ECONOMIC REVIEW 2007

STATE PLANNING BOARD
THIRUVANANTHAPURAM
FEBRUARY 2008

GOVERNMENT OF KERALA

ECONOMIC REVIEW 2007

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CHAPTER 1

AN OVERVIEW

The Gross State Domestic Product of the state in real terms increased by 8.1 percent in 2006-07, which is marginally higher than the 8 percent of the previous year. But high growth rates in themselves do not signify much. They *may be* accompanied by, and for most states of late *have been* accompanied by, increasing distress for significant segments of the population. What was notable in Kerala during 2007 was that the high growth rate came together with reduced rural distress. The most significant reflection of this was that peasant suicides came to an end in the second half of 2007, Kerala being the first major suicide-affected state to have put an end to this tragic phenomenon.

2. A number of factors were responsible for this. No doubt, there has been a revival of late of world market prices of a variety of cash crops (though with the current appreciation of the rupee visavis the US dollar, and the imminence of a slowdown in the world economy owing to the onset of a recession in the US, this revival is already under threat); but this alone does not explain the end of this tragedy. Of greater significance is the setting up of a statutory Debt Relief Commission by the state government, which, even though its main recommendation (of the state government taking over the debt of the poor) was implemented only in 2008, brought substantial hope to the distressed peasantry with its very formation. Debt relief, together with the provision of an assured remunerative price of Rs.9 per kg. for paddy (well above the Rs.6.3 offered by the central government), and the scrupulous implementation of the National Rural Employment Guarantee Scheme in the poorest districts of the state, has brought some amelioration in rural distress in Kerala.

3. There has also been a revival of serious planning in the state, and therewith of plan expenditure in the countryside. With a stagnant tax-GSDP ratio in the first four years of the tenth plan, and the straitjacket of a Fiscal Responsibility Act that, most mystifyingly, fixed the fiscal deficit target at 2 percent of GSDP, plan expenditure had been drastically curtailed till 2005-06. Since then, with major steps being taken towards additional resource mobilization, and a determination being shown not to sacrifice the planning process at the altar of so-called fiscal responsibility, there has been a resumption of plan expenditure. This resumption, modest to start with, is gathering momentum.

4. The phenomenon of inflation that had resurfaced last year, continued to gather momentum, a fact that is less visible in the wholesale price index but much more so in retail prices. This phenomenon of course is not Kerala-specific; nor is it more pronouncedly manifest in this state compared to others. Its origin lies in factors operating at the international and national levels. Since some of these factors are likely to persist, it is worth discussing them briefly. The first is the rise in world oil prices, which, it now appears, will persist. Since the full impact of this rise has not yet been felt on the level of prices in our country, a boost to inflation from this source in the coming months cannot be ruled out. The second is the rise in foodgrain prices, both internationally and within India, which is quite ominous because of the nature of its underlying causes.

5. With petroleum prices ruling high, and the need to diversify towards other energy sources now generally accepted, the advanced capitalist countries are turning towards bio-fuels. Acreage

under foodgrains is being diverted towards crops like jetropha; and foodgrains themselves, like maize, are being used for producing ethanol which is used as fuel. As a result, world foodgrain availability, for purposes of human and animal consumption, is shrinking, a symptom of which is the abysmally low world foodgrain stocks at present. This underlies the current upturn in the world foodgrain prices. True, there is, as already mentioned, a general upturn in world primary commodity prices at present, of which foodgrains too are a beneficiary. But the contribution of this additional element, namely the switch towards bio-fuels of foodgrains themselves as well as of acreage under foodgrains, has also been significant.

6. Recent developments in the Indian economy have compounded the problems on the foodgrain front. In the late 1990s, even though per capita foodgrain *output* was declining, per capita *absorption* was declining even faster. This resulted in a massive build-up of foodgrain stocks with the government. Stocks reached 63 million tonnes by 2002, which represented 45 million tonnes of *excess stocks* (over and above what are considered "normal stocks" required for the PDS and as "buffer"). Instead of seeing this stock accumulation as the result of an absence of purchasing power in the hands of the rural poor, owing to cuts in rural development expenditure which it had itself effected, the central government saw this build up as an expression of excess production relative to *requirements*. Hence, instead of injecting purchasing power into the countryside so that the stocks could clear even as the people became better-fed, it dumped foodgrain stocks on the world market at prices below those charged to the BPL population. In the world market, such foodgrain stocks were bought as animal feed in the rich countries! At the same time, to discourage such "excess production" the central government kept procurement prices for foodgrains low, and indeed even started progressively winding up the entire procurement-cum-public distribution machinery so painstakingly erected in the mid-sixties. This adversely affected foodgrain output at the very time when the stocks had been disposed off, giving rise to food-shortages and inflation caused by excess demand for foodgrains.

7. The central government now sees the need for enlarging food output; but such an increase is not easy, since the entire procurement system, which provided a major incentive to the peasants, is now in a shambles. What is more, even in a longer-term perspective, the prospects of any significant increase in the foodgrains output remain bleak, since no new technological breakthroughs have occurred in agriculture even as the old breakthrough, of the Green Revolution, has out of steam.

8. As a result, inflation, especially in food prices, which the country was widely perceived to have grown out of, is back with us with a vengeance. And the central government's attempt to counter it by resorting to imports, even at exorbitant prices, is unlikely to succeed for at least two reasons. First, the PDS itself is in a shambles because, being influenced by the neo-liberal apotheosis of the free market, the central government has tended to run it down; second, as already mentioned, the world food stocks are also running low, and cannot sustain us for too long. What is more, a jump in procurement prices at this juncture, even though it may help the revival of foodgrain production to some extent in the coming period, may feed inflationary expectations and thereby have the *immediate* effect of worsening inflation. Thus, a host of factors affecting the food economy, including in particular mismanagement of this economy by successive central governments, have brought us to a situation which is truly disconcerting.

9 Kerala, being a food-import-dependent state, is extremely vulnerable to such developments. Inflation, caused by these national and international factors, is of course adversely affecting the people of the state at present; but even the long-run prospects for the state are not very bright. This is because the looming world recession, as a result of developments in the US, will bring down the terms of trade for primary producers visavis manufactures; but among the

primary commodities, the *prices of foodgrains will fall less compared to the prices of other primary commodities.* In short, there will be two different kinds of terms of trade movement, each of which will affect the people of the state adversely: first, a terms of trade movement against primary commodities and in favour of manufactures, which will of course hurt the cash crop growers; and secondly, a terms of trade movement between food grain and other primary commodities in favour of the former that will further compound the adverse effect on these growers, even as it hurts other sections engaged in the petty production economy of the state.

10. This is a situation for which we have to be prepared. Putting pressure on the centre for adequate supplies of foodgrains, and keeping the PDS going must constitute one part of our effort, reviving Kerala's food economy so that a modicum of food security is provided to the state must constitute the other part. The offer of a higher procurement price for paddy, and the proposed legislation to prevent the diversion of paddy land for other purposes, are crucial components of this strategy of reviving food production in the state, whose importance cannot be overstated.

CHAPTER 2

STATE FINANCES

Key deficit indicators – viz. Gross Fiscal Deficit (GFD), Revenue Deficit (RD) and Primary Deficit (PD) showed an improvement for all states, taken together in 2004-05. The GFD/GDP ratio of all States which was 2.7 per cent in 1996-97 went up to 4.7 per cent in 1999-2000. It declined successively but again increased to reach 4.5 per cent in 2003-04. Thereafter declined consecutively and became 2.8 per cent in 2006-07. Revenue deficits and primary deficits also moved almost in the same manner (See Table 2.1).

Table 2.1
Key Fiscal Deficits of All States

(Rs. Crore)

Year	Gross Fiscal Deficit	Revenue Deficit	Primary Deficit
1996-97	37251 (2.7)	16114 (1.2)	11675 (0.9)
1997-98	44200 (2.9)	16333 (1.1)	14087 (0.9)
1998-99	74254 (4.2)	43642 (2.5)	38381 (2.2)
1999-00	91480 (4.7)	53797 (2.7)	46309 (2.4)
2000-01	89532 (4.3)	53569 (2.5)	37830 (1.8)
2001-02	95994 (4.2)	59188 (2.6)	33488 (1.5)
2002-03	102123 (4.1)	55111 (2.2)	31981 (1.3)
2003-04	123070 (4.5)	61145 (2.2)	41306 (1.5)
2004-05	109257 (3.5)	36423 (1.2)	21268 (0.7)
2005-06 (RE)	113888 (3.2)	17178 (0.5)	24894 (0.7)
2006-07 (BE)	109610 (2.8)	4511 (0.1)	10185 (0.3)

Source : State Finances : A study of Budgets of 2006-07
(Figures in brackets are percentage to GDP)

Kerala

Overall Fiscal Position

2.2 The revenue deficit of the state came down from Rs.3668.30 crore (3.66 percent of GSDP) in 2004-05 to Rs. 2637.94 crore (1.99 percent of GSDP) in 2006-07. However, revenue deficit moderately grew by 1.99 per cent and reached Rs. 5251.16 crore in 2007-08 (BE). The fiscal deficit came down from Rs. 4451.90 crore (4.44 per cent of GSDP) in 2004-05 to Rs. 4181.72 crore in 2005-06 and further to Rs. 3821.87 crore in 2006-07; but considerably increased to Rs. 7425.21 crore in 2007-08 (BE). This was because of a resumption of significant plan expenditure which had been drastically pruned during the earlier years of Tenth Plan. Even so, the primary deficit not only declined but marked a surplus during 2006-07 (See Table 2.2)

Table 2.2
Major Deficit Indicators

(Rs. Crore)

Year	Revenue Deficit		Fiscal Deficit		Primary Deficit	
	Amount	% to GSDP	Amount	% to GSDP	Amount	% to GSDP
1996-97	643 03	1 45	1542.48	3.47	439.07	0.99
1997-98	1122.90	2.27	2413.85	4.88	1127 76	2.28
1998-99	2029.96	3.61	3012.2	5.36	1565.94	2.78
1999-00	3624.21	5.8	4534.56	7.25	2582.29	4.13
2000-01	3147.06	4.51	3877.8	5.56	1620.20	2.32
2001-02	2605.64	3.28	3269.4	4 12	779.94	0.98
2002-03	4118.66	4.53	4990.04	5.49	2043.28	2.25
2003-04	3680.30	3.59	5539.05	5.41	2210 75	2.16
2004-05	3668.92	3.66	4451.9	4.44	839.36	0 84
2005-06	3129.15	2.80	4181 72	3.70	382.00	0.30
2006-07	2637.94	1.99	3921.87	2.88	+367.83	0.28
2007-08 B.E	5251.16	3 57	7425.21	5.05	2646.9	1.80

Source : Finance department, Govt of Kerala

2 3 The Balance from Current Revenue (BCR) continued to be negative with diminishing trend. The share of capital outlay on capital receipts which declined in 2005-06 has doubled in 2006-07 and continued to remain the same in 2007-08 (See Table 2.3).

Table 2.3
Financial Indicators for Government of Kerala

Particulars	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 B.E
Balance of Current Revenue (BCR) (Rs in Crore)	-1660	-1811	-1983	-1496	-711.61	-1332	- 4075.99
Interest Ratio	0.27	0.28	0.28	0.27	0.25	0.23	0.22
Capital Outlay/Capital Receipt	0.16	0 15	0.12	0.15	0.17	0.22	0.22
Return of Investment ratio	0.003	0.005	0.009	0.013	0.08	0.013	NA
Outstanding Guarantees/ Revenue Receipt	1 30	1.19	1.18	0 91	0.78	0.52	NA
Assets/ Liabilities	0 44	0.4	0.4	0 4	0.4	0.40	NA

Source : Finance department, Government of Kerala

Pattern of Revenue Receipts

2.4 Revenue Receipts comprises of State's own revenue and central transfers in the form of shared taxes and grants for plan and non-plan purposes. State's own revenue is the sum of State's own tax revenue and State's own non tax revenue. The total revenue receipts of the State during the last decade is shown in Table 2.4. During the period revenue receipts grew by 12.17 per cent. The component wise growth rates are : State's own tax revenue by 12.35 per cent, State's own non tax revenue by 11.53 per cent, share of central taxes and grants-in-aid by 13.25 per cent.

Table 2.4
Revenue Receipt

(Rs. Crore)

Year	State's own Revenue						Share of Central Taxes and Grants	Growth rate	Total Revenue (6+8)	Annual Growth rate
	State's own Tax Revenue	Growth rate	State's own Non Tax Revenue	Growth rate	Total (2+4)	Growth rate				
1	2	3	4	5	6	7	8	9	10	11
1996-97	3898.50	15.25	513.8	-4.06	4412.3	12.61	1732.78	15.11	6145.08	13.30
1997-98	4501.05	15.46	552.11	7.46	5053.16	14.52	2065.06	19.18	7118.22	15.84
1998-99	4649.56	3.30	557.66	1.01	5207.22	3.05	1990.9	-3.59	7198.12	1.12
1999-00	5193.51	11.70	530.71	4.83	5724.21	9.93	2217.53	11.38	7941.75	10.33
2000-01	5870.26	13.03	659.09	24.19	6529.35	14.07	2201.51	-0.72	8730.86	9.94
2001-02	5923.42	0.91	543.38	17.56	6466.8	-0.96	2589.59	17.63	9056.39	3.73
2002-03	7302.54	23.28	681.26	25.37	7983.8	23.46	2653.58	2.47	10537.38	17.46
2003-04	8088.78	10.77	806.98	18.45	8895.76	11.42	2919.61	10.03	11815.37	11.07
2004-05	8963.65	10.82	819.08	1.50	9782.73	9.97	3717.75	27.34	13500.48	14.26
2005-06	9779.64	9.10	936.77	14.37	10716.41	9.54	4578.11	23.14	15294.52	13.30
2006-07	11941.82	22.11	937.57	0.9	12879.39	20.18	5307.23	15.93	18186.62	18.91
2007-08 BE	13789.79	15.47	1133.07	20.85	14922.86	15.87	6622.90	22.91	21445.76	17.92
AAGR from 1996-97 to 2007-08		12.35		11.53		11.91		13.25		12.17

Source : Finance Department, Govt. of Kerala

2.5 The Revenue receipt of the State increased from Rs. 6145.08 crore in 1996-97 to Rs. 21445.76 crore representing more than 3.5 times increase in 2007-08 (BE). The total revenue receipt increased by Rs.3259.14 crore (17.92%) in 2007-08 (BE) as against the increase of Rs. 2892.10 crore (18.91%) in 2006-07. The growth of revenue receipts which always lagged behind the growth of revenue expenditure is a disturbing feature of Kerala's fiscal position.

State's own tax Revenue

2.6 Growth rate of State's own tax revenue exhibits increasing trend since 2005-06. Growth rate which was 9.10 percent in 2005-06 increased to 15.47 per cent in 2007-08 (BE) (see Table 2.5). The total own tax revenue realized during 2006-07 was Rs. 11941.82 crore, out of which Rs. 8563.31 crore (71.71 percent) was on account of sales tax and Rs. 1519.93 crore (12.73 per cent) on account for stamps and registration fees. Land revenue accounted for Rs. 55.69 crore (0.5 per cent), State excise for Rs. 953.07 crore (8 per cent) and motor vehicle tax for Rs. 707.74 crore (5.9 percent). All components of own tax revenue registered an increase during 2006-07 compared to the previous year.

2.7 As per budget estimates for 2007-08, own tax revenue has increased by Rs 1847.97 crore (15.47 per cent) compared to 2006-07. During the period 2006-07, the highest growth rate was achieved by stamps and registration fees (38%) followed by sales tax (21.6%). Highest amount in total tax revenue was contributed by tax on sales during 2006-07, i.e. Rs.8563.31 crore. As the gap between revenue expenditure and total revenue is going on widening effective measures have to be initiated for extracting state's own tax revenue at a level maximum possible.

Table 2.5
State's Own Tax Revenue

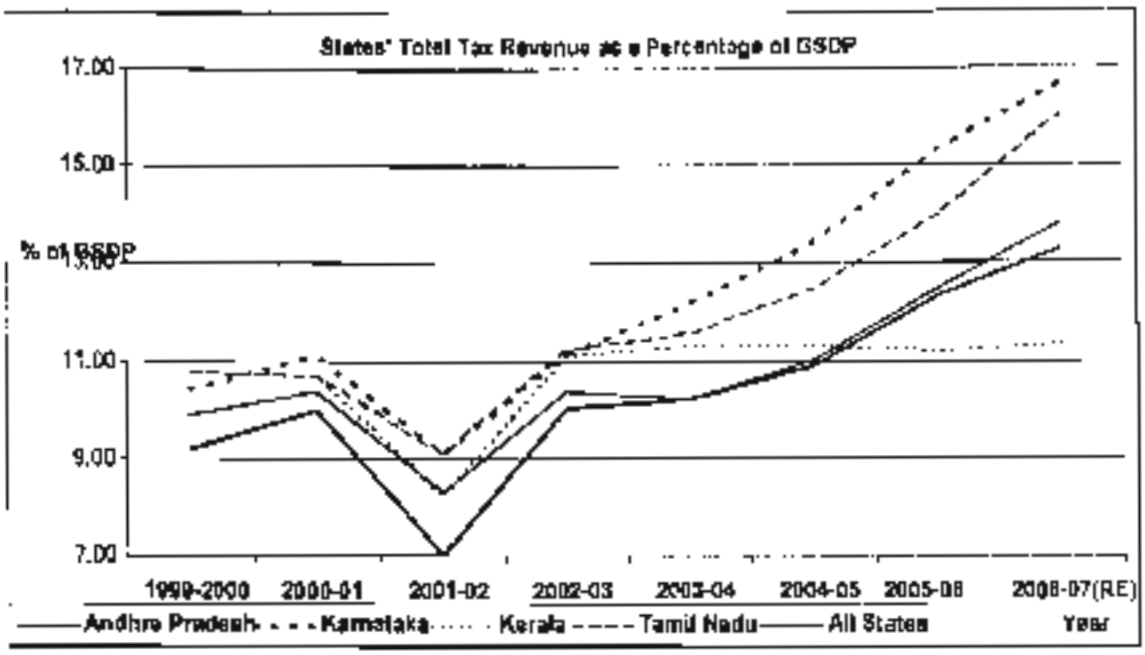
(Rs. Crore)

Year	Land Revenue	Stamps and Registration fees	State Excise Duties	Sales tax	Motor vehicles tax	Others	Total	Annual Growth rate
1996-97	22.33	360.30	418.53	2772.28	247.59	77.47	3898.50	13.25
1997-98	23.75	331.36	543.41	3084.09	301.63	216.81	4501.05	15.46
1998-99	32.73	301.15	529.62	3366.62	323.31	96.13	4649.56	3.30
1999-00	34.67	279.65	591.10	3853.54	380.83	53.72	5193.51	11.70
2000-01	39.35	341.10	688.94	4344.33	394.85	61.69	5870.76	13.03
2001-02	34.93	394.28	541.46	4440.85	452.18	59.72	5923.42	0.91
2002-03	38.40	486.53	663.07	5343.15	513.20	258.20	7302.55	23.28
2003-04	40.59	549.81	655.91	5991.43	585.78	265.26	8088.78	10.77
2004-05	43.85	775.35	746.45	6701.05	610.48	86.47	8963.65	10.82
2005-06	43.88	1101.42	841.00	7037.97	628.51	126.86	9779.64	9.10
2006-07	47.01	1519.93	953.07	8563.31	707.74	150.76	11941.82	22.11
2007-08 BE	55.69	1524.12	986.86	10035.51	835.08	352.53	13789.79	15.47
AAGR from 1996-97 to 2007-08	9.2	15.5	8.9	12.6	11.8	-	-	12.36

Source : Finance Department, Govt. of Kerala

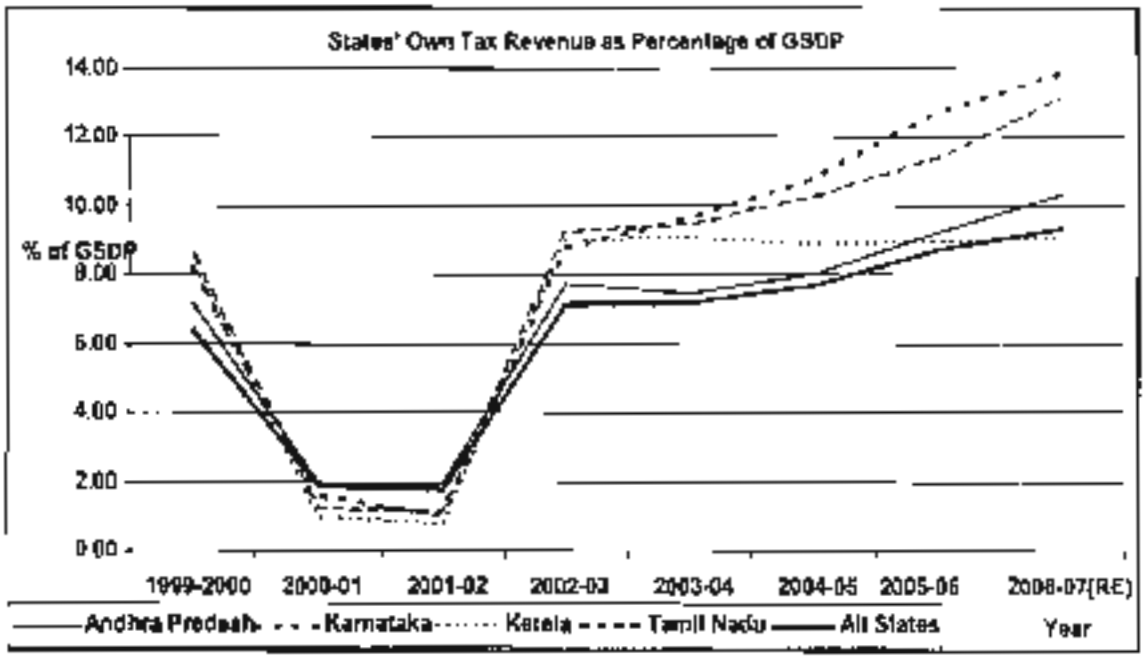
2.8 The annual average growth rate of State's own tax revenue during the period 1996-97 to 2007-08 was 12.36 percent, 9.2 percent for land revenue, 15.5 per cent for stamps and registration fees, 8.9 percent for state excise duty, 12.6 per cent for sales tax and 11.8 per cent for motor vehicle tax

2.9 If we compare Kerala with the other South Indian States and with All States' weighted average with respect to Tax-GSDP ratio, we find that in general South Indian States lie above the All States' average. The Tax-GSDP ratio has been continuously increasing since 2001-02 in all cases, except Kerala. Kerala's total Tax as a percentage of GSDP has been stagnant at slightly above 11% of GSDP since 2002-03.



Source: State Finances: A Study of Budgets - Various Issues. Reserve Bank of India (RBI).

2.10 We see a similar picture as far as States' own tax revenue is concerned. Here also Kerala's own tax revenue to GSDP ratio has been stagnating slightly above 9% of GSDP, whereas the other South Indian States have succeeded in raising their tax-GSDP ratio quite significantly, and even the All-States average has been on the rise since 2001-02.



Source: State Finances: A Study of Budgets - Various Issues, Reserve Bank of India.

State's own Non-Tax Revenue

2.11 State's own non-tax revenue constitutes on an average only 7 percent of state's own revenue. The component-wise details of non-tax revenue receipt from 1996-97 to 2007-08 are shown in Table 2.6. Increase in the non-tax mobilization during 2006-07 was neglible, i.e from Rs. 936.77 crore in 2005-06 to Rs. 937.57 crore in 2006-07. Budget estimate for 2007-08 expects the non-tax revenue to increase to Rs 1137.07 crore (an increase of 21.28 per cent). Revenue from major components of non-tax revenue have decreased during 2006-07. Revenue from forest

which was Rs. 189.63 crore in 2005-06 fell to Rs. 174.56 crore in 2006-07. Similarly revenue from debt services decreased from Rs. 46.35 crore in 2005-06 to Rs. 44.63 crore in 2006-07.

Table 2.6

State's Own Non-Tax Revenue

(Rs. Crore)

Year	Forest	Annual Growth rate	Debt Services (Interest)	Annual Growth rate	Social Development Services*	Annual Growth rate	Others	Annual Growth rate	Total	Annual Growth rate
1996-97	162.00	0.77	55.73	-44.45	86.30	-10.50	209.77	17.86	513.80	-4.05
1997-98	144.91	-10.55	53.48	-4.04	106.73	23.67	246.99	17.74	552.11	7.46
1998-99	121.03	-16.48	70.96	32.69	122.66	14.93	243.01	-1.61	557.66	1.01
1999-00	109.88	-9.21	37.31	-47.42	118.41	-3.46	265.11	9.09	530.71	-4.83
2000-01	141.24	28.54	36.81	-1.34	165.07	39.36	315.97	19.18	659.09	24.18
2001-02	113.70	-19.50	31.08	-15.57	135.51	-17.88	263.09	-16.74	543.38	-17.55
2002-03	149.50	31.46	35.86	15.38	185.67	37.02	310.15	17.89	677.76	24.64
2003-04	187.18	25.24	32.40	-9.65	200.90	11.97	379.50	22.36	806.98	19.15
2004-05	199.69	6.68	40.51	25.03	209.85	0.94	369.03	-2.76	819.08	1.50
2005-06	189.63	-5.04	46.35	14.42	236.67	12.78	464.12	25.77	936.77	14.37
2006-07	174.56	-7.94	44.63	-3.71	242.26	2.36	476.12	2.59	937.57	0.09
2007-08 BE	268.44	53.78	45.35	2.06	276.65	14.20	546.43	14.77	1137.07	21.28
AAGR from 1996-97 to 2007-08		6.70		-3.33		12.35		9.84		8.30

Source : Finance Department, Govt. of Kerala

* *It includes education, medical and public health, Agriculture, Rural Development, Animal Husbandry, Co-operation, Industries, Community Development and miscellaneous Social Development Organisation*

Table 2.7

Component-wise realisation of Own- Non Tax Revenue-Kerala & All States

(Rs. Crore)

Item	2004-05		2005-06 (RE)		2006-07 (BE)	
	Kerala	All states	Kerala	All states	Kerala	All states
States Own-Non tax Revenue	846 (100)	49181 (100)	889 (100)	46702 (100)	1113 (100)	53301 (100)
Interest receipts	36 (4.3)	11827 (24)	36 (4.0)	9673 (20.7)	50 (4.5)	9724 (18.2)
Dividend & Profit	22 (2.6)	398 (0.8)	31 (3.5)	413 (0.9)	40 (3.6)	307 (0.6)
General Services	275 (32.5)	12255 (25)	332 (37.4)	12043 (25.8)	460 (41.3)	15157 (28.4)
(Of which) State Lotteries	89 (10.5)	7604 (15.5)	159 (17.8)	7864 (16.8)	251 (22.6)	10741 (20.2)
Social & Community Service	145 (17.1)	3343 (7)	137 (15.4)	3239 (7.0)	163 (14.6)	3314 (6.2)
Economic Services	368 (43.5)	21357 (43.4)	354 (39.8)	21329 (45.7)	400 (36.0)	24795 (46.5)
(Of which) Forestry & Wild Life	217 (25.7)	1994 (4.1)	210 (23.6)	2174 (4.7)	250 (22.5)	2363 (4.4)

Source : State Finances : A study of Budgets of 2006-07

(Figures in brackets are percentage to State's own Non-Tax Revenue.)

2.12 Table 2.7 shows the changing pattern of non-tax revenue receipts of Kerala and all states from 2004-05 to 2006-07. Sectors like General Services and Economic Services continued to contribute the major share of own non-tax revenue of the state for 2006-07 also. These two sectors together account for more than half of the own-non tax revenue. The contribution of state lotteries to the state was about 23 per cent of the total non-tax revenue collected during 2006-07, the net yield from lotteries was Rs. 36.83 crore, total receipt being Rs. 251 crore. The share of dividend and profit recorded a slight increase over 2005-06. Interest receipts also increased consecutively.

2.13 A comparative position of non-tax revenue in the four neighboring states during 2006-07 is shown in Table 2.8. The non-tax revenue realized by Andhra Pradesh, Karnataka and Tamil Nadu are 11.56 per cent, 11.90 per cent and 6.71 percent respectively of their total revenue expenditure whereas the same realized by Kerala is only 4.53 percent. While the ratios of non tax revenue to revenue receipts for Andhra Pradesh, Karnataka and Tamil Nadu are 11.82 per cent 11.40 per cent and 6.90 percent respectively, the same for Kerala is only 5.82 per cent. Both these ratios are lesser than that of the year 2005-06.

Table 2.8
Comparative Position of States Own Non-Tax Revenue in four neighbouring States: 2006-07

(Rs. Crore)

	Andhra Pradesh	Karnataka	Tamil Nadu	Kerala
Own Non tax Revenue	5240	4088	2674	1113
Revenue Expenditure (RE)	45327	34340	39861	24555
Revenue Receipts (RR)	44331	35875	38732	19140
NTR/RE	11.56	11.90	6.71	4.53
NTR/RR	11.82	11.40	6.90	5.82

Source : State Finances , A study of Budgets of 2006-07

Central Transfers

2.14 The main components of central transfers to the state are tax devolution and grants. The central transfers to Kerala during the period from 1996-97 to 2007-08 is shown in Table 2.9. The growth rate in central transfers to Kerala continue to fluctuate throughout the years since 1996-97. The annual growth rate of total transfers to the state during 1996-97 was 15.11 percent but declined to -0.72 per cent in 2000-01. It increased by 17.62 per cent in 2001-02. In 2004-05 the growth rate was 27.34 per cent but declined to 15.93 per cent in 2006-07. The budget estimate for 2007-08 shows an increase of 22.91 per cent in central transfers to the state.

Table 2.9
Central Transfers : 1995-96 to 2006-07

(Rs.Crore)

Year	Share in Central taxes & Duties		Grant-in-aid and other receipts from Centre for Plan & Non-Plan		Total Transfers	
	Amount	Annual Growth rate	Amount	Annual Growth rate	Amount	Annual Growth rate
1996-97	1242.65	19.84	490.13	4.63	1732.78	15.11
1997-98	1271.74	2.34	793.32	61.85	2065.06	19.18
1998-99	1382.30	8.69	608.60	-23.28	1990.90	-3.59
1999-00	1535.22	11.06	682.31	12.11	2217.53	11.38
2000-01	1585.61	3.28	615.90	-9.73	2201.51	-0.72
2001-02	1614.26	1.81	975.33	58.36	2589.59	17.62
2002-03	1715.21	6.25	938.37	-3.79	2653.58	2.47
2003-04	2012.09	17.31	907.61	-3.28	2919.61	10.03
2004-05	2404.95	19.53	1312.80	44.64	3717.75	27.34
2005-06	2517.18	4.67	2060.93	57.00	4578.11	23.14
2006-07	3212.00	27.60	2095.23	1.66	5307.23	15.93
2007-08 BE	3801.49	18.35	2721.41	29.89	6522.90	22.91
AAGR from 1996-97 to 2007-08		10.99		20.91		13.25

Source : Finance Department, Govt. of Kerala

2.15 The total transfers to Kerala during 2006-07 was Rs. 5307.23 crore as against Rs 4578.11 crore received in 2005-06. During 2006-07 an amount of Rs. 426.23 crore was received as compensation towards shortfall in VAT collection of the state. Out of the total transfers for 2005-06, Rs. 3212 crore was the state share in union taxes and Rs. 2095.23 crore was grant-in-aid and other receipts from central government for plan and non-plan purposes. The average annual growth rate of central transfers for the period from 1996-97 to 2007-08 is 13.25 per cent.

Table 2.10
Comparative Position of Central Transfers to Neighbouring States

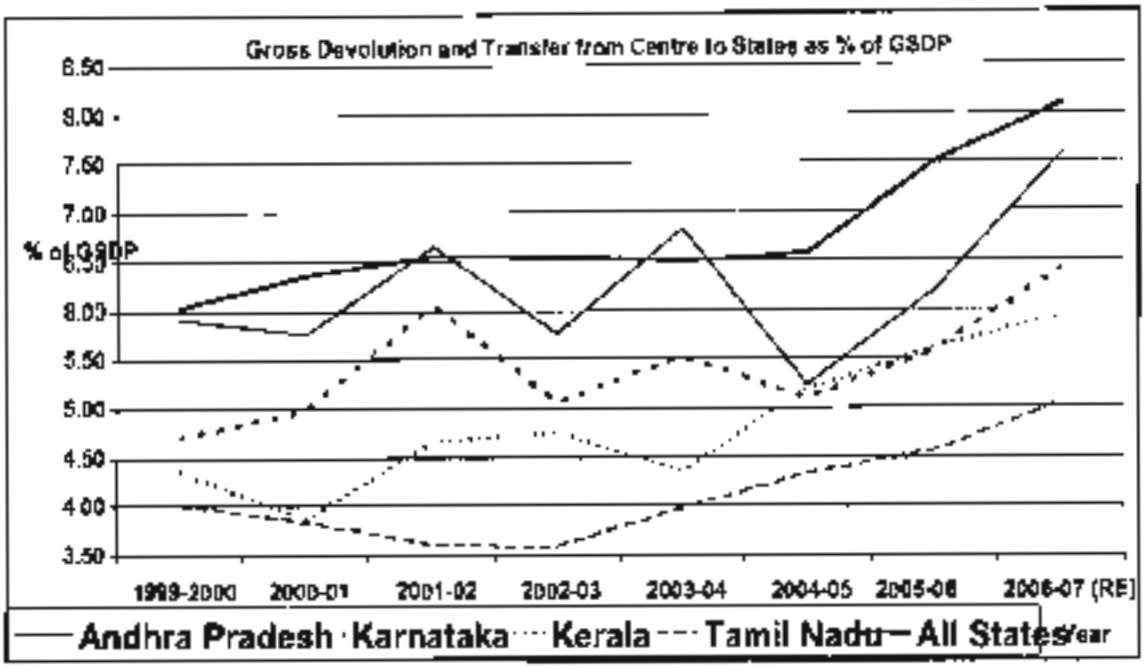
(Rs. Crore)

State	2006-07			
	Share of Central Taxes	Grant from Centre	Total Amount	%
Andhra Pradesh	8039	7384	15423	7.36
Karnataka	4609	4644	9253	4.41
Tamil Nadu	6026	3021	9047	4.32
Kerala	**3027**	**3338**	**6365**	**3.04**
All States	**109414**	**100188**	**209607**	**100.00**

Source : State Finances : A study of budgets of 2006-07

2.16 Central transfers in Kerala and neighboring states during 2006-07 is compared in Table 2.10. Kerala's position is the lowest in terms of total transfers as it is only 3.04 per cent of total central transfers. Andhra Pradesh is at the top with 7.36 per cent of total transfers followed by Karnataka (4.41 per cent) and Tamil Nadu (4.32 per cent).

2.17 The ratio of Central transfers to GSDP, it should be noted, is lower for the South Indian States than for all states taken together (see Chart). But among these States Kerala appears to fare better than Tamil Nadu.



Source: State Finances: A Study of Budgets – Various Issues, RBI.

2.18 During the last two years the situation with regard to Central transfers, relative to GSDP, appears to have improved slightly. The gross transfer to all States taken together has increased from 6.5% of GDP to more than 8%, and the net transfer has increased from below 4.5% to above 7% of GDP. This improvement however is illusory, since it is caused by the inclusion of compensation for revenue loss owing to the introduction of VAT.

Expenditure Pattern

Revenue Expenditure

2.19 Revenue expenditure in the state has increased by an annual average rate of 13.74 percent during the period from 1996-97 to 2007-08 (see Table 2.11). At the same time revenue receipts have increased only by 12.17 per cent. The revenue expenditure during 2006-07 was Rs. 20824.57 crore higher by Rs. 2400.80 crore over Rs. 18423.68 crore of 2005-06. The growth is at a rate of 13.03 per cent. The budget estimate for the period 2007-08 shows an increase in revenue expenditure by Rs. 5872.34 crore over 2006-07, at a rate of 28.20 per cent. The share of development expenditure to total expenditure is going on declining year after year. This share which was 59.63 per cent of the total expenditure in 1996-97, declined to 44.58 per cent in 2006-07. During the period from 1996-97 to 2007-08 while the non development revenue expenditure

increased by an annual average growth rate of 16.38 per cent, the development revenue expenditure increased by 12.22 per cent only.

Table 2.11
Trend in Revenue Expenditure

(Rs.Crore)

Year	Total Revenue Expenditure		Development Expenditure		Non Development Expenditure	
	Amount	Annual Growth rate	Amount	% to total Revenue expenditure	Amount	% to total Revenue expenditure
1996-97	6788.10	16.51	4047.96	59.63	2740.14	40.37
1997-98	8241.12	21.41	5031.26	61.05	3209.86	38.95
1998-99	9228.08	11.98	5642.03	61.14	3586.05	38.86
1999-00	11565.96	25.33	6510.24	56.29	5055.72	43.71
2000-01	11877.92	2.69	6396.50	53.85	5481.42	46.15
2001-02	11662.03	-1.18	6028.34	51.69	5633.69	48.31
2002-03	14756.05	26.53	8064.80	54.65	6691.25	45.35
2003-04	15495.67	5.01	8061.94	52.03	7433.73	47.97
2004-05	17169.41	10.80	9244.45	53.84	7924.95	46.16
2005-06	18423.68	7.30	9757.79	52.96	8665.79	47.04
2006-07	20824.57	13.03	9283.26	44.58	11541.31	55.42
2007-08 (BE)	26696.91	28.20	12491.88	46.79	14205.03	53.21
AAGR from 1996-97 to 2007-08		13.74				

Source : Finance Department, Govt. of Kerala

2.20 The trend in revenue expenditure in the state is given in Table 2.12. During 2006-07, revenue expenditure constituted 94.33 per cent of the total expenditure. The increase in revenue expenditure during the year was mainly due to the increase in expenditure on education (Rs. 460.25 crore), interest payment (Rs. 259.86 crore), pension (Rs.433.4 crore), agriculture and allied sectors (Rs. 228.84 crore), etc. over the previous year.

Table 2.12
Trend in Revenue Expenditure

(Rs. Crore)

Year	Development Expenditure						Non Development Expenditure				
	Education	Health	Agri. AH & Co-op	Industrles, Labour & Employment	Others	Total	Interest Payments	Pension	Others	Total	Total Revenue Expenditure
1996-97	1616.45	535.33	474.75	201.42	1220.01	4047.96	1103.41	753.67	883.06	2740.14	6788.10
1997-98	1761.05	634.12	575.65	214.61	1845.83	5031.26	1286.09	913.02	1010.75	3209.86	8241.12
1998-99	1957.90	694.86	615.43	191.75	2182.09	5642.03	1446.26	1154.32	985.47	3586.05	9228.08
1999-00	2609.49	870.38	643.67	216.87	2169.83	6510.24	1952.27	1808.29	1295.16	5055.72	11565.96
2000-01	2620.24	837.04	594.69	178.34	2166.19	6396.5	2257.60	1929.48	1294.34	5481.42	11877.92
2001-02	2471.00	861.21	487.57	176.36	2032.20	6028.34	2489.47	1837.93	1306.29	5633.69	11662.03
2002-03	2967.56	954.78	594.50	197.58	3350.38	8064.80	2946.77	2282.9	1461.58	6691.25	14756.05
2003-04	3080.12	1062.00	498.38	283.12	3138.32	8061.94	3328.30	2408.83	1696.60	7433.73	15495.67
2004-05	3254.19	1153.76	623.93	367.10	3845.48	9244.46	3612.54	2600.77	1711.64	7924.95	17169.41
2005-06	3456.85	1165.73	730.54	306.34	4098.43	9757.89	3929.84	2861.18	1874.77	8665.79	18423.68
2006-07	3917.10	1334.17	959.38	358.95	2713.66	9283.26	4189.70	3294.58	4057.03	11541.31	20824.57
2007-08 B.E	5550.44	1703.51	1000.73	362.11	3875.09	12491.88	4778.3	4578.22	4848.51	14205.03	26696.91
AAGR from 1996-97 to 2007-08	12.62	11.48	8.30	6.96	5.15	11.63	14.47	18.91	19.87	16.65	13.68

Source : Finance department, Govt. of Kerala

Capital Expenditure

2.21 The continuously declining capital expenditure in the state which has shown a slight revival in 2005-06, increased in 2006-07 also. The ratio of capital expenditure to total expenditure which was 3.96 per cent in 2003-04 gradually increased to reach 4.19 per cent in 2005-06 and further to 5.67 per cent in 2006-07. In the budget estimate for 2007-08, this ratio is calculated to be 7.78 per cent. Severe and comprehensive measures are to be adopted for augmentation of capital expenditure, for the decline in capital expenditure despite higher growth in borrowings is a serious matter of concern in the state. The details of capital expenditure in the state during the period from 1996-97 to 2007-08 are given in Table 2.13 and 2.14.

Table 2.13
Trend in Capital Expenditure

(Rs.crore)

Year	Capital Expenditure		Total Expenditure		Capital expenditure as % to total expenditure
	Amount	Annual Growth Rate	Amount	Annual Growth Rate	
1996-97	622.52	10.48	7410.62	15.97	8.40
1997-98	738.87	18.69	8979.96	21.18	8.23
1998-99	651.63	-11.81	9879.96	10.02	6.60
1999-00	648.18	-0.53	12214.14	23.63	5.31
2000-01	577.20	-10.95	12455.11	1.97	4.63
2001-02	558.36	-3.26	12220.39	-1.88	4.57
2002-03	698.66	25.13	15704.72	26.47	4.52
2003-04	639.71	-8.44	17427.32	4.40	3.96
2004-05	681.75	6.57	18047.62	3.56	3.78
2005-06	816.95	19.83	19471.30	7.89	4.19
2006-07	1251.97	53.25	22076.53	13.38	5.67
2007-08 BE	2253.69	80.01	28950.60	31.14	7.78
AAGR from 1996-97 to 2007-08		14.91		13.67	

Source : Finance Department, Govt of Kerala

Table 2.14

Trend in Capital Expenditure

(Rs.Crore)

Year	Irrigation	Growth rate	Agriculture & Allied services	Growth rate	Industries	Growth rate	Public works	Growth rate	Others	Growth rate	Total	Growth rate
1996-97	187.59	10.13	51.14	-2.57	110.69	20.97	155.65	13.57	1[illegible]7.45	4.79	622.52	10.48
1997-98	188.29	0.37	53.57	4.75	106.11	-4.14	236.04	5[illegible].65	154.86	31.84	738.87	[illegible]8.69
1998-99	177.76	-5.59	40.57	-24.27	80.06	-24.55	182.68	-22.61	170.56	10.14	651.63	-11.81
1999-00	169.57	-4.61	54.67	34.75	68.79	-[illegible]4.08	241.96	32.45	113.19	-33.64	648.18	-0.53
2000-01	154.50	-8.89	36.58	-32.89	58.20	-15.39	187.99	-22.31	139.92	23.72	577.20	-10.95
2001-02	[illegible]47.21	-4.72	29.18	20.47	30.24	-48.04	222.13	18.16	129.60	-7.31	558.36	-3.26
2002-03	132.32	-10.11	44.95	54.04	33.09	9.42	287.42	29.39	200.88	55.00	698.66	25.13
2003-04	159.20	20.31	35.44	-21.16	30.55	-7.68	272.73	-5.11	141.79	-29.42	639.71	-8.44
2004-05	175.18	[illegible]0.04	33.19	-6.35	74.53	143.98	260.34	-4.54	138.51	-2.3[illegible]	681.75	6.57
2005-06	208.37	[illegible]8.95	36.91	41.58	31.24	-58.08	352.54	35.4[illegible]	187.89	29.02	8[illegible]6.95	19.83
2006-07	156.64	-24.83	66.84	81.09	110.10	252.43	431.31	22.34	487.08	[illegible]59.24	1251.97	53.25
2007-08 BE	178.8	14.5	143.5	114.69	24.67	-77.59	688.50	59.65	1218.12	[illegible]50.09	2253.69	80.01
AAGR from 1996-97 to 2007-08		2.72		20.56		14.20		8.33		37.64		14.12

Source : Finance Department, Govt. of Kerala

Non-Plan Expenditure, Interest, Pension and Salary

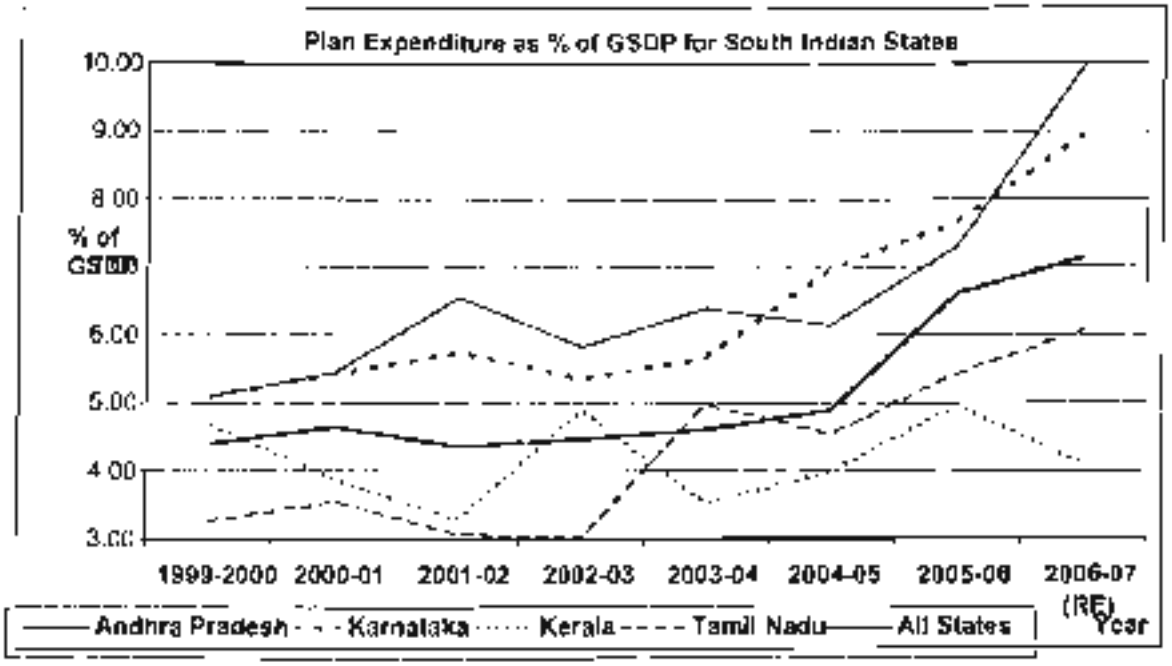
2.22 Interest, pension and salary are the major items coming under non-plan/non-developmental expenditure of the state. During the period 2006-07, the above three commitments accounted for about 77.7 per cent of the total revenue receipt of the state where as it was 80.20 per cent in 2005-06. The rate of growth of interest during 2006-07 over the previous year was 10.28 per cent. Pension was growing at an alarming rate of 15.15 per cent and salary at a rate of 18.54 per cent. The total commitment on interest, pension and salary which was 72.8 per cent of the revenue receipts and 65.9 per cent of revenue expenditure in 1996-97 gradually increased and reached at a level of 77.7 per cent of revenue receipts and 67.8 per cent of revenue expenditure in 2006-07. The budget estimate for 2007-08 shows that these commitments amount to 85.6 per cent of revenue receipts and 68.8 per cent of revenue expenditure The average annual growth rate of revenue receipts for the period from 1996-97 to 2007-08 is only 10.16 per cent, whereas the growth rate of total commitment for the above three items is 14.30 per cent. The annual growth rate of interest payments has increased from 5.17 per cent in 2005-06 to 10.28% in 2006-07 despite a fall in the growth of debt in the face of rising interest rate scenario. However, it was observed that interest payments as a percentage of revenue receipts ranged between 23 and 25 during the last five years keeping the recommendations of the XII Finance Commission. Trend in expenditure on interest pension and salaries is shown in Table 2.15.

Table 2.15
Trend in Expenditure on Interest, Pension and Salary

(Rs.Crore)

Year	Interest			Pension			Salary			Total		
	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expdr.
1996-97	1103.40	18.0	16.3	753.70	12.3	11.1	2616.70	42.8	38.5	4473.80	72.8	85.9
1997-98	1286.10	18.1	15.6	913.00	12.8	11.1	2803.30	39.4	34.0	5002.40	70.3	60.7
1998-99	1446.30	20.1	15.7	1154.30	16.0	12.5	3254.70	45.2	35.3	5855.30	81.3	63.5
1999-00	1952.30	24.6	16.9	1808.30	22.8	15.6	4502.90	56.7	38.9	8263.50	104.1	71.4
2000-01	2257.60	25.9	19.0	1929.50	22.1	16.2	4491.60	51.4	37.8	8678.70	99.4	73.1
2001-02	2489.47	27.5	21.3	1837.90	20.3	15.8	4200.80	46.4	36.0	8528.20	94.2	73.1
2002-03	2946.77	27.7	20.0	2282.90	21.5	15.5	4678.99	44.0	31.7	9908.66	93.1	67.1
2003-04	3328.30	28.2	21.5	2408.83	20.4	15.5	5067.09	42.9	32.7	10804.22	91.4	69.7
2004-05	3612.54	26.8	21.0	2600.77	19.3	15.1	5345.58	39.5	31.1	11558.89	85.5	67.3
2005-06	3799.25	24.8	20.6	2861.18	18.7	15.5	5605.49	36.7	30.4	12265.92	80.2	66.6
2006-07	4189.70	23.04	20.1	3294.58	18.1	15.8	6644.48	36.5	31.9	14128.76	77 7	67.8
2007-08 BE	4778.3	22.3	17.9	4578.22	21.4	17.2	9006.86	42.0	33.7	18363.38	85.6	68.8
AAGR from 1996-97 to 2007-08	14.5			18.9			12.6			14.3		

Source : Finance Department, Govt. of Kerala



Source: State Finances: A Study of Budgets - Various Issues, Reserve Bank of India (RBI), Kerala Revised Budget 2006-07 and Central Statistical Organisation (CSO)

Note: GSDP figures up to 2004-05 are from CSO and for last two years these are estimated on the basis of their respective recent trends and for Kerala we assumed 14% growth rate of nominal GSDP for last two years

2.23 Developmental expenditure as a ratio of GSDP experienced a major and consistent contraction. The table below shows expenditures on health, education, water supply and sanitation and social services as a whole during the recent past in Kerala. The figures for 2006-07 show the new policy thrust to reverse the pattern of contraction.

Year	Health	Education	Water Supply & Sanitation	Social Services
1999-2000	1.14	4.20	0.29	6.83
2000-01	0.99	3.78	0.23	6.08
2001-02	1.04	3.44	0.18	5.71
2002-03	0.99	3.68	0.24	6.31
2003-04	0.96	3.46	0.26	5.68
2004-05	0.92	3.26	0.26	5.94
2005-06	1.03	3.41	0.28	6.31
2006-07 (RE)	0.99	3.91	0.34	6.58

Source: State Finances: A Study of Budgets - Various Issues, RBI.

Debt Profile

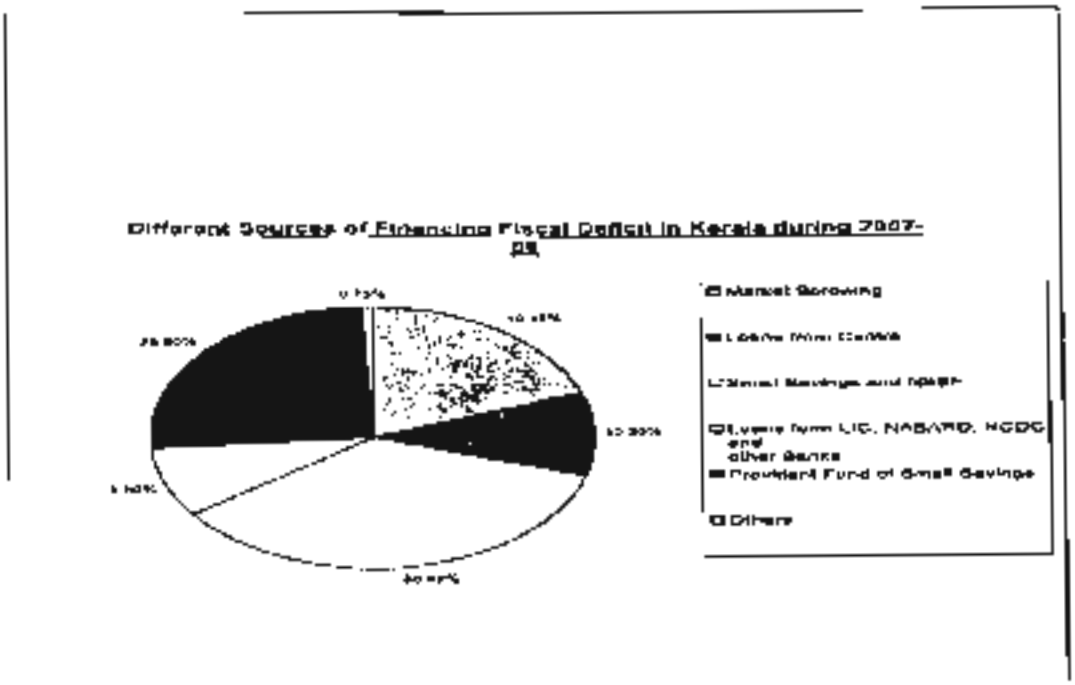
2.24 Debt liabilities of the state include borrowings on account of internal debt, treasury savings and provident fund and loans and advances from Government of India. Total debt of the state increased from Rs. 11420.91 crore in 1996-97 to Rs. 57138.71 crore in 2007-08 (BE) (See Table 2.16).

Table 2.16
Debt of the State

(Rs. Crore)

Year	Internal Debt	Growth rate	Small Savings Provident Fund, Others	Growth rate	Loans and Advances from the Central Govt.	Growth rate	Total	Growth rate
1996-97	2970.85	19.49	3837.52	7.23	4612.54	8.93	11420.91	12.93
1997-98	3585.12	20.68	4292.51	11.86	4990.51	8.19	12868.14	12.67
1998-99	4424.36	23.41	5627.78	31.11	5648.13	13.18	15700.27	22.01
1999-00	5735.61	29.64	8537.67	51.71	5902.79	4.51	20176.10	28.51
2000-01	7627.34	32.98	10189.75	19.35	6101.88	3.37	23919.97	18.55
2001-02	9342.46	22.49	11261.65	10.52	6346.46	4.01	26950.57	12.67
2002-03	11747.02	25.74	12778.37	13.47	6534.88	2.97	31060.27	15.25
2003-04	17420.99	48.30	14403.33	12.72	5627.96	-13.88	37452.23	20.58
2004-05	21676.23	24.43	14790.83	2.69	5410.82	-3.86	41877.88	11.82
2005-06	25670.72	18.43	14840.93	0.34	5417.40	0.12	45929.05	9.67
2006-07	29969.15	16.74	14534.26	-2.07	5371.77	-0.84	49875.18	8.59
2007-08 BE	34557.80	15.31	16450.86	13.19	6130.05	14.12	57138.71	14.56
AAGR from 1996-97 to 2007-08		25.29		14.99		2.90		15.90

Source : Finance Department, Govt. of Kerala



Source: State Finances, a Study of Budgets 2007-08 (RBI)

2.25 Debt burden of the State Government is a matter of serious concern. While in the past, a significant portion of the debt burden went towards the financing of state plan; but in recent times a substantial part has to be used to bridge the gap between non-plan revenue receipts and expenditure. The Balance of Current Revenue (BCR) becomes negative on account of higher rate of growth of non-plan revenue expenditure over the rate of growth of revenue receipts and the plan size getting increased every year results in higher borrowing for financing the plan. However, the growth in debt which was 9.67 per cent in 2005-06 declined to 8.59 per cent in 2006-07.

2.26 Internal debt continued to grow faster with an annual average growth rate of 25.29 per cent during the period 1996-97 to 2007-08. A comparison of debt/GSDP ratio as well as per capita debt liability of Kerala with neighboring states and all states' average can be seen in Table 2.17.

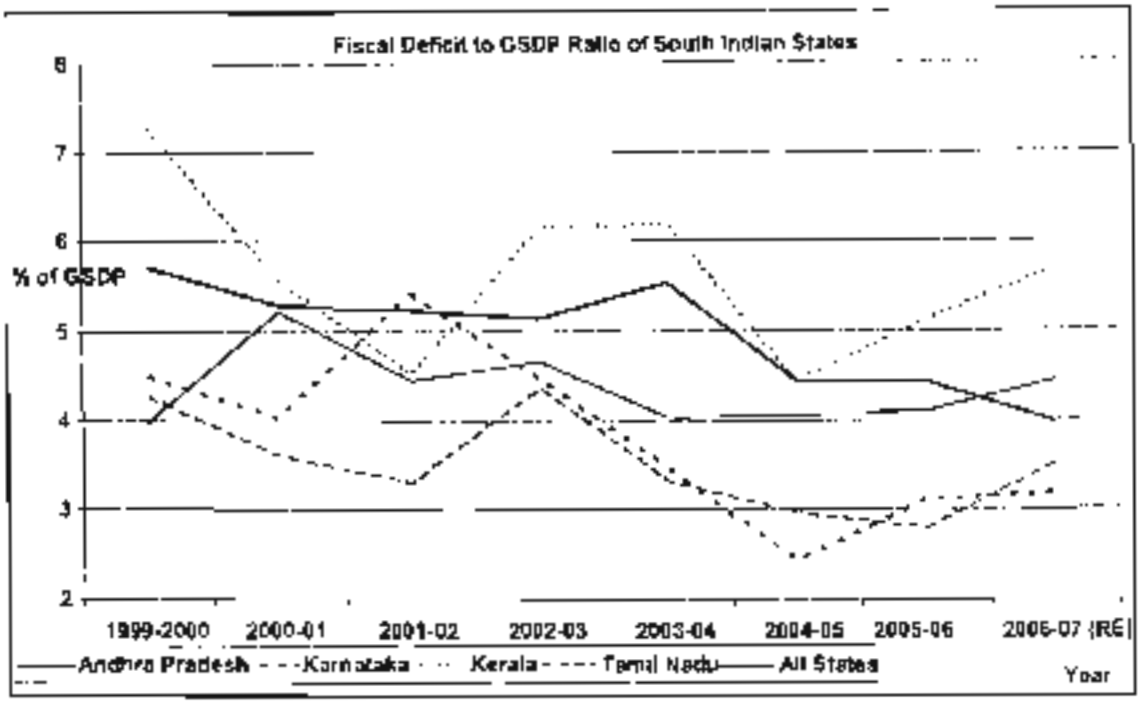
Table 2.17

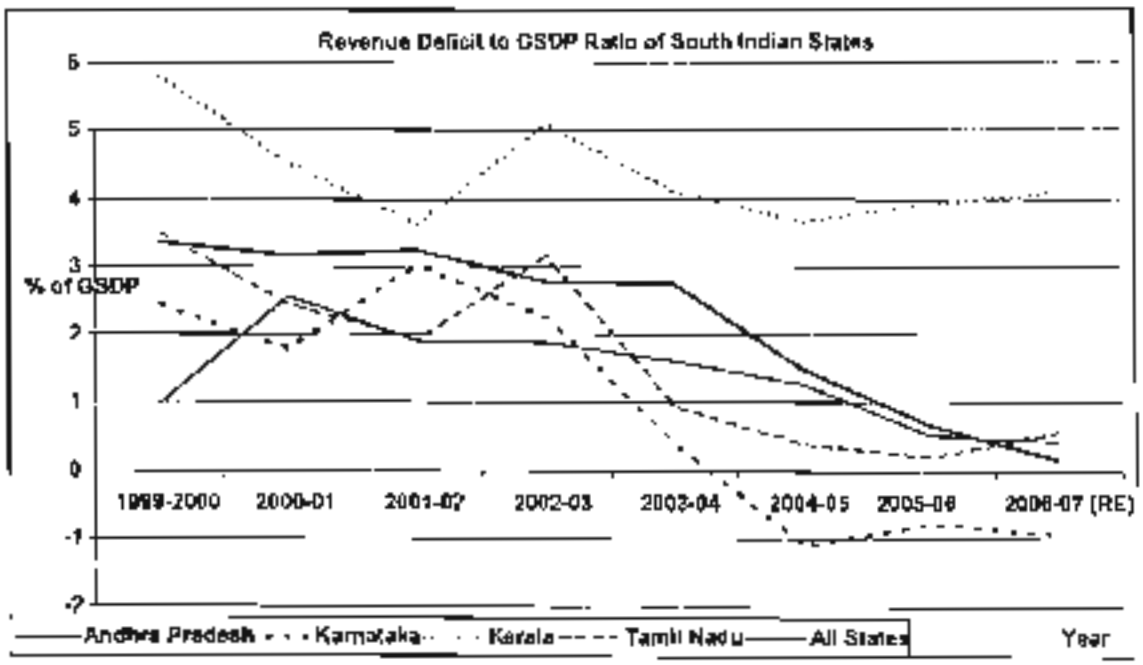
Debt Position: Comparison with Other States

State	Debt/GSDP Ratio(%)					Per Capita Debt (Rs)				
	2001	2002	2003	2004	2005	2001	2002 *	2003 *	2004 *	2005
Andhra Pradesh	26	28	31	32	34	4724	5542	6420	7290	8427
Karnataka	21	25	28	-	-	4254	5073	5838	6587	7446
Kerala	**32**	**35**	**39**	**40**	**42**	**7414**	**8388**	**9723**	**10922**	**12681**
Tamil Nadu	21	22	25	28	27	4644	5211	6207	7382	7782
All States	24	-	31	32	38	4996	5639	6402	7405	8343

Source : Budget in Brief, Govt. of Kerala 2007-08

2.27 Both the fiscal deficit to GSDP ratio and the revenue deficit to GSDP ratio are the highest in Kerala among all South Indian States and stand above the all States' average.





Source: State Finances: A Study of Budgets - Various Issues, Reserve Bank of India (RBI), GoI

2.28 The per capita debt of Kerala which was Rs. 7414 in 2001 increased to Rs. 12681 in 2005 as against all state level of Rs. 8343. The per capita debt of neighbouring states in 2005 next to Kerala was Andhra Pradesh (Rs.8427) followed by Tamil Nadu (Rs. 7782) and Karnataka (Rs. 7446). When the debt/GSDP ratio of Kerala in 2005 was 42 per cent, that of neighbouring states and of all states ranged between 27 per cent and 38 per cent.

2.29 The debt profile of the state is given Table 2.18. The gross retention (receipt minus disbursement) and net retention (gross retention minus interest) which were Rs. 4372.72 crore and Rs. 573.11 crore respectively in 2005-06 declined to Rs. 3946.13 crore and Rs. -150.03 crore in 2006-07. The budget estimate for 2007-08 shows the gross retention as Rs. 7263.52 crore and net retention as Rs. 2571.47 crore.

Table 2.18
Debt Profile of the State (1998-99 to 2007-08)

(Rs. Crore)

Item		1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 BE
Loans and advances from Governement of India	Receipts	869.59	1072.97	483.11	780.69	1192.86	968.17	1482.11	803.29	205.01	1383.38
	Disbursements	211.96	246.95	284.01	536.12	1004.44	1875.09	1699.25	596.71	250.64	625.1
	Interest	606.54	703.74	732.26	778.56	805.02	809.92	671.60	412.50	432.73	513.21
	Gross Retention	657.63	826.02	199.10	244.57	188.42	-906.92	-217.14	6.58	-45.63	758.28
	Net Retention	51.09	122.28	-533.16	-533.99	-616.60	-1716.84	-888.74	-405.92	-478.36	245.7
Small Savings and Deposits	Receipts	3875.61	6986.41	6295.44	5917.95	8147.87	7011.55	6317.80	6146.25	5838.15	8064.54
	Disbursements	2935.66	4981.87	5332.26	4830.22	6770.85	5824.84	6523.40	6381.50	6818.20	7798.49
	Interest	78.92	273.00	357.84	441.64	578.5	662.46	668.33	633.16	782.59	820.00
	Gross Retention	939.95	2004.54	888.02	1087.73	1377.02	1186.71	-205.60	-235.25	-980.05	266.05
	Net Retention	861.03	1731.54	530.18	646.09	798.52	524.25	-873.93	868.41	-1762.64	-553.95
State Provident Funds	Receipts	1128.11	1731.92	1722.63	1268.51	1685.99	1761.58	1578.63	1595.75	2058.83	3633.06
	Disbursements	770.01	859.97	1033.71	1284.34	1546.29	1323.33	985.53	988.85	1385.45	1982.52
	Interest	276.32	364.19	391.02	290.03	375.98	353.86	449.14	537.74	500.67	666.04
	Gross Retention	358.10	853.95	688.92	-15.83	139.70	438.25	593.10	606.9	673.38	1650.54
	Net Retention	81.78	489.76	297.90	-305.86	-236.28	84.39	143.96	69.16	172.71	984.50
Internal Debt	Receipts	3101.91	4858.25	6975.36	7849.7	10518.26	14120.87	14442.36	11366.48	11577.39	13628.42
	Disbursements	2262.67	4118.37	5083.63	6134.58	8113.70	8446.95	10187.07	7371.99	7278.96	9039.77
	Interest	465.38	589.23	747.71	941.14	1140.29	1502.06	1823.45	2216.21	2380.17	2692.8
	Gross Retention	839.24	739.88	1891.73	1715.12	2404.56	5673.92	4255.29	3994.49	4298.43	4588.65
	Net Retention	373.86	150.65	1144.02	773.98	1264.27	4171.86	2431.84	1778.28	1918.26	1895.85
Total Debt	Receipts	8975.22	14631.55	15476.5	15816.85	21544.98	23862.17	23820.90	19711.77	19679.38	26709.40
	Disbursements	6180.30	10207.16	11733.6	12785.26	17435.28	17470.21	19395.25	15339.05	15733.25	19445.88
	Interest	1427.16	1930.16	2228.83	2451.37	2899.79	3328.30	3612.52	3799.61	4096.16	4692.05
	Gross Retention	2794.92	4424.39	3742.93	3031.59	4109.70	6391.96	4425.65	4372.72	3946.13	7263.52
	Net Retention	1367.76	2494.23	1514.10	580.22	1209.91	3063.66	813.13	573.11	-150.03	2571.47

Source : Finance Department, Govt. of Kerala

Contingent Liabilities

2.30 Like other debt liabilities, contingent liabilities will also become debt obligations of the state in the event of default by borrowing public sector units for which government is a guarantor. The outstanding guarantees of the State Government from 1996-97 to 2006-07 are shown in Table 2.19. Over a decade, liability on account of guarantee increased from Rs. 1948.97 crore in 1996-97 to Rs. 9405.33 crore in 2006-07. But it is lesser by Rs 2529.36 crore than the liability of Rs. 11934.69 crore of 2005-06.

Table 2.19
Outstanding Guarantees

(Rs. Crore)

Year	Maximum Amount Guaranteed	Amount Outstanding
1996-97	5867.82	1948.97
1997-98	6656.89	3292.29
1998-99	9078.16	5112.96
1999-00	11431.59	7952.24
2000-01	12797.80	9553.17
2001-02	14222.46	11817.53
2002-03	14922.61	12623.88
2003-04	15612.67	14009.18
2004-05	14783.36	12315.96
2005-06	13751.80	11934.69
2006-07	12646.70	9405.33
2007-08 BE	NA	NA

Source: Finance Department, Govt. of Kerala

2.31 For discouraging guarantees to public sector undertakings and co-operatives for normal commercial operations that can be secured through appropriate arrangements by due diligence, the Kerala Ceiling on Government Guarantee Act, 2003 was enacted by government. As per the Act, the outstanding government guarantee as on the first day of April of every year shall not exceed Rs. 14,000 crore. In order to achieve the objective of this Act Government is encouraging the public sector units to secure loans on the strength of their mortgagable assets or through partial guarantees.

Performance During 10th Five Year Plan

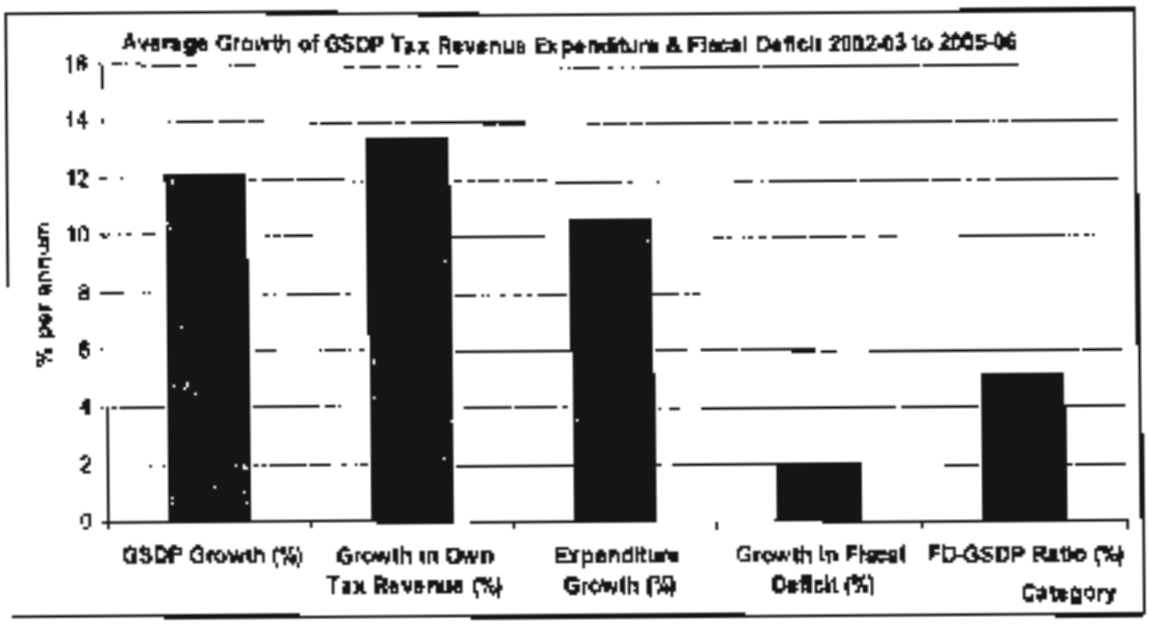
2.32 The overall fiscal performance of Kerala during 10th Five year Plan could be summarised as under. The nominal GSDP grew at an annual average rate of more than 12.5% and if we consider the first four years of the plan, the own tax revenue of the State increased at a rate of only 13.5% registering an extremely low tax buoyancy as compared to other States in India.

Growth Rates of Some Important Fiscal Variables for Kerala during X Plan Period

Year	2002-03	2003-04	2004-05	2005-06	2006-07
GSDP at Current Prices	81146	89461	100531	114605	130650
GSDP Growth (%)	12.08	10.25	12.37	14.00	14.00
Total Revenue	10634	11815	13501	15295	19140
Revenue Growth (%)	17.42	11.11	14.26	13.29	25.14
State's Own Tax Revenue	7303	8089	8964	9780	11663
Growth in Own Tax Revenue (%)	23.28	10.77	10.82	9.10	19.26
Centre to State Transfer	2654	2920	3718	4578	6365
Growth in Transfer (%)	2.47	10.03	27.34	23.14	39.02
Total Government Expenditure	15705	17427	18048	19546	26768
Expenditure Growth (%)	19.59	10.97	3.56	8.30	36.95
Total Plan Expenditure	3974	3119	3953	4129	5345
Growth in Plan Expenditure (%)	67.62	-21.50	26.73	4.44	29.45
Total Non-Plan Expenditure	11731	14308	14094	15417	21423
Growth in Non-Plan Expenditure (%)	9.01	21.97	-1.49	9.38	38.96
Gross Fiscal Deficit	4994	5539	4452	4200	7535
Growth in Fiscal Deficit (%)	22.52	10.92	-19.62	-5.66	79.40
Gross Revenue Deficit	4119	3680	3669	3562	5415
Growth in Revenue Deficit (%)	58.05	-10.64	-0.31	-2.92	52.03
Revenue Deficit to GSDP Ratio(%)	4.53	3.59	3.66	2.80	1.99
FD-GSDP Ratio (%)	5.49	5.41	4.44	3.70	2.88

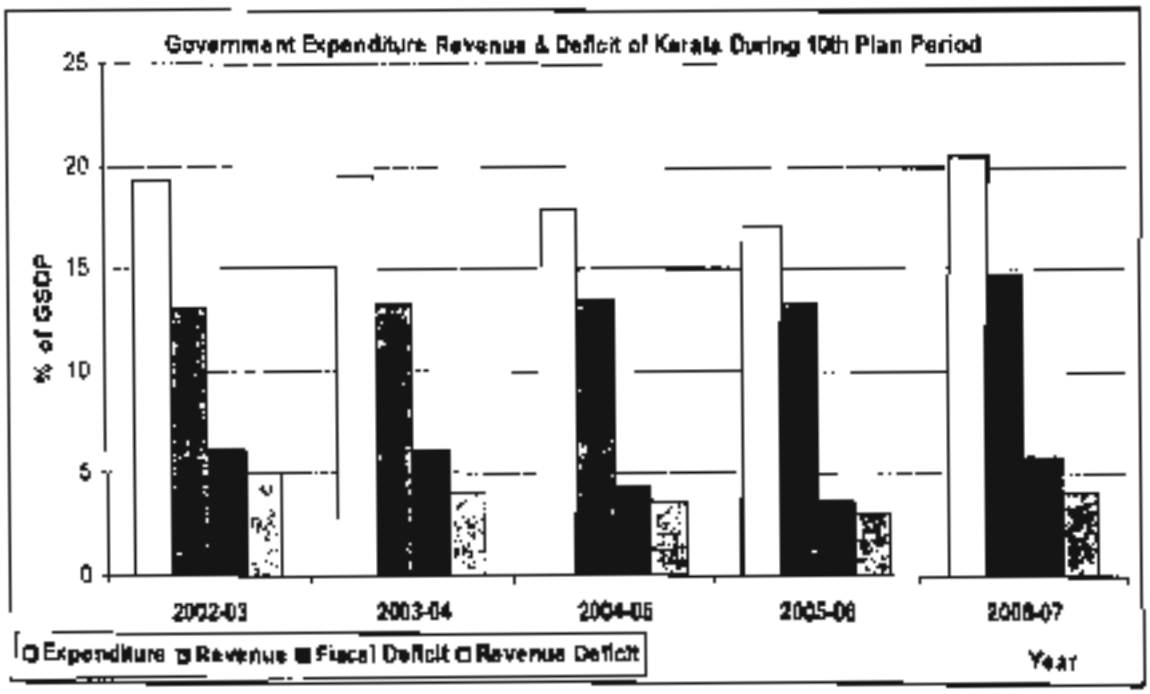
Source. Revised Budget Estimates of Kerala 2006-07, Govt. of Kerala.

2.33 The expenditure grew only at an annual average rate of 10.6%, registering an expenditure elasticity of less than unity with respect to GSDP and lowering the government expenditure to GSDP ratio during first four years of 10th Plan for which data are available. As a result, during this period, the fiscal deficit grew only at an annual average of 2% as compared to 12% growth in nominal GSDP. In fact, actual revenue deficit registered negative growth rates during 2003-04, 04-05 and 05-06 lowering its proportion to GSDP from 3.59% to just 2.80%. The fiscal deficit to GSDP ratio has also come down from 5.49% to 3.70% by 2005-06. Comparatively lower tax buoyancy caused lower growth rate in revenue and most of the extra revenue has been utilized in lowering the deficit as a proportion to GSDP. As a result, given the increasing trend of non-plan expenditure, the developmental and plan expenditure have suffered (graph below) and grown at a much lower rate than GSDP.



Source: Revised Budget Estimates of Kerala 2006-07, Govt. of Kerala.

2.34 The graph below shows the total government expenditure, revenue, fiscal and revenue deficit as percentages of GSDP during 2002-03 to 2006-07. We can see that the revenue-GSDP ratio has been more or less stagnant during this period excepting the budget estimate of last year. The expenditure to GSDP ratio came down continuously to bring down the fiscal deficit and revenue deficit as a proportion to GSDP. Therefore, Kerala's failure has been in raising tax buoyancy even after experiencing very high growth of GSDP during the period under consideration. To maintain 'fiscal discipline' according to FRBM legislation, the state had to compromise with the government expenditure and particularly plan and developmental expenditure. Ideally, 'fiscal discipline' should have been achieved by ensuring tax buoyancy rather than by reducing development expenditure.



Source: Revised Budget Estimates of Kerala 2006-07, Govt. of Kerala.

CHAPTER 3

INCOME AND POPULATION

Global Scenario

Global growth remained above 5 percent in the first half of 2007. China's economy gained momentum, growing 11½ percent and, for the first time, making the largest contribution to global growth evaluated at market as well as purchasing-power-parity (PPP) exchange rates. India continued to grow at more than 9 percent and Russia at almost 8 percent. These three countries alone accounted for one-half of global growth over the past year, but other emerging market and developing countries have also maintained robust expansions. Growth in the euro area and Japan slowed in the second quarter, after two quarters of strong gains.

3.2. Inflationary pressures have emerged as a key issue, even as the threat of a recession in the US economy has begun to loom large. In the global food grain markets the prices has been rising in response to the surging demand for major crops such as coal, soybeans and wheat whose prices have increased by 10 per cent, 55 per cent and 51 per cent respectively, from a year ago. The rally has swept up prices of other commodities such as barley, eggs, cheese, oat, sunflower etc..

3.3. Meanwhile, oil prices have recently rebounded to new highs of US$ 99 per barrel, owing to stronger growth of demand than initially projected in the face of lower production by the Organization of Petroleum Exporting Countries (OPEC), a smaller-than-expected rise of non-OPEC output, low US crude stock and continuing geopolitical concerns coupled with depreciation of dollar against major currencies.

3.4. Metal Prices have increased by 1.6 per cent during the first 9 months of 2007 over and above increase of 53.6 per cent in 2006 and 36.3 per cent in 2005. Gold touched the all time high price during 2007 due to geo-political tensions coupled with depreciation of dollar against euro boosting the demand for the precious metal as an alternative asset.

3.5. The exchange rate in emerging market and developing countries has continued to appreciate gradually against the U.S. dollar, and its real effective exchange rate has risen modestly in recent months. Nevertheless, China's current account surplus has widened further, and its international reserves have continued to soar, reaching $1.4 trillion at end August. Other emerging market countries have also faced strong foreign exchange inflows from both current and capital accounts, reflected in significant exchange rate appreciations in a number of countries and a rapid accumulation of international reserves that has driven strong domestic credit growth. Emerging market currencies generally weakened in July and August, in the context of turbulent global financial markets, but have since regained ground.

National Scenario

3.6. India's real GDP grew by 8.9 per cent in the quarter ended September 2007. This growth was considerably lower than 9.3 per cent growth clocked by the country's GDP during the first quarter of 2007-08. The lower growth can be attributed to the higher base last year and the slowdown in the growth is expected to pick up again in the coming quarters and the year is likely to end with a 9.1 per cent growth in GDP. While the growth in the manufacturing sector will be restricted to 9.5 per cent, the construction sector and services sector are likely to grow by a healthy 10.5 per cent and 10.7 per cent, respectively. The growth in the agricultural sector, electricity and mining is also expected to accelerate a bit to 3.9 per cent, 7.8 per cent and six per cent, respectively.

3.7. Inflation, measured in CPI-IW declined to a one-and-a-half year low of 5.5 per cent in October 2007. Average monthly inflation at the wholesale level, however, rose a tad to 3.1 per cent in November 2007 from three per cent in October 2007, reflecting the rise in the non-administered fuel prices.

3.8. Interest rates continue to witness downward pressure. Most factors including inflation that influence interest rate favour easing of interest rates. Corporates are sitting on surplus cash, retail lending has slowed down, inflation is at a low of 3.01 per cent and deposit mobilisation has almost outstripped credit growth. However, interest rates will not ease immediately. This is mainly because banks are not ready to immediately prune lending rates since that they have mobilised significant amount of deposit funds by offering high deposit rates.

3.9. Production of all major groups is expected to see a growth in the current fiscal year. Overall agricultural crops production is estimated to grow by 3.8 per cent during 2007-08.

3.10. Consumer goods dragged down the rate of growth in industrial production in the first half of 2007-08. Basic goods output grew by 9.4 per cent during April-September 2007 compared to 8.6 per cent in the year ago period. Capital goods production grew by 19.6 per cent compared to 17.5 per cent in the April-September 2006. However, growth in consumer goods production dropped sharply to 5.3 per cent from 11.5 per cent during April-September 2006. This was one of the prime reasons for a slowdown in the IIP growth to 9.2 per cent in the first half of the current year compared to the 11.1 per cent in the corresponding year ago period.

3.11. Corporate India is expected to witness a slowdown in sales growth during the December 2007 quarter to 13 per cent compare to a sales growth of 24.7 per cent witnessed in the December 2006 quarter. This is largely on account of a significant slowdown in the sales expansion of sectors like chemicals, information technology, food products, commercial vehicles, auto ancillaries, two & three wheelers, aluminium & aluminium products and a moderation in the robust growth of sectors like cement, steel, metal, products, pig & sponge and hotels sectors.

3.12. In the first seven months of fiscal 2007-08, Central government expenditure grew by 28 per cent to Rs.3,68,902 crore. Revenue from taxes have shown buoyancy till October 2007. Gross tax collection recorded 26.5 per cent increase during April-October 2007.

3.13. Total bank deposits grew by a minimum of 23.9 per cent while credit growth during the same was a maximum of 23.3 per cent. The improvement in deposit mobilisation in recent months is largely attributed to the higher deposit rates offered by banks across various maturities as also the special deposit schemes offered by the larger banks.

3.14. During April-October 2007, imports grew by a higher rate of 25.4 per cent than the 20.8 per cent increase recorded in exports. As a result, trade deficit widened to USD 44.4 billion from USD 32.9 billion during April-October 2006.

3.15. Foreign institutional investors poured USD 8.5 billion into the country during April-August 2007, accounting for nearly half of the total foreign investments coming into the country during this period. Overseas investors brought in about 5 billion US dollars as foreign direct investment during April-August 2007. As strong inflows continue, the average market rate of the rupee vis-a-vis the dollar moved from Rs.40.34 per dollar in September to Rs.39.5 per dollar in October and further to Rs.39.4 per dollar in November 2007.

3.16. The BSE Sensex rises from 14091 in 2007 January to 20500 as on January 2008 and NSE 50 index is also rises from 4083 in 2007 January to 6170 as on 2008 January due to large

inflow of money through FII, domestic mutual funds, better corporate result especially in cement, steel, construction, infrastructural, power sectors etc and increased participation of general public in stock market

3.17. A boom is witnessed in the Indian Stock market during the period. Indian companies continued to raise resources aggressive from domestic primary market during 2007.

National Income

3.18. As per the statistics published by Central Statistical Organisation the Revised Estimate of Gross Domestic Product (GDP) of India at factor cost at constant (1999-2000) prices for the year 2006-07 is estimated at Rs.28,48,157 crore as against the Quick Estimate of GDP for the year 2005-06 of Rs.26,04,532 crore. This shows that the GDP in real terms could grow at a rate of 9.4 per cent during 2006-07 compared to the growth rate of 9 per cent during 2005-06. GDP at Factor cost at current prices in the year 2006-07 is estimated at Rs.37,43,472 crore showing a growth rate of 15.2 per cent over the Quick Estimate of GDP of Rs.32,50,932 crore in 2005-06.

Table 3.1
National Product, Domestic Product & Per Capita Income at Factor Cost
(All India)

(Rs. Crores)

Sl. No	Item	At 1999-2000 Prices			At Current Prices		
		2004-05	2005-06*	2006-07**	2004-05	2005-06*	2006-07**
1	Gross National Product (GNP)	23,67,711	25,80,761 (9.0)	28,29,349 (9.6)	28,33,558	32,25,963 (13.8)	37,22,669 (15.4)
2	Net National Product (NNP) (National Income)	21,03,350	22,95,243 (9.1)	25,22,576 (9.9)	25,01,067	28,46,762 (13.8)	32,96,639 (15.8)
3	Gross Domestic Product (GDP)	23,89,660	26,04,532 (9.0)	28,48,157 (9.4)	28,55,933	32,50,932 (13.8)	37,43,472 (15.2)
4	Net Domestic Product (NDP)	21,25,299	23,19,014 (9.1)	25,41,384 (9.6)	25,23,442	28,71,731 (13.8)	33,17,442 (15.5)
5	Per Capita NNP (Rs)	19,297	20,734 (7.4)	22,483 (8.4)	22,946	25,716 (12.1)	29,382 (14.3)

Source. Central Statistical Organisation.
Note: The figures in Parenthesis show the percentage change over previous year.
**-Quick Estimate, **- Revised Estimate*

3.19. The Revised Estimate of National Income (Net National Product at factor cost) at constant (1999 –2000) prices is estimated at Rs. 25,22,576 crore during 2006-07 as against the previous year's Quick Estimate of Rs. 22,95,243 crore. In terms of growth rates, the National Income is estimated to rise by 9.9 per cent during 2006-07 compared to the growth rate of 9.1 per cent in 2005-06. At current prices the Revised Estimate of National Income at factor cost in 2006-07 is estimated at Rs. 32,96,639 crore, showing a growth rate of 15.8 percent over the Quick Estimate of National Income for 2005-06 of Rs 28,46,762 crore.

3.20. The details of GDP and National Income at current and constant (1999-2000) prices from 1999-2000 to 2006-07 with percentage change over previous year are given in Appendices 3.1 to 3.4

Per Capita National Income

3.21. The per capita income in real terms (at 1999-2000 prices) during 2006-07 is estimated to attain a level of Rs. 22,483 as compared to the Quick Estimates for the year 2005-06 of Rs.20,734. The growth rate in per capita income is estimated at 8.4 per cent during 2006-07. The per capita income at current prices during 2006-07 is estimated to attain a level of Rs.29,382 showing a rise of 14.3 per cent as compared to the Quick Estimates for the year 2005-06 of Rs.25,716.

3.22. The sectoral distribution of GDP at constant (1999-2000) prices and current prices with percentage change over previous year is given in Table 3.2 and Table 3.3.

Table 3.2
Sector-wise Distribution of GDP at Factor Cost by Economic Activity- All India
(At 1999-2000 prices)

(Rs. Crore)

Sl. No	Industry	2004-05	2005-06 (Quick Estimate)	2006-07 (Revised Estimate)	Percentage change over previous year	
					2005-06	2006-07
1	Agriculture forestry & fishing	4,83,080	5,12,147	5,25,875	6.0	2.7
2	Mining &quarrying	52,250	54,128	56,912	3.6	5.1
3	Manufacturing	3,61,115	3,93,956	4,42,503	9.1	12.3
4	Electricity, gas & water supply	54,531	57,401	61,671	5.3	7.4
5	Construction	1,55,431	1,77,543	1,96,555	14.2	10.7
6	Trade, hotels, transport and communication	6,16,024	6,80,237	7,68,578	10.4	13.0
7	Financing, insurance, real estate & business services	3,23,187	3,58,535	3,96,394	10.9	10.6
8	Community, Social & Personal services	3,44,042	3,70,584	3,99,668	7.7	7.8
	GDP at factor cost	**23,89,660**	**26,04,532**	**28,48,157**	**9.0**	**9.4**

Source: Central Statistical Organisation

3.23. A high growth rate of 9.4 per cent in GDP could be achieved during 2006-07 because of high growths in sectors like trade, hotels, transport and communication (13%); manufacturing (12.3%); construction (10.7%); financing, insurance, real estate and business services (10.6%); Community, Social and Personal Services (7.8%) etc.

Table 3.3
Sector wise Distribution of GDP at Factor Cost by Economic Activity-All India
(At Current Prices)

(Rs. Crore)

Sl. No.	Industry	2004-05	2005-06 (Quick Estimate)	2006-07 (Revised Estimate)	Percentage change over previous year 2005-06	2006-07
1	Agriculture forestry & fishing	5,36,629	5,95,058	6,56,051	10.9	10.2
2	Mining &quarrying	84,464	90,482	1,02,152	7.1	12.9
3	Manufacturing	4,53,603	5,19,746	6,09,596	14.6	17.3
4	Electricity, gas & water supply	60,607	65,979	73,135	8.9	10.8
5	Construction	1,85,669	2,22,110	2,59,223	19.6	16.7
6	Trade, hotels, transport and communication	7,14,547	8,24,936	9,68,677	15.4	17.4
7	Financing, insurance, real estate & business services	4,13,129	4,64,493	5,40,160	12.4	16.3
8	Community, Social & Personal services	4,07,285	4,68,128	5,34,479	14.9	14.2
	GDP at factor cost	**28,55,933**	**32,50,932**	**37,43,472**	**13.8**	**15.2**

Source: Central Statistical Organization

3.24. An analysis of the percentage distribution of GDP shows that the contribution from primary sector to the GDP is decreasing and that from secondary and tertiary sectors are increasing.

Table 3.4
Gross Domestic Product at Factor Cost by Economic Activity – Percentage Distribution
(All India)

Sl. No.	Industry of Origin	At 1999-2000 Prices			At Current Prices		
		2004-05	2005-06 (Quick Estimate)	2006-07 (Revised Estimate)	2004-05	2005-06 (Quick Estimate)	2006-07 (Revised Estimate)
1	Agriculture, Forestry & Fishing	20.2	19.7	18.5	18.8	18.3	17.5
2	Mining & Quarrying	2.2	2.1	2.0	2.9	2.8	2.7
	Sub Total-Primary	**22.4**	**21.8**	**20.5**	**21.7**	**21.1**	**20.2**
3	Manufacturing	15.1	15.1	15.5	15.9	16.0	16.3
4	Electricity, Gas & Water Supply	2.3	2.2	2.2	2.1	2.0	2.0
5	Construction	6.5	6.8	6.9	6.5	6.8	6.9
	Sub Total-Secondary	**23.9**	**24.1**	**24.6**	**24.5**	**24.8**	**25.2**
6	Trade, Hotels,	25.8	26.1	27.0	25.0	25.4	25.9

	Transport and Communication						
7	Financing, Insurance, Real Estimate & Business Services	13.5	13.8	13.9	14.5	14.3	14.4
8	Community Social & Personal	14.4	14.2	14.0	14.3	14.4	14.3
	Sub Total-Tertiary	**53.7**	**54.1**	**54.9**	**53.8**	**54.1**	**54.6**
GDP		**100**	**100**	**100**	**100**	**100**	**100**

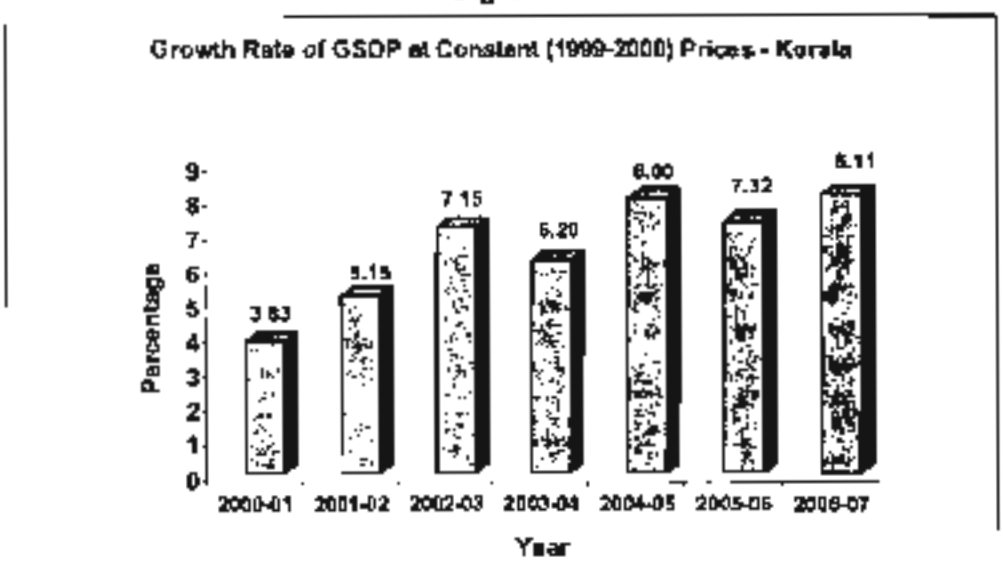
Source. Central Statistical Organisation.

3.25. The percentage distribution of GDP during 2006-07 at constant (1999-2000) prices shows that 27 percent of the GDP is from Trade, Hotels, Transport and Communication followed by Agriculture, Forestry, and Fishing (18.5 percent) and manufacturing (16.5 percent). At current prices the maximum contribution to GDP during 2006-07 is from Trade, Hotels, Transport and Communication (25.9 percent) followed by Agriculture, Forestry and Fishing (17.5 percent) and manufacturing (16.3 percent) (Table 3.4).

State Income

3.26. As per the statistics published by Department of Economics and Statistics, the quick estimate of Gross State Domestic Product (GSDP) at factor cost at constant (1999-2000) prices is Rs 1,06,832.73 crore during 2006-07 as against the provisional estimate of Rs. 98,817.08 crore during 2005-06, registering a growth rate of 8.1 per cent in 2006-07 At current prices the Gross State Domestic Product is estimated at Rs. 1,32,738.53 crore (quick estimate) during 2006-07 as against the provisional estimate of Rs. 118998.19 crore during 2005-06. The growth rate at current prices is 11.6 per cent in 2006-07 compared to 11.2 per cent in 2005-06.

Fig: 3.1



Source: Department of Economics and Statistics

3.27. The quick estimate of Net State Domestic Product (State Income) at factor cost at constant (1999-2000) prices is Rs. 92119.77 crore during 2006-07 compared to the provisional

estimate of Rs. 85759.29 crore during 2005-06 recording a growth rate of 7.4 per cent in 2006-07. At current prices the State Income is estimated at Rs. 113475.14 crore (quick estimate) in 2006-07 compared to the provisional estimate of Rs.102508.19 crore during 2005-06. The growth rate of State Income at current prices is 10.7 per cent in 2006-07 compared to 11.2 per cent in 2005-06 (Table 3.5).

Table 3.5
State Domestic Product and Per capita Income of Kerala

Sl. No	Item	Income (Rs. Crore)			Growth rate (Per cent)	
		2004-05	2005-06 (P)	2006-07 (Q)	2005-06 (P)	2006-07 (Q)
1	2	3	4	5	6	7
1	Gross State Domestic Product a) At Constant (1999-2000) prices	92074.98	98817.08	106832.73	7.3	8.1
	b) At Current prices	107053.67	118998.19	132738.53	11.2	11.6
2	Net State Domestic Product (State Income) a) At Constant (1999-2000) prices	80090.79	85759.29	92119.77	7.1	7.4
	b) At Current prices	92151.98	102508.19	113475.14	11.2	10.7
3	Per Capita State Income (Rs) a) At Constant (1999-2000) Prices	24217	25657	27284	6.0	6.3
	b) At Current Prices	27864	30668	33609	10.1	9.6

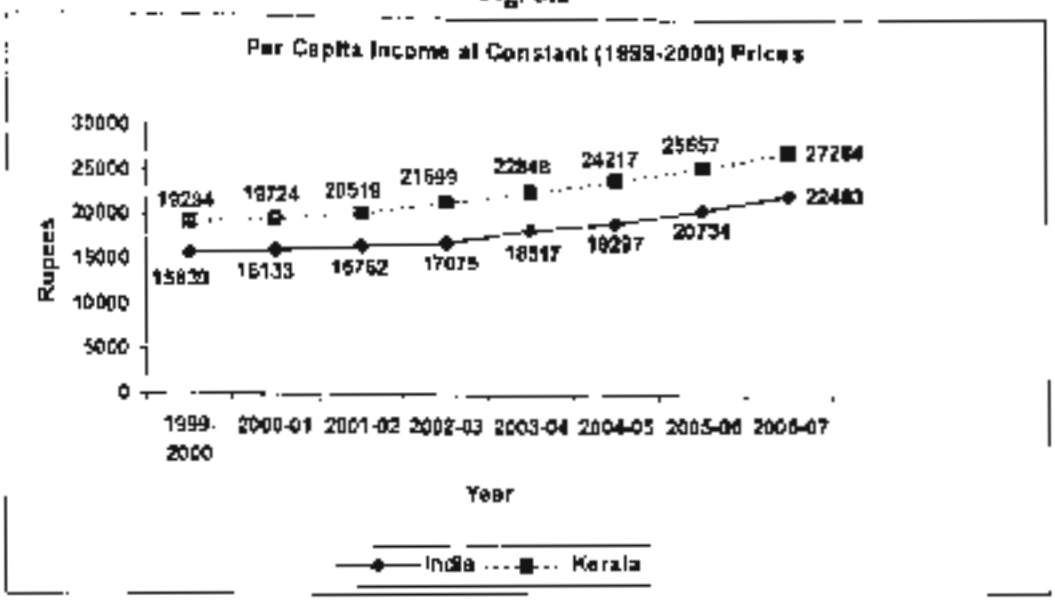
Source: Department of Economics & Statistics
P: Provisional, Q: Quick Estimate

Per Capita State Income

3.28. The per capita Gross State Domestic Product at constant (1999-2000) prices during 2006-07 is Rs.31642 compared to Rs.31438 during 2005-06. The growth rate in per capita GSDP is estimated at 0.65 per cent during 2006-07. At current prices the per capita GSDP during 2006-07 is Rs.39315 as against Rs.35602 during 2005-06 registering a growth rate of 10.4 per cent.

3.29. The per capita state income at constant (1999-2000) prices increased from Rs. 25657 in 2005-06 to Rs. 27284 in 2006-07, registering a growth rate of 6.3 percent. At current prices the per capita state income during 2006-07 is Rs. 33609 as against Rs.30668 during 2005-06, recording a growth rate of 9.6 percent in 2006-07. The per capita state income is higher than the per capita national income (See Fig. 3.2)

Fig. 3.2



Source: Central Statistical Organization and Department of Economics and Statistics

Sectoral Distribution of Gross State Domestic Product

3.30. During 2006-07 the contribution from primary, secondary and tertiary sectors to the GSDP at constant (1999-2000) prices constitutes 17.8%, 21.6% and 60.6% respectively. At current prices, the primary, secondary and tertiary sectors contribute 16.5%, 22.2% and 61.3% respectively to the GSDP during 2006-07. While analysing the sectoral distribution of state income it is seen that the contribution from primary sector is decreasing and tertiary sector is increasing. But secondary sector remains almost same level of about 22 per cent. The details of sectoral distribution of GSDP with percentage during the last three years is given in Table 3.6.

Fig 3.3
Sectoral Distribution of GSDP – Kerala

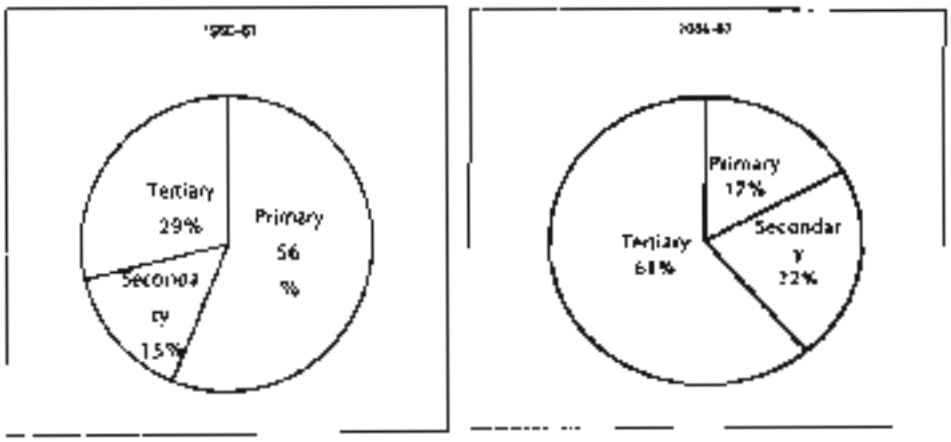


Table 3.6
Sectoral Share of Gross State Domestic Product (GSDP) at Factor Cost (2004-05 to 2006-07)

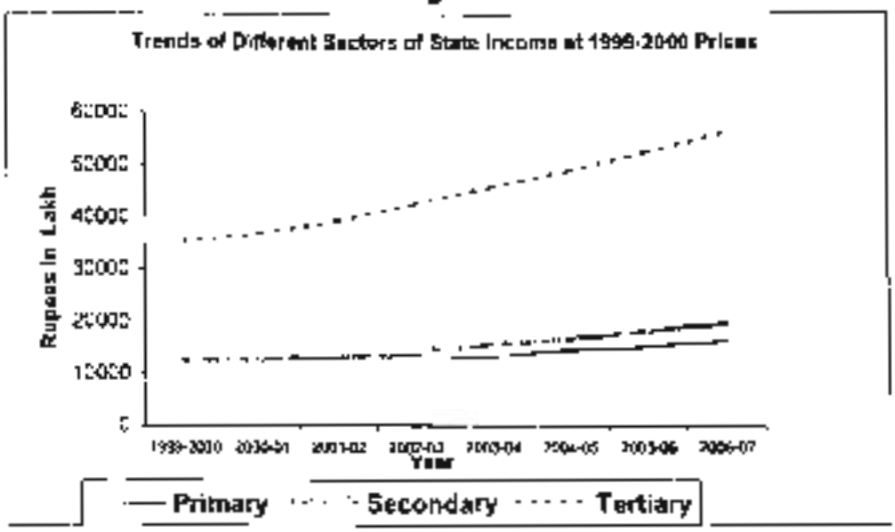
(Rs. Crore)

Sl. No.	Industry of Origin	At Current Prices						At Constant (1999-2000) Prices					
		2004-05		2005-06(P)		2006-07 (Q)		2004-05		2005-06(P)		2006-07 (Q)	
		GSDP	%	GSDP	%	GSDP	%	GSDP	%	GSDP	%	GSDP	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Agriculture & Allied Activities	14813.6	13.8	16265.7	13.7	17879.47	13.5	13752.12	14.9	14673.25	14.9	15538.72	14.5
2	Forestry & Logging	1267	1.2	1267	1	1249.67	0.9	1693.16	1.8	1693.16	1.7	1828.96	1.7
3	Fishing	1814.22	1.7	2481.96	2.1	2644.09	2	1535.53	1.7	1469.02	1.5	1548.3	1.5
4	Mining &Quarrying	203.16	0.2	203.16	0.2	201.05	0.1	125.48	0.1	125.48	0.1	121.95	0.1
	Sub-Total Primary	**18097.98**	**16.9**	**20217.82**	**17**	**21974.28**	**16.5**	**17116.29**	**18.5**	**17960.91**	**18.2**	**19039.93**	**17.8**
5	Manufacturing	9125.23	8.5	10198.1	8.6	11428.38	8.6	7531.66	8.2	7945.98	8	8396.7	7.9
6	Electricity, Gas & Water Supply	2164.95	2.0	2364.85	1.9	2470.22	1.9	1786.98	1.9	1841	1.9	1810.89	1.7
7	Construction	11841.14	11.1	13568.44	11.4	15534.03	11.7	10224.26	11.1	11501.45	11.6	12841.43	12
	Sub-Total: Secondary	**21131.35**	**21.6**	**26132.39**	**21.9**	**29432.63**	**22.2**	**19542.9**	**21.2**	**21288.43**	**21.5**	**23049.02**	**21.6**
8	Transport, Storage & Communication	11739.61	11	13596.32	11.4	16208.3	12.2	10951.77	11.9	12590.32	12.8	14671.24	13.8
9	Trade, Hotels & Restaurants	22415.56	20.9	23976.8	20.2	25424.86	19.1	18603.88	20.2	19202.24	19.4	19757.1	18.5
10	Banking and Insurance	6032.76	5.6	6876.06	5.8	7406.39	5.6	5207.41	5.7	5755.75	5.8	6330.73	5.9
11	Real Estate ownership, Business, legal	10681.5	10	12020.94	10.1	13681.87	10.3	8174.78	8.9	9072.36	9.2	9657.41	9
12	Public Administration	5743.45	5.4	6215.24	5.2	7504.4	5.7	4769.08	5.2	5123.67	5.2	6087.62	5.7
13	Other Services	9211.46	8.6	9962.62	8.4	11105.78	8.4	7708.87	8.4	7823.4	7.9	8239.68	7.7
	Sub-Total-Tertiary	**65824.34**	**61.5**	**72647.98**	**61.1**	**81331.62**	**61.3**	**55415.79**	**60.3**	**59567.74**	**60.3**	**64743.78**	**60.6**
	Total-GSDP	107053.7	100	118998.2	100	132738.5	100	92074.98	100	98817.08	100	106832.7	100

Source: Department of Economics and Statistics

P Provisional, Q: Quick Estimate.

Fig.3.4



Source: Department of Economics and Statistics

3.31. The analysis of annual sectoral growth rate of Gross State Domestic Product shows that secondary sector recorded the highest rate of growth of 12.6 per cent in 2006-07 at current prices followed by tertiary sector (12%) and primary sector (8.7%). At constant (1999-2000) prices, the secondary sector recorded a growth rate of 8.3 per cent, tertiary sector 8.7 per cent and primary sector 6 per cent in 2006-07. (Table 3.7)

Table 3.7
Sector wise Annual Growth Rate of GSDP- Kerala

Sl.No	Industry Origin	Percentage change over Previous Year					
		At Current Prices			At Constant (1999-2000) Prices		
		2004-05	2005-06 (P)	2006-07 (Q)	2004-05	2005-06 (P)	2006-07 (Q)
1	2	3	4	5	6	7	8
1	Agriculture &Allied Activities	8.4	9.8	9.9	7.4	6.6	5.9
2	Forestry & Logging	-12.2	0	-1.4	15.4	0	8.1
3	Fishing	21.7	36.8	6.5	-0.6	-4.3	5.5
4	Mining &Quarrying	-2.1	0	-1.0	-5.6	0	-2.8
	Primary Sector	7.7	11.7	8.7	7.2	4.9	6.0
5	Manufacturing	11.5	11.8	12.1	4.8	5.5	5.7
6	Electricity, Gas & Water Supply	-1.5	9.2	4.5	-7.3	3.0	-1.6
7	Construction	14.4	14.6	14.5	10.8	12.5	11.7
	Secondary Sector	11.6	13.0	12.6	6.5	8.9	8.3
8	Transport, Storage & Communication	22.5	15.8	19.2	17.7	15.0	16.5
9	Trade, Hotels & Restaurants	5.1	7.0	6.0	2.7	3.2	2.9
10	Banking, Insurance & Real Estate	1.5	14.0	7.7	9.5	10.5	10.0

11	Real Estate ownership Business, legal	15.1	12.5	13.8	1.9	11.0	6.5
12	Public Administration and other services	33.3	8.2	20.7	30.2	7.4	18.8
13	Other Services	14.8	8.2	11.5	9.2	1.5	5.3
	Tertiary Sector	**12.6**	**10.4**	**12.0**	**8.8**	**7.5**	**8.7**
	GSDP	**11.5**	**11.2**	**11.6**	**8.0**	**7.3**	**8.1**

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

District-wise Gross State Domestic Product

3.32. District-wise distribution of Gross State Domestic Product at factor cost at current prices shows that Ernakulam District continues to have the highest income of Rs. 18729.37 crore in 2006-07 as against Rs. 16714.22 crore in 2005-06 registering a growth rate of 12.1%. At constant (1999-2000) prices it comes to Rs. 14913.78 crore during 2006-07 compared to Rs. 13748.73 crore during 2005-06. Thiruvananthapuram District stands second with an income of Rs. 14569.67 crore in 2006-07 at current prices followed by Thrissur (Rs.12773.29 crore), Kozhikode (Rs. 11487.60 crore), Malappuram (Rs. 10485.37 crore) and Palakkad (Rs.10023.14 crore). The lowest income of Rs. 3073.05 crore was recorded in Wayanad District at current prices during 2006-07 preceded by Kasaragod (Rs. 4269.12 crore), Idukki (Rs. 5027.85 crore) and Pathanamthitta (Rs.5241.30 crore).

Table 3.8
District-wise Distribution of Gross State Domestic Product

(Rs. Crore)

Sl. No	District	Gross State Domestic Product at Factor Cost				Growth Rate (%)	
		At 1999-2000 Prices		At Current Prices		At 1999-2000 Prices	At Current Prices
		2005-06 (P)	2006-07 (Q)	2005-06 (P)	2006-07 (Q)	2006-07	2006-07
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	10700.46	11675.73	12942.79	14569.67	9.1	12.6
2	Kollam	7290.88	7880.92	8874.27	9892.94	8.1	11.5
3	Pathanamthitta	4046.38	4394.93	4702.01	5241.30	8.6	11.5
4	Alappuzha	6178.80	6679.04	7640.53	8520.48	8.1	11.5
5	Kottayam	6853.43	7421.73	8171.09	9130.07	8.3	11.7
6	Idukki	4000.11	4277.91	4570.03	5027.85	6.9	10.0
7	Eranakulam	13748.73	14913.78	16714.22	18729.37	8.5	12.1
8	Thrissur	9481.00	10256.77	11461.60	12773.29	8.2	11.4
9	Palakkad	7478.75	8047.03	9005.00	10023.14	7.6	11.3
10	Malappuram	7825.27	8425.29	9414.66	10485.37	7.7	11.4
11	Kozhikode	8459.73	9135.37	10320.27	11487.60	8.0	11.3
12	Wayanad	2404.47	2576.13	2779.32	3073.05	7.1	10.6
13	Kannur	7111.94	7667.77	8556.59	9515.27	7.8	11.2
14	Kasaragod	3237.13	3480.33	3845.80	4269.12	7.5	11.0
	GSDP	**98817.08**	**106832.73**	**118998.19**	**132738.53**	**8.1**	**11.6**

Source: Department of Economics & Statistics
P - Provisional, Q – Quick Estimate

District-wise Per Capita Income

3.33. The analysis of district wise per capita income shows that Ernakulam district stands first with the per capita income of Rs.39034 at constant (1999-2000) prices in 2006-07 as against Rs.36520 in 2005-06. Kottayam District has the second largest per capita income of Rs. 30626 in 2006-07 at constant prices followed by Idukki (Rs.30605), Pathanamthitta (Rs.28979), Thiruvananthapuram (Rs.28526) and Thrissur (Rs.28301). The lowest per capita income was recorded in Malappuram District (Rs.19124) in 2006-07 at constant prices preceded by Kasaragod (Rs.23928), Kollam (Rs.24580) and Palakkad (Rs.24903).

3.34. The highest rate of growth of per capita income at constant (1999-2000) prices of 6.9% was recorded in Ernakulam District in 2006-07 followed by Pathanamthitta (6.8%), Thiruvananthapuram (6.7%), and Thrissur (6.4%). The lowest growth rate was recorded in Idukki District (5.6%) preceded by both Palakkad and Wayanad (5.9%), and Kasaragode and Malappuram (6.1 %). The district wise per capita income with growth rate is given in Table 3.9.

Table 3.9

District-wise Per Capita Income at constant (1999-2000) Prices

Sl. No	District	Per Capita Income (Rs.)				Growth Rate (%)	
		At 1999-2000 Prices		At Current Prices		At 1999-2000 Prices	At Current Prices
		2005-06 (P)	2006-07 (Q)	2005-06 (P)	2006-07 (Q)	2006-07	2006-07
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	26726	28526	32088	35285	6.7	10.0
2	Kollam	23154	24580	27983	30612	6.2	9.4
3	Pathanamthitta	27131	28979	31206	34146	6.8	9.4
4	Alappuzha	24198	25686	29752	32556	6.2	9.4
5	Kottayam	28840	30626	34051	37338	6.2	9.7
6	Idukki	28983	30605	32616	35358	5.6	8.4
7	Ernakulam	36520	39034	44030	48532	6.9	10.2
8	Thrissur	26599	28301	31937	34960	6.4	9.5
9	Palakkad	23518	24903	28076	30712	5.9	9.4
10	Malappuram	18024	19124	21561	23653	6.1	9.7
11	Kozhikode	24691	26238	29956	32785	6.3	9.4
12	Wayanad	25213	26694	28857	31518	5.9	9.2
13	Kannur	24874	26412	29759	32565	6.2	9.4
14	Kasaragod	22549	23928	26610	29130	6.1	9.5
	STATE	**25657**	**27284**	**30668**	**33609**	**6.3**	**9.6**

Source: Department of Economics & Statistics

P: Provisional

Q: Quick Estimate

District-wise Sectoral Distribution of Gross State Domestic Product

3.35 District wise and sector-wise analysis of GSDP at constant (1999-2000) prices shows that the highest contribution from primary sector income of Rs. 1883.88 crore was in Idukki district during 2006-07 followed by Malappuram (Rs.1871.71 crore), Kollam (Rs.1585.74 crore) and Kottayam (Rs. 1519.64 crore). During 2006-07 the lowest primary sector income was in Alappuzha district (Rs.810.59 crore). The highest income from secondary sector during 2006-07 was in Ernakulam district (Rs. 5337.17 crore) followed by Thiruvananthapuram (Rs. 2729.50 crore), Thrissur (Rs. 2327.67 crore) and Kozhikode (Rs. 1969.28 crore). Lowest secondary sector income was in Wayanad district (Rs. 233.0 crore). Regarding tertiary sector the highest income during 2006-07 was in Ernakulam district

(Rs.8249.09 crore) followed by Thiruvananthapuram (Rs.7683.21 crore), Thrissur (Rs. 6615.50 crore) and Kozhikode (Rs. 5829.44 crore). Lowest tertiary sector income was in Wayanad district (Rs. 1137.29 crore).

3.36. While analysing the growth rates, in primary sector it ranges between 5.7% in Alappuzha district and 6.4% both in Pathanamthitta and Idukki districts. Growth rate in secondary sector is lowest at 6.2% in Idukki, highest at 10.4% in Kasaragod. Growth rate in tertiary sector is between 7.7% in both Kasargod and 10.2% in Thiruvananthapuram districts. The district wise details of sectoral GSDP and growth rate are presented in Table 3.10

Table 3.10

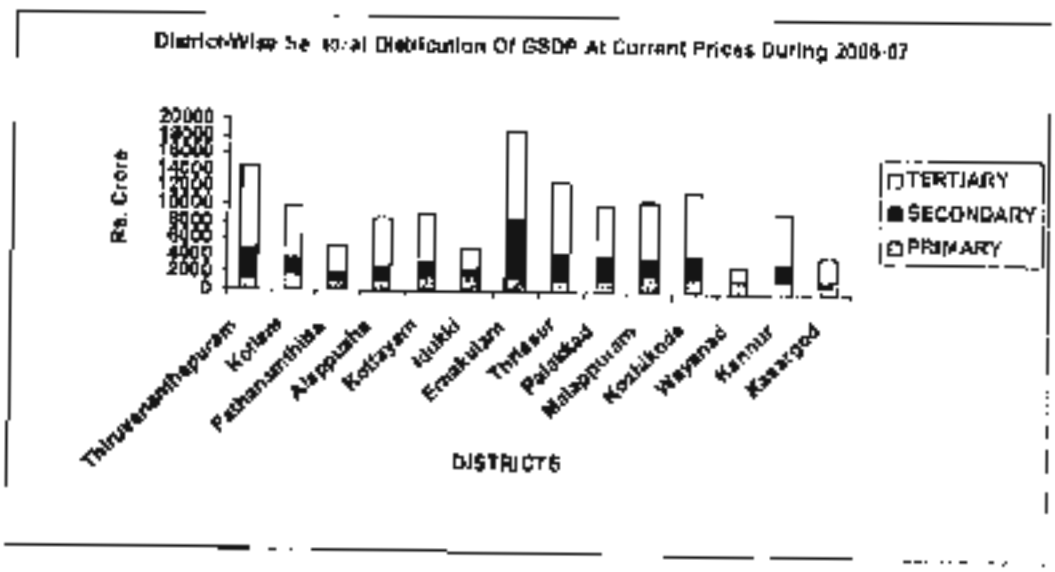
District wise and Sector-wise Distribution of Gross State Domestic product during 2006-2007 at constant (1999-2000) Prices (Quick Estimate)

(Rs.Crore)

Sl. No.	District	Primary		Secondary		Tertiary	
		GSDP	Annual Growth Rate (%)	GSDP	Annual Growth Rate (%)	GSDP	Annual Growth Rate (%)
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	1263.02	6.0	2729.50	7.5	7683.21	10.2
2	Kollam	1585.74	6.0	1379.52	8.2	4915.66	8.8
3	Pathanamthitta	1087.85	6.4	580.25	8.4	2726.83	9.6
4	Alappuzha	810.59	5.7	1421.20	8.0	4447.24	8.6
5	Kottayam	1519.64	5.9	1264.28	8.0	4637.82	9.2
6	Idukki	1883.83	6.4	591.24	6.2	1802.79	7.8
7	Ernakulam	1327.52	5.8	5337.17	8.0	8249.09	9.3
8	Thrissur	1313.60	6.1	2327.67	8.5	6615.50	8.5
9	Palakkad	1456.85	6.2	1895.61	7.4	4694.57	8.1
10	Malappuram	1871.71	6.0	1436.59	9.4	5116.99	7.8
11	Kozhikode	1336.65	5.8	1969.28	9.4	5829.44	8.1
12	Wayanad	1205.85	6.1	233.00	9.1	1137.29	7.8
13	Kannur	1403.44	5.8	1445.22	9.7	4819.12	7.9
14	Kasaragod	973.69	5.8	438.50	10.4	2068.23	7.7
	State	19039.93	6.0	23049.02	8.3	64743.78	8.7

Source: Department of Economics and Statistics

Fig: 3.5



3.37. District-wise sectoral distribution of Gross State Domestic Product from 2004-05 to 2006-07 at current and constant (1999-2000) prices are given in Appendices 3.9 to 3.14.

Population

3.38. The World Population in 2005 is 646 crores and the population of India is 110 crore India is the second most populous country in the world, sustaining 17 per cent of the world's population.

Table 3.11
World Population – Urban and Rural

Particulars	Population in Crore			
	1950	1975	2005	2030
Urban Population	73	152	315	491
Rural Population	179	256	331	329
Total World Population	**252**	**408**	**646**	**820**

Source. United Nations Department of Economic and Social Affairs.

BOX 3.1

Urban dwellers represented 49 per cent of the global population in 2005 compared to 29 per cent in 1950. By 2008, half of the World's Population is projected to be Urban. (Population Newsletter by United Nations Department of Economic and Social Affairs.)

3.39. The population of India as per 2001 Census was 102.7 crore comprising of 53.13 crore males and 49.57 crore females. Kerala's population as per Census 2001 was 318.41 lakh consisting of 154.69 lakh males and 163.72 lakh females. Kerala's share in the population of India is 3.1%. In Kerala, 74% of the population lives in rural areas. Projected population of Kerala is 337 lakhs in 2006.

Decadal Growth of Population

3.40 An analysis of the decadal growth rate of all India population shows that it increased from 1921 to 1981 and since then it started declining gradually. In Kerala the decadal growth rate had been at higher rate from 1941 to 1971 and since then growth rate has been declining. The details of decadal growth rate of population at All India and Kerala from 1901 to 2001 are given in Table 3.11. Fig 3.6 shows decadal growth rates of urban and rural population.

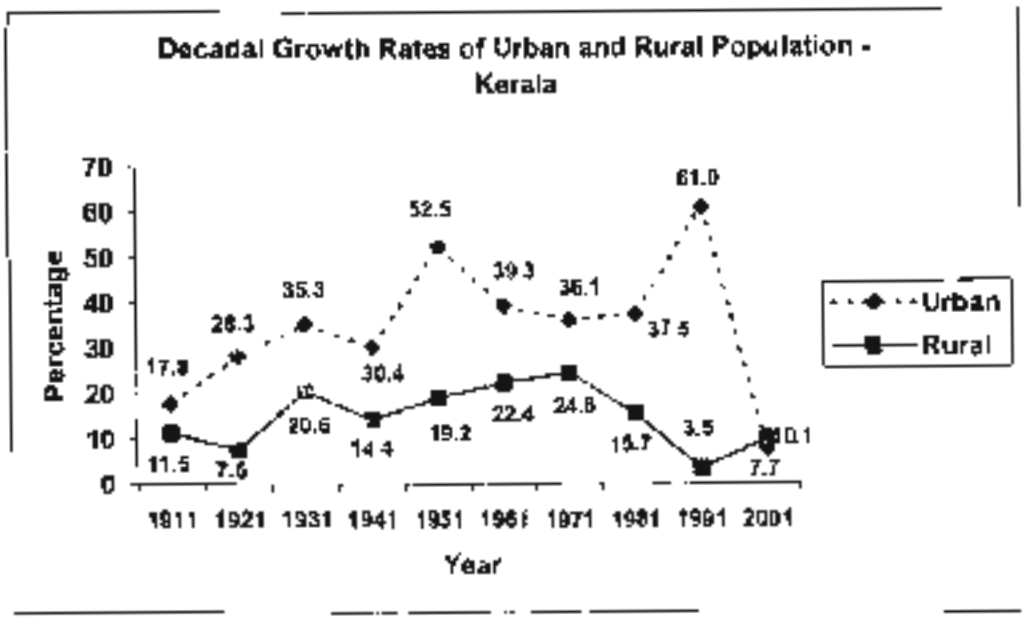
Table 3.11
Population and Its Growth from 1901 to 2001

Census Year	All India				Kerala			
	Population (lakhs)			Decadal Growth Rate(%)	Population (lakhs)			Decadal Growth Rate(%)
	Rural	Urban	Total		Rural	Urban	Total	
1	2	3	4	5	6	7	8	9
1901	2125.4	258.5	2383.9	-	59.4	4.5	63.9	-
1911	2261.5	259.4	2520.9	5.75	66.2	5.3	71.5	11.75
1921	2232.3	280.9	2513.2	-0.31	71.2	6.8	78.0	9.16
1931	2455.2	334.6	2729.8	11.0	85.9	9.2	95.1	21.85

1941	2745.1	441.5	3186.6	14.22	98.3	12.0	110.3	16.04
1951	2986.5	624.4	3610.9	13.31	117.2	18.3	135.5	22.82
1961	3602.9	789.4	4392.3	21.64	143.5	25.5	169.0	24.76
1971	4390.5	1091.1	5481.6	24.8	178.8	34.7	213.5	26.69
1981	5238.7	1594.6	6833.3	24.66	206.8	47.7	254.5	19.24
1991	6286.9	2176.1	8463.0	23.86	214.1	76.8	290.9	14.32
2001	7416.6	2853.6	10270.2	21.34	235.7	82.7	318.4	9.42

Source: Census of India

Fig: 3.6



3.41. Among the Districts in Kerala, Malappuram has the highest population of 36.3 lakhs followed by Thiruvananthapuram (32.35 lakhs) and Ernakulam (30.98 lakhs). Wayanad is the lowest populated district in Kerala with a population of 7.87 lakhs preceded by Idukki (11.29 lakhs) and Kasaragod (12.03 lakhs). Among the districts, Pathanamthitta had the lowest decadal (1991-2001) growth rate of population of 3.72% and Malappuram the highest growth rate of 17.22%. All districts in Kerala showed a decrease in decadal growth rate (1991-2001) compared to 1981-1991 decade. Malappuram district achieved a deduction of about 11 points between the two decadal growth rates, which is the highest among the districts in Kerala.

3.42. The details of State-wise all India population and District-wise Kerala population are given in Appendices 3.15 and 3.16

Annual Growth Rate

3.43. The annual average growth of world population is 1.2 per cent in 2004 and it is 1.5 per cent in India (World Development Report 2006).

3.44. The average annual growth in population of Kerala during 1991-2001 was 0.92 per cent as against the average annual growth rate of 1.93 percent in India. In addition to achievements, such as low infant mortality rate and high life expectancy the population growth rate in the state remains the lowest in the country.

3.45 Kerala's Population consists of 82.96 lakhs in the age group 0-14, 201.82 lakhs in the age group 15-59 and 33.35 lakhs above the age of 60. Between 1991 and 2001, children in the age group 0-14 have declined by 4.24%. Population in the15-59 age group increased by 12.91% and people above 60 years increased by 30.22%. In Kerala when the number of children (0-14 years) decreased, their number increased over 22 per cent in India. The proportion of people in the working age group is 63.4 % in Kerala as against 55.6% in India. This indicates very high potential for economic growth. The age group population in 2001 and their percentage distribution is given in Appendix 3.17.

3.46. The proportion of children (0-14) to the total population is 26.1 percent in Kerala, which is the lowest among the major states in India. In the proportion of people in the working age group (15-59) Kerala is second only to Tamil Nadu (63.7%). The proportion of population above 60 years in Kerala is 10.5 percent, which is the highest among the major states in India.

Table 3.12
Age Group Population of India & Kerala

Sl. No.	Age Group	Population 1991		Population 2001		Growth Rate (%)	
		India (crore)	Kerala (Lakhs)	India (crore)	Kerala (Lakhs)	India	Kerala
1	2	3	4	5	6	7	8
1	0-14	31.96 (37.76%)	86.64 (29.78%)	39 (37.3%)	82.96 (26.1%)	22.02	-4.24
2	15-59	47.03 (55.57%)	178.74 (61.42%)	57 (55.6%)	201.82 (63.4%)	21.19	12.91
3	60+	5.64 (6.66%)	25.61 (8.8%)	7 (6.7%)	33.35 (10.5%)	24.11	30.22
Total		**84.63 (100%)**	**290.99 (100%)**	**103 (100%)**	**318.41 (100%)**	**21.7**	**9.42**

Source: Census of India

Population Density

3.47 The World Population Density in 2004 is 49 persons per sq.km. and it is 363 persons per sq. km. in India (World Development Report 2006). The density of population in low-income countries, middle-income countries and high-income countries are 80, 44 and 30 respectively. Higher population density puts greater pressure on infrastructure and environment but reduces the per capita costs of supply of public goods and services.

3.48. As per 2001 Census, the density of population for India as a whole is 324 persons per sq. km. where in Kerala it is 819 persons per sq. km. Among the Indian States, Kerala is in third position in respect of density, the first being West Bengal (904) and the second Bihar (880).

3.49. Among the Districts in Kerala, Alappuzha has the highest density with 1489 persons per sq. km. followed by Thiruvananthapuram with 1476 persons per sq. km. Idukki District has the lowest density of 252 persons per sq. km. Eight districts have densities higher than the State average and six Districts lower than the State average.

Sex Ratio

3.50. Kerala has a unique position in regard to sex ratio. In all the Censuses, females outnumbered males in Kerala, which is contrary to All India pattern. The sex ratio of Kerala has gradually increased from 1004 in 1901 to 1028 in 1951 and then to 1058 in 2001. The 2001 Census shows that Kerala is the only state in India where sex ratio is above the equality

ratio and is a 100-year high with 1058 females per 1000 males. District-wise analysis shows that the highest sex ratio of 1094 is in Pathanamthitta District and the lowest in Idukki District with 993 females per 1000 males. Details of sex ratio for India and Kerala from 1951 to 2001 is given in Table 3.13

Table 3.13
Sex Ratio - India & Kerala(1951 to 2001)

Year	Sex Ratio	
	India	Kerala
1	2	3
1951	946	1028
1961	941	1022
1971	930	1016
1981	934	1032
1991	927	1036
2001	933	1058

Source: Census of India 2001.

Ageing Population

3.51. The number of aged persons as a proportion of the total population has increased all over the world. The rate is more in developed countries as compared with developing countries. The increasing proportion of aged people is accompanied by a falling proportion of young persons. The average annual global growth rate of older population (60 +) is 1.9 percent, which is higher than the total population growth at 1.2 percent (2000-02). The average annual global growth rate of persons aged 80 years and above (3.8 per cent) is currently twice as high as the growth rate of the population over 60 years of age (1.9 percent).

3.52. India has the second largest number of elderly persons after China. India is home to 10 per cent of the total senior citizens of the world. There were about 4.3 crore elderly in 1981, comprising 6.5% of the population. Their number increased to 5.7 crore (6.7%) in 1991 and again increased to 7.0 crore (6.7%) in 2001. The proportion of elderly to total population in rural areas is higher than that in urban areas.

3.53. It is a noteworthy feature of Kerala that the percentage of aged population (above 60 years) is increasing fast. During 1961, the aged population constituted only 5.9% of the total population in Kerala. It increased to 6.2% in 1971, 7.5% in 1981, 8.8% in 1991 and to 10.5 % in 2001. As per 2001 Census, the total number of old age persons was 33.36 lakhs.

3.54. In Kerala the highest percentage of old age population is in Alappuzha district followed by Ernakulam, Kottayam, Thrissur and Thiruvananthapuram. The lowest is in Kozhikode and Wayanad Districts.

CHAPTER 4

AGRICULTURE AND ALLIED SECTORS

The deceleration in the growth of agricultural output was not witnessed for such a long period as seen in recent years. The increase in vulnerability in agricultural income at macro level is indicated by recent slow down in growth along with increased volatility of the growth rate. The Eleventh Five Year Plan of the state and the country was launched in 2007-08 with a special focus to address the agrarian crisis.

4.2 The summary of the report of the Steering Committee on Agriculture and Allied Sectors for the Eleventh Five Year Plan (GOI) is given in Box: 4.1. The Steering Committee in this Report, attempts to highlight the major concerns, causes underlying the present dismal state of agriculture in the country and suggests a road map for reviving agriculture with a view to placing it on a high, inclusive and sustainable growth path

Box 4.1

Report of the Steering Committee on Agriculture and Allied Sectors

Concerns

The followings have been identified as major concerns in Agriculture sector

Deceleration of growth : There is a deceleration of the growth of agricultural out put after 1994-95

Degradation of natural resources : Land resources are getting degraded and productivity is declining through soil erosion, salinity, alkalinity and chemicalisation

Equity : Slow growth in agriculture with no significant decline in labour force has created a serious disparity between agriculture and non agriculture.

Efficiency : Efficiency in resource use which encompasses production, marketing , processing, transport etc. are at disadvantage.

Vulnerability : With rise in capital- intensity in agriculture, in the face of natural calamities and other man made disasters, vulnerability of farmers has increased considerably. Farm harvest prices of various commodities often fall below MSP

Causes

Public and private investment in infrastructure including irrigation, technological change, diversification and fertilizers are the four major sources of agriculture growth in India. The progress on these fronts slowed down since 1990's.

Rural infrastructure : Burgeoning farm subsidies are impinging upon the Government's ability to invest in key areas

Degradation of natural resources : Main reasons for degradation of natural resources are the increasing pressure of human and animal population on natural resources, policies like free power for irrigation leading to overexploitation of water resources and lack of participatory management of natural resources.

Failures in Conservation and Improvement of Rainfed land . Water shed development projects are mostly planned and implemented by government departments in a piecemeal and fragmented manner without actively involving the beneficiary communities.

Technology Development and Dissemination: The agricultural research network in the country is highly centralized, hierarchical and bureaucratic set up has not responded to the need for change.. The available resources have not been optimally utilized for lack of clearly stated strategy and rational prioritization of research agenda.

Market Infrastructure and Regulation : In low productivity regions having large potential, marketing infrastructure is under developed and private trade is exploitative

Status of women farmers . Since women are not formally recognized as farmers , but are seen merely as helpers on family farms, agricultural extension agents seldom contact women. Existing institutions including farmers cooperatives are structured with male farmers in mind both in terms of location and forms of interaction

Imperfections in land markets and plight of small farmers : The small farmers genuinely interested in cultivation do not have resources to purchase land that is leased out for oral tenancy.

The way forward

Accelerated growth :

There is need for stepping up public investments in agriculture to 4% of GDP

Demand driven diversification : The emerging scenario of increasing diversification offers an opportunity for raising farm incomes significantly

Input provisioning : Supply of seed needs urgent attention as quality of seed is the basic determinant of productivity. Seed production and distribution needs revamping by strengthening public sector seed agencies and by involving private trade in seed multiplication and distribution

Land and water : Major emphasis is needed on water conservation and recharging schemes including restoration and renovation of traditional water bodies as an integral part of water shed development with the involvement of local communities and NGO's

Rain fed areas : Wherever possible, agriculture development programmes in rainfed areas should converge on watersheds

Technology : Research priorities need to shift towards enhancing the yield potential in the rainfed areas by evolving through recourse to modern biotechnologies , varieties that are drought and pest resistant and by evolving cropping systems suited to varying agro climatic conditions.

Agricultural Extension : Measures urgently required to revamp the extension systems are a) allocation of more resources for extension b) closer and frequent interactions between research and extension and c) result oriented performance evaluation of extension staff.

Agricultural credit : There is a need to increase the supply of institutional credit through cooperatives, commercial banks and micro finance institutions on easy terms and conditions. Steps should be taken to improve the absorptive capacity of backward states in utilizing RIDF by relaxing norms for matching contribution.

Studies on irrigation and fertilizers : Local level community institutions should be empowered to levy and collect economic rates for surface irrigation and power used for pumping water, linked to volume of water consumed as determined by the local institutions and use the revenues so collected for development at the local level.

Ensuring remunerative prices : In the Eastern and Central region, MSP should be ensured through effective procurement.

Insurance against risks in agriculture : There is a scope for improving the coverage of NAIS in terms of regions and crops substitution of long term yield rate as bench mark and ensuring prompt payment of the indemnities .

Better Deal for women farmers : Enhancing women's right in land providing infrastructure support to women farmers and advancing legal support on existing laws will get recognition for women as farmers and enable them to access credit, inputs and marketing outlets

Land markets and prospects for small farmers : Small farmers should be assisted to buy land through provisions of institutional credit on long term basis at a low rate of interest and by reducing stamp duty

Participation of private trade : Private sector can play a major role not only in post-harvest handling and distribution of produce but also by forging appropriate arrangements such as

contract farming with farmers particularly for high value crops.
Agricultural statistics : The formats of TRS scheme as well as the ICS scheme need to be thoroughly reviewed and changed for bringing about a lasting improvement in the basic system of Agriculture Statistics

Source . Planning Commission, GOI, 2007

National Policy for Farmers- 2007

4.3 There is a need to focus more on the economic well-being of the farmers, rather than just on production. Socio-economic well-being must be a prime consideration of agricultural policy, besides production and growth. The aim of such a policy is to bring about overall economic improvement of farm families and also to enhance their capacity to invest in farm related activities. The National Policy for farmers was released in 2007 with the major objectives such as to improve economic viability of farming by substantially increasing the net income, to protect and improve land, water, bio-diversity and genetic resources essential for sustained increase in the productivity, profitability and stability of major farming systems. The salient features of the policy is outlined in Box: 4.2.

Box 4.2
National Policy for Farmers -2007

- Joint *pattas* for both homestead and agricultural land are essential for empowering women to access credit and other services. The Land Acquisition Act would be reviewed with particular reference to the assessment of compensation.
- Water users' associations would be encouraged to gain expertise in maximising the benefits from the available water. To enhance water availability and stability of water supply , rain water harvesting and aquifer recharging will be given priority. Renovation of existing ponds and wells, demand management through improved irrigation practices ,launching water literacy movement etc. will be initiated
- With the support of National Rainfed Area Authority, a drought code will be introduced in drought prone areas, Flood code in flood prone areas and Good weather code in arid areas
- To enhance the income of livestock owners, agri-clinics operated by veterinary and farm science graduates would be encouraged to improve productivity and overall efficiency of livestock. Livestock insurance would also be revamped and made accessible to all farmers.
- For poultry Quarantine and Testing facilities for imported birds and vaccines at all ports of entry would be established and strengthened. Testing for safety and efficacy of imported poultry vaccines before they are allowed to be marketed, as is done in the case of human vaccines, would be made compulsory. Appropriate support would be provided to backyard poultry farmers to promote clusters or small holders' poultry estates.
- In the area of public policy, there is a need for well-planned aquarian reforms in order to provide landless labour families access to village ponds and other water bodies in the public domain for aquaculture. Centralised services to support the decentralised capture and culture in fisheries sectors, promoting inland aquaculture, Artificial coral reefs to compensate for the loss of natural coral reefs to revive the fish catch, Raising bio-shields etc. will be initiated

- A dynamic policy for the management and economic use of the Exclusive Economic Zone (EEZ) for a variety of economic activities, including fisheries, will be evolved and put in place with the assistance of NFDB.
- The National Gene and Biodiversity Fund would be used to recognise and reward contributions of farmers and to support revitalisation of *in situ* farm conservation traditions of such communities.
- For conservation of bio resources , community biodiversity registers, support to rural and tribal people for revitalizing their farm traditions, participatory breeding procedures, launch of literacy movement on genetic and legal aspects of biodiversity, genome clubs in schools and colleges, training of farm and tribal families to prevent gene erosion, organise and support herbal bio valleys to conserve medicinal plants , setting up of farmer level gene banks, participatory management of national parks, biosphere reserves and gene sanctuaries etc. will be promoted
- Biodiversity fund will be utilized for motivating people to conserve their animal breeds under Biodiversity act.
- New technologies will be applied to launch an evergreen revolution .The research strategy should be pronature, pro-small farmer and gender sensitive. Community-managed seed villages and seed technology training centres are needed, with women playing the major role because of their traditional knowledge of seeds and seed management, especially in tribal communities.
- A National Bio-technology Regulatory Authority would be set up for ensuring the safe and responsible use of recombinant DNA technology or genetic engineering. Need-based breeding of crop varieties would be stepped up such as processing quality in fruits and vegetables
- High level multidisciplinary effort will be made for enhancing scientific inputs in organic farming that meet the needs of farmers
- Establishing an integrated National Agricultural Biosecurity System (NABS) on cropping patterns and water availability.
- The agro-meteorological advisories issued from time to time would be used by Panchayat-level functionaries, trained to give appropriate land-use suggestions to farmers with the least possible time lag. For marine fisheries, data on wave heights and location of fish shoals available would be transmitted to the fishermen. In drought and flood-prone areas, experienced farmers would be trained as "Climate Managers" in the art of managing drought, flood and aberrant monsoons.
- A national seed grid will be established to ensure supply of seeds across the country, as per the area specific requirement.
- Steps would be taken to ensure that each farmer is issued with a soil health passbook containing integrated information on the physics, chemistry and microbiology of farm soils with corresponding advisories would be promoted.
- The sale of spurious and substandard pesticides would be prevented and bio-pesticides would be promoted.
- Agri - entrepreneurs including farm graduates and progressive farmers would be encouraged to provide implements and tools, machinery, tractors and other farm implements on a custom-hire basis.
- Bio-technology research in the area of vaccine development would be stepped up, encouraging public private partnerships
- Progressive fishermen and their groups such as SHGs would be trained in induced fish seed breeding, production and availability of seed and fish seed feed.
- For capacity building and livelihood, women working in the farms need appropriate support services like crèches, child care centres, nutrition, health and training, etc.

- Steps would be taken for extensive coverage of farmers under the *Kisan* Credit Card Scheme. Micro credit and micro insurance will be promoted. Revamping the National Agricultural Insurance Scheme to make it more farmer friendly. For credit and insurance literacy in villages, *Gyan Chaupals* (village knowledge centres) will be established . *Kisan* credit cards would be issued to women speedily with joint *pattas* for homestead / agricultural land.
- KVKs would take up training and lab-to-land demonstrations in the area of post-harvest technology, agro-processing and value addition to provide skilled jobs in villages.
- Terminal markets for agriculture would be developed in public-private partnership mode
- The Minimum Support Price (MSP) mechanism would be implemented effectively across the country and the Market Intervention Scheme (MIS) would be strengthened markets for local produce.
- The curriculum of Agricultural Universities will be revised. The motto of Agricultural universities would be to groom "every scholar/student as an entrepreneur". This will call for integrating business management principles with major applied courses.
- The mandate of the ICAR would be expanded to provide for registration and accreditation to the farm graduates as registered farm practitioners to provide quality service to the farmers.
- Special categories of farmers such as tribal farmers pastoralists, island farmers, plantation farmers and urban farmers will be supported
- Special categories of farming such as organic farming, green agriculture, protected agriculture would be promoted .
- Risks and benefits associated with GM crops will be assessed.
- Distress spots will be addressed to mitigate the agrarian stress and mega biodiversity hot spots will be encouraged to convert their bio resources into economic wealth in a sustainable manner with the participation of local communities .
- Educated youths would be helped and supported for setting up agri-clinics and production-cum-processing centres to undertake outsourcing jobs

Source : Ministry of Agri & Cooperation , GOI, 2007

Food Security Crisis

4.4 The world food situation is currently being rapidly redefined by new driving forces. Many parts of the developing world have experienced high economic growth in recent years. Developing Asia, especially China and India, continues to show strong sustained growth. Real GDP in the region increased by 9 percent per annum between 2004 and 2006. Sub-Saharan Africa also experienced rapid economic growth of about 6 percent in the same period. Even countries with high incidences and prevalences of hunger reported strong growth rates. Of the world's 34 most food insecure countries, 22 had average annual growth rates ranging from 5 to 16 percent between 2004 and 2006. Beyond 2008, world growth is expected to remain in the 4 percent range while developing-country growth is expected to average 6 percent (Mussa 2007). This growth is a central force of change on the demand side of the world food equation. High income growth in low income countries readily translates into increased consumption of food.

4.5 Another major force altering the food equation is shifting rural–urban populations and the resulting impact on spending and consumer preferences. The world's urban population has grown more than the rural population; within the next three decades, 61 percent of the world's populace is expected to live in urban areas (Cohen 2006). Higher incomes, urbanization, and

changing preferences are raising domestic consumer demand for high-value products in developing countries. The composition of food budgets is shifting from the consumption of grains and other staple crops to vegetables, fruits, meat, dairy and fish. The demand for ready-to-cook and ready-to-eat foods is also rising, particularly in urban areas. In India, cereal consumption remained unchanged between 1990 and 2005, while consumption of oil crops almost doubled, consumption of meat, milk, fish, fruits, and vegetables also increased. In other developing countries, the shift to high-value demand has been less obvious.

4.6 Wheat, coarse grains (including maize and sorghum) and rice are staple foods for the majority of the world's population. Cereal supply depends on the production and availability of stocks. World cereal production in 2006 was about 2 billion tonnes – 2.4 percent less than in 2005. Most of the decrease is the result of reduced plantings and adverse weather in some major producing and exporting countries. Between 2004 and 2006, wheat and maize production in the European Union and the United States decreased by 12 to 16 percent. On the positive side, coarse grain production in China increased by 12 percent and rice output in India increased by 9 percent (FAO 2006b and 2007b). In 2007, world cereal production is expected to rise by almost 6 percent due to sharp increases in the production of maize, the main coarse grain. In 2006, global cereal stocks—especially wheat were at their lowest levels since the early 1980s. Stocks in China, which constitute about 40 percent of total stocks, declined significantly from 2000 to 2004 and have not recovered in recent years. End-year cereal stocks in 2007 are expected to remain at 2006 levels. As opposed to cereals, the production of high value agricultural commodities such as vegetables, fruits, meat, and milk is growing at a fast rate in developing countries. **In India while analyzing the stocks of rice and wheat one could see that during 1996-97 the stock was 16.41 million tons which rapidly increased to 51.02 million tons in 2001-02. However thereafter the stock gradually decreased and in 2005-06 the stock was 16.62 million tons which was almost the quantity stocked before 10 years.**

4.7 The above-mentioned changes on the supply and demand side of the world food equation have led to imbalances and drastic price changes. Between 2000 and 2006, world demand for cereals increased by 8 percent while cereal prices more than doubled. Supply is very inelastic, which means that it does not respond quickly to price changes. Typically, aggregate agriculture supply increases by 1 to 2 percent when prices increase by 10 percent. This kind of supply response decreases further when farm prices are more volatile, but improved infrastructure and access to technology and rural finance will always increase such supply response.

4.8 The consumption of cereals has been consistently higher than production in recent years and that has reduced stocks. A breakdown of cereal demand by type of use gives insights into the factors that have contributed to the greater increase in consumption. While cereal use for food and feed increased by 4 and 7 percent since 2000, respectively, the use of cereals for industrial purposes such as biofuel production—increased by more than 25 percent (FAO 2003 and 2007). In the United States alone, the use of corn for ethanol production increased by two and a half times between 2000 and 2006 (Earth Policy Institute, 2007). Supply and demand changes do not fully explain the price increases. Financial investors are becoming increasingly interested in rising commodity prices, and speculative transactions are adding to increased commodity-price volatility.

4.9 World cereal and energy prices are becoming increasingly linked. Since 2000, the prices of wheat and petroleum have tripled, while the prices of corn and rice have almost doubled. A worrisome implication of the increasing link between energy and food prices is that high energy-price fluctuations are increasingly translated into high food-price fluctuations. There is an increasing priority for biofuels owing to the constant increase in oil prices. The

trade-offs between food and fuel will actually be accelerated when biofuels become more competitive relative to food and when, consequently, more land, water, and capital are diverted to biofuel production

4.10 How will food prices change in coming years? This is one of the central questions that policymakers, investors, speculators, farmers, and millions of poor people ask. Though the research community does its best to answer this question, the many uncertainties created by supply, demand, market functioning, and policies mean that no straightforward answer can be given However, a number of studies have analyzed the forces driving the current increases in world food prices and have predicted future price developments The Economic Intelligence Unit predicts an 11 percent increase in the price of grains in the next two years and only a 5-percent rise in the price of oilseeds (EIU 2007). The OECD-FAO outlook has higher price projections (it expects the prices of coarse grains, wheat, and oilseeds to increase by 34, 20, and 13 percent, respectively, by 2016–17). The Food and Agricultural Policy Research Institute (FAPRI) expects increases in corn demand and prices to last until 2009 10, and thereafter expects corn production growth to be on par with consumption growth.

4 11 An increase in cereal prices will have uneven impacts across countries and population groups. Net cereal exporters will experience improved terms of trade, while net cereal importers will face increased costs in meeting domestic cereal demand. There are about four times more net cereal-importing countries in the world than net exporters. Price increases also affect the availability of food aid. Global food aid represents less than 7 percent of global official development assistance and less than 0.4 percent of total world food production. Food aid flows, however, have been declining and have reached their lowest level since 1973. In 2006, food aid was 40 percent lower than in 2000 (WFP 2007). At micro economic level Since food accounts for a large share of the poor's total expenditures, a staple-crop price increase would translate into lower quantity and quality of food consumption. Many of those who are the poorest and hungriest today will still be poor and hungry in 2015, the target year of the Millennium Development Goals (International Food Policy Research Institute, 2007)

4 12 Coming to the Kerala perspective , while examining the rice production scenario of the South Indian states it could be seen that production trends during the last five years presents a dark picture. Table indicate that rice production registered a negative growth in Tamil Nadu and Kerala while it had almost declined from the production levels during 2001-02 and then slightly improved to retain its early status in Karnataka and Andhra Pradesh during 2005-06. While looking at the all India situation the rice production in India also can be observed to have declined during the last five years from the neighbouring states (Table 4.1). With the recent production trends and low volume of food grain stocks, the country in general fears to be moving towards a food insecurity. Being a consumer state ,the situation in Kerala can be expected to be much worse in this context.

Table 4.1

Area and Production of Rice in Southern states from 2001-02 to 2005-06

Name of state	Area (Million Ha)					Production (Million Tonnes)				
	2001-01	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06
Tamil Nadu	2.08	1.52	1.4	1.87	2.65	7.37	3.58	3.22	5.06	5.22
Karnataka	1.42	1.15	1.15	1.31	1.36	3.23	2.39	2.52	3.55	3.44
Andhra Pradesh	3.82	2.82	2.97	3.09	3.98	12.39	7.33	8.95	9.5	11.7
Kerala	0.32	0.31	0.29	0.29	0.28	0.72	0.69	0.62	0.67	0.63
Total India	44.62	41.18	42.5	41.91	43.66	93.34	71.82	88.53	83.13	91.79

4.13 In order to tackle this food crisis the Govt. of India launched the National Food Security Mission in 2007- 08 to increase the production of rice by 10 million tons, wheat by 8 million tons and pulses by 2 million tons by the end of the Eleventh Plan (2011-12) Palakkad district from Kerala has been included in the mission The salient features of the mission is given in box: 4.3.

4.14 In order to support focused action plan, a flagship project was approved in 2007-08 covering the supplementary income sources of paddy farmers and interest subsidy in selected districts in the state.

Box 4.3
National Food Security Mission

The key features of NFSM is that the scheme to be implemented in a mission mode through a farmer centric approach and all the Stakeholders to be actively associated at the District levels for achieving the set goal. The scheme aims to target the select districts by making available the improved technologies to the farmers through a series of planned interventions. A close monitoring mechanism is proposed to ensure that interventions reach to the targeted beneficiaries. The major objectives of the scheme are increasing production of rice, wheat and pulses through area expansion and productivity enhancement in a sustainable manner; restoring soil fertility and productivity at individual farm level; and enhancing farm level economy (i.e. farm profits) to restore confidence of farmers of targeted districts.

The Districts are selected based on following criteria

- National Food Security Mission-Rice : Districts Covering more than 50,000 ha area under rice , the productivity is less than the State average productivity.
- National Food Security Mission-Wheat . Districts with sizeable area under wheat , Districts having irrigation to a great extent, the productivity is less than national/state average.
- National Food Security Mission- Pulses : The districts selected based on potential for area expansion through inter-cropping / fallow land.

A no. of 133 Districts in 12 states have been selected under NFSM- Rice , 138 Districts in 9 states under NFSM-Wheat and 168 Districts in 14 states have been chosen under NSFM - pulses.

Strategies adopted under the mission are

1. Expansion of area of Pulses and Wheat, no expansion of area in rice
2. Bridging the yield gap between the potential and the present level of productivity through
   - Acceleration of seed production
   - Integrated Nutrient Management and Integrated Pest Management
   - Promotion of new production technologies like hybrid rice, timely planting of wheat and promotion of new improved variety of Pulses
   - Supply of inputs ensuring their timely availability
   - Farmers Training and Visits

Source - Ministry of Agriculture and Co operation, GOI, 2007

Agricultural Income

4.15 The trends in agricultural income in Kerala during the last seven years is shown in Table- 4.2. The provisional estimate for 2005-06 indicated an increase of 6.72 per cent in growth. The quick estimate for 2006-07 showed an increase of 6.17 per cent over the previous year.

Table 4.2
Growth of Agricultural Income in Kerala (1999-00 Prices)

Sl. No.	Year	Agricultural Income (Rs. in crores)	Rate of change over previous year	Percentage contribution to State Income
1.	2002-03	13132	1.37	16.36
2	2003-04	12819	- 2.38	15.04
3.	2004-05	13762	7.35	14.95
4	2005-06 *	14673	6.72	14.85
5	2006-07 **	15539	6.17	14.55

Source: Directorate of Economics and Statistics
** Provisional ** Quick*

Rainfall

4.16 In Kerala, the rainfall was 3173.2 mm in 2007, against the normal of 2630.6 mm. The highest departure from the normal in the last two decades was recorded during the Southwest Monsoon of 2002. The deviation in rainfall, apart from affecting production and productivity of annual crops, also affects the productivity of perennial crops such as coconut, rubber and pepper in the long run.

4.17 Deficient rainfall was recorded in 3 districts during North East Monsoon and excess rainfall in 10 districts during South West monsoon of 2007 in the State. (Appendix 4.4).

4.18 The cumulative rainfall in the country during the South West Monsoon was five per cent above normal and out of 513 meteorological districts, 72 per cent received excess/normal rainfall while the remaining 28 per cent received deficient/scanty rainfall. Further 77 district (15%) experienced moderate drought and 30 districts (6%) experienced severe drought conditions at the end of South West Monsoon of 2007 in the country.

4.19 The cumulative rainfall recorded in the country during the North East Monsoon of 2006 was 21 per cent below normal as compared to 10 per cent above normal during the corresponding period of the previous year. Out of the 533 meteorological districts in the country, 24 per cent of the total number of districts alone received excess or normal rainfall and the remaining received deficient/scanty rainfall. Details are shown in Table 4.3

Table 4.3
Percentage Departure of Rainfall from Normal (1998 to 2006) in Kerala

Sl. No.	Year	Annual	South West Monsoon	North East Monsoon
1	2001	-6	-13	0
2	2002	-14	-33	32
3	2003	-14	-24	5
4	2004	-3	-19	12
5	2005	0	-2	2
6	2006	-2	-7	22
7	2007	20	27	-5

Source: IMD website

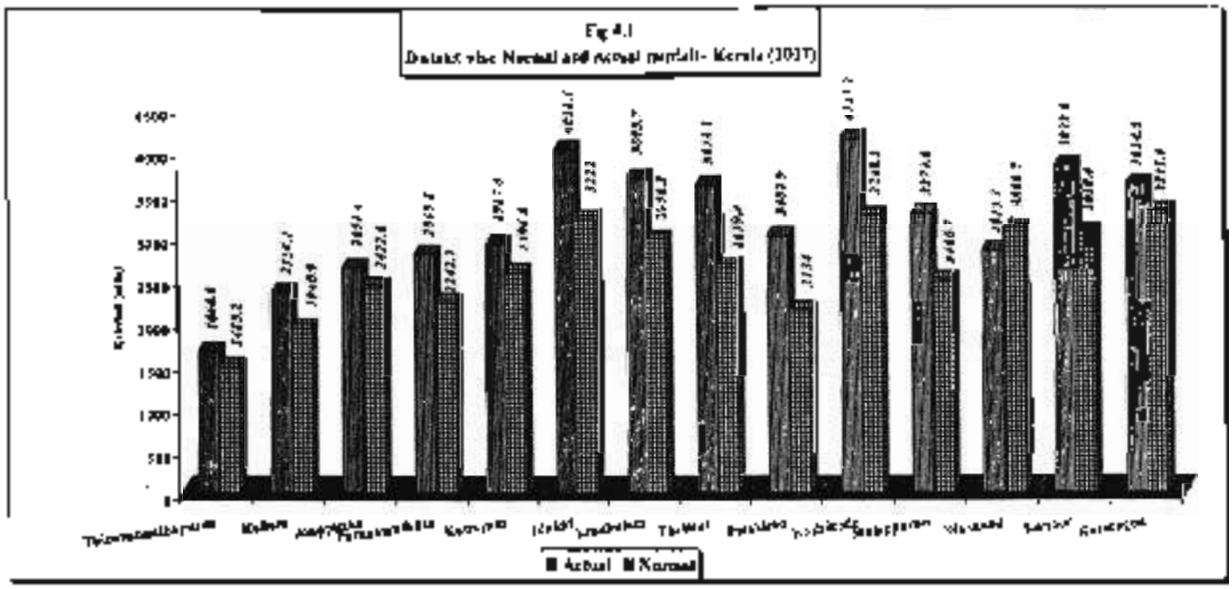


Fig 4.1
Actual
Normal

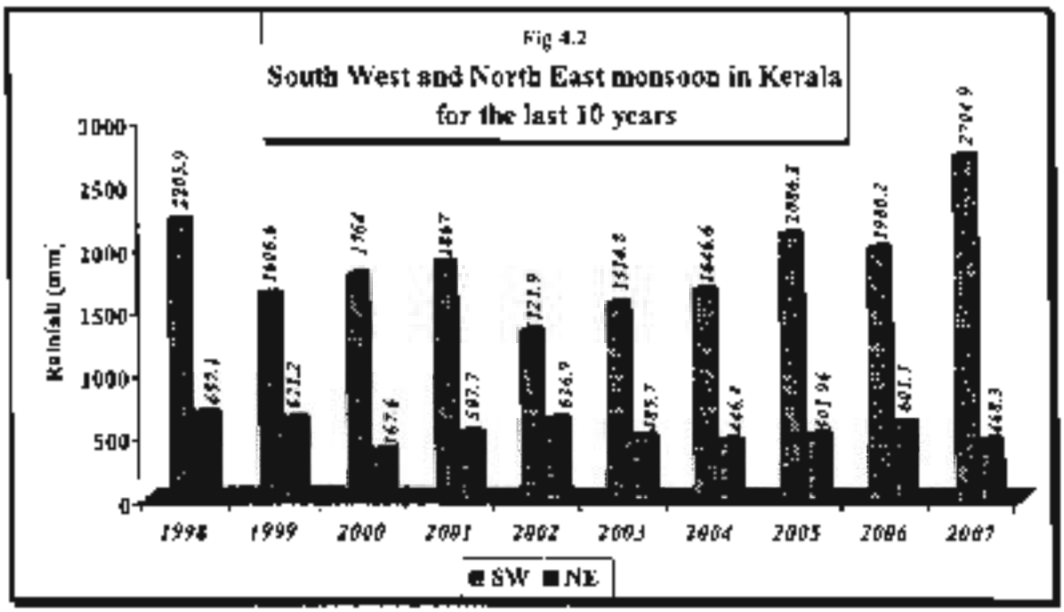
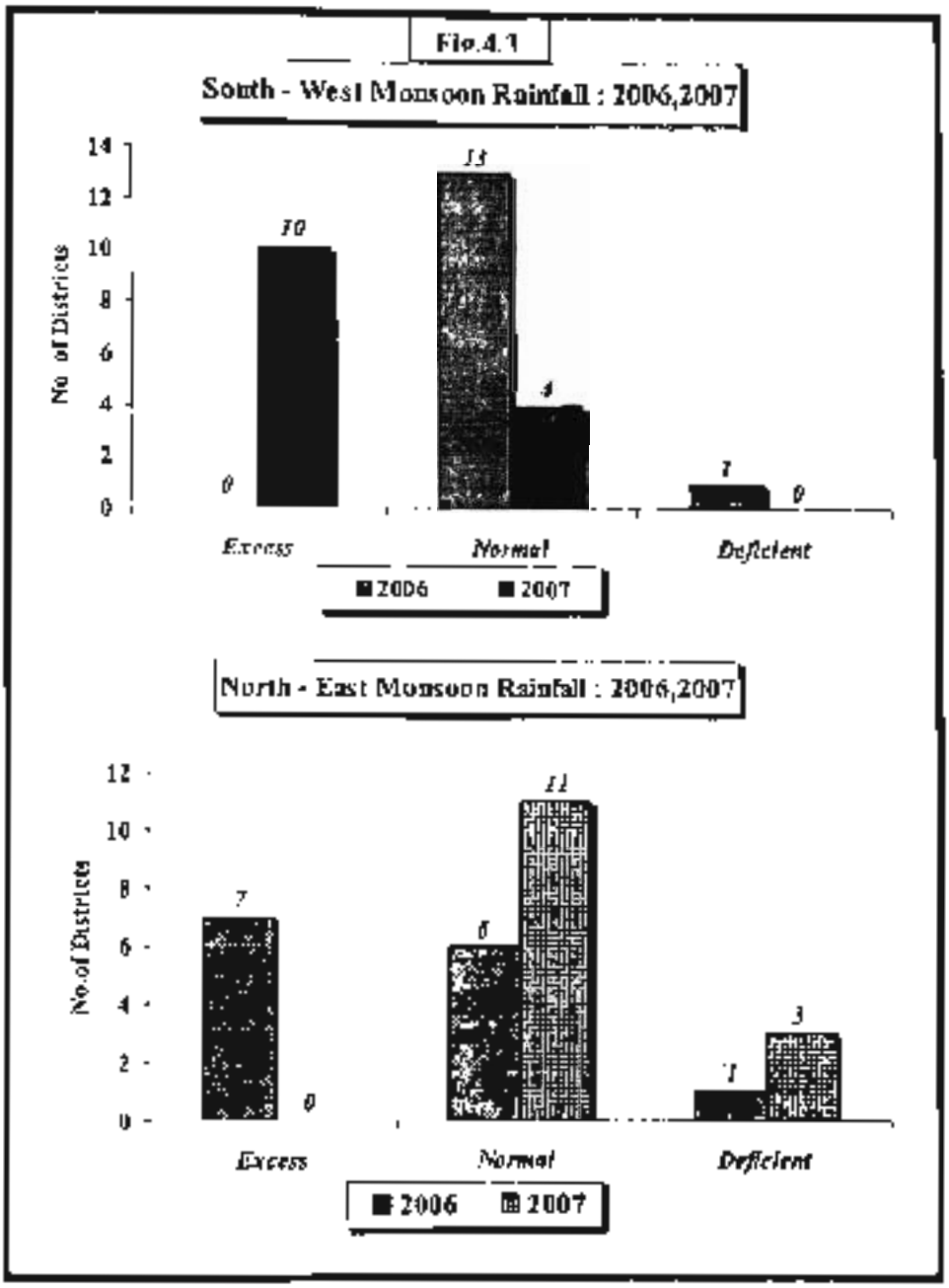


Fig 4.2
South West and North East monsoon in Kerala
for the last 10 years
Rainfall (mm)
3000
2500
2000
1500
1000
500
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
SW
NE



Land Use

4.20 Data on land use pattern of Kerala for the year 2006-07 is given in Table 4.4. Out of a total geographical area of 38.86 lakh ha, net sown area is about 54 per cent. Forest occupies around 28 per cent. Agriculture and forest sectors together account for over 82 per cent of the land area. There was no perceptible improvement in the extent of land use for agriculture. In

fact net sown area is declining over the period. Land under non-agricultural uses was 9.10 percent in 1999-00 and has increased to 11.29 per cent in 2006-07 There was an increase in the area under current fallow (11485 ha) and an increase in the area under fallow other than current fallow (1973 ha) during 2006-07 over 2005-06. The area under cultivable waste also increased by 24155 ha and barren and uncultivated land declined by 332 ha. The land use pattern in Kerala during 2006-07 are shown in Fig 4.4.

Fig. 4.4
Landuse pattern in Kerala (2006-07)

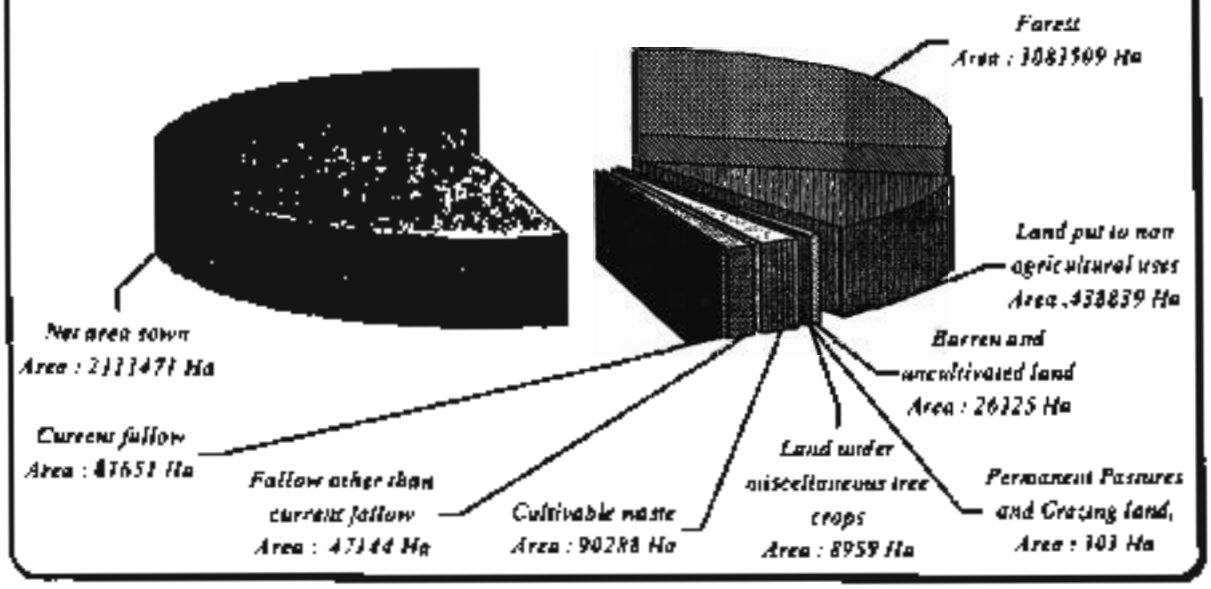


Table 4.4
Land use Pattern in Kerala

Sl. No.	Classification of Land	2005-06	2006-07*	per cent of Geographical Area	Change in Area between 2005-06 and 2006-07	
					Actual	Percentage
1	Total Geographical Area	3886287	3886287		-	-
2	Forest	1081509	1081509	27.83	-	-
3	Land put to non agricultural uses	370322	438839	11.29	68517	18.5
4	Barren and uncultivated land	26457	26125	0.67	- 332	-1.25
5	Permanent Pastures and Grazing land	274	301	0.01	27	9 85
6	Land under miscellaneous tree crops	9526	8959	0.23	-567	-5.95
7	Cultivable waste	66133	90288	2 32	24155	36 52

8	Fallow other than current fallow	45171	47144	1.21	1973	4.37
9	Current fallow	70166	81651	2.10	11485	16.37
10	Net area sown	2132483	2111471	54.33	-21012	-0.99
11	Area sown more than once	853244	806034	20.74	-47210	-5.53
12	Total Cropped area	2985727	2917505	75.07	-68222	-2.28
13	Cropping intensity	140	138			

Source : Directorate of Economics and Statistics
** Provisional*

Trend in Area, Production and Productivity of Crops

4.21 Data regarding the area, production and productivity of important crops grown in Kerala are shown in Table 4.5 and Appendix 4.5. Out of a gross cropped area of 29.18 lakh ha. in 2006-07, food crops comprising rice, pulses, minor millets and tapioca occupy only 12.25 per cent. Kerala state which had a low base in food production is facing serious challenges in retaining even this meagre area. Kerala agricultural economy is undergoing structural transformation from the mid seventies by switching over a large proportion of its traditional crop area which was devoted to subsistence crops like rice and tapioca to more remunerative crops like coconut and rubber.

Table 4.5

Area, Production and Productivity of Principal crops

Sl. No	Crops	Area (ha)		Production (MT)		Productivity (kg./Ha.)	
		2005-06	2006-07*	2005-06	2006-07*	2005-06	2006-07*
1	Rice	275742	263529	629987	641577	2285	2435
2	Pulses	10562	6870	7940	5211	752	759
3	Pepper	237998	226094	87605	64264	368	284
4	Ginger	12226	11082	56288	42497	4604	3835
5	Turmeric	3384	3917	8237	9978	2434	2547
6	Cardamom	41367	41362	9765	8545	236	207
7	Arecanut	108590	102078	119309	109968	1099	1077
8	Banana	61400	59143	491823	463766	8010	7841
9	Other Plantains	55222	53060	445333	435635	8064	8210
10	Cashewnut	78285	70461	68262	61680	872	875
11	Tapioca	90539	87128	2568284	2518999	28367	28911

12	Coconut **	897833	870939	6326	6054	7046	6951
13	Coffee	84644	84571	60175	59475	711	703
14	Tea	35043	35364	56384	53659	1609	1517
15	Rubber	494400	502240	739225	780405	1495	1554

*** Production million nuts and Productivity in nuts/ha.*
** 2006-07 figures are provisional except Paddy, Cardamom, Coffee, Tea and Rubber*
Source: Directorate of Economics and Statistics and UPASI

4.22 The area under rice has declined from 2.76 lakh ha. in 2005-06 to 2.64 lakh ha. in 2006-07. In the case of tapioca the area has declined from 0.91 lakh ha. to 0.87 lakh ha during this period. The area under commercial crops in general and rubber in particular has increased considerably during the last two decades. During Ninth plan average annual increase in area under rubber was 1951 ha while during 2006-07 area increased by 7840 ha compared to previous year and the increase was mainly due to upsurge in prices. The index of area, production, productivity of crops in Kerala for the year 2004-05 to 2006-07 with the base of triennium ending 1993-94 is shown in Appendix-4.6. The index of food grain production increased by 1.89 points and non-food grains increased slightly. While index of area of food grains declined by 2.82 points productivity increased by 8.93. However non-food grains showed slight increase and the indices increased by 4.98, 258 and productivity declined by 8.54 respectively. The production of plantation crops showed slight improvement during the year by 10.53 points (Appendix-4.6)

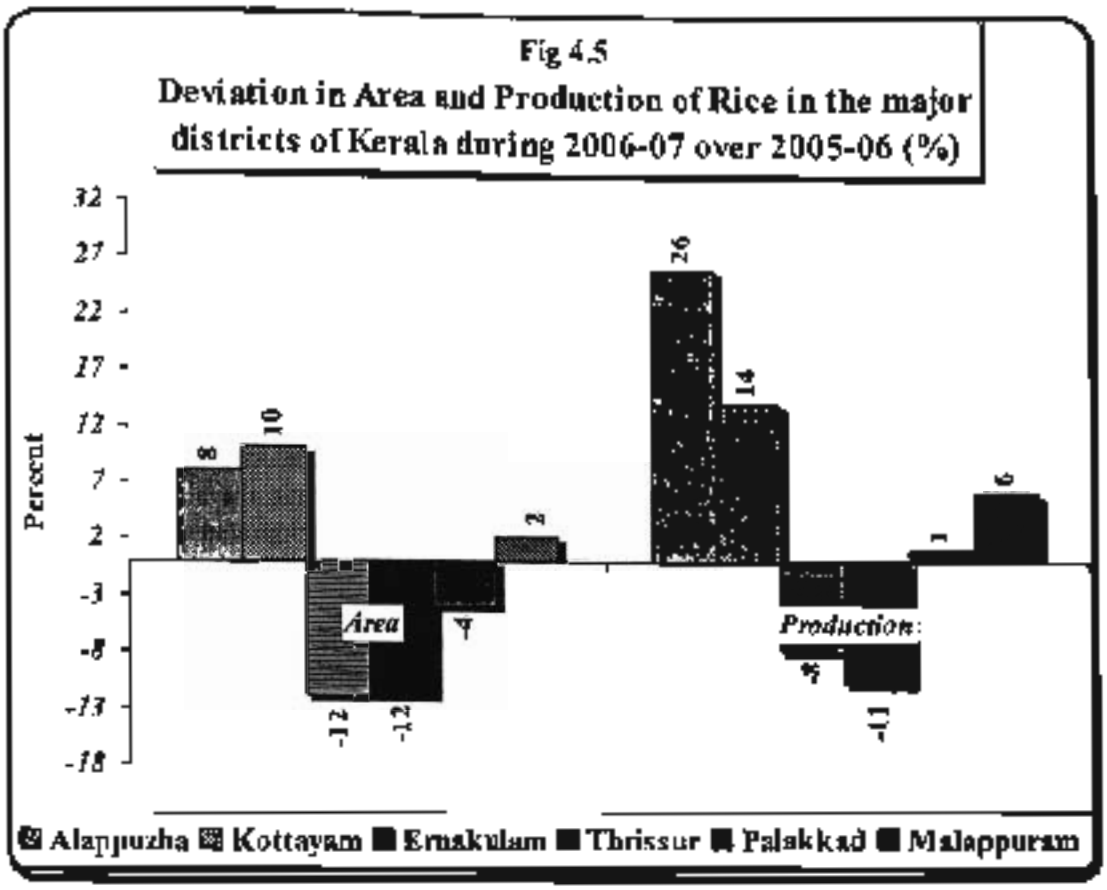
4.23 In the case of coconut, area was at its peak during 2000-01. During the year 2006-07 area declined by 26894 ha. over 2005-06 Major commercial crops which had recorded expansion of area during 2006-07 from previous year include rubber (7840 ha) and Tea (321 ha) The major crops with considerable loss in area include cashewnut (7824 ha),ginger (1144 ha) Pepper (11904 ha) Arecanut (6512 ha), Banana (2257 ha), Tapioca (3414 ha) and Coconut (26894 ha). Crops which have failed to sustain the production level in 2006-07 compared to previous year include cashewnut (6582 MT), ginger (13791 MT), Pepper (23341 MT), Banana (28057 MT) Other Plantain (9698 MT) Arecanut (9341 MT), Tapioca (49285 MT), Coconut (272MN), Cardamom (1220 MT), Tea (2725MT), and coffee (700 MT) . Increase in production reported during this period include rubber (41180 MT), Rice (11590 MT) and Turmeric (1741 MT)

Crop wise analysis

Rice

4.24 The average annual decline in area under rice during the Eighth Five Year Plan was around 22000 ha, whereas it has come down to an average of 13000 ha. during the Ninth Plan period. The average annual reduction in area during Tenth Plan was 9398 ha. During 2006-07, decline in area was 12213 ha. from 2.76 lakh ha. in 2005-06 to 2.64 lakh ha and rice production increased from 6.30 lakh MT to 6.42 lakh MT, an increase of 1.8 per cent during this period compared to a decline of 6 per cent in 2005-06 with that of 2004-05. The department of agriculture has introduced a scheme on Promotion of Paddy cultivation in fallow lands in 2004-05. In terms of increase in area under rice, the scheme seems to be less effective However in terms of production, an increase of 1.8 percent is recorded during 2006-07 compared to

2005-06. The increase in production could be partly attributed to higher procurement price announced by the Government.



4.25 The average productivity which was stagnant at around 2.2 MT/ha for the last four years has increased to 2.44 MT/ha in 2006-07. (Table-4.6). Maximum increase in productivity during the year to the tune of 19 per cent was recorded in Pathanamthitta district. Rice productivity at current level is sub optimal. Instead of providing area based subsidies , suitably designed incentive system is essential to promote productivity of rice in the state.

Table 4.6

Area, Production and Productivity of Rice in Kerala and India

	Year	Area (000' ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	347	44710	751	84980	2162	1901
2	2001-02	322	44620	704	93080	2182	2086
3	2002-03	311	40410	689	75720	2218	1874
4	2003-04	287	42496	570	88280	1984	2077
5.	2004-05	290	41665	667	85310	2301	2047
6.	2005-06	276	44258	630	91790	2285	2074
7	2006-07	264	-	642	-	2435	-

Source -Directorate of Economics and Statistics, CMIE

4.26 The sharp increase in the prices of fertilizers and wages and non-availability of labour in peak seasons in certain locations, the failure of the irrigation system to serve the areas to the extent desired etc. are problems to be tackled to sustain this crop.

4.27 Local governments are also investing a significant amount for the promotion of rice. However there is no apparent coordination between the schemes of State Plan and those of local governments A coordinated approach is needed for the development of rice in the State.

4.28 The future of rice production in the state lies in improving productivity through promotion of high yielding varieties under scientific management in potential areas. Strengthening of group farming samithies with the required facilities and gradually raising them to the level of self supporting institutions is perhaps one way to circumvent these problems However past experience with the group farming programme suggests that neither input subsidies nor infrastructure support per se can bring about substantial change in area and production. Instead of pumping in more money by way of additional incentives, appropriate institutional arrangements for organising common services coupled with participatory irrigation management, local water resources development, promotion of supplementary income sources, low cost credit, organized marketing and selective mechanisation could improve the situation. Applied research on emerging technologies and participatory technology development are also equally important.

4.29 A State level project has to be prepared for the promotion of rice production by linking the schemes of Department of Agriculture, local governments and Kudumbashree. Padasekharam based action plans have to be prepared linking with credit, input support, water management, procurement and supplementary income sources. The newly constituted Paddy Board could take a lead in the implementation of the project in a coordinated manner.

Speciality rice

4.30 Concerted efforts are needed to promote scented rice cultivation in Wayanad, organic rice production in Pokkali lands and medicinal rice in identified potential panchayats with necessary brand promotion and marketing support in association with LSGs. Adequate processing facilities have to be established before launching a major project for the development of scented rice in Wayanad district. Value added products from medicinal rice could also be promoted on SHG basis in collaboration with ayurvedic industry.

Season wise performance

4.31 Season wise data on the performance of rice during the last three years is shown in Appendix 4.7 Data shows increase in area in Puncha season with decline in Mundakan and virippu seasons. There was 14.7 per cent decline in area during Virippu season in 2006-07 compared to previous year and 7.6 per cent reduction in Mundakan season. Area under Virippu is gradually shrinking Group farming samithies should concentrate their efforts in such areas with a view to bringing such areas under double cropping. Mundakan season accounts for highest share in production with 54.05 per cent followed by 29.8 per cent in Virippu and 16.45 per cent in Punja season. The productivity recorded in Punja is the highest with 2881 kg. per ha. during 2006-07 which is 5.4 per cent higher than that in 2005-06.

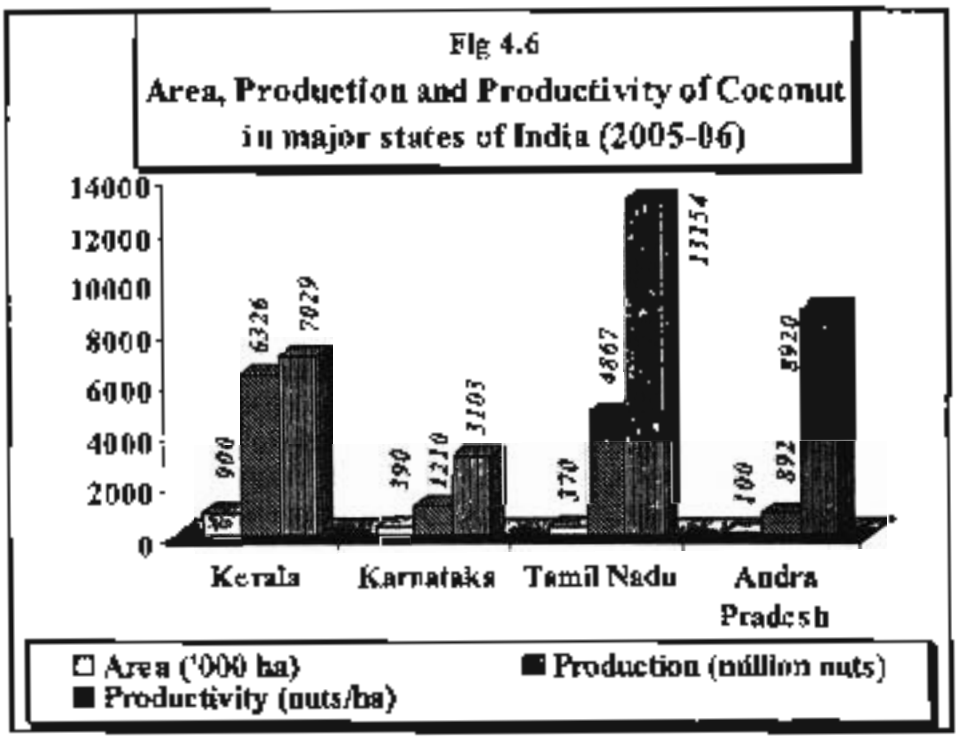
High Yielding Varieties

4.32 The coverage with high yielding varieties is given season wise in Appendix 4.8. Inspite of sharp decline in the area under rice, the coverage under high yielding varieties remains steady and is increasing. The coverage which was stagnating in the range of 1.65 to 1.77 lakh ha during the last decade, has registered marked improvement in the last five years. It increased from 1.77 lakh ha in 1998-99 to 2.24 lakh ha in 2006-07. However During 2006-07, a slight increase of 0.26 per cent in area compared to previous year was recorded. Maximum high yielding variety coverage was in Punja season with 99 percent, followed by Virippu (91 per cent) Mundakan (78 per cent)and overall coverage was 85 percent (Appendix-4.8). The average productivity of high yielding varieties during 2006-07 was 2560 kg/ha indicating 7.5 per cent during the year, compared to the previous year.

4.33 Eventhough Mundakan season accounts for the largest share in coverage of area under rice, its share in high yielding varieties is lower compared to Virippu season. This is mainly because of inadequate research support to evolve varieties with multiple disease resistance suitable for cultivation in different localities in Kerala during Mundakan season.

Coconut

4.34 In India, coconut is grown in an area of 1.95 million ha. producing 14811 million nuts with a per hectare productivity of 7608 nuts. (Table 4.7) Kerala's share in area as well as production of coconut in the country is declining over time. The share of area declined from 57 per cent in 1991-92 to 46 per cent in 2005-06, while share of area in Karnataka and Tamil Nadu together increased from 29 per cent in 1992-93 to 39 per cent in 2005-06 (Fig. 4.6).



4.35 With a coverage of 8.71 lakh ha, coconut occupies 41 per cent of the net cropped area and provides livelihood to over 3.5 million families in Kerala. Production increased by 5.4

percent in 2005-06 compared to the previous year and declined by 4.3 per cent in 2006-07 compared to previous year. The average productivity has slightly declined in 2006-07 by 1.3 per cent to 6951 nuts/ha compared to 2005-06. The productivity levels in Kerala are also lower than other major producing states. The productivity in 2005-06 in Maharashtra was 15190 nuts and 13140 nuts in Tamil Nadu

Table- 4.7

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	2000-01	926	1840	5536	12597	5980	6847
2	2001-02	906	1893	5479	12822	6049	6776
3	2002-03	929	1922	5709	12535	6349	6523
4	2003-04	898	1934	5876	12178	6540	6298
5	2004-05	899	1935	6001	12830	6673	6632
6.	2005-06	898	1950	6326	14811	7046	7609
7	2006-07	871	-	6054	-	6951	-

Source: Directorate of Economics and Statistics, CMIE, CDB, Ministry of Agriculture, GOI.

4.36 Apart from sizeable percentage of senile and unproductive palms and the higher incidence of root wilt affected palms, the share of younger non-bearing palms is around 25 per cent as reported in the survey of Department of Economics and Statistics. Over population of palms in holdings (231 nos. per ha) is another reason for low productivity of palms.

4.37 Though India is among the leading producers of coconut in the world, its relative share in the international trade of value added products is insignificant as compared to other major producing countries like Philippines, Indonesia and Sri Lanka. More concerted efforts are needed to promote value addition in coconut. Promotion of Hi-tech ventures in cooperative sector as well as micro enterprises offer scope in the state. Promotion of Neera also could be taken up on Pilot scale

4.38 However it should be recognised that mere diversification and value addition will not make the Indian coconut economy internationally competitive, unless the cost of production of coconut is contained and brought down in real terms over time. For this the primary task is to raise the yield of coconuts for which technology adoption is crucial. Massive replanting of root wilt affected palms with seedlings of elite palms could be initiated immediately. The present level of adoption suggests the need for further intervention to enhance technology adoption. Generation of technologies for different agro ecological situations may improve the level of adoption Integrated farming system with due emphasis on multi tier cropping systems needs to be promoted in different agro ecological situations. The elastic approach in coconut development adopted in recent years in association with Coconut Development Board needs to be expanded in more areas .

Pepper

4.39 The state continues to enjoy a near monopoly in area and production of pepper, accounting for 98 per cent each in the country. The productivity achieved its peak level of 376 kg per ha during 1998-99. The productivity of pepper recorded during 2006-07 was only 284 kg,

per ha. The production declined from 87605 MT during 2005-06 to 64264 MT in 2006-07. Pepper produced in Kerala fetches a premium price in international market in view of its intrinsic quality.

4.40 However consequent to the liberalisation of imports, there are reports of low quality pepper arriving from other producing countries. The import of pepper has increased from 4028 MT in 2000-01 to 15750 MT in 2006-07 affecting the interests of pepper farmers of the State. The Indo Sri Lankan Free Trade Agreement allowing free import of pepper has to be modified to safeguard the interests of Kerala farmers.

4.41 Government of India should build in adequate safety mechanism and monitoring system to see that the issue of certification of origin and the condition relating to origin of the goods are not violated. Similarly in respect of import for re-export of pepper which enjoys duty free status, a minimum value addition needs to be prescribed

4.42 India could export 42806 MT of pepper in 1999-00, in which declined to 28750 MT in 2006-07. The value realization was at Rs. 306.20 crores in 2006-07 compared to Rs. 140.50 crores in 2005-06 and unit value realization is almost stagnant at Rs. 106.50 to Rs. 85.80 per kg. respectively in the corresponding period. USA is the major export market for India accounting for 39 per cent in 2005-06. Vietnam is the leading exporter with 46 per cent followed by Brazil 16.2%, Indonesia 14.3 per cent and India 7.6 per cent. Vietnam exports more than its production, while Indian exports account for only 22.6 per cent of its production.

4.43 Price of pepper moved consistently upwards from early nineties and reached a peak level in 1999-00 with Rs. 215 per kg. Since then declined to Rs. 174 per kg. in 2000-01, further down to Rs. 80 per kg. in 2001-02 and increased slightly to Rs. 107.31/kg. in 2006-07. Pepper prices continued its declining trend since 2000. In recent months, the prices started an increasing trend.

4.44 The state has to bestow specialised attention for upgrading the productivity through an organised replanting programme. The productivity in India is the lowest among the major producing countries. It is the highest in Thailand with 4.3 MT/ha. followed by Malaysia with 2 MT/ha in 2001. The varietal selection and improvement through genetic upgradation is also important for stabilizing and retaining its lead share in global trade.

4.45 The pattern of global demand for the crop is undergoing changes. The consumer preference is for value added form of pepper such as white pepper, pepper in brine, oleoresin etc. Kerala could not take full advantage of the emerging opportunities for want of raw material of desired quality.

Cashew

4.46 India is the third largest producer of cashew in the world. India's share in world production is 20 per cent with a production of 5.26 lakh MT in 2005. Area under the crop in Kerala, has been declining steadily from 1.25 lakh ha in 1988-89 to 0.70 lakh ha. in 2006-07 and the production declined from 1.08 lakh MT to 0.62 lakh MT during the period (Table 4.8). The share of Kerala in the area under cashew in the country has come down from 23 per cent in 1987-88 to 9.4 percent in 2005-06 and the corresponding decline in share of production from 31 per cent to 10.05 per cent Area and production are increasing steadily in other producing states in the country. Maharashtra is the leading producer with 31.77 percent share in production during 2006-07, whose share was only 10 per cent in 1990-91.

Table 4.8

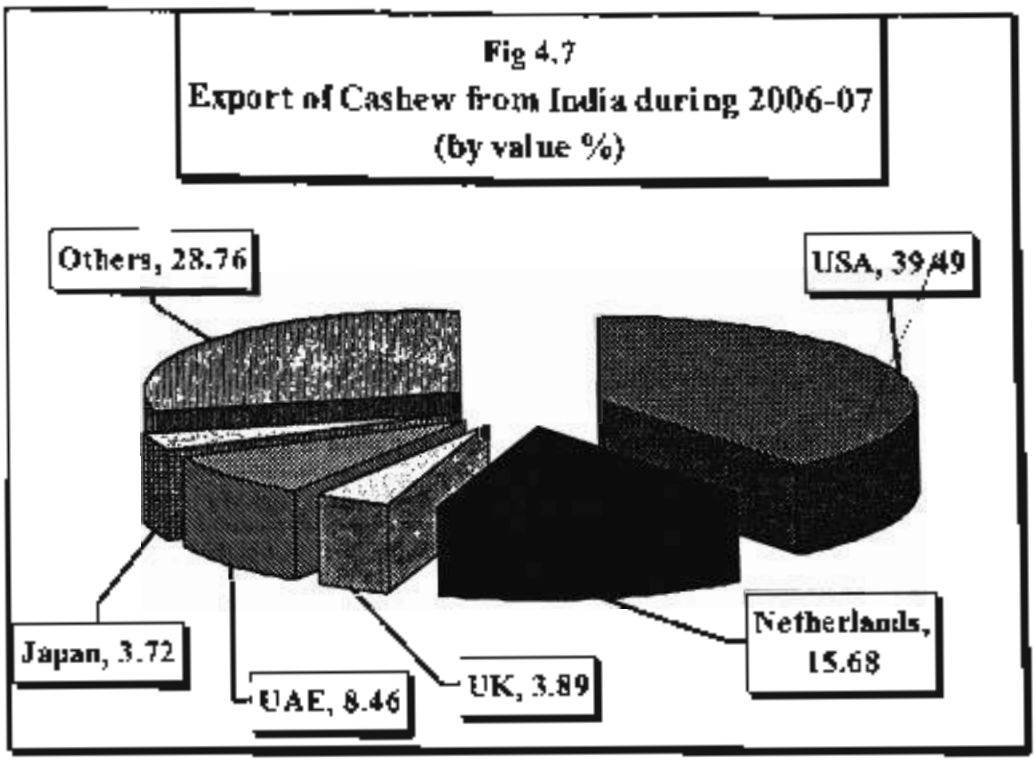
Area, Production and Productivity of Cashew in Kerala and India

Sl. No	Year	Area (000'Ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	92.1	720	66.2	450	718	625
2	2001-02	89.7	750	65.8	470	734	710
3	2001-03	88.5	770	66.1	500	746	760
4	2003-04	88.4	730	65.2	535	737	733
5	2004-05	81.5	820	60.6	544	743	810
6.	2005-06	80.7	855	57.6	573	714	815
7	2006-07	70.46	-	61.7	620	875	-

Source: Directorate of Economics and Statistics, CMIE

4.47 In spite of operating special schemes for expansion of area under cashew, the coverage has been steadily declining during the last two decades. The decline in area from 1980-81 to 2006-07 was to the tune of 70809 ha. Productivity of the crop, which was around 900 kg. per ha. during late eighties has also started declining from 1995-96 onwards, reaching 562 kg. per ha. during 1998-99 and thereafter hovering around 740 kg. In 2006-07, it increased to 875 Kg/ha.

4.48 India exported cashew kernels worth Rs. 2455.15 crore during 2006-07 and imported raw nuts worth Rs. 1811.62 crore resulting in a net foreign exchange earning of Rs. 643.53 crore indicating 2.4 per cent decline in value terms compared to 2005-06 and 3.9 per cent increase in quantity of cashew kernals exported and 3.7 per cent increase in the quantity of raw nuts imported. U.S.A. is the major export market with 39 per cent export share followed by Netherlands (16 per cent). The unit export price of cashew kernels declined during the year 2006-07 by 6 per cent compared to 2005-06. The total raw nuts imported into India during 2006-07 was 5.86 lakh MT. Around 30 per cent of total raw nuts imported is from Ivory Cost followed by Guinea Bissau (13.3 per cent). Tanzania has emerged as another supplier of raw cashew nuts with a share of 12.45 per cent of total imports. Out of imported nuts 55 per cent of imported raw nuts is bought to Kerala during 2006-07 which was 46 per cent in 1998-99. Cashew processing industry is finding it extremely difficult even to maintain the present level of capacity utilization because of the lower availability of local raw cashew nuts. Concerted efforts are needed to nurture this crop in the state with programmes to promote high density planting with high yielding cashew grafts. Cashew could form one of the major crops supported under the State Horticulture Mission.



Plantation crops

4.49 Plantation crops in general are 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 import, plantation crops in general are facing the threat of low quality imports.

4.50 Kerala has a substantial share in the four plantation crops of rubber, tea, coffee and cardamom. These four crops together occupy 6.54 lakh ha, accounting for 31.4 per cent of the net cropped area in the state and 43 per cent of the area under these crops in the country. Kerala's share in the national production of rubber is 92 per cent, cardamom 76 per cent, coffee 21 per cent during the year 2006-07. Kerala's share in the production of tea is 6 percent during 2005-06

Rubber

4.51 India is the fourth largest producer of natural rubber with a share of nine per cent in the world after Thailand, Indonesia and Malaysia. The production of natural rubber in the country was 8.53 lakh MT in 2006-07, registering a 6.3 per cent growth compared to the previous year while it was 7.1 per cent growth over the previous year during 2005-06. India is at the same time the fourth largest consumer of natural rubber after China, USA and Japan

4.52 Kerala accounts for 82 percent of the area under rubber in the country. The coverage under the crop in 2006-07 was 5.02 lakh ha, higher by 7840 ha. over the previous year. The production of natural rubber in Kerala during the year was 7.8 lakh tonnes indicating a 6 per cent increase over the previous year. The increasing trend in productivity continued during 2006-07. It was 1190 kg. per ha in 1998-99, which rose to 1554 kg. during 2006-07. In terms of tapping area, productivity recorded was 1865 kg. per ha during the year 2005-06.

4.53 Even though the domestic prices of natural rubber were more or less comparable to international prices during 2006-07 (See Appendx-4.17) the industrial sector still resorts to imports in bulk quantities. The total quantity imported was 45285 MT in 2005-06 which increased to 89690 MT in 2006-07. The annual average growth of the domestic natural rubber industry for the period 1996-97 to 2006-07, showed an annual average increase of 4.5 per cent in production where as consumption had increased at 3.90 per cent per annum while import of natural rubber increased by 16.3 per cent. Details are given in the Table 4.9.

Table 4.9
Consumption of Rubber during 2004-05, 2005-06

Sl. No	Item	Consumption (in MT)		Growth per cent
		2005-06	2006-07	
	Natural Rubber			
1	Auto Tyres and Tubes	442921	462081	4.3
2	Others	358189	358224	0.01
	Total NR	**801110**	***820305***	**2.4**
	Synthetic Rubber (SR)			
3	Auto Tyres and Tubes	141580	170809	20.6
4	Others	95915	100021	4.3
	Total SR	**237495**	**270830**	**14.0**
	NR and SR			
5	Auto Tyres and Tubes	584501	632890	8.3
6	Others	454104	458245	0.9
	Total of NR and SR	**1038605**	**1091135**	**5.1**

Source: Rubber Board

4.54 The higher prices in the international market is reflected in the domestic market also. The average price of RSS4 in the domestic market at Kottayam was Rs. 66.99 per kg. in 2005-06 which increased to Rs. 92.04 in 2006-07. The international price of RSS3, equivalent of RSS4 of India, increased from Rs. 74.32 to Rs. 97.79 in the corresponding period. The price of RSS 4 in Kottayam reached Rs.106.92 during June 2006 and then declined to Rs.92.21 in December 2007. The Indian price (RSS4) which was higher than the international price till May 2005 started moving below the international price till July 2007 owing to the sharp increase in the international price.

Coffee

4.55 The area under coffee in Kerala was 0.846 lakh ha out of 3.28 lakh ha in the country during 2006-07, which works out to 26 per cent. The share of Kerala in production is 21per cent during 2006-07. Major variety grown in Kerala is Robusta with a share of 95 per cent in planted area. Production of coffee during the year was only 0.59 lakh MT against 2.82 lakh MT for the country. Productivity of the crop in Kerala (703 kg/ha) is lower than the national level of 860 kg./ha. Area under coffee registered substantial increase during the last two decades with an annual growth rate of over 2 per cent. The increase in production recorded

during the period was much higher and registered an annual average growth rate of nearly nine per cent Coffee provides opportunities for livelihood to nearly one lakh families including agricultural labourers. In Kerala, coffee is also one of the small holder plantation crops with nearly 76,000 holdings coming under the category with an average size of 1 1 ha. Consumption of coffee has remained more or less static at around 55,000 tonnes for the past one and half decades till 1999 and then slightly improved to 70,000 tonnes in 2003. Out of this, 28000 MT is robusta coffee.

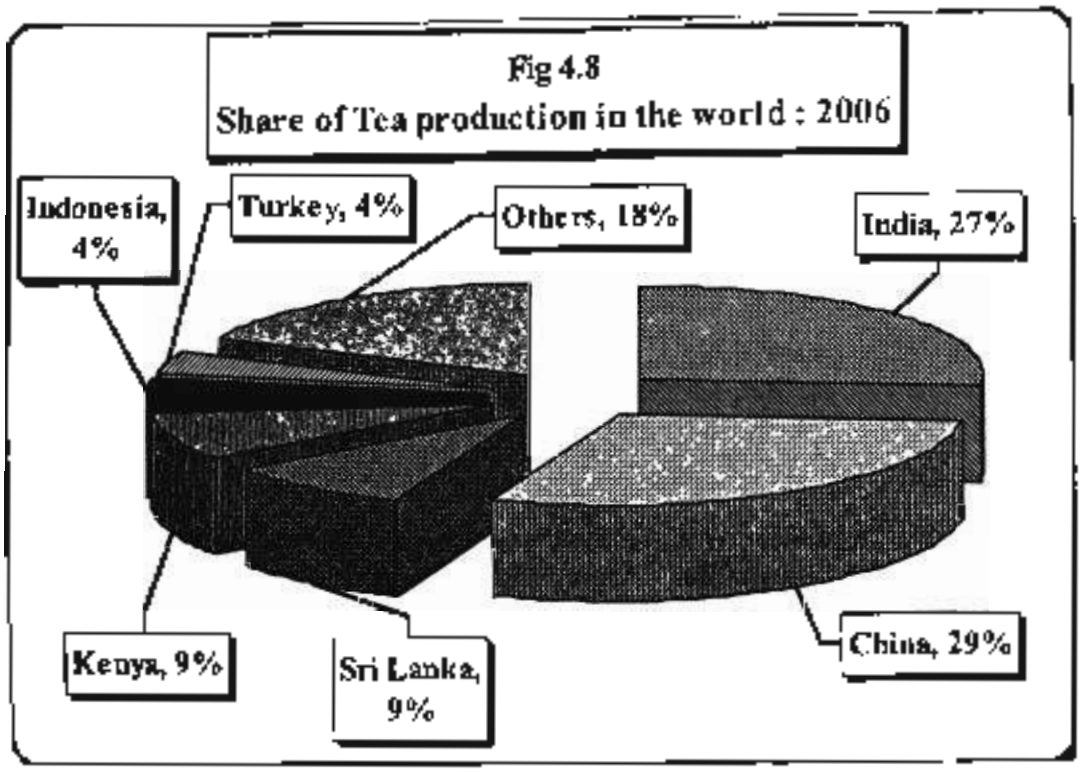
4.56 Coffee is a highly export dependent crop and more than 80 per cent of domestic production is exported. The unit value realization has declined drastically from Rs. 95.37 per kg. in 1997-98 to Rs. 74.94 per kg. in 2005-06 which improved to Rs.80.57 per kg in 2006-07. The quantity of coffee exported from India increased in 2006-07 to 2.43 lakh tonnes from 2.01 lakh tonnes in 2005-06.

4 57 International Coffee prices made a remarkable recovery during 2005 with Robusta prices averaged to $ 1 09/Kg up from $ 0 79/Kg. in 2004.

Tea

4.58 A declining trend in production in the State was observed for the last six years from 68.9 m. kgs. in 2000 to 67 m. kgs. in 2005. Against the total area of 5.11 lakh ha under tea in the country Kerala accounts for only 0.35 lakh ha. In respect of production the share of Kerala is 7 per cent in 2006. Tea plantations owned by big companies employ a labour force of over 84,000 in the organised sector There is fluctuation in production and it ranged from 64.8 M. kgs. in 1995-96, reaching to 69.1 M.kgs. in 2000-01 which declined to 53.6 M kgs. in 2006-07.

4.59 After the removal of quantitative restrictions in April 2001, one of the major threats faced by the tea industry is the increased import of inferior quality teas into India particularly from Indonesia resulting in further depression in prices. Imports increased from 13.4 M. kg. in 2000 to 16.6 M. kg. in 2001 and further increased to 23.95 M kg. in 2006. However during 2003 the import declined substantially to 9.8 M. kgs. The maximum quantity of tea was imported from Vietnam (34 per cent), followed by Kenya (18.6 per cent) and Nepal (18 per cent). The unit value of imported tea was the lowest from Vietnam (Rs.34/kg) while the average being Rs.50/kg The disturbing fact is that most of the countries are exporting to India at low prices.



4.60 The average auction prices for 1999 at Kochi was Rs. 62 per kg. which declined to Rs. 54.40 per kg. in 2006. The price of tea in south India during January-June 2007 has slightly improved to Rs. 54.69 per kg from Rs.49.26 during the corresponding period during 2006. The auction price of three centers (Colombo, Kolkata and Mombassa) averaged US$ 1.66 /kg. during 2005, which is slightly lower compared to 2004 level

4.61 Productivity of Tea in India is much lower than that in Vietnam. The organic tea production is a major shift in this sector. (eg. Darjeeling tea). In Kerala coverage under organic tea could be increased . Nelliyampathi (Palakkad dist) estates have already got Organic Certification.

4.62 On the types of tea imported by major countries the orthodox tea accounted for 51 per cent and CTC accounted for 39 per cent and the rest by green tea and others. The CTC market is shrinking. In South India orthodox tea production had declined from 94 per cent in 1961 to 25 per cent in 1991 and to 16 per cent in 2003. There is a need to correct this, especially in the context of the global demand for orthodox teas.

Cardamom

4.63 Productivity which was more or less stagnant around 50 kg./ha in the 1980s has improved to the level of around 203 kg per ha by 2001 and increased slightly to 208 kg/ha in 2006-07 Kerala was lagging behind the national level till 1992-93 but has improved its position by raising its productivity to 215 kg. per ha over the last five years. Consequently, the

share of Kerala in production at the All India level also increased from 28 per cent in 1992-93 to 76 per cent in 2006-07. While area under cardamom in the country has declined from 0.97 lakh ha to 0.73 lakh ha. in the period. In Kerala it has come down from 65,000 ha to 41362 ha. On the export front cardamom has been facing competition from Guatemala although the quality of Guatemala cardamom is inferior. The country could tide over the challenge by expanding domestic market through market promotion. The average auction price during 2000-01 was Rs. 570 per kg. which improved to Rs. 622.96 in 2001-02 and declined to Rs. 561.13 in 2002-03 and further declined to Rs. 217.44 in 2005-06. The Indian export of cardamom has increased from early nineties and reached a peak level of 1545 MT in 2000-01 and then declined by 43 percent in 2006-07 to reach 650 MT. The unit price of exported Cardamom increased steadily to Rs. 344.00 per kg. in 2006-07 from Rs. 310.78 per kg. in 2005-06. However the market for cardamom is largely domestic as could be seen from the declining share of exports and the share of exports is only 17 per cent of the production.

Lease land farming through Kudumbashree

4.64 'Harithashree', the lease land farming promoted by the State Poverty Eradication Mission, Kerala, through 'Kudumbasree', has helped women farmers to stay on in agriculture for their livelihood. The number of Grama Panchayats involved in the programme is 820. There are about 26499 NHGs and 234812 families presently involved in the 'Harithashree' programme covering an area of 43425.36 ha. The area under leased land farming increased from 23159.79 ha in 2005-06 to 43425.36 ha. during 2006-07. The details are given in Table – 4.10

Table 4.10
Lease Land Farming through Kudumbashree as an March 2007

Sl.No.	Name of District	No. of GPS	No. of NHGs	No. of families	Area in Hectares
1.	Thiruvananthapuram	73	2019	21159	2576.68
2.	Kollam	69	1324	5009	2716.63
3.	Pathanamthitta	38	1085	9775	1588.66
4.	Alappuzha	72	1044	10997	2094.20
5.	Kottayam	65	755	7936	1646.40
6	Idukki	49	6759	61103	8314.00
7	Ernakulam	52	2544	29175	5506.96
8	Thrissur	32	375	3351	537.25
9.	Palakkad	87	2363	17443	4139.44
10.	Malappuram	72	1370	6381	1708.00
11.	Kozhikode	77	2090	13284	2180.00
12.	Wayanad	25	1064	12407	6801.00
13.	Kannur	70	2252	24458	2636.00
14.	Kasaragod	39	1455	12397	980.14
	Total	**820**	**26499**	**234875**	**43425.36**

Source: Kudumbashree

4.65 Paddy, Tapioca, other tuber crops, vegetables etc. are the major crops cultivated under lease land farming. Certain innovative groups are experimenting fewer other crops such as water melon in Pathanamthitta district and Basmathi and scented rice in Wayanad district. Many Grama panchayats are also promoting organic farming through their women groups.

Crop Husbandry

Crop Development Programme - Review of Annual Plan 2006-07

4.66 During the Annual plan 2006-07 an amount of Rs. 19089.05 lakhs was provided to crop husbandry which include Rs. 955.73 lakhs for partially aided schemes and Rs.9885.34lakhs under 100 per cent Centrally sponsored including Macro management schemes. (Table 4.11). The State sector schemes incurred an expenditure of Rs. 6173.29 lakh (74.84 per cent).

Table 4.11
Financial Performance of Crop Husbandry during 2006-07

(Rs Lakh)

Sl. No.	Item	Outlay	Expenditure	per cent of Expdr. to outlay
1.	State Plan Schemes	8247.98	6173.29	74.84
2.	Partially Assisted Central schemes	955.73	1431.43	149.77
3.	100 per cent Centrally Sponsored Schemes including MOU	9885.34	4184.92	42.33
	Total	**19089.05**	**11789.64**	61.76

4.67 Major crop wise financial achievements made during the period is furnished below (Table 4.12). An amount of Rs. 27.64 crore was utilised for the development of rice in the State from the State and Central Plan schemes. For Horticulture crops, apart from the amount shown in Table above, State Horticulture Mission also provided separate funds.

Table 4.12
Major Scheme wise Expenditure during 2006-07

(Rs. Lakh)

Sl.No.	Schemes	Expenditure
1.	Rice based farming system	1850
2.	MOU Rice Development	914
3.	Coconut based Farming System	1016.991
4.	Integrated Farming in Coconut Holdings	656.628
5.	Market Intervention Support Price to Farmers	1089.15
6.	Organic Farming	198.225
7.	Women in Agriculture	289.0208

Rice

4.68 Rice development activities in the State were carried through State schemes and Centrally sponsored schemes. The ultimate objective of rice development programme during the Tenth Plan period is to sustain rice cultivation in 4 lakh ha and to augment the average productivity to more than 2.8 tonnes per ha Revitalisation of group farming samithies in predominant rice growing areas like Palakkad, Thrissur, Ernakulam and Alappuzha, assistance to paddy development agencies and assistance to seed development agencies were continued under State plan for attaining the targeted level of rice production and productivity. During the year 2006-07 it was targeted to introduce revitalisation activities in 1.21 lakh ha and attained progress in 1.15 lakh ha.

Coconut Development

4.69 Productivity of coconut during 2006-07 was 7046 per hectare as against the national average of 6294 nuts/ha. It is estimated that 1/3rd of the plants are senile and unproductive. Yield loss due to root wilt disease is a major concern among the farming community During 2006-07 20000 root wilt affected palms were removed and 404464 palms were replanted with seedlings

4.70 As per the Centrally sponsored scheme the Coconut Development Board provides assistance for production and distribution of quality hybrid coconut seedlings. During the year 0.65 lakh coconut hybrid seedlings were produced and distributed against the target of 0.75 lakh seedlings.

Pepper

4.71 Pepper development programme include production and distribution of pepper cuttings, area expansion, rehabilitation of old pepper gardens, promotion of organic pepper, integrated pest management for pepper and promotion of soil conservation measures. During the year 94 lakh pepper cuttings were produced and distributed, Pepper rehabilitation was introduced in 4000 ha. Promotion of organic pepper was introduced in 1500 ha. Along with pepper other spices such as ginger, turmeric, chillies and tree spices also received support during this period.

Cashew

4.72 In the case of cashew development, rehabilitation, plant protection and establishment of cashew nurseries were given importance during the Annual plan 2005-06. Through Centrally Sponsored programme an area of 974.5 ha was brought under rehabilitation programme against the annual target of 2900 ha.

Vegetable and Fruit Promotion Council's Programme

4.73 Vegetable and Fruit Production Council, Keralam, was involved in the implementation of vegetable and Fruit Promotion Programme. The programme covers production, formation of SHGs, credit management and marketing.

4.74 During the year 2006-07,13965 farmers were inducted and 720 SHG's were formed. 27 farmers markets were established. 25215 farmers were covered under the 'Karshaka Raksha' medical insurance scheme. During the year Rs.113.16lakh was disbursed as crop loan,39MT of vegetables and fruits were exported during 2006-07 and 40022 ha of area was covered under vegetable cultivation.

Supplies and Services

4.75 The State has a strong network for supplies and services. This include Krishi Bhavans in all the Grama panchayats for transfer of technology and organising agricultural services. Planting material delivery system has been developed which includes 33 state seed farms, 10 district farms, 10 special farms and 8 coconut nurseries. The paddy seed farms and the District Agricultural Farms are under the control of the District Panchayats for facilitating appropriate seed planning at the grass root level. Inspite of such elaborate progeny support, supply of quality seeds of paddy and other seasonal crops remain as a weak link in the production front.

Agricultural Insurance

4.76 A survey conducted by FAO in the early 1990s revealed that various types of crop insurance programmes are present in more than 140 countries. Low insurance penetration despite high premium subsidies, mostly captured by large farmers, poor financial performance with claims consisting exceeding to premiums, inappropriate pricing methodologies are few of the key endemic problems that plague national insurance programmes worldwide

4.77 Two crop insurance schemes are currently in operation in the State, viz., The State Crop Insurance Scheme and The National Agricultural Insurance Scheme. The State Crop Insurance Scheme, being implemented since 1995, provides insurance cover to 24 major crops against crop loss due to natural calamities like drought, storm, cyclone, flood, landslip, forest fire, sea erosion, earth quake and lightening. The National Agricultural Insurance Scheme (NAIS), was introduced from 1999-2000, replacing the Comprehensive Crop Insurance Scheme (CCIS) which was in operation since 1985. NAIS is implemented in the State through the GIC of India, and provides insurance cover to Paddy, Banana, Tapioca, Pineapple, Ginger and Turmeric against risks such as natural fire and lightening, storm, hailstorm, cyclone, typhoon, tempest, hurricane, tornado, flood, inundation and land slide, drought, dry spells, pests and diseases. Small and marginal farmers are eligible for 50 per cent subsidy on premium, which is equally shared by the State and Central Governments. The scheme is being implemented in 23 States and 2 Union Territories.

4.78 The State Crop Insurance Scheme, has so far enrolled 240490 farmers. It is also required to include more perennial crops like, Coconut, Rubber, Pepper etc. in the National Agricultural Insurance Scheme, and withdraw these crops from the State Insurance Scheme. An amount of Rs.100.00 lakhs, provided under the State budget has been credited to the Crop Insurance Fund during 2006-07.

4.79 At present State Insurance Scheme and NAIS are in operation in the State. As on March 2007, 255846 farmers were enrolled, covering an area of 216365ha and an amount of Rs.642.52lakhs was collected as premium. An amount of Rs.1506.17 lakh was disbursed as compensation for crop loss to 49332 farmers. The Agricultural Insurance Corporation has prepared a pilot scheme for the insurance of coconut in the state.

Weather based insurance

4.80 Recently Private insurers have executed Pilot projects to sell rainfall insurance to farmers as a substitute for or complement to Crop insurance provided by government. ICICI Lombard has designed rainfall insurance policies with support from the World Bank and IFC. The pilot project was carried out in Andhra Pradesh through a Local Area Bank. The pilot scheme was launched in June 2003 for the kharif season of 2003-04. The insurance policy makes payment if the cumulative rainfall during the season falls below the historical average. This is implemented through a rainfall index.

4.81 The State has to generate reliable rainfall data from different locations within the districts to address variations in microclimates. Satellite based automatic weather stations could be established on a pilot basis in selected districts. Simultaneously meteorological studies also to be initiated to analyse the rainfall yield relationship in various crops.

Agricultural Research and Education

4.82 The Kerala Agricultural University is the principal institution in the state providing human resources and technology required for the sustainable development of agriculture encompassing all production activities based on land and water, including crop production, animal husbandry, forestry and fisheries. The university fulfills its obligations and commitments through a network of 36 big and small campuses spread through out the state consisting of ten colleges, six RARS's , 26 Research Stations, 3 centers of Advanced studies, the Central Training Institute(CTI), the ATIC (Agriculture Technology Information Center), 7 KVK's (in Kollam, Kottayam, Thrissur, Palakkad, Malappuram, Kannur and Wayanad Dsts.), the KAU Press, the Central Library and various other research programmes. The University has a strong technical manpower consisting of 1000 academics and over 800 technical staff.

4.83 The research support for sustainable development of agriculture sector in the state is rendered by Kerala Agricultural University in a participatory mode in close association with research institutions managed by Indian Council of Agricultural Research, Commodity Boards and Departments of the State and Central Governments. Over 500 research projects are currently in operation including 39 All India Co-ordinated Projects/Network Projects, 21 Ad-hoc Projects, 73 KSCSTE Projects and 127 other externally aided projects funded by SHM, Western Ghat Cell, UGC and Cadbury India Ltd. The research accomplishments of the University during the year 2006-07 is highlighted in the Box- 4.4.

Box 4.4
Research Highlights of Kerala Agricultural Universtiy-2006-07

Rice and rice based cropping system

- The rice cultivar C80 which is non lodging, photoinsensitive, high yielding, with red kernel was released as " Manupriya " as a better substitute for Jyothi
- VLR-7 a rice variety suitable for pokkali cultivation was released
- Culture 20D1 a promising , photoperiod sensitive, semi tall red rice mutant suitable for rabi season was released as Pib 58 (Anaswara)
- SRI method of planting and after cultivation was significantly inferior to conventional method of cultivation in Kuttanad.
- Recommendations of poly lined jute bags with 400 gauge density as a suitable packing material for prolonged storage of paddy has been accepted for inclusion of POP recommendations

Coconut and other palms

- The exotic type coconut Seychelles was released as ' Kera Sagara'
- Water stress tolerant coconut seedlings were developed through pollen selection and selective fertilisaion
- Processing methods have been standardized for coconut by products such as CIS RTS, CIS Honey and CIS granules

Vegetables

- Two Dolichos bean varieties 'Hima' and 'Grace' and two amaranthus varieties 'Krishnasree' and 'Renusree' have been released
- Two bacterial wilt resistant lines LE 66-1 and LE 1-2 have been developed

Fruits

- The base temperature at which growth starts in Nendran banana is 14° C. The secondary corm formation is an integral part of crop cycle when banana crop is raised from suckers and it is the first report of its kind
- Turmeric proved to be the most remunerative intercrop in banana var. Nendran

Spices and Plantation crops

- First time in the history of black pepper cultivation an amphidiploid , partly fertile interspecific hybrid was developed through hybridization between cultivated sp.of black pepper and *Pepper colobrinum* , the wild species which is completely resistant to Phytophthora foot rot disease.
- Released the cashew hybrid H 1593 as variety 'Poornima' for cultivation in Kerala

Sugar and tuber crops

- One coleus variety- 'Suphala' was released

Floriculture

- Five Orchid varieties - Deep blush, Lemon Glow, Master Delight, Pink Cascade, Velvet Soft were released

Fodder crops

- Two Bajra-Napier hybrids , 'Suguna' and 'Supriya' and one guinea grass variety- Harithasree were released

Aromatic and Medicinal plants

- Two varieties of Cherhi Koduveli- Mridhula, Agni, two arieties of Atalodakam- Ajagandhi, Vasika and one variety of Adapathiyan-Jeeva were developed.

Soils and Agronomy

- Integrated use of poultry manure, vermicompost , oil cakes and bio fertilizers could substitute the chemical fertilizers to a certain extent only.
- In a 6 year study on continuous application of the same herbicide at the recommended doze for weed control in rice, no accumulation of residues was noticed in the grain, straw or soil
- In SRI method of rice cultivation herbicide weed control was found to be more effective than cono weeder

Beneficial organism

- A new technology was standardized for liquid formulation of *Pseudomonas fuorescens*
- Use of biocontrol agent *Pseudomonas fuorescens* and vermicompost application significantly reduced the neck blast disease in rice

Gender studies

- A network consortium of women entrepreneurs of various stake holders associated with Agricultural Development was formed

Veterinary and Animal Sciences

- Reported the occurrence of Classical Swine Fever in pigs for the first time in Kerala

- First report in India on pathogenicity of *Theleria orientalis* among cross breds of Wayanad
- First report of *Linguatula serrata* from ruminants of Wayanad

Agriculture Engineering

- The TNAU rasp bar-drum type pepper thresher was tested for its performance and found satisfactory
- A semi automatic equipment for application of water in furrows through surges was developed.

Post Harvest Technology

- Prepared products like instant rice noodles, dried starch from rice soup, cocoa powder coated rice flakes and rice bread
- Utilisation of rice husk ash as an alternate material for hollow bricks

Information technology

- The software DSS-CROP -9 is ready for release
- The package ' Nutrient Recommendation System for Rice (NRSR) , a part of the main software is ready for release

Source - KAU Annual report 2006-07

4.84 A number of research stations were established under the KAU decades back and a restructuring of the stations with changes in mandate as well as incorporation of new courses in agricultural education are needed if they have to play any useful role in the changed and changing agricultural scenario.

4.85 A number of research institutions funded both by Government of Kerala as well as Government of India are located in the state. The contributions made by these institutions over a period of time are substantial. However in the changing scenario of post WTO context and shrinking financial support to these institutions a consortium approach has to be adopted for the identification of research problems and recommendations especially in farming systems research. Institutional synergies in transfer of technologies also have to be implemented for realising the maximum benefits to the farmers.

4.86 The Planning Commission, GOI India attempts to analyse the current situation of Agriculture Research and Education in India. Recommendations of the Eleventh Plan Working Group and reports of the Steering Committee on Agriculture Research and Education contain several suggestions for revitalizing the present system. The excerpts of these reports relevant to the state are given in Box: 4.5

Box 4.5

Reports of Planning Commission , GOI on Agriculture Research and Education

A Report of the Steering Committee on Agriculture Research and Education

- Agricultural research is under funded. ICAR and its network has been frequently reviewed by eminent experts, but its highly centralized, hierarchical and bureaucratic set up has not responded to the need for change. The available resources have not been optimally utilized for lack of clearly stated strategy and rational prioritization of research agenda.

- Frontline demonstrations by various departments provide clinching evidence of large gaps between what can be attained at farmers fields with improved technology and what is obtained with existing practices clearly pointing to the large potential for raising output through the effective dissemination of technology. However this gap is not addressed because of the weak Research –Extension-Farmer linkages .

- The flow of improved varieties and production technology for rainfed crops and regions with relatively low rainfall has been uneven. Research has tended to focus mostly on breeding varieties of individual crops for increasing the yield potential by more intensive use of water and biochemical inputs , to the neglect of cropping systems and practices for prudent, efficient and sustainable use of land , water and chemical inputs

B. Recommendations of the Working Group on Agriculture Research and Education, GOI

- A nation wide programme needs to be launched for the conservation of plant, animal, fish and micro-organism resources in the country

- The seed replacement in varieties should reach 40% and in hybrids touch 80% which will not only make demands on seed producing agencies but will also largely induce private entrepreneurs to invest in seed production

- Development of district-wise crop-potential map to focus research on crop improvement and production management within the potential region for each crop Block level agro-climatic, land use and socio-economic data collection and analysis should be carried out.

- The evolution of national data base on pesticide residue status in commodities is another prime area of focus for the next five year plan period

- Strong network programme is essential to make viral disease management in Indian crop health scenario through vector control.

- Improvement of water use efficiency and water productivity through multiple water use for diversified agriculture. Rain water management through equitable water harvest technology based on participatory approach.

- The integrated farming systems internalizing synergies of different components for enhanced resource utilization, income and livelihood generation and minimizing environmental loading need to be developed for different agro-ecologies

- Upgradation of weather based forewarning mechanism and provision of value added agromet advisory services are needed

- Maping of disaster prone areas, pest and disease hotspots using GIS and remote sensing technologies need to be taken up. There is an urgent need to establish a wide interlinked network of automatic weather stations with real time data dissemination across the country particularly in the eco-regions important for food security.

- Designing of diagnostics and vaccines for major diseases of Cattle, Poultry and other domesticated animals and development of new generation vaccines against important diseases should receive high priority

- The research in extension education is the weakest link in the growth of transfer of technology. The recent advances in the field of communication and information technology, behavioral sciences including management have great implications for improving research in extension education as well as development of models of technology generation, assessment and refinement.

- Demand and supply projections on a regular basis for all agricultural commodities at national and regional level, including nutritional implications of dietary diversification should be given the priority.

- ICAR should increasingly focus on research coordination, networking and partnership to increase efficiency and effectiveness of agricultural research.

- ICAR should strengthen the efforts to integrate outcome of various programs undertaken by different ICAR institutes/schemes for greater visibility of research outcomes and impacts.

- Nearly one-third of plan funds of ICAR should be dedicated for competitive funding with well defined objectives and research priorities, and only public institutions should be eligible to compete for these funds

- For externally-funded projects, ICAR institutes should charge an institution fee(20-40% of total budget) for maintenance of research infrastructure of the institute after completion of the project

- Management of intellectual property and transfer of technology through commercialization and public routes should be institutionalized in a sustainable manner.

- There is need to consolidate the programmes to optimize output and enhance efficiency. Proliferation of projects/schemes results in spreading the resources thinly.

- The financial health of SAUs is a cause of concern, hence, support to SAUs may be given to the tune of Rs.10,000 crore.

Source : Planning Commission, GOI, 2007

Farm Commodity Price

4.87 Data on average farm price of principal crops grown in Kerala are shown in Table 4.13. The table shows increase in 2006-07 compared to previous year in respect of most of the commodities, namely arecanut (19.30 per cent), Rubber (24.27 per cent) tapioca (8.53 per cent), banana (6.87 per cent). Paddy (11.61 percent), Pepper (79.44 Per cent), Coffee (3.95 Per cent) and Cardamom (43.5 per cent) Decline was reported to Cashewnut (15.02 per cent), and Coconut (4.35 per cent). Global agricultural prices have also indicated a recovery path from

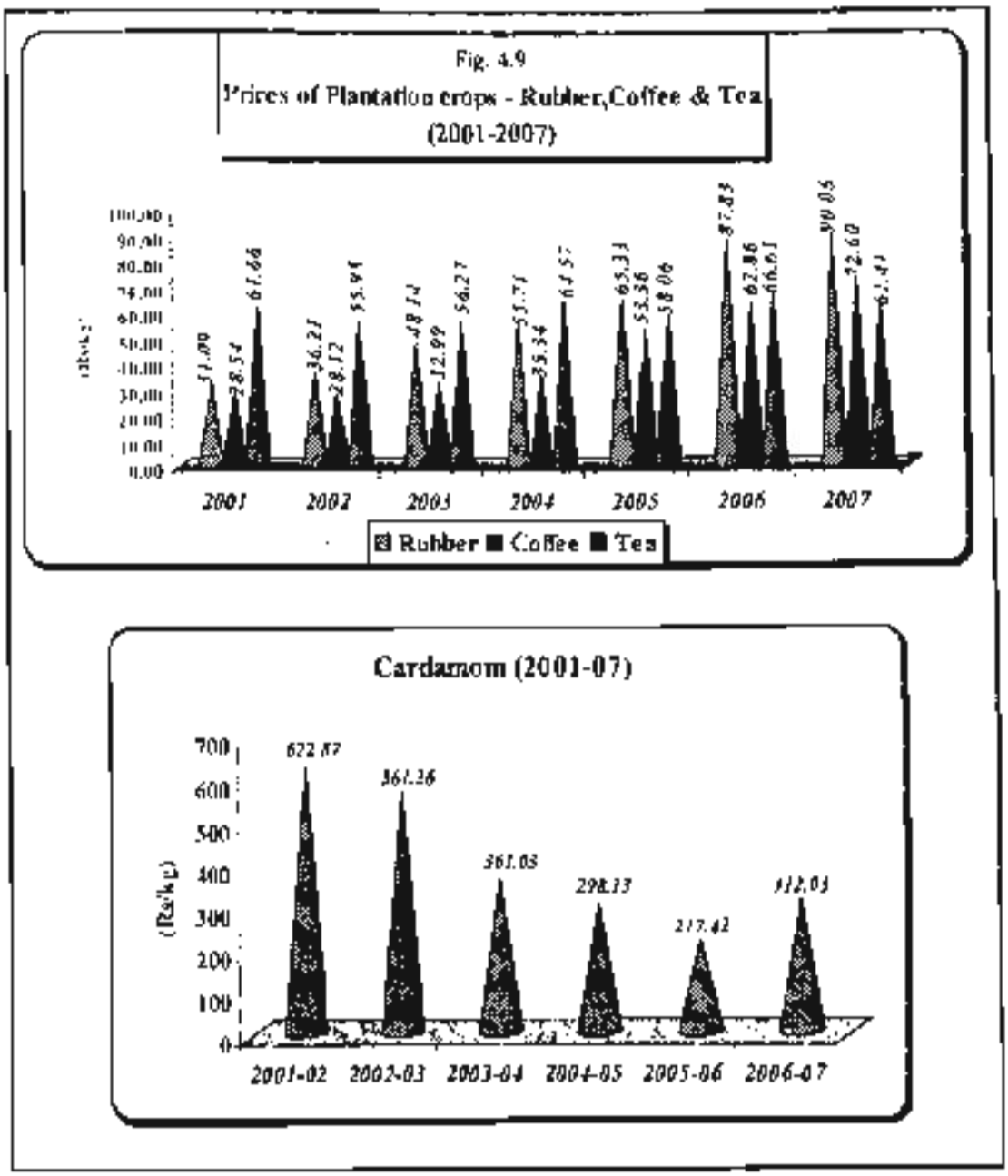
the latter half of 2002 onwards. Data on month-wise prices of the commodities during 2006-07 are shown in Appendix 4.18. The prices of plantation crops for the last seven years are shown in Fig. 4.9

Table 4.13

Average Farm Price of Important Agricultural Commodities

Year	Paddy (qtl.)	Coconut with husk (in 00' nos.)	Arecanut (00' nos.)	Cashewnut (qtl.)	Banana (qtl)	Tapioca (qtl.)	Pepper (qtl.)	Rubber (qtl)	Tea (kg.)	Coffee (kg)	Cardamom (kg)
2000-01	648.36	281.43	41.88	2368.81	1042.51	397.24	12401.24	3036	51.33	39.95	569.99
2001-02	600.27	340.64	32.81	2569.33	949.51	321.03	6745.43	3228	52.21	28.54	622.96
2002-03	649.76	475.63	32.11	2730.30	971.34	394.01	7692.17	3919	47.21	78.12	561.13
2003-04	694.69	582.73	34.62	2831.75	1167.00	389.36	6802.46	5040	45.78	32.29	361.02
2004-05	651.00	635.00	40.00	3533.00	1112	404	6032	5224	52.14	53.36	330.44
2005-06	610.78	494.89	42.73	2899.54	1247.81	432.63	5979.84	6699	54.41	62.86	217.44
2006-07	681.72	473.36	52.17	2463.90	1333.58	469.54	10730.62	8125.16	—	65.34	312.03
% Change in 2006-07 over 2005-06	11.61	-4.35	19.30	-15.02	6.87	8.53	79.44	24.27	—	3.95	43.5

Source: Directorate of Economics and Statistics



Livestock Development

4.88 Livestock sub sector is a part of a dynamic development process and has emerged as one of the key components of agricultural growth in developing countries in recent years. At world level, consumption of livestock products is growing even faster than the increase in world population. Rising affluence, particularly in the developing countries where average real incomes have doubled since the early 1960's, means that more people can afford the high-value protein that livestock products offer. There are more people with more disposable income to spend on the food they desire and, in ever-greater numbers, those people are living in towns and cities. Over 80 per cent of the world's population growth occur in the cities of the developing countries, and urban population consumes more animal products than those based in rural areas

4.89 India is at present on the path of economic transformation and India's economic development would sustain the increasing trend of urbanisation and income growth in the future. Urbanisation and income growth had positive influence on the consumption of livestock

products viz., milk, egg and meat. The consumption growth rates of these commodities are very high in the last 2-3 decades and the same will be the trend in the nearest future. This will help not only to maintain nutritional security of the people but will help to increase income growth of the rural poor.

4.90 In Kerala where the dairying has thrived very well till mid nineties is now showing signs of stagnation and or even to a retrogressive situation. At the same time the consumption pattern of livestock food products in Kerala is in the same direction of the nation. But this trend had no positive effect on the income the people engaged in livestock sector. Now in the State people are reluctant to undertake dairy farming. In spite of the attempts of the state to retrieve the sector, livestock rearing is no more an attraction to the rural people especially the large majority of livestock owning households which comprise of small and marginal farmers and landless households. The strategy adopted in the eleventh plan is to increase the production thereby making the State self sufficient in the availability of livestock food products, reducing the cost of inputs through better management practices and reducing cost of production as well as to augment the income of the farmers. Major inputs viz., fodder and feed production are given due importance and projects are framed as such to make the sector profitable.

4.91 The sector of Kerala is now showing a declining trend in respect of livestock population and livestock products. This sub sector which flourished well during the last three five year plans, showed signs of declining during the X plan period. Compared to 1996 livestock census, the census conducted during 2000 and 2003 showed drastic reduction in different categories of livestock. Estimates of milk and egg production reveals a declining trend in milk production after 2001-02 and in egg production after 1999-00 and during 2006-07, production of both the products showed a slight increase.

4.92 The sector has high potentiality for alleviating poverty and unemployment in rural areas. As the ownership of livestock is more evenly distributed with landless labourers, small and marginal farmers, the progress in this sector will result in a more balanced development of the rural economy, particularly in reduction of poverty ratio.

Trend in Livestock Population

4.93 As per the report of FAO, the World's livestock population in 2003 comprised of 1365 million cattle, 172 million buffaloes, 1059.8 million sheep, 790 million goats and 943.8 million pigs. During 2004 the poultry population was estimated at 16.4 million and duck population 1 million. Compared to 2000, the worlds' cattle population increased by 2.7 per cent during 2003 and by 3.8 percent during 2004. During the same period buffalo population increased by 4.2 and 5.2 percent, goat population by 6.9 and 9.4 percent and pig by 5 and 5.3 per cent.

4.94 As per the provisional figures of 2003 livestock census, India has 187.38 million cattle, which are about 14 per cent of the world cattle population. Out of the 187.38 million cattle, 22.63 million were crossbred, which is 12.07 per cent of the total cattle population. Between 1997 and 2003, crossbred population increased by 12.6 per cent. The states of Tamilnadu, Maharashtra, Kerala, Uttar Pradesh, Karnataka and Punjab account for about 60 per cent of the crossbred cattle population. The country has 96.62 million buffalo population, which is about 56.5 per cent of the world buffalo population. Between 1997 and 2003, the buffalo population increased by 7.5 per cent. In spite of India's position as highest producer of milk, productivity per animal is very poor. It is only 987 Kgs/lactation as compared to the world average of 2038 Kgs/lactation. This is mainly due to poor level of nutrition as well as low genetic potential for milk production and health care.

4.95 Kerala's cattle population which accounted for 1.75% of the total cattle population in the country during 1987 declined to 1.61 % by 1996 and 1.13 % by 2003 . The cross bred cattle population which stood at 12.26 lakhs and 68% as per 1996 Census decreased to 7.73 lakh Nos and in percentage terms increased to 83% by 2003 This increase in proportion of cross bred population was made possible by expanded health care facilities and AI services available in the State . So far out of 3050 artificial insemination centres, 2469 centres were established by the Animal Husbandry Department, 10 by Dairy Development department and 571 by other agencies

4.96 Over the Census periods buffalo population is the most affected one. Concerted efforts are to be undertaken for implementing buffalo development programme. KLD Board has been producing frozen buffalo semen and the same is made available through AI units for artificial insemination. Goat population is also on the decline mainly due to indiscriminate slaughter, shrinking of grazing lands and urbanisation. A programme for the development of buffaloes is started during 2005-06 to include buffalo calves under SLBP Programme

4.97 Of the total cattle population, Palakkad district accounts for 12.4 per cent (highest) and Wayanad for 4.89 per cent (lowest). Higher number of buffaloes is concentrated in Malappuram (19%), goat in Thiruvananthapuram (12%) and pig in Idukki (30%). Regarding poultry Malappuram accounts for 13 per cent of fowls, Alappuzha for 38 per cent of ducks.

Trend in Production of Major Livestock Products

4.98 As per the latest estimates of estimates the value of output from livestock sector to Indian economy during 2001-02 at current price was about Rs 1470.07 billion which increased to Rs.1851.66 billion during 2005-06 ie., an increase of 25.8 percent over four years showing a compound growth rate of 5.2%. But, the major contributor is the milk group and during the period the per centage share staggered around 67 per cent compared to a share of 68.29 per cent during 2001-02, the base year of 10th five year plan. During 2001-02 the contribution of meat was 14.43 per cent which declined to 13.82 per cent during 2005-06. (See Table 4.14).

Table 4.14

Value of Output from Livestock sector (All India) (2001-02 to 2005-06)

(At current prices in Rs. Billions)

Item *	2001-02	%age share	2002-03	%age share	2003-04	%age share	2004-05	%age share	2005-06	%age share
1 Milk Group	1004.54	68.29	1043.47	67.74	1104.43	67.79	1159.31	67.87	1245.20	67.25
2 Meat Group	249.83	16.98	265.47	17.23	273.37	16.78	281.23	16.46	300.51	16.23
2.1 Meat	212.31	14.43	225.71	14.65	232.23	14.25	239.44	14.02	255.88	13.82
2.1.1 Beef	22.92	1.56	25.10	1.63	26.30	1.61	28.22	1.65	35.99	1.94
2.1.2 Mutton	78.99	5.37	87.89	5.71	91.79	5.63	85.94	5.03	92.47	4.99
2.1.4 Poultry Meat	98.53	6.70	98.42	6.39	100.10	6.14	110.25	6.45	110.17	5.95
2.2 Meat Products	8.41	0.57	9.05	0.59	9.51	0.58	9.39	0.55	11.25	0.61
3 Eggs	48.79	3.32	50.49	3.28	50.86	3.12	55.70	3.39	57.91	3.13
5 Dung	107.90	7.34	120.21	7.80	128.68	7.90	136.58	8.00	158.03	8.53
Total of All Items	1470.97	100	1540.56	100	1629.21	100	1708.12	100	1851.66	100

*Source: Central Statistical Organisation, GOI * only details of Major items are included*

4.99 Poultry meat is the biggest contributor to meat group followed by mutton. The contribution of egg is around 3 % all over the period. Over the period 2001 - 06 there was no remarkable change in percentage share of contribution of egg to the value of output.

4.100 Regarding the index number of whole sale price of all commodities (all India) compared to 2001-02 there was an increase of 28% during 2006-07, 19.5% in food grains, least in the case of dairy products ie , 16%. higher percentage recorded by milk 18% and egg, fish and meat 19% . The highest hike is in the index number of oil cakes i e., 37%.

4.101 Trends in requirement and availability (based on domestic production) of major livestock products in Kerala are given in Table 4.15. A wide gap is existing between the requirement and production of animal products. A comprehensive strategy needs to be put in place to augment production of all major livestock products in the state with appropriate linkage with plans of the local governments. Block level credit plans are also to be prepared realistically by incorporating these concerns since credit absorption potential is projected to be high in the animal husbandry sub sector.

4.102 With a view to enhance the availability of milk and egg , it is proposed to launch a new programme during Eleventh Plan as part of Flagship Project. The aim is to enhance milk production by 70% from 2005-06 level and doubling of egg production.

Table 4.15

Requirement and production of Livestock Products in Kerala

Sl. No.	Year	Milk (Lakh MT)		Egg (Million Nos.)		Meat ('000 MT)	
		Require ment	Producti on	Require ment	Production	Require ment	Producti on*
1	2002	23.65	24.20	4217	1347	253	177.74
2	2003	23.87	21.11	4258	1277	256	188.22
3	2004	24.16	20.25	4314	1197	257	195.27
4	2005	24.38	20.63	4341	1196	261	195.37
5	2006	24.53	21.18	4362	1199	262	196.17

Source: Animal Husbandry Department

**including unauthorised sector * Anticipated Requirement estimated based on projected population figures*

4.103 The total milk production of the State is showing a declining trend from 27.18 lakh tonnes in 2001-02 to 20.63 lakh tonnes during 2005-06 and increased to 21.18 lakh tonnes during 2006-07. At the same time over the period, at national level the milk production has been continuously increasing. Kerala's contribution to national milk production which stagnated around 3.2 per cent during 1993-94 to 2001-02 declined to 2.1 per cent during 2005-06 and remains at the same level during 2006-07. The gap between the production and requirement of egg is widening at an alarming rate. Meat production alone is increasing over the years to keep in pace with the demand .

4.104 The average annual growth rates of milk and egg production in Kerala and India for the period from 1950-51 to 2006-07 are given in Table 4.16

Table 4.16
Average Annual Growth Rate of Milk and Egg Production

(Per cent)

Sl.No.	Year	Milk		Egg	
		Kerala	India	Kerala	India
1	1950-51 to 1960-61	2.50	1.64	NA	4.63
2	1960-61 to 1970-71	2.52	1.15	NA	7.91
3	1970-71 to 1980-81	12.52	4.51	NA	3.79
4	1980-81 to 1990-91	6.41	5.50	4.89	7.70
5	1990-91 to 2000-01	4.24	4.16	2.75	4.59
6	1997-98 to 2001-02	3.78	4.32	(-) 0.22	7.09
7	2001-02 to 2006-07	- 4.86	3.64	-9.75	5.52

Source. Based on Sample Survey reports of Animal Husbandry Department

4.105 In spite of a shrinking fodder base, the dairy sector in Kerala could maintain a growth rate of 4.24 per cent in the 1990s, compared to India (4.16 per cent). But during the Ninth Plan period (1997-02) it came down to 3.78 per cent while that of India increased to 4.32 per cent. Compared to 9th Plan period during 10th plan period, a negative growth rate is reflected in the milk production of Kerala (- 4.86%) and at India level the growth rate declined to 3.64 per cent.

4.106 The egg production of Kerala, which recorded a growth rate of 4.89 per cent during 1980 – 90 period, declined subsequently and by ninth plan period it reached a negative growth rate of 0.22 per cent and declined further to -9.75% during 10th plan period Compared to growth rate of 7.09 pecent during 9th plan period, 10th plan growth rate is only 5.52% at all India level.

Dairy development

4.107 International Dairy Federation has given a brief report on the World dairy situation during 2007, the details are given in Box No. 4.6 During the period milk production is expected to grow at a slower pace than 2006. Major changes are not expected during the period.

Box 4.6
World Dairy situation 2007

- According to International Dairy Federation (IDF) on the World Dairy Situation 2007, the worldwide milk production is expected to grow at a slower pace in 2007 and is estimated at 655 million tonnes, only 9 million tonnes more than the production of 2006. The strongest growth would be in Asia, notably in China and India. Milk production is projected at 36 million tonnes in China and 94.60 million tonnes in India. India would continue to be the largest milk producer, followed by the US, with projected production of 82.60million tonnes.

- Milk production in EU is sliding down.. Growth is also not expected in US, since in countries like America, milk production has lost attractiveness compared to other types of farming In Oceania, milk production would be static, as a result of drought in Australia..

- Major changes are not expected in dairy products basket. World butter production increased for two years, in 2004 and 2005 and then declined in 2006. It is expected to decline again in 2007. The major cheese producing regions are Europe and North America and both areas are expected to have a faster growth rate.

- The production of condensed and evaporated milks is subject to a declining trend for many years in the developed market. Production of milk powders increased last year and is expected to continue in the year 2007 but skim milk powder (SMP) production is on the way down.

- World trade in dairy products after a period of relative stagnation, started recovery in the second half of 2006 and it continued in the first half of 2007. The recovery is due to prosperity resulting from economic demand. However, the bullish price situation is not likely to continue long and would level down.

- The outlook for the trade in dairy commodities for 2007 appears bright. However, since the new market equilibrium, in respect of prices has to be found, the question is whether international trade in dairy products will continue its growth in 2007 at the same momentum as in previous years

- The IDF has also published prevailing milk producers' price trend to reflect the development of product prices as well.. The lowest prices were paid in India and rural China, it being Euro 21 per 100 kg, in comparison to Euro 28 in US, Euro 33 in New Zealand, Euro 34 in EU; Euro 56 in Norway; Euro 58 in Canada and Euro 68 per 100 kg in Japan. In the year 2007, strong increases of milk prices are expected in the EU, particularly in the second half of the year and in the US. In the emerging markets, prices might also have to follow these tendencies.

- In India, the milk producers are already demanding better prices and it is the responsibility of the processing industry, especially those engaged in the production of export-oriented products to share the benefits of high prices of milk products prevailing in the international markets with their milk producer suppliers. This would lead to equity in development at the end of both producers and processors

Source : International Dairy Federation 2007

4.108 Dairy industry in India has made significant progress from 8th plan onwards. India continues to be largest producer of milk in the world with a total production of 97.1 million tonnes in 2005-06 and the per capita availability of milk stood at 241gm/day

4.109 Though the per capita availability of milk is low compared to world average and substantial increase in this regard was attained over a period of 10years, from 195gm/day to 241 gm/day. This increase together with attainment of near self sufficiency in milk and milk products has been achieved mainly on account of the tremendous amount of marketing support and technical inputs provided and the infrastructure developed in the country through the network cooperatives. More than 50 per cent of the milk in the country is produced by small and marginal farmers and landless labourers, producing about one to three litres of milk per day.

4.110 Among the major states in India, there are significant interstate differences in the productivity of cows and buffaloes. As per the available estimates milk yield/day of exotic cows were highest in Punjab(8 431 Kg), followed by Gujarat (8.057kg) Kerala(7.508 kg) and Andhra Pradesh (7.385kg). At the same time the yield/day of exotic breeds in Karanataka is 6.312kg and Tamil Nadu is only 5.890kg. Among these states highest yield of non descript cow is of Gujarat (3.401kg) followed by Tamil Nadu(2.762kg), Kerala (2 629 kg), Punjab (2.505kg), Karnataka (2 240kg) and Andhrapradesh (1.813kg). The average yield/day of buffaloes is highest in Punjab (7.425 kg) followed by Kerala (6.242 kg), Tamil Nadu (4.222 kg) and Karnataka (2.481 kg). In general the milk yield of both cows and buffaloes were lowest in Assam.

4.111 The year wise estimate of production is shown in Table 4.17. The season wise milk production from 2001-02 to 2006-07 are shown in Table 4.18. The maximum share in production during the rainy season.

Table 4.17
Year-wise Estimate of Milk production

Sl. No.	Year	Milk Production (lakh tonnes) India	% change overprevious year	Kerala	% change over previous year	% contribution of Kerala
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	2001-02	844	4.7	27.18	4.3	3.2
2	2002-03	867	2.7	24 20	-11.0	2.8
3	2003-04	881	1.6	21 11	-12.8	2.4
4	2004-05	925	4.9	20.25	-4.1	2.2
5	2005-06	971	5.0	20.63	1.9	2.1
6	2006-07	1009*	3.91	21.19	2.71	2.1

*Source: Economic Survey and Department of Animal Husbandry *anticipated*

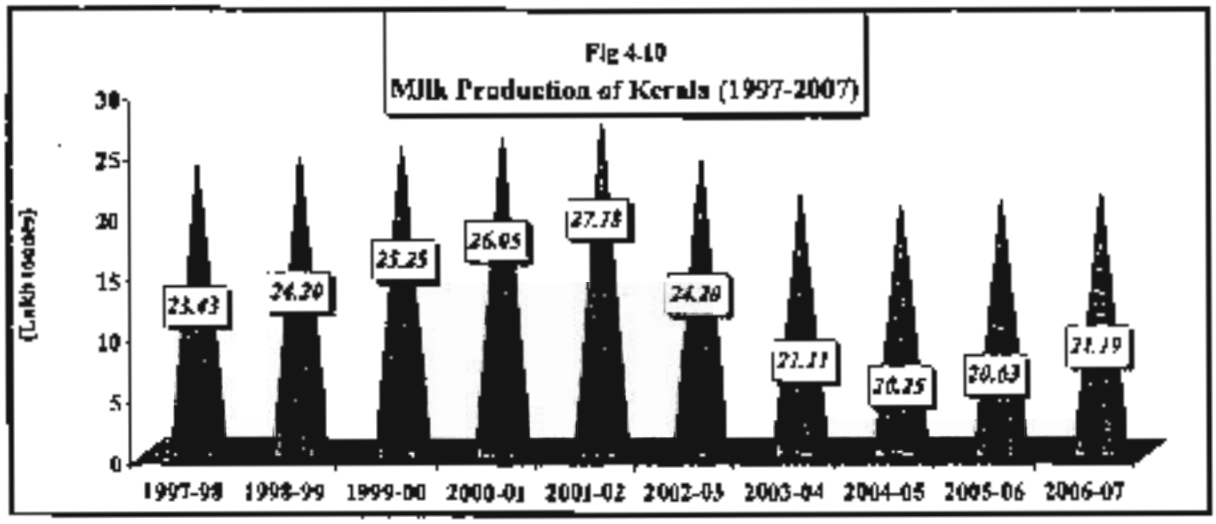
Table 4.18
Season wise Estimated Production of Milk

(Lakh MT)

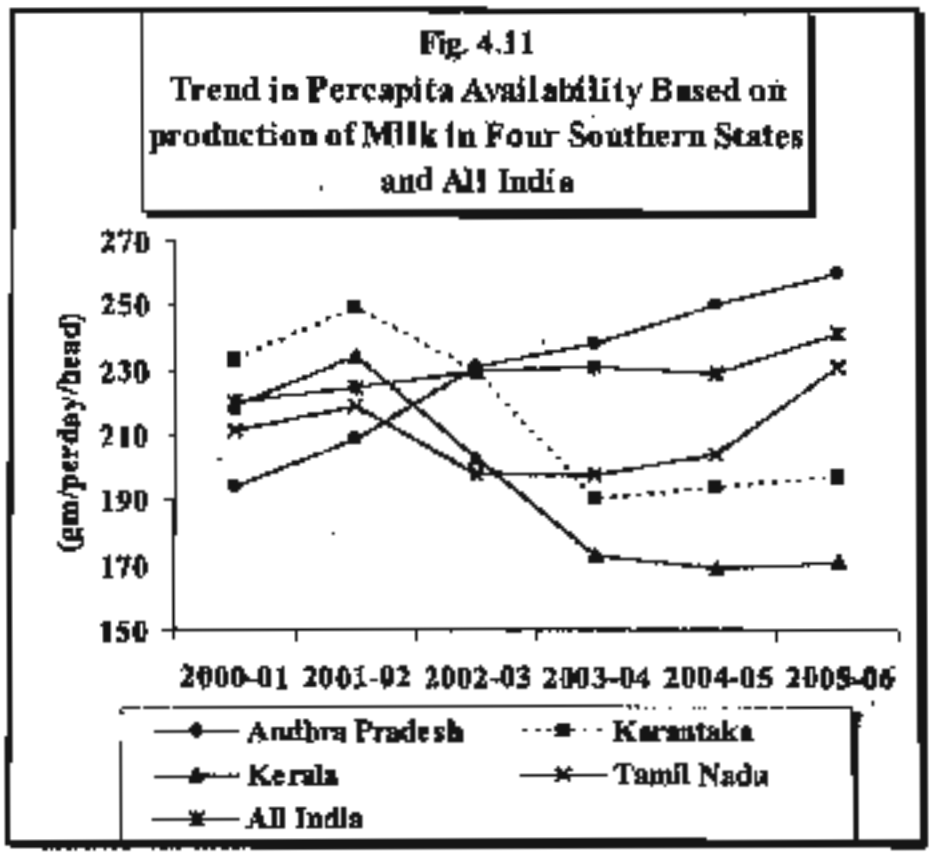
Sl. No.	Year	Summer Quantity	Summer % to total	Rainy Quantity	Rainy % to total	Winter Quantity	Winter % to total	Total
1	2001-02	8.43	31.02	9.74	35 84	9.01	33.14	27.18
2	2002-03	7.77	32.12	8.59	35.51	7.83	32.37	24.19
3	2003-04	6.88	32.59	7.46	35.34	6.77	32.07	21.11
4	2004-05	6.68	32.99	7.25	35.80	6.32	31.21	20.25
5	2005-06	6.65	32.23	7.27	35.24	6.71	32.53	20.63
6	2006-07	6.68	31.52	7.31	34.50	7.20	33.98	21.19

Source: Integrated Sample Survey

4.112 Trend in Year-wise milk production for the period from 1997-98 to 2006-07 is given in Fig.4.10



4.113 Regarding the per capita availability of milk based on 2005-06 figures for the southern states viz., Andhra Pradesh, Karnataka , Tamil nadu and Kerala, Andhra Pradesh ranks first with an availability of 260g/day and Tamil Nadu ranks second with 231g/day. (Trend from 2000-01 to 2005-06 is shown in Fig.4.11). Among the four states, Kerala has the lowest figure of 171g/day (See Appendix-4.31). During the previous year it is 169gm/day. Among the major states at all India level Punjab ranks first with 943g/day and the lowest in the case of Assam with 72g/day.



Better Management of Young Calves

4.114 Despite considerable increase in the proportion of high yielding crossbred cattle, average milk yield per animal per day remains low at 6 litres compared to its potential of 8-10 litres. In order to increase productivity, management of calves is crucial. Bringing down the age at first calving and reduction in the inter calving period of cross-breds have been recognized as the most effective measures for augmenting milk production. With this objective, a 'calf rearing programme by subsidising cattle feed for rearing cattle up to 32 months along with health cover and insurance has been under implementation from Eighth Plan. With the adoption of this scheme in larger areas it is expected to increase productivity of cattle in the state. During 2005-06 period 21819 calves were enrolled under the programme and during 2006-07, 21768 calves were enrolled under the programme. On the whole during the Tenth plan period 0.92 lakh calves were enrolled under this programme. Details are furnished in Table 4.19

Table 4.19
Year-wise Details of Calves Enrolled under Special Livestock Breeding Programme (2001-02 to 2006-07)

Sl. No	Year	No. of calves enrolled
1	2001-02	4485
2	2002-03	6700
3	2003-04	23683
4	2004-05	17941
5	2005-06	21819
6	2006-07	21768

Source: Animal Husbandry Department

Milk Marketing

4.115 As per Report of NDDB, the number of Dairy Co-operatives under organised sector in India is nearly 1.23 Lakh (with 129.64 lakh farmer members)of which the southern area accounts for nearly 23% of the total members. Of the total members 33.84 lakh are women members. The total liquid milk sale is 181.23 lakh litre/day. The dairy co-operative net work includes 170 milk unions and operate in over 346 districts. During the last decade daily milk supply to 1000 urban consumers had increased from 17.5 to 58.8 litres

4.116 In Kerala there are 3322 dairy co-operatives including 2500 Anand pattern societies (as on August 2007) functioning under KCMMF. Besides the societies functioning under the Co-operative Sector, 4 Societies viz., Malanadu, Nirmalgram, PDDP, Perambra and PDDP, Kalady are working under Charitable Institutions. As per MMPO order 1992 ten private dairies handling 64000 MT/annum were registered in the State

4.117 MILMA represents more than 7.77 lakh dairy farmers who have organised 2500 Anand Pattern Cooperative Societies (as on Aug 2007). It has helped in ensuring better returns to the dairy farmers. It also represents10 dairies handling 9.90lakh litres of milk/day, 14 chilling plants, two cattle feed plants, a milk powder plant, an established training centre and 5000 distribution outlets. Of the total 2723 APCOs registered, only 2500 are functional. The average milk procured per day by APCOs during the year 2006 was 9.05 lakh litres against the

previous year average of 8.4 lakh litres. As on August 2007 the average procurement is 9.05 lakh litres/day

4.118 The procurement /day/society is 378 litres during 2006 and as on August 2007, it is 362 litres/day. Over a period of last 7 years the highest average procurement /day is during 2006.

4.119 In Kerala, where the production of milk is concentrated in the small farm sector and ultimate supply is dependent on seasonal factors, maintaining uninterrupted supply particularly during lean period is very difficult. The Federation is thus forced to import milk from the neighbouring states during lean periods when the internal supplies used to shrink. Presently the milk was imported from AAVIN and KMF. The total import during 2005-06 was 500 lakh litres against 625 lakh litres during 2004-05. Season-wise milk production is given in Table 4.18. The procurement of milk by KCMMF stood at 2218, 2508 and 2788 lakh litres respectively against the sale of 2889, 3047 and 3270 lakh litres during 2004, 2005 and 2006. During 2007, procurement and sale of milk by KCMMF stood at 1698 and 2297 lakh litres respectively as on Aug. 2007. During the previous year, procurement during the same period stood at 1829 and sale stood at 2177 lakh litres showing a widening gap between procurement and supply during 2007. Data on procurement and sale of milk by different dairies of KCMMF during 2003 to 2007 is presented in Appendix 4.41.

4.120 The price revision and price spread details of milk of KCMMF is given in Appendix 4.43 and 4.44. During 2007 the sale price of milk per litre was revised twice by KCMMF to Rs.16/litre on February 2007 and to Rs.17/litre on November 2007 During the first revision, the purchase price/kg on an average enhanced to Rs.11.84 and during second revision to Rs.12.45

4.121 The veterinary services rendered by KCMMF are noteworthy. They have a well established Veterinary Wing at Thiruvananthapuram and Ernakulam Regional Milk Unions. During 2007 (as on Aug), services were provided through 10 regular and 32 emergency routes and 0.32 lakh animals were treated. KCMMF has sold 0.75 lakh MT of cattle feed during2007(as on Aug) . It also produced 1744 MT and sold 1678 MT of ghee during the year (as on Aug.). Year wise details for the period from 2001 to 2007 are furnished in Appendix 4.40.

4.122 Besides milk, a variety of milk products are manufactured by KCMMF. A comparison of sales by KCMMF from 2004-05 to 2006-07 is given in Appendix 4.45 All the products except dairy whitener and Palada showed an increase in sale during the period. Increase in the sale of peda is the highest one i.e., 260%. The sale of milk increased by 9% , ghee by 17%, butter by 43% and ice cream by 76%. Also sale of sambharam recorded an increase of 14% and curd 16%

Dairy Farmers Welfare Fund

4.123 The dream pension to dairy farmers was realised through promulgation of an ordinance to form Dairy Farmers Welfare Board In order to create the Corpus for the Fund, the leadership of Milma agreed to contribute 9paise/litre of milk procured by Milma for six months.

4.124 At present 1.5 lakh members (75% of total pouring members) have already enrolled in the fund. Now 22365 eligible dairy farmers (of over 60 years of age and minimum 10 years as qualified milk pouring years) are receiving regular pension @ of Rs.250/month. Also 170

nominees of deceased pensioners are receiving family pension at the rate of Rs.125/month. The KDFWF Act 2007 passed by Kerala Legislature also contains provisions to grant financial assistance to physically disabled members

Weak Feed and Fodder Base

4.125 Reports of the future scenario of demand and supply position reveals a huge deficit in green fodder in the country. The available fodder can meet the demand of around 45 per cent of the total livestock As per the report, the deficit in green and dry fodder in the country which was estimated at 61.96 per cent and 22.08 per cent respectively during 2005 will increase to 62.76 per cent and 23 46 per cent during 2010. The situation appears all the grimmer in case of green fodder

4.126 Kerala's Fodder production efforts have not borne fruits to the extent of bridging the gap left by rapid decline in paddy cultivation. With the shift in cropping pattern of Kerala, the area under rice has come down by 50 per cent over the last two decades leading to drastic reduction in the availability of straw for feeding cattle. It is estimated that the state produces only 60 per cent of the roughage requirement for cattle in Kerala. One of the main constraints for increasing milk production is the shortage of quality fodder. To overcome this situation department is implementing fodder promotion programmes using root slips/stem cuttings of high yielding fodder varieties.

4.127 Special focus will be given to fodder and feed production in Kerala to over come the situation during Eleventh plan period. Popularisation of high yielding fodder varieties like *CO3* and large scale intercropping in coconut holdings are to be taken up with the support of local governments. Perennial fodder varieties like Hybrid Napier and Guinea, which is widely acceptable to farmers, and the department is supplying the planting material free of cost to the farmers.

4.128 Fodder and feed development in is of prime importance in reducing cost of production and optimising economic return from the dairy activity and KLD Board and dairy development department have taken up fodder development as an important activity right from the beginning. The Board with the participation of farmers has taken up production of selected varieties of tropical grasses and legumes in a large scale They produced only 4.07MT of fodder seeds during 2006-07 against 6.53 MT of seeds during 2005-06. The quantity of seeds supplied by KLD Board during the period was 15.52 MT against 24 36 MT during 2005-06. (See Table 4 20). The existing trend reflects the farmers' reluctance to use seeds for fodder cultivation.

Table 4.20
Production and Sale of fodder seeds by KLD Board

SLNo.	Year	Quantity of Seeds Produced (MT)	Quantity of Seeds Supplied* (MT)
1	2001-02	15.98	20.68
2	2002-03	13.51	12.57
3	2003-04	10.80	15.65
4	2004-05	13.89	10.88
5	2005-06	6.53	24.36
6	2006-07	4.07	15.52

Source: KLD Board Annual Reports

4.129 During 2005-06, under department programmes 246 lakh fodder slips/stem cuttings were supplied to cover an area of 1640 ha. The trend over the last five year period shows a continuous decline in total area brought under fodder cultivation through department programmes. But during 2006-07, there is an increase in the area to 1890 ha showing an increase of 18% in the area of fodder cultivation (See Table 4.21). Also the preference of slips over seed is increasing.

Table 4. 21

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	Area covered	Total area covered under fodder cultivation
		(In MT)	(In MT)	(in Ha)	(in lakh)	(In Ha)	(in Ha)
1	2001-02	51.30	51.30	2315	400	2000	4315
2	2002-03	60.00	60.00	2000	160	800	2800
3	2003-04	4.80	4.48	1798	282.5	1412.5	3210.5
4	2004-05	Nil	Nil	Nil	375	1840	2230
5	2005-06	Nil	Nil	Nil	240	1600	1600
6	2006-07	22.5	22.5	250	246	1640	1890

Source: Dairy Development Department

4.130 Regarding the cattle feed concentrate, which will have to supplement the shortage in quality fodder production, the production is not enough to satisfy the requirement. Now KCMMF and Kerala Feeds Ltd., are taking conscious steps for facing this challenge.

4.131 Kerala farmers have adjusted to the situation by restricting the number of cattle and that too by preferring high yielding cross breds. This is evident from the steady increase in the proportion of crossbred animals, which Kerala achieved during the last three decades. (see Appendix 4.23). There is drastic reduction in other categories of livestock such as bullocks, indigenous female cattle, male calves etc. (Appendix 4.24 & 4.25)

Breeding Support

4.132 Regarding breeding infrastructure, India is among the countries having the largest breeding infrastructure in the world with 159 bull semen stations, 152 frozen semen banks and more than 50000 AI Centres. Due to poor quality semen produced by most of the semen stations in the country, the conception rate ranges from 20 per cent to 45 per cent only where as in the developed countries the rate is more than 50 per cent.

4.133 As per the data available during 2007 (as on 31/3/2007) of the 38813 AI Centres under Animal Husbandry department in the Country 2469 are in Kerala.

4.134 Kerala Livestock Development Board (KLDB) is involved in the production and distribution of frozen semen and maintains three bull stations at Mattupetty, Dhoni and Kulathupuzha for the production of crossbred and purebred cattle and buffalo bulls. Compared to 2005-06, when semen production increased by 20.07 percent to 32.54 lakh doses during 2006-07. The distribution inside the State increased by 25 per cent and outside the State decreased by12 percent. Details are furnished in Appendix 4. 35.

4.135 The number of AI centres under Animal Husbandry Department during 2006-07 is 2469 along with 571 centres operated by other agencies and 10 by department of Dairy Development, the total number of AI centres operational is 3050. (Appendix 4.36)

4.136 The number of inseminations done during 2006-07 was 12.04 lakh and calvings recorded was 3.83 lakh. This is against 3.55 lakh calvings recorded out of 11.80 lakh AI during 2005-06. Correspondingly the average number of insemination done by one centre decreased from 483 in 2005-06 to 474 in 2006-07. The average number of inseminations needed for producing one calf is around 3 (between 3.40 -3.14) over the last 5 years (Table 4. 22). The quality of AI is improving slowly over the last 5years.

Table 4.22

Number of Artificial Inseminations Conducted and recorded Calving

Sl. No.	Year	No. of artificial Insemination Centres	No. of Artificial Inseminations done	No of AI Done Per centre	Recorded Calving	No of inseminations per calving
1	2	3	4	5	6	7
1	2001-02	2505	1248996	499	332967	4
2	2002-03	2523	1369112	543	402173	3
3	2003-04	2538	1231407	485	353764	3
4	2004-05	2445	1176318	481	357718	3
5	2005-06	2445	1179801	483	355011	3
6	2006-07	2541	1204000	474	383000	3

Source: Animal Husbandry Department

4.137 Apart from the frozen semen technology, KLD Board is also engaged in research and development activities like progeny testing, embryo transfer, production of liquid nitrogen, fodder seed and training programmes. During the year, the Board has produced 305 Malabari kids, 66 boer goats, 5393 piglets, collected 164 embryos and trained 494 personnel. Other activities of the Board are given in Appendix 4.37

4.138 Herd Book Scheme is operated complementary to the Progeny Testing Programme. This would help to assess the improvements happening in the field with respect to traits to support the field progeny testing programme So far against the target of 80000 animals, 117242 animals have been identified and registered under the programme. During 2006-07 against the target of registering 5000 calves, 3085 calves were registered under the programme. The Scheme covers a breedable population of about 60000 cross bred females spread around 83 AI Centres. Under the programme farmers are provided with deworming medicines and advice on scientific aspects of calf rearing.

4.139 Another notable achievement of KLD Board is the introduction of Boer goats which are considered far superior to any other goats for meat production, into the Kerala scene. They have high disease resistance. Crosses of local goats with Boer goats have proved to be a suitable genotype for the goat production system and well adapted to all types of climate.

4.140 During 2004 KLD Board has launched a project for dissemination of Malabari Germ plasm aiming at genetic improvement of goat herd of the State. Specific objectives includes identification of superior bucks based on individual performance for growth and dams performance for milk yield and prolificacy , improving marketing outlets for superior bucks, upgradation of the non descript stock to Malabari etc..

Cattle Feed

4.141 At present the State has three cattle feed plants functioning at Pattanakkad (300 MT/day capacity) and Malampuzha (200MT /day capacity) and Kerala Feeds Ltd., Kallettumkara (650 MT/day). The third one is operating under a separate management. Also there is a custom packing arrangement at Erode under KCMMF The per day production capacity of Kerala Feeds Ltd , increased from 500 MT to 650 Mt during 2005-06. The production of the three plants is insufficient to meet the demand of cattle feed in the state.

4 142 During 2004-05, the two plants under KCMMF produced 1.18 lakh tonnes and sold 1 17 lakh MT of cattle feed The major customer is APCOS

4.143 The production of cattle feed by Kerala Feeds Ltd., increased from 1 39 lakh MT in 2005-06 to 1.54 lakh MT in 2006-07 registering a growth rate of 10.50%. .The Company has a good marketing network which includes 400 dealers and 450 Co-operatives. During the year the production and sale of mineral mixture stood at 690.6 Mt and 709.6 Mt respectively. Compared to the previous year there is a reduction in the sale of mineral mixture The company has evolved a growth plan "Vision 2010" to enhance the production capacity to 1500 MT per day by 2010 The capacity is enhanced to 650 TPD during the year. Production details of the above cattle feed plants are given in Table 4.23

Table 4.23
Production of Cattle Feed

(in lakh MT)

Factory	Production				
	2002-03	2003-04	2004-05	2005-06	2006-07
Pattanacaud (KCMMF)	1.08	1.07	0.58	0.595	0.663
Malampuzha(KCMMF)			0.34	0.18	0.516
Erode CPA	-	-	0.18	0.30	-
Kerala Feeds Ltd	1 06	1 16	1 26	1.39	1.54
Total	**2.15**	**2.23**	**2.37**	**2.47**	**2.719**

Egg and Meat

4.144 In a country like India where the average level of nutrition is very low, chicken and eggs, which are not expensive, can contribute considerably towards improving diet as a source of animal protein. As per estimates available, the per capita availability of egg is very low at 41 eggs/year and poultry meat is 0.9 kg/year against the world average of 147 eggs and 11 kg poultry meat /year. Government of India has set a target for achieving production of over 52 billion eggs by 2011-12, at a growth rate of 4 3 per cent.

4.145 Poultry farming for egg production relaying on purchased feed are uneconomic in Kerala. Poultry rearing on commercial lines is therefore largely confined to broiler production.

The egg production which reached 2054 million in 1999-2000 is continuously showing declining trend and in 2005-06 it reached a lower level of 1196 million recording a drastic fall of 41.75per cent. During 2006-07 the situation is changing and a 0.25% increase over the previous year is recorded and egg production increased to 1199 million Nos. The per capita availability of egg based on production during 2003-04 is only 39/ year and from 2004–05 to 2006-07, it further declined to 36/year. The per capita consumption of egg during 2006-07 is 66/year. The gap is filled by importing eggs from neighbouring State. An alarming factor to be noted in this regard is that over the last three years the domestic production of egg is declining to a lower level than that of 1984 - 85 (See Appendix 4.33). The decline in poultry population and hike in cost of feed were the major reason for the decline in production

4.146 During 2006-07, 1021 million numbers of egg is imported to the State. The export during the year is 4.3 million numbers

4.147 Trend in Egg production during the period from 1997-98 to 2006-07 is given in Fig. 4.12

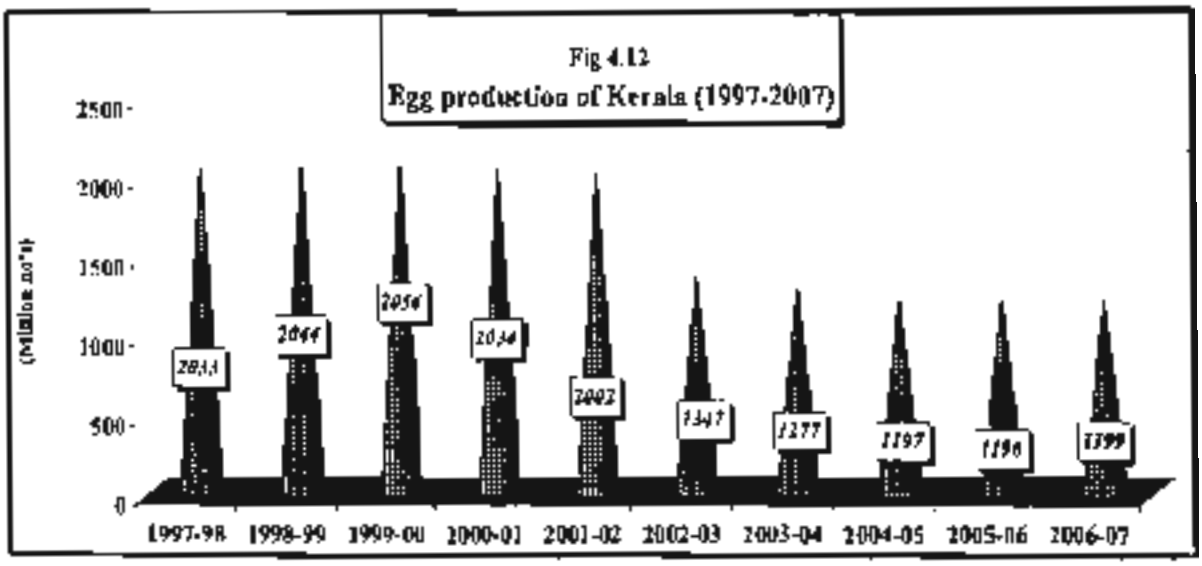


Table 4.24
Year-wise Estimate of Egg production

Sl. No.	Year	Egg Production (million numbers)				% contribution of Kerala
		India	% change over previous year	Kerala	% change over previous year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	2001-02	38729	5.72	2002	-1.57	5.2
2	2002-03	39823	2.82	1347	-32.7	3.4
3	2003-04	40403	1.46	1277	- 5.20	3.2
4	2004-05	45201	1.87	1197	- 6.26	2.9
5	2005-06	46166	2.13	1196	- 0.08	2.6
6	2006-07	50663	9.74	1199	- 0.25	2.4

Source: Economic Survey and Department of Animal Husbandry

Back yard poultry

4.148 Backyard poultry system has good potential in the state. Around 8-10 lakh chicks are being introduced every year in the state. Apart from Animal Husbandry department and KSPDC, a few NGOs and private farms are also involved. But the system is yet to develop to the required extent. The functioning of the department farms is to be strengthened to foster the backyard poultry system. On the contrary, in India as a whole it was transferred into a vibrant scientifically organised industry.

4.149 The main breeds of backyard poultry supplied by Animal Husbandry Department Farms are Kalinga brown, Mumbai Desi, Rhode Island Red and CARI Nirbheek. The birds distributed by the department are "low technology/low input" birds and they have a survival rate of above 90 per cent.

Poultry Rearing and Kerala State Poultry Development Corporation

4.150 Kerala State Poultry Development Corporation was established in 1989 to give special attention for the revival of poultry farming. The Corporation had built up a broiler breeding farm and hatchery at Kudappanakunnu in Thiruvananthapuram District with a total investment of Rs 5.95 crore. Now the Corporation is producing and supplying 45000 day old chicks per week for distributing to the farmers. During 2005 a modern meat processing plant was commissioned in Petlah with a capacity to process 1200 birds/day. Presently 450 to 500 birds are being processed and supplied from this plant

4.151 As a part of "Women development" the Corporation is implementing the scheme viz., Support to Training and Employment programme (STEP) for the development of women of economically weaker sections and SGSY giving emphasis to backyard rearing of layer chicks. So far nearly 21800 women are given training and assistance under the programme and supplied around 7 lakh birds. During 2007-08 as a part of government intervention for promoting backyard poultry farming, a project for the development of poultry as a part of State Food Security Project was launched in the state.

Broiler Production

4.152 Nearly 10-15 Private hatcheries, working as satellite hatcheries also contribute to this local production of chicks and chicken meat. Approximately 40000-50000 direct employment is generated through broiler production. Apart from this, around 30000-40000 MT of chicken meat, which includes broilers, layer chicks, broiler and layer parent culls etc is being imported from neighbouring state.

Meat production

4.153 India is endowed with more than 11 per cent of worlds' livestock population comprising a variety of meat animals such as buffaloes, goat, sheep, pigs, cattle and poultry. The per capita animal protein availability is about 10g against world average of 25g. The minimum requirement targeted is 20g per capita/day of animal protein of which 4g will come from meat. The estimated demand for meat would be 7.7 million tonnes against the present production of 5.7 million tonnes. Meat production in Kerala comprises of beef, mutton, pork and broiler chicken. Out of this, beef is almost entirely from the culled animals brought from the neighbouring states. The rearing of goat and pig is concentrated in selected pockets. As in the case of poultry, meat production under stall-fed condition in general is not economical in

Kerala. However, there is scope for fostering this activity in selected areas largely by utilising the bio wastes available. The annual production of meat is shown in Table 4.25

Table 4.25
Year-wise Estimate of Meat production
Kerala

Sl. No.	Year	Poultry Meat		Meat other than Poultry Meat	
		Production (tonnes)	%age increase over previous year	Production (tonnes) (@)(@	%age increase over previous year
(1)	(2)	(3)		(4)	(5)
1	2001-02	47693	14.88	125100	1.87
2	2002-03	52611	10.31	125130	0.02
3	2003-04	39327	-14.04	142992	14.27
4	2004-05	32704	-25.25	162567	13.69
5	2005-06	27609	-16.84	167763	3.20
6	2006-07	16184	-41.38	179991	7.21

Source: Economic Survey and Department of Animal Husbandry
(@) from 2003-04 onwards spent chicken production data is not available
(@)(@) including unauthorised sector

4.154 Details of meat production in the unauthorised sector are not available. It is estimated that about 2/3rd of the meat production in the State is from unauthorised sector. Total quantity of meat and poultry meat produced during the period 2001-02 to 2006-07 are furnished in Table 4.25. From 2003-04 onwards qty of meat from spent chicken is not included Production of Poultry meat decreased by 41.38 per cent during 2006-07 . From 2003-04 onwards the trend is one of decline Production figures for meat other than poultry meat is on the increase and the increase during 2006-07 is 7.21% compared to 3.20% during the previous year. The percapita availability of meat during 2006-07 is 14.7gm/day compared to 13.8gm/day during 2005-06.

4.155 In Kerala beef is the cheapest meat costing only 50 per cent of the prices elsewhere till 2004-05. This is because of the migration of large number of cattle and buffalo from the neighbouring states for slaughter. But the trend has changed and now the price of beef increased to Rs.70/kg during 2005-06 and to Rs.83.02/kg during 2006-07 and at the same time the price of broiler remains around Rs.60/kg broiler during the last 3 years

4.156 There is no authentic data regarding the number of cattle and poultry slaughtered in the State and hence the total value and quantity of meat produced in the state not accessible. As per survey conducted by dept. of Economics and Statistics in 2006, there are 4904 slaughter houses in Kerala of which the authorised slaughter houses were only 1490(30.38%. Also of the total 6489 poultry stalls registered were only 2124 (32%). About 93% of the slaughter houses in Ernakulam district are unauthorised. .Category wise number of animals slaughtered and quantity of meat produced during 2002-03 to 2005-06 are given in Table 4.26

Table 4.26
Meat Production under Authorised Sector in Kerala

Sl No	Category	Period	Numbers (000' Nos)	Qty. of meat produced (MT)
1	Cattle	2002-03	524.25	25897
		2003-04	598.30	29864
		2004-05	627.57	33181
		2005-06	606.00	31358
2	Buffalo	2002-03	151.53	8637
		2003-04	162.99	8620
		2004-05	182.12	9846
		2005-06	256.00	13478
3	Goat	2002-03	665.74	6276
		2003-04	748.92	6696
		2004-05	684.72	6677
		2005-06	732.00	6709
4	Pig	2002-03	44.50	1994
		2003-04	53.14	2484
		2004-05	95.81	4485
		2005-06	95.00	4378
	Total(1-4)	2002-03	1386.02	42804
		2003-04	1563.35	47664
		2004-05	1590.22	54189
		2005-06	1689.00	55923
	Chicken-Total *	2002-03	41241.40	52611
		2003-04	28091.00	39327
		2004-05	27253.00	32704
		2005-06	17624.00	27609

Source: Integrated Sample Survey for Estimation of Production of Milk, Meat & Egg
** data for spent chicken was not collected from 2003-04 onwards and hence not included*

4.157 Compared to previous year's meat production (excluding chicken) under authorised sector, share of beef decreased from 61 per cent to 56 per cent, buffalo meat increased from 18 to 24 per cent, mutton remained around 12 per cent and pork around 8 per cent.

4.158 The production of broiler was on the increase till 2002-03. From 2003-04 onwards the production is continuously declining and it reached 27609 MT in 2005-06. The outbreak of bird flu in other countries and States had an adverse impact on the consumption of poultry meat and thereby affecting production.

Pig Rearing

4.159 Pig rearing has ample scope in Kerala Scene. The AH department has one pig farm and seven piggery units to cater the needs of the farmers. High quality piglets will be produced in the pig farm at Kappad and pig breeding units at Kudappanakkunnu, Mundayad and Central Hatchery, Chengannur. MPI and KLD Board are also engaged in Pig Development These 3 Institutions are at the service of the pig farmers of the State.

Meat Products of India Ltd.

4.160 Meat Products of India Ltd., is engaged in production and marketing of meat and meat products derived from pork, beef, chicken, mutton, rabbit, quail etc. It also and produces feed for the poultry and pig farms of AH dept. During 2005-06 MPI sold 129 MT of pork products worth Rs.147 lakhs, 113 MT of beef products worth Rs.95 lakhs 57 MT Chicken products worth Rs.45 lakhs. They marketed 892 MT of various kinds of feed worth Rs.104 lakh during the year. As an extension activity 1792 Piglets were supplied to farmers and on maturity were taken back at remunerative prices.

Animal Health Care

Indian Scenario

4.161 With the introduction of extensive cross breeding programmes and improvement of quality of cross bred cattle, the susceptibility of these to various diseases including exotic diseases has increased. In order to reduce morbidity and mortality, efforts are being made by the State/UT Governments to provide better health care For it, a network of 9009 polyclinics/hospitals and 19162 dispensaries and 26443 veterinary aid centres (including stockmen centres/mobile dispensaries), supported by about 250 disease diagnostic laboratories are functioning in the country. These institutions employ around 36000 professional staff and over 70000 para veterinarians. For the production of vaccines, there are 26 veterinary vaccine production units. The primary emphasis is on clinical services and as a result, endemic diseases such as Foot and Mouth Diseases (FMD) are still prevalent in India.

4.162 The efforts of States/UTs for preventing/controlling of various animal diseases are being supplemented by way of providing central assistance during the Tenth Five Year Plan through the various components of the scheme on "Livestock Health and Disease Control":

Kerala

4.163 At the end of 2005-06 Plan period all village panchayats in the State were provided with a veterinary institution (hospital/dispensary) There is a strong network for veterinary health care now in the State comprising 210 Veterinary hospitals, 883 veterinary dispensaries, 47 veterinary poly clinics, 14 District Veterinary Centres, 9 mobile hospitals/dispensaries at district level, 13 district level clinical labs, four diagnostic labs and other related health care institutions.

4.164 The state is implementing a programme for Foot and Mouth disease control with the assistance of Government of India. Also Brucellosis has now emerged as a new threat to the livestock wealth of the State. Helminthiasis control also needs attention. Worms and other internal parasites cause considerable economic loss to the farmers. Data regarding outbreaks, attacks and deaths of major contagious diseases of animals in Kerala for the period from 2001to 2007 are given in Appendix. 4.46.

4.165 Even though vaccinations were carried out, frequent outbreaks were reported which lead to production loss to farmers. During 2002, 2003 and 2005 frequent F&M disease outbreaks are reported. Among the 3 years severe situation prevailed during 2003 and during the period 2383 outbreaks, 19207 attack and 1302 deaths were reported (Appendix 4.46). The most affected districts are Kannur., Alappuzha and Ernakulam. A project for the creation of

disease free zone with assistance from NDDB, FMD CP with 100 per cent Central assistance and ASCAD has been already started implementing in the State and now the diseases are under control. During the succeeding two years(2005 and 2006) the intensity of the attack decreased considerably and during the year 2007 only 53 outbreaks, 553 attacks and 80 deaths were reported . Compared to 2003 there is remarkable reduction in outbreaks, attacks and deaths.

4.166 During the period of last six years from2001 onwards the attack of black quarter ranges between 1 and zero and no death is reported. But during 2006, 160 attacks were reported and the disease is showing a sign of creeping back. During 2007 no outbreak was recorded. The reports of major diseases like Anthrax, Black Quarter and Hemorrhagic Septicemia are also rare. During 2006 and 2007, 6 and 10 outbreals, 132 and 24 attacks of Anthrax and 6 and 10 deaths during each year was reported. Even though Hemorrhagic Septicemia is under control, 24 attacks and 10 deaths are recorded during 2007.

4.167 The State has already eradicated the dreadful disease of Rinderpest and no outbreak was reported after 1994.

The Avian Flu

4.168 The current panzootic of Highly Pathogenic Avian Influenza (HPAI) caused by viruses of the H5N1 sub-type first resulted in transboundary disease in late 2003, it subsequently spread from Asia to Europe and both North and West Africa in 2005 and 2006. It has caused high mortalities in affected poultry flocks, with additional losses due to culling. Farmers and traders have suffered loss of income as a result of market disruption caused by control activities and also market shock due to consumer concerns for human health all over the world.

4.169 In January , 2008 the Avian Flu struck the state of West Bengal devastating the poultry population in several Districts. West Bengal is the fifth state in the country to have been struck by virus after Maharashtra, Gujarat, Madhya Pradesh and Manipur in 2006. A total mortality 1,32,911 poultry birds have been so far reported (as on Feb. 6, 2008) from Birbhum, Dakshin Dinajpur, Murshidabad , Nadia, South 24 Parganas, Burdwan, Bankura, Hooghly,Malda, Coochbehar, Purilia, Howrah, and North 24 Parganas District of West Bengal. A total of 233 rapid response teams were engaged in the state. The preventive culling in neighbouring states like Assam and Bihar is being undertaken. In Jharkhand state the priority areas are being identified for starting preventive culling. The strategies and actions taken to meet the crisis of recent incidence of Avian influenza in India and global strategy worked out by FAO to achieve this goal is given in Box: 4.7.

Box 4.7

Strategies and actions for facing the challenge of Avian Epidemic

Actions taken to meet the crisis of Avian Influenza in West Bengal

Declaration of infected and surveillance area including actions to be taken in these areas(ban on movement of poultry and its products in infected area/ closure of poultry and egg markets and shops within 10 kms of the infected site/ban on movement of farm personnel/ restricting access to wild and stray birds, restricting access to infected premises, destruction of birds, disposal of dead birds and infected material and clean up , disinfection followed by sealing of the premises and issue of sanitation certificate, post operation surveillance, imposition of legislative measures etc. along with necessary measures laid down in the Contingency plan of Ministry of Health , Govt. of India. (Department of Animal Husbandry and Dairying , GOI 2008)

Global strategy for control of Avian Influenza

The Food and Agriculture Organisation (FAO) and Organisation for World Animal Health(OIE) have worked out a global strategy for the control of Highly Pathogenic Avian Influenza. According to this strategy countries HPAI status is to be assessed,(whether small no. of endemic infection, sporadic out breaks currently, having risks of incursion.)to achieve the vision of the strategy.

At global domain proposed activities focus on support to countries in planning and implementing their plans for HPAI prevention and control, including provision of technical advice and operational support, and international collaborative initiatives for supporting international research, surveillance, early warning and epidemiological analysis of disease outbreaks and information dissemination.

At regional level the efforts include the development of formal long-term and sustainable cooperation and collaboration, taking into account regional specificities, for the development of policies and regulatory frameworks related to regional trade in livestock and livestock products, harmonization of HPAI control strategies, HPAI surveillance and reporting and HPAI preparedness planning.

At National level broadly applicable key measures are strengthening of veterinary services and related national capability, poultry industry adjustment and changes in husbandry practices to improve bio security, strategic research initiatives support for public communication and provision of technical assistance, as required. Vaccination has proved very effective in high-risk countries where re-introduction of disease is likely, but it must be conducted in accordance with guidelines, involve vaccines of assured quality and be accompanied by appropriate monitoring of immune response and infection status of vaccinated flocks (FAO 2007)

Production of Vaccine in Veterinary Biological Institute, Palode

4.170 The 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 Table 4.27

Table 4.27

Production of Vaccine by Veterinary Biological Institute (2001-02 to 2006-07)

(lakh doses)

Sl. No.	Name of Vaccine	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	RDVK	26.65	54.45	120.06	104.02	69.46	159.50
2	RDVF	12.87	17.61	31.16	19.86	10.01	16.98
3	FPV	3.12	0.45	0.20	8.17	1.97	5.87
4	DPV	11.46	10.64	28.25	2.48	27.84	23.36
5	HS Oil adjuvant	0.13	0.41	1.14	1.47	0.77	2.04
6	HS Broth	0.73	0.67	2.67	1.03	0.27	1.34
7	BQ	0.59	0.67	1.39	0.32	0	0.28
8	Anthax	0.84	0.28	0.14	0.48	0.79	1.02
9	FMD Vaccine**	8.30	12.15	Nil	Nil	Nil	Nil

Source Animal Husbandry Department

***Supply from other Sources*

4.171 Apart from the production of vaccines, the institute is engaged in the manufacture of diagnostic reagents and other animal health products.

4.172 Compared to previous year poultry vaccine production during 2006-07 increased by 91 per cent from 109.48 lakh doses in 2005-06 to 208.92 lakh during 2006-07 and livestock vaccine by 138 per cent to 4.39 lakh doses from 1.84 lakh doses during 2005-06. Number of vaccinations done during the year was 27 23 lakh for livestock and 87 52 lakh doses for poultry respectively Compared to previous year, vaccination to cattle decreased by 21 per cent and vaccination to poultry 8.9 per cent. Details are given in Appendix 4.34

4.173 Compared to 2005-06 production of all the vaccines recorded an increase (see Table 4.27) during 2006-07.

Prices

4.174 Average price of important inputs and products of livestock sector for the last five years is presented in Appendix 4.38. Compared to 2005-06 there was increase in the price of all meat categories during 2006-07 except chicken. The highest increase is in the case of beef (18.63%) and pork (7 61%). The hike in the price of beef during the previous year is 20 28%. Among the different types of meat, price of beef recorded an all time hike during 2006-07 and compared to 2002-03 the increase is 62%. During the period the price of mutton increased by 38.64%. The rate of increase in price is lower in the case of chicken (broiler and desi).. The increase in the price of beef and pork may be attributed to the increase in the demands for pork and beef due the occurrence of Avian Influenza among poultry in other states and rare occurrence of Anthrax in the State. Compared to 2005-06, the price of fowl-white egg increased by 1.89 per cent, brown egg by 3.88 per cent and duck egg by 2.69 per cent during 2006-07 Correspondingly during the previous year the prices decreased by 8%, 4% and 4.19%.

4.175 During 2006-07, the price of milk (cow) increased by 2.31% and buffaloe milk increased by 3% in the State

4.176 On the input side, the price of grass which recorded 40.52% hike during 2005-06 increased further by 12.27% during 2006-07 . The price of straw which recorded an increase of 3% only compared to an increase of 22.31% during previous year. Over the period from 2002-03 to 2006-07 the increase is Rs.1.31/kg, but over 2005-06 the increase is Rs.1.66/kg. Compared to previous year, the price of gingely oil cake decreased by 7.18%, coconut oil cake by 5.95%and ground nut cake by 5.04% during 2005-06 and is a relief to dairy farmers. But during 2006-07 the price of ground nut cake increased by 6% and gingely oil cake by 5% . The trend in average price of livestock products are shown in Fig. 4.13 (a to d)

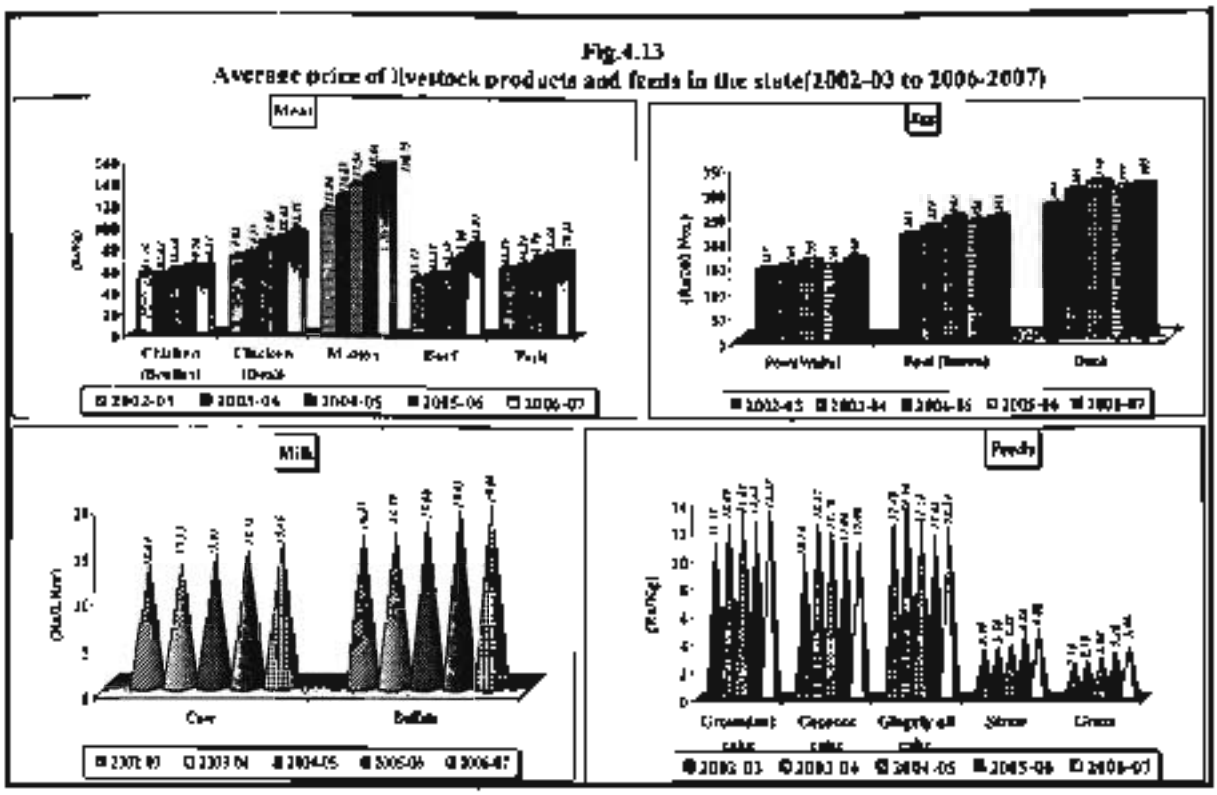


Fig.4.13
Average price of livestock products and feeds in the state(2002-03 to 2006-2007)

Tenth Plan: A Review

4.177 The Tenth plan strategy for livestock sector is framed giving due importance for up gradation of standards of veterinary institutions and services, developing adequate health care including establishment of disease free zone, extending health cover and stock upgradation and increasing production through scientific and better management. Enhancing fodder availability and fodder seed/planting material, promotion of farming ;system approach and revamping extension services and development of micro enterprises for reduction of poverty are also given importance.

Financial Performance of Tenth Five Year Plan

4.178 The total approved outlay for the livestock sector under the Tenth Five Year Plan is Rs.147 crores. This includes Rs.140 crores provided for Animal Husbandry and Rs 7 crores meant for Dairy Development.

4.179 The budgeted outlay for Animal Husbandry for 2002-07 was Rs.232.34 crores and the expenditure incurred is Rs.164.37 crores i.e. 71% of the budgeted outlay. At the same time compared to Tenth Plan Approved outlay, the expenditure is 17% higher. Details are shown in Table 4.28

4.180 Under Dairy Development the total budgeted outlay for 2002-07 is Rs.11.12 crore (excluding mission schemes) an with an expenditure of Rs.9.62 crores i.e., 87% of the Budgeted outlay, and 59% higher than the approved outlay.

Table 4.28
Summary of Financial performance during the Tenth five Year Plan

(Rs. Crores)

Sl.No	Major Head/Minor Head of development	Tenth Plan 2002-07 Outlay	2002-07(5 Years) Total BE	Total Expd.	Expd. as % to Tenth Plan Outlay	Expd. as % toBE
1	2	3	8	9	10	11
	Livestock Sub Sector					
1	Animal Husbandry	140	232 34	164 37	117	71
2	Dairy Development	7	11 12	9.62	159	87
	Total: Livestock	**147**	**243.46**	**173.99**	**118**	71

4.181 A review of the Annual Plans of the local bodies indicates that substantial outlays have been were earmarked by them for livestock development. The activities, by and large, are centered around assistance to dairy co-operative societies for infrastructure development and purchase of equipment, fodder cultivation and development of farms transferred to them outlay and expenditure of some of the major schemes are given in Table 4.29.

Table 4.29
Outlays and Expenditure for Major Schemes under Tenth Five Year Plan

(Rs. lakh)

SL No.	Name of Scheme	Approved outlay	Actual expenditure	Expd. as % to Total
1	Strengthening of Veterinary Service	5210	3191	61
2	Expansion of Cross Breeding facilities	900	2573	285
3	Special Livestock Breeding Programme	3275	4363	133
4	Commercial Fodder Production Programme	700	869	124
5	Poultry Farms and Expansion of Poultry Production Incl. Farms under KSPDC	290	591	137

Physical Performance

4.182 Envisaged targets for egg and milk for Ninth Five Year were not achieved except for meat and considering the situation prevailing during the formulation of Tenth five year plan, the Tenth Plan targets for the production of livestock products is set at a slightly higher level for milk and at a lower level for egg.

4.183 The Tenth Plan envisaged stepping up milk production to 35.05 lakh tonnes, egg production to 2255 million Nos and meat production to 1.74 lakh tonnes by the end of the

tenth Plan period But the achievement during 2006-07 21.19 lakh tonnes of milk, 1199 million nos of egg. The production of meat is 1 79 lakh tonnes

4.184 Consequent to reduction in livestock, milk as well as egg production had shown a declining trend from 2001-02 onwards. Compared to the terminal year of 9th five year plan the decline was 22.59%. The state couldn't achieve the targets envisaged during the last 2 Five year Plans in production of milk and egg production. In the case of milk production 2005-06 achievement decreased to reach 1994-95 level (3rd year of the eighth five year plan). The egg production even declined to a lower level beyond that of the terminal year of sixth five year plan. The meat sector alone is showing signs of improvement but the production is not enough to satisfy the internal demand.

Fisheries Development

4.185 The demand for fish and fishery products are increasing considerably in the country, both in domestic and export fronts. The projected demand for fish in the country by 2012 is 9.74 million tonnes with a projected supply of 9.60 million tonnes. The major share of 5.34 million tonnes is expected from inland aquaculture followed by 3.10 million tonnes from marine fisheries(Planning Commission 2007) . The global production of fish from aquaculture has grown rapidly during the past four decades. Aquaculture, now accounts for nearly 45 per cent of the world's food fish and this increase is expected to reach 50 per cent in 2015 China account for 67.3 per cent of the food fish aquaculture production followed by India (5.9%) and Vietnam (3.0%)

Resource base

4.186 India is endowed with vast fisheries resources in terms of a coast line of 8118 km and 2.02 million sq.km of exclusive economic zone, including 0.53 million sq.km of continental shelf. The inland fisheries include rivers and canals (1.95 lakh km), reservoirs (3.15 million ha), flood plain wetlands (0.30 million ha), estuaries (0.26 million ha), fresh waters (2.41 million ha) and brackish water bodies (1.24 million ha). These resources are one of the main sources of livelihood for the rural poor, particularly the fisher community. The sector provide livelihood for over 90 lakh at subsistence level of annual income. At present, an estimated 14 million people are engaged in fishing, aquaculture and ancillary activities in the country.

4.187 The state has all the requisite natural endowments for building a strong and vibrant fisheries economy in tune with the national strategy. They include a stretch of coastal belt extending over 590 km. and an extensive inland water spread of around 4 lakh hectares. The exclusive economic zone (sea spread upto 200 metres) lying adjacent to Kerala coast is spread over 36000 square kilometres which is almost equivalent to the land area of the state.

4.188 The state has a total fresh water area of 158358 ha consisting of reservoirs (42890 ha), private ponds (21986 ha), irrigation tanks (2835 ha), Panchayat ponds (1847 ha) and 44 rivers having water spread area of 85,000 ha. The brackish water resources consist of 65213 ha of estuaries and backwaters and 12873 ha of prawn filtration fields. The polders of Kuttanad having a water spread of 35000 ha and 17,000 ha of kole lands of Thrissur are also very ideal for various aquaculture development activities.

4.189 The estimated fisher folk population of Kerala is 11 114 lakh, which include 8.558 lakh in the marine sector and 2.556 lakh in the inland sector. Out of this the number of active fishermen is estimated as 2.28 lakh. There are 222 fishing villages in the marine and 113 fishery villages in the inland sector, where fishing and relative activities provide livelihood to

a vast majority of the population. Alappuzha district is in the first place in the number of fisher folk with a population of 1.86 lakh followed by Thiruvananthapuram(1.83 lakh). The district wise details of fisher folk population are given in Appendix-4.47

Income from fisheries sub sector

4.190 The Gross State Domestic Product of the State has increased about 56 per cent during the period from 1999-00 to 2006-07 and the share of fisheries sector has remained more or less stagnant in the period. Also the share of fisheries sector in the State Domestic product also declined from 2.22 to 1.45 per cent respectively in the same period (See Table-4.30). Share of Primary sector in GSDP also declined from 22.32 to 17.82.

Table 4.30

Contribution of Fisheries sector to Gross State Domestic Product (1999-00 Prices)

Category	Period					
	1999-00	2001-02	2003-04	2004-05	2005-06 (Provisional)	2006-07 (Quick)
Gross State Domestic Product (Rs. Crores)	68617	74914	85253	92075	98817	106833
Fishing (Rs Crores)	1526	1547	1545	1536	1469	1549
Share of fisheries sector in GSDP	2.22	2.07	1.81	1.67	1.49	1.45
Share of Primary sector in GSDP	22.32	21.19	18.73	18.59	18.18	17.82

Source: Directorate of Economics and Statistics

Species-wise Composition of Fish Landing

4.191 The Kerala Marine Fisheries Regulation Act was enacted with a view to enforce strict regulatory measures following the induction of more number of crafts and consequent increase in the level of unrestricted fishing. According to this Act, the inshore area coming within the depth range of 50 meters has been demarcated for fishing by the traditional fishermen using country crafts and the area beyond the limit in the economic zones can be utilised by motorized boats and large vessels. As this restriction is not being strictly followed, monsoon trawling has been banned as a preventive measure. The ban on monsoon trawling has been in force from 1980 onwards.

4.192 Although the fish catches from the Kerala coast include more than 300 different species, the commercially important number about forty only. The high value species among the fish catches are still few; prominent among them are seer fish, pomfret and prawn. Ribbon fishes are also now a target group. During 2006-07 the catch of Ribbon fish was 18000 tonnes. The quantity of these high value species in the total catch ultimately decides the income of the fishermen. Unfortunately the share of these high value varieties in the total marine fish catch has been remaining stagnant. The annual potential of prawn is estimated at

64482 tonnes The average catch of prawn during 2006-07 was 56779 tonnes. The catch of oil sardine, the most important variety consumed mainly by the poorer sections of the society exceeded the potential in recent years. The catch of sardine during 2006-07 was 2.15 lakh tonnes The species wise landings are shown in Appendix: 4.48

Fishing Crafts

4.193 There was enormous increase in the number of fishing crafts operating in Kerala during the last decade According to Marine Fisheries Census 2005, the total number of crafts in operation is 29177 of which 5504 crafts are mechanized and 14151 crafts are motorized and the rest non-motorised. Out of the 5504 mechanised crafts 3982 are Trawlers and 428 are Gillnetters. The District wise details are given in Appendix-4 50

Trend in Production

4.194 Among the maritime states in India, Kerala occupies the foremost position in marine fish production, accounting for about 20% of the total landings Marine capture fisheries have always dominated the total fish production, compared to Inland fisheries in Kerala. Fish production in the marine sector over the last 10 years presents more or less a stagnant trend with an average production of 5.88 lakh tonnes The marine fishery resource of the state has almost attained the optimum level of production. In this context there is no scope for further increase in fish production for inshore marine capture fisheries. However, the total inland fish production has shown an increasing trend in Kerala. The inland fish production reached peak share of 13% of the total fish production of the state during 2000-01 and thereafter decline slightly At the national level more than 50% of the total fish production is contributed by the inland sector

4.195 The National Agriculture Policy, which aims to attain a growth rate in excess of four per cent annum in the agriculture sector, stresses the importance of food and nutritional security issues and the importance of animal husbandry and fisheries sectors in generating wealth and employment.

4 196 India is the third largest producer of fish in the world, and second largest producer of fresh water fish in the world. During 2005-06, India's total production was 65.7 lakh metric tonnes of which 37.6 lakh metric tonnes was from marine fisheries and 28.16 lakh metric tonnes from inland fisheries (Fig.4.15). The fish seed production was 22614.72 million fry during 2005-06. The marine fish production in Kerala is stagnant and seems to have achieved a saturation level whereas the inland fish production showed signs of improvement from 1999-00 followed by slight decline During 2006-07, marine production has increased to 5.61 lakh tonnes from 5.59 lakh tonnes of 2005-06 and inland fish production increased slightly (Table- 4.31 & Fig.4.14) . In the inland sector 0.79 lakh tonnes of fish is produced and which accounts for 12.34 per cent of the total fish production of the state during 2006-07.

Table 4.31

Fish Production in Kerala during the last Five years

(lakh tonnes)

Year	Marine	Inland	Total
2002-03	6.03	0.75	6.78
2003-04	6.09	0.76	6.85
2004-05	6.02	0.76	6.78
2005-06	5.59	0.78	6.37
2006-07	5.61	0.79	6.40

Source; Fisheries department

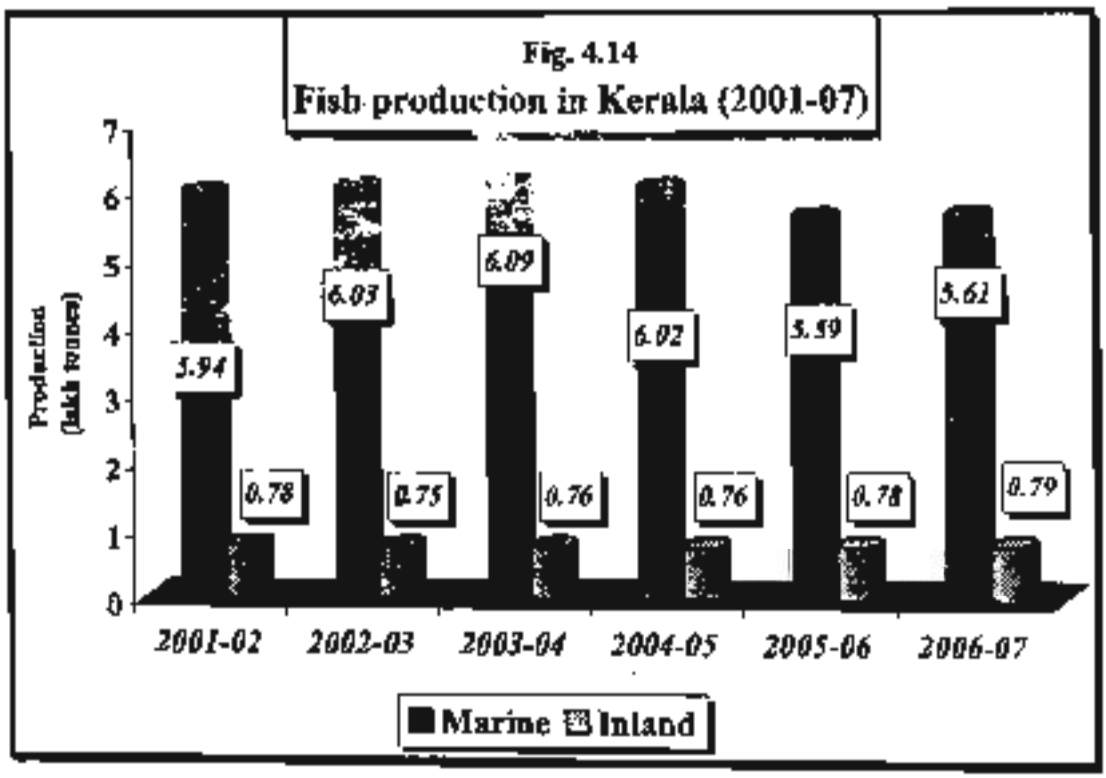
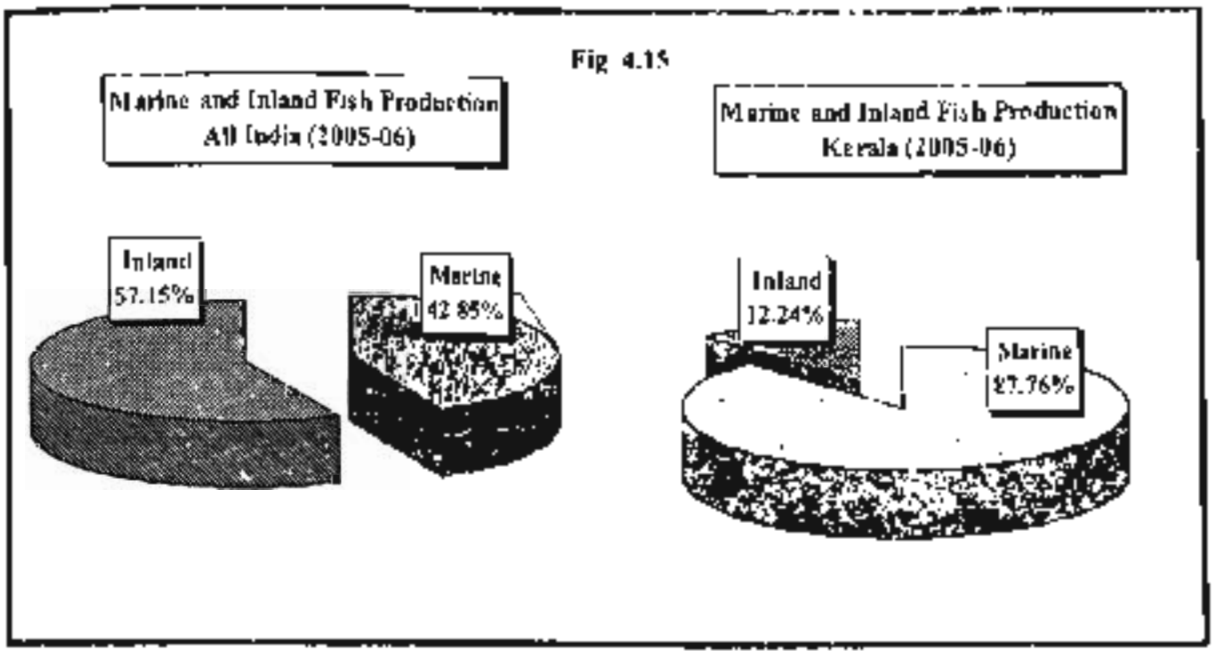


Fig 4.15



Export

4.197 The marine fisheries sector in the country contributes about 45% of the total fish production and is one of the major contributors to foreign exchange earnings through seafood export The phenomenal growth in marine fisheries during the last decades was due to the introduction of innovative fishing practices, well developed harvest and post harvest infrastructure and increased demand for marine fish products both in domestic and export markets

4.198 Export of marine products had set an ever time record of 1852.93 million US$ during 2006-07. The total value of marine products export from the country was Rs. 8363.53 crores during 2006-07 and the quantity exported was 6.13 lakh tonnes indicating an increase of 15 per cent in rupee terms, 20 per cent in volume and 13 per cent in US $ realization compared to 2005-06. The average unit value realization was almost static at $ 3.02/ kg.

4.199 European Union collectively emerged as the largest market for Indian marine products with a share of 33% in the total export earning, followed closely by Japan (16.18%) and the USA(16 12%).

4.200 The marine products export from the state during 2006-07 was 108616 MT valued at Rs. 1524 crores constituting 17.74 per cent in terms of volume and 19 per cent in terms of value to Indian marine products export.

4 201 The major export item is frozen shrimp which constitutes 41.32 per cent in value term of total export from the State during 2006-07 while at national level the corresponding share is 53.88 per cent.

4.202 The State's share in all India exports has been declining in recent years. The share declined from 27 per cent in quantity terms in 1999-00 to 18 percent in 2006-07 and the share in value declined to 18 per cent from 22 per cent. Though the quantity exported during

2006-07 was increased by 11.62 per cent, the share of Kerala has been decreased compared to that of the previous year (Table - 4.32). European Union continues to be the major market for the marine products exported from Kerala with a share of 56.56 per cent in value during 2006-07 followed by Japan (10.03%) relegating USA to the third position (9.16%).

Table 4.32

Export of Marine Products from Kerala *vis-a-vis*

(Q: Quantity in Metric Tonnes V: Value in Rs. Crore)

Year		India	Kerala	Share of Kerala (%)
1999-00	Q	343031	92148	27
	V	5117	1147	22
2000-01	Q	440473	88852	20
	V	6444	1046	16
2001-02	Q	424470	72756	17
	V	5957	951	16
2002-03	Q	467297	81393	17
	V	6881	1046	15
2003-04	Q	412017	76627	19
	V	6092	1099	18
2004-05	Q	461329	87378	19
	V	6647	1158	17
2005-06	Q	512164	97311	19
	V	7245	1258	17
2006-07	Q	612641	108616	18
	V	8364	1524	18

Source: MPEDA

Infrastructure facilities available for processing

4.203 The infrastructure facilities available for processing seafood for export purpose are shown in the Table. 4.33. In Kerala 179 exporters are registered as against an all India number of 745

Table 4.33

Infrastructure facilities of seafood industry in Kerala and All India (2006-07)

Sl.No	Facilities	All India	Capacity tons/day	Kerala	Capacity tons/day
1	Fishing Vessels	14283		4971	
2	Conveyance	305		164	
3	Freezing Plant	358	1332	106	2289
4	Canning Plant	8	30.5	3	11.5
5	Ice Plant	164	3216	61	207
6	Peeling sheds	545	6592.7	245	2926
7	Cold storages	477	169492	152	33566
8	Other storages	131	7464.5	3	27

Source: MPEDA

Tsunami

4.204 In order to rehabilitate and reconstruct Public and community based infrastructure and restore the livelihood of the affected population, Tsunami Emergency Assistance Project at a total cost of Rs. 245.46 crores was approved by Asian Development Bank. In the project Rs. 38.62 crores has been provided for fisheries sector, out of this Rs. 8.03 crores has been expended for livelihood restoration activities in 2005-06. During 2006-07, an amount of Rs. 13 crore has been set apart for the implementation of the Project and the amount has been expended Planning commission has approved Tsunami Rehabilitation programme (TRP) for an amount of Rs 1441.75crore for reconstruction of damaged physical and social infrastructure and for the revival of livelihood. Out of the total outlay of Rs. 1441.75 crore, Rs. 162.82 crore is for the fisheries and livelihood components and the project is on implementation.

Eleventh Five Year Plan

4.205 The planning commission, Government of India has constituted a Working Group on Fisheries for the Eleventh Five Year Plan. The major objectives with regard to development programmes in fisheries and aquaculture and the strategy for realizing the potentials of the fisheries sector during the Eleventh Five Year Plan is highlighted in the Working Group report are as follows Box: 4.8.

Box 4.8

Objectives and Strategies with regard to development programmes in fisheries and aquaculture during the Eleventh Five year plan.

Strategy

- Ensuring adoption of responsible and sustainable fishery practices and enhancing fish productivity in all cultivable waters
- Establishing agro-aqua farms, aqua-shops and fishery estates to incorporate activities from production to consumption.
- Spreading fish quality literary among fishers and aqua-farmers.
- Improving facilities for fish landing and handling at harvest and post harvest stages.
- Developing social marketing techniques.
- Introducing aquarian reforms, with regard to leasing and Management of waters, ownership and community, management and training in different aspects of fisheries and aqua culture.

Objectives

- Enhancing the production of fish from Indian waters, both marine and inland, on an environmentally sustainable and socially equitable basis;
- Address the hitherto unexplored potentials of Indian fisheries such as island fisheries and non-food fisheries;
- Conservation of aquatic resources and genetic diversity, as also preservation of health of ecosystems;
- Increasing profitability of fishers and aqua- farmers through an integrated approach from production to consumption;

- Promoting fish as health food and meeting the changing requirements of both domestic and export markets to make the sector globally competitive;
- Strengthening of Infrastructure in harvest, post-harvest, value addition and marketing;
- Upliftment of fisher and aqua- farmer communities with gainful employment opportunities and capacity strengthening.

Source . Planning Commission, Government of India

4.206 The strategy suggested in the working group report for Eleventh Plan for sustaining and augmenting marine fish production comprises changing over from an open access to a regulated regime, employing a fishery management regime supported by a multi dimensional information platform, upgrading technologies and capabilities in the artisanal and small mechanized sector for diversification reducing the excess capacity of fishing fleet, freezing the entry of new coastal mechanized fishing crafts, establishing an oceanic tuna and squid fishery, promoting mariculture for finfishes, edibile bivalves, sea plants and other important species and sustain fish production through the effective enforcement of MFRAs.

Major developmental Programmes

4.207 The major developmental programmes implemented during the Plan period in the state include, inland fisheries development, development of fishing harbours and landing centres and programmes ensuring social and livelihood security of fishermen population. The developmental programmes undertaken in the marine sector include modernisation of country crafts, popularisation of new generation crafts and distribution of suitable components of fishing gear

Outlay and expenditure for 2006-07

4.208 The outlay and expenditure for various schemes implemented in the fisheries sub sector are shown in Table-4.34. The total expenditure of the state sector schemes up to March 2007 is Rs. 5277.79 lakh which accounts for 89.64 per cent of the original outlay of Rs. 5888 lakh. Under fisheries sector there are 10 partially aided central sector schemes having an outlay of Rs. 1522.50 lakh and the expenditure reported is Rs. 1456.32 lakh.

Table 4.34
Outlay and Expenditure for 2006-07

(Rs. lakhs)

	BE	Expenditure
State Plan Schemes	5888.00	5277.79
Centrally Sponsored Schemes	1522.50	1456.32
Total	**7410.50**	**6734.11**

1. Integrated Development of aquaculture in Kuttanand

4.209 The Scheme integrated Development of Scampi/ Fish farming in rotation with paddy in Kuttanad has been started in 2003-04 with a target area of 3500 ha. Upto March 2007 an amount of Rs. 249.65 lakh has been expended as state share of the scheme and covered an area of 1965 ha during the tenth plan period. During 2006-07, 554 ha have been covered under the scheme.

2. Integrated Development of Pokkali fields

4.210 During the tenth plan period the scheme sustainable shrimp aquaculture in Pokkali fields targeted an area of 2500 ha and achieved an area of 3699 ha expending an amount of Rs. 303.21 lakh as state share.

3. Fishing Harbours and Landing Centres

4.211 Vizhinjam, Neendakara, Thankassery, Munambam, Puthiyappa, Mopla Bay and Chombal have been completed and commissioned. The progress of work in respect of the ongoing Harbours and landing centres is given in Appendix.4.51 and Table 4.35. All the harbours are constructed with 50% Central assistance. The three projects Thankassery, Munambam and Neendakara, the central assistance have already been exhausted and the construction is in progresssing with State Government share. The revised estimates of most of the harbours are pending with Government of India.

4.212 Work on Muthalapozhy, Ponnani, Thottappally and Kayamkulam are progressing. The total revenue collected during 2005-06 and 2006-07 were Rs. 229.43 lakh and Rs. 201.97 lakh respectively Neendakara contributed 50 per cent of the total revenue collected during 2006-07. (See Appendix 4.52)

Table 4.35
Fishing Harbours in Kerala

(Rs. lakhs)

Sl. No.	Name of Fishing Harbour	Total estimated cost (Rs. in Lakhs)		Year of starting	Year of completion/ Target	Expenditure upto March 2007
		Original	Revised			
1.	Vizhinjam	704.00	1583.00 *	1987	2004 II Stage	1538.97
2.	Muthalappozhi	1366.00	-	2000	2005	1086.47
3	Thankassery	1980.50	4385.50 *	1991	Commissioned on 2001	4104.35
4.	Neendakara	585.00	622	1982	Commissioned on 1988	854.02
5.	Kayamkulam	624.60	1970.32	1994	2005	1335.98
6.	Ponnani	2759.40	-	2001	2008	1179.04
7.	Thalai	1370.00	1970 *	-		59.48
8.	Thottappally	1458.30	-	2004	2009	577.45
9.	Koyilandi	1772.50		2006	2009	2.55

Source: Harbour Engineering Department

* Revised Estimates submitted to Government for sanction

4.213 Under RIDF XI, NABARD has approved an amount of Rs. 1062.54 lakhs for the balance work of Kayamkulam fishery Harbor and Rs 895 lakh for the modernization of Neendakara Fishery harbour. In Kayamkulam Fishery harbour construction work of breakwater are completed and Rs.1032.29 lakh has been spent. For Koyilandi Fishery harbour NABARD has sanctioned a loan of Rs. 1772.5 lakh under RIDF XII.

4.214 There are 15 landing centres for traditional fishermen. Out of the fish landing centres for traditional fishermen, eight have been completed. The completed fish landing centres are Quilandy, Kattoor Pollathai, Vallikkunnu, Arthungal, Punnappra, Vellayil, Chalil Gopal Pettah and Moyilalikadappuram. Fish landing centre at Vizhinjam south has almost completed. Work at Kadapra has partially completed and construction of Groyne completed at Thikkodi. Two centres at Poovar in Thiruvananthapuram and Kanjanhad at Kasargod could not be commenced due to the resistance from local people and non availability of land. The proposed centre at Vizhinjam North has been abandoned due to local resistance and the one proposed at Quilon was dropped in view of the development of Thankassery Fishery Harbour.

4.215 The construction of fishing harbours and landing centres has to be done on a strict project mode with different methods of financing and participation, a prioritized action plan has to be prepared for the completion of all long pending infrastructure projects.

4. Social Security and livelihood support to fishermen Community

4.216 A number of programmes are under implementation for providing social security and livelihood support to the fishermen community. They include saving-cum-relief scheme, NFWF housing, Group insurance to fishermen etc. The major highlights are given in Appendix-4.53.

4.217 Under NFWF assisted housing scheme under the Model villages development Programme, 8729 houses were constructed spending Rs. 35.02 crores during Ninth Plan. During the Tenth Five year plan, 6445 houses were constructed spending Rs. 2577.87 lakhs. All active fishermen are covered under group accident insurance scheme. About 2.28 lakh fishermen were insured under the scheme. Assistance is provided to accidental death/missing of fishermen while fishing, permanent and total disability and partial disability.

4.218 The Kerala Fishermen Welfare Fund Board is the implementing agency for welfare and relief schemes to the fishermen in the state. The Board has 227815 registered contributing fisher folk and 51477 registered contributory allied workers. Besides there are 26383 old age pensioners and 3657 widow pensioners and 1674 allied workers old age pensioners. Details are shown in Appendix. 4.54.

4.219 The saving cum relief scheme is for providing assistance to fishermen during lean period by mobilizing their savings during the peak season. This is a 50% CSS and during 2006-07, 127587 beneficiaries under marine sector and 9500 beneficiaries under inland sector were assisted and the total expenditure was Rs. 7 crores.

Co- operation

4.220 The Co-operative sector has been playing a distinct and significant role in the process of socio-economic development of the state with special focus on rural population and livelihood. Through sustained efforts, co-operatives have made impressive progress in various

segments of Indian economy particularly in agriculture credit disbursement, fertilizer distribution, procurement and distribution of agricultural commodities, promotion of consumer activities, health, dairy, fisheries, handloom, coir etc. Attempts were made to develop the movement as a self reliant one by augmenting the resources through mobilization of savings in urban and rural areas.

4.221 The co-operative movement in Kerala has a solid foundation and impressive track record in terms of financial stability and sound infrastructure to generate adequate funds. The spread and growth of co-operatives in different sectors were nurtured under development plans with government initiative and government finance. Kerala has a wide network of co-operatives engaged in various promotional activities such as distribution of credit, marketing, agro processing, consumer activities, public health, education, insurance and infrastructure development. There are 12996 co-operatives under the control of Registrar of Co-operative Societies, of which 10236 are functional in the various promotional activities in the sector. The total number of co-operatives are classified into nine categories as shown in Table - 4.36

Table 4.36

Co-operatives under the control of Registrar of Co-operative Societies

Sl. No.	Type of Societies	Total No.	Functional No.
1	Credit Co-operatives	3122	2910
2	Marketing Co-operatives	547	277
3	Consumer Co-operatives	4775	4165
4	Processing Co-operatives	32	13
5	Housing Co-operatives	373	283
6	SC/ST Co-operatives	803	498
7	Health Societies	177	86
8	Women Co-operatives	892	671
9	Other Co-operatives (miscellaneous)	2275	1333
	Total	**12996**	**10236**

Source: Registrar of Cooperative Societies

4.222 With large expansion of co-operatives in almost all the sectors, signs of structural and performance weaknesses and regional imbalances have become apparent. The reasons for such weaknesses could be attributed to the large percentage of dormant membership, heavy dependence on government assistance, political interference, lack of professional management, overdues etc. Co-operative institutions also suffer from low resource base, high dependence on refinancing agencies, imbalances, poor business diversification, low recoveries, huge accumulated loss, lack of professionalism and skilled staff, weak management information system (MIS), poor internal checks and control systems etc. Concrete steps are necessary to revitalise the cooperatives to make them vibrant, democratic organisations with professional management with economic viability. In an increasingly competitive environment, cooperatives will cease to exist unless these can be ensured.

Support by NCDC

4.223 NCDC has emerged as a developmental and promotional financing institution for the Co-operative sector in the country. The strategy of the Corporation is to strengthen and develop co-operative institutions to enable them to serve their members and to maintain a sustained growth in their income.

4.224 As on March 2007 the cumulative disbursement of the Corporation was Rs. 1251.88 crores. During 2006-07 the flow of fund from NCDC to Kerala was all time high, as the amount released was Rs.310.59 crore against Rs.190.99 crore during 2005-06 showing a growth of 62.62%. An amount of Rs. 200.00 crore was provided as Working Capital assistance, directly to the Kerala State Co-operative Agricultural and Rural Development Bank and Rs.100 crore to state co-operative bank Ltd. to meet short term micro finance requirement in Agriculture and allied sectors. Out of the total disbursement of Rs. 310.59 crores, Rs. 0.33 crore (0.11%) was for marketing and input distribution, Agro-processing Rs 6.58 crore (2.12%) weaker sections Rs.0.10 crores (0.03%) and ICDP Rs. 3.20 crore (1.03%). Activity wise and year wise sanction and release of assistance from NCDC are furnished in Appendix 4.55 and 4.56. The major thrust areas financed by NCDC include agro-processing, agro-marketing, integrated co-operative development projects focusing on micro-level co-operatives, consumer co-operatives, coir, Handloom and promotion of information technology in the co-operative sector.

4.225 The Year-Wise amount released by NCDC from 1962-63 to 2006-07 with rate of interest is given in Table-4.37

Table 4.37

Year wise release of NCDC loans with interest rates.

(Rs.Crores)

Year	Release of fund	Interest rate(%)
1962-63 to 92-93	122.08	
1993-94 to 98-99	195.47	
1999-00	56.07	13.75
2000-01	69.04	13.75
2001-02	51.64	13-12.25
2002-03	50.18	11.50-10.5
2003-04	96-58	7-9
2004-05	109.24	8-8.5
2005-06	190.99	8.5
2006-07	310.59	10.25
Total	**1251.88**	

Primary Agricultural Credit Societies (PACS)

4.226 The Co-operative Credit structure in Kerala comprise of 1602 Primary Agricultural Credit Societies (PACS) and 46 affiliated Primary Co-operative Agricultural and Rural Development Banks supported by the Central and Apex Co-operative banks. As on March 2007, there were 1602 PACS out of which 1557 are functional, 28 are dormant and 17 are under liquidation. The 1557 PACS are functioning with a total membership of 3.17 crores, with a paid up share capital of Rs.568.79 crores and reserves of Rs. 966.9 crores. Out of 1557 functional PACS, 833 societies were on loss and 724 were on profit.

4.227 The performance of the co-operatives during the year under report was not encouraging. The total loan disbursed in 2006-07 was Rs. 16079.84 crores against that of Rs. 14429.11 crores in 2005-06. Compared to the last year, there was increase in the disbursement of all types of loans. Out of the total loan disbursement, major share (67%) was for short term, followed by medium term (28%) and long term (5%). In the case of loan disbursement, for agricultural purposes, though in real terms, the disbursement was higher than that in the previous year, a slight increase was noted in the percentage of Medium term (Agriculture) credit disbursement. Credit for non-agricultural purposes in all types has comparatively increased. Though the co-operatives are disbursing loan for non agricultural purposes for

making good margin for their business, a good number of societies are working on loss. During the period the short term loan was reduced by 32 % due to the conversion of short term loan into medium and long term, as relief package for the distressed farmers

4.228 The Selected indicators of the credit operations of the Primary Agricultural Credit Societies shows that, during the year, the average membership has increased from 17149 to 19766, average deposits / society from Rs. 968.66 lakhs to Rs. 978.69 lakhs,. The average deposit per member is reduced to Rs. 4951.44. The percentage of overdue to demand and overdue to outstanding stood at 38.01 per cent and 22 per cent respectively during the year 2006-07. Selected indicators and credit operations of PACS are given in Appendix - 4.57 and Appendix - 4.58.

One Time Settlement Scheme (OTS)

4.229 The revised One Time Settlement Scheme implemented with effect from 27.2.2006 onwards, in the co operative sector with a view to reducing the overdue position of the co-operative institutions and extend to March 2007 as a relief to the loanees who could not repay the loan in time due to drought/flood and consequent loss of agricultural products. The scheme was implemented in all the credit co-operative institutions. The benefit so far covered to 2.29 lakh people. The societies were able to collect Rs.675.55 crores of overdue amount including 488.03 crore as principal and Rs.184.53 crore as interest under the scheme. The scheme has helped in reducing the overdues as well as NPAs of credit societies

Self Help Groups linkages and PACS

4.230 In Kerala under Co-operative sector the SHG scheme was implemented through PACs. The district wise cumulative progress is given in Table – 4.38

Table 4.38

Progress of Self Help Groups Scheme as on 31.3.07

(Rs. in Lakhs)

Sl. No	Districts	No of societies participated	No. of groups	Share collected by groups	Deposit collected	Total loan issued to groups	Total refund of loan	Groups working in profit	Groups working in loss	Total Members in the groups
1	2	3	4	5	6	7	8	9	10	11
1	Trivandrum	41	1109	341	415	841	348	734	375	20496
2	Kollam	0	3242	0	0	987.87	0	0	0	
3	Pathanamthitta	38	588	3.16	38.31	447.82	351.84	336	252	
4	Alappuzha	0	5511	69.26	485.84	1,447.86	691.83	5089	252	76909
5	Kottayam	55	1505	6.24	103.15	1039.79	515.12	1022	178	26331
6	Idukki	69	7103	436.45	986.65	1076.79	420.19	6641	462	
7	Ernakulam	43	637	3.49	47.18	151	64.94	202	435	
8	Thrissur	87	2417	4.39	242.69	1000.12	403.6	1396	799	35373
9	Palakkad	37	815	25.79	80.98	263.84	83.82	504	311	8025
10	Malappuram	32	169	2.45	14.33	78.37	18.32	141	28	2405
11	Kozhikode	49	543	16.58	88.74	186.82	109.54	305	238	
12	Kannur	40	219	28.28	1104.02	229.3	0	0	0	5407
13	Wayanad	26	5855	147.92	485.63	469.25	344.03	3975	634	74989
14	Kasaragod	27	49	0.96	10.26	98.36	68.65	18	31	1044
	Total	547	29766	1090.97	4108.78	8325.19	3427.88	20384	4007	251012

Source : Registrar of Co-operative Societies.

4.231 Under this scheme 547 PACs were involved in the implementation of SHGs upto March 2007. Idukki district formed maximum number of 7103 Groups through 69PACs followed by Wayanad district. The performance of Kasaragod district was very poor In the State 29766 Groups with a share of Rs 1090.97 lakhs were formed. Total deposits of 251012 members was Rs 4108 78 lakh. The total loan issued to the groups was Rs. 8325.19 lakh The deposit is also the maximum of Rs. 1447.86 lakhs with an outstanding amount of Rs. 1068.08 lakhs. In the case of over due Rs. 219.61 lakh standing against Kottayam District.

Deposit Mobilisation Campaign by Co-operative Societies

4.232 Deposit Mobilisation campaigns by co-operative credit institutions continued during the year under report also. The deposit mobilisation by the Co-peratives have shown an increasing trend over the years. During 2006-07, against the target of Rs.600 00 crore the co-operatives could mobilize Rs.1719.93 crore. Year wise target and achievement is given in Table - 4.39

Table 4.39
Targets and Achievements of Deposit Mobilisation Programme of Co-operatives in Kerala

(Rs. in Crores)

Year	Target	Achievement	Achievement (%)
2002	200.00	853.20	426.66
2003	400.00	909.61	226.00
2004	450.00	920.00	204.44
2005	400.00	1305.00	326.00
2006	400.00	1539.55	384.88
2007	600.00	1719.93	286.66

Source : Registrar of Co operative Societies.

Performance of the Sector during the Tenth Plan

4.233 The strategy adopted for the development of Co-operative sector during Xth Plan was expansion and diversification of commercial ventures in selected areas such as agro processing, marketing, storage and promotion of SHGs.

4.234 The outlay envisaged for the sector during 10th Plan was Rs. 100 crores. Out of this, Rs. 72 crores have been budgeted for X Plan. Against this, the expenditure incurred was Rs. 46.90 crores, i.e. 65.14% of the budgeted outlay.

4.235 Sub sector wise financial achievement during the Tenth Plan is given in Table 4.40

Table 4.40
Sub sector wise financial achievement during the Tenth Plan.

(Rs. Lakhs)

Sl.No	Sub sector	Financial outlay (Tenth Plan)	Achievement (Tenth Plan)	% of Expenditure to outlay.
1	Credit co-operatives	1173	671.92	57.28
2	Processing co-operatives	1170	887.58	75.86
3	Consumer co operatives	550	409.07	74.38
4	Housing co-operatives	440	474.30	107.80
5	Research, Education & Training	250	241.25	96.50
6	Administrative Reforms	820.02	428.96	52.31
7	Modernisation	128	85.15	66.52
8.	Other co-operatives	268.98	274.76	102.15
9	Other schemes-			
	i).Expansion& diversification.	1250	233.30	18.66
	ii).Rehabilitation of weak but potential co-operatives	1150	983.76	85.54
	Total	7200	4690.05	65.14

4.236 An analysis of the expenditure shows that the major share (33%) was incurred for the implementation of the two schemes viz., 'expansion & diversification of co-operatives and rehabilitation of weak but potential co-operatives. About 16% of the outlay was for assisting processing co-operatives, 16% for credit co-operatives, 11% for administrative expenses, 8% for providing assistance to consumer co-operatives and 6% for assistance to Housing co-operatives. Besides the plan outlay, NCDC has released Rs.757.56 crores during the Tenth Plan for the development of marketing, credit, consumer and industrial co-operatives in the State.

4.237 During 2006-07, four processing societies were assisted by way of share capital contribution. Financial assistance was availed from NCDC for promoting processing co-operatives. AGreen Co-operative (Kannur), Chellanam Panchayat Service Co-operative Society (Ernakulam), Kumbalangi SC/ST Society (Ernakulam) were assisted by way of share capital contribution

4.238 Grant-in-aid was provided to State Co-operatives for running co-operative Training Centre and implementing schemes relating to co-operative education, training, research and for conducting examinations. During 2006-07, an amount of Rs. 50.00 lakhs has been expended for imparting co-operative education. As part of e-governance, for computerizing and modernizing the co-operative department an amount of Rs. 2.00 lakhs has been spent . Share capital to the tune of Rs.100 lakhs has been contributed to primary housing co-operatives for development of business. Share assistants was given to 78 Primary housing societies.

4.239 A three tier system consisting of primary consumer co-operatives, district wholesale stores,, and consumer federation is engaged in providing consumer services to the public. Besides the consumer stores, 1000 Neethi stores and 181 Neethi medical stores are functioning in the State. Of these, 22 medical stores are run by the Federation and the remaining stores are run by PACS Neethi gas and 179 foreign liquor retail outlets are also run by the Federation. But these schemes are at loss to the Federation. Under consumer schemes 5 societies and 7

societies were given subsidy and loan respectively. Under Neethi stores 256 societies were assisted by giving subsidy 89 share 77 and loan 68.

Miscellaneous types of Co-operatives

4.240 Miscellaneous types of co-operatives has been organised in the state mainly for the purpose or generating employment opportunities to the unemployed youth and [illegible] sections. Co-operative Hospital and Dispensaries, Education Co-operatives, [illegible] operative Societies, Motor Transport, Autorikshaw and Taxi Drivers Co-op[illegible]ties, Tailors Co-operative Societies, Washermen Co-operative Societies, Cheth[illegible]ali Co-operative Societies etc. are some of the co-operative societies which are organised for the purpose of employment generation. There are also Social Welfare Co-operative Societies, Cultural Co-operative Societies, Farming Co-operative Societies, Leprosy Patient Co-operative Societies, Matsya Thozhilali Co-operative Societies, Photographers Co-operative Societies, Tailors Co-operative Societies etc. Government extend financial assistance to these societies by way of share capital contribution, grant, loan and subsidy. During 2006-07 assistance was given to 60 societies.

4.241 State has been given marketing support to major Co-operatives. The major production, procurement, export and Sales turn over of the major Co-operatives are given in Appendix 4.59.

Integrated Co-operative Development Project (ICDP)

4.242 Integrated Co-operative Development Project (ICDP) focuses on over all development of selected districts through co-operative efforts in the area of agriculture and allied sectors with the financial assistance of NCDC. ICDP covers all the districts in the state by providing financial assistance to PACS, PAMS, SC/ST co-operatives for infrastructural facilities such as godown, retail outlet, cash counters, iron safe, strong room, furniture etc.

4.243 The Project has successfully implemented in Wayanad, Palakkad, Kottayam, Idukki, Thrissur and Pathanamthitta, Malappuram, Kasaragod and Kannur districts. Scheme is under implementation in Kollam, Alappuzha, Kozhikode and Thiruvananthapurtna districts. NCDC has sanctioned second phase of the project in Wayanad district and the project will be commenced soon.

4.244 Under ICDP in 14 districts sanctioned Rs.160 crores as Block cost and allocated Rs.135.03crore to strengthen the Primary marketing societies by way of creation of basic infrastructrue/banking facilities, value addition projects, professional management of co-operatives, extensive computerization of co-operatives etc with NCDC share. During 06-07, NCDC has released Rs. 3 20 crores for implementation of ICDP in seven districts. District-wise activities are given in the following table-4.41

Table 4.41
District-wise Activities under ICDP

1.	Thiruvananthapuram	Ice cream and milk and milk based processing unit, a food processing unit, a tender coconut processing unit.
2.	Kollam	Two Copra Processing unit, CopraPprocessing Expeller unit, a Rubber Processing unit.
3.	Pathanamthitta	Three Rubber Processing unit (Cream Latex unit, unit of Rubber Board Latex adhesive and Joy balloons, Rubber sheet processing unit)

4.	Alappuzha	A Bio-fertilizer unit, a tender coconut water processing unit, 2 Rubber sheet processing unit, coconut wood processing unit, copra and Coir Dye House processing unit, Mobile Hay Boiling unit.
5	Idukki	Crumb Rubber factory, milk pasteurization plant, a spices powdering unit, tea factory, a cattle feed plant, Neem caked factory.
6	Kozhikode	2 Coconut Oil processing unit, 2 Copra processing and a Hollow Cement processing unit
7.	Kannur	Copra drying unit and Coconut expeller unit
8.	Kasaragode	Coconut expeller unit

Co-operative Academy of Professional Education – CAPE

4.245 The prime objective of setting up of the Academy was to establish new institutions for professional education under Co-operative sector in the State. At present it manages a Co-operative Medical College and 5 Engineering Colleges. The academy has also obtained NOC (Non Objection Certificate) for starting a college of Engineering and Management studies at Punnapra along with a finishing school and B.D.S, BSc (Nursing) and Bpharm courses at Ernakulam from Government, starting from the next year.

Kerala State Co-operative Employees Welfare Board

4.246 Government of Kerala has constituted a welfare fund for the employees of co-operative societies including commission agents/salesman in the co-operative institutions. The main objective of the Welfare Board is to raise and administer funds for the welfare of the members of co-operative employees and to alleviate the distress of employees and their dependents. As on March 2007, the total outstanding balance of regular employees and commission agent was Rs.6.5 crore and Rs.0.33 crores respectively. During 2006-07 the total disbursement of the Board was Rs.164.67 lakhs for various welfare activities.

Kerala State Co-operative Union

4.247 State Co-operative Union, Kerala is the main agency for imparting Member Education Programme. There are 21 Member Education units functioning under State Co-operative Union, consisting of 14 units is general wing and 7 units is women wing for two in each districts.

4.248 During 2006-07, 29191 personnel were trained by conducting classes with an actual expenditure of Rs. 69.68 lakh. They conducted leadership Development programmes, Management Development Programmes and State Level Seminars for Dairy, Fisheries, Industries , Handloom, SC/ST and women co-operatives Kerala Co-operative Journal is published by the State Co-op union every month.

4.249 12 co-operative training colleges and 9 co-operative training centres are run by the union conducting Higher and Junior Diploma courses in Co operation

Kissan Credit Cards (KCC)

4.250 Kissan Credit Card scheme was introduced in 1998-99 as an innovative scheme for issuing short-term loan for seasonal agricultural operations and purchasing agricultural input for their production. The scheme has helped in augmenting ground level credit flow for agriculture. At the National level during 2006-07 Co-operative Banks, Commercial Banks and RRBs issued 22.97 lakh, 37.67 lakh and 14.06 lakh cards respectively. Total 665.63 lakh cards were issued by the banking system during the last six years under the scheme. Co-operative banks accounted for the largest share (49%) followed by Commercial Banks (39%) and RRBs (12%). A major portion of crop loan disbursed through KCC is Co-operative Banks indicating its emergence which widely accepted mechanism for the delivery of crop loans to farmers. A personal insurance package to KCC holders was combined in the union budget and to cover them against accidental death or permanent disability upto a maximum amount of Rs.50, 000/- and Rs 25,000/- respectively. The premium burden for this is shared by the card issuing institutions and KCC holders in the ratio of 2:1. To extend the coverage of borrowers under KCC and to improve the credit flow to agriculture the scheme has been extended to long term credit structure, paving the way of acceptance of KCC as a single window for comprehensive credit product.

4.251 Agency wise ,Year wise Kissan Credit Cards issued at the national level are given in the following Table – 4.42

Table 4.42
Agency – Wise, Year-wise Kissan Credit Cards Issued.

(Lakhs Nos.)

Year	Co-operative Banks	RRBs	Commercial Banks	Total
2002-03	45.79	9.64	27.00	82.43
2003-04	48.78	12.74	30.94	92.46
2004-05	35.56	17.29	43.95	96.80
2005-06	25.98	12.49	41.65	80.12
2006-07	22.97	14.06	37.67	74.70
Total	**179.08**	**66.22**	**181.21**	**426.51**

Source - Annual Report NABARD 2006-07

4.252 The KCC scheme has since been established as a major source of crop loan, but the investment credit requirement of farmers remained out side the ambit of the scheme. Keeping this in view, NABARD enlarged the scope of the scheme to cover term loans for agriculture and allied activities and a reasonable component for consumption needs.

4.253 District wise cumulative issue of KCC through PACs in Kerala as on 31.3.2007 is given below in Table – 4.43

Table 4.43
Progress on Kissan Credit Card issued through PACS as on 31-03-2007

(Rs. In lakhs)

Sl. No	District	No. of Societies	No of cards issued	Loan Outstanding
1	Thiruvananthapuram	90	15563	40410
2.	Kollam	124	31322	2984
3.	Alappuzha	186	25265	6826.29
4.	Pathanamthitta	61	11118	1673 64
5.	Kottayam	105	64000	14000
6.	Idukki	68	66932	7624
7.	Ernakulam	49	14058	0
8.	Thrissur	159	77021	7735
9.	Palakkad	86	71301	8848.26
10.	Malappuram	102	25791	2859.33
11.	Kozhikode	69	29918	7927.6
12.	Wayanad	26	4531	7576.41
13.	Kannur	119	156488	2008.10
14.	Kasaragod	63	56362	7337.16
	Total	**1307**	**789742**	**117809.79**

Source. RCS

4.254 In the State as on March 2007, 7.89 lakh. KCC has been issued through PACS with an aggregate credit outstanding Rs.1178.09 crores. 1307 PACS are involved in the issue of KCC. Amongst Alappuzha and Thrissur Districts contributes 186 and 159 societies respectively . To enlarge the coverage of KCC scheme it is proposed to take care of full crop production, consumption needs and working capital under allied activities so far

4.255 The Credit cards could be utilized effectively to channelize investment credit to the farm sector to promote capital formation. The flexi credit approach adopted by NABARD has to be popularized to address this issue

Swarozgar Credit Card Scheme

4.256 The Swarozgar Credit Card Scheme was introduced by NABARD in 2003 to take care of investment and working capital requirements of small borrowers and by the end of March 2007, 98 RRBs, 48 Commercial Banks and 138 Co-operative Banks had introduced the scheme and issued 6.79 lakh cards involving credit limit of Rs.2700 crore.

4.257 NABARD introduced a pilot scheme during 2005-06 for supporting select RRBs and Cooperative Banks with one time grant assistance for promoting SCC scheme. The objective is to generate greater awareness about the scheme and cover maximum number of borrowers, educate the card holders to use the credit facility optimally and effectively as also to improve credit flow at the ground level.

4.258 Under this scheme KSCARDB provide timely credit for micro enterprise, small artisans, handloom weavers, service sectors etc., as block capital or working capital in the form of non-farm sector loans. The borrowers will be provided with a laminated credit card and pass book with a validity of 5 years and the maximum limit for individual is Rs 50,000/-.

Repayment period for block capital is 5 years and for working capital 1 year from the date of drawal.

Co-operative Development Fund

4.259 NABARD had constituted a Co-operative Development Fund (CDF) during 1992-93 with the objective of supporting co-operative credit institutions in undertaking various developmental activities such as Human Resource Development (HRD), building up of Management Information System (MIS), infrastructure creation, setting up of Business Development Department with technical personnel etc. The fund is augmented every year through contributions from NABARD surplus. Disbursement during the year 2006-07 was Rs.2.71crore (including 10 lakh for flood affected area of Surat). Cumulative sanctions and disbursement under CDF aggregates to Rs 76.35 crore and Rs.67.66 crore respectively, as on 31 March 2007. The support provided through the fund resulted in the increase in deposit mobilization in the primary societies, improved MIS and availability of trained manpower in co-operative banks contributing to overall efficiency of the structure.

Agricultural Finance

4.260 The goal of doubling of credit in three years initiated in June 2004 was achieved in two years. The target set at the national level for credit flow to agriculture for 2006-07 was Rs.1, 75,000 crore. Against which disbursement by all agencies stood at Rs.203296 crore exceeding the target by 16 per cent. For 2007-08, a target of Rs 2,25,000 crore has been fixed. The share of ground level credit flow from Commercial Banks, Co-operative Banks and RRBs accounted for 69, 21 and 10 percent respectively to total credit flow. During the terminal year of the Tenth plan, the increase in total credit flow in the country was to the tune of 192 per cent from the initial year of the plan in 2002-03. The details are given in Table 4.44

Table 4.44
Agency-wise Ground Level Credit Flow in India

(Rs.crore)

Agency	2002-03	2003-04	2004-05	2005-06	2006-07
Co-operative Banks	23,636	26,875	31231	39404	42480
Regional Rural Banks	6,070	7,581	12404	15223	20434
Commercial Banks	39,774	52,441	81481	125477	140382
Others	80	84	193	382	-
Total	**69,560**	**86,981**	**125309**	**180486**	**203296**

Source: Annual Report – NABARD 2006-07

4.261 During the year 2006-07 83.50 lakh new farmers were brought under institutional fold, 74.70 lakh fresh KCCs issued and financed 631 agricultural- clinics were financed,. An amount of Rs.460.06 crore to small/ marginal farmers under one time settlement scheme was provided by the banks. It also extended loans of Rs.73.71 crore to 27 810 farmers to redeem their past debts availed from normal sources. Even though a series of actions were initiated at the state and national level to augment credit flow in agriculture sector as well as to address debt relief of farmers a large number of problems are still remaining un addressed.

4.262 A working group chaired by Dr.S.S.Joshi was set up by RBI to suggest measures for assisting distressed farmers including provision of financial counsellig services and introduction of a specific credit guarantee scheme under such DFCGC Act for such farmers.

The group submitted its report in November 2006.Based on the recommendations it is proposed to introduce a credit guarantee scheme for the distressed farmers. The salient features of the scheme are shown in Box. 4.9.

Box 4.9

Relief Measures for Distressed Farmers – Credit Guarantee Scheme

- The Working Group to suggest measures to assist distressed farmers (Chairman Shri S.S.Joshi), has, *inter alia*. Suggested the operation of a credit guarantee scheme for distressed small borrowers (agricultural and others) by Deposit Insurance and Credit Guarantee Corporation. The features of the scheme, as recommended by the Group, are as follows
- All the commercial banks, including RRBs and rural co-operative banks (state and central co-operative banks) have to compulsorily participate in the scheme
- The scheme will cover only the borrowers affected by 'systemic distress'. Systemic distress, for the purposes of the scheme, will cover extensive loss of crops/assets caused due to natural calamities and pests/locusts on an epidemic scale.
- The scheme will cover those borrowers with aggregate sanctioned limits up to Rs.1 lakh granted after the introduction of the scheme, and whose loans are required to be restructured/rescheduled for the second successive time on account of systemic distress. The earlier restructuring/rescheduleement should have been done in terms of Reserve Bank's/NABARD's guidelines
- Consumption loans will not be covered under the scheme except to the extent included in the Kisan Credit Card (KCC) limit.
- The scheme shall guarantee up to 60 per cent of the amount outstanding in the guaranteed account/s, as on the date of occurrence of the natural calamity, necessitating restructuring/rescheduleement for the second successive time. The balance loss should be borne by the bank/concerned.
- Based on the recommendations of the Groups, an Agricultural Loans (Distressed Farmers) Guarantee Scheme, 2007 has been drafted and forwarded to Government of India. The Scheme is being revised based on Government's Comments.

Source RBI 2006-07

4.263 A technical working group for the review of legislation on money lending chaired by S.C.Gupta was set up by RBI to review the efficacy of the existing legislation framework governing money lending and its enforcement mechanism in different states. The group submitted its report in June 2007. The major recommendations of the working group are shown in Box: 4.10. A debt Relief Act has been passed by the State Government for the first time in country. A Debt Relief Commission has already been set up in the state. Based on the recommendations of the working group as well as on the lines of Kerala Debt relief Act, a national legislation could be considered for addressing the concerns of the farmers and to provide debt relief Priority Sector lending in Kerala

Box 4.10
Technical Group to Review the Legislations on Money Lending

The Technical Group (Chairman: Shri S.C.Gupta) made the following recommendations;

- Moneylenders should be registered compulsorily with the State Governments. Unregistered moneylenders will be penalized. The procedure for registration and renewal should be made simple and hassle free.
- In order to focus the legislation on the regulation of money lending transactions, banks, statutory corporations, co-operatives, financial institutions, NBFCs and the Reserve Bank need to be kept out of the purview of the legislation.
- To provide the State Governments with the flexibility of adjusting the rates of interest in accordance with the market realities, the maximum rates of interest to be charged by moneylenders should be notified by the State Governments from time to time. While determining the maximum rate, the range of interest rates and costs and other expenses being charged should be taken into account. In order to prevent usury, the rule of damdupat has been recommended.
- Alternate dispute resolution mechanisms such as Lok Adalat and Nyaya Panchayat for speedy and economical dispensation of justice have been recommended. Alternatively, State Governments may think of setting up of fast-track Courts/designated Courts to deal with disputes relating to lending transactions by money lenders and accredited loan providers. The choice of the forum can be decided by the State Governments depending upon the local conditions.
- In order to ensure that the enforcement/administration of the legislation is properly monitored, a new section has been proposed which would require State Governments to place an annual report on the administration of the legislation before the State Legislature.
- The State Governments should take adequate steps to publicise the maximum rates of interest notified under the Act, the offences under the Act and the dispute redressal machinery provided thereunder.
- A new chapter in the States' money lending legislations, aimed at establishing a link between the formal and informal credit providers, to be called 'Accredited Loan Providers', has been recommended.
- The Technical Group has recommended a set of conditions in the agreement between the banks/financial institutions and the 'accredited loan providers' as safeguard measures.
- The advances made by institutional creditors to accredited loan providers may be treated as priority sector lending. This would encourage the banks to take up the role of institutional creditors and disburse loans through the linkage with accredited loan providers as an additional business.

Source : RBI 2006-07

4.264 The scope and extent of priority sector lending has undergone a significant change in the post reform period with several new areas and sectors being brought under its purview. Based on the recommendations of an internal working group set up by RBI chaired by Shri.C.S.Murthy, the sectors of the economy /society that impact large segments of the population , the weaker sections and the sectors which are employment intensive such as agriculture, micro and small enterprises have been retained as priority sectors in the revised

guidelines which came into effect from April 30 2007.Agriculture, small enterprises, micro credit, retail trade, education and housing loan subjected to Rs.20 lakhs are the broad categories included in the priority sector.

4.265 The priority sector advances which was 45.9 per cent in 2002 has declined to 43.9 per cent in 2003 and increased to 49.4 per cent in 2004 and reached to 51 per cent in 2004-05 again increased to 55.52 percent against a mandatory norm of 40 per cent. The change in the definition of the priority sector also taken into account in interpreting the figures. The total priority sector advance disbursed during 2006-07 was Rs 27724 crore against Rs 23303 crore during 2005-06. The total bank advance outstanding was Rs.64273 crore out of which the priority sector advance outstanding was Rs 20822 crore.

4.266 Agency-wise disbursement of the annual credit flow in the state is given in Table 4.45 In the disbursal of total advances, commercial banks stood at the first place disbursing Rs.17181 crore (62%) in 2006-07, followed by Co-operative Banks (30%) and RRBs (8%). In the lending for agriculture also commercial banks dominated by disbursing Rs.6618 crore (56%) followed by Co-operative Banks (30%) and RRBs. (14%) .

Table 4.45

Agency-wise Annual Credit flow to Agriculture and total priority sector in Kerala

(Rs. in crores)

Sl No	Agency	Priority Sector					Agriculture				
		2002-03	2003-04	2004-05	2005-06	2006-07	2002-03	2003-04	2004-05	2005-06	2006-07
1	Commercial Banks	6702	5847	11871	14159	17181	1914	2579	3884	4588	6618
2	RRBs	628	1108	1473	1797	2186	408	755	1066	1290	1690
3	Co operatives including KSCARDB	3138	3539	4975	7097	8310	1192	1215	1904	2873	3598
4	Kerala Financial Corporation	94	102	68	250	47	0	0	0.36	1.13	
5	Grand total	10563	13596	18387	23303	27724	3514	4549	6854	9152	11906
6	Percentage increase to previous year	28%	29%	35%	26.74 %	18.97 %	22.82 %	29.44 %	51%	35%	30.09 %

Source: State Level Bankers Committee

4.267 Under Annual Credit Plan 2006-07, the total advance to the priority sector was in the tune of Rs 27724 crore, of which the share of agriculture was Rs.11906 crore (42.94%) secondary sector Rs.3207.82 crore (11.5%) and tertiary sector Rs.12609.84 crore (45.48%) (Table- 4.46). There is an increase of 30.09% in the agricultural credit disbursements over that achieved during the last financial year. District wise analysis of total advance to priority sector reveals that out of total disbursement, Kollam advanced Rs.3294.23 crores (11.9%) followed by Ernakulam Rs.2959crores (10.6%) Thrissur Rs.2874 crores (10%) and Kottayam Rs.2482 crores (9%). In the case of disbursement of agricultural credit Kozhikode district stands first with an achievement of 10.25% of the total disbursement (Rs.1221.35 crore), followed by Palakkad 9.9% (1187.47 crore) and Thiruvananthapuram with 9% (1130.67 crore). Idukki with 96.12% achievement of the target should have to improve the performance as it is the only

district which could not achieve the target under Primary Sector. Kottayam district achieved 130.96% against the target under the sector. Details are given in Appendix 4.60

Table 4.46

Flow of Credit to Priority Sector and Agriculture (in percent)

Year	All Commercial Banks			
	Priority Sector Lending		Agriculture Credit	
	As a % of Total Credit	As a% of total Deposits	As a % of Total Credit	As a% of total Deposits
2001	46.37	19.83	14.32	6.13
2002	45.93	19.61	13.76	5.88
2003	43.94	19.98	12.99	5.90
2004	49.35	23.84	14.13	6.82
2005	51.11	25.6	14.7	9.6
2006	53.47	35.74	15.91	10.63
2007	55.52	38.91	17.70	12.36

Source: State Level Banker's Committee

4.268 The proportion of total credit to priority sector lending was 55.52% indicating a slight increase over the previous year. Likewise the proportion of total deposit (Rs.91697 crore) to priority sector has increased to 38.91% from 35.74% in previous year. In the case of Agriculture credit, the proportion of agriculture credit to total credit and total deposits has increased to 17.70% and 12.36% respectively.

4.269 The achievements of the Commercial banking sector of the State under total priority sector advances (57.44 %) and weaker section advances (18.86 %) are above the National goal of 40% and 10% respectively (Table – 4.47). During the year under agricultural credit the percentage credit to total credit is just above the mandatory level ie., 18.86%.

Table 4.47

Targets and achievements under advances of commercial banks in Kerala

(Figures in percentage)

Sl. No.	Parameter	Target	March 2004	March 2005	March 2006	March 2007	June 2007
1.	Priority sector Advances to Total Credit	40	49.35	51.05	53.47	55.52	57.44
2.	Agriculture Advances to Total credit	18	14.13	14.68	15.91	17.70	18.86
3.	Weaker Section Advance to Total credit	10	10.83	11.79	12.40	13.01	12.84
4.	DRI Advance to Total Credit	1	0.04	0.01	0.01	0.02	0.02
5.	C.D. Ratio	60	48.31	59.01	66.84	70.09	69.47

Source. SLBC

4.270 All bank groups at the national level were able to achieve the overall target for priority sector lending by March 2007.

Credit flow to Agriculture

4.271 As part of doubling the flow of credit to agriculture sector within three years, the target set for disbursement of credit to agriculture in the State by the end of 2006-07 was Rs.9100 crore. which is twice the flow of credit (Rs.4549crore) during 2003-04. During the fiscal year 2005-06, the credit disbursement to agriculture by the banks was Rs.9152crore against a target of Rs.9100 crore registering an achievement of 100.57 per cent. However SLBC had fixed a higher target of Rs9645 crores during 2006-07 and achievement up to March 07 was Rs.11906.13 crore.

4.272 District wise analysis of progress of doubling the flow of credit to Agricultural with in three years shows, out of 14 districts in the state 6 districts, viz Kasaragod Pathanamthitta, Palakkad, Kozhikode, Thiruvananthapuram and Ernakulam have doubled the flow of credit.

4.273 In enhancing the coverage of institutional credit through Kissan Credit Card in Kerala, 22.07 lakh KCCs have been issued so far by the banking sector out of which Commercial Banks accounted for 11.25 lakhs and Co-operative including KSCARDB banks 10.82 lakh KCCs. The aggregate credit limit sanctioned under KCC is Rs.6647.74 crore. As a part of the initiative to improve flow of investment credit to Agricultural, Commercial banks disbursed Rs.563.85 crores as investment credit to 52685 farmers up to March 07. Co-operative banks have disbursed Rs.36.70 crores as investment credit in the same period. As per the policy guide lines, Since 2004-05 the banks in the state have financed 16.28 lakh farmers up to March 2007 The target for financing new farmers during 2006.07 was 2.99 lakh and have financed 6.30 lakh new farmers. Co-operatives have financed 88936 new farmers during the year.

Credit flow to Agriculture in Kerala

4.274 The credit flow to agriculture sector during the last six years is given in Table 4.48. The share of investment credit to agricultural credit disbursement declined from 20 per cent during 2000-01 to 17 per cent during 2002-03 and slightly increased to 18.13% in 2005-06 and 19% in 2006-07 Out of the total credit flow, the share of production credit has marginally increased from 2004-05 onwards.

Table 4.48
Flow of Credit to Agriculture Sector

(Rs. Crores)

Year	Production Credit	Investment Credit	Total
2000-01	2312 (80%)	596 (20%)	2908
2001-02	2311 (81%)	550 (19%)	2861
2002-03	2901(83%)	613 (17%)	3514
2003-04	3620 (80%)	929 (20%)	4549
2004-05	5672 (83%)	1182 (17%)	6854
2005-06	7493 (81.87)	1659 (18.13)	9152
2006-07	9664 (81%)	2262 (19)	11906

Source: SLBC

4.275 In the agency-wise analysis, it is seen that the major portion of short term and medium term credit requirements in the state are met by the Co-operative banking sector consisting of the State Co-operative Banks, District Co-operative banks and Primary Agriculture Credit Societies which covers 1/5th of the activities. The share of co-operatives in the disbursal was

89 per cent in production credit and 11 per cent in investment credit (Table-4.49). The share of RRBs in production credit and investment credit was 96.98 per cent and .02 per cent respectively.

Table – 4.49
Agency wise flow of credit during 2006-07

(Rs. Crores)

Agency	Production Credit	Investment Credit	Total Agriculture Credit	% Production Credit to total Agri. Credit	% Investment Credit to Total Credit	% share of Investment Credit in the State
Commercial banks	4811	1787	6598	73	27	55.42
Co-operative Banks	3198	412	3610	89	11	30.32
RRBs	1654	41	1695	98	2	14.23
Other Agencies			3	-		.03
Total	**9663**	**2240**	**11906**	81	**19**	100

Source: SLBC

Performance of State Co-operative banks and District Co-operative banks

4.276 State Co-operative Bank as the apex bank of short term credit structure in Kerala, it provides strong and sound guidens, supervises, coordinates, monitors and controls all the 14 District Co-operative Banks and Primary Agricultural Credit Societies. It also provides ST, MT, LT loans to various activities as per their requirements and also acts as a central balancing centre to obserbs surplus funds from DCBs and PACs and other Co-operative institutions.

4.277 State Co-operative banks and District Co-operative banks channelise their own fund and fund of NABARD for disbursal. The total deposit of State Co operative Bank in 2006-07 was Rs.2901.36 crore against Rs.2864.04 crore in 2005-06, registering an increase of 1.3%. The total loans and advances stood at Rs.2199.43crore, the NPAs of the bank stood at Rs.430.76 crore as on 31.03.06 through the recovery effect on NBA could not be contained as expected. The interest spread has become 25.86 crore during 2006-07. The operational expenses has more or less maintained equal to the previous year as Rs.27.07 crore in 2006-07 from Rs.27.51 crore in the previous year.

4.278 The operations of the SCB are shown in Appendix -4.61. During the year under report, the deposit position of the Bank had increased marginally compared to the last year. The Bank deposit has increased marginally to Rs.2901.36 crore from Rs.2864.04 crore recording an increase of 1.3 per cent in 2006-07. The borrowings from other institutions had again increased to Rs.545.77 crore from Rs.424.58 crore. The working capital position has slightly increased during in 2006-07. The deployment of loan by the bank was not affected by the decline of deposits of the Bank.

4.279 The purpose wise disbursal during 2006-07 was Rs.1791.31 crore against that of Rs.1846.93 crore in 2005-06 showing a decrease of 3.10 %. The credit disbursement was mainly for agriculture, marketing, cottage & small scale industries, consumer business, consumption purposes, housing etc. The net profit of the bank shows a fluctuating trend during the last few years but the profit amount negatively increased to Rs.28.95 crore, which is higher than the previous year. Disbursal on agriculture, consumption purpose, housing etc. had reduced by the bank considerably. The portion of disbursment on consumption activities and industrial activities increased during the year 2006-07 by an amount of Rs.43.81 crore and 117.68 crore respectively compared to the previous year.

4.280 The Bank has been implementing SHGs Scheme through Kannur, Palakkad and Ernakulam District Co-operative Banks. The thrust of the programme is organising SHGs of agriculturists and agricultural workers under PACS and financing from their own fund by making use of group dynamism. The financing is done from the own funds of the Bank.

4.281 The working results of SCB shows a steep rise in borrowings, from Rs.424.58 crore in 2005-06 to Rs.545.77 crore in 2006-07. The purpose wise cumulative loan disbursed by the State Co-operative Bank is furnished in Appendix - 4.62. During 2006-07, out of total loans and advances disbursed, Rs.573.94 crore i.e.32 per cent was for agriculture. The share of flow of credit to agriculture was relatively higher than the previous year

4.282 During 2006-07 the total deposit of District Co-operative Banks had gone upto to Rs 9149 crore against that of Rs.8277.17 crore in the previous year with an increase of 10.5%. The amount disbursed as loans and advances was Rs 7633 16 crore, which was 83 per cent of the total deposits. During 2006-07 Idukki, Malappuram, Kozhikode, Kannur and Kasaragod districts earned progressive net profit, where as the progressive net profit to Thiruvananthapuram, Kollam, Alappuzha, Pathanamthitta, Palakkad and Wayanad were very low. The cumulative loss of Kottayam and Thrissur were recorded as 25.21 crore and 5.88 crore respectively. The operational indicators of DCBs show that total Deposits and working capital is much higher in Ernakulam District, followed by Thiruvananthapuram, where as in the case of loans and advances, it is higher in Thiruvananthapuram followed by Ernakulam . In the case of NPA Kollam ranks inferior to other state followed by Kottayam. The indicators are given in Appendix -4.63

4.283 In view of persisting weaknesses in the co-operative credit structure, preparation of Institution Specific Development Actions plans by co-operative banks and entering into MOUs continued during the year with certain refinements PACs were advised to prepare action plan for attaining viable and enter into MOUs with respective DCCBs. NABARD provide financial support though Co-operative Development Fund with the objective of supporting developmental initiatives of co-operative credit institutions.

Long term credit:

4.284 A net work consisting of the Kerala State Co-operative Agricultural and Rural Development Bank at the Apex and 46 Primary Co-operative Agricultural and Rural Development Banks at Taluk Level is responsible for long term credit disbursement for rural development in the state. Various activities covered by KSCARDB's lending in scheme loan include Minor Irrigation, Plantation and Horticulture Agricultural machinery, Land Development, poultry, fisheries etc., where as under ordinary loan include construction of Wells/Tanks, construction of Godowns/cattle, Barbed wire or stone fencing, Construction of drainage channels, loans for redemption of prior debts etc. The Bank raises funds through floatation of debentures issued on government guarantee; NHB, LIC, SBI and SBT etc., are the financial institutions which invest in the debentures floated by the KSCARDB. The total long term loan disbursed during 2006-07 by KSCARDB was Rs.510.73 crore against that of Rs.430.7 crore showing an increase of 18 per cent. In the purpose-wise disbursal, the major share of total disbursement is availed by Rural Housing (48%) followed by Agriculture (31%), non farm sector (21%). The share of disbursement of non-farm sector has declined considerably during 2006-07. The declining nature of Non-farm lending shows the urgency of disbursement in the agricultural sector. The details of loan disbursement is given in Appendix -4.64 and 4.65

4.285 The Non farm sector lending scheme intends to provide financial assistance to meet the credit needs of individual artisans, craftsmen, handicraftsmen and small entrepreneurs who undertake manufacturing and processing activities as approved by the Development commissions of SSI, Government of India and maximum loan eligible under is Rs.10.00 lakhs to be repaid within 10 years. Small Road and Water Transport operators scheme for public goods carriage and passenger vehicles/boats. Integrated Loan Scheme for new industrial ventures/modernization of existing SSI. Educational Loan for higher education in India and abroad as recognized by Central and State Government are also introduced under the long term loan disbursement scheme The Bank has also financing tourism related activities with the assistance of NABARD to promote farm tourism / home stay which enables the farmers to generate additional income. A new scheme in the name of Card Bank Jewel Scheme was introduced by the Bank to the member borrowers to acquire assest in the form if gold coin or ornaments to met the future requirements as marriage of their daughter / son.

Refinance Support by NABARD

4.286 Investment credit facilitates capital formation in agriculture, which considered to be a pre-requisite for up grading the technology and improving resource use efficiency in agriculture. NABARD provides refinance for investment credit at confessional rates of interest, facilitates argumenting the flow of investment credit at the ground level through various policy initiatives/programmes.

4.287 At the national level, the refinance budget for deployment of investment credit was Rs.8795.02 crore as compared to the disbursement of Rs.8622.37 crore in the previous year. The total refinance disbursement during the year increased in the country. Commercial Banks accounted for the highest share 52% in the total refinance disbursed and the share of Co-operative banks declined both in ST&LT disbursements Considering the need for supplementing the resource of KSCARDB to enable them to provide adequate short term loans (production credit) at reasonable rates of interest to borrowers, availing term loans for agriculture and allied activities, a new line of short term refinance support was introduced by NABARD including Kerala State in December 2004 on a pilot basis.

4.288 Under sector wise disbursement of refinance Non Farm Sector received the higher share (28.8%) followed by Farm Mechanisation (21.1) and Self Help Groups as (14.7%)

4.289 In Kerala the total refinance from NABARD was Rs.482.44 crore in 2006-07 as against Rs.415 crore in the previous year recording a slight increase of 16 per cent The agency wise analysis reveals that unlike the previous years the Commercial Banks avail the largest share (55%) followed by KSCARDB (33%), RRBs (12%). Agency-wise disbursement of refinance assistance by NABARD in Kerala is given in Appendix -4.66 and 4.67.

4.290 Refinancing of NABARD shows a slight position variation compared to the previous year. The interest rate on refinance for investment credit providing to specific activities, regions and at the borrowers. It was revised during February 2006. In North Eastern region, interest rate is fixed as 6.5% irrespective of quantum of loan amount. Interest rate of 6.5 to 7% were charged for loan size upto Rs. 50,000/- and above Rs. 50,000/- respectively for farm and non-farm sectors.

4.291 The position of refinance by NABARD in the State and Country level is given in Table-4.50

Table 4.50
Refinance by NABARD 2006-07

(Rs.crore)

Region	KSCARDB	State Co-operative Bank	Commercial Bank	RRBs
Country	1743	1131	4569	1353
Kerala	158.47		265.03	58.94
%	9.09	-	5.8	4.35

Source: NABARD, Annual Report 2006-07

4.292 The purpose-wise analysis of the refinance by NABARD reveals that as in the previous years, the major share of assistance was availed by the non-farm sector (49%), under farm sector, the refinance disbursement have shown a declining trend. , In the disbursement, the major share was for land development (13%), Minor irrigation (8%), Plantation and Horticulture (6%). The amount of refinance for the sectors like fisheries, poultry , dairy, farm mechanisation which are very important in the rural economy of Kerala remained to be low compared to the previous year. There is an imperative need to work out strategies to motivate the client institutions to avail of more refinance under farm sector activities.

4.293 NABARD's non farm sector investments are mainly on processing, (fish processing), concrete works, mat making, furniture making, bricks manufacturing etc Additional income and employment generation are expected from this lending. Under refinance support 30925 Self Help Groups were credit linked during 2006-07 with an amount of Rs.62.05 crore

4.294 NABARD has slightly increased the interest rate on refinance from 6.5 to 7.75 per cent depending on the loan size. Agency wise revised rate on refinance is given in Table-4.51

Table 4.51
Agency wise Interest Rates on Refinance

Agency	Loan Amount	Percentage
Up to Rs.50,000 and above Rs.50,000		
Commercial Bank	6.50 (7.5)	7 (8.00)
Co-operative Bank	6.50 (7.75)	7 (7.25)
RRBs	6.50 (7.25)	7 (7.75)

(figures is paranthesses indicates all India interest rate on refinance)
Source: NABARD annual report 2007

Package of Relief Measures for Debt stressed farmers in Kerala.

4.295 Three districts namely Wayanad, Palakkad and Kasaragod have been included in the relief package announced by the Union Government. The Special meeting of SLBC Kerala convened on 6th June, decided that the agriculture loans liabilities upto Rs. One lakh of farmers who have committed suicide would be written of by commercial bank. All the 248 loans of the deceased farmers with liabilities up to one lakh have been write off by commercial Banks. The total amount written off by Commercial banks is Rs.76.67 lakh.

Loans written off as on 31.05.2007 (State Government/SLBC initiative of farmers who have committed suicide in the state	Comm : banks	Rs. 76.65 lakh (248 loans)
	Co-Operative -	Rs. 153.27 lakh (487 loans)
	State Total -	**Rs. 229.92 lakh (885 loans)**

4.296 For mitigating the distress of farmers in Wayanad, Palakkad and Kasaragod, the RBI has advised all banks to extend the relief measures as per the package in the distressed districts Under this measures include.

(a) To ensure all the farmers loan accounts in the specified districts which are over due as on July 2006 are rescheduled on the lines of the package and the interest there on is fully waived

(b) To extend fresh finance to farmers. It is instructed to furnish all banks the released amount of credit that the respective Lead District Managers.

(c) To furnish the amount of interest waived in order to monitor the progress at the state level.

Interest Waiver Estimated amount of Rs.360	1. Amount waived claimed as on 31 05 2007 45 Commercial Banks including RRBs and UCBs Wayanad Rs.46.30 Palakkad Rs.24.37 Kasaragod Rs. 5.97 Total Rs.86 64 crore
	2. By Co operatives Rs. 114.27 crore State Total Rs. 200.91 crore
Rescheduling of Loans Estimated amount involved Rs 815.53 crores	Amount Rescheduled as on 31.05.2007 by 45 Commercial Banks including RRBS and UCBS. Wayanad - Rs.149.62 Palakkad - Rs 161.95 Kasaragod - Rs. 79 93 Total Rs.391.5
	2. By Co-operatives Rs 323.05 State Total Rs. 714.55
Write off Agricultural loans of farmers committed suicide by Co-operative societies from 01.01.99 to 03.07.06	No. Loans 514 Amount of Loans Rs.1.64 crores

4.297 A case study on farmers suicides in Wayanad district was conducted by "Centre for Management Development (CMD) under the auspices of SLBC, Kerala, with the broad objective of identifying the non – farm causes of farmers suicides in Wayanad. 35 cases of suicides were drawn from 179 cases reported in the district during the five year from 2002-06.

Rural Infrastructure Development Fund (RIDF)

4.298 The RIDF was set up in NABARD with contribution from the Commercial banks which were not able to fulfill the commitment of channelising at lest 18 per cent of their total lending to agriculture RIDF has been instrument an in strengthening the rural infrastructure in the State. The RID Fund started in 1995-96 with a corpus of Rs.2000 crores has emerged as a popular and effective mechanism for financing rural infrastructure projects and its corpus from RIDF I to XII stands at Rs.60,000 crore The corpus of RIDF XII increased to Rs.10,000 crore (including Rs.4000 crore exclusively for rural roads) during 2006-07. The corpus is Rs.250 crore at state level during 2005-06. The quantum of loan is different for various sectors. From RIDF X onwards, it is 95 per cent for activities relating to agriculture including mini hydel, 85

per cent for social sectors and 80 per cent for rural connectivity. With the receipt of deposits of Rs. 6966.43 crore from Commercial banks during the year, the cumulative deposits under RIDF received upto 31st March 2007 stood at Rs.35716.33 crore.. An amount of Rs.2697.62 crore was received from State Governments by way of repayment of RIDF loans during 2006-07. Disbursements under RIDF tranche I, II & III were closed at the end of March 2003 and RIDF IV at the end of May 2005. For projects sanctioned under RIDF V was over at the end June 2006. The Project sanctioned under VI to IX the implementation was extended up to March 2007 to enable the state government to complete the ongoing projects and avail reimbursement of expenditure incurred there against.

Assistance to Kerala

4.299 Kerala has been receiving assistance under RIDF for the last eleven years. The major projects for which refinance has been disbursed include watershed development projects, rural bridges, rural roads, reclamation of waterlogged area, inland navigation, tourism oriented roads and rural market yards. The scope of RIDF was widened in 1999-00 to include lending to Grama panchayats, Self help groups and Non-governmental organisations for implementing village level infrastructure projects, innovative projects such as information technology enabled services and new activities such a system improvement, mini hydel generation under power sector, construction of primary/secondary school buildings, primary health centres rain water harvesting structures etc Among all, agriculture and allied sectors irrigation and power sector are given priority

4.300 The cumulative sanction amount as on 30.11.07 was Rs.1921.25 crore and the disbursement was Rs.1178.97 crore (61%) for the implementation of 2927 projects. Out of 2927 projects 1708 have been completed. The cumulative sanction and disbursement on projects as on 30.11.07 is given in Table-4.52. Purpose wise loan disbursement is given in Table-4.53.

Table 4.52
Tranche wise Sanction & Disbursement under RIDF

(Rs. Crores)

RIDF	Kerala as on 31.1.07		India as on 3/06	
	Sanction	Disbursement	Sanction	Disbursement
I	95.93	86.26	1906.21	1760.87
II	86.91	73.13	2666.87	2397.95
III	89.29	73.88	2733.82	2453.5
IV	64.00	56.73	2903.32	2482.00
V	126.77	117.23	3477.16	3032.66
VI	175.12	156.72	4525.36	3850.83
VII	191.77	142.83	4657.64	3756.82
VIII	196.55	150.49	6009.36	4440.34
IX	93.50	25.76	5599.18	3387.48
X	234.90	73.89	6878.48	2967.81
XI	206.21	27.00	3033.30	807.08
XII	360.3	195.05	10555.36	1540.69
Total	1921.25	1178.97	54946.06	32878.03

Source - Annual Report 2006-07, NABARD

Table 4.53
Purpose wise loan sanctioned and disbursements under RIDF
(I to XI)

(Rs. Crores)

Sl. No.	Purpose	No. of Projects	Sanctioned Amount	Disbursed Amount
1.	Irrigation	1096	294.98	207.01
2.	Soil and Water Conservation	259	112.49	66.98
3.	Drainage and Flood Protection	56	122.67	47.85
4.	Rural Roads PWD	819.00	546.97	358.82
5	Rural Bridges	331	583.14	433.09
6.	Rural Market Yards	108	9.72	6.93
7.	Boat Jetties	4	0.27	.02
8.	Inland Navigation	1	10.00	7.87
9.	Rural Drinking Water Supply	8	44.45	15.21
10.	Health	114	50.32	13.93
11.	Education	116	35.89	1.94
12.	Fish Harbour	3	37.30	11.74
13.	Animal Husbandry	2	12.82	5.91
14.	Public market	1	1.12	0.11
15.	Hydel Power	1	7.79	1.56
16.	Information Technology	1	50.00	--
17.	Rural godown	7	1.32	--
	Total	**2927**	**1921.25**	**1178.97**

Source: NABARD

Promotional programmes under RIDF in distressed districts

4.301 Under RIDF 467 projects involving a loan amount of Rs.355.25 crore have been sanctioned in the three districts. Details are given in Table 4.53. Purpose wise loan sanctionedand disbursements under RIDF is given in table. 4.54

Table 4.54
District wise assistance by NABARD

District	No. of Projects	RIDF loan	
		Sanction	Disbursement
Kasaragod	179	85.73	61.79
Palakkad	199	157.82	101.36
Wayanad	89	111.71	78.09
Total	**467**	**355.26**	**242.05**

Source: NABARD

CHAPTER 5

WATER RESOURCES

Water sector has undergone basic changes in recent years due to perceived scarcity While focus in the past was mainly on investment in physical structures, recent developments are associated to a great extent with improved management, conservation and institutional changes. Government of India has declared the year 2007 as "Water Year", with a view to address the water related issues in a focused manner, ensure successful implementation of policies and programmes and to launch a massive awareness programme all over the country. For successful implementation of water resources development programme, it would be essential to bring all the stakeholders viz policy makers and decision makers, project managers and local authorities, NGO's, communities, social workers and individuals and also the private sectors to ensure successful implementation of the policies and programmes for better management and development of the water sector. Therefore the "Water year" focuses on a) Developing consensus on appropriate measures including legislation on better management of the water sector including participatory irrigation management, regulated use and conservation b) Timely completion of irrigation projects and maintenance of existing projects to ensure water availability to farmers. c) awareness programme of the masses; d) organization of conferences, workshops on important development and management issues. As a part of Water Year 2007 awareness programme, capacity building, demonstration of artificial recharge, rain water harvesting etc. were organized in the state

Kerala State Water Policy

5.2 There is an imminent need to create greater social awareness about the rights and responsibilities in the use of water and to put in place better management practices in the utilization of this invaluable resource. It is also necessary to ensure people's participation in water sector within the framework of decentralized democratic institutions and to evolve suitable frameworks and strategies for the continual up-gradation of water environment. Hence a policy framework shall be adopted to create an enabling environment for equitable, sustainable and productive management of water resources for ensuring public health, promoting growth and minimizing regional imbalance. The state Water Policy –Draft was prepared for fulfilling the following objectives such as adopting integrated and multi-sectoral approach for planning, development and management of water resources, considering micro watersheds as the basic unit for the conservation and optimal utilization of water resources for achieving resource sustainability , Integrating the problems and prospects of water resource systems by considering river basin as the basic unit , Emphasizing the importance of comprehensive watershed conservation and management plan, water quality management plan, long-term sub-basin and river basin operation and monitoring plan and State water resource plan and enabling appropriate institutional mechanism and legal measures for sustainable water resource development and management. Salient features of the draft policy is given in Box 5.1

Box 5.1
Kerala State Water Policy(Draft)-2007

State of water resources : The water resources in the state are not abundant, but over exploited and deteriorated in quality. Kerala has not adequately responded to appropriate water retention structures or techniques

Issues in water sector :Open wells and ground water sources serve as substantial sources of drinking water and they need to be protected from bacterial and chemical contamination. The technical support for integrated water resource planning at the level of Local Self Governments is grossly inadequate. There is a shortage of adequate facilities at various levels for testing water quality which should be addressed. The water use efficiency of the existing irrigation distribution system is poor with poor correlation to agriculture production and productivity. There is a need for greater accountability and transparency in the management and operation of major irrigation projects. Availability of water is not considered as a major criterion for industrial zoning.

Policy Parameters and initiatives

Water use priorities : The State shall follow the following priority for allocating water among the various categories of users viz. 1. Domestic use 2. Agricultural use 3. Power generation 4. Agro-based industrial use 5. Industrial and commercial use 6. All other uses

Water use entitlements The State shall establish a well-defined transparent system for water entitlements according to the guidelines and prescriptions made and accepted by the public at large.

Management of existing water resource projects . Considering the nagging issues of time and cost over runs of major and medium water resources projects, priority shall be given for completion of pending projects by stipulating cut off dates, pooling and allocating resources and constituting special task forces for close monitoring and public accountability. In all irrigation projects, Participatory Irrigation Management (PIM) shall be implemented. In order to ensure efficient implementation of PIM, an exclusive legislation shall be enacted. water audit shall be made compulsory for all the projects.

Water resource planning : The sustainable development of water resources of the State calls for an ecosystem approach and it shall be facilitated through micro watershed based planning and intervention. In the case of groundwater aquifers, the assessment and development shall be made based on the specific characteristics of respective aquifers. A state-level master plan for water resource development and management shall be prepared by compiling the status and action plans in each micro watersheds, sub basins and river basins in a hierarchical form. Alternate mechanism for financing water projects shall be considered. A detailed rehabilitation and resettlement policy shall be necessarily formulated for the State and commissioning of a project shall be done only after implementation of rehabilitation and resettlement plan, if applicable.

Implementation of water resource projects : Documentation and monitoring shall be made compulsory for project implementation. Periodic environmental monitoring shall be made compulsory. The factors that lead to abnormal cost escalation should be identified and necessary precautions should be taken.

Water quality management : Regular water quality upgradation programs shall be undertaken, with the support of Local Self Governments, for the protection of water bodies under perpetual dangers of pollution

Environmental interventions in water sector - There shall be specific plan of actions for implementing location specific sewerage system in all urban areas and appropriate sanitation systems in all rural areas. The potential for recycling and reusing of water shall be recognized and all water users shall be directed to adopt measures through recycling. Drought prone areas shall be delineated and prioritized for every river basin depending on the drought characteristics. Drought mitigation plans shall be given priority in the watershed master plans of such areas.

Master plans for the major rivers of the Sate shall be prepared which will form the basis of any river-based project.

Interstate water sharing : Performance evaluation of all inter state water sharing arrangements shall be carried out periodically by the State and necessary action initiated to protect the interests of the State. It will be ensured that the administrative control of infrastructures and regulating mechanisms in the state for such interstate water sharing shall vest with the state.

Institutional mechanism : There shall be a State Level River Authority, under which there shall be River basin and Sub basin organisations. A wetland authority shall also be established in order to ensure protection, conservation, development and management of wetlands in the State authorities. The reconstitution shall be done in such a manner that it facilitates technical support to Local Self Governments in water sector.

Data management and information system - A system for periodical collection, compilation and utilization of data pertaining to water resources shall be established at the river basin and state level. The role of R&D Centres and academic institutions shall be recognized while establishing and operating the modern Database Management System for water resources sector. The data generated shall be put on the public domain, in order to ensure better transparency, utility and accountability.

Research , Development and training . The frontiers of knowledge in water and allied sectors shall be pushed forward through focused action research, development and promotion of state-of-the-art technology and training for effective and economic management of water resources. The services of Centre for Water Resources Development and Management, other R&D Centres and training institutions shall be utilized appropriately.

Management Competence of state water services : The technology transfer shall be encouraged on all technical assistance and consulting services. The training and R&D institutions in the water sector shall be strengthened to meet the technology requirements for supporting watershed/river basin planning and development. A master plan for training the apex-functional community level stakeholders shall be developed to materialize the vision of the State Water Policy.

Financial and physical sustainability : The water charges for various uses shall be fixed in such a way that they cover at least the operation and maintenance charges for providing the service. The subsidy on water rates to the disadvantaged and poorer sections of the society shall be continued. The rates for irrigation water shall be decided in such a manner that it conveys the scarcity value of water to users and foster motivation for economy in water usage. The water rates shall be rationalized with due regard to the interests of small and marginal farmers. It shall be accompanied by volumetric measurement of water consumption. A Citizen's Charter shall be developed and published with a view to guaranteeing quality, efficiency, transparency and accountability in the delivery of drinking water and irrigation water.

Gender : The crucial role that women play in the water resources sector shall be recognized. Active involvement of women in the management of projects and protection of resources shall be ensured.

Legislation : The provisions and adequacy of different regulations enacted in the water sector shall be reviewed and modified. Some of the aspects to be brought under new enactments are the water rights, prioritization of water use, groundwater exploitation, bulk supply, water harvesting, transfer of irrigation systems to users, use of irrigation water for drinking purpose, water pricing and subsidy norms, water conservation and harvesting, reconstitution of institutional mechanism etc.

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River Basin Management

5.3 River basin is a 'geographical unit' enclosing an area drained by streams and channels that feed a river at a particular point. All the precipitation that falls on these slopes will either evaporate, used by plants and other living organisms, sink into the ground or end up in the river after various natural and man-made uses.. Very often, river basin has been considered to be operating in a steady-state equilibrium and assumed that can therefore be managed by relatively control systems, like large dam and embankment projects. However, this perception is fundamentally flawed. In fact, through large dams, among other impacts, the morphological and sediment transfer processes gets accelerated in one region, while the same gets hindered in another region. Activities that use water (like irrigation, municipal and industrial water supply) or change its quality (e.g. sewage and industrial discharges, pesticides runoff and others) or the pattern of its delivery further downstream (e.g. hydropower production, reservoir storage and releases) has implication for other possible uses downstream. .Thus, understanding the integration of these systems will make a sense for planning, management and in evolving a river basin organisation (RBO) It is important that any organisation, which is going to facilitate its planning and management must respect the fundamental physical integrity of the river systems and its relations with the socio-cultural aspects of the people in the basin.

5.4 The case study of Damodar Valley Corporation (DVC) as a replicable model of most successful River Basin Organisations of the country is given in Box-5.2. The DVC is a self-sufficient and self-sustaining organisation contributing to the integrated development of the Damodar Valley. Models like DVC might be replicated and appropriate River Basin Organisations could be established for the integrated planning, development and management of other river basins, taking into account the needs of different uses of water with a multi-disciplinary approach.

Box 5.2

River Basin Organisation- A case study of Damodar Valley Corporation

Damodar River basin. is entirely situated in the two states of Jharkhand and West Bengal of India. The catchment area is about 22,000 km^2, of which about 19,000 km^2 are in uplands and 3,000 km^2 of very fertile irrigated plains. The Damodar is a shallow, wide, seasonal and flashy river. The entire left bank area includes important industrial towns and coal mines, as well as vital means of communications. The destructions it causes have earned the Damodar the name of "the river of sorrow", since it can produce much distress and losses in both states. The *Damodar Valley Corporation* (DVC), which came into existence in 1948 with an overall objectives of promotion and operation of schemes for irrigation and drainage; water supply; generation, transmission and distribution of electrical energy (both hydropower and thermal); flood control; navigation; forestation and soil erosion; etc.. The DVC is acting as a River Basin Organisation and is successfully implementing the concept of integrated water resources management, through the flood control, promotion and operation of schemes for irrigation., water supply for industrial and domestic use, navigation and drainage , generation, transmission and distribution of electrical energy , promotion of afforestation and control of soil erosion in valley area , promotion of public health, agriculture, industrial, economic and general well being in Damodar valley

Organisation Structure

The Corporation consist of a Chairman and two other members(each from West Bengal and Jharkhand) appointed by the Central Government after consultation with the State Governments. The secretary and the financial adviser of the Corporation are appointed by the Central Government. The secretary shall be the chief executive officer of the Corporation. The Corporation appoints such other officers as it considers necessary for the efficient performance of its functions. As per the provisions of the Damodar Valley Corporation Act, 1948, the DVC appoints one or more Advisory Committees for the purpose of securing the efficient discharge of the functions of the Corporation, and in particular for the purpose of securing that these functions are exercised with due regard to the circumstances and requirements of particular local areas.

Environmental Management : A common forum 'Damodar Valley Mission' of Central and the State Governments of Jharkhand and West Bengal along with experts in the field has been constituted under the Chairmanship of the Chief Secretary, Government of Jharkhand. The Mission will provide policy guideline, co-ordinate between various Government Departments of the participating State Governments, Central Government, Municipal Bodies, Panchayati Raj Institutions (PRI), Statutory Bodies and other institutions, support training, research and development programmes, supervise and exercise control over the functions of the Mission.

Socio Economic Development of Region : In order to design, manage and implement the Social Integration Programmes (SIP) optimally and making it more broad based through participation of various stakeholders and using expert inputs, a common forum 'DVC Foundation' has been constituted under the chairmanship of Chief Secretary, Government of West Bengal with members from the State Governments of Jharkhand and West Bengal, DVC and experts in the field. The Foundation will formulate, guide and monitor the social integration programmes of DVC.

Water Management :The flood control , release of Water for irrigation, municipal and industrial use are carried out as per allocation finalized by the Damodar Valley Reservoir Regulation Committee (DVRRC). The integrated operation of all structures is done by the *Damodar Valley Reservoir Regulation Committee* (DVRRC) headed by *Member (River Management), Central Water Commission* (CWC), with representatives each from DVC and the states of Jharkhand and West BengalThe stakeholders/users are involved only indirectly, since the composition of DVRRC includes solely the government departments' representatives, who get the brief from the public representatives (Members of Parliament and local politicians)

Activities of DVC

- Power generation transmission and distribution
- Water management through building dams, canals and barrages
- Mining
- Soil conservation, afforestation and creating water harvesting structures
- Social development of basin area
- Rural electrification

Highlights of the current activities of DVC

- Energy generation from DVC Power Plants during 2005-2006 was12560 million units and energy sale was 94.75 million units

- In the sphere of Coal Mining, DVC Bermo Mines made a production of 3.68 lakh metric tons of coal in 2005-2006 and earned a profit of Rs. 16.82 crores.

- For integrated development and utilisation of Damodar valley water resources, DVC has initiated action for preparation of a Master Plan involving the stakeholders, which will encompass construction of Balpahari dam and unified control of all the dams under the control of Jharkhand Government.
- Under the programmes for land protection / reclamation and rehabilitation of denude forests, major works viz. afforestation, extension, soil conservation engineering etc. have been carried out under the centrally sponsored schemes of soil conservation in River Valley Project (RVP) of the Government of India. The programmes included re-prioritization of 716 micro-watersheds, phased work plan for soil and moisture conservation covering forest and non-forest areas, extending area of operation and maintenance for at least three years after afforestation in new areas.

- In the field of development in socio-economic conditions of the inhabitants of villages within 10 kms of major DVC projects, programmes as finalized in consultation with the local authorities have been implemented / undertaken under the Social Integration Programme (SIP) of DVC.

- In the field of healthcare, arrangement has been made to provide free treatment to local villagers under BPL category and treatment to APL patients at nominal charges in DVC hospitals. Super speciality services through Public Private Partnerships at project level and participation in National Health Programmes are other two important activities, which have been initiated.

- Against the task of Rural Electrification, being executed by DVC in the States of West Bengal and Jharkhand, under the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) of Government of India and funded by Rural Electrification Corporation (REC), significant progress has been made in West Bengal

Source : Annual Report, Damodar Valley Corporation, 2005-06

Pricing of Water

5.5 The costs of providing irrigation water include a fixed cost of operation and maintenance and a variable cost, which depends on the quantity of water supplied. Irrigation water charges in most states are not even adequate to meet the O & M costs. In addition there is a capital cost of constructing a water project. The per hectare cost of creating irrigation potential in the major and medium irrigation sector has been increasing steadily from about Rs. 1500/- in the first plan to between Rs. 1,75,000 and Rs. 2,50,000. The establishment cost takes a large part of the meagre O & M allocation, leaving very little for works. However, given the environment of crisis in the agricultural sector it is almost impossible to put anymore burden on the farmers.

5.6 In Kerala, the water rates now collected are based on the estimates of 1974. The rates are very low compared to the costs of maintenance of major irrigation projects. The water rates prevailing in some of the states are shown below in Table 5.1.

Table No 5.1
Water rates Prevailing in Selected States

State	Rate for flow irrigation (Rs/ha)	Date since applicable
Andhra Pradesh	Rs. 148.20 – Rs.1235.00	01.07.1996
Gujarat	Rs. 70.00 - Rs.2750.00	16.02.2001
Karnataka	Rs. 37.05 - Rs. 988.45	13.07.2000
Kerala	Rs.37 - Rs. 99.00	18.09.1974
Madhya Pradesh	Rs, 50 - Rs. 960.00	01.11.2005
Maharashtra	Rs. 238 - Rs. 6297.00	01.07.2003
Punjab	Abolished	14.02.1997
Tamilnadu	Rs 2.77 - Rs. 61.78	01.07.1962
West Bengal	Rs. 37.05 - Rs. 123.50	06.04.1997

Source : CWC, 2007

Live Storage Capacities of Irrigation Reservoirs

5.7 There are 18 dams intended for irrigation. Out of this, 13 have storages and 5 are barrages. The live storage position of the reservoirs during the beginning and end of the monsoon period during 2005, 2006 and 2007 are given in Table -5.2

Table 5.2
Live Storage Position in the Reservoirs

(Mm^3)

Sl. No	Item	2005	2006	2007
1.	Storage at the beginning of the Monsoon	357	566	405
2.	Storage at the end of the Monsoon	1194	1143	1133
3.	Monsoon increase	837	577	728
4.	Average for 10 years			
	(i) at the beginning of the monsoon	299	344	390
	(ii) at the end of the monsoon	830	942	978
	(iii) increase in monsoon storage	531	598	588

5.8 In the beginning of the Monsoon (during the current year) the total storage was 405 Mm^3 and at the end of the monsoon the level of the storage was 1133 Mm^3 This is against the level of storage of 566 Mm^3 at the beginning of the Monsoon and 1143Mm^3at the end of the monsoon

period during the previous year. The current year's storage of 1133 Mm^3 is greater than the ten year average of 978 Mm^3 on the date. The total designed storage (at FRL) of the reservoirs is 1487Mm^3 whereas the total availability at the end of the Monsoon of 2007 is 1133 Mm^3 against 1143 Mm^3 at the end of the monsoon last year The storage capacities of reservoirs are deteriorating due to silting in reservoirs. Sedimentation or silt removal need be done periodically for the proper upkeep of the reservoirs. The storage position at the beginning and at the end of the Monsoon during 2006 & 2007 are given in Fig.5.1 (a) and 5.1(b). The Live storage capacities of the Irrigation Reservoirs is given in Appendix 5.8

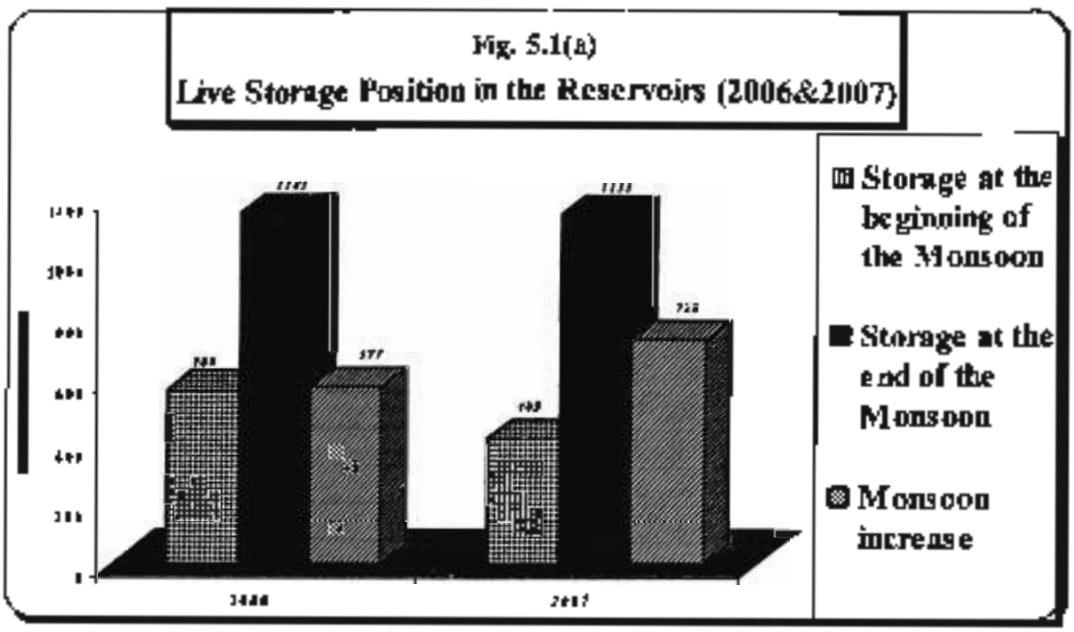


Fig. 5.1(a)
Live Storage Position in the Reservoirs (2006&2007)

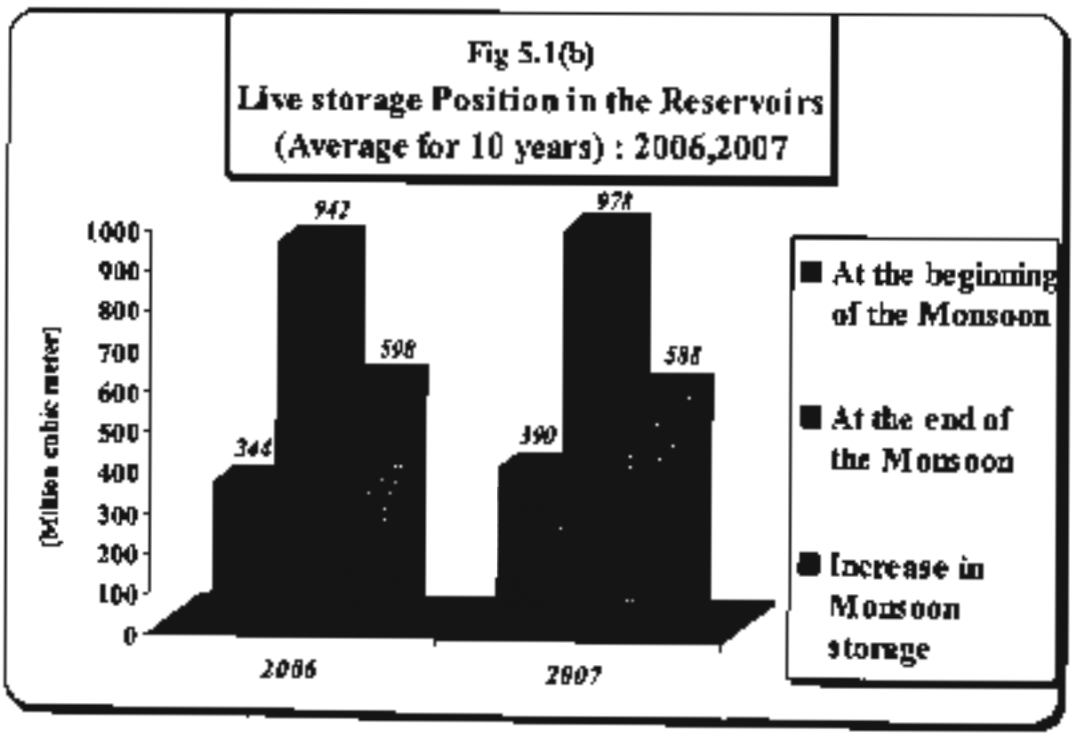


Fig 5.1(b)
Live storage Position in the Reservoirs (Average for 10 years) : 2006,2007

Dam Safety

5.9 Safety of the existing dams is one of the items emphasized in the National Water Policy. Almost all of the 18 dams in the State were completed in the 1950's and are constructed of masonry/earth or a combination of both. Excessive seepage/leakage, mal functioning of gates etc. caused distressed conditions as noticed by the State level Dam Safety Committee. Besides this, the storage capacity of the reservoir gets depleted due to excessive siltation. If these problems are not attended properly, it can cause downstream damages. Hence rehabilitation of the dams are essential. As per the Dam Safety Act-2000 every State having a significant number of dams shall constitute a body called 'Dam Safety Organisation' (DSO). Accordingly in Kerala also constituted a 'Dam Safety Organisation' for Monitoring the post and pre-monsoon inspections of dams and maintenance and surveillance and safety activities of the dams, Hydrological review to check the adequacy of design flood, preparation of emergency action plan, prioritization of dam for rehabilitation purposes, interaction with the Dam Safety Organisation of the Central Water Commission, conducting structural analysis, and checking the safety of dams once in 10 years.

5.10 During 2006-07, Dam Safety Organisation along with Dam Safety Committee inspected the dams in Periyar Valley, Walayar, Pothundi, Meenkara, Karappuzha, Kanhirapuzha, Malankara, Pamba Irrigation Project, Malampuzha and Chimmony,

Investment in Irrigation

5.11 Irrigation development in Kerala is mainly centered on the development of surface water resources mainly on the development of major and medium irrigation projects. In each Plan, priority in allocation was given for the development of major and medium irrigation projects. Out of a cumulative expenditure of Rs. 4043.02 crores, Rs. 2876.11 crores (71%) is invested for major & medium irrigation. About 60 to 70 percent of the investment in each plan was made for this purpose. Rice is the major crop benefited through irrigation infrastructure. Even in the case of this crop, the incremental yield, which the irrigation support could bring, is not significant. With the fast changes taking place in the farm front of Kerala with notable reduction in the area under rice cultivation, even the distribution systems already developed for gravity irrigation to service rice cultivation now require realignment.

5.12 During the Tenth Plan period an outlay of Rs. 930 crore was set apart for the Irrigation sector which includes Rs. 600 crores for Major and Medium Irrigation, Rs. 205 crores for Minor Irrigation and Rs. 50 crores for Flood Control and Anti-sea Erosion works This is against the outlay of Rs. 1028.00 crores and an expenditure of Rs. 1078.73 crores during the Ninth Plan period. In the allocation of resources during Tenth Plan a small reduction was noted in the overall outlay of the sector. The percentage share of Plan outlay during Tenth Plan was 3.88% against that of 6.38% in the Ninth Plan. The reduction was mainly due to the transfer of Minor irrigation schemes to the local bodies and reduction in number of major projects.

5.13 During the Plan period (2002-07) against the Plan outlay of Rs. 930 crores, an amount of Rs. 781.39 crores was budgeted and the expenditure came to Rs. 876.56 crores. A major portion (73%) of the outlay on Water Resource Sector was budgeted for Major and Medium Irrigation Sector and the expenditure recorded for Major & Medium for the Tenth Plan was 78% of the total expenditure. Over and above the State plan outlay a substantial amount has been invested for Minor irrigation and Flood Management from the schemes of Local Self Governments.

5.14 Public investment in irrigation has fallen significantly over successive Plan periods. This is largely due to resource constraints faced by governments both at the Centre and the States. At the All India level also, there is decline in the percentage of funding for irrigation. The percentage of funding which was 23 percent in the 5th Plan has declined to 20.85 per cent in the sixth plan and further to 15.9 per cent in the Eighth and Ninth Plans. This has resulted in cost over run and time over run of the projects. In Kerala, the percentage outlay for the sector which was 6.38% in the Ninth Plan has decreased to 3.88% in the Tenth Plan. This has adversely affected the completion of the major projects thereby increasing the spill over costs of the ongoing projects. However, resources are not the only problem. Potential irrigation projects are located in area which are either more difficult or environmentally more sensitive which makes it difficult to implement irrigation projects. The Accelerated Irrigation Benefit Programme (AIBP) launched in 1996-97 for the expeditious completion of approved ongoing major and medium irrigation projects is a potentially important instrument for providing resources to state governments to complete ongoing irrigation schemes. Allocations under this programme have been massively increased. The state wise details of release from 1996-97 to 2006-07 is given in Appendix- 5.2.

5.15 Upto 2006-07, Government of India had sanctioned Rs.21739 crores to various states. The assistance sanctioned to Kerala was Rs 164.54 crores (0.75 %).

5.16 The pattern of assistance has revised in 2006 and in the revised pattern the central government will provide 25% as grant and the loan component has to be raised by States.

5.17 In Kerala, Kallada and Muvattupuzha Projects were assisted under the AIBP and the assistance received so far is Rs. 32.51 crores and Rs.206.70 crores respectively. The assistance was availed based on individual selected components of public works identified under each project. The Karappuzha Irrigation project has been approved for assistance is 2006-07.

5.18 The target set for the realisation of additional irrigation potential during Tenth Plan was 1.40 lakh hectares (gross) comprising of 0.90 lakh hectares under major irrigation and 0.50 lakh hectares under minor irrigation. The actual achievement aggregates to 1.08 lakh hectares. Overall performance of the Major and Medium Irrigation sector was not encouraging during the Tenth Plan period. Additional irrigation facility could be created only in Muvattupuzha Irrigation Project. The physical targets and achievements under Irrigation during the Tenth Plan, target for the XIth Plan and Annual Plan 2007-08 are given in Table 5.3

Table- 5.3
Physical Targets and Achievements under Irrigation during the Tenth Plan period (gross), target for XIth Plan and Annual Plan 2007-08

(000 ha)

Sl. No	Sector	Cumulative coverage up the end of 9th Plan	Tenth Plan Target	Achievement 2002-07	Eleventh Plan target	Anticipated Achievement 2007-08
1	Major& Medium	225	90	60	50	10
2	Minor	207	50	48	200	50
	Total	**427**	**140**	**108**	**250**	60

Review of Major Projects

5.19 In Karapuzha project 99.71% of the Main canal – RBC and 99.1% of the Main canal- LBC have completed. In Banasurasagar project, construction of main canal is completed and construction of branch canals are in progress. In Muvattupuzha Project, major portion of the work has been completed. In Idamalayar project, out of the total of 32.28 Km of the main canal, work related to 9.60 Km of main canal and 9.77 km of low level canal have been completed and the remaining works are arranged. Kallada project was completed. However, the reported irrigation potential realized was relatively low as compared to the potential created.

5.20 The work of the Thrithala Bridge-cum-regulator is completed. The Chamravattam RCB has been modified and approved for implemental under RIDF of NABARD.

5.21 The overall performance of the major and medium irrigation sector during 2006-07 was not encouraging. The cumulative area brought under irrigation through major and medium irrigation projects is 2.83 lakh hectares. (gross). The details of the progress of implementation of ongoing projects as on 3/2007 are given in Table- 5.4.

Table 5.4
Project-wise Details of Ongoing Projects

(Rs. lakhs)

Sl. No.	Name of Project	Year of starting	Original estimate	Revised estimate	Year of revision	Cost escalation (%)	Expenditure upto March 2007	Target area to be irrigated (Ha)		Physical achievement as on 3/07 (Ha)	
								Net	Gross	Net	Gross
1	2	3	4	5	6	7	8	9	10	11	12
1	Muvattupuzha	1974	2086	67800	2004	3150	65431	17737	34737	18606	28372
2	Idamalayar	1981	1785	30711	2004	1626	22366	14394	29036	-	-
3	Karapuzha	1979	760	36200	1999	3228	23500	5221	8721	-	-
4	Banasurasagar	1979	800	109000	1999	525	1708.40	2800	4740	-	-
5	Chamravattom	1985	1327	85000	1999	804	4358.13	3106	9659	-	-
6	Palakkappandy	2004	910	1030	2004	42.8	545.13	-	-	-	-

Source: Department of Water Resources

Irrigation Status

5.22 The source-wise and crop-wise area irrigated as on March 2007 is given in Table -5.5 and Table- 5.6

Table 5.5
Net Area Irrigated (Source wise)

(in Ha.)

Sl. No.	Source	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7
1	Government canals	101139	94859	101397	104669	98664
2	Private canals	4272	5754	4729	4965	4300
3	Tanks	66729	47856	43983	45062	42064
4	Wells	117490	109360	108445	110000	114477
5	Other sources	103541	123469	134802	135227	125900
6	Total	393171	381298	393356	399923	385405
7	Area irrigated more than once in a year		782892		918341	-
8	Gross irrigated area	447490	426765	455391	464765	475231
9	Net area irrigated to net area Sown(%)	17.83	17.36	18	19	17.52
10	Gross irrigated area to gross cropped area (%)	14.77	14.35	15	15	16.29
11	Irrigated area under paddy to total irrigated area	41.16	40.00	40	38	45

Source: Directorate of Economics & Statistics

5.23 As per the assessment of the Directorate of Economics and Statistics the net irrigated area in the state as on 3/07, was 3.85 lakh ha. and the gross area irrigated is 4.75 lakh ha. The net area irrigated during has declined from 3.99 lakh ha. during 2005-06 to 3.85 lakh ha during 2006-07. Only 18 per cent of the net cropped area is irrigated. The major source of irrigation is wells, which contribute 30 per cent followed by government canals 26 per cent, tanks 11 per cent and private canals 1.12 per cent. In the source wise irrigation, the contribution of private wells predominates.

Table 5.6
Gross Area Irrigated (Crop-wise)

(in ha.)

Sl. No	Crops	2002-03	2003-04	2004-5	2005-06	2006-07
1	2	5	6	7	8	9
1	Paddy	183703	169829	183601	174600	173068
2	Tubers	1008	1020	2253	2958	5158
3	Vegetables	9786	9657	14274	25075	24434
4	Coconut	163550	159113	157768	158630	177734
5	Arecanut	34205	32990	36858	35131	34625
6	Nutmeg/clove	2948	2884	6285	6913	10527
7	Other Spices and condiments	3212	3245	3403	3788	4312
8	Banana	29209	28100	30265	33730	40852
9	Betel leaves	990	947	891	850	590
10	Sugarcane	3426	3567	1630	2000	1156
11	Others	15373	15413	18163	21070	17552
	Total	447490	426765	455398	464745	490008

Source: Directorate of Economics & Statistics

5.24 Among the crops, coconut tops the major crop supported by irrigation. It accounted for about 36 per cent followed by Paddy (35%) Banana (8.34%) Arecanut (7.1%) and Vegetables (5%) . Irrigation could be provided to 59% of the area under Paddy 17 per cent of the total area under coconut, 35 per cent of the area under arecanut and 54 per cent of the area under banana. Compared to last year the area irrigated under crops like Sugarcane, betel leaves, etc. have been decreased.

5.25 GOI had launched a new scheme Bharat Nirman Yojana to create additional irrigation facilities in the next four years Under this programme, action is proposed for the areas of irrigation, roads, rural housing, rural water supply, rural electrification and rural communication connectivity.

5.26 Irrigation is one of the six components for development of rural infrastructure under Bharat Nirman. Under irrigation, it is proposed to create additional 10 million hectares of irrigation capacity by 2009 through major and medium irrigation projects (4.2 Mha), minor irrigation (2.8 Mha), enhancing utilisation of completed projects (2.0 Mha) and ground water development (1.Mha).

5.27 Kerala is also eligible for assistance under the programme. GOK had proposed schemes worth Rs. 1873 crores comprising of major irrigation Rs. 1453 crores for creating an additional area of 0.80 lakh ha, and minor irrigation costing Rs. 134 crores for bringing an additional area of 0.31 lakh hectare and modernisation and restoration costing Rs. 286.23 crores to create an additional area of 1.84 lakh hectares.

Local Water Resources

5.28 Local water resource development and management would be an important element of the strategy of meeting the water needs of the future particularly in water-scarce regions. There is a need to lay emphasis on local water planning, water harvesting at micro level and integrated water shed development. Lakes are the largest fresh water storages and from time immemorial serve human beings in non-raining season for all water needs. Due to excessive withdrawal of water and pollution very sustainability of lakes has become questionable. Safe water supply and environmental sanitation are vital for protecting the environment. Unless the facilities for the treatment of domestic sewage and industrial effluents are increased manifold the increasing pollution due to urbanisation will further deteriorate the quality of waterbodies. National Lake Conservation Programme needs to be strengthened to arrest further degradation of lakes. Enlarged programmes of lake and wetland conservation need to be initiated and streamlined.

5.29 In order to promote the development of local water resources, particularly tank irrigation, Government of India has introduced a scheme 'restoration of water bodies' (renovation of tanks/ponds) with 75% central assistance under Command Area Development Programme. Restoration of Tanks in Palakkad and Pathanamthitta were forwarded to GOI and sanction has been accorded for taking up the work for the renovation of Tanks in both the districts. An amount of Rs. 1.37 crores (10 tanks) was sanctioned for Palakkad district and an amount of Rs. 1.38 crores was sanctioned to Pathanamthitta District (13 lakhs) and the works are in progress.

Minor Irrigation

5.30 Kerala has a wide network of rivers and rivulets and springs spread over the entire cropped area Minor irrigation sector received considerable attention from Seventh Plan onwards and got a

considerable boost during the Ninth Plan period consequent to the enhanced flow of funds from the grant in aid of the local bodies as well as on account of special support received from the external agencies like European Economic Community, Dutch Government and assistance under RIDF of NABARD. With the introduction of decentralised planning, all minor irrigation works (having cultivable command area up to 2000 ha.) were vested with the Panchayat Raj Institutions (PRIs). But by the enactment of the new Act 'Kerala Irrigation and Water Management Act 2003' the definition of minor irrigation has been changed and works benefiting an area less than 15 ha only come under the category of minor irrigation and are vested with PRIs. All other works having cultivable command area greater than 15 ha. have been taken over by the Water Resources Department as medium irrigation. The major works implemented under surface water are minor irrigation Class - I, II and Lift irrigation schemes. Construction of check dams, Vented cross bars, weirs, tanks etc are the various works executed under minor irrigation Class-I & II.

5.31 The minor irrigation has always been a thrust area for NABARD not only in terms of providing increased refinance but also by introducing various developmental initiatives and financial incentives. So far 807 minor irrigation schemes have been under taken till RIDF XI and completed 710 schemes, RIDF I to V has been closed and works under RIDF IX to XI are fast progressing.

5.32 An amount of Rs. 119.50 crores have been expended for implementing minor irrigation schemes during the Tenth Plan period.

5.33 During the year under review (2006-07) the Department has invested Rs.12.65 crores for implementing surface water minor irrigation schemes. The additional area reported to be brought under irrigation during 2006-07 was 3182.05 hectors.

Ground Water Development

5.34 The dynamic ground water resource (recharged annually by rainfall) of the country is 432 BCM. As much as 80per cent of India's population manage to get their own domestic water supply and three fourth of the irrigated area in the country is through private sources mostly through ground water. India is the largest user of ground water (200 BCM) followed by the United States (100 BCM) and China (90 BCM). However ground water resources are either over exploited or are in the critical zone in certain pockets - Tamil Nadu, Haryana, Punjab, Gujarat and Rajasthan. According to the Central Ground Water Board, out of 7928 blocks/taluks/watersheds, 673 are over exploited where the level of development is more than the quantum that can be replenishable and 425 are dark/critical. The provision of free or subsidised power to agriculture sector in many states is one of the factors responsible for indiscriminate use of groundwater.

5.35 The expert group on groundwater management and ownership has examined legal positions of ground water ownership and usage and made recommendations. The salient features of this report is given in Box. 5.3

Box: 5.3

Ground Water Management and Ownership.

- Groundwater development in the country has expanded significantly in the past few decades. Overexploitation of the resource in certain parts of the country has led to rapid decline in water table. This has begun to threaten not only the food security of the country, but also the environment. Further, depletion of groundwater resource has been hurting the small and marginal farmers the most, threatening their livelihood in many cases.
- An important way of addressing the issue is by augmenting groundwater supplies in shallow aquifers. Artificial recharge of groundwater has been found to be a useful tool. A recharge scheme implemented by the Government of India in different parts of the country showed recharging can be made much more effective by the use of scientific inputs and analyses than otherwise. It may however be noted that even if the entire potential of recharge is utilised, shortage will still persist, underscoring the need for limiting extraction. Yet another option is to tap the huge "static" water reserves in deeper aquifers, which have hitherto been untapped and requires detailed scientific studies to examine its long-term viability.
- In limiting extraction, the first thing that needs to be addressed is the legal regime. Under the current legal regime, which dates back several decades, the landowner is given the right to capture an unlimited amount of groundwater from beneath his/her land, without being liable for injury to adjacent landowners caused by excessive or harmful pumping. By relying on this regime, our historical approach has been to exercise little control on groundwater pumping. The approach may have been adequate when the overall demand for groundwater in any given aquifer was limited, but with the threat of large-scale withdrawals looming large, there is a need for change in approach.
- The international experience of attempts to make groundwater a national property has not been encouraging. Spain with 0.5 million wells and Mexico with 0.09 million wells find it difficult to get water rights of agricultural users registered. In view of this, the option of declaring groundwater a government property in India, which has 19 million wells over a much larger area, is not a sensible one.
- The recent court rulings have emphasized the role of State as the trustee of all natural resources, including groundwater, which by nature are meant for use and enjoyment of public at large. Pursuing this position, courts have held that the State has got a duty to protect ground water against excessive exploitation and the inaction of the State in this regard will tantamount to infringement of the right to life of the people guaranteed under Art. 21 of the Constitution of India.
- The attempt must therefore be to balance the landowner's right to capture groundwater with the public interest in managing groundwater resources for all users, including the environment, and to ensure that both the present and future needs of the communities dependent upon these resources are accounted for.

- The Central Government's role in the management of groundwater emanates from the provisions of the Environment (Protection) Act, 1986. Even though states have the primary responsibility of ensuring groundwater sustainability, the Government of India is expected to play an expanded and more effective role (than at present) .
- The technological and managerial expertise of the Central Government does not appear to have been adequately utilised by the current groundwater regime, possibly because of lack of incentives under the current management practices to seek such support.
- While the measures suggested in the National Water Policy and the National Environment Policy to promote sustainability of groundwater should be the cornerstone of the ground water development and regulation strategy in the country, these policy statements have been supported by neither institutional infrastructure nor enabling legislation nor appropriate econ omic incentive structure
- Experience with regulation in some states shows that it is not possible to have significant control over use of groundwater through legal provisions because of difficulties in enforcement. This has been corroborated by international experience also. Further, current regulations tend to discriminate against new users. Some modification of the current framework will make regulations more equitable and easier to implement
- In the light of the above, the Group emphasises the need for all states to introduce a modified groundwater legislation Involvement of Panchayati Raj institutions should be a key part of the strategy.
- Further, given the enforcement problems relating to prohibitive measures, greater reliance needs to be placed on community management of the resource, supported by adequate technical inputs, complementary institutional changes and appropriate incentives (such as a subsidy regime for micro-irrigation), rather than on 'controls by state' for reasons stated earlier. State legislations can of course strengthen such strategy by endorsing community action, supportive institutions and use of technical inputs and incentives.

- The balance between individuals' rights and the Government's obligation, referred to earlier, can be achieved by adopting for all groundwater management units a sustainable-yield management goal, which means that average withdrawals should not exceed long-term recharge. Towards this end, CGWB and SGWB should be responsible for scientific monitoring of groundwater level and for estimating a sustainable level of groundwater usage. These inputs would form the basis for planning the use of ground water resources by the user groups.

- Should the ground water level fall below the replenishable level, the Central Government should intervene, under the provisions of the Environment Act, by declaring the affected area as "environmentally threatened". This should be the basis for invoking public trust doctrine and trigger formulation of an explicit strategy in consultation with stakeholders.

- The tools of indirectly regulating extraction such as fixing the energy charges beyond certain limit for agricultural uses or separating agricultural feeders and restricting electricity supply etc. can be decided by individual State governments. The Committee has observed that while huge electricity subsidy may have contributed to depletion of groundwater, a cut in subsidies could have only marginal positive impact on extraction. A long term strategy, however, that links extent of subsidy with the reliability and duration of power supply can have positive results for both groundwater management and viability of power sector.

Source . Ground water management and ownership, Report of the Expert Group , Planning Commission, 2007

5.36 The net annual ground water availability in the State has been assessed as 6.23 BCM. The present annual draft for irrigation is 1.82 BCM and 1.10 BCM for domestic and industrial uses (total 2.92 BCM). The stage of development is assessed as 47%

5.37 The Kerala Ground Water (Control and Regulation) Act, 2002 came into effect in December 2003 and the Kerala Ground Water Authority was constituted a month later. As per Section 6(1) of the Act, the Authority can recommend to the Government to notify any area within the State for the purpose of regulating groundwater extraction in that area in public interest. The notification is to be gazetted, published in two daily newspapers and exhibited on the notice board of the office of the Gram Panchayat or Municipality. If at a later date the availability of ground water improves, the Authority can recommend the cancellation of the notification. Also, every owner of existing wells in a notified area should apply to the Authority in a prescribed form for registering the well. Dug wells used for domestic purpose are exempted. After site inspection, the Authority can grant or refuse registration.

5.38 A permit from the Authority will be required for constructing a new well or deepening or enlarging an existing well (except dugwell used for domestic purposes) Permit is also required for energising an existing unenergised well if the horsepower exceeds 1.5 HP in the case of dug wells and 3 HP in the case of borewells. The request is processed after site inspection

5.39 It is time India recognises its dependency on groundwater resources, which is only going to increase in the coming years, partly because of growing urbanisation and industrialisation. In view of the growing seriousness of the problem, it is necessary that a political consensus build up quickly on a management strategy, which takes into consideration domestic and international experience. Delay in this matter could spell crisis of a much larger scale than has been experienced so far.

5.40 The National Water Policy, 2002 has advocated that groundwater recharge projects should be developed and implemented for improving both the quality and availability of ground water resources. The policy also advocated exploitation of ground water resources so as not to exceed recharge possibilities. The Ministry of Water Resources has already prepared and submitted, a part of the second green revolution project of the Ministry of Agriculture, a scheme for ground water development in 5.2 m. ha.(loan-cum-subsidy cost of Rs.15,310 crore) and another for artificial recharge of 3.9 BCM of water (at a cost of Rs 3,000 crore). Compared to 4,000 BCM rainfall/snowfall in the country and 1,869 BCM run off, recharge of this small quantity of groundwater will not adversely affect the existing hydrology of rivers and streams The Ministry of Water Resources had also submitted a new state sector scheme costing Rs 175 crore for artificial recharge in various parts of the country, which would serve as a demonstration exercise for various types of recharge structures.

5.41 The contribution of ground water in the total irrigation potential of the country has been estimated as 47 per cent. Although ground water is annually replenishable resource, its availability is non-uniform in space and time. Hence, precise estimation of ground water resource and irrigation potential is a pre-requisite for planning its development. The scientific assessment of the ground water resources of India has been made by the Central Ground Water Board in collaboration with concerned State Departments in 1997.

5.42 In Kerala, groundwater occurs under phreatic, semi-confined and confined conditions. The groundwater resources are largely concentrated in the sedimentary aquifers of the coastal regions. The groundwater resources are tapped mainly for drinking and irrigation purposes. The ground

water potential of Kerala is very low as compared to that of many other States in the country. The state has a replenishable groundwater resource of 6841 million cubic meters. The net groundwater availability is 6229 million cubic meters. The gross groundwater draft is 2920 million cubic meters and the net groundwater available for future use is 3221 million cubic meters.

5.43 A district-wise analysis of ground water resources of Kerala shows that Palakkad has the higher potential for ground water recharge (12%) followed by Thrissur (11%), Ernakulam (9%), Kannur (8%), Kottayam (7%) and Alleppey (6.8%). Thiruvananthapuram has the lowest (4%) potential for ground water recharge. The stage of development of groundwater is the highest in Kasargod district (79%) and the lowest is in Wayanad (25%). The overall stage of development in the State is 47% which is greater than the national level. The ground water resources of Kerala as on 31.3.2004 is given in Appendix.5.4.

5.44 Monitoring and preservation of groundwater is an important aspect, which requires serious attention. Factors like over exploitation of groundwater, the deep infiltration of surface water from irrigated fields using chemical fertilizers and pesticides, infiltration of saline soils, effluents from industries affect the quality of ground water. The Central Ground Water Board monitors the ground water situation in Kerala state through a network of 590 observation wells and 274 piezometers. Water samples are collected in the pre monsoon period and maps showing ground water level, fluctuations are prepared to determine the long term water level trend, which helps delineating the areas of critical and overdeveloped nature. The State Ground Water Department is monitoring 440 piezometres and 303 observation dugwell stations across the state in different terrains under hydrology project. Monthly observed data for all the stations are analyzed and trend analysis reports were prepared. It is observed that 81 piezometres and 59 dug wells are showing falling trend when analyzed for pre monsoon and post monsoon seasons. This indicates that either overdraft or insufficient recharge is affecting these areas. These areas need special attention in the context of ground water recharge.

5.45 Artificial recharge and rainwater harvesting are the best-suited and cheapest methods to overcome this situation. A scheme for the construction of artifical recharge structures was introduced in the state with financial assistance from Government of India. Sub surface dams and dykes are the main structures built for the artificial recharge of ground water. The sub surface dams constructed at Odakkali in Ernakulam district, Alanallur, Bavaji nagar in Palakkad district, Sadanandapuram in Kollam district, Ayilam in Thiruvananthapuram district, Neezhur in Kottayam district showed a considerable rise of ground water levels in the upstream side of these sub surface dams and prevention of the decline of water table in the areas. Hydrogeologically suitable sites for sub-surface dams were located and works are in progress. For the rest of places detailed hydrogeological investigation are underway for the construction of suitable recharge structures. The sources of pollution have to be properly surveyed and identified. The Central Ground Water Board is carrying out artificial recharge studies in high water demand areas with critical stage of ground water development and the Board's Pollution Cell has undertaken studies to find out the ways and means to check the effect and spreading of pollution.

5.46 As per the latest groundwater estimation carried out by the Central Groundwater Board, Government of India and Groundwater Department, Government of Kerala based on Groundwater Estimation Committee norms, 15 blocks of the State fall under overexploited, critical and semi critical categories and 33 blocks show more than 70% development. Blocks were categorised based on the stage of development and long term trend of groundwater levels during pre and post Monsoon seasons.

5.47 The systematic approach to the management of ground water requires a sustainable legal framework. Government of India has also pointed out the necessity of legislation by the State Governments for the regulation of ground water exploitation. In this circumstance, in order to regulate the over exploitation of groundwater resources Government of Kerala have brought in a law The Kerala Ground Water (Control and Regulation) Act 2002 which envisages conservation of ground water and regulation and control of its use. The Act has to be implemented by an authority named 'State Ground Water Authority' consisting of 13 members and the Secretary (WRD) as the Chairman and Director, GWD as the Secretary

5.48 The State Ground Water Department is the nodal agency assigned with the responsibility of ground water development and utilisation. The main activities of GWD is to locate potential ground water resources for construction of ground water structures like open wells, bore-wells, tube wells and artificial structures like subsurface dykes and check dams. Technical guidance were given to local bodies for siting and construction of drilled wells and for the implementation of rainwater harvesting.

5.49 During the period under report (2006-07), an amount of Rs. 17.16 crores has been invested for minor irrigation out of which the share of ground water development was Rs. 4.76 crores ie., about 28% of the investment under minor irrigation.

5.50 During 2006-07 the Department has imparted technical assistance to identify sites for 4210 open wells, and constructed 863 drilled wells. The additional area reported to be brought under irrigation was 1372 ha. Training was imparted to 57 personnel and analysed 2719 water samples, During the period under review 85 rain water harvesting structures were constructed . Under Rajiv Gandhi National Drinking Water Mission scheme, 135 bore wells 2 tube wells and 10 filter pointer wells were drilled in the non-covered/partially covered habitats through out the state. The physical achievement during the year under report is given in Appendix- 5.5

National Hydrology Project

5.51 The Phase I of the National Hydrology Project has been continued during the period under report and the second phase also has been initiated.

5.52 The Hydrology Project Phase-II is a follow on project of Hydrology project and to be implemented with the assistance of World Bank. The project objectives are

i to extend and promote the sustained and effective use of the HIS by all implementing agencies concerned with water resources planning and management

ii Strengthening the capabilities of implementing agencies at state/central level in HIS data utilisation for efficient water resource planning and management.

iii Awareness building and outreaches services about HIS use.

5.53 The project would cover 9 ongoing states of HP-I namely Andhra Pradesh, Gujarat, Maharashtra, Karnataka, Kerala, Madhya Pradesh, Chattisgargh, Orissa, Tamil Nadu and 4 new states Himachal Pradesh, Goa, Pondicherry and Punjab and the Central institutes CWC, MOWR, CGWB, CWPRS, NIH,, IMD, CPCB and Bhakra-Beas Management Board (BBMB). Under HP-II it is proposed to enhance the current manual system of recording and reporting expenditures in the implementation by the Surface Water and Ground Water departments of two states by instituting a computerised Financial Management System.

5.54 The total cost of the project for the country as a whole is Rs. 631.83 million The three project components namely institutional strengthening costs 36% vertical extension cost (44%) and horizontal extension costs (20%) of the total project cost. The project would be implemented over a period of six years from 2005-06 onwards.

5.55 The World Bank has approved the phase – II of the project in Kerala for a total cost of Rs.18.35 crores. The agreement for phase –II was executed in January 2006 and initiated implementation in April 2006. During the year 2006-07 monthly data collected from 847 piezometers and regular data collected from 8 climatic stations.

Flood Management

5.56 India is prone to natural disasters. Due to its locational and geographical features, it is vulnerable to a number of natural hazards like cyclones, droughts, floods, earthquakes, fires, land slides & avalanches.

5.57 The reasons for the occurrence of the flood are not simple enough to comprehend in its true perspective. The short duration intense rainfall seems to create conditions leading to flood. The peculiar physiographic set up of Kerala with abrupt fall in slope from the Western Ghats to the midlands and the high rainfall pattern spread over two seasons and that too concentrated in a few days, are the major factors which make the state vulnerable to heavy floods of a recurring nature.

5.58 At the State level during the year under report, an amount of Rs 1.08 crores has been spent for protection of an area of 204 ha. of land from the ravages of flood. The cumulative area brought under flood control was 61446 ha. as on 3/2007 for which the total expenditure amounts to Rs. 103.68 crores.

Coastal Zone Management

5.59 Coastal erosion is affecting most of the coastal states. The situation in Kerala is also not different. Kerala has a long coastal stretch of 590 kms. and more than half of it is subjected to sea erosion. Unlike other parts in the country, Kerala seacoast is thickly populated and as a result the loss due to sea erosion is relatively very high.

5.60 Construction of sea walls continued to be the sole intervention for coastal zone protection. In the area of protection of seashore, modern technologies like geo textiles, polyethylene fabrics/sheets, nourishment of foreshore with biomaterials, etc. are emerging. During 2006-07 an amount of Rs.12.87 crores has been spent to construct 2.57 km. of new sea wall and for reformation works in 8.87 km. Out of the total coastal stretch of 590 kms, about 392.1 Kms has been protected by constructing new sea walls and reformed 125.53 Km. of old sea walls spending an amount of Rs. 299.06 crores upto 30.03.2007. The Eleventh Finance Commission has provided Rs.50 crores for antisea erosion works for constructing 15.89 km of new sea wall and reformation of 20.14 km for the period 2000-05. Out of this, 12.70 km of new sea wall was constructed and reformed 28.63 km. of old sea walls as on 31.03.2005 spending Rs.38.00 crores. The physical and financial achievement under flood management and coastal zone management during 2006-07 are given in Table 5.6

Table 5.7
Financial and Physical Progress of Flood Management and Coastal Zone Management Programmes during 2006-07

(Rs. lakhs)

Sl. No.	Item	Financial Achievement	Physical Achievement	Cumulative Physical achievement as on 3/2007
1	Flood Management	107.64	204 ha	61446 ha
2	Anti-Sea Erosion Works New sea-wall constructed Reformation of old & damaged sea-wall	1287.69	2.57 Km 8.87 Km	 392.1 Km 125.53 km

Source. Water Resources Department

5.61 The Twelfth Finance Commission has awarded Rs.175 crores for the construction, maintenance and reformation of the sea walls. Kerala Coast is subject to severe erosion, which undermines the valuable coastal eco system and affects the lives of millions of people. Nearly 100 Kms. coastal zone, prone to severe sea erosion needs to be urgently protected on a long term basis. The amount allotted is for construction and reformation of sea walls for the protection of the coastal area and for establishing permanent bench marks in the coastal area and conducting pilot studies using new techniques. The target envisaged for the utilization of Twelfth Finance Commission Award is to construct new sea walls to a length of 47.77 Kms, 21 groynes and reformation of 63.10 Km. during 2005-10. The work, as envisaged in the action Plan for Rs. 64.05 crores, is in progress

Command Area Development

5.62 The Command Area Development Programme was launched with the main objective of bridging the gap between the irrigation potential created and utilised and improving agricultural production and productivity in the irrigation commands. The programme was restructured in 2003-04 and renamed as Command Area Development and Water Management Programme.

5.63 The restructured programme retains the components of the existing scheme which have been found to be beneficial to the farmers, include a few new components considered necessary for correction of deficiencies in the irrigation system and delete those components which have lost their utility overtime.

5.64 Under the restructured Programme there is thrust on Participatory Irrigation Management (PIM) and, therefore, following features have been made mandatory for programme implementation.

5.65 Central assistance for correction of system deficiencies upto distributaries of 150 Cusec capacity has been linked to formation of Distributories Committees and handing over of the distributories to such Committees for maintenance in future.

5.66 The main activities of Command Area Development Authority include construction of field channels, field drains, enforcement of warabandhi and reclamation of water logged areas. The

Command Area Development (CAD) activities were carried out in the 16 completed irrigation projects, namely Malampuzha, Mangalam, Pothundy, Walayar, Cheerakuzhy, Vazhani, Peechi, Chalakudy, Neyyar, Gayathri, Pamba, Periyarvalley, Chithurpuzha, Kuttiyadi, Pazhassi and Kanhirapuzha with a total ayacut of 2.03 lakh ha.

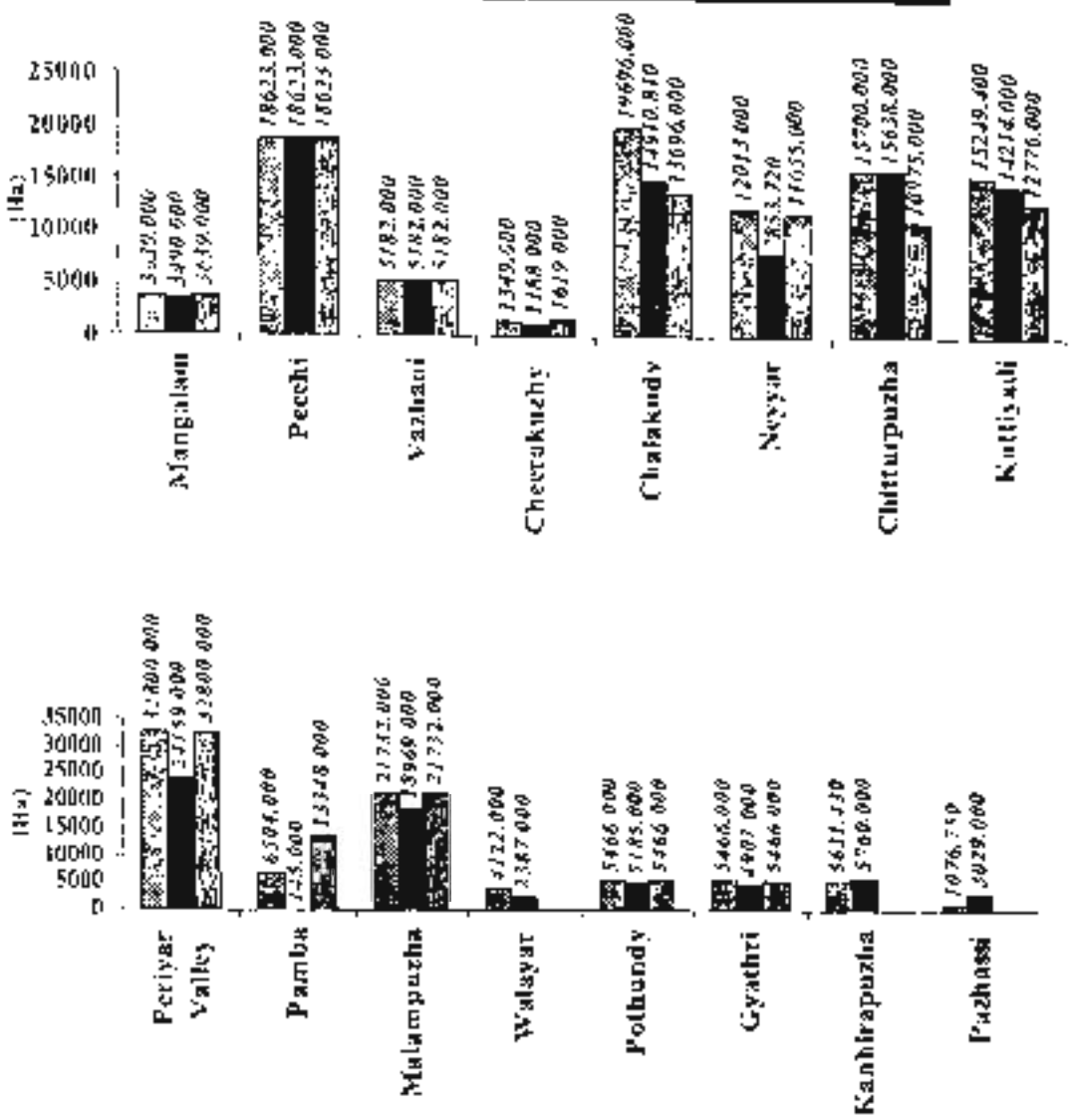
5.67 Government of India had directed to restructure the CAD programme from the 3rd year of the Tenth Plan onwards in the ongoing four projects namely Kallada, Periyarvalley, Kanhirapuzha and Pazhassi. Detailed project reports for these projects for the restructured CADWM activities were approved by Government of India. As part of reform initiative in the new CADWM programme new components like renovation of tanks and system correction are included.

5.68 The progress during 2006-07 was not encouraging. The achievement recorded during 2006-07, include construction of field channels in 1344 ha, drains to benefit 1652 ha. adaptive trials in 51 ha. 71 training programmes, bench mark and evaluation studies in 1782 ha. The work on reclamation of water logged areas were done in 126 ha The major physical cumulative achievements are given in Appendix 5.5. The cumulative achievement of the main activities of CAD programmes of all projects are represented in Fig.5.2

5.69 Physical achievements of the existing CAD programme during 2006-07 are given in Appendix 5.6

Fig 5.2

Major Physical Cumulative Achievments under CAD Programme as on March 2007



Drinking Water Supply

Coverage

5.70 In Kerala 84.21 percent urban and 65 percent rural population have been covered by Water Supply Schemes as on 1-4-07. The overall water supply coverage is 69.99 percent as against 68.02 percent as on 1-4-06 The rural urban coverage as on 1-4-06 was 62.74 percent and 83.07 percent respectively. During 2006-07, 97 water supply schemes taken up under various categories were commissioned. A total population of 6.25 lakhs have been benefited by these schemes. Out of this additional population covered are 5.12 lakh and the remaining are status level improvement. Out of the additional population covered with protected water supply, 50202(9.8%) are scheduled caste and 5840(1.14%) are scheduled tribe population.

5.71 District-wise overall coverage of water supply varies from 94.33 percent in Ernakulam to 51 27 percent in Kozhikode. In rural coverage also Ernakulam stands top with 91.32 percent and Kozhikode at the bottom with 36.30 percent. Urban coverage is highest in Malappuram district with 99.35 percent and lowest in Wayanad with 50.10 percent. District-wise population covered by water supply schemes as on 1-4-07 is given in Appendix 5.9

5.72 As per National Family Health Survey (NFHS-3) 2005-06 in India 88 percent house holds have an improved source of drinking water (95% of urban households and 85% of rural households) but only 25 percent have water piped into their dwelling, yard or plot. One third of households treat their drinking water to make it potable; half of those that treat their water strain the water through a cloth, and almost one third boil the water.

5.73 As per this survey only 69.1% households in Kerala use an improved source of drinking water Percentage of house holds with improved source of drinking water for the four southern states are given in Table 5.8

Table 5.8
Households with improved source of drinking water

State	Percentage
Andra Pradesh	94.0
Karnataka	86.2
Kerala	69.1
Tamil Nadu	93.5

Source: NFHS-3

Habitation-wise status of Water Supply Coverage

5.74 Habitations are mainly classified in to three, namely Non- Covered (NC) Habitations, Partially Covered (PC) Habitations and Fully Covered(FC) Habitations. According to a survey conducted by the Rajiv Gandhi National Drinking Water Mission in 1992, out of the 9776 habitations in the state, 4368 habitations were NC (potable water is not provided/provided@<10 lpcd) and 5348 had coverage with 10-40 lpcd level. 52 habitations were fully covered (potable water provided @ 40 lpcd and above) and 13 were in forest areas and not covered. Between the years 1992 and 2007 all habitations were covered and the number of FC habitations increased to 4745. The number of PC habitations as on 1-4-07 is 5018. This shows that as on 1-4-07 only 48.6% of the total habitations were fully covered and remaining 51.4% were partially covered The corresponding all India figures in 2006 were 97 02% and 2.73% respectively and Kerala has second

highest number of rural habitations with partial coverage next to Maharashtra. Habitation-wise status of water supply coverage in Kerala from 2001-02 onwards is given in Table-5.9 Status of coverage of habitations in States and Union Territories as on 1-4-2006 is given in Appendix.5.10.

Table 5.9
Habitation-wise status of Water Supply Coverage

(Number)

Year	Fully Covered	Partially Covered	Non-covered	Forest Area
2001-02	2091	6889	783	13
2002-03	2091	7444	228	13
2003-04	2125	7638	0	13
2004-05	2365	7398	0	13
2005-06	3892	5871	0	13
2006-07	4745	5018	0	13

Source: KWA

5.75 A fresh habitation survey has been conducted in 2003 based on 2001 Census population and the number of rural habitations/wards in Kerala increased to 12165 from 9776 in the previous survey in 1992. The increase in the number of habitations were due to ward bifurcation as per 2001 Census. In the new survey a number of Fully Covered habitations slipped back to Partially /Non-Covered status due to various reasons such as drying up of sources, sources becoming quality affected, lowering of the ground water table, population increase etc. The details of another 1124 habitations were added on 1-4-07 and the total number of habitations come to 13289. Habitation-wise Water Supply level as on 1-4-07 based on the new survey is given in Table-5.10

Table 5.10
Habitation-wise Water Supply Level as on 1-4-07

Quantity of supply	No. of habitations
Below 10 lpcd/NC	145
Between 10 lpcd and 40 lpcd	7565
Above 40 lpcd	5579
Non covered Forest Areas	Nil
Total-Habitations	**13289**

Source: KWA

Water Supply Schemes in Operation

5.76 Kerala Water Authority has 2037 water supply schemes in operation as on 1-4-07. It consists of 65 urban and 1972 rural schemes. During 2006-07, 97 schemes have been commissioned. District-wise details of water supply schemes in operation are given in Appendix-5.11

Production and Distribution of Water

5.77 The total quantity of water produced by KWA during 2006-07 is 1750 million litres per day (mld) and the quantity supplied is 1400 mld. Hence the unaccounted for water (ufw) is 350 mld, which is 20% of the quantity produced. Production and distribution of water by KWA from 2001-02 onwards is given in Table.5.11

Table 5.11
Production and Distribution of Water

Year	Production (in mld)	Supply (in mld)	Leakage (%)
1	2	3	4
2001-02	1511.96	1164.21	23
2002-03	1551.58	1194.72	23
2003-04	1583.60	1219.37	23
2004-05	1617.13	1245.78	22.96
2005-06	1635.00	1259	23
2006-07	1750.00	1400	20

Source: KWA

5.78 The cost of production of water is Rs. 7.82 per Kilo Litre during 2006-07 as against Rs. 7.39 in 2005-06. The summary of cost of production of water is given in Table 5.12

Table 5.12
Summary of Cost of Production of Water

Particulars	For the year 2006-07	
	mly	mld
1	2	3
Quantity produced	638,750	1750
Quantity sold	466,288	1278
	Total (Rs. in crores)	Per KL (Rs)
A. Direct Variable Cost		
Operators Salary	52.52	1.13
Power charges	121.00	2.59
Chemicals	10.85	0.23
Total Direct Variable Cost	**184.37**	**3.95**
B. Indirect Overhead cost		
Repairs & Maintenance	27.64	0.59
Administrative Overheads	74.47	1.60
Interest & Depreciation (including interest on GoK Loan)	43.27	0.93
Depreciation	35.00	0.75
Total Indirect Overhead Cost	**180.38**	**3.87**
Total	**364.75**	**7.82**

Source: KWA

Service Connections and Street Taps

5.79 Kerala Water Authority has 10.98 lakh service connections and 1.98 lakh street taps as on 1-4-2007. This is against 10.36 lakh service connections and 1.97 lakh street taps as on 1-4-2006. Out of the total service connections, 10.16 lakh (92.5%) are domestic and 0.81 lakh (7.4%) are non domestic. Out of the total street taps, 1.57 lakh (79.24%) are in rural areas. Category-wise service

connections and street taps as on 1-4-07 is given in Table 5.13 and District-wise details are given in Appendix 5.12

Table 5.13
Service Connections and Street Taps by KWA as on 1-4-2007

Sl. No	Category	Number
1	**Service Connections**	
	i) Domestic	1015904
	ii) Non-Domestic	81050
	iii) Industrial	911
	Total	**1097865**
2	Street Taps	
	i) Rural	157088
	ii) Urban	41146
	Total	**198234**

Source: KWA

Water Tariff and Revenue

5.80 The existing water tariff rates in Kerala was fixed with effect from 1-4-99 and it is given in Appendix-5.13. Total revenue collected from water charges during 2006-07 is Rs. 138.56 crore as against Rs.166.57 crore in 2005-06 showing a decline of Rs. 28.01crore. Out of the total revenue collected during 2006-07 Rs.121.29 crore (87.54%) was from service connections and Rs.17.27 crore (12.46%) was from street taps. Similarly out of the total income from water charges Rs. 90.44 crore (65.27%) was from Urban Schemes and Rs. 33.06 crore (23.86%) was from Rural Comprehensive Schemes and Rs. 15.06 core (10.87%) from Rural Single Panchayat Schemes Details of income from water charges from 2001-02 onwards are given in Appendix.5.14 and receipts of Kerala Water Authority from various sources from 1999-2000 onwards are given in Appendix 5.15

Arrears of Water Charge

5.81 As on 1-4-2006 dues from various category of consumers is Rs. 786.46 crore as against Rs. 732.23 crore during the previous year showing an increase of 7.41%. Out of Rs. 786.46 crore, Rs. 605.52 crore (77%) is from Local Governments. Table 5 14 shows arrears due from various category of consumers.

Table 5.14
Arrears of Water Charges due from various category of consumers

(Rs. crore)

Sl. No	Consumer category	Amount	Percentage
1	Domestic	61.24	7.79
2	Non-Domestic	96.45	12.26
3	Industrial	23.25	2.96
4	Panchayat	312.47	39.73
5	Municipality	171.04	21.75
6	Corporation	122.01	15.51
	Total	**786.46**	**100**

Source: KWA

Plan and Non Plan Expenditure of KWA

5.82 Total expenditure of KWA during 2006-07 was Rs. 736.32 crore. Out of this Rs.388.90 crore (52.8%) was under plan and Rs.347.42 crore (47.2%) under non-plan. Under non-plan 37 percent is utilised for salary and establishment, 31 percent for power, 11 percent for operation and maintenance, 12 percent for interest on loans and 7 percent for repayment of loans. Category-wise plan and non-plan expenditure of KWA during 2006-07 is given in Table 5.15 and category wise plan and non-plan expenditure of KWA for the last ten years is given in Appendix. 5.16

Table 5.15
Plan and Non-plan Expenditure of KWA- 2006-07

Sl. No	Category	Expenditure (Rs. in crore)
1	2	3
	A. Plan	
1	State Plan Schemes	85.24
2	Externally Assisted Schemes	193.21
3	LIC/HUDCO Aided Schemes	22.23
4	Centrally Assisted Schemes	88.22
	Sub Total	**388.90**
	B. Non-Plan	
1	Salary and Establishment	126.99
2	Power	108.00
3	Operation and Maintenance	38.49
4	Interest on Loans	43.27
5	Repayment of Loans	23.18
6	Others	7.49
	Sub Total	**347.42**
	Grand Total	**736.32**

Source: KWA

Ongoing Water Supply Schemes

5.83 Considering the need for extending the coverage of protected water supply various schemes are being implemented by Kerala Water Authority with loan assistance from financial agencies within and outside the country in addition to state funded and centrally sponsored schemes. Altogether 203 water supply schemes consisting of 160 rural and 43 urban schemes are under execution. District-wise and category-wise details of ongoing water supply schemes are given in Appendix 5.17

Accelerated Rural Water Supply Programme (ARWSP)

5.84 The works of 82 schemes sanctioned under ARWSP are in progress-74 schemes with central fund and 8 schemes which have exceeded their estimated cost with state fund. Centrally Sponsored Schemes are implemented with 100% assistance from Govt. of India

Technology Mission Schemes

5.85 Govt of India provides assistance under Technology Mission for implementing schemes in Water quality affected areas. Up to 15% of the ARWSP funds are to be earmarked for new projects designed to address water quality issues. Fourteen schemes have been sanctioned so far and of this 3 schemes are with funding pattern of 50:50 and the remaining are with 75:25 between Govt. of India and Govt. of Kerala. Out of 14 schemes one scheme has been commissioned and works of the remaining are in progress.

Water Supply Schemes to Rural Schools

5.86 As per the Govt. of India directive all the rural schools and Anganwadies having no drinking water facilities are to be provided with such facilities. The expenditure for this will be shared by the central and state government on 50:50 basis. 925 proposals had been sanctioned by SLSC held on 7/12/05. Out of this 589 schemes had been completed and works of the remaining are targeted to be completed by March 2008. Proposals for water supply schemes to 479 schools/ Anganwadis have been sanctioned during 2007.

Rain Water Harvesting

5.87 The implementation of Rain Water Harvesting Schemes- Varsha is by involving community participation. 10% of the cost of the unit is to be borne by the beneficiaries. 2813 units of 'Varsha' proposals had been sanctioned by the SLSC held on 7-12-05. Out of these 1622 units have been completed and works of the remaining are nearing completion. Proposals for 66 units amounting to Rs. 190.18 lakhs has been sanctioned during 7/2007.

Accelerated Urban Water Supply Programme

5.88 The Accelerated Urban Water Supply Programme (AUWSP) for Census Towns having population below 20,000 is sponsored by Ministry of Urban Development, Govt. of India. The main objective is to provide safe and adequate water supply facilities to the population of the Census Towns in the country within a fixed time. The Scheme will be funded on 50% grant basis by the central government. The balance 50% will have to be provided by the State government including 5% beneficiary/local body contribution. So-far 9 schemes were sanctioned under this programme and out of which one scheme has been completed. Govt. of India has announced that no new schemes will be sanctioned under AUWSP and a new programme namely UIDSSMT is launched for providing water supply and sanitation facilities for small and medium towns.

Swajaldhara

5.89 Govt. of India launched community based, participatory demand driven Water Supply viz, Swajaldhara for rural sector in the financial year 2002-03 by giving 90% of the project cost as government aid and remaining 10% as beneficiary contribution. Out of 486 schemes taken up under Swajaldhara 229 schemes had been completed.

LIC/HUDCO/Bank Assisted Schemes

5.90 Rural and Urban Water Supply Schemes were being implemented with LIC loan assistance since 1967-68. Rs. 319.57 crores were received from LIC for financing water supply sector. 303 schemes were completed with LIC assistance up to 31/3/07. LIC assistance is not received from 2003-04 onwards and the progress of implementation of the schemes are severely affected due to

this. As on 1-4-07 there are 52 rural water supply schemes and 28 urban water supply schemes under different stages of implementation under this category.

5.91 Loan assistance was received from HUDCO for 18 urban water supply schemes for which LIC assistance was also received except for two schemes. Out of these 18 schemes all were commissioned except one. The total loan sanctioned for the above schemes by HUDCO comes to Rs. 157.27 crores and loan received is Rs. 119.71 crores. HUDCO assistance is also not being received since 2003-04 onwards. Hence bank loan is being availed for completion of certain viable projects originally taken up with HUDCO/LIC assistance.

NABARD Assisted Schemes

5.92 There are 8 rural water supply schemes sanctioned with loan assistance under RIDF IX of NABARD Total loan amount originally sanctioned was Rs. 3324.06 lakhs. Considering the cost escalation due to the revision of the schedule of rates the project cost has been revised to Rs. 6218.15 lakhs and has sanctioned a loan of Rs. 4444.61 lakhs. Out of the 8 schemes, 3 schemes are expected to be completed during 2007-08 and the remaining in 2008-09.

ADB Assisted Schemes

5.93 Due to the devastating effects of Tsunami disaster, ADB has provided assistance for retroactive works and long term works. Retroactive works include rehabilitation of piplelines, repairing and fixing of street fountains, repair of pump sets, repair and drilling of tube wells, construction of pump houses, OH tanks etc. All the retroactive works have been completed.

5.94 The long term works proposed under Tsunami Emergency Assistance Project are:-

1) CWSS to Alappad, Clappana, Oachira and Karunagappally
2) WSS to Kayamkulam Municipality and Arattupuzha Panchayat.

Administrative sanction has been received from Government for the above works and preliminary works have been started. The expected date of completion is 3/10/2008

JBIC Assisted Kerala Water Supply Project

5.95 A Package of five water supply schemes was approved for loan assistance by the Overseas Economic Co-operation Fund (OECF) of Japan (now the Japan Bank for International Co-operation) in 1996. The objectives of the project are to augment and rehabilitate water supply systems of two urban regions viz, Thiruvananthapuram and Kozhikode and to construct water supply systems for three rural regions viz, Meenad, Cherthala and Pattuvam including their adjoining villages. The largest ever water supply project in the state when completed will ensure drinking water to a population of about 43 lakh in the benefited area spread over five districts. The total estimated cost of the project was Rs. 1787.45 crore.

5.96 As per the loan agreement, the project was proposed to be commenced in 1997 and completed by 2003. However the appointment of consultants for implementation of the project, a mandatory pre-requisite as per the loan agreement, had been inordinately delayed and the project could not take off as per the proposal The selection procedure for appointment of consultants started afresh in May 2002 and agreement has been executed with the selected consultants on 4-8-03. The project cost was subsequently revised to Rs. 2589.90 crores.

5.97 The total project has been proposed to be carried out in 23 contract packages of which 11 are International Competitive Bidding (ICB) packages and 12 are Local Competitive Bidding (LCB) packages. Twenty one out of 23 contract packages were awarded and the construction activities are progressing. The remaining two contract packages are the rehabilitation works of existing components of Thiruvananthapuram and Kozhikode schemes. Institutional strengthening is also included in the project. The project is expected to be completed by August 2009.

Transfer of KWA Schemes to Local Bodies

5.98 As a step towards the decentralisation process, in 1998 it was decided by the Govt. that KWA should hand over 1050 Rural Water Supply Schemes which fall within the boundary of one Panchayat, having independent source, to the Local Bodies. The Panchayats will be responsible for operation, maintenance, quality control, augmentation and improvement of the schemes thus undertaken and meet the expenditure by collecting tax/tariff. So far 371 KWA schemes including 172 schemes other than 1050 schemes, were handed over to local bodies. District-wise details of KWA Water Supply Schemes transferred to local bodies are given in Appendix. 5.18

Kerala Rural Water Supply and Sanitation Project

5.99 The World Bank loan assisted Kerala Rural Water Supply and Environmental Sanitation Project (Jalanidhi) was conceived in mid 1999. Project Implementation Plan was prepared and project appraised in mid 2000.The agreement with the World Bank was signed on 4th January 2001.The government has also created an autonomous institution 'Kerala Rural Water Supply and Sanitation Agency' (KRWSA) to implement this project. The project is expected to cover three lakh households, benefiting a population of over 15 lakh in the selected Grama Panchayaths. The project has been designed as a demand responsive project, with a community driven development approach in implementation. The project integrates water supply with sanitation, health promotion, environment management and ground water recharge measures.

Objectives of the Project

5.100 The overall development objective of the project is to improve the quality of rural water supply and environmental sanitation. The specific development objectives of the project are : (a)demonstrate the viability of cost recovery and institutional reforms by developing, testing and implementing the new decentralised service delivery model on a pilot basis (b) build the state's capacity in improved sector management inorder to scale up the new model state wide.

Selection of Panchayaths, Planning and Implementation of Schemes

5.101 Panchayats are selected for the project based on the need for water and sanitation, the extent of poverty and proven efficiency in managing Plan Funds Panchayats are covered in batches of approximately 15-20 Panchayats per batch and each scheme has a project cycle of 27 months, divided into four phases: 3 months for Pre-Planning Phase, 12 months for Planning Phases, 8 months for Implementation Phase and 4 months for Post-Implementation Phase.

5.102 The Beneficiary Groups (BGs) plan, implement, contract and or construct and take full responsibility for the continuous operation and maintenance of the structures created under this project. They contribute 15 % of the capital cost and mobilise the full O&M expenses. There can be 25 or more BGs in a Panchayat. Socio-technical support required to mobilize the community and the GP is provided by a Support Organization (SO) usually an NGO or a CBO selected by the

GP itself. District Project Management Unit is at district level with multi disciplinary team and provides all necessary operational assistance, technical or otherwise, for the GPs and the SOs.

5.103 The project also ensures (i) Domestic and Environmental Sanitation to protect quality of water (ii) sanitation and hygiene promotion activities (iii) Sustainability of source (iv) economic empowerment activities and (v) strong capacity building to empower people to ensure sustainability of the project.

Project Details

5.104 The Jalanidhi project was originally proposed to be implemented in about 80-100 Grama Panchayaths in four districts of Kerala (Thrissur,Palakkad, Malappuram and Kozhikode) at an estimated cost of Rs.451.40 crore, over a period of six years from 2001.(Rs.329.25 crore by WB, Rs.34 24 crore by GoK and Rs.87.95 crore by GPs and BGs.).

5.105 During the Mid Term Review of the project in 2003, it was found that the project is achieving its target at a lower cost. Hence the estimates were revised and also decided to scale up the project to other districts. As per the revised plan, by the end of the project, 92 Grama Panchayaths spread over Thrissur, Palakkad, Malappuram and Kozhikode districts and 18 Grama Panchayaths spread over the remaining 9 districts, ie, 2 Grama Panchayats from each district, excluding Alappuzha were to be covered under this project. Besides 2 Grama Panchayats of Kollam district were selected to implement Tsunami rehabilitation water supply project. Thus Jalanidhi Project is covering 112 Grama Panchayaths. The revised estimate of Jalanidhi Project is Rs. 381.5 crores including Rs. 60 crore for scaling up the activities across the state and Rs. 60 crore for Tsunami rehabilitation project. The project period has been extended for a further period of one year for implementing the Tsunami rehabilitation project. The pattern of funding of the project is given in Table 5.16 below.

Table 5.16
Pattern of funding of Jalanidhi project

Stake Holder	Percentage	Amount (Rs.in crores)
1	2	3
World Bank	72	274.74
Government of Kerala	7	26.70
Grama Panchayaths	7	26.70
Beneficiary Groups	14	53.36
Total	**100**	**381.50**

Activity-wise Present Status of Implementation

5.106 3536 water supply schemes, have been completed as on end October 07 through Jalanidhi project. All these schemes are being operated and maintained by the beneficiary communities. Another 173 schemes are at different stages of implementation and works on these schemes are going/progressing on a war footing basis. Out of the 15 river based large water supply schemes taken up so far, 5 schemes have already been commissioned and 10 schemes are in the implementation phase. Besides a rehabilitation water supply project for the Tsunami affected areas of Chavara and Panmana GP has also been taken up under Jalanidhi and the works are in progress.

Sanitation

5.107 In order to ensure the quality of drinking water and to avert the threat of water pollution, the project is investing a lot of resources on sanitation. The major focus area is the prevention of biological contamination by construction of sanitary latrines and conversion of unsanitary latrines to sanitary latrines. 67897 new sanitary latrines have been constructed so far against the total PAD target of 40,000 and conversion of 24291 unsanitary latrines to sanitary latrines have done against the total PAD target of 8000. Thus the project has attained a very high level of achievement in this component. A total of 88632 environment sanitation structures like compost pit, soak pit and vermi composting units have been constructed against the total PAD target of 26667. The project also assigns equal weightage to building up the community's awareness on sanitation and hygiene and its relation to water.

Ground Water Recharge (GWR)

5.108 This project is designed keeping the change in govt. perspective on a holistic approach to water resource management. Thus source recharge measures are inbuilt in to the project design. Comprehensive GWR activities are being implemented in some panchayaths with the objective to implement GWR activities in the project Panchayaths identified as "difficult areas" which show a drop in ground water levels and face acute drought during peak summer. BG centric activities have been completed in 1003 BGs and GP centric activities in 8 GPs and ongoing in another 32 GPs spread across all the batches.

Transfer of single- Panchayat KWA schemes/GP Schemes

5.109 In keeping with the Government Order of 1998, transferring all single panchayat KWA Schemes to the GPs, Jalanidhi has facilitated the transfer of 174 KWA schemes to the panchayat and has been successful in transferring 91 of these, after necessary rehabilitation, to the user communities themselves. 237 Grama Panchayat schemes were rehabilitated so far and handed over to Beneficiaries for operation and maintenance.

Women Development Initiatives:-

5.110 The project believes in mainstreaming women in to all the decision making and implementing activities of the project. There is separate component of women development initiatives within the project which focuses on women empowerment through building up their capacities and skills and have been very successful in bringing women in to the mainstream role of water supply services.

5.111 Physical targets and achievements in major components up to 31-10-2007, both overall and for the financial year 2007-08 are given in Table 5.17 and District-wise population covered by water supply schemes implemented by KRWSA as on 1-4-07 is given Appendix 5.19

Table 5.17
Physical Targets and Achievements as on 31-10-07

Item	Units	OVERALL			2007-08		
		PAD target till the end of project	Cumulative Achievement Till 31-10-07	% of Achievement	Target 2007-08 till Dec'07	Cum. Achievement F.Y 2007-08 up to 31-10-07	% of Achiev-ement
1	2	3	4	5	6	7	8
Water Supply Schemes-small	Nos	2500	3531	141%	500	372	74%
Comprehensive Schemes	Nos	6	5	83%	12	2	17%
New Latrine	Nos	40000	67397	170%	500	1290	258%
Latrine conversion	Nos	8000	24291	304%	500	564	113%
Comprehensive GWR	GPs	0	8		30	8	27%
GWR-Point recharge	BGs	562	1003	178%	100	16	16%
Tsunami relief works-WS	GPs	2	0	0%	2	0	0%
EMP- works	Nos	26667	88632	332%	750	1523	203%
Drainage	Mtrs	178000	65529	37%	2000	8567	428%
RWH structures	Nos	1500	12802	853%	700	850	121%

Source: KRWSA

CHAPTER 6

ENVIRONMENT

The climate changes are expressed in terms of radiative forcing, which is used to compare how a range of human and natural factors drive warming or cooling influences on global climate According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of UN, global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities and exceeded the pre-industrial values. The climate change will affect the basic elements of life for people around the world such as access to water , food production, health and environment. Hundreds of millions of people could suffer hunger, water shortages and coastal flooding as the world warms up. It has been estimated using the formal economic models, if not acted to mitigate the effects of climate change, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year now and forever. If a wider range of risks and impacts is taken into account, the estimates of the damage could rise to 20 % of GDP or more. In contrast, the costs of action in reducing the green house gas emissions can limit the worst impacts of the climate change to 1% global GDP each year (Source . The Hindu Survey of Environment, 2007)

6.2 A major cause of environmental degradation today is the lack of integrated environmental planning. Often, departments, municipalities, local authorities and industries use environmental resources according to the priorities of their individual sectors, without much regard to the overall needs of the state or the unsustainable use of its resources. To proactively manage environmental resources ,environmental resource planning will have to be made a central component of policy making in the state

The IPCC Report on Climate Change

6.3 The Intergovernmental Panel on Climate Change (IPCC) of United Nations completed its Climate Change-2007 report and released its final Synthesis Report on November 17, 2007. Salient findings of the Synthesis Report of the Fourth Assessment Report for policy makers is given in Box 6 1

Box 6.1

The Synthesis Report of IPCC Fourth Assessment Report

- Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level
- Changes in atmospheric concentrations of greenhouse gases (GHGs) and aerosols, land-cover and solar radiation alter the energy balance of the climate system. Global GHG emissions due to human activities have grown since pre-industrial times, with an increase of 70% between 1970 and 2004
- Human influences have very likely contributed to sea level rise during the latter half of the 20th century and also contributed to changes in wind patterns, affecting extra-tropical storm tracks and temperature patterns. These influences also likely to bring about increased temperatures of extreme hot nights, cold nights and cold days , increased risk of heat waves, area affected by droughts and frequency of heavy precipitation events.

- Continued GHG emissions at or above current rates would cause further warming and induce many changes in the global climate system during the 21st century that would very likely be larger than those observed during the 20th century

- Some projected regional impacts for Asia includes
  - By 2050, freshwater availability in Central, South, East and South-East Asia, particularly in large river basins, is projected to decrease;
  - Coastal areas, especially heavily-populated megadelta regions in South, East and South- East Asia will be at greatest risk due to increased flooding from the sea and, in some megadeltas, flooding from the rivers;
  - Climate change is projected to compound the pressures on natural resources and the environment associated with rapid urbanization, industrialization and economic development.
  - Endemic morbidity and mortality due to diarrhoeal disease primarily associated with floods and droughts are expected to rise in East, South and South-East Asia due to projected changes in the hydrological cycle.

- Anthropogenic warming could lead to some impacts that are abrupt or irreversible, depending upon the rate and magnitude of the climate change. Partial loss of ice sheets on polar land could imply metres of sea level rise, major changes in coastlines and inundation of low-lying areas, with greatest effects in river deltas and low-lying islands. Such changes are projected to occur over millennial time scales, but more rapid sea level rise on century time scales cannot be excluded.

- Climate change is likely to lead to some irreversible impacts such as approximately 20-30% of species assessed so far are likely to be at increased risk of extinction if increases in global average warming exceed 1.5-2.5°C (relative to 1980-1999). As global average temperature increase exceeds about 3.5°C, model projections suggest significant extinctions (40-70% of species assessed) around the globe.

Source : IPCC- The Synthesis Report(FAR), November ,2007

Main streaming climate change into sustainable development of nation

6.4 Government initiatives for the diffusion of renewable energy and energy-efficient technologies, joint forest management, water resources management, agricultural extension services, web-enabled services for farmers and rural areas, and environmental education in schools and colleges represent a broad spectrum of efforts to integrate climate change concerns in sustainable development. This integration is institutionalized through specialized institutions, such as the Ministry of New & Renewable Energy, the Bureau of Energy Efficiency, and the Technology Information, Forecasting & Assessment Council, with specific mandates to promote climate friendly technologies Addressing climate change mitigation and adaptation involves many stakeholders, cuts across short and long timeframes, and requires that all development projects be assessed for their sensitivity to climate concerns. This integration of climate concerns in the development process has been mainstreamed in India through high-level multistakeholder committees. The **National Committee to Assess the Impacts of Climate Change** is chaired by the Principal Scientific Advisor to the Prime Minister, and includes meteorologists, climate modelers, hydrologists, energy economists, as well as representatives of key Ministries. The

Committee is evaluating the impact of climate change on key development activities, and assessing options to mitigate climate risks. At the national level, the integration of climate change in national development is guided by the **Prime Minister's Council on Climate Change,** which includes representation of key Ministries, as well as experts and representatives of industry and of media. The Council provides overall strategic guidance on mainstreaming climate change in development, identifies key intervention priorities, and monitors the implementation .

Carbon Economy

6.5 Levels of carbon dioxide (CO_2) in the atmosphere, one of the main causes of climate change, have risen by more than a third since the industrial revolution and are now rising faster than ever before. This has led to rising temperatures over the 20th century, the earth warmed up by about 0.6°C largely due to increased greenhouse gas emissions from human activities. But the worst effects can be avoided if greenhouse gases in the atmosphere are stabilised instead of being allowed to go on increasing. The UNFCCC3 and its Kyoto Protocol demonstrate that it is possible to reach global agreement on action, but far more needs to be done. Hydrogen looks likely to play a key role in future low-carbon energy systems, as an 'energy carrier' through which non-fossil energy can replace fossil fuels in stationary power units such as domestic fuel cell based CHP units and in vehicles. Hence the very wide interest in the prospective shift to a future 'hydrogen energy economy' is pivotal.

6.6 In transport, hybrid (internal combustion/electric) vehicles can replace the carbon emitting vehicles , delivering significant efficiency savings There could be substantial and increasing use of low carbon biofuels in the very near future. The development of bioethanol and biodiesel production from biomass such as farm wastes, forestry residues, coppice crops and possibly also domestic waste could be encouraged. These can potentially deliver bigger carbon savings and wider environmental, farming and rural employment benefits.

6.7 Enhancing carbon sequestration in nature is of critical value for resolving vital issues of our times, viz., the state of ecological paucity, natural resource management, global warming, and climate change.. It is the free carbon in nature, particularly in the form of CO_2, that is responsible for the ill effects of our environment and that makes future of life on earth bleak and unsustainable. Increasing carbon level in the environment in essence is one of the major challenges our contemporary society faces. A comparative estimate of land-use and carbon sequestration potential of different forestry options has been done for India by the Tata Energy Research Institute, New Delhi. This has been done using the Land Use and Carbon Sequestration (LUCS) model. The salient findings of the study is given in Box: 6.2

Box 6.2

Carbon Sequestration estimation for different land use scenarios in India

- The scenario LUCS-I puts maximum amount of land into the forestry sector and is an economically feasible scenario. The scenario LUCS-II is a 'business as usual' scenario, as it is projected according to the current five-year plan. The scenario LUCSIII puts maximum amount of land in the plantations category and is a potential scenario. These scenarios were generated for a time period of fifty years starting from the year 2000.

- Results reveal a dynamic picture of changes in land-use and carbon sequestration for India during the period 2000–50 for all the three scenarios. The carbon sequestered here through vegetation has more than doubled by the year 2050. The total carbon sequestered in all the three systems during 2000 was 15.81 bt/year which would be 34.63 bt/year during the year 2050 according to the model prediction

- This is due to the fact that the area under protected forests has been increasing with a step towards managing of forests in a sustainable manner. Stress on forests for fuelwood is also declining due to changes in existing resource use (fuelwood) by resource substitution (energy-efficient chulhas). Apart from conservation in the domestic sector, use of improved cooking stoves plays an important role in the reduction of emissions of greenhouse gases. In India, the share of total fuelwood consumption has declined from 30% in 1980 to 20% in 1994. Traditional energy consumption has also declined from 32 to 23% during the same period. Initial degradation of land has also shifted towards restoration and conservation, resulting in increases in the amount of carbon stored in the vegetation

Source : Current Science 83 (11), 2002

Carbon trading

6.8 The carbon trade came about in response to the Kyoto Protocol signed in Kyoto, Japan, by some 180 countries in December 1997. The Kyoto Protocol calls for 38 industrialized countries to reduce their greenhouse gas emissions between the years 2008 to 2012 to levels that are 5.2% lower than those of 1990.

6.9 A market would be created to facilitate the buying and selling of the rights to emit greenhouse gases. The industrialized nations for which reducing emissions is a daunting task could buy the emission rights from another nation whose industries do not produce as much of these gases. The market for carbon is possible because the goal of the Kyoto Protocol is to reduce emissions as a collective. In the year 2006, the Chicago Climate Exchange (CCX) in United States has traded 10.3 mt of CO_2 worth more than 30 million dollars (Source : Michigan State University). India is considered as the largest beneficiary, claiming about 31 per cent of the total world carbon trade through the Clean Development Mechanism (CDM). It is expected to rake in at least $5 billion to $10 billion (Rs 22,500 crore to Rs 45,000 crore) over a period of time. The Multi-Commodity Exchange of India (MCX), the country's leading commodity exchange, may soon become the third exchange in the world with a license to trade in carbon credits. While

carbon trading may have its merits, debate over this type of market is inevitable, since it involves finding a compromise between profit, equality and ecological concerns.

Forest Carbon Partnership Facility (FCPF)

6.10 Despite decades of international financial assistance for forest protection, tropical forests continue to disappear at an alarming rate. Failing urgent action, the majority of remaining tropical forests of the world will vanish in this century. This dire situation calls for stronger global partnerships and the development of new sustainable financing mechanisms to support country-led forest sector reform programs. The proposed **Forest Carbon Partnership Facility (FCPF) of the World Bank** would assist developing countries in their efforts to reduce emissions from deforestation and land degradation (REDD). A readiness mechanism for $ 100 millions and a carbon finance mechanism for $ 200 million would be set up as a part of the facility.

State of Environment Report – Kerala 2007

6.11 The Kerala State Council for Science, Technology and Environment (KSCSTE) has brought out a comprehensive state of Environment Report for Kerala . Brief summary of the report is given in Box . 6.3

Box 6.3
State of Environment report -Kerala 2007

Land Environment . The land is subjected to undesirable practices and hence to serious degradation in Kerala. Preventive and curative measures against pollution and contamination of soil and land is higher priority in the years to come.

Wetlands of Kerala: Wet lands of the state are currently subjected to acute pressure owing to rapid developmental activities and indiscriminate utilisation of land and water. Infrastructure development in the form of roads, railways and other lines of communication fragmented the continuity of wetlands and destroyed extensive tracts of coastal vegetation thereby upsetting the entire complex ecology; rapid urbanisation encroached into the rich and luxuriant mangrove forests while industrial development not only caused pollution, but prevented any regeneration possibilities as well. The major issues facing the wetlands of Kerala are mainly related to pollution , eutrophication, encroachment, reclamation, mining and biodiversity loss.

The major driving forces elucidated as causes of decline of wetlands of Kerala are population/households growth and urbanization, industries , infrastructure, agriculture, aquaculture, fishing, poaching, mining , deforestation, services , water transport, and tourism. The major pressures identified are from industrial effluents, retting of coconut husks, leachates from agricultural fields, waste disposal, petroleum hydrocarbons, land use changes, hydraulic interventions, over exploitation of resources and weed infestation. The major impacts on population and economy and ecosystem due to deterioration of wetlands of the state are diminution of bio resources, species loss, food toxicity, water borne and zoonotic diseases , , obstruction to navigation, decrease in agriculture production and productivity, scarcity of potable water, flood and drought and aesthetic value depletion. Status of five selected wetlands of Kerala are analysed in the report

Environment and Health – water : The environment and health report deals with special reference to water and vector borne diseases in Kerala. Water borne diseases from faecal contamination are one of the biggest public health risks. High population density, rapid urbenisation and limited awareness of hygiene, disease prevention and spread are identified as important driving forces.

Natural hazards : The State of Kerala faces a host of natural disasters such as coastal erosion, flood, droughts, lightning, landslides and earthquakes. In the recent catalogue of earthquakes in the Peninsular shield, Kerala region also shows an increased seismic activity. The Kerala coast is located in the shadow zone with respect to the direction of propagation of tsunami though it encountered unexpected destruction in tsunami on Dec. 26th ,2004 devastating the coastal strip of Kollam , Alappuzha and Ernakulam Districts. This varying effect along the coast could be attributed to local amplification of tsunami waves in certain regions. Kerala is a place of high lightning incidence compared to most of the other parts of the country. Weather and Western Ghats together cause formation of more lightning clouds resulting in higher incidence. Relatively higher population density and vegetation density results in more casualities. The floods is another natural hazard, and the state experience frequent and severe floods in recent years. Continuous occurrence of high intensity rainfall for a few days is the primary factor contributing to the extreme floods in the state. Other factors include wrong land use practices , mismanagement of water resources and forests. Human interventions contributing to the flood problems are predominantly in the form of reclamation of wetlands and water bodies, change in land use pattern, construction of dense network of roads, establishment of more and more settlements, deforestation in upper catchments etc. The state of Kerala experience seasonal drought conditions every year during the summer months. Even in years of normal rainfall, summer water scarcity problems are severe in midland and highland regions. Severe drought conditions often result from the anomalies in monsoon rainfall combined with various anthropogenic pressures. As seen in the majority of drought incidents , even a 20% fall in north east monsoon can make water scarcity situation worse during the summer. Environmental degradation on account of heavy pressure of population, decline in forest cover, change in agricultural practices , industrial and infrastructural development on unstable hill slopes etc. are some of the factors that aggravate the incidence of land slides in the state. The Western flank of the Western Ghats covering the eastern part of Kerala is identified as one of the major land slide prone areas of the country. The land slides in the state include rock falls, rock slips, debris flow and in few cases rotational types of slides

The most prevalent recurring and disastrous type of mass movements noticed in Kerala are the "debris flows". The population growth in the coastal plains and midlands and pressure on land have forced people to move towards high lands in search of land . This has given rise to pressure on steeply sloping high lands due to land use practices, developmental activities , deforestation, and vegetation removal. The state of environment indicated very high saturation levels in the soil, increased pore pressure and lowering of factor of safety. The impact of the above factors is the slope failures in the form of landslides and loss of property and life.

Corporate Environmental Management : An environmental management system is a tool for managing the impacts of an organisations activity on the environment aiming at continuous improvement of its performance. An attempt was made to evaluate current systems of environment management policies and practices in the corporate operating in the state. It is noted that 68% of the organisation have environmental policies and 85% are practicing regular environmental monitoring in environmental management. The petroleum and chemical industries in the state maintain a comparatively good environmental management system. The role of Confederation of Indian Industries, KSCSTE etc. are very important for creating more awareness and avenues for sharing information.

Environmental Indicators: The report on environmental indicators provides details of indicators developed for Forest and Biodiversity, Water resources, Marine and Costal Environment of Kerala. The general trend of forest cover in the state is that the forest is getting deteriorated. A positive trend in the forest sector is that currently only the existing forest areas are managed and no more natural forest is converted to plantations. The establishment of Protected Areas is a positive indicator towards improvement of forests and its biodiversity. The mangrove ecosystem in the state is facing severe debilitation both in extent and quality. In non forest areas, both the indigenous and domesticated biodiversity is undergoing drastic changes with the introduction of various exotic crops and deterioration of ecosystems. In Kerala the water resources are depleting. There are regions in the state wherein water use is high in comparison to the water availability which resulted in high stress on water resource. The indicator for ground water stress in the state used are based on four units such as safe, semi critical, critical and over exploited. Water quality indicators used in the report include physical, chemical and biological measurements. The rapid increase in the population and industrialization have polluted the marine and coastal environment. The infrastructure development including ports and harbors , oil pollution and air pollution have also contributed to the increased degradation of marine ecosystem. The report brings about a status of physico chemical parameters, primary productivity, chlorophyll and microbiological activity. The report also details high risk area, low risk area and no risk area based on pollution monitoring .

Source : State of Environment Report –Kerala 2007 (Vol. I to IV)

World Environment Day

6.12 World Environment Day, celebrated each year on 5 June, through which the United Nations stimulates world wide awareness of the environment and enhances political attention and action. The world Environment Day theme selected for 2007 was "The environmental impact on polar regions"

6.13 The theme for World Environment Day 2008 is "CO_2, Kick the Habit! Towards a Low Carbon Economy.". New Zealand which is the first country to achieve the carbon neutrality will be hosting the World Environment Day 2008. The agenda is to give a human face to environmental issues, empower people to become active agents of sustainable and equitable development, promote an understanding that communities are pivotal to changing attitudes towards environmental issues, and advocate partnership which will ensure nations and peoples enjoy a safer and more prosperous future. World Environment Day is a People's event with colourful activities such as street rallies, bicycle parades, green concerts, essays and poster competitions in schools, tree planting as well as recycling and clean up campaign

Coastal Pollution

6.14 The main driving forces of coastal pollution are pollution owing to population followed by discharge of industrial effluents, indiscriminate use of agricultural chemicals damaging the quality of river water and adding to marine pollution, oil pollution, and air pollution. According to KSPCB , in Kerala about 3000 medium and large scale and about 2000 small scale industries are discharging effluent directly into saline fresh water bodies About 104536 m3 of treated effluents per day is being discharged into the back waters or sea in the coastal zone of the state. The extensive use of fertilizers and pesticides/fungicides etc results in undesirable residues

causing considerable damage to the quality of water in rivers ultimately adding to the marine pollution problems and seriously affecting human beings as well as aquatic life. The operation of large scale oil tankers and other activities connected to handling of oil add to the problem of marine oil pollution by way of oil spills and use of motorized boats. Air pollutants such as suspended maters, oxides of nitrogen, sulphur and carbon monoxide which are emitted from power generation of stations, industrial plants, construction projects, discharges from automobiles and solid waste disposal operations reach the sea through rain water and atmospheric transport of particulate matter (Source : State of Environment report –Kerala 2007- Vol IV- Environmental Indicators.).The estimated solid waste generation in the Coastal Zone of coastal districts in Kerala is given in Table- 6.1

Table 6.1
Estimated Solid Waste Generation in Coastal Zone of Coastal Districts in Kerala

District	Solid Waste generation (tons/day)	Biodegradable solid waste (tons/day)	BOD load reaching coastal waters (Kg/day)
Kasaragod	105	35	6
Kannur	188	62	10
Kozhikkode	241	79	13
Malappuram	122	40	7
Thrissur	137	45	7
Ernakulam	234	77	13
Alappuzha	188	62	10
Kottayam	25	8	1
Kollam	196	65	11
Thiruvananthapuram	241	80	13
Total	**1677**	**553**	**91**

Source : KSPCB, 2002

Wet land Conservation

6.15 The area under natural coastal wetlands in the state is 85671.50 ha while manmade coastal wetlands extend to an area of 8059 ha. The total area under wetlands in the state is 127930.07 ha (Source : State of Environment Report- Kerala , 2007).

6.16 India is a signatory of the Ramsar Convention, which calls for the conservation of the ecosystems while ensuring benefits to the local communities Under National Wetland Conservation Programme the wetlands identified from Kerala are Ashtamudi, Sasthamkotta, Kottuli, Kadalundi and Vembanad Kol (Source: Ministry of Environment & Forests, Annual Report 2006)

6.17 State has to prepare action plans for wetland project implementation Immediate steps should be taken to protect them by changing their legal status to that of a protected category. Participatory methods are to be adopted with the involvement of PRIs, NGOs and local communities in the co-management of wetlands. The need for a proper management of existing wetlands should be a priority of the state

6.18 The Vembanad Kol wet land system is a complex aquatic system of coastal back waters , lagoons, marshes, mangroves and reclaimed lands with intricate network of natural and manmade channels including a chain of lagoons from Kuttanad in the South to Kol lands of Thrissur in the

North which covers 2.5 % of state's area. The environmental problems faced by Vembanad – Kol wetlands are due to industrial effluents, municipal solid waste and sewages , fertilizers and pesticides , oil spillage, retting of coconut husks, eutrophication, aquatic weeds etc. according to the study conducted by CWRDM, Kozhikkode. The salient findings of the study are depicted in Box : 6.4

Box 6.4

Impact of industrial, Municipal and Agricultural Effluents on Vembanad-Kol Wetland System

- The analysis of pH, Dissolved Oxyen, BOD, nutrient concentrations, algal biomass etc. of the water samples of Vembanad lake revealed that Punnamada which is the Southern side of the lake is severely polluted site.
- The algal biomass is extending slightly towards the North.
- Sediment analysis of lake revealed that lake is blanketed with highly nutrient rich acidic sand dominated sediments which are polluted by heavy metals like iron, chromium and manganese.
- Organic matter deposition was found to be increasing
- Metal accumulation was found to be high. The major sources of heavy metal contamination are the industrial effluents near Kochi. The increased monsoonal supply of materials together with flushing of previously deposited sediments through the Kochi back waters may be the reason for increased metal deposition.
- The eutrophication of Vembanad lake is determined to be mainly phosphorus limited in addition to the nutrient load received by the lake due to point sources The lake is also polluted in the Southern, Eastern and Western parts by diffuse pollutants such as agricultural and municipal effluents. The study also indicated that total phosphorus load to the lake should be regulated to 12.5% to the present phosphorus load of the lake to change to oligotrophic level

(Source : CWRDM, 2007)

6.19 The Kerala State Biodiversity Board was constituted in 2005 with vision of Conservation of biodiversity and its sustainable utilization for the benefit of human beings. During the year 2007-08 the major activities of the State Biodiversity Board include International Biological Diversity Day celebrations, Seminar on "Biodiversity-Major challenges for conservation and sustainable utilisation", Production of a Documentary Film on Kerala's Biodiversity, State level workshop for formulating Kerala state organic farming policy ,Regional discussion meeting on Organic Farming Policy and Environmental Policy, One day seminar on Dr. Salim Ali , "Earth Day" celebrations and Discussions on formulating the Environment Policy

6.20 The Kerala State Biodiversity Board has prepared the Kerala Biodiversity Strategy and Action Plan for the sustainable utilisation of biodiversity of the state The highlights and top priorities of this document is given in Box 6.5

Box 6.5

Kerala Biodiversity Strategy and Action Plan

- Documentation of our living wealth (People's Biodiversity Register) : A massive people's movement across the state covering all panchayaths, municipalities and corporations recording all the living organisms , and knowledge on their traditional use thereby establishing the right on such knowledge.
- Biodiversity based sustainable development programmes in each local body for the benefit of local people and conservation of biodiversity rich areas such as sacred groves and wetlands in each panchayat.
- Call for a water revolution . With a state wetland conservation and wise use policy and action plan, a state wetland conservation and wise use act and a Wetland Authority to facilitate taking stock the wetland resources , allocation of water for different stakeholders, conservation and sustainable use of wetland biodiversity for the benefit of common people.
- Identification and conservation of biodiversity rich areas outside the Protected Areas and in the low lying riparian forests.
- Restoration of the native agro-biodiversity by reviving and organic farming of traditional crop varieties.
- Call for launching a state organic farming policy and phasing out the use of chemical pesticides within a reasonable time period to restore agro biodiversity.
- Encourage reviving and farming of domesticated native animal diversity.
- A legally binding " biodiversity code of conduct" for implementing any new development Project by Government departments, public and private institutions, national and multinational corporate bodies, construction corporations, LSG's
- Proposal for enactment of a comprehensive land use legislation to arrest further destruction and modification of land forms and for conservation of biodiversity.
- Strengthen the eco-clubs, nature clubs and biodiversity clubs for creating awareness on biodiversity conservation and its values for human well being.

Source : Kerala Biodiversity Board, 2007

Paddy land Conversion and ecological impacts :

6.21 In Kerala , there has been an alarming shift from rice and subsistence food farming to cash crops. The area under rice cultivation has drastically declined from above 8 lakh ha in early 1970's to nearly 2 lakh ha in 2000's mainly due to conversion of paddy lands. The paddy field conversion has led to severe ecological degradation and these losses are irrecoverably forever. It has also resulted in loss of direct and indirect employment to farm workers and rural women. In future, the rural poor will have to face acute water shortage than at present. It is very likely that the remaining paddy lands would be vanished in near future if the present policy is continued. To conserve the paddy land and wetland and to restrict the conversion or reclamation of such lands in the state, the Govt of Kerala has proposed the " Kerala Conservation of Paddy Land and Wetland Bill-2007 ". The salient features of the bill are given in Box : 6.6

Box 6.6

Kerala Conversion of Paddy land and Wetland Bill-2007

- Under the act, the conversion or reclamation of paddy land and keeping the paddy land as fallow is prohibited. The owner of any paddy land in a major paddy producing area in the state shall not undertake any activity for the conversion or reclamation of such paddy field except in accordance with the provisions of the act and shall not keep such paddy land fallow. The act also prohibits the conversion or reclamation of wetland and removal of sand from them.

- Cultivation of any intermediary crops or any vegetables or pulses or a combination or rotation of paddy and fish on a reversible basis during the period in between two paddy crop that is cultivated according to ecological nature of that paddy field is allowed.

- The Govt. may grant exemption from the provision of this act, if such conversion or reclamation is essential for any public purpose. No exemption shall be granted by the Govt. unless after due enquiry they are satisfied that no alternate locations are available and that the conversion or reclamation shall not adversely affect the cultivation of paddy in the adjoining paddy land and also environmental conditions in the area

- Under the Act, the District Collector is empowered to take actions to restore the original position of any paddy field or wetland reclaimed violating provisions of this Act. The local bodies shall not grant any license or permit under the said Act for carrying out any activity in a paddy land or wetland converted or reclaimed in contravention of the provisions.

- Not withstanding anything contained in any law, order, custom or practice for the time being in force, the Collector may by notice in writing to the holder of any paddy land which is not under the cultivation and which is likely to be left fallow during the current cultivation season to cultivate it with paddy or any other crop in accordance with this Act.

- If the holder of the land fails to comply with the directions of the notice, the District Collector may order, direct and arrange for the entrustment by public auction or other wise of his right to cultivate paddy land in question for a specified period which shall ordinarily be 3 years. While entrusting, preferences to be given to Kudumbasree units, Padasekharasamithy's and SHG's in the locality.

- During the pendency of entrustment of right to cultivate paddy land, if the holder of such paddy land affects any alienation of his right in paddy land, he shall give intimation regarding such transfer to the Collector within such time. If the transferee is willing to cultivate the paddy land, he may apply to the Collector to resume the land to his possession and thereupon, the Collector shall give notice of termination of the right to cultivate paddy land to the person concerned. A person entrusted with the right to cultivate a paddy field shall have no right whatsoever except to cultivate the same with paddy or such other crop as provided in this Act.

- Penalty for reclamation . Any person who violates the provisions of this act , converts or reclaims any paddy land or wetland or remove sand from them shall on conviction be punishable with imprisonment for a tenure which may extend upto1- 3 years, and with a fine from Rs. 50000-1 lakh. If the person contravening the provisions of this Act is a company, every person, who was responsible for the company for the business of the company shall be deemed to be guilty and liable to be proceeded against and punished.

Environmental Information System (ENVIS)

6.22 Environmental management plays an important role in making a balance between the demands and resources available, in order to keep the environmental quality at a satisfactory level. Protection and improvement of environment thus aims at sustaining good quality of life for the living beings. Environmental information in this direction plays a paramount role not only in formulating environmental management policies, but also in the decision-making process.

6.23 Realizing the need of such information, the Ministry of Environment and Forests set up an Environmental Information System (ENVIS) as a plan programme and as a comprehensive network in environmental information collection, collation, storage, retrieval and dissemination to varying users, which include decision-makers, researchers, academicians, policy planners, research scientists, etc. ENVIS has been conceived as a distributed information network with the subject-specific centres to carryout the mandates and to provide the relevant and timely information to all concerned. Association of the various State Governments/UTs was also felt necessary in promoting the ENVIS network to cover a wide range of disciplines of subjects and the cooperation of the various State/UT Governments. Keeping this in view, the network was expanded gradually with the involvement of thematic subject-areas and State Government departments to make it more comprehensive.

6.24 ENVIS network at present, consists of a chain of 75 network partners out of which 45 are on subject-specific and 30 are on State related issues. These network partners are called ENVIS Centres and are located in the notable organizations/ institutions/ State Government organizations throughout the country. The Focal Point of ENVIS is located in the Ministry of Environment and coordinates the activities of all the ENVIS network partners to make ENVIS a web-enabled comprehensive information system. The list of ENVIS network partners in Kerala is given in Table -6.2

Table 6.2
List of ENVIS centres in Kerala

Sl. No	Name of Envis Centre	Subject Area	Sub network area
1	Kerala State Council for Science Technology and Environment, Thiruvananthapuram	Status of Environment and Related Issues	Status of Environment
2	Dept. of Geology, University of Kerala, Karyavattom Campus	Marine Ecosystems	Ecology and Ecosystems

Land Degradation

6.25 It is estimated that on an average, annual rate of soil loss is at 16.35 tonnes/ha. The ICAR has initiated the preparation of soil erosion maps of different states using the Universal Soil loss equation. Soil nutrient mining results in serious soil health and ecological problems, which needs urgent attention. Municipal water, sledges, pesticides, industrial water etc. need to be used with utmost care to avoid the possibility of soil pollution through heavy metals. State wise extent of land degradation in India is given as Appendix-6.15. In Kerala an area of 76000 ha have been subjected to water erosion while 2098000 ha area is troubled by water logging. Soil acidity is a

degrading factor in approximately 138000 ha. Approximately 67.1 % area in the state is reported to be degraded

6.26 The main causes of land degradation are deforestation, ignorance of soil conservation practices, extension of cultivation to marginal lands, improper crop rotation, imbalanced fertiliser use, surface irrigation ironically designed to increase land productivity, rapid growth in population, paucity of land, economic pressures and poverty

Water Quality

6.27 High fluoride concentration in ground water beyond the permissible limit of 1.5 ppm has come to stay as a major issue affecting a large segment of rural population to the tune of 25 million spread over more than 200 districts in 17 states in the country. The population at risk is estimated at around 66 million. Hand pump attached defluoridisation and iron removal plants have failed due to inappropriate technology, unsuited to community perception and community involvement.

6.28 Both organic and inorganic chemicals can contaminate the drinking water. The most commonly reported inorganic elements in water are Fluoride, Iron, Nitrates and mixed contamination of these three. Fluorides in water primarily produces effects on skeletal tissues such as teeth and bones. Fluoride can have an adverse effect on tooth enamel and give rise to mild dental fluorosis at drinking water concentrations between 0.9 and 1.2 mg/lit. Elevated fluoride intakes can also have more serious effects on skeletal tissues. There are 11 villages and 13 habitations in Kerala affected by high fluoride content. According to the survey in 2003, it is endemic in Idukki, Palakkad and Thiruvananthapuram Districts. In Kerala , 341 villages in 378 habitations have been affected by high iron content. Water systems, piping, fixtures etc. can become restricted or clogged by presence of iron When iron exists along with certain kinds of bacteria it may create sanitation problems. The short term exposure to drinking water with a nitrate level at or just above the health standard of 10 mg/l nitrate –N is a potential health problem primarily for infants. In Kerala 59 villages from 67 habitations are affected by nitrate especially in Malapparam District.

6.29 The Kerala State Pollution Control Board maintains a network for monitoring of the ambient quality of the rich and varied water resources of the state. There are 3 major schemes for ambient water quality monitoring with the Board. They are 1 Global Environmental Monitoring Scheme (GEMS) Sponsored by the WHO the scheme covers 6 river stations and 3 ground water stations 2. Monitoring of Indian National Aquatic Resources Scheme (MINARS) Sponsored by CPCB the scheme covers 24 river stations 10 backwater/lake stations and 12 ground water stations 3. Ambient Water Quality Monitoring Scheme (AWAQUMS). This extensive monitoring network covers more than 90% of the inland water resources of the state. The ground water quality trends of selected monitoring stations in the state is given in Table -6.3

Table 6.3
The ground water quality of selected monitoring stations (2006-07)

Location	pH	Nitrate -N (mg/l)	Hardness As CaCO3 (mg/l)	Iron (micro gram/l)	BOD (mg/l)	Fluoride (mg/l)	Total Coliform (MPN/100 ml)	Faecal Coliform (MPN/100 ml)
Eloor	5.6	2.17	34	270	1.2	0.04	368	40
Chungappaly	6.6	0.31	35	BDL	0.6	0.15	140	60
Punalur	6.6	0.5	44	BDL	0.5	0.001	220	90
Pappanamcode	5.7	0.5	50	BDL	0.5	0.001	220	90
Nedumangad	5.7	1.2	56	BDL	1.8	BDL	170	80
Kundara	4.7	4.11	20	29	.8	0.2	1700	1280
Cherthala	6	0.34	35	1207	1	0.05	800	190
Vytilla	6.7	1.4	200	62	0.8	0.05	540	60
Edayar	5.8	2.57	20	137	0.5	0.05	3	0
Kalamassery	4.5	8.4	26	BDL	0.5	0.06	100	10
Poomkumam	5.6	3.18	40	19	1.6	0.06	40	4
Malappuram	6	3.23	58	BDL	0.75	0.5	400	120
Mavoor	5.5	3.23	19	...	0.75	0.5	400	120
Kannur	5.1	2.69	14	....	1	0.06	200	80
Payyannur	6	3.37	35	...	0.3	0.42	200	0

6.30 The river water quality observed at selected locations of Meenachil and Moovattupuzha river during Jan 2007 is given in Table- 6.4

Table 6.4
The river water quality of selected monitoring stations in Meenachil and Moovattupuzha rivers during Jan 2007

Location	pH	Total Coliform/100 ml	Faecal Coliform/100 ml	BOD (mg/l)	DO (mg/l)
Meenachil river					
Thoekoy	6.8	620	610	0.4	7.2
Bharananganam bridge	6.3	2080	1420	0.6	6.3
Kadappattur	6.7	1440	960	0.5	7.8
Punnathara Bridge	6.7	840	550	0.4	7.6
Thazhathangady bridge	6.5	1040	720	0.7	7.7
Moovattupuzha					
Malankara Dam	6.2	960	630	0.4	7.7
Moovattupuzha Bridge	6.4	1400	1050	0.6	7.6
Ramamangalam bridge	6.5	1280	960	0.5	7.4
Piravom Railway bridge	6.3	2040	1400	0.5	7.6
Muvattupuzha bridge	6.2	1380	950	0.7	7.8

Source : KSPCB, 2007

Ambient noise levels in Major Cities of Kerala

6.31 Noise, a physical pollutant, is not easily recognized. This is because the sensitivity of human ear gets automatically adjusted to the ambient level of sound and so, slow increases in the ambient level go unnoticed. Therefore noise continues to do the damage silently. In the case of noise, pollution measurement is all the more essential because of the incapability of our auditory system to recognise slow changes. The influence of noise on the human body can be due to direct effects upon the auditory system, on non - auditory physiological processes and on purely psychological mechanisms. The Ministry of Environment and Forests, Govt. of India, has come out with notifications regarding allowable limits of noise. Ambient air quality standards in respect of noise is given in Table- 6.5

Table 6.5

Area Code	Category of Area /Zone	Limit in dB(A) Leq.	
		Day time*	Night time**
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Source : KSPCB

* Between 6.00 am and 10.00 pm

** Between 10.00 pm and 6.00 am

6.32 Research conducted to identify the relative annoyance of different types of noise has shown that, for a given level, the noise produced by traffic is more annoying than that from trains or air crafts. In this context a study was undertaken to measure the noise pollution from transport and public addressing system in major cities of Kerala viz. Thiruvananthapuram , Kochi and Kozhikkode. Salient findings of this study is given in Box : 6.7

Box 6.7
Noise Pollution in three major cities of Kerala

- In Thiruvananthapuram measurements were taken at 21 locations out of which 19 were commercial zones and the other two belong to silence zones being hospitals. On an average, it has been found that the commercial zones recorded a noise level of 81.3 dB(A), that is 16.3 dB above the permissible noise level as per Table 1. The silence zones recorded 78.7 dB(A) that is about 28.7 dB above the permissible level. In fact, the silent and commercial zones have recorded almost similar noise levels.

- In Kochi measurements were taken at 26 locations; out of which two were in silence zones, one in a residential zone and the rest in commercial zone. The average noise levels in the commercial zone are 78.5 dB(A), 13.5 dB(A) above the permissible limit. The silence zones recorded 76.55 dB(A), 26.55 dB(A) above the permissible level. The sole residential zone recorded 40.7 dB(A) 15 dB(A) below the limit. In Kochi also, the silence zones and the commercial zones have recorded equal noise levels and well above the permissible limit.

- In Kozhikkode city Measurements were taken at 21 locations; out of which five were in silence zones and the rest in commercial zone The average noise levels in the commercial zone is 77.5 dB(A), 12.5 dB(A) above the permissible limit. The silence zones recorded 74.7 dB(A), 24 7 dB(A) above the permissible level. In Kozhikkode too, the silence zones and the commercial zones have recorded equal noise levels and well above the permissible limit.

Source : J. Ind Geophys, Union, October 2004

Industrial effluents

6.33 A number of industries situated on the banks of rivers and backwaters discharge their effluents into the wet land system. These effluents contain a large number of toxic ingredients such as acids, alkalies, heavy metals, suspended solids and a number of other chemicals. Among various industrial pollutants, heavy metals require special considerations due to their non degradable nature. Analysis of particulate metal content indicates high concentration of Zinc, Cromium etc due to industrial pollution in Kochi backwaters. Details of industries in Periyar river basin is shown in the Appendix 6.6 Highest concentration of heavy metals in sediments was observed during pre monsoon. Chromium content was higher in Ashtamudi and Vembanad and mercury content was high in Vembanad.

6.34 A recent study shows that pollution is concentrated among a few industrial sub sectors and that a sector's contribution to pollution is often disproportionate to its contribution to industrial output. Petroleum refineries, textiles, pulp and paper and industrial chemicals produce 27 per cent of the industrial output in the country, but contributes 87 per cent of sulphur emissions and 70 per cent of nitrogen emission from the industrial sector Likewise, iron and steel and non-metallic mineral products, produce about 16 per cent of the industrial output, but account for 55 per cent of the particulate emission.

6.35 Environmental concerns have assumed significance in the recent years. Commensurate with industrial expansion, a strong regulatory mechanism is required to ensure minimum environmental standards. State wise summary status of 17 categories of highly polluting industries (Economic Review 2006) indicated that out of the total 2301 large and medium industrial units identified in the 17 categories of highly polluting industries in the country, 1927 industrial units have installed the requisite pollution control equipments, 235 units have closed down and the remaining 139 units have yet to install the necessary pollution control facilities . Legal action has been taken against all defaulting industrial units. In Kerala out of 43 units , 6 are closed and 37 are having adequate facilities to comply with the standards

6.36 According to the CPCB, as of June 2006, 73 percent of the 2672 units under 17 categories of highly polluting industries were in compliance, which is a decrease from 2004, when the rate was 84 percent. Table 5.12 provides a summary of the compliance status by industrial sector The major non-complying sectors are chloralkali (29%), thermal power (27%), copper (25%), iron and steel (24%), and pharmaceuticals (23%).

Table 6.6
Sector-wise Compliance Status of 17 Categories of Highly Polluting Industries
(as on June 2006)

Sl.No	Category	Complying	Defaulting	Closed	Total
1	Aluminium	6	1	0	7
2	Cement	198	16	20	234
3	Chlor-Alkali	24	10	0	34
4	Copper	3	1	0	4
5	Distillery	191	35	36	262
6	Dyes and DI	87	9	25	121
7	Fertiliser	104	10	21	135
8	Iron and Steel	28	9	1	38
9	Oil Refineries	17	3	1	21
10	Pesticides	95	9	11	115
11	Petrochemicals	73	7	1	81
12	Pharmaceuticals	351	124	59	534
13	Pulp & paper	118	32	37	187
14	Sugar	438	49	91	578
15	Tannery	97	13	17	127
16	Thermal power	129	51	8	188
17	Zinc	4	1	1	6
	Total	**1963**	**380**	**329**	**2672**

Source : CPCB (Quoted by OECD, December 2006)

Air Pollution

6.37 The air in most of our cities is dangerously polluted. Average levels of suspended particulate matter in the four metropolitan cities (Mumbai, Delhi, Chennai and Kolkata) is over 360 micrograms per cubic metre, while the World Health Organisation has stipulated a safety level of 150 mg/ cubic metre. Pollutants in India's urban areas include oxides of nitrogen (NO2), sulphur (SO2) and carbon (CO and CO2) and suspended particulate matter (soot and dust). In addition, there is a range of toxic and carcinogenic substances such as benzene, Polycyclic Aromatic Hydrocarbons (PAH), ozone, lead, etc. The main sources of these pollutants are vehicular exhaust and industrial activity (energy sector, refinery and petrochemicals, iron and steel industry and others). Delhi, Mumbai and Kolkata are among the 15 most polluted cities in the world.

6.38 The major causes of increasing air pollution are increasing energy demand and consumption, the use of poor quality fuels such as coal with high sulphur content, inefficient methods of energy production and use, increasing number of vehicles, traffic congestion, poor automobile and road conditions, use of leaded fuel, resulting in emission of sulphur dioxide, nitrogen oxides, suspended particulate matter, lead and carbon monoxide. Forest fires also contribute to the air pollution.

Ambient Air Quality

6.39 Monitoring of ambient air quality is considered to be a vital component in the Environmental Impact Assessment. The Central Pollution Control Board has established a National Ambient Air Quality Monitoring Net work (NAMP) in collaboration with the State

Pollution Control Boards, comprising of 290 stations in 92 cities/towns, to collect, compile and disseminate information on air quality.

6.40 The Kerala State Pollution Control Board (KSPCB) monitors the ambient air quality at 11 stations in the state. The KSPCB also has 2 mobile sampling units

6.41 The Ministry of Environment and Forest, Government of India has identified Kochi as one of the areas with very high pollution potential.

Vehicular Pollution

6.42 Traffic planning and management assume importance in reducing vehicle pollution. Greater promotion of and use of alternative fuels, cleaner technologies such as CNG, LPG, curbing fuel adulteration, fiscal incentives for pollution prevention and control measures, appropriate monitoring of industries, strengthening of emission standards, replacement of two stroke engines, awareness programmes, appropriate design of green belt etc. are needed. An effective environment management plan should be devised covering regulation, capacity building, environment strategy by involving NGOs, PRIs, line departments and private sector.

6.43 As a leading manufacturer in the region, India has also seen a rapid rise in motorization— especially in motorcycles over the years—particularly in its major urban areas. The total number of registered motor vehicles in India has increased from 1.86 million in 1971 to 67 million in 2003 . Motorized two-wheelers (motorcycles, scooters, and mopeds) account for over 70% of the total registered fleet that will clearly impact on Carbon monoxide (CO) and hydrocarbon (HC) emissions. The absence of an effective mass rapid transport system (MRTS) and intra-city railway networks have resulted in people using their own vehicles to commute to work. The proportion of buses to the total registered fleet has fallen from 5% in 1971 to 1.1% in 2003 Correspondingly, the proportion of private vehicles (two-wheelers and cars) to the total number of registered vehicles in India has increased from 65% in 1971, to 84% in 2003 (ADB, 2006)

6.44 In 2003, 23 out of 35 metropolitan cities accounted for about 1/3 of the total 67 million vehicles registered in the country. About 45% of the total cars in India are concentrated to these metropolitan cities. In the five major metropolitan cities (Mumbai, Kolkata, Delhi, Chennai, and Bangalore), the growth in registered motor vehicles has outpaced population growth While the population in these cities has doubled during 1981–2001, the number of vehicle has gone up by six-and-a-half fold. The projected number of in-use motor vehicles in India was estimated using the assumed 8% GDP growth per year from 2004 to 2030. The total number of vehicles is estimated to rise at 10% per annum, reaching 672 million in 2030. Two-wheelers have the highest growth rate at 14% annually and this figure will reach 425 million by 2030 The share of buses is estimated to fall further for the same period. (ADB, 2006)

6.45 A comprehensive emission inventory was conducted in 1997 for Mumbai as part of the Urban Air Quality Management Strategy (URBAIR). It was found in the study that the total suspended particulates exposure was primarily due to re suspension from roads caused by vehicles (40%), emission from diesel and gasoline vehicles (14%), domestic wood and refuse burning (31%), and others (15%) (World Bank 1997). For vehicle emission inventory, data on actual vehicles plying on road, vehicle usage data, and fuel usage data are not available or well-documented.

6.46 In a study by CPCB in residential and industrial areas, annual NO2 levels have decreased to below NAAQS values of 60 ug/m3 (residential) and 80 ug/m3 (industrial). A decreasing trend has also been observed in NO_2 levels in both residential and industrial areas in the last few years for cities with the highest concentrations, although levels in other cities appear to be relatively unchanged. ***The decreasing trend in NO_2 levels may be due to various measures taken for vehicular pollution control such as stricter vehicular emission norms, etc.*** Vehicles are one of the major sources of NO_2 in the country

6.47 The measures taken by the Government to mitigate emissions from the transport sector summarized in the Asian Development Bank Country Synthesis Report on Urban Air Quality Management is given in Box : 6.8

Box 6.8
Measures to mitigate the emission from transport sector in India

Stringent emission norms. In 1991, the first stage emission norms came into force for petrol vehicles and in 1992, for diesel vehicles. From April 1995, new laws were in effect mandating the use of catalytic converters in new petrol passenger cars sold in the four metros of Delhi, Calcutta, Mumbai, and Chennai, along with the supply of unleaded petrol. Availability of unleaded petrol was further extended to 42 major cities later, and now, Euro II grade unleaded fuel is available throughout the country. Emission standards were further raised in 2000 when passenger cars and commercial vehicles had to meet the Euro I equivalent, India 2000 norms, while two-wheeled vehicles were also similarly made to meet tighter emission norms. At present, the emission norms stipulated for two wheeled vehicles in India are among the most stringent in the world. Euro II (Bharat Stage-II) emission norms for all categories of four-wheeled vehicles are applicable all over India from 1 April 2005. Bharat Stage-III will be made applicable throughout India starting April 2010. However, Bharat Stage- III was introduced in 11 cities in April 2005 and Bharat Stage- IV is planned to be introduced in April 2010

Emission norms in certain areas. In the case of the NCR,only private vehicles conforming to Euro-II equivalent—i.e., Bharat Stage-II norms—were allowed to register. In Mumbai, Euro-II standards for private vehicles (four-wheelers) have been applicable from 2001. In Kolkata, India,2000 norms (Euro-I) have been applicable from November 1999. Bharat Stage-II norms for new four-wheeler private noncommercial vehicles were introduced in Mumbai from January 2001; Kolkata, in July 2001; and Chennai, in October 2004. Starting 2003, only Bharat Stage-II emissions norms-compliant all new vehicles (except two- and three-wheelers) were registered in Hyderabad, Secunderabad, Bangalore, Ahmedabad, Kanpur, Agra, and Surat. Only those taxis that meet Bharat Stage-II norms are being registered in Delhi

Cleaner fuel quality. Fuel quality specifications have been laid down by the Bureau of Indian Standards for gasoline and diesel for the period 2000–2005 and beyond 2005 for the country. Given the increased usage of diesel in India, it becomes necessary to reduce its sulfur content. In a directive by the Supreme Court, the Ministry of Petroleum and Natural Gas is to supply diesel with 0.05% mm sulphur to NCT by 31 December 2000 and the entire NCR from 30 June 2001. For gasoline, lead was phased out in the entire country from 5 February 2000. Similarly, the benzene content was reduced; and by 2001, gasoline with 1% benzene was supplied to the whole of NCR.

Inspection and maintenance (I&M). The first and most important step toward emission control for the large inuse, fleet of vehicles is the formulation of an I&M system. It is possible to reduce 30–40% emission loads generated by vehicles through proper periodical inspections and maintenance of vehicles.

Alternative fuels. All government vehicles were required to fit CNG kits or catalytic converters in December 1996. Customs duty on CNG kit has been exempted for promotion of CNG vehicles. India has about 248,000 natural gas vehicles (including 207,000 classified as cars and light-duty vehicles) and 10,146 buses. It is also estimated that 127,000 vehicles are natural gas three-wheelers and most probably included in the light-duty vehicle classification. The country has 198 natural gas refueling stations. Emission norms for CNG/LPG vehicles and for diesel vehicles fitted with LPG engines were made effective from May 2001.

Tax measures. In addition to various taxes related to motor vehicle procurement and operations, the Government of Tamil Nadu introduced an additional Green Tax (Hindu Business Line 2003) on all classes of old motor vehicles to discourage the use of old vehicles from March 2003. The tax payments are levied for motorcycles (Rs500 for 5 years), other motor vehicle types (Rs1,000 for 5 years), and for motor vehicles with longer than 7 years of registration (Rs500 per annum).

Other measures. Other measures include bans on commercial vehicles more than 15 years old, a ban on the registration of new auto-rickshaws with front engine, replacement of all pre- 1990 autos and taxis with new vehicles using clean fuel; and all buses in Delhi to switch to CNG instead of diesel by March 2001

Phase-out of old vehicles. India has number of very old and polluting vehicles. In Delhi, commercial vehicles that are more than 15 years old have been phased out with effect from December 1998 Buses that are 8 years or more have also been phased out The replacement of pre-1990 and conversion of post- 1990 auto-rickshaws and taxis to clean fuels is in progress in the capital.

Public transport system. The number of buses has been increased to discourage the use of private vehicles

i ... *ADB, 2006*

6.48 Rapid urbanization, industrialization and population growth have led to an increase in number of automobiles that cause air pollution. It is estimated that road traffic contributes 60% of air pollution in urban areas. A case by case assessment is required to predict the air quality in urban situations, so as to evolve certain traffic management measures to maintain the air quality levels within the tolerable limits Calicut city in Kerala, was chosen as the study area Carbon Monoxide (CO) concentration was monitored at 15 links in Calicut city and air quality performance was evaluated over each link. The CO pollutant concentration values were compared with the National Ambient Air Quality Standards (NAAQS), and the CO values were predicted by using CALINE4 and IITLS and Linear regression models. Conclusions of the study are given in Box 6.9

Box 6.9

Modelling Ambient Carbon Monoxide Pollutant due to traffic in Calicut City

- CO pollutant concentration is found to increase with the number of four wheeler, three wheeler and two wheeler. But CO concentration is found to increase more with number of three wheelers than other type of vehicles.
- CO pollutant concentration is increasing with decreasing speeds of the vehicles. The reason is that vehicles will spend more time in traffic stream.
- A comparatively high value of R2 was observed between q/u and the CO concentrations indicating that concentration of vehicles on the links is positively correlated to the carbon monoxide concentration.
- Linear regression model is performing better than the CALINE4 and IITLS models This indicates that models have to be modified including other variables.
- Ambient air quality performance is estimated over 15 links. The estimations have revealed that air quality is good at 2 links, fair at 6 links and poor at 7 links.
- Maximum 1 hour average CO concentration value is calculated over each link. In seven links CO concentration is exceeding NAAQS and remaining links CO is below 4.0 ppm.
- The model developed for predicting CO concentration is useful to develop traffic control measures and environmental capacity standards for urban roads.

Source : Proceedings of the World Academy of Science, Engineering and Technology, December 2006

6.49 Disaster risk arises when hydro meteorological, geological and other hazards interact with physical, social, economic and environmental vulnerabilities. Events of hydro meteorological origin constitute majority of disasters. Despite the growing understanding and acceptance of the importance of disaster risk reduction and increased disaster response capacities, disasters and in particular the management and reduction of work continue to pose a global challenge.

National Disaster Management Authority

6.50 On 23 December 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers, to spearhead and implement a holistic and integrated approach to Disaster Management in India NDMA as the apex body is mandated to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters.

6.51 Kerala has become the first state to have a Disaster Management Authority . The Kerala Disaster Management Authority was formed as stipulated in the National Disaster Management Authority Act of 2005 with the Chief Minister as chairman and the Revenue Minister as vice-chairman. It has an advisory and an executive committee. Formulation of a state policy, identification of disaster-prone areas and planning of disaster management programmes incorporating the services of various departments will come under the purview of the state executive committee. There will be district-level authorities under the state executive committee.

Environmental Sanitation

6.52 Sanitation is a crucial factor in human welfare and sustainable development The lack of adequate sanitation facilities has also led to severe health and environmental impact due to the presence of unhygienic conditions.

International Year of Sanitation -2008

6.53 The United Nations has announced 2008 as the International Year of Sanitation to accelerate the progress of 2.6 billion people world wide who are without proper sanitation facilities . Access to sanitation is deeply connected to virtually all the Millennium Development Goals in particular those involving the environment , education, gender equality and reduction of child mortality and poverty. If the current trend continues there will be 2 4 billion people without basic sanitation in 2015, with children continuing to pay the price in lost lives, missed schooling , in disease, malnutrition and poverty. Lack of toilets makes women and girls vulnerable to violence if they are forced to defecate only after nightfall and in secluded areas. The schools with decent toilet facilities enable children especially girls reaching puberty to remain in the education system. It is estimated that improved sanitation facilities could reduce diarrhea related deaths in young children by more than one-third. It has been estimated that investing approximately $ 10 billion per year can halve the proportion of people without basic sanitation by year 2015 and if sustained the same investment could provide basic sanitation to the entire world within one or two decades. This sum is less than 1 % of the world military spending in 2005 and 1/3rd of the estimated global spending on bottled water While funding needed for sanitation is not

overwhelmingly large, the return on that investment is potentially great (Source : United Nations, 2007)

6.54 The quantity of sewage from cities in India is increasing significantly but only 10% of these are treated The remaining untreated sewage from the urban areas finds its way into water bodies, making the water contaminated and unfit to drink or even to use for bathing and at the same time adversely affecting the ecosystem.

Sanitation Coverage

6.55 Kerala has the largest coverage of individual household latrines in India. Out of the 65.95 lakh households in the State 57.17 lakh (86 per cent) have sanitary latrine facilities.Though the sanitation coverage is relatively high , there is general lack of awareness on the potential health risks from unhygienic latrine, (which is estimated to account for over 60 per cent of the total household latrines) when located close to unprotected open dug well drinking water sources as well as open defecations by children.

6.56 Safe drinking water and better sanitation are essential requisites for healthy and sustainable life for human beings. In spite of many initiatives to provide protected water supply, the rural section depend on open dug wells or other ground resources. Preliminary investigations suggested that single pit/double pit latrines and even septic tanks are not safe enough to prevent contamination of open well. A study was conducted by the CWRDM to examine the bacterial contamination in drinking water wells in rural Kerala by selecting a total 936 sites distributed in the 13 Agro ecological zones across the state. The salient findings of the study are given in Box 6.10

Box 6.10

Study for assessing the risk to ground water from on-site sanitation in rural Kerala

- Wide variations in the level of faecal coliforms and faecal streptococci were observed both spacially and temporally. During the period of observation (2005) faecal coliforms ranged from 1 to 240000 MPN/100 ml and faecal streptococci ranged from 1 to 110000 MPN /100 ml of the water sample. High level of contamination of >10000 MPN was recorded for both Faecal Coliforms (FC) and Faecal Streptococci (FS) to the tune of 3.9 and 2.6 % of the samples analysed respectively. High values of the order MPN> 1000 were observed for over 19 % and 17 % of the samples for FC and FS respectively.
- Overall results indicated around 82 % of the samples showed E.coli positive. Presence of E. coli indicates the recent contamination.
- Seasonal trends indicated that 85.9 % , 82.6 % and 77. % of the observation wells revealed the presence of E. coli during monsoon, pre- monsoon and post monsoon seasons respectively.
- Wells with parapet walls (no platform) have a highly significant reduction in contamination compared to open wells.
- Distance between wells and latrines are highly significant and reduction in contamination level increases with distance in the case of FC.
- The wells near the double pit latrines and septic tanks exhibited lower levels of FS than wells near single pit latrines.
- In case of both FC and FS, turbidity level and pH appear to increase the levels of FS

contamination.

- Sanitary survey results indicated that only inadequate drainage at the site in which water stagnates near a well contributes significantly.
- Higher population density in Grama Panchayaths was observed to increase the FC level.

Source : CWRDM, 2007

Community Perceptions and Local Government Initiatives

6.57 Sanitation is one of the subjects that has been transferred to the local governments at the cutting edge level, as part of the decentralization process. This has paved the way for improving the level of community participation in sanitation related services.

6.58 In the Ninth Plan about 300 Grama Panchayats gave top priority to sanitation and 50 of them achieved the goal of more than 95 per cent coverage of the household sanitary latrines. During the Ninth Plan about 5.71 lakhs household sanitary latrines were constructed under decentralized plan which is much more than the total achievement in the past 15 years through different governmental programmes. During the Tenth Five Year Plan, nearly 5.70 lakh house hold latrines was constructed Table -6.7.

Table 6.7
No. of Household Latrines constructed by Local Governments during Xth Plan

Year	GP	SCP	TSP	EFC	Total
2002-03	56466	8946	1609	9335	76439
2003-04	130525	21883	2262	20019	174689
2004-05	43546	11167	1009	13205	68927
2005-06	**76453**	**9716**	**394**	-	**86563**
2006-07	**42467**	-	-	**121658**	**164125**

Source : Dept. of LSG, Govt. of Kerala, 2007
Abbreviations : GP . General Plan, SCP · Special Component Plan
TSP: Tribal Sub Plan, EFC. Eleventh Finance Commission

School Sanitation

6.59 Conceptually school sanitation recognizes the potentialities of the child as a change agent more respective to new ideas. The present status of schools with sanitation and drinking water facilities is given in Table -6.8 The TSC and Sarva Siksha Abhiyan (S.S.A) have provision for construction of school toilet. Apart from this, hygiene education is also an integral component of school sanitation for which school health clubs are formed

Table 6.8
District wise Details of Government Schools having Drinking Water/latrines/urinal Facilities in Kerala 2006-07

Sl. No.	District	No. of Govt. Schools				No. of Schools having							
						Drinking Water				Urinals/Latrines			
		L.P	U.P	HS	Total	L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5		6	7	8	9	10	11	12	13
1.	Thiruvanan thapuram	299	98	119	516	295	91	117	503	286	90	119	495
2.	Kollam	268	62	76	406	258	134	76	468	259	56	75	391
3.	Pathanam Thitta	168	42	48	258	168	42	48	258	166	42	48	256
4	Alappuzha	92	67	58	217	183	63	58	304	178	62	58	298
5	Kottayam	69	67	60	296	153	62	54	269	153	67	55	275
6.	Idukki	85	40	56	181	73	37	56	166	77	39	56	172
7.	Ernakulam	181	91	87	359	176	90	87	353	180	89	87	356
8.	Thrissur	115	55	80	250	105	54	79	238	106	53	79	238
9.	Palakkad	194	63	61	318	171	61	61	293	175	62	61	198
10	Malappuram	350	113	82	545	331	110	82	523	334	112	82	528
11	Kozhikode	181	74	69	324	165	74	69	308	160	74	69	303
12.	Wayanad	91	34	40	165	81	33	38	52	88	32	40	160
13.	Kannur	114	76	83	273	101	75	83	259	100	75	83	258
14	Kasaragod	141	72	77	290	136	71	74	281	136	72	74	282
	Total	2548	954	996	4498	2396	997	982	4375	2398	925	987	4310

Source: Directorate of Public Instructions, Thiruvananthapuram, 2007

Solid Waste Management

6.60 In the light of the Supreme Court Judgment, Government of India had notified comprehensive rules for Municipal Solid Waste Management. As per Supreme Court directive local governments having a population above one million are required to set up waste processing and disposal facilities before 31/12/2003 as part of implementing solid waste management system in urban areas.

6.61 Urban solid waste is presently being disposed of unscientifically by dumping it in disposal yards. Such operation of open dumping results in unpleasant odour and air pollution; generation of leachate polluting ground water and surface water; and fly and mosquito breeding.

Clean Kerala Mission

6.62 Inadequate solid waste management resulting in environmental and ground water pollution and uncontrolled breeding of mosquitoes, flies and rodents has been the cause of the outbreak of many communicable diseases in the State. Most of the urban local bodies in the State are beset with acute problems related to solid waste management with no solution in sight. As per the Supreme Court directive, all urban local bodies are required to set up waste processing and disposal facilities before December 31, 2003..

6.63 The local self-government institutions (LSGIs) have the primary responsibility for implementing integrated solid waste management systems in urban areas. The Clean Kerala Mission is acting as a nodal agency of the state providing technical support and financial assistance for the effective implementation of solid waste management system . Accordingly 55 LSG I's have been identified for setting up solid waste processing facility and sanitary landfill.

The present status of land availability with the Urban Local Bodies (ULB) for Solid Waste Management is as follows

No of ULB's with land - 55
No of ULB's without land for SWM - 3
Total - **58**

6.64 Thirty Grama Panchayaths submitted proposal for solid waste management system. The Clean Kerala Mission evaluated the proposal and given approval for Rs. 784.75 lakhs with mission support of Rs. 248.20 lakhs.

The physical achievements of solid waste processing plants under different LSG's (2007) are given in Table -6.9

Table 6.9
Physical Achievements of solid waste processing plants under LSG's (2007)

Sl.No	LSG's which completed solid waste processing plants	LSG's whose Solid Waste Processing Plants are nearing completion.
1	Thiruvananthapuram Corporation	Adoor municipality
2	Kozhikkode Corporation	South Paravoor Municipality
3	Thrissur	Kanjangade municipality
4	Malappuram Municipality	Kuthuparambu municipality
5	Palakkad municipality	Alappuzha municipality
6	Attingal municipality	Manjeswaram Municipality
7	Mattannur municipality	Nileswaram Grama Panchayat
8	Koyilandy municipality	Nadapuram Grama Panchayat
9	Manjeri municipality	Keezhoor Chavassery grama Panchayat
10	North Paravoor municipality	
11	Chalakkudy municipality	
12	Perinthalmanna municipality	
13	Vaikkom municipality	
14	Payyannur municipality	
15	Kottayam municipality	
16	Punalur municipality	
17	Changanassery Municipality	
18	Pala municipality	
19	Mangalpady Grama Panchayath	
20	Kattappana Grama Panchayath	
21	Ajanoor Grama Panchayath	
22	Pattambi Grama Panchayath	

Source : Clean Kerala Mission, 2007

Bio Medical Waste

6.65 About 85% waste generated in hospitals is general waste and can be handled as other solid wastes. The remaining 15% constitutes infectious and toxic wastes. Table -6.10 More often than not, the general wastes in hospitals and bio medical wastes are allowed to mix thereby rendering the general waste also toxic and hazardous.

Table 6.10
Type of Waste (%)

1	Infectious Waste	10
2	Toxic Waste	5
3.	General Waste	85

Source: State Pollution Control Board

6.66 About 26% of total health care institutions in India are located in Kerala and the total quantity of biomedical waste generated and handled in the State is about 82724 tons/year. The quantity of recyclable hazardous waste is 10725 tons/year, incinerable hazardous waste is 10725 tons/year, incinerable hazardous waste 2596 tons/year and for land disposal is 60538 ton/year. About 1.5 lakhs ton/day of solid waste is being generated from the hospitals and other health care establishments (State of Environment Report, 2005)

6.67 Minimum required facilities to be installed in a hospital for biomedical waste treatment include one Incinerator, one Autoclave and one Shredder. According to a rough cost estimate each hospital may have to make a capital investment of Rs.10 lakhs for acquiring these facilities. Therefore, installation of Common Treatment Facility for a given consortium of hospitals appears to be a more viable option. In a 5,000 bedded hospital, 7.5 MT of waste is generated per day. Out of this 1.25 MT would be bio-medical waste. The estimated capital cost for establishing a common treatment facility for bio medical waste generated from 5,000 hospital beds comes to Rs. 50 lakh. The annual O&M cost will come to Rs. 30 lakhs.

E-Waste Management

6.68 E-waste consists of wastes generated from used electronic devices and house hold appliances which are not fit for their original intended use and are destined for recovery, recycling or disposal . Such wastes encompasses a large number of electrical and electronic devices such as computers, cellular phones , personal stereos, including large house hold appliances such as refrigerators , air conditioners etc. E-wastes contain over 1000 different substances many of which are toxic and potentially toxic to environment and human health if these are not handled in an environmentally sound manner.

6.69 The electronics industry has emerged as the fastest growing segment of Indian industry both in terms of production and exports. The share of software services in electronics and IT sector has gone up from 38.7 per cent in 1998-99 to 61.8 percent in 2003-04. In 2005-06, India had an installed base of 4.64 million desktops, about 431thousand notebooks and 89 thousand servers. The e-waste inventory based on this obsolescence rate and installed base in India for the year 2005 has been estimated to be 146180.00 tonnes. This is expected to exceed 8,00,000 tonnes by 2012. (Source : Third Draft of guidelines for environmentally sound management of E- waste, CPCB, 2007)

6.70 Sixty-five cities in India generate more than 60% of the total e-waste generated in India. Ten states generate 70% of the total e-waste generated in India. Maharashtra ranks first followed by Tamil Nadu, Andhra Pradesh, Uttar Pradesh, West Bengal, Delhi, Karnataka, Gujarat, Madhya Pradesh and Punjab in the list of e-waste generating states in India Among top ten cities generating e-waste, Mumbai ranks first followed by Delhi, Bangalore, Chennai, Kolkata, Ahmedabad, Hyderabad, Pune, Surat and Nagpur. There are two small e-waste dismantling facilities functioning in Chennai and Bangalore. There is no large scale organized e-waste recycling facility in India and the entire recycling exists in unorganized sector (Source : CPCB)

Towards a cleaner environment

6.71 Institutions involved with environmental governance and protection are to be strengthened in the state. More co ordination with implementing agencies as well as linkage with local governments would go a long way in achieving the desired results For achieving this goal, the Govt. of Kerala has formed a separate Department of Environment in February 2006. Environmental activities being implemented through various departments/agencies have been brought under this department as a part of functional Co-ordination. An environment management agency has also been created in 2007 to support the Department. Even though environmental education is included as part of school curriculum, more topics related to the State have to be included. Environmental education has also to be made a compulsory topic in teacher training programmes Environmental journalism is also needs strengthening with much focus given in media coverage.

6.72 Environmentally sensitive zones requiring special conservation efforts in the state to be identified and legal status has to be given for conservation. Area development plans prepared on a scientific basis with adequate participation by the local communities and LSGs will help in sustainable conservation. The District Environmental atlas needs to be prepared in a phased manner. The Environment Impact Assessment is another area to be given added focus in development projects.

Soil And Water Conservation

6.73 For the last three decades NGOs and development agencies have implemented watershed management projects with the aim of increasing agricultural productivity and reducing poverty. Many of the watershed management projects throughout the world have not taken into account land use capability. They have centred on activities mostly at plot level and do not add upto transformation at catchment level. Additionally they have been top down and have not accommodated the interests of resource users. In order to make a meaningful difference, local people have to be directly involved, trusted and enabled their knowledge appreciated and their skills used.

6.74 A number of schemes on rainwater harvesting and watershed management are implemented by various Ministries with different guidelines, like NWDPRA, Hariyali, WGDP, River valley projects etc. There are many issues of inter Ministerial Coordination, commonality of approach, provision of support services, which need to be resolved to give a greater thrust to water harvesting and conservation

6.75 The projects under RIDF I and RIDF II and RIDF III were completed. Under RIDF IV & V, there were no schemes for soil conservation department. The department is now implementing RIDF VII , VIII, IX , X ,XI and XI schemes . Under RIDF VI, 20 projects were sanctioned with an outlay of Rs. 1021.87 lakhs and 40 watersheds were sanctioned under RIDF

VII with an outlay of Rs. 1779.32 lakhs covering an area of 13694 ha. Similarly under RIDF VIII, 12 schemes were sanctioned with a financial outlay of Rs. 647.40 lakhs for covering an area of 5175 ha. Under RIDF IX, 7 projects were sanctioned with an outlay of Rs 403.47 lakhs for covering an area of 2859 hectares 51 projects having a project cost of Rs 2973.5 lakhs were sanctioned under RIDF X for covering an area of 28537 hectares. Under RIDF XI 3 projects were sanctioned for covering an area of 1200 ha with a project cost of 248.73 lakhs. Under RIDF XII, 25 projects have been sanctioned with a project cost of 1858.29 lakhs to cover an area of 9895 ha. During the year 2006-07 an area of 27004.24 ha. was brought under various soil and water conservation measures under both state sector and central sector schemes, spending an amount of Rs. 2511.41 lakhs. Details regarding RIDF projects are given in Table -6.11

Table -6.11
RIDF assisted Soil and Water Conservation Programmes

RIDF Phase	Period	No. of Watershed			Project cost (Rs. lakhs)	Project Area (Ha)	Cumulative Achievement	
		Sanctioned	dropped	Completed/ ongoing			Physical (Ha)	Financial (Rs. lakhs)
RIDF I	1995-97	40	3	37	1013.25	5902	5716	996.09
RIDF II	1996-99	32	6	26	1292.99	8725	7859	1087.45
RIDF III	1998-02	40	3	37	2161.50	13423	10890	1845.07
RIDF VI	2000-03	20	-	20	1021.87	6220	4627.5	845.53
RIDF VII	2002-04	40		40	1779.32	13694	9647	1593.6
RIDF VIII	2002-05	12	-	12	647.40	5175	3900	455.05
RIDF IX	2004-06	8	-	-	403.47	2859	1473	199.72
RIDF X	2004-07	51	-	-	3552.21	28537	12785	1964.09
RIDF XI	2006-08	3	-	-	248.73	1200	0	0
RIDF XII	2006-09	25	-	-	1858.29	9895	36	14.2

6.76 Other important state sector schemes implemented during 2006-07 were the protection of catchment of reservoirs of water supply schemes and stabilisation of land slide areas Sedimentation of reservoirs is a serious problem posing a threat to the life of the reservoir and its storage capacity. Sedimentation is caused due to soil erosion and improper land use in the catchment area. With a view to reduce siltation of the reservoirs of water supply schemes, various soil conservation measures are taken up in the catchment of reservoirs of Aruvikkara and Sasthamcotta . During 2006-07, soil and water conservation measures were implemented at a cost of Rs.9.52 lakhs covering an area of 39.79 ha in Aruvikkara and Sasthamcottah

6.77 Stabilization of land slide areas scheme is being taken up by the state considering the frequent landslide occurring in different districts of the State. During 2006-07,under this project, Rs. 11.5 lakh has been utilised for taking up scientific soil conservation measures in 59 ha. area affected by landslide in Idukki and Pathanamthitta Districts in the State.

6.78 Under the National Watershed Development Project for Rainfed Areas (NWDPRA), 30 watersheds have been identified in the State during Tenth Plan period with an effective area of 72032 ha. The District Watershed Committee and Watershed Development Team were constituted and Project Implementing Agencies and Nodal Agencies were identified in all districts. During 2006-07 an amount of Rs.1313.63 lakhs was expended under the project for treating an area of 21351 ha.

6.79 An integrated watershed management approach is being adopted in Kabini River valley project . Total catchment area of Kabini is 1.635 lakh ha of which 1.05 lakh ha needs soil and water conservation measures. An amount of Rs.1040 lakh has been spent upto 3/2006 for covering an area of 11597 ha. During the year 2006-07 the MOU allocation was Rs. 413.625 lakhs. The budget provision for the year was Rs. 375 lakhs out of which an amount of Rs. 162.34 lakhs has been expended for developing an area of 811.75 ha and construction of 684 structures generating 1 lakh man days for rural employment At present works are being implemented in 7 watersheds which has been classified under high priority by the All India Soil and Land use Survey.

Table -6.12
Progress of Soil Conservation Schemes during 2006-07

Sl.No	Sector	No.of schemes	Target		Achievement		% achievement
			Physical(Ha)	Financial (Lakhs.)	Physical(Ha)	Financial (Lakhs.)	
1	State Sector	6	10160	2047	4841.79	1035.44	51
2	Central Sector	2	22230	1770.32	22162.45	1475.97	83
3	Grand Total	8	32390	3817.32	27004.24	2511.41	66

6.80 The major schemes implemented under Western Ghats Development Programme (WGDP) include Integrated Development of watersheds in the Western Ghat region, Forestry based programmes, infrastructure development schemes for SC/ST development and Tribal Development under internal programmes NRM,PSM and Livelihood Support System. During the year 2006-07, Rs. 20.57 crores has been spent. The overall sectoral priority of investments under WGDP in the state are integrated Watershed Development-80%, Forestry -10% and other activities such as administration, Research training , monitoring and evaluation etc. 10%. The main focus of WGDP is integrated development of Watershed within the Western Ghat area keeping in view the overriding priorities of eco restoration and eco preservation. The watershed component is further allocated to Natural Resource Management, Production System Management and Livelihood Support System. During 2006-07 under natural resource management an amount of Rs. 1945.71 Lakh have been expended. Component wise Physical and financial achievements of WGDP for Natural Resource Management for 2006-07 are shown in Appendix-6.15

6.81 Kerala Land Development Corporation is implementing projects sanctioned under RIDF. The Thrissur Kole Development project and Eight Drainage and Flood Protection Projects and Onattukara Drainage and flood protection project were completed with an amount of Rs. 10.99 crores. Nine projects are now being implemented under RIDF VII-XII including the second phase of Onattukara Drainage and Flood Control Projects. Main objectives of the projects include the development of Punja lands of about 3418 ha spread over 52 large Padasekharam of Onattukara region, control of flood water entry to the Thrissur Kole lands, improvement and stabilization of paddy cultivation spread over Alappuzha and Ernakulam Districts through Pokkali land development projects.

The National Rainfed Area Authority

6.82 The dry land and rainfed areas constitute nearly 60% of the net sown area of the country. Agriculture in these areas is currently challenged with umpteen issues which is also home to the

poorest section of our population. Considering the importance of rainfed areas in Indian Agriculture, Govt. of India has established a National Rainfed Area Authority (NRAA) in November 2006. The NRAA is an advisory, policy making and monitoring body charged with a role of examining guidelines in various existing schemes and in the formation of new schemes including all externally aided projects in the rainfed areas. The authority is intended to support upgradation and management of dry land and rainfed agriculture in the country. The authority is also supposed to converge the various schemes being operated by different ministries in the area of watershed development. The NRAA has a two-tier structure of a Governing Board and Executive Committee which have representatives from Ministry of Agriculture, Rural Development, Water Resources, Environment & Forests, Planning Commission, Panchayati Raj and NABARD besides farmer representatives and eminent experts in related areas. The mandates of the authority include evolving common guidelines for all schemes under different ministries and preparing perspective plan outlining national strategy for holistic development of rainfed areas. In the state perspective, the authority is supposed to identify rainfed areas in different states which need priority attention and prepare watershed development programmes for integrated natural resource management in consultation with states. The gaps in input supply, credit availability and dissemination of appropriate technology relevant to rainfed areas will be identified by the authority. The evaluation of completed watersheds and concurrent evaluation of on going watershed programmes in different states will be performed by the authority.

The way ahead and future outlook of NRAA

6.83 Rainfed areas, which get more than 1,500 mm rainfall, have lots of unexploited underground water resources. Utilisation of ground water in states such as Orissa, WestBengal, Bihar, parts of Chhattisgarh and Andhra Pradesh will be key focus over the next few years. The region specific watershed programmes have to be developed as, we cannot have the same criteria for all rainfed regions. Even a state like Kerala faces drought-like situations if rainfall is less than 3,000 mm. This has an adverse impact on production of rubber and spices. There is a need to divert a portion of the population dependent on agriculture to areas like fisheries, agro-processing and horticulture. It is ironical that Orissa and Assam import fish from Andhra Pradesh for meeting domestic demands. Fisheries have a lot of potential in areas, which get good rainfall. It is quite clear that agriculture cannot sustain such a large mass of people in rainfed areas. The policy towards rainfed areas has to look beyond crop production and rainwater management. (Source : NRAA, 2007)

Forestry and Wild Life

Forest Cover

6.84 The total forest cover of the country as per State of Forest Report 2003 is 678333 sq.km which constitute 20.64 percent of the geographic area of the country. Of this 51285 sq.km (1.56%) is very dense forest, 339,279 sq.km (10.32 %) is moderately dense forest and 287769 sq.km (8.76 %) is open forest cover. The mangrove area in the country is 4461 sq.km (0.14% of country's geographic area). The forest cover of the country has remained between 19.5% to 20.5% in the last two decades.

6.85 The forest cover in the country according to 2001 assessment was 675538 sq.km. while the 2003 assessment showed an increase of 2795 sq.km (0.41 %). There is a decrease in dense forest cover to the tune of 26245 Sq.km (6.30%) and the open forest cover has increased by 29040 sq.km(11.22%)

6.86 Upto SFR 2001, any forest cover with a canopy density more than 40% was classified as Dense Forest (DF). SFR 2003 shows the forest cover with a canopy density over 70% as Very Dense Forest (VDF) and that with canopy density between 40 to 70% as Moderately Dense Forest (MDF). In SFR 2001 and 2003, forest cover has been taken as comprising all lands more than one hectare in area, with a tree canopy of more than 10 percent, irrespective of land use and ownership.

6.87 Kerala ranks 14th among all the States/Union Territories in respect of percentage of geographical area under forest cover. Madhya Pradesh with 76429 Sq.km of forest cover has the maximum forest cover amongst all states/UTs, followed by Arunachal pradesh (68019.Sq.km) and Chattisgarh (55,998 Sq.km). Kerala ranks 19th among all the States/Union Territories when the proportion of recorded forest area to its geographical area is considered. The forest cover of the state as per the 2003 assessment of FSI was 15577 sq.km. (dense forest 334 sq.km, moderate dense forest 9294 sq.km and open forest 5949 sq.km). It is 40.08 percent of State's geographical area and 0.47 percent of country's forest cover.

6.88 In Kerala Wayanad District has the maximum forest cover of 1677 sq.km and Alappuha District has the lowest forest cover of 21 sq.km. The district wise details of forest cover in Kerala is given in Table – 6.13

Table 6.13
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	2192	21	421	547	989	45.12
2	Kollam	2491	23	640	548	1211	48.62
3	Pathanamthitta	2642	0	1172	371	1543	58.40
4	Alappuzha	1414	0	4	17	21	1.49
5	Kottayam	2203	0	185	110	295	13.39
6	Idukki	5019	37	2442	1240	3719	74.10
7	Ernakulam	2407	5	228	232	465	19.32
8	Thrissur	3032	19	505	394	918	30.24
9	Palakkad	4480	55	823	693	1571	35.07
10	Malappuram	3550	69	494	650	1213	34.17
11	Kozhikode	2344	56	346	229	631	26.92
12	Wayanad	2131	13	1345	319	1677	78.70
13	Kannur	2966	36	424	293	753	25.39
14	Kasaragod	1992	0	265	306	571	28.66
	State	**38863**	**334**	**9294**	**5949**	**15577**	**40.08**

Source : FSI, 2003

6.89 The estimated forest area (provisional) in Kerala is 11278.2487 sq.km . This includes 9225.6522 sq.km. of reserve forests, 217.1891 sq.kms. of proposed reserves and 1835.4074 sq.km. of vested forests. Out of the total 11278.2487 sq. kms,. the effective forest area in Kerala is only 9400 sq.kms. Division wise details of forest cover are given in appendix - 6.17.

6.90 In Kerala forests fall in two bio-geographic zones of Western Ghats and the West Coast, and are rich in bio-diversity and vital for environmental protection and considered to be a repository of rare and endangered flora and fauna. The forest area in Kerala (11278.25 sq.km.) is 29 per cent of the geographical area of the state which is higher than the national average of 19.5%.

Natural Forest

6.91 The spatial distribution of forests in the State is very uneven, with high forest concentration in the high land of the Western Ghats, supplemented by a few forest areas in the midlands. There are considerable variations in forest type, the predominant three broad types being tropical moist deciduous forests from the plains to 750 MSL, tropical wet evergreen forests in the mountain ranges of the Ghats, and tropical semi-evergreen forests between these two types. These three types together cover most of the natural forest area (79 per cent). The coverage of the plantation forestry is to the extent of 19.30 per cent of the total area. The forests in Kerala are better stocked than forests in most other parts of India. The types of forests in Kerala are given in Table – 6.14

Table 6.14
Types of Forests in Kerala

Sl. No.	Forest Type	Area (Sq.km.)	% of Total area
1	Tropical Wet Evergreen and semi evergreen Forests	3299	35.10
2	Tropical Moist Deciduous Forests	4100	43.62
3	Tropical Dry Deciduous Forests	100	1.06
4	Mountain Sub Tropical Temperate shoals	70	0.74
5	Plantation	1814	19.30
6	Grass land	17	0.18
	Total	**9400**	**100**

Source: Department of Forest

6.92 Forest plantation constitutes the major source of raw materials to the forest based industries. The total area covered by forest plantation of various species is about 1.73 lakh ha. Teak is the major species planted 75767 ha (43.8 %) followed by Eucalyptus 14274 ha (8.3 %). Of the total forest plantations, the area covered by hard wood spices is 78729 ha (45.5%), Softwood species is 28832 ha (16.7%), Bamboo and reeds is 5912 ha (3.4 %), Plantation crops is 1712 ha (1 %) and mixed plantation is 57682 ha (33.4 %) (Appendix – 6.18).

6.93 Major forest produce includes timber, reeds, bamboo and firewood. The quantity of timber produced in 2006-07 was 32058.8 cum (round log). The number of bamboos and reeds produced were 1.29 lakh and 213.86 lakh respectively. These are species which can be promoted under farm forestry with people's participation. The trend in production of forest produces from 1998-99 onwards is shown in Appendix 6.19

6.94 The Ministry of Environment and Forests has constituted the National Forest Commission on 7.2.2003 for a period of two years to review the working of Forests and Wildlife sector covering existing policy and legal framework, current status of forest administration, policy option for sustainable forest and wildlife management, biodiversity conservation, and

establishing partnership and interface between forestry management and local communities including tribes. The Commission has submitted the report during 2006.

6.95 Planning Commission, Government of India, has set up a steering committee on Environment, Forests and Wild life and Animal Welfare for the Eleventh Five Year Plan. The major recommendation of the steering committee for forests and wild life sector is given in Box: 6.11

Box 6.11
Recommendation of the Steering Committee on the Forest Sector

- Increasing green cover and strengthening participatory process.
- Increase the forest and tree cover by 5 percentage points
- Strengthen the traditional wildlife conservation efforts in the form of support for habitat and infrastructure development.
- Participatory process to be strengthened by ensuring legal, social and economic empowerment of community organizations in order to facilitate considered decisions on planning, practicing and utilizing the forest in their vicinity.
- Forest establishment generates a shelf of afforestation/ eco restoration programmes for the village communities for implementation of the National Rural Employment Guarantee Programme.
- Improving Management Planning and Survey (land records)
- Setting up of a public domain forest land information system in each state.
- The programme for eco restoration of common lands can be linked to NREGA for augmenting the ecological resource base.
- Specific thrust for developing technologies and processes for agro forestry and social forestry.
- Setting up of biodiversity management committees at the local level and supporting.
- Develop expertise in the field of forestry and wildlife management as well as to create awareness among the personal of other services and all other stake holders who directly or indirectly influence the development and management of forests and wild life eco-systems

Source : Report of the steering committee on the Environment and forest sector for the Eleventh Five Year Plan, Planning Commission, Government of India.

6.96 The forest policy of the state is guided by the 1988 National Forest Policy. In Kerala the strategies adopted for the development of forests envisages maintenance of environmental stability through preservation and reduction of degraded forests, conservation of bio-diversity, increasing productivity of forest, increasing substantially the forest cover through massive afforestation and developing participatory forest management. The Forest Management Policy of the state encompasses technology improvement, bio-diversity conservation and development of partnership with the forest dependent communities and fringe dwellers. Special thrust is also given for protecting species of plants and animals.

6.97 The forests of Kerala have been managed following National Forest Policy. The National Forestry Commission has also recently recommended that each State shall have it own forest policy statement for the sustainable management of its forest and wild life resources. Preliminary attempts to formulate state's own Forest Policy were made during 1987 and 1998 and the orders were partly implemented resulting in some of the historical and landmark decisions such as stopping of selection felling in natural forests, removal of subsidy for the supply of raw materials

to industries, liberalisation of transit regime etc. A comprehensive state forest policy to address the specific problems and issues related to the conservation of forests and biodiversity of the state as well as the livelihood needs of the forest development communities has been formulated during 2007. The highlights of the Draft State Forest Policy 2007 is given in Box 6.12

Box 6.12
Highlights of the Draft State Forest Policy 2007

- The Western Ghats represents the remarkable bio-diversity and genetic resources of the state which will be maintained, conserved and augmented.
- Conservation of soil and water in the catchments of rivers, streams, lakes and reservoirs will be accorded top priority for mitigating land-slides, floods, droughts, siltation of reservoirs and for supporting the associated agricultural activities.
- Forest Protection will be given prime importance.
- Diversion of forestlands for non-forestry purposes will be done only as per the provisions of Forest Conservation Act
- Illicit brewing and Ganja Cultivation in forest areas will be stopped.
- Forest department will closely associate with the other departments both at state and district level in developing welfare programmes for tribals and other forest dwelling communities and outreach functions.
- All the forest divisions will be managed by approved working plans/management plans.
- Involvement of women will be encouraged in all activities of the Forest Department to improve their economic & social conditions and ultimately to minimize the pressure on forests.
- Eco-tourism will be promoted through people's participation without damaging the ecological status of the forests, for the benefits of the local communities.
- Intellectual property rights of the State, especially of the tribals will be protected
- The intelligence cell of the department will be strengthened.
- Forest conservation will be developed
- Rights of Tribal will be protected.
- Resource budgeting mechanism will be designed and adopted for effective management.
- Critical ecosystems will be accorded total protection.
- The ban on clear felling and selection felling in the natural forests will continue. However, dead and wind fallen trees of commercially valuable timber species will be extracted wherever economically viable and ecologically feasible.
- Degraded forestlands will be rehabilitated through appropriate management interventions.
- All the plantations will be retained as plantations. In Protected Areas they will be managed as per approved Management Plans.
- The Revolving Funds for Teak and Pulpwood already established will be strengthened.

- With a view to increasing the tree cover in the State, innovative participative schemes like Theeravanam, Endemaram, Vazhoyorathanal etc. will be implemented. Farm forestry, Urban forestry and Homestead forestry will be encouraged by providing technical assistance, other inputs and marketing support. The scope of providing insurance cover to the forest trees in private lands will be explored.
- To encourage tree planting on private lands, felling and transport regulations will be liberalized, taking sufficient precautions to prevent indiscriminate felling of trees.
- The Social Forestry Wing will function as an effective interface with the public by organizing Forestry clubs, outreach programmes and publicity activities.
- People's nurseries of indigenous forest species will be encouraged through the District Forestry Extension and Information Centers (DFEIC)
- Agro-forestry and farm-forestry activities will be encouraged in homesteads, Non Reversable Forest (NRF) lands, home gardens and tribal settlements
- Grama Haritha Samithies (GHS) on the lines of Vana Samrakshana Samithies will be organized in areas outside the forests with a view to mobilizing the public in massive tree planting and production programmes.
- Urban forestry issues will be identified and addressed by developing suitable institutional arrangements.
- Protected Area Network will be rationalized and extended wherever required and strengthened.
- Efforts will be made to protect the migratory birds and to conserve their habitat.
- A buffer zone will be created to the Silent Valley National Park.
- Conservation of ecologically fragile areas will be supported.
- Ecological audit of sanctuaries will be conducted.
- Research activities being under taken by various wings of the forest department will be coordinated by the research wing.
- The department will prepare and implement a HRD Plan that will provide an enabling environment for improved performance.
- The collection and processing of Non-Timber Forest Produce will be streamlined so that benefits will flow to the tribals.
- Bamboos and reeds will be supplied to the traditional bamboo workers at concessional rates to encourage bamboo and reed based cottage industries. .
- Commercial timber production and its marketing strategy will be improved to meet both the domestic and industrial demand.
- Sandalwood harvesting and processing will be done by the State only.
- An afforestation-cum-development package for the coastal region will be developed.
- All wetlands which are recognized as Ramsar sites or other nationally/internationally recognized sites will be conserved and scientifically managed with the participation of people.
- The catchments of river systems in the forest area will be managed in integrated watershed approach for increasing sustainable water supply in downstream areas by appropriate interventions including forestry activities.
- A Mangrove Management Authority will be set up as a measure to strengthen protection to mangrove eco-systems.

- Recognizing that sacred groves are low elevation evergreen forests and the repositories of rich biodiversity, necessary financial and legal support to sacred grove managers or owners will be provided to protect *kavu* from encroachment, illegal biomass harvest, alienation, unscientific developmental programmes which are detrimental to associated biological diversity of *kavu*
- The eco-tourism activities will be regulated in such a way as to preserve the pristine original conditions of the eco-tourism destinations.
- The forest department will co-ordinate and enter into partnerships with the local self governments, to ensure maximum participation of the local people in forest management and to work for their development.

Source . Forest Department

Participatory Forest Management (PFM)

6.98 Joint Forest Management was introduced in India with the proclamation of National Forest Policy 1988. However, through a resolution in 1990, the scheme was actually introduced in all the states in India. In Kerala it is known as Participatory Forest Management. Under the scheme, the forest dependant communities are given rights to collect logs and of branches, non-timber forest produces etc.

6.99 Joint Forest Management (JFM) programme was pursued vigorously as the result of the National Forest Policy 1988, and the Joint Forest Management resolution in 1990 has now been adopted in all 28 states. Around 99868 JFM Committees have been formed and 214 lakh ha. forest area have been brought under JFM programme till 2006. About 138 lakh families are involved in JFM programme in various states all over the country. In Kerala 571 PFM Committees have been formed and 1.65 lakh ha. forest area has been brought under PFM. About 64000 families including 9823 SC's and 11279 ST's are involved in PFM programme in various forest divisions of Kerala. The execution, monitoring and evaluation of the micro plans are vested with the Vanasamrakshana samithies. So far 561 VSSs and 193 EDCs are formed during the last 5 year period. Government of Kerala constituted the FDA's in each forest division in 2002-03, with a view to guiding the activities of the VSS.

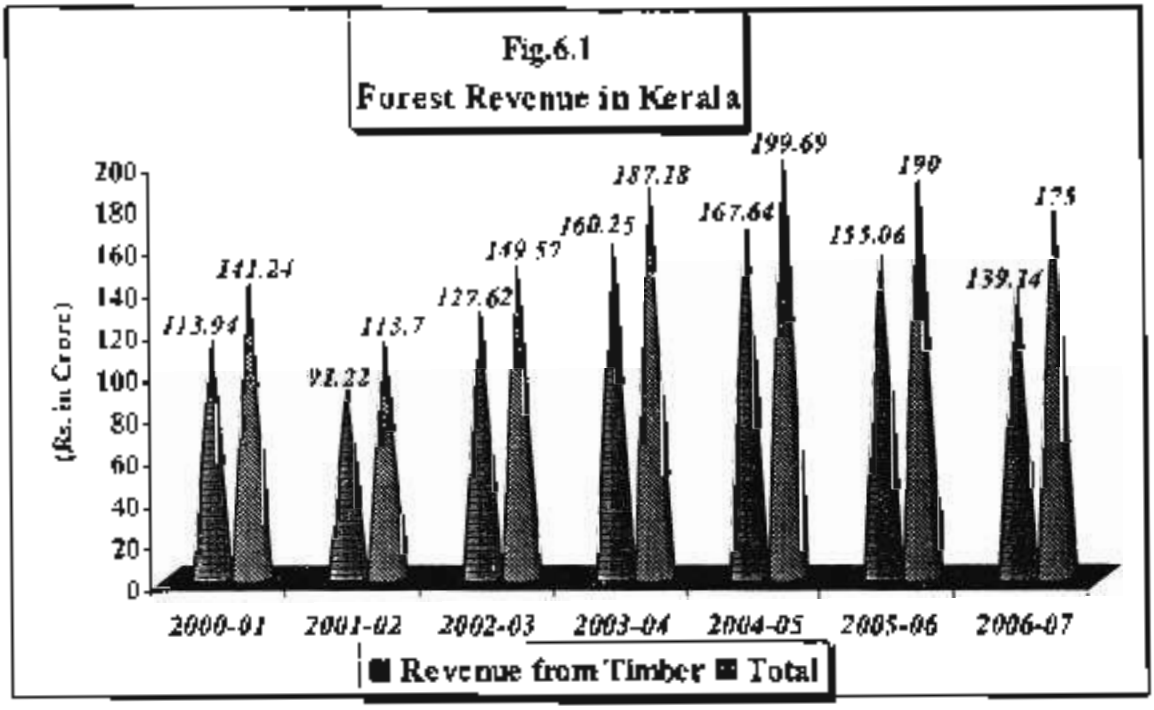
National Afforestation Programme

6.100 The total outlay for National Afforestation Programme in the plan period is Rs. 47.65 crores and later it is revised to Rs. 31.40 crore. The amount released to State was Rs. 10.55 crores and the expenditure reported was Rs. 6.05 crore. The project is being implemented by 24 Forest Development Agencies through Participatory Forest Management (PFM) mode with the active participation of stake holders forming Vana Samrakshana Samithies (VSSs).

Forest Revenue

6.101 The Revenue from the forestry sector by way of sale of timber and other forest products comes to Rs. 175 crores in 2006-07 as against Rs. 190 crores in 2005-06. Major portion of the forest revenue is from timber (Fig. 6.1). During 2006-07, Rs. 139.14 crore was the revenue from timber, which account for 79.51 per cent of the total forest revenue. The State Government have modified the policy of supplying raw materials at subsidised rates from 1999-00 onwards and

completely abolished the subsidy with effect from 30.09.2004. The increase in revenue attained through this measure is of the order of Rs. 10 00 crore per annum.



Wild life and Biosphere Reserve

6.102 The protected area net work in the country constitutes 605 protected areas spread over most biomes and encompassing a wide array of habitats. These protected areas consists of 96 National Parks and 509 Wild life Sanctuaries. The total areas covered under the special protection is 15.7 m ha, which is about 4.78 per cent of the geographical area of the country covering about 20 per cent of the total forest. The National parks and Sanctuaries of the country contribute significantly to the GDP of the country through various kinds of ecological services and benefits and through the tourism sector Of these, 28 have been declared tiger reserve, spread over 37,761 sq.km. in 17 states. These reserves constitute roughly 5 6 per cent of the recorded forest area and over one per cent of the country's geographical area. In all cases, PAs constitute whole or part of Tiger Reserves. The total tiger population recorded in 2001-02 census is 3642, but over half of these tigers live outside tiger reserves. The tiger population in periyar tiger reserve is estimated as 36 during 2001-02. The Periyar Wild life sanctuary was constituted in 1950 and was brought under project Tiger in 1978 as Periyar Tiger Reserve. The Periyar Tiger Reserve also falls in the Periyar Elephant Reserve. The types of forest include evergreen forests, grass land and moist deciduous forests. The total extend is 777 sq.km. consisting of core (350 sq.km), buffer (377 sq.km) and tourism (50 sq.km) zones. The animal found in the reserve are elephants, leopard, tiger, lion tailed macaque, nilgiri marten etc. in addition to the 45 species of reptiles.

6 103 The Centre considered the Periyar Tiger Reserve in Kerala as the best manged tiger reserve in the country, with the forest dwellers on its fringes actively assisting the official machinery in the conservation efforts. The Union Ministry of Environment and Forests has agreed in principle to Kerala's proposal for declaring the Parambikkulam Wild Life Sanctuary as a tiger Reserve

6.104 Government of Kerala declared the area around the Silent Valley National Park as a buffer zone The buffer zone comprises an area of 148 sq.km of forest land adjoining the park, providing protection to the regions rich and varied plant and animal life.

6.105 The Western Ghats represent one of the World's 18 hot spots of biodiversity as per Norman Meyer's classification (now the number of hot spots is raised to 34). There are more than 4500 species of flowering plants found in Kerala. The records of KFRI indicates that there are 145 species of mammals of which 14 species are endemic to Western Ghats, 169 species of fresh water species, 93 species of amphibians of which 40 species are endemic and 486 species of birds of which 16 are endemic to Western Ghats, in addition to innumerable micro-flora and fauna.

6.106 The area covered by five National Parks, fifteen Wild life sanctuaries coming under the category of protected areas in Kerala works out to 2452.48 sq.kms It is about 21.75 per cent of the total area under forest and 6.3 per cent of the total geographical area, which is higher than the national average of 5 per cent. Details are given in Appendix-6.20. During 2006, Kurinjimala-sanctuary was constituted and a fowl sanctuary named choolannur pea fowl sanctuary has established in 2007. With the formation of these sanctuaries, Government intended to ensure long term protection for the majestic vegetal sketch which contains many botanical rarities and novelties to science. Protected areas are managed now as showcases of bio diversity with predominance for large animals in habitat management, participatory management based on the principles of eco-development has been initiated and this strategy has resulted in the co-operation of the neighborhood communities and forest dependent communities During the year 2006-07, an amount of Rs. 1790 lakhs was earmarked under various schemes for protected areas management including bio diversity conservation. Out of which Rs. 1469.62 lakhs were utilised under various schemes including biodiversity conservation and eco – development

6.107 Biosphere Reserves are terrestrial and coastal ecosystems which are internationally recognised within the framework of UNESCO's Man and Biosphere programme. In the country, 13 Reserves have been set up and in 2001, UNESCO approved designating the Sunderban (West Bengal) and Gulf of Mannar Reserves As a result three Biosphere Reserves from India are now included in the International Net Work, the third being Nilgiri (Kerala, Karnataka and Tamil Nadu) which was designated earlier. Kerala has two bio-sphere reserves namely Nilagiri Bio-sphere Reserve with an area of 1455 sq kms constituted in 1986 and Agasthyamala biosphere reserve with an area of 1701 sq.kms constituted in 2002 Detailed action plans will facilitate attraction of additional funding for these sites for long term conservation and sustainable utilisation of resources.

6.108 The first National Wildlife Action Plan of 1983 has been revised and the new wild life Action Plan (2002-2016) has been adopted at the national level. The plan outlines the strategies, action points and priority projects for conservation of wild fauna and flora in the country. A systematic management of Protected Area is most important from ecological, environmental and socio economic point of view. The implementation of Management Action Plans prepared under the Kerala forestry Project is of special priority.

General Forestry

6.109 In General Forestry, Management of natural forests is one of the major programme . The major activities under this programme were survey of forest boundaries, forest protection and regeneration of denuded forests. Out of an estimated boundary area of 11220 kms, it is roughly

estimated that 3000 km of forest boundary are yet to be demarcated and fixed. The activities of boundary protection during 2006-07 include construction of 5420 cairns and maintenance of 1307 cairns and 12.50 kms of Kayyala formation. Fire protection is another important activity and during the period 3144 km fire lines were created. Under regeneration of denuded forests the activities conducted are planting 1231 ha new areas, maintenance of plantation 11100 ha, raising nurseries of different species, construction of new buildings (11 nos), maintenance of forest roads 7 kms, and under industrial raw materials planting 951 ha new areas and maintenance of 2530 ha. Under 'Hardwood' species 219 ha of hardwood species was raised and 176 ha was maintained during the year 2006-07.

6.110 The outlay and expenditure for various schemes implemented in the Forestry sub sector is shown in Table -6.15

Table 6.15
Outlay and Expenditure of 2005-06

(Rs. Lakh)

Plan	Budgeted outlay	Expenditure
State sector Schemes	4665.00	3715.94
Centrally sponsored Schemes	1950.00	1006.39
Total	6615.00	4722.33

6.111 The state plan expenditure reported for various state plan schemes implemented during the period include forest protection with an expenditure of Rs. 9 crore, regeneration of denuded forest with Rs. 1.90 crores, strengthening bio-diversity conservation and management of protected area with Rs. 5.66 crores, strengthening of infrastructure facilities with Rs. 0.89 crores, improving productivity of Plantation with 3.35 crores.

6.112 The World Bank aided Kerala Forestry Project was commenced in March 1998 and the project was completed on 31.12.2003. The total outlay of the project was Rs. 182.39 crore, out of which Rs 152 crore was IDA assistance, Rs. 29 crore GOK assistance and Rs. 1.39 crore is of beneficiary contribution During 2006-07, a provision of Rs. 235 lakh was set apart for continuing the activities under the project including Forest Management Information system and expended an amount of Rs. 206.27 lakhs. Upto 31.3.2007, the cumulative expenditure incurred for the project was in the tune of Rs. 172.07 crores

Management of Non-Wood Forest Produce

6.113 The NWFP harvested in Kerala is dominated by reeds and bamboos, but the forests are also rich in canes as well as forest fruits, seeds, leaves, roots and other produce collected as medicinal plants mainly used for preparing ayurvedic medicine as well as for edibles, spices and fiber products. The quantities of bamboo and reed annually harvested are at a level of 40-50 thousand tonnes of bamboo and 80-100 thousand tonnes of reeds.

6.114 The NWFPs including medicinal plants is being given a major thrust because of their importance around the world. The productivity and management of NWFPs are to be improved through sustainable and scientific management by adopting improved methods of harvesting processing, value addition and marketing.

6.115 In addition to the protection and conservation measures taken by the department, these activities are to be strengthened by executing the same through actual consumer groups themselves. For this purpose Vana Samrakshana Samithies (VSS) were formed. The collection of NWFPs is entrusted with these user groups and they undertake collection.

6.116 Under the scheme Management of NWFP, new NWFP species were planted at an area of 367 ha. Also maintenance of NWFP plantations of different species was done at an area of 1328 ha and nursery seedlings of different species of 158300 nos were also produced and supplied.

Compensatory Afforestation Scheme

6.117 The Compensatory afforestation project was sanctioned at an estimated cost of Rs.113.00 crores to be implemented within a period of 10 years starting from 1993-94. The objective of the scheme is the afforestation of 57,180 ha. of forestland in lieu of 28588 ha. lost by way of encroachment prior to 01.07.1977 which is a pre-condition for obtaining Government of India clearance for issuing patta to the encroached land. During 2006-07 an area of 4410 ha. were treated under the scheme and an amount of Rs. 360.75 lakh was spent. Afforestation of degraded forests has been carried out in 57051 ha under various programmes till 2006-07. The balance of 130 ha is to be treated during 2007-08

Kerala Forest Development Corporation

6.118 KFDC is a public sector undertaking with shares owned by Government of India and Government of Kerala. The jurisdiction of the Corporation covers forest areas situated in 7 revenue districts and 10 territorial forest divisions. The total area of 10717 ha. (8006.86 ha of tree plantations and 2710.13ha. cash crops) is under 6 divisions and 23 sub units and tree crops like Eucalyptus, Acacia, Teak, Albizia, etc. and cash crops like Cardamom, Coffee, Tea, Pepper etc. are cultivated.

6.119 The activities undertaken during 2006-07 include raising of 47 ha. pulpwood plantations and 146 ha. teak plantations. KFDC entered into an agreement with M/s Hindustan Newsprint Limited for the supply of pulpwood during 2006-07 and 11311 tonne at 50% moisture content was removed upto March 2007. Eco-Tourism activities being carried out at Gavi and Munnar Divisions and earned an income of Rs 46.66 lakh during 2006-07.

Sanjeevanivanam (National Medicinal Plants Board Assisted Scheme)

6.120 This is a scheme implemented for the creation of awareness among the stake holders through appropriate extension activities including training, extension, marketing and documentation sanctioned by the NMPB for Rs. 35 lakhs for 3 years starting from 2002-03. The awareness and training programmes for stake holders have been conducted on promotion and cultivation of medicinal plants. The total amount spent under the scheme works out to Rs. 31.84 lakh.

Project Elephant

6.121 Project Elephant presently covers 25 Elephant Reserves in 14 States spread over 61,200 sq km of National Parks/ Sanctuaries and areas used by Elephant outside. The scheme is for protection of elephants and their habitat and corridors. The elephants in the forests are protected from poaching and their habitats are improved with fire protection and planting fodder species. For the benefit of public electric fences and elephant proof trenches are created and compensation

is paid for the damages caused to their person and property. Public awareness programmes are conducted and mahouts are trained for better handling the elephants in captivity. The activities are executed as per the specific work programme approved by the Government of India.

Harithatheeram

6.122 The *harithatheeram Padhathi* is to raise bio-shields in convenient width along the coastal belt of Kerala where ever possible for providing vegetative barrier against tidal influx, sea erosion and high sea wind velocity. This programme has been formulated under Tsunami Relief Programme and it is a joint programme of Forest and Fisheries Department. The total projected cost is Rs. 179.96 crore and the outlay for forestry activities is Rs. 25.56 crore. The project is for three years from 2006-07 up to December 2009. Of the outlay, Rs. 9 crore is for acquisition of private mangrove areas. During the first two years, the available vacant lands in the coastal area has to be planted for creation of bio- shields and during the third year the land available after the rehabilitation of fishermen has to be planted. The preliminary activities of the programme have been started during 2006-07.

CHAPTER 7

ENERGY DEVELOPMENT

National Scenario

Energy is a basic requirement for all facets of our life, it is also a basic human need and is a critical infrastructure on which the Socio – economic development of the country relies. Colonial India got little attention and less benefit; fossil fuels such as petrol were scarce and expensive for people. In 1947, the nation's electricity supply came from a sparse collection of stations with a total installed capacity of 1360 MW. During the tenth five year plan, 41,000 MW of the new capacity was to have come up, but merely half that target was achieved, leaving the national grid about10 percent short of capacity. Census 2001 found that over 72 percent of households in the country used firewood, cowdung or farm waste to cook, leaving their kitchens smoky and unhealthy. Only 33 million had recourse to liquefied petroleum gas, the clean fuel

7.2 India's hydroelectric potential is estimated to be 84000 MW. At present, generation capacity is about 34,680 MW. If India can achieve the full potential of 84000 MW; it will generate about 400 million kwh, two percent of the desired total energy supply.

7.3 On the other side, India has abundant and cheap coal reserves and coal accounts for 53 percent of the present commercial energy supply. Therefore, coal remains to dominate the energy mix.

7.4 The nuclear power is a clean and non-polluting energy. In India, total installed capacity of the nuclear power is about 4120 MW, which contributes 3 percentage of the total installed capacity in India.

7.5 Total Installed Capacity of the Power Sector in India as on 30.11.2007 is depicted in the Table 7.1

Table 7.1
Total Installed Capacity in India

Sl.No.	Fuel	MW	Percentage
1	**Thermal**		
	(a) Coal	73492.38	53.2
	(b) Gas	14581.7[illegible]	10.1
	(c) Oil	1201.75	0.9
2	**Hydro**	34,680.76	25.2
3	**Nuclear**	4120.00	3.1
4	**Renewable**	10175.03	7.5
	Total	**138251.63**	**100**

Source: Ministry of Power: Government of India

7.6 The installed power generation capacity in the country has increased from 124271.97 MW as on 31.5.2006 to 138251.63 MW as on 30.11.2007 The capacity addition during the period was 13979.66 MW. Out of total Installed capacity of 138251.63 MW, a major chunk of the installed capacity in the power sector was from State sector. The contribution was 72,231.82 MW. This formed 52.3 percentage. Contribution of each sector to the national grid as on 30.11.2007 is shown in the table 7. 2.

Table 7.2
Sectoral Contribution

Sl. No.	Sector	MW	Percentage
1	State sector	72231.82	52.3
2	Central sector	47350.99	34.0
3	Private sector	18668.82	13.7
	Total	**138251.63**	**100.00**

Source: Ministry of Power, Government of India

Nuclear Energy Source

7.7 Uranium is an important raw material to develop the nuclear energy. In India, Uranium reserves are limited. What compounds the problem is that setting up heavy water plant, fast breeder rector and other equipments pertaining to the nuclear energy plant involve a lot of investment without adequate returns. In this context Koodankulam Atomic power station (2x1000MW) in Tamilnadu, is a major boon, mainly because Russia gives all technical support towards this project. If this project comes into force, 2000 MW of power can be added to the national grid. By 2020, India hopes to produce 20000 MW of nuclear power. This will be a meagre 7 percent of our aggregate installed capacity.

Energy Sector in Kerala

7.8 The need for equipping Kerala Power System to meet the demands of the expected explosive growth in the industrial sector is well recognized. The expected growth in modern areas like I T sector calls for increased quality and reliability of the system. The need of the hour is a quality improvement to meet the demands of the industrial field and match the modern consumer expectation. In Kerala, Kerala State Electricity Board (KSEB) is the sole organization to supply the power to different categories of the consumers. KSEB has a major role in setting of adequate generation capacity as well as transmission and distribution network. As per section 172(a) of the Electricity Act 2003, KSEB has been continuing as the State Transmission Utility (STU) and Distribution Licensee. KSEB aims at providing electricity for all at affordable price and meet the future demand during the Eleventh Plan period by developing Hydro Electric projects in the State and ensuring share from upcoming interstate projects. Integrated functioning of all the key sectors viz. Generation, Transmission and Distribution is imperative in this background.

Generation

7.9 Increasing the capacity of hydel generation by harnessing the untapped potential in the State without much disturbances to the forest and its bio-reservoirs is the key strategy adopted by the KSEB. Hydel energy being green energy and low cost one, the KSEB continues to concentrate on adding capacity of hydel generation.

7.10 There are 24 Hydel projects owned by KSEB and 2 by private agencies. The wind farm located at Kanjikkode with an installed capacity of 2.025 MW is the only one of its kind utilizing the non-conventional energy sources. The Brahmapuram and Kozhikode Thermal Power Plants with an installed capacity of 106.6 MW and 128 MW respectively uses LSHS as fuel and are owned by the KSEB.

7.11 The Kerala State Electricity Board has an installed capacity of 2087.23 MW on its own with another 570.016 MW contributed by NTPC and private sector producers taking the total installed capacity of State to 2657.25 MW.

7.12 The plants that are catering to the energy demands of the State are the Kayamkulam plant of NTPC with an installed capacity of 359.58 MW and the BSES, Kochi Plant with an installed capacity of 157.00 MW. The KPCL, Kasaragod with capacity of 20.44MW is the latest entrant in the Independent Power Project (IPP) segment of generation. The balance is met from import of power from the central sector.
Details of energy source and its installed capacity in Kerala are shown in the Table 7.3

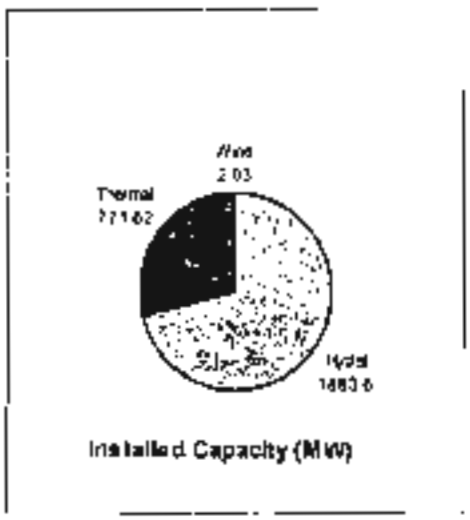
Table 7.3
Energy Source in Kerala as on 31.03.2007

Sl. No.	Source of Energy			Installed Capacity (MW)
1	Hydel	:	KSEB	1850.60
2	Thermal	:	KSEB	234.60
3	Wind	:	KSEB	2.03
4	NTPC			359.58
5	Thermal	:	IPP	177.44
6	Hydel	:	Captive	33.00
	Total			**2657.25**

Source:KSEB

7.13 Figure 7.1 also highlights total Installed Capacity in Kerala from hydel, thermal and wind.

Fig: 7.1



7.14 Total installed capacity went up by 0.49 percent to 2657.25 MW as on 31.3.2007, from 2644.25 MW in 31.3.2006. Only 13 MW of the power has been added in the Kerala grid, which was made possible through renovation and modernization of Neriamangalam and Sabarigiri hydroelectric projects. No other project has been commissioned during 2006 - 07. Many of the schemes initiated by KSEB, such as Kuttiar Diversion Scheme (37 MU), Kuttiadi Tail Race Scheme (3.75 MW), Kuttiadi Additional Extension Scheme (100 MW), Neriamangalam

Extension Scheme (25 MW) are progressing. these are expected to be commissioned in 2007 – 08 itself. Details of ongoing generation project and completed projects in Kerala are shown in Appendix 7.2 and 7.3 Projects in the pipeline are shown in the Table 7.4

Table 7.4
Projects in the pipeline

Sl No	Name of the Project	Installed Capacity(MW)	Energy Potential(MU)
1	Athirapally	163.00	233.00
2	Sengulam Augmentation		85.00
3	Sengulam Tailrace	3.60	12.57
4	Chathankottunada;II	6.00	14.67
5	Poozhithodu	4.80	10.97
6	Vilangad	7.50	22.63
7	Thoniar	40.00	99.00
8	Mankulam	40.00	82.00
9	Pasukkadavu	2.00	5.36
10	Maniyar tailrace	4.00	16.73
11	Perumthenaruvi	6.00	25.77

Source: KSEB

7.15 Once again nature has been kind enough to provide bountiful monsoon which helped the KSEB to generate more hydel power. The board could manage the power supply situation with higher quantum of cheaper hydropower. This also helped Board to earn substantial revenue by utilizing the features of the Availability Based Tariff (ABT) by generating more power during day peak periods thereby availing higher Tariff under Unscheduled Interchange (UI). With the strategic decision, Board also could sell excess power to the traders in the Central Public Sector. During the year peak demand reached 2742 MW and the normal demand reached 2034 MW. The year also witnessed the record consumption in a day viz. 47.81 MU on 23.3.2007 and record monthly consumption 1413.44 MU in March 2007. The increase in demand and consumption is a definite and encouraging indication of the things to come and KSEB is taking various measures such as tap hydel potential to the extent possible and avail power from Central Sector units to meet the increasing demand.

7.16 Share from Central Sector Power Stations is given in the Table 7.5

Table 7. 5
Share from Central Sector Power Stations

Sl. No.	Power Plant	Total Capacity in operation (MW)	Allocated Capacity to KSEB (MW)	Rate in Rs.
1	Talchar - II	2000	427.00	0.64
2	NLC II - Stage I	630	65.90	1.20
3	NLC II State II	840	93.83	1.20
4	NLC - Expansion	420	68.71	1 14
5	NTPC (RSTPS)	2100	260 40	1.04
6	NTPC (RSTPS) NCW	500	64.75	1.04
7	MAPS	340	23.89	1.98
8	KAIGA	440	41.32	3.01
	Total		**1048.80**	

Source: KSEB

7.17 Meanwhile, Government of India has unilaterally decided to cut down the State's share from the Central grid. This impedes KSEB's commitments to meet growing power requirement from peak and off peak seasons.

Coal Based Power Project

7.18 Baitarni West Coal block has been jointly allotted to Orissa Hydro Power Company (OHPC), KSEB and Gujarat Power Corporation Ltd (GPCL). MOU has been signed between the allottees on 12.11.2007 for the formation of SPV/Joint Venture Company for the development of mines and mining of coal from Baitarni West Coal Block. About 60.21 crore tonnes coal reserve has been identified at the proposed block and it can be utilized by these states. Kerala can also generate 1000 MW of power from this project. The growth of power system in Kerala is shown in Table 7.6

Table 7.6
Growth of Power System in Kerala

Particulars/ Year	2005	2006	2007(up to 31-08-2007)
Installed Capacity(MW)	2644	2657	2657
Annual Sales(MU)	10270	11331	4850
Per Capita Consumption (Kwh)	427*	465*	467#
EHT.Lines-Ctkm	10292	10399	10447
Sub Stations-Nos	256	271**	275**
HT-lines-Ctkm	34596	36415	36961
LT-Lines-Ctkm	217899	226128	229458
Distribution Transformers-Nos	37724	39872	40718
Revenue from Sale of Power – Rs.crore	3590.11	4286.13	1648.52

Source. KSEB

*Population based on 2001Census

**Includes 1no 400KV Pallippuram S/S of PGCIL

#Estimated value based on present consumption pattern

Power Purchase Agreement (PPA)

7.19 KSEB has signed Power Purchase Agreement (PPA) with National Thermal Power Corporation (NTPC) for State's share of electricity from the proposed second stage of the NTPC'S mega thermal power project at Simhadri in Andhra Pradesh. As per agreement Kerala will get 200 MW from Simhadri Coal based Power Project. The coal as a fuel and enjoying exemption from the excise duty and income tax under the union government's Mega Power Policy, would cost Kerala only about Rs. 2.50. The tenure of the agreement is 25 years.

7.20 On the otherhand, KSEB has made attempts to obtain power from the proposed Ultra Mega Power Projects (UMPP) for 1200 MW from Tadri (400 MW) in Karnataka, Akalthara (200MW) in Chattisgarh, Krishnapatnam (400 MW) in Andhrapradesh and Orissa (200 MW). But only a tentative allocation of 200 MW power from the prposed Tadri, Karnataka has been given to Kerala. Kerala has been allocated 300 MW from Tamilnadu UMPP.

7.21 The cost of power purchase and generation has been arrived at assuming a normal rainfall in 2007 – 08. During 2006 – 07, State has received sufficient rainfall. On account of good monsoon, the board has taken necessary steps to avoid spilling of dams and the Board could sell the additional power at competitive rates through M/s NTPC Vydyuth Vypar Nigam Ltd (NVVN) and Power Trading Corporation (PTC) Due to the high price of Naphtha & LSHS, KSEB has not been able to schedule full generation of energy from BSES Kochi, KPCL Kasaragode and NTPC Kayamkulam and from the KSEB'S own power stations BDPP and KDPP. However, considering the increase in peak load requirements and also for system reliability, the KSEB proposes to operate 40 MW from BDPP and 60 MW from KDPP during peak hours in 2007 – 08.The Ratio of Hydro – Thermal mix in Kerala is shown in Table: 7.7

Table 7.7

Hydro – Thermal Mix in Kerala from 2002 – 03 to 2006 – 07

Year	Hydel(MU)	Thermal(MU)+Import(MU)	Total(MU)	Hydel(%)	Thermal(%)
2002-03	4819	7932	12751	38%	62%
2003-04	3910	8545	12455	31%	69%
2004-05	6134	6314	12448	49%	51%
2005-06	7450	6169	13619	55%	45%
2006-07	7497	7301	14798	51%	49%

Source KSEB

7.22 According to the report on Seventeenth Electric Power Survey of India, Power requirement in Kerala is substantially increased every year. In the year 2006 – 07, 11147 million kwh of power has been utilized. It reveals that 8.5 percent of power additionally utilized during 2006 – 07 over the corresponding period of previous year. In the coming five years total utility will be hiked by 7 to 35 percentage. KSEB have already initiated steps for new power projects to meet growing power demand. Details of power consumption in Southern State are shown in the Table: 7.8

Table 7.8

Electrical Energy Consumption (in Million kwh)

Sl. No.	State	2004 - 05	2005 - 06	2006 – 07
1	Kerala	9360	10272	11147
2	Tamilnadu	41286	43780	46935
3	AP	37620	41246	45134
4	Karnataka	24781	26518	28747

Source: Seventeenth Electric Power Survey of India

Transmission

7.23 Transmission network in Kerala is connected to the Southern Region Transmission System through two 400KV double circuit lines at Madakkathara and Trivandrum. There are five major inter state transmission lines. The major substations include one 400 KV. Substation and fourteen 220 KV substations and four 220 KV substations under construction. The main grid comprises of the 220 KV system. The present peak load demand is increased up to 2800MW.

7.24 The transmission network has been expanded by adding 106 Kms of EHT lines constructed during 2006 – 07.

7.25 The targets and achievements of Transmission infrastructure during 2006 – 07 is shown in the Table7.9

Table 7.9
Transmission Infrastructure 2006 – 07

Sl. No.	Item	Target	Unit	Achievement	Unit	Percentage of Achievement
1	440KV Substations	0	Nos	0	Nos	0
2	220KV Substations	4	Nos	0	Nos	0
3	110KV Substations	10	Nos	2	Nos	20
4	66KV Substations	4	Nos	3	Nos	75
5	33KV Substations	47	Nos	10	Nos	21.28%

Source - KSEB

7.26 The above table reveals that the target of transmission infrastructure could not be achieved. No 220KV substation was constructed during 2006 – 07 against the target of four numbers. Only 2 numbers of 110KV substations were constructed during the tenure against its target of 10 nos. Imperative performance has not been shown in the case of construction of 66KV and 33KV substations during 2006 – 07 against their targets.

7.27 The transmission facilities like substations and transmission lines as on 31.8.2007 are given in the Table 7.10

Table 7.10
Transmission facilities in Kerala As on 31.8.2007

Capacity	Sub-stations (Nos)	Lines (Km)
400KV	2(1.PGCIL)	
220KV	14	2642
110KV	112	3934
66KV	86	3008
33KV	61	706
22KV		157
Total	275	10447

Source. KSEB

Transmission Plan

7.28 Enhancing load handling capacity of the transmission system, avoiding bottlenecks/congestion in power flow, adequate redundancy to meet the system exigencies, ensuring power evacuation from the new projects, ensuring availability of power in every part of State etc. are the core objective of the State Transmission Plan. Being the State Transmission Utility, KSEB is statutorily bound to discharge all functions of planning and co-ordination relating to intra-state Transmission system.

Load Dispatch Activities

7.29 The State load dispatch centre schedules generation from various generating stations, central sector stations and IPP depending on the load condition and the real time frequency. The Load Dispatch Centre also monitors the transmission system and issues sanction for shutdowns. Water availability, inflow consumption, demand etc are daily collected and monitored in the Load Dispatch Stations.

Major Activities

- Daily Scheduling Generation
- Short term & Long term planning of generation schedule
- Economic load dispatching
- Grid discipline
- Co-ordination with neighbour grid
- Maintenance of the communication net work, communication equipments and SCADA system etc.

AT&C Loss reduction

7.30 Since 2001 – 02, the Board has been able to achieve significant reduction of losses in the system by replacement of faulty meters and electromechanical meters by electronic meters, anti-theft activities, system improvement schemes, energy audit and computerization of billing etc.

7.31 The total loss in the system in 2001 – 02 was 32.15% which has been reduced to 23.43% by the close of 2006 – 07. The AT&C losses in the system, reduction achieved and financial savings accrued to the Board are given in the table7.11

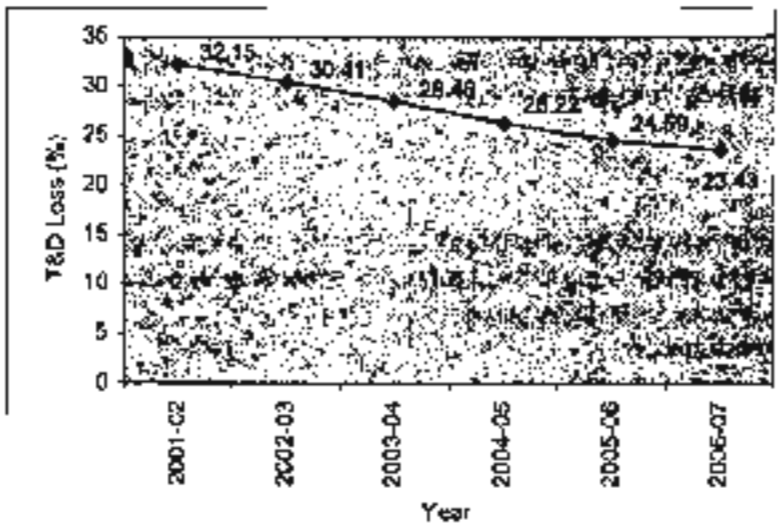
TABLE 7.11
Impact of AT&C loss reduction

Year	Energy Sold(MU)	Total Energy generated and power purchased by KSEB (MU)	T&D Loss (%)	Impact of loss reduction (estimate)	
				Savings in MU	Amount .Rs. Crore
2001-02	8667.32	12773.37	32.15		
2002-03	8873.30	12751.14	30.41	221.06	61.90
2003-04	8910.84	12455.37	28.46	243.36	75.44
2004-05	9384.40	12719.77	26.22	284.65	88.53
2005-06	10269.80	13618.96	24.59	221.99	68.59
2006-07	11331.00	14798.06	23.43	205.62	69.09

Source:KSEB

7.32 The above table depicts that despite marginal increase in consumption of energy over the years, the total quantum of energy generated and purchased remained more or less at the same level between 2001 - 02 and 2004 – 05 due to progressive reduction in the loss and saving of energy which ranged from 221.06 MU to 284.65 MU per years. Thus, by way of AT&C loss reduction there has been saving of Rs.61.9 crore in 2002 –03, Rs. 75.44 crore during 2003 – 04 Rs.88.53 crore in 2004 – 05, Rs. 68.59 crore in 2005 – 06 and 69.09 crore in 2006 – 07. Transmissions Distribution loss has also declined considerably in the consecutive year from 2001 02 to 2006 – 07. The seventeenth electric power survey of India anticipates that T&D loss would be reduced to 15% by the year 2011-12 from 23.43 percent during 2006-07. Figure 7.2 highlights reduction in the T&D loss over the years.

Figure: 7.2



Transmission&Distribution loss

Distribution

7.33 Electrifying all households is a national target in the power sector. At present 66.79 lakhs households in Kerala are electrified. However, a recent survey on various socio economic conditions in Kerala put the percentage of electrified households in Kerala as 85%, which is well above the national average. Thus roughly around 10-11 lakhs households, mostly in the rural areas remain to be electrified in Kerala. The RGGVY Scheme launched by Government of India is expected to cover a large portion of these areas.

7.34 The distribution system is being modernized by computerization of different activities in the sector. Computerization work of billing and revenue collection in all section offices is in progress. The target and achievement in the distribution sector is shown in Table7.12

Table 7.12

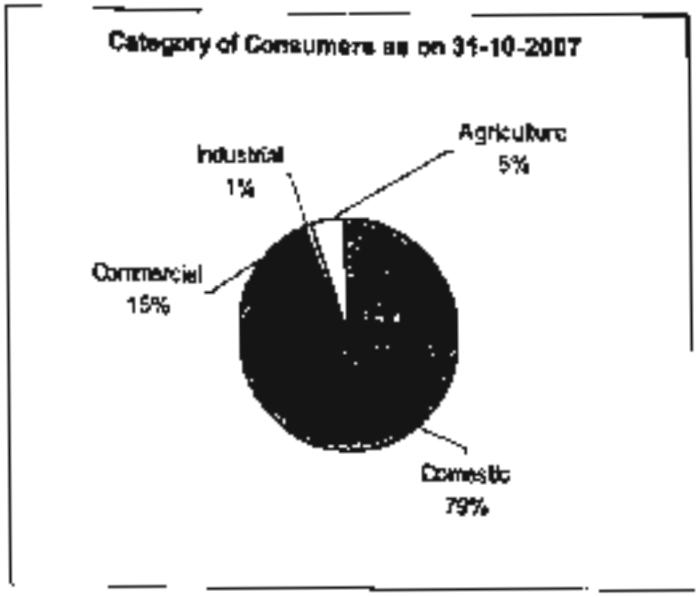
Targets and Achievements of distribution infrastructure during 2006 – 07

Sl. No.	Item	Target	Unit	Achievement	Unit	Percentage of Achievement
1	11 KV lines	2000	Kms	1819	Kms	90.95
2	Distribution Transformers	3000	Nos	2148	Nos	71.60
3	L.T. Lines	10000	Kms	8229	Kms	82.29
4	Service connections	5.00	lakhs	4.79	Lakhs	95.80

Source : KSEB

7.35 In addition to above, composition of category of consumers as on 31-10-2007 is shown in figure 7 3

Figure 7.3



National Electricity Policy

7.36 In compliance with section 3 of the Electricity Act 2003, the Central Government has notified the national electricity policy. It aims and objectives are follows:

- Access to electricity – Available for all households in next five years
- Availability of power- Demand to be fully met by 2012. Energy and peaking shortages to be overcome and adequate spinning reserve to be available.
- Supply and reliable quality power of specified standards in an efficient manner and at reasonable rates.
- Per capita availability of electricity to be increased to over 1000 units by 2012.
- Minimum life line consumption of 1unit/household/day as a merit good by years 2012.
- Financial turn around and commercial viability of Electricity sector.
- Protection of consumers' interests.

7.37 In line with the above objectives, several reforms were made by the KSEB, which are summarized below.

Power Sector Reforms

Improve consumer satisfaction

(a) Trouble cell management system

7.38 The Board has introduced centralized trouble cell management system and mobile service units for attending to break down and for restoring uninterrupted power supplies in the major cities in Kerala.

(b) Distribution Automation Project

7.39 KSEB has introduced distribution automation project by installation of 120 RMU and laying of 120 KM of 11 KV XPLE cables.

(c) Computerization of Billing and Revenue Collection

7.40 Board has already completed computerization of LT billing, cash collection and accounting in 184 section offices. Data entry work in the balance 426 is in progress.

The H.T&E.H.T billing has also been computerized.

(d) Simplification of procedure for service connection

7.41 As part of mitigating complaints on metering, consumers themselves have been permitted to purchase energy meters of their own for installation after checking by the Electrical Inspectorate.

7.42 The District Advisory Committee has been constituted in all the districts and considering the consumer density and geographical area, 80 new electrical section offices have been formed throughout the State to facilitate better service to the consumers.

(e) Additional Service Connections

7.43 The State Government and KSEB are taking efforts to provide additional service connections to 5 lakh consumers ever year. 5.48 lakh connections could be given during the year 2005 – 06 and 4.79 lakhs connection during 2006 – 07. Board has also given 3.35 lakh connections to BPL category over the last four-years.

7.44 Board has also taken up the prestigious schemes such as APDRP and RGGVY to strengthen the transmission and distribution net work in Kerala.

(f) Revenue Gap

7.45 Revenue gap has been reduced considerably for the past 3 –6 years, during 2006 – 07 revenue gap was recorded all time low about 142.23 crores compared with the previous years.

(g) Anti Power Theft Squad (APTS) was active during the years with as many as 16221 inspections throughout the State. An amount of Rs. 11.04 crores was realized against an assessment of Rs.12.73 crore.

(h) Prudent Power management initiatives have resulted in a situation wherein the State was free from power cuts and load shedding. Voltage & frequency of the power system was well within the specified limits. The availability of EHT & HT feeders was about 98% all over the State.

Developmental Activities

7.46 KSEB has undertaken various developmental activities in the distribution sector. In respect of MPLADS and SDF for MLA's, total 1074 and 3143 works were carried out. Under the peoples plan campaign, 38887 works were completed till 31.8.2007. These details are given in the tables 7.13, 7.14 and 7.15

Table 7.13
Works under MPLADS as on 31-08-2007

Region	Total no of Works	Works Completed	Amount of Works executed (Rs.lakhs)
South	392	377	321.20
Central	233	219	325
North	514	478	811.19
Total	**1139**	**1074**	**1457.39**

Source: KSEB

Table 7.14
Works under SDF for MLA's as on 31-8-2007

Region	Total no of Works	Works Completed	Amount of Works executed (Rs.lakhs)
South	1048	979	642.65
Central	775	698	528.13
North	1693	1466	1027.36
Total	**3516**	**3143**	**2198.14**

Source: KSEB

Table 7.15
Works under Peoples Campaign Programme

Region	Total no of Works	Works Completed
South	14386	13439
Central	11439	10625
North	16097	14823
Total	**41922**	**38887**

Source.KSEB

Accelerated Power Development and Reforms Programme (APDRP)

7.47 APDRP, a major initiative to bring about reforms in power distribution, has been initiated by the Ministry of Power, Government of India, for restoring the commercial viability of the distribution sector. The funds provided for the programme are utilized for upgradation and modernisation of sub transmission and distribution networks.

7.48 Works execution of 46 town scheme amounting Rs.341 81 crores have been sanctioned for installation of energy meters, construction and re-conducting of 11KV lines, installation of 100 KVA transformers, computerization of billing etc so as to reduce T&D loss and for new service connections and energy accounting. As on 31.3.2007 total expenditure was 277 13 crores

7.49 In addition to town scheme, KSEB is also inplementing city scheme. Three special schemes for the cities of Trivandrum, Kochi and Kozhikode with total outlay of Rs 304 crores have been sanctioned. The major works include construction of 11 KV lines (underground cables), installation of distribution transformers, construction of substations, Distribution Automation, SCADA, TCMS, GIS mapping etc and they are proposed to be completed by 31.10.2008. Expenditure incurred for the city scheme as on 31.3.2007 was Rs. 2 12 crores. Financial Achievement of APDRP scheme is given in Table 7.16

TABLE 7.16

Financial Achievement under APDRP Scheme as on 31.3.2007

Name of Scheme	Date of Sanction	Scheme Amount	Amount Released fromGoI to GOK	Amount Received from GoKby KSEB	Counter part funding received	Counter funding from KSEB fund	Total amount Received by KSEB	Total amount spent by KSEB
Circle Scheme (3 Circle)	26-8-2002	148.24	161.22	241.24	72.00	19.88	420.24	143.11 (closed)
Town Scheme (7Towns)	27-11-2002	160.72			55.07			138.48
New Town Scheme (26 towns)	01-10-2004	123.91	40.66		32.05			101.38
New Town Scheme (13 Towns)	4-4-2005	57.18						37.27
New City Scheme (3 Cities)	04-04-2005	304.00	46.69	46.69			46.69	2.12
Total		794.05	248.57	287.93	159.12	19.88	466.93	422.36

Source:KSEB

7.50 Meanwhile Government of India has released an amount of Rs. 12.89 crores to Kerala as incentive component under APDRP for the State's Annual Plan 2007 – 08.

Rajiv Gandhi Grameen Vidyuthikaru Yojana (RGGVY)

7.51 RGGVY is a new programme of the Government of India for providing access of electricity to all households within five years, which is one of the goals of National Common Minimum Programme (NCMP).

7.52 The scheme includes creation of Village Electrification Infrastructure (VEI) for electrification of households in unelectrified villages/habitations and for providing Rural Electricity Distribution Backbone (REDB) package for construction of 33/11KV or 66/11KV substations. 90% capital subsidy would be provided for the overall cost of the project under the scheme and 10% as loan from Rural Electrification Corporation (REC) Ltd.

7.53 Government of India have agreed in principle for the project proposal of Kerala amounting Rs. 438.36 crores. The proposals are

(a) (Village Electrification Infrastructure)

7.54 VEI scheme for electrification of 3578 unelectrifical habitations covers 930 revenue villages of Kerala with an outlay of Rs. 343.78 crores. This package covers construction of 8353

Kms of 11 KV line, installation of 9298 nos of 25 KVA Distribution Transformers, Construction of 3955 Kms of LT line and effecting 46784 nos of service connections.

(b) Rural Electricity Distribution Backbone (REDB)

7.55 Package for construction of 7 nos of 66/11KV substations and 18 numbers of 33/11 KV substations involves an outlay of Rs. 94. 57 crores. M/s REC Ltd, the funding agency of Government of India, has sanctioned the RGGVY Scheme for implementation in the seven districts viz. Kasaragod, Kannur, Kozhikode, Wayanad, Malappuram Palakkad and Idukki with an outlay of Rs.221.75 crores. In Idukki district, Letter of Award has been issued to M/s. ICSA (1) Ltd for execution of works and NTPC has been entrusted to execute the works in the remaining six districts.

7.56 REC has also agreed to the proposal amounting Rs. 99.25 crores to execute the work in Southern districts of Thiruvananthapuram, Kollam, Pathanamthitta, Kottayam, Alappuzha, Ernakulam and Thrissur on May 2007.

Pending Tariff Arrears

7.57 Different Government, Public and Private Sector organizations are not remitting the electricity tariff to KSEB promptly.

7.58 As on 31.3.2007 Rs. 1670.91 crores remained as outstanding dues to be collected. Kerala Water Authority (KWA) is a highest defaulter and has to pay a staggering amount of Rs. 636.16 crores. KSEB has to collect the pending amount from the defaulters on warfooting so as to reduce mounting burden faced by the KSEB. Details of arrears pending with different sectors are given in Table 7.17

Table 7.17
Arrear Details of Consumers as on 31-3-2007

(Rs.crore)

Sl. No	Name of Depts	LT	HT/EHT	Total
1	Stat Govt Dept	114.89	14.00	128.89
2	State PSUs	339.80	493.37	833.17
3	Local Bodies	11.59	3.23	14.82
A	**Total**	**466.28**	**510.60**	**976.88**
4	Central Govt Depts	0.21	0.29	0.50
5	Central Public Sector Under takings	0.22	33.47	33.69
6	Inter State Energy	0.00	19.73	19.73
7	Private Sector	61.51	578.60	640.11
b	Total under Central Govt, Inter State &Private	61.94	632.09	694.03
	Grand Total	**528.21**	**1142.70**	**1670.91**

Source: KSEB

LNG Terminal at Kochi

7.59 The LNG terminal is a part of the newly created port based Special Economic Zone (SEZ) at Kochi and Petronet LNG Ltd (PLL) is one of the co – developers of the SEZ. The LNG receiving re-gasification terminal at Kochi would satisfy the enormous demand of natural gas for power, fertilizers, petro chemical and various other industries in Southern States. The terminal is designed to handle a capacity of 5 Million Metric Tones Per Annum (MMTPA) of LNG. However initially re-gasification facilities shall be installed for 2.5 MMTPA of LNG. Cochin Port Trust has allocated 32 hectares of land at Puthuvypeen island for development of the LNG terminal which includes construction of jetty, storage and re gasification facilities - including two unloading arms, two full LNG tanks, vaporization system, utilities and off – site facilities. All the pre – project activities including various on – shore and off shore services, investigation, preparation of detailed feasibility report and basic engineering package, mathematical and physical modeling studies, marine environment impact assessment study etc have been completed. The company has also obtained various statutory approvals including environmental clearance from the Ministry of Environment and forest. As per the project schedule, the mechanical completion of the project will take 42 months from the date of award of contract. The mechanical completion of the project is expected by June 2010. The approximate cost of the project is Rs. 2500 crores. RGCCPP, Kayamkulam will be benefited most by way of conversion to gas based generation.

Issues and Challenges faced by the KSEB

7.60 KSEB is facing some issues and challenges. The most pertinent among them are the following:

- Environmental objections on new hydel projects.
- Absence of optimum utilisation of hydel potential in the State
- As fallout of the increasing price of petroleum products, the cost of thermal power is skyrocketing. Obviously power purchase from thermal station is not affordable.
- Inadequate transmission facility leads to poor quality of power supply. Thick vegetation, high density of population, constraints on availability of land etc are the major factors that inhibit the drawing of transmission lines.
- Large amount of tariff arrears pending with Govt/PSU/Private sector.
- Industrial, HT, EHT consumption are almost stagnant.
- Forfeiting of power from Centre's unallocated pool to Kerala.

Tariff Structure

7.61 Tariff shall apply to consumers to whom Kerala State Electricity Board has undertaken or undertakes to supply electricity notwithstanding anything to the contrary contained in any agreement entered into with any consumer earlier by Board/Government or any of the Tariff Regulations or rules or orders.

7.62 Government had reduced the tariff by 20 paise per unit in respect of LT 1(a) Domestic and LT-VII (A)&B commercial category of consumers. Later, Government have revoked this order, and lifted the 20 paise concession for domestic category. The Board expects that this will result in Rs.10crores additional realization per month.

7.63 Board had estimated the aggregate sale of energy as 10064.55 MU for 2005 – 06 and 10796.34 MU for 2006 - 07. As a result overall average realization rate from tariff increased by 4.85% to 324 paise/unit including sale to NVVN/PTC in 2006 – 07 from 309 paise/unit in the previous year. During 2006 - 07, KSEB sold energy at the rate of 499 and 564 paise/ unit to NVVN/PTC and TNEB respectively. This is a major contributing factor for increasing overall tariff in 2006-07.

7.64 The realisation efforts have been by and large successful. Average realization has gone up to 340 paise/unit in 2006 – 07 from 326 paise/unit over the previous year. The sale to TNEB was a major factor in the enhancement of the average realization. The details are shown in the appendix 7.4 and 7.5

Finance

7.65 A major source of fund generation by the Board was borrowings from the various financial institutions in the country. During 2006 – 07, Board borrowed Rs. 2637.90 crores. The major lending agencies are LIC of India, IDBI, NEC, SIDBI and PFC. Centre and State Governments are not providing any financial assistance/grant to the KSEB. However KSEB benefits from the central projects of APDRP and RGGVY. Source of funding of KSEB is shown in the Appendix 7.7.

Revenue Gap

7.66 Performance during 2006 – 07 indicate a continuing trend of improvement in the financial and operating performance. This has been brought about by strategic initiatives for improving the power management and overall productivity and efficiency coupled with cost reduction efforts. As a result revenue deficit was reduced from Rs. 144.58 crores in 2005 – 06 to Rs. 142.23 crores in 2006 – 07 (provisional). The total revenue during 2006 – 07 amounted to Rs. 4416.17 crores and the total expenditure was Rs. 4558.40 crores. Revenue gap can be further reduced and eventually even eliminated provided the defaulters are some how made to pay their out standing tariff dues. Top priority need be given to efforts towards at making the defaulters clear their liabilities in a time bound manner.

7.67 As on 30.09.2007, the revenue earned from sale of power and other receipts was Rs. 1956.02 crores for the year 2007 – 08. The expenditure towards purchase of power was Rs. 862.68 crores, the annual budgeted figure being Rs. 2020.39 crores. As part of prudent management of the power system, the off take from the thermal plants in the State has been minimized to the extent possible.

7.68 Details of Revenue earnings and Revenue gap are shown in the Table 7.18 &7.19

Table 7.18

Revenue Earnings

Sl. No.	Particulars	2004 – 05	2005 - 06	2006 - 07
1	Energy sold (Mu) (including sales outside the State)	9384.40	10905.70	12377.89
2	Income (crores)			
	From Tariff	2917.36	3367.30	4009.70
	Non Tariff	339.63	325.43	406.47
	Total	**3256.99**	**3692.73**	**4416.17**

Source: KSEB

Table 7.19
Revenue Gap

Years	Income			Total Expenditure	Revenue GAP
	Tariff	Non tarifl	Total		
2004 - 05	2917.36	339.65	3257.01	3599.77	-342.76
2005 - 06	3367.30	325.43	3692.73	3837.32	-144.58
2006 – 07 (pro)	4009.70	406.47	4416.17	4558.40	-142.23

Source: KSEB

7.69 The average cost of supply per unit, revenue realization and the gap are given in the Table No. 7.20 which indicates reduction of cost, increasing tend in revenue realization and sizeable reduction in revenue gap over the years.

Table 7.20
Comparison of per unit cost of supply and realization

(Rs/Kwh)

Sl. No.	Particulars	2004 - 05	2005 - 06	2006 - 07
1	Average cost of supply	3.84	3.52	3.55
2	Average revenue realised	3.47	3.39	3.36
	Gap : 1 –2	0.37	0.13	0.19

Source: KSEB

Swapping of High cost Loans

7.70 The Board, by taking advantage of the prevailing interest rates in the financial market, has swapped the high cost outstanding loans by borrowing fresh loans at low interest rates. So far, KSEB has swapped Rs. 1733.40 crores of loans, saving an interest liability of Rs 241.08 crore payable during the rest of the repayment period of the loans and an annual saving of Rs. 39.54 crore. The details of the swapping are given in the Table7. 21

Table 7.21
Details of Swapping of high cost loans

(Amt in crores)

Year	Item	Amount	Before Swapping		After Swapping		Premium Paid	Net Savings	Annual Net Savings
			Interest %	Amount	Interest %	Amount			
2003-04	Non SLR Bond VI	300.00	15.25	187.58	7.50	54.72		132.86	26.57
	REC Ist Stage	649.43	13-15	278.95	10.50	226.89	20.21	31.85	3.98
	REC II nd Stage	118.97	13.00	39.97	10.00	29.36	2.96	7.65	0.85
	LIC	187.41	14.00	102.98	11.00	80.91	7.80	14.27	1.10
	PFC Ist Stage	100.00	15-17	67.26	8.5-10	49.98	8.55	8.73	0.97
	PFC 2nd Stage	18.13	13.5-15	7.21	8.5	5.74	0.94	0.53	0.08
	Loan taken from KDFP	125.00	13.75	48.35	11.25	25.47		22.88	2.29
	Total	1498.94		732.30		473.07	40.46	218.77	35.84

2004-05	Premature redemption-Non-SLR Bonds(BondIX)	6.48	13.25	2.22	6.50	1.09		1.13	0.37
	REC Short term loan	48.77	9.75	3.23	6.50	1.71	0.42	1.10	1.10
	Total	55.25		5.45		2.80	0.42	2.23	1.47
2005-06	Premature redumption Non SLR Bonds (BondVII)	1.95	13.75	0.27	6.20	0.12		0.15	0.15
	Premature redumption Non SLR Bonds (BondVII-a	1.60	13.00	0.21	6.25	0.10		0.11	0.07
	Premature redumption Non SLR Bonds (BondX-a)	10.31	11.40	3.41	6.25	1.87		1.54	0.39
	Premature redumption Non SLR Bonds (BondX-b)	0.05	11.00	0.03	6.25	0.02		0.01	
	LIC StageII (2nd time)	145.20	11.00	68.01	9.00	55.64	4.65	7.55	0.58
	Total	159.11		71.93		57.75	4.65	9.36	1.19
2006-07	Premature redumption Non-SLR Bonds (BondXa)	0.10	11.40	0.03	Board's own fund			0.03	
	Closure of loan from SBT for Neriamangalam	20.00	9.00	10.69	Board's own fund			10.69	1.04
	Total	20.10		10.72				10.72	1.04
	Grand Total	1731.40		820.48		533.62	45.53	241.08	39.54

Source.KSEB

7.71 Due to swapping of high cost loans, reduction in outstanding loans, fresh borrowings from least cost sources and reduction in cost of raising finance by way of dispensing with government guarantee, upfront payments, commitment changes etc, the Board has substantially reduced the interest burden.

Box 7. 1
KSEB's least cost Methodology

- Increase in the Sale of Energy
- Effecting disconnection/dismantling and Revenue Recovery Action against defaulters for improving revenue realization
- Reducing the commercial losses by replacement of faulty and sluggish meters by electronic meters
- Conducting special revenue recovery adalaths at the level of distribution circles
- One time settlement option to settle long pending HT/EHT dues
- Tapping the non-Tariff income sources
- Intensification of anti power theft activities
- Prudent planning of generation so as to get maximum advantage of UI and sale of power to other utilities at competitive rates.

Aggregate Revenue Requirement (ARR)

7.72 KSEB has submitted its ARR for 2007 – 08 to the KSERC. It stated that Rs. 430.11 crores is expected to Revenue Gap limiting Rs. 4545.02 crores of ARR (Exp) and total income Rs. 4114.91 crores. During 2006 – 07 actual revenue gap was reduced by Rs. 142.24 crores by way of increased tariff and non-tariff income. Earlier KSEB estimated the total income as Rs. 3694.73 crores. Later this figure was increased substantially by Rs. 4416.17 crores with robust tariff and non-tariff collection. These details reflects in the Table 7.22

Table 7.22
Summary of Aggregate Revenue Requirement (ARR) 2007 – 08

(Rs.Crore)

Items	2005-06			2006-07			2007-08*
	ARR	KSERC	Actual	ARR	KSERC	Actual	ARR
Generation of power	55.86	55.86	51.30	43.09	43.09	111.84	54.96
Purchase of Power	1492.77	1427.31	1533.92	1646.02	1646.02	1629.30	2020.39
Interest & Finance Charges	617.68	583.60	565.81	529.76	513.64	429.34	458.61
Depreciation	430.35	235.65	392.65	424.32	247.43	405.98	460.42
Employee Cost	939.43	845.89	862.52	882.20	823.45	898.09	965.00
Repair& Maintenance	89.09	85.25	93.82	96.50	90.00	110.99	101.47
Administration &General Expenses	98.27	90.70	113.85	108.85	105.00	135.10	125.63
Other Expenses	144.20	50.00	214.29	146.75	91.78	698.66	227.00
Gross Expenditure(A)	3867.65	3374.26	3828.16	3877.49	3560.41	4419.30	4413.48

Less:Expenses Capitalised	158.95	138.77	43.61	43.90	43.90	43.19	37.63
Less:Interest Capitalised	99.15	85.59	48.50	53.50	53.50	35.13	48.25
Net Expenditure(B)	3609.55	3149.90	3736.05	3780.09	3463.01	4340.99	4327.60
Return on Equity(RoE)	217.42	217.42	101.26	217.42	217.42	217.42	217.42
ARR(D)=(B)+(C)	3826.97	3367.32	3837.31	3997.51	3680.43	4558.41	4545.02
LessNon-Tariff Income	259.03	269.54	325.43	301.31	290.51	406.46	361.84
Less:Revenue from Tariff							
(a)With in the State	3075.69	3046.47	3170.79	3393.42	3424.55	3476.35	3753.07
(b)Outside the State	-	-	196.51	-	150.00	533.36	-
Total Income	3334.72	3316.01	3692.73	3694.73	3865.06	4416.17	4114.91
RevenueGap	492.25	51.31	144.58	302.78	-184.63	142.24	430.11

**Projected figure while filing ARR for 2007-08*
source:KSEB

Non Conventional Energy Programme

7.73 Our conventional energy reserves are finite and will only be available for a limited period and that also with the steadily increasing prices. The fossil fuel use is also linked to environmental problems, particularly global warming and climate change. The challenges of the present energy scene offer us a window of opportunity for renewable energy sources. This will reduce dependency on the fossil fuels. It becomes necessary to expand and diversify our energy supply mix and make the process of development environment - friendly.

7.74 Such energy sources, as biomass and wood energy, geothermal energy, wind energy, tidal energy and ocean energy are continuously and freely produced in nature and not exhaustible. They are known as the renewable sources of energy.

7.75 The major non-conventional Energy sources relevant to Kerala are solar energy, Bio energy, Wind energy, and Small Hydro Power and wave energy.

7.76 Agency for Non Conventional Energy and Rural Technology (ANERT) is the nodal agency of the Ministry of Non Conventional Energy Sources (MNES) Government of India for the State of Kerala.

Wind Energy Programme

7.77 Wind energy can be used for two major applications, firstly as wind mills for pumping water for drinking as well as irrigation purposes and secondly as aero – generator for electricity generation for domestic and industrial use. In addition to this, wind energy battery charges are also available, which can store energy for lights, radio communication, and hospital equipment. They are also used to power various emergency related equipment.

7.78 ANERT has completed data collection at the two wind monitoring stations – Pasavadigumbe of Kasaragode district and Pushpagiri of Iduki district. Installation of two new wind monitoring stations, sanctioned by MNRE (under 2005 – 06 scheme) at Chatayangulay of Palakkad and Talapoya of Wayanad are in progress.

7.79 ANERT was successful to take a lead role in solving the policy limitations. Technical and administrative clearances could be accorded for establishing 7.2 MW in Agali, Palakkad and 9.75 MW in Ramakkalmedu, Idukki. The initial activities for establishing the 5 MW wind farm at Ramakkalmedu as a joint project of KSEB and ANERT are still pending with KSEB. The details of potential sites for Wind Power Generation in Kerala is shown in the Table 7.23

Table7.23
Potential Sites for Wind Power Generation in Kerala

Sl No	Station	District	Annual Mean Wind Power Density	
			At 20m	At 30m
1	Kailasamedu	Idukki	251	300
2	Kolahalamedu	Idukki	146	174
3	Kulathummedu	Idukki	180	239
4	Kuttikanam	Idukki	140	181
5	Panchalimedu	Idukki	254	285
6	Parampukettimedu	Idukki	447	525
7	Pullikanam	Idukki	178	187
8	Ramakkalmedu	Idukki	532	534
9	Senapathi	Idukki	192	233
10	Sakkulathumedu	Idukki	531	533
11	Kanjikkode	Palakkad	218	249
12	Kotamala	Palakkad	154	187
13	Kottathara	Palakkad	207	243
14	Nallasingam	Palakkad	324	377
15	Tolanur	Palakkad	115	157
16	Ponmudi	Trivandrum	216	220

Source. KSEB

Bio Energy Programme

7.80 Biogas is generated by anaerobic digestion of biomass under certain conditions.It is a gaseous mixture containing about 57.7% methane, 45-30% carbondioxide and traces of other gasses such as ammonia, hydrogen sulphide, oxygen etc. Cow – dung is one of the important raw materials for production of biogas. It can be supplemented with other wastes like human excreta, sheep and poultry droppings and other agricultural and industrial organic weeds.

7.81 ANERT had taken up implementation of community biogas plants in various institutions. The achievement so far is 15 nos of community Biogas plants having a total capacity of 375m3 biogas generation per day in private sector institutions for thermal application, 3 biogas plants having a total capacity of 65m3 biogas generation per day for electrical application (approximately 15 KW installed capacity) and 9 plants with a total capacity of 170m3 per day (thermal application) in government Hospitals.

7.82 ANERT has also ventured into the new bioenergy utilization sector by taking up the high – efficiency biomass direct combustion system for replacing fossil fuel consumption in industrial establishment. The unit is being established in the Keral Ceramics, Kundara, and Kollam district with financial support from ANERT.

7.83 This will replace the fossil fuel (SKO/Diesel) being used in their hot air generator with cheaper and locally available biomass – empty palm fruit bunches which as disposed by Oil Palm India Ltd as their process waste. This project would be commissioned this year itself and is expected to be a model for other industries using fossil fuel for thermal applications.

Solar Photovoltaic Programme

7.84 SPV is an appropriate and cost- effective source of electricity for basic services and amenities in an environmentally sensitive manner. Though identified as a costly option of electricity generation, solar photovoltaic energy generation was proven to be the most convenient source of energy for the electrification of remote, isolated – hamlets where the existing power grid cannot be extended. During the previous five-year plans ANERT had utilized this technology effectively to electrify about 20,000 remote backward class households. Banking on this experience ANERT had submitted a proposal to MNRE for assistance to take up solar electrification in other un-electrified remote backward class habitations also. Accordingly ANERT obtained Central Financial Assistance (CFA) for solar electrification of 5760 remote houses (73 backward classes colonies) spread in six districts of the state. ANERT had initiated steps to carry out detailed site surveys and DPR preparation for this project.

Solar Thermal Energy Programme (STEP)

7.85 Solar thermal energy devices convert radiant energy of the sun into thermal energy for different productive works. They have an additional advantage of being economical compared to current fuel prices. Solar water heaters for domestic and industrial purpose, solar crop dryers and solar cookers are devices propagated under this programme.

7.86 Solar Thermal Energy division had focused its activities in the last two quarters of the current year, to complete the spill over projects of the previous year with a target of providing Solar Water Heating systems in domestic and service sector, so as to replace or reduce the use of electric geysers. The achievement so far in this sector for the current financial year is installation of 468 nos of Domestic Solar Water Heaters (468000 LPD) and 15100 LPD of substantial Solar Water Heaters. The institutional installations include 32 nos of 300 LPD SWH installed in PHC/CHCs and 9 nos of SWHs having capacity of 500 LPD or more in Taluk/District/Medical College Hospitals.

Improved Chulha Programme

7.87 Under this Programme ANERT had taken up installation of 70803 domestic chulha for SC/ST families, 9132 domestic chulha for general / BPL families, 314 community chulha for Anganwadi and 359 communitychulha for schools during2006-07. In continuation to this, ANERT had installed 5478 domestic model improved chulhas in SC/ST household and 4014 chulhas in general category houses, 104 community model improved chulhas in anganwadies and 115chulhas in schools having noon meal programme.

Table 7.24
Summary of achievement of Improved Chulha Programme

District	Domestic Chulha		Community Chulha	
	SC/ST	Gen/BPL	Anganwadi	Schools
Kasaragod	503	252	63	8
Kannur	457	1438	54	83
Wayanad	904	592	5	25
Kozhikode	1125	1295	115	87
Malappuram	471	831	12	28
Palakkad	2819	368	9	7
Thrissur	435	672	2	8
Ernakulam	198	800	0	20
Idukki	132	229	11	19
Alappuzha	333	1314	0	23
Kottayam	55	219	0	4
Pathanamthitta	67	103	1	23
Kollam	1654	442	22	16
Trivandrum	1650	517	20	8
Total	**10803**	**9132**	**314**	**359**

Source: ANERT

Micro Hydel Power Programme

7.88 The project taken up in 2006 – 07 for carrying out of the pre feasibility site investigation of the Micro Hydel Power (MHP) potential of Kannur district is completed. The study covered about 80 sites spread along the western ghat ranges of the Kannur District. The final report of this study is getting ready.

7.89 It is observed that while most of the sites are in the micro range suitable for providing power to the near by habitations, a few sites are even suitable for supplying power to the grid at least for part of the year. One of such sites Thenamkayam in Payyavoor Panchayat having a potential of supplying 2MW power to the grid for about 7 months in a year is taken for model DPR preparation. Civil Surveys of this site are completed and the DPR preparation is in progress.

7.90 One major limitation of most of the sites is that sufficient water for power generation will be available up to 6-9 months only and hence it is observed that further studies on "MHP – Biomass gasification Hybrid Power generation systems" are much relevant.

Total Energy Security Mission (TESM)

7.91 The major thrust in energy sector for the eleventh five-year plan is to achieve Total Energy Security for the State. Accordingly the flagship project "Total Energy Security Mission" was launched. The Mission Programme targets to achieve cent percent rural electrification as well as effective fulfillment of other essential energy needs of the society.

7.92 The objectives of the Mission include the following

- Achieve cent percent household electrification in the state with a minimum electrical energy availability of one unit per household per day.

- Provide at least the energy equivalent of eight cylinders of liquid petroleum gas to every household annually for cooking.
- Ensure sufficient energy availability for all rural entrepreneurs and community institutions.
- Initiate demand side management, energy conservation and promote use of non-conventional energy to achieve the above on a sustainable basis.

7.93 A State Level Mission Committee consisting of members of the State Planning Board, Principal Secretaries of Power, Local Self Government and Planning, Directors of ANERT and EMC has been formed for providing directions to these Mission activities. The Mission is championed by ANERT and EMC, two leading agencies working on energy in the state along with the Kerala State Electricity Board. The greatest strength of TESM is the grass root level linkages that the Mission has achieved by virtue of its partnership with the local governments in the State.

7.94 As per the GO (Rt) No: 69/2007/PD dated 26.03.2007, Government has constituted the Mission Group for implementation of programmes in the Non-conventional Energy Sector. Subsequently, the 7th Meeting of the TES Mission Group decided to organize District Level Conventions of Local Body Leaders, Three Regional Training Programmes and Training of Teachers and resource persons in every district in the month of May and instructed ANERT to provide immediate expenses for the TESM programme from the carry over funds available at ANERT, which will be reimbursed later from the plan fund allotted for the Mission.

7.95 Accordingly, ANERT organized the "State Level Orientation Workshop for district level key functionaries" on 27 th April 2007 and the "State Level Review Meeting of the Co-ordination Committee" on 19th May 2007 both at Kudumbasree Office Auditorium. Based on the consultations of these meetings, Government has constituted the State Level Co-ordination Committee of the Mission (GO (Rt) No 111/2007/PD dated 17.05.2007) and District Level Co-ordination Committees in every district (GO (Rt) No. 1460/07/LSGD dated 21.05.2007).

7.96 The half-day District Level Conventions of Local Body Leaders in all districts were conducted from 21st to 25th of May. Three Regional Training Programmes for the Resource Person (or Trainer of Trainees) selected from each districts were held at Thrissur (on 23 rd May), Thiruvananthapuram (on 24th May) and Kozhikode (on 25th May). Subsequently the District Level Teachers Training for the team of two teachers selected from each Panchayat, Municipality and Corporation as primary co-ordinators of the "Energy Environment Corp", were held as a one day orientation training in every district on the 25th and 26th of May. This trained team of activists took the lead in the conduct of a Lecture Session in all the Local Bodies of Kerala on 5th June 2007, heralding the launch of "Total Energy Security Mission" as well as building up public awareness on the relevance of Energy Security, Energy – Environment Linkages and the Renewable Energy Potential of the State.

7.97 ANERT has also taken up steps for the Information, Education and Communication activities for the Mission. As part of the IEC campaign Time Table Cards with messages of the Mission were printed and distributed to the school students, Cinema Theatre Slides were prepared and distributed to all major theatres in all districts, Video – Audio Sports on the Mission Programme were prepared and telecasted through AIR and Doordarshan.

7.98 As a prelude to the formulation of projects at Local Self Government institution level, four regional workshops were held at Thiruvananthapuram, Ernakulam, Palakkad, and Kozhikode for introducing TES Mission Programmes and vision to the pilot Panchayats. At Present more than

450 Local Self Government Institutions (LSGIs) have proposed projects for preparation of detailed energy plans during the financial year 2007 – 08 itself and all the district panchayats have proposed major renewable energy projects as part of the Mission programme. The Mission also proposes to undertake a detailed survey of promising Small Hydro Electric Power projects in the State.

Conservation of Energy

7.99 Energy Management Centre (EMC) is an autonomous body under the department of Power, Government of Kerala. It is the nodal agency for enforcing the Energy Conservation Act 2001.It is devoted to the Improvement of energy efficiency in the State, promotion of energy conservation and encouraging development of technology related to energy through research and training, demonstration programmes and awareness creation.

7.100 The following are the important activities of EMC during 2007.

1. EMC conducted a comparative study to evaluate the energy savings possible in a ceiling fan by using both electronic as well as conventional (resistance type) regulators and came to the conclusion that an average saving of 27% can be achieved under reduced speed, if the fan is used along with an electronic type regulator against a conventional type regulator. Though the initial cost of the electronic regulator is high, the higher saving will pay back the investor in less than 10 months.
2. A study on parboiled rice cooking in Kerala has revealed the following:
    - Majority of fuel used is firewood, hence the energy conservation will benefit in protecting forest cover.
    - Cooking the food with vessel closed saves time and energy when compared to vessel open, about 20 – 40%.
    - Propagation of improved chullahs save close to 4.5 x 106 metric tonne of firewood per year. Using thermal/pressure cooker along with this gives further cut by 1.76 x 106 metric tonne of firewood per year.
3. EMC has commissioned Energy Efficiency improvement studies in the units of Trivandrum Air Cargo Terminal, Shangumuham, Foam Mattings (India) ltd, Alappuzha, and Kochi Corporation.
4. In order to encourage energy conservation activities in the State, applications for Energy Conservation awards instituted by Government of Kerala, are invited every year by the EMC. In the year 2006 – 07, 27 industrial units participated in the award scheme and these industries saved 40 Mu/year electrical energy, which is equivalent to 7.61 MW capacity addition.
5. EMC organized energy clinics through out the State. Every clinic is a unique programme of EMC on energy conservation activities in domestic sector through women change agents. At present there are 130 trained women volunteers in the State. Through awareness, 10 – 15% of total energy can be saved.
6. The EMC, through the efforts in promoting Energy Conservation Club Project (ECCP) of the Energy Conservation Society (ECS), sets up energy conservation clubs in schools and colleges all over the State to create awareness among school/college students. Clubs now exit in about 500 schools and 50 colleges/ITCs in the State.
7. EMC prepared Techno – Economic Feasibility Report (TEER) for the small hydropower projects at Palchuram, Alamparathodu and Mukkuttithode for Sree Rayalaseema Hi – strength Hypo Ltd, Hyderabad.

8. EMC had prepared 8 DPRs in total of them the first phase of 4 projects are at Kozhiyilakuthu, Panamkidantha, Padivathil and Killikkalthodu and the second phase of 4 projects are at Rasathikuth, Rajamudy, Balanthode and Edathanalkuthu.
9. EMC acts as a consultant for kickstarting the implementation of Arippara SHP, by providing technical advice and interacting with financial institutions, KSEB, KERC etc.

Enforcement of Standards and Statutes

7.101 Functioning under the control of Electrical Inspectorate, The Meter Testing and Standards Laboratory tests and sets the specifications and quality of electrical equipment, materials and gadgets as per the standards prescribed by the Bureau of India Standards (BIS).

7.102 The following are the achievements/activities during 2006 - 07.

- There are four Regional Testing Laboratories attached to the District Offices at Thiruvananthapuram, Ernakulam, Thrissur and Kozhikode. During 2006 – 07, five more districts Offices had started under Electrical Inspectorate at Palakkad, Malappuram, Kannur and Kottayam and Kollam.
- Completed office automation for granting licences without delay to wireman/supervisor/contractor, in the Kerala State Electricity licensing Board which is under the control of Electrical Inspectorate.
- Department has observed Tower Safety Week all over India in order to minimize electrical accidents and to create awareness among the people.
- The Kerala State Electricity Licensing Board and Kerala Cinema operators Examination Board are functioning under Electrical Inspectorate.
- The activities of State/District Level Electrical Accident Controlling Committee were made more effective during the period.
- There was much increase in the case of Revenue Recovery during the period.
- Proposal has been submitted to the government for amendment of Electricity Duty Act 1963.

Kerala State Electricity Regulatory Commission (KSERC)

7.103 KSERC was constituted on 14th November 2002 under the provision of Kerala State Electricity Regulatory Commission Act, 1998 and came into effect from 10th June 2003. At present KSERC has come under the purview of Electricity Act, 2003 and its function as per the section 8 of the Electricity Act 2003 are the following.

1. Determine the tariff for generation, supply, transmission and wheeling of electricity within the State.
2. Regulate Electricity purchase and procurement, process of distribution licenses including the prices.
3. Facilitate inter – state transmission and wheeling of electricity.
4. Issue licenses to persons seeking to act as transmission licenses, distribution licenses and electricity traders.
5. Promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person enforce standards with respect of quality, continuity and reliability of service by licensees.

Regulations issued by the Commission

1. Kerala State Electricity Supply Code (Second Amendment) Regulations, 2007 Notification dt 20th April 2007
2. KSERC (Licensees' Standards of Performance) Regulations, 2006 – postponement of enforcement in the case KSEB Notification dt 28 th April 2007.
3. KSERC (Consumer Grievance Redressal Forum and Electricity Ombudsman) (First Amendment) Regulations, 2007 Notification dt 3rd May 2007.
4. Kerala State Electricity Regulatory Commission (Fees) Regulations, 2007 Notification dt 29th June 2007
5. KSERC (Supply of Power from Captive Generating Plants to Distribution Licensees) Regulations, 2007 Notification dt 6th August 2007.

Orders issued by the Commission

7.104 Kinfra Export Pormotion Industrial Parks Ltd., Rubber Park India (P) Ltd, Cochin Special Economic Zone, Kanan Deven Hills Plantation Company Pvt Ltd and Thrissur Corporation have filed their ARR and ERC for the year 2007-08. KSERC has issued the order accordingly. Moreover the proceedings for approving the ARR & ERC submitted by KSEB for the year 2007 – 08 and revision of Electricity Tariff are in the final stage Orders will be issued very shortly.

CHAPTER 8

INDUSTRY AND MINING

Kerala, which has been traditionally backward in the filed of industrial development, is taking serious efforts to identify new opportunities and to equip it to meet the emerging challenges. The Industrial Policy, IT Policy, establishment of INKEL are all intended towards the enhancement of investment in the State especially in the industrial sector with the objective of creating more income and employment. The role of Government has been changed from a provider to that of a facilitator for industrial investment. In the 11th Five Year Plan a number of schemes have been evolved and being implemented with a view to attract more and more private investment to the State. Efforts at maintaining the tempo of investment in the traditional sector are continuing with the aim of bringing about its technology upgradation, diversification and modernization.

8.2 In the case of PSUs Government is taking steps to restructure and revive the SLPEs by a comprehensive policy initiative through upgradation of technology, performance contract agreement, inter-PSU tie up, capacity building and effective corporate governance As a result of the concerted efforts made by the Government in this direction it is seen that the net profit of the PSUs during 2006-07 comes to Rs.92.05 crore.

Industrial & Commercial Policy 2007

8.3 To achieve high and sustainable economic growth, with specific thrust to social objectives, through rapid industrialization and big leap in commercial activities, with out affecting ecology and environment and to create large-scale employment opportunities for the people of Kerala and ensuring them fair wages and to convert Kerala into an investment friendly destination is the vision of the Industrial & Commercial Policy announced by the Government during 2007. The main features of the Industrial Policy 2007 are as follows:

- Convert Kerala into a favored destination for Manufacturing, Agro Processing, Health Services, Knowledge-based Industries and Services.
- Strengthen the State Level Public Enterprises (SLPEs) by technological upgradation, diversification, efficient management system and synergizing with Central Public Sector Undertakings.
- Make Traditional Industries competitive by modernization, value addition and skill development.
- Promote and support SMEs as ancillaries to large scale industries as well as a self sustaining entity considering its role as a largest employment provider in the State.
- Make use of the abundant and highly rich mineral resources of the State to the fullest extent protecting environment and ecology and restricting the mining activity in the Public Sector
- Generate massive employment in industrial, commercial and service sectors.
- Attract huge capital investment on mutually beneficial terms.
- Tap the rich industrial potential of biotechnology.

- Develop Kerala as a global centre of excellence with state of the art education and skill sets and prepare a pool of multi skilled, technically competent individuals and organizations

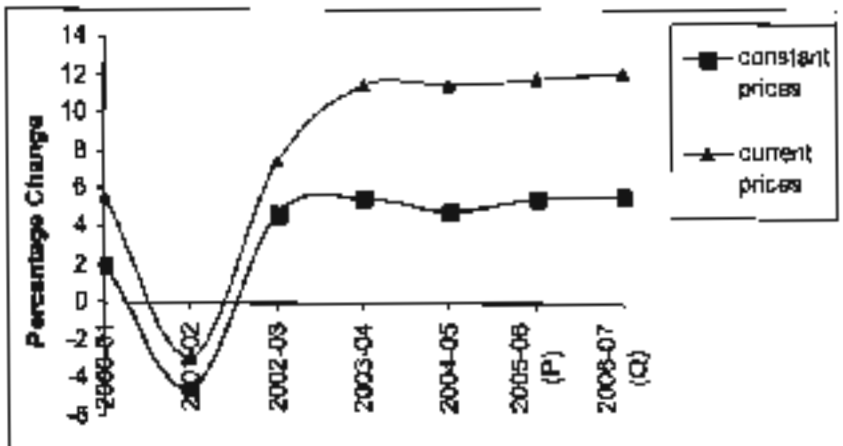
Industrial Growth

8.4 Industrial growth recorded from 2000-01 to 2006-07 was positive except in 2001-02, which were (-) 4.44 per cent and (-) 2.88 per cent in the year 2001-02 respectively at constant and current prices. The average growth rate for the period from 1999-2000 to 2006-07 was 2.9 per cent and 6.99 per cent at constant and current prices respectively. The contributions of manufacturing sector to GSDP at constant and current prices are 7.86 per cent and 6.61 per cent respectively during 2006-07. Growth of manufacturing sector (GSDP) of Kerala from 1999-2000 to 2006-07 both at constant and current prices are given in Table 8.1 and Figure 8.1.

Table 8.1
Growth of Manufacturing sector in Kerala (GSDP)
Base Year 1999-2000 (Rs. lakh)

Year	Contribution to GSDP (Rs. lakh)		Growth Rate (%)	
	At constant prices	At current prices	At constant prices	At current prices
1999-2000	666799	666799		
2000-01	680170	703504	2.01	5.50
2001-02	649950	683278	-4.44	-2.88
2002-03	680869	734199	4.76	7.45
2003-04	718735	818580	5.56	11.49
2004-05	753166	912523	4.79	11.48
2005-06 (p)	794598	1019910	5.50	11.78
2006-07 (Q)	839670	1142838	5.67	12.05

Source: Dept. of Economics and Statistics
P: Provisional, Q: Quick Estimates



Growth of Manufacturing Sector in Kerala
Fig 8.1

Index of Industrial production (IIP)

8.5 The Index of Industrial production measures the impact of development in the filed of industrial sector over a period of time in the State in comparison with a selected previous year. It gives a comprehensive view of the industrial development of the State. So far the index used to cover only the production in the manufacturing and electricity generation and transmission sectors in the State. But now the mining and quarrying industry also falls within the purview of IIP In order to ensure more accuracy and better reliability of the data the base year has been shifted from 1980-81 to 1993-94.

8.6 The General Index for the year 2006-07 increased to 262.37 from 208.31 in 2005-06 showing an increase of 26 per cent. Negative growth was recorded in products such as jute & other vegetable fibre textiles. All other items showed positive growth. The index of industrial production for the period 2004-05, 2005-06 and 2006-07 is given in Appendix 8.1.

Foreign Direct Investment (FDI)

8.7 Foreign Direct Investment (FDI) is a means to supplement domestic investments and bridge the investment - savings gap. The role of Foreign Direct Investment in the upgradation of technology, skills and managerial capabilities is now well accepted. Additional investments over and above the investments possible with the available domestic resources help in providing much needed employment opportunities. The flow of Foreign Direct Investment to Kerala including Lakshadeep from January 2000 to March 2006 comes to Rs.333.45 crores which constitutes only 0.34 per cent to total FDI inflows in India and during 2006-07 this inflow to our State is only Rs.60.72 crores totaling to Rs.394.17 crores by diminishing the share of the State to 0.26 per cent compared to the previous year.

Industrial Export

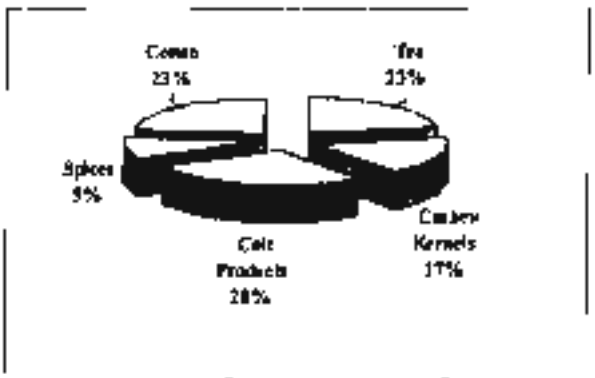
8.8 Performance of the export of Cashew Kernels during 2006-07 has recorded a negative growth of 16 per cent compared to the previous year At the same time export of Tea, Coir products, Coffee etc. recorded positive growth. Details of major commodities exported from Kerala (through Cochin Port) for 2005-06 and 2006-07 are given in Table 8.2.

Table 8.2
Export from Kerala (through Cochin Port)

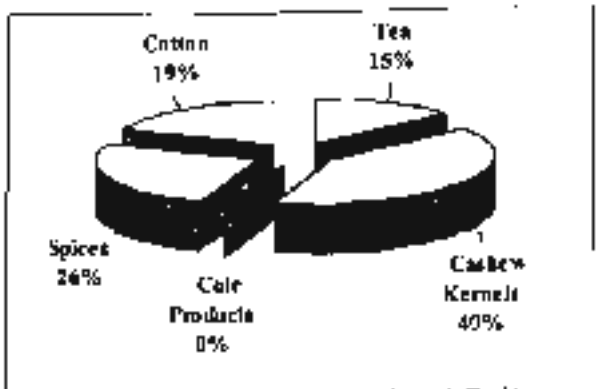
(Qty: MTs; Value. Rs. crores)

Sl. No	Commodity	2005-06		2006-07	
		Quantity	Value	Quantity	Value
1	Tea	31985	253.48	88610	540.67
2	Cashew Kernals	80775	1651.12	68179	1504.94
3	Coir Products	73391	7 73	108051	12.36
4	Spices	65321	25291	36732	942.85
5	Coffee	68960	603.23	92218	690.21

Source: - Cochin Port Trust



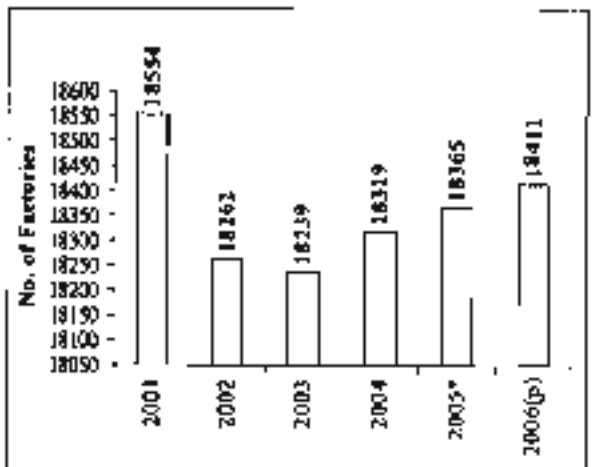
Export of Major Commodities through Cochin Port 2006-07 (Quantity)
Fig 8.2



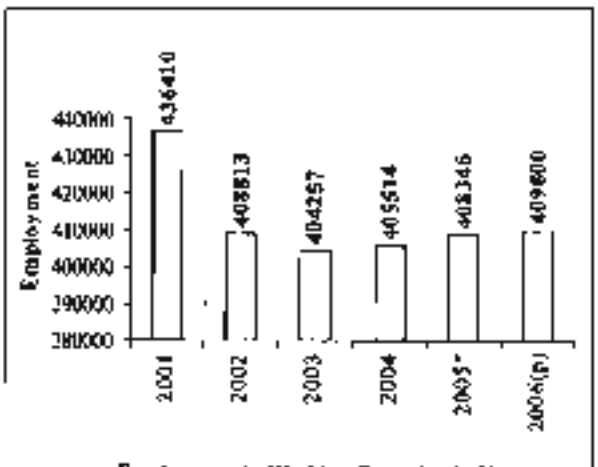
Export of Major Commodities through Cochin Port 2006-07 (Value)
Fig 8.3

Working Factories and Employment

8.9 Even though the number of public working factories has been reduced to 528 in 2006 from 529 in 2005 the number of private working factories has been increased to 17883 in 2006 from 17837 in 2005 and hence the total number of working factories registered a small hike of only 46 showing a marginal increase of 0.25 per cent. Similarly in the case of number of employment no change is seen in the public working factories and a marginal increase of 1454 was witnessed in the private working factories. Growth of working factories and employment during the period from 2001 to 2006 are given in Appendix 8.2 and Figure 8.4 and Figure 8.5.



Growth of Working Factories in Kerala
Fig. 8.4



Employment in Working Factories in Kerala
Fig. 8.5

8.10 In ten districts a marginal increase was recorded in the distribution of factories in which the highest increase registered was in Ernakulam District and it remained same in Thrissur, Wayanad and Kasaragod Districts. In Kollam district this was diminished from 1940 to 1930 in 2006. As in other years Ernakulam District has the highest number of working factories followed by Thrissur, Wayanad and Kasaragod districts.. As in other years Ernakulam District has the highest number of working factories followed by Thrissur, Kollam, Palakkad and it was least in Wayanad district. But in the case of distribution of employment Kollam district stands first with 132490 followed by Ernakulam, Thrissur, Alappuzha and it is least in Kasaragod. The district wise details of working factories and employment for the period from 2001 to 2006 are given in Appendix 8 .3 and 8.4. Details of Industrial disputes handled, settled etc. to the period from 2001-02 to 2006-07 are given in Appendix 8 5.

Joint Stock Companies

8.11 The total number of Joint Stock Companies in Kerala as on March 2007 is 15549 in which 1422 are public limited and 14127 are private limited. This shows an increase of only 39 companies (0.25 per cent). During 2006-07, 1247 companies were newly registered in the State of which 1124 were private limited and 79 were public limited and only two private limited companies were transferred from other States and at the same time seven companies were transferred to other States from Kerala. The net addition to the total number of companies thus comes to only 39. The total number of Government companies stood at 109 with 58 private and 51 public limited. Details of Joint Stock Companies working in Kerala are given in Appendix 8.19

Central Sector Investment

8.12 As against the Central Sector Investment of Rs.712819 crore in India Rs.17848 crore was invested in Kerala as on March 2006 which constitutes only 2.50 per cent. Even though the increase in total investment in the country is 9.79 per cent, the investment in the State indicates a decrease of 0.10 per cent and Kerala stands in 17th position among Indian States which was in 15th position during the previous year. This shows that proportionate increase in investment is not being made in all States and also the increase in investment is only in non - manufacturing units like BSNL, Indian Oil Corporation etc.

8.13 As per the State-wise distribution of investment in fixed assets Maharashtra was at the forefront in investment in CPSEs with a total investment of Rs.125642 crore followed by Uttar Pradesh Rs.53222 crore, Gujarat Rs.52058 crore and Chandigarh had the least investment in fixed assets in CPSEs with Rs.95.80 crores. In the Central Sector PSUs in Kerala as in the previous year only 42000 people are working which accounts only 2.55 per cent of the total employment in the CPSEs. In the case of number of employment Maharashtra ranks first and Kerala ranks 14th. Details of Central Sector Investment in Kerala and other States are given in Appendix in 8.6 and 8.7.

Micro, Small and Medium Enterprises Development Act (MSMED Act) 2006

8.14 With the enactment of the MSMED Act, 2006 which came into force on the 2nd October 2006, the system of SSI registration has been done away with and the new system of filing of Entrepreneurs Memorandum (EM) has been introduced. Also the earlier concept of "Industries" has been changed to "Enterprises". Classification of enterprises under MSMED Act 2006 is given in Box 8.1.

Box 8.1
Classification of Enterprises under MSMED Act 2006

(a) Enterprises engaged in the manufacture or production of goods is classified as
- (i) a micro enterprise, where the investment in plant and machinery does not exceed Rs 25.00 lakh
- (ii) a small enterprises, where the investment in plant and machinery is more than Rs.25.00 lakh but does not exceed Rs.5.00 crore or
- (iii) a medium enterprise, where the investment in plant and machinery is more than Rs.5.00 crores, but not exceed Rs.10.00 crore

(b) Enterprises engaged in providing or rendering of services is classified as

(i)	a micro enterprise, where the investment in equipment does not exceed Rs.10.00 lakh
(ii)	a small enterprise, where the investment in equipment is more than Rs.10.00 lakh but does not exceed Rs.2.00 crore or
(iii)	a medium enterprise where the investment in equipment is more than Rs.2.00 crore but does not exceed Rs.5 00 crore.

8.15 In calculating the investment in plant and machinery, the cost of pollution control, research and development, industrial safety devices and such other items are excluded. In the case of service enterprises, ' equipment' is defined as all instruments, office machines and such other electro – mechanical or electronic appliances that are directly related to the services rendered but excluding furniture, fittings and other items not so related

Filing of Entrepreneurs Memorandum

- Filing of memorandum is optional for all Micro and Small Enterprises.
- Filing of memorandum is optional for service sector medium enterprises.
- Filing of memorandum is mandatory for manufacturing sector Medium Enterprises
- The form of memorandum is in two parts. Any person who intends to establish a micro or small enterprise or medium service enterprise may file or those who want to establish medium enterprise engaged in production or manufacture of products shall file Part I of the EM to District Industries Centre
- Once the above enterprises start production or start providing or rendering services, they shall file Part II of the EM to DIC.
- In case of non - filing of Part II of the EM within two years of the filing of Part I, the memorandum (Part I) filed by the entrepreneur will become invalid.

State Level Public Sector Enterprises

8.16 Kerala has the highest number of State owned enterprises spread over sectors including electrical, electronics, engineering, chemical, pharmaceuticals, public utility services, and social welfare. The network of SLPEs has played a crucial role in the manufacturing and service sector of the State. It is one of the largest employment providers in the organized sector. SLPEs provided a strong foundation for the development of small, medium and large scale industries. Vibrant SLPEs are essential for industrial infrastructure, employment generation, market intervention and improved service delivery.

8.17 In connection with the revival of PSUs under the Industries Department, Government is taking steps to restructure and revive the SLPEs by a comprehensive policy initiative through upgradation of technology, performance contract agreement, inter PSU tie ups, capacity building and effective corporate governance. In order to strengthen the SLPEs, the following policy initiatives are being taken by the Industries Department,

- Formulate comprehensive enterprise specific restructuring packages for potentially viable enterprises.
- Arrange strategic tie up with reputed State and Central government Organizations with a view to tap new market, technology support and appropriate participation in growth and development of SLPEs

- Arrange support from Industrial Reconstruction Agencies, Bank and Financial Institutions under suitable Corporate Debt Restructuring schemes.
- Merge these SLPEs having same lines of business to benefit from the scale of economy.
- Utilise excess or unused land of SLPEs for other industrial and commercial purpose.
- Implement profit linked incentive schemes and incentives for product and process innovation
- Appoint professionals as CEOs in SLPEs
- Establish a training centre for the capacity building of CEOs and line managers
- Ensure inter PSU procurement extending price purchase performance and long term rate contract covering departments like electricity, health, agriculture, water resource, public works etc.

8.18 Comprehensive restructuring packages are being implemented in the following PSUs.

- Kerala State Electronics Development Corporation Ltd
- Kerala State Textile Corporation Ltd.
- Steel Complex Ltd
- Steel Industries Kerala Ltd
- Autokast Ltd

8.19 Many SLPEs had availed term loan as well as working capital loans from banks and had failed to service the same promptly. This has resulted in classification of these accounts by banks as NPAs and bank operations have been stalled in certain cases and hence there is a dearth of capital support from the Financial Institutions / Banks. In this context government have constituted a Core Committee for PSU restructuring and based on the efforts taken, One Time Settlements with Banks / FIs have been concluded in the following PSUs during 2006-07 with budgetory assistance from Government.

- Kerala State Electronics Development Corporation Ltd
- Autokast Ltd
- Steel Complex Ltd
- Kerala State Textile Corporation (pre - nationalization dues)

8.20 As part of the steps being initiated for inter PSU tie – ups on marketing of products among themselves and strategic tie ups with State / Central PSUs or agencies the following progress have been achieved.

- KSEB have synergy with companies like KEL, SILK, Traco Cable Company, UEI and Transformers & Electricals, Angamally to meet its captive demands
- TELK entered into strategic tie up with NTPC
- Take over of KELTEC by DRDA
- Manufacture of railway wagon for Indian Railway using the facilities of SILK and Autokast
- Tie up with SAIL being processed in Steel Complex Ltd.
- KSDP availed orders from Health Dept.
- Availed orders from VSSC for SIFL, KELTRON units and Autokast

8.21 Other major initiatives in the public sector are the following:

- Malabar Spinning & Weaving Mills of KSTC reopened
- Proposal for restarting Trivandrum Spinning Mills Ltd as an open end Spinning Mill under KSTC
- UEI achieved record turn over in 2006-07
- Implementation of Comprehensive Capacity Building Programmes in PSUs
- Given award to Best PSU and Best MD

8.22 The performance of PSUs under Industries Department for 2005-06 and 2006-07 is given in Table 8.3.

Table 8.3
Performance of PSUs under Industries Department

(Rs. lakh)

Sl. No	Company	Turnover		Profit /Loss	
		2005-06	2006-07	2005-06	2006-07
	Profit making units				
1	Kerala State Industrial Development Corporation Ltd	2754.00	4696.00	2188.00	4196.00
2	Malabar Cements Ltd	22780.37	18203.51	539.82	2476.18
3	The Kerala Minerals and Metals Ltd	28967.00	29596.74	1782.00	2065.26
4	Kerala State Electronic Development Corporation Ltd	10820.19	12336.12	- 3860.71	1201.05
5	Transformers and Electricals Kerala Ltd	11002.00	15005.00	174.00	913.00
6	Kerala State Industrial Enterprises Ltd	1017.15	1128.00	388.42	487.00
7	Steel and Industrial Forgings	3336.00	4128.00	302.00	350.00
8	Travancore – Cochin Chemicals Ltd	12584.00	12298.00	571.00	293.00
9	United Electricals Ltd	497.24	3462.00	-312.00	237.00
10	Kerala Hi-tech Industries Ltd	1577.19	1771.50	46.25	133.81
11	Kerala Electrical & Allied Engineering Company Ltd	5956.92	7507.98	-112.55	122.36
12	The Kerala Ceramics Ltd	290.75	968.50	-96.99	106.48
13	Kerala Clays & Ceramic Products Ltd	441.72	476.69	83.83	94.60
14	Travancore Sugars & Chemicals Ltd	655.24	718.38	66.75	81.78
15	Forest Industries (Travancore) Ltd	670.87	675.00	45.00	48.00
16	Kerala State Textile Corporation Ltd	3545.55	3694.87	-191.36	34.07
17	Handicrafts Development Corporation (Kerala) Ltd	997.73	1076.55	-56.55	28.48

18	Kerala Small Industries Development Corporation Ltd	287.93	443.14	-69.92	25.76
19	Kerala Automobiles Ltd	3774.41	3394.17	-209.77	22.52
20	Keltron Electric Ceramics Ltd	362.78	481.62	-89.46	21.29
21	Traco Cable Company Ltd	3684.38	5159.22	-415.29	14.95
22	Kerala State Palmyrah Products Development and workers welfare	5.47	7.79	3.01	2.48
	Total	**116008.89**	**127228.78**	**775.48**	**12955.07**
	Loss Making Units				
1	HANTEX	1016.50	1327.07	-1068.76	-740.93
2	Kerala State Handloom Development Corporation Ltd	1118.35	1535.00	-359.58	-449.56
3	The Quilon Co-operative Spinning Mills Ltd	717.52	577.61	-408.88	-314.17
4	Autokast Ltd	1356.75	1182.46	-241.00	-290.61
5	Steel Industries Kerala Ltd	1283.89	1093.86	-393.32	-272.51
6	The Cannanore Co-op. Spinning Mills Ltd	1043.04	1108.74	-320.03	-257.20
7	Steel Complex Ltd	435.26	770.24	-56.67	-247.40
8	The Trichur co-operative Spinning Mills Ltd	1162.00	1273.00	-227.00	-230.00
9	Kerala State Bamboo Corporation Ltd	921.28	904.88	-195.91	-201.73
10	Kerala State Drugs & Pharmaceuticals Ltd	27.84	294.04	-664.23	-125.86
11	Sitaram Textile Ltd	636.70	672.31	-171.94	-125.03
12	Alleppey Co-operative Spinning Mills	492.77	362.93	-285.71	-105.57
13	Travancore Titanium Products Ltd	13383.00	10488.00	-1,552.00	-100.00
14	Travancore Cements Ltd	1930.00	2360.00	-390.00	-88.00
15	Keltron Component Complex Ltd	2455.20	2064.83	-308.82	-60.17
16	Keltron Crystals Ltd	115.31	94.71	-222.47	-45.94
17	Keltron Magnetics Ltd	398.24	285.27	-24.54	-42.73
18	Keltron Resistors Ltd	151.11	163.99	-65.31	-34.42
19	The Malappuram Co-operative Spinning Mills Ltd	2032.98	2257.87	-74.83	-11.47
20	The Metal Industries Ltd	142.88	216.08	-21.49	-6.43
	Total	**30820.62**	**29132.89**	**-7,052.49**	**-3749.73**

Source: RIAB

8.23 Twenty two SLPEs of the Industries Department made profit totaling to Rs.129.55 crore during 2006-07 as against a profit of Rs.60.57 crore by 13 SLPEs during 2005-06. In the manufacturing sector Malabar Cements made the highest profit as in previous year. The following PSUs made profits during 2006-07 as against loss in 2005-06.

- KELTRON
- United Electrical Industries Ltd
- Kerala Electrical & Allied Engineering Company
- Kerala State Textile Corporation
- Handicrafts Development Corporation
- SIDCO
- Kerala Automobiles
- Keltron Electro Ceramics Ltd
- Traco Cable Company Ltd.
- Kerala Ceramics

8.24 During 2006-07 PSUs made a payment of Rs. 197.57 crore to the Exchequer Details of the financial assistance from Government to PSUs during 2006-07 are given in Table 8.4.

Table 8.4
Details of Financial Assistance from Government to PSUs during 2006-07

Sl. No.	Particulars	Amount (Rs. Lakh)
A	**Amount released against working capital /KSEB dues**	
1	Autokast Ltd	195.00
2	Steel Industrials Kerala Ltd	120.00
3	Kerala Electrical & Allied Engg. Co	350.00
4	United Electrical Industries Ltd	200.00
5	Traco Cable Company Ltd	300.00
6	Travancore Cements Ltd	250.00
7	KELPALM	15.00
8	KSEB Dues – SILK	50.00
	Sub Total – A	**1480.00**
B	**Restructuring Packages**	
1	Kerala State Electronics Development Corporation Ltd	400.00
2	Kerala Automobiles	74.94
3	Metal Industries Ltd	46.00
4	Kerala State Textile Corporation	451.56
5	Kerala State Drugs & Pharmaceuticals Ltd	300.00
	Sub Total - B	**1272.50**
	Total (A + B)	**2752.50**
C	**Amount released for VRS dues / Dues to PF etc**	
1	Malabar Spinning & Weaving Mills - KSTC	29.78
2	Edarikode Textiles – KSTC	89.19
3	Steel Industrials Kerala Ltd	146.46
4	Kerala Soaps & Oils Ltd	355.00
5	Kerala Garments Ltd	135.00

6	Kerala State Detergents & Chemicals Ltd	359.57
7	PF Dues	254.30
8	Travancore Plywood Industries Ltd	8.70
9	Autokast Ltd	46.55
10	Scooters Kerala Ltd	2.05
11	Chalakudy Refractories Ltd	3.18
	Sub Total - C	**1429.78**
D	**OTS Packages (Rs. lakh)**	
1	Kerala State Electronics Development Corporation	600.00
2	Steel Complex Ltd	200.00
3	Autokast Ltd	300.00
4	Kannathara Textiles – Draft case settlement	17.72
	Sub Total – D	***1717.72***
	GRAND TOTAL	**5300.00**

Source RIAB

8.25 Performance of the PSUs at a glance for 2006-07 is as follows.

Table 8.5
Performance of PSUs during 2006-07

Particulars		2005-06	2006-07
I. No. of Profit making units		12	22
Value of Production	(Rs. crore)	1184.60	1682.19
Turnover	(Rs. crore)	857.91	1271.70
Profit	(Rs. crore)	61.90	129.55
II No. of loss Making Units		30	20
Value of Production	(Rs. crore)	577.60	316.26
Turnover	(Rs. crore)	610.39	291.33
Loss	(Rs crore)	124.67	37.50
III Total Production	(Rs. crore)	1762.20	1998.45
Total Turnover	(Rs. crore)	1468.30	1563.03
Net Loss / Profit	(Rs. crore)	(-) 62.77	92.05

Source: RIAB

Bureau of Public Enterprises (BPE)

8.26 A new website has been launched by Bureau of Public Enterprises. A system for internet based performance monitoring system for PSUs under the control of departments other than Industries Department is being introduced. Regional workshops were conducted at Thiruvananthapuram, Ernakulam and Kozhikode for the Information Officers of PSUs on 'Right

to Information Act'. A training programme for Energy Managers on Energy Conservation in PSUs has been formulated.

Small-scale Industry (SSI)

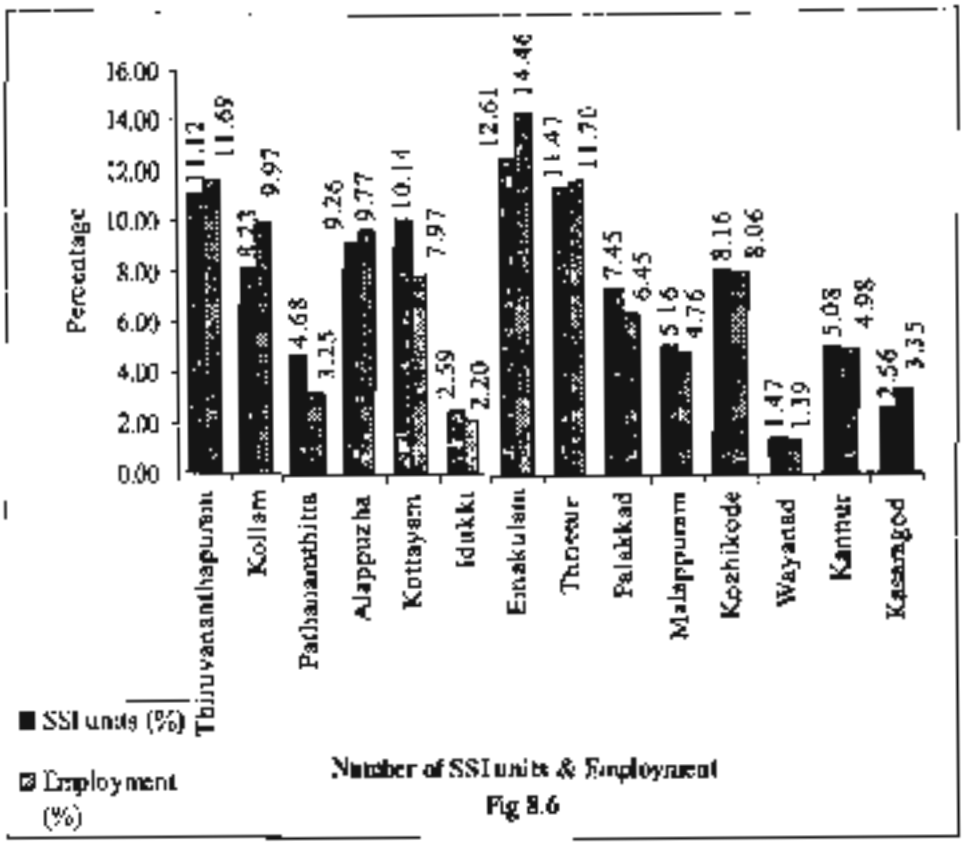
8.27 Small-scale Industry has emerged as a major determining factor in the growth of our economy in terms of employment generation. The sector contributes maximum production for domestic and export markets and produces variety of products ranging from traditional to high-tech.

8.28 Keeping pace with the higher global and domestic economic growth, the Indian SSI sector recorded an accelerated growth rate of 13 per cent during 2006-07 on top of the higher growth rate of 12.30 per cent during 2005-06. As at the end of 2006-07, the total number of SSI units in India increased to 128.4 lakh units, employing 312.5 lakh persons, which is second only to agriculture.

8.29 Considering the growing importance of the SSI sector to the overall economic development of the country, the Government of India initiated a number of policy measures during the year such as enactment of MSMED act 2006 which revised the SME definition to enable technology upgradation. Further, the Government of India announced a new policy package on February 2007 for promotion of Micro and Small Enterprises containing a number of significant proposals such as raising the credit guarantee limit to Rs.50.00 lakh, increasing the corpus fund for the Credit Guarantee Trust for Small Industries (CGTSI) etc.

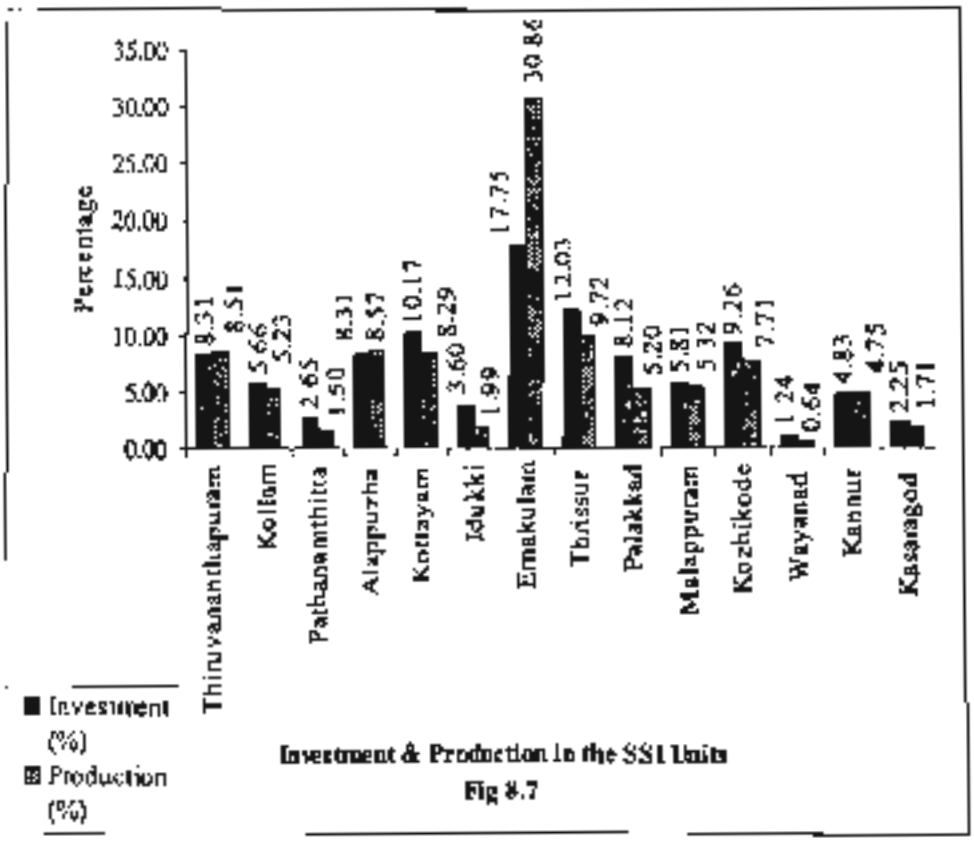
8.30 The 3rd All India Census of Small-scale Industries conducted during 2002 – 2003 with reference year 2001 – 2002, covering all the registered units as on 31.03.2001, revealed that there are only 146988 units are actually working in Kerala.. Later, 48972 number of SSI units were registered in Kerala for the period up to 1.10.2006 and the system of SSI registration has been discontinued with the enactment of MSMED Act, 2006. Out of the total number of registered working SSI units 195960 units, 41305 units are promoted by women, 6834 by SCs, 1414 by STs and 146407 by others. The additional investment made by the SSI units during 2006-07 (up to 1.10.2006) is Rs.8815 lakh and the employment provided is 12352. The details of district wise number of working SSI units during 2006 – 07 (up to 1.10.2006) and as on March 2007 with investment, employment provided and value of production are given in Appendices 8.20 and 8.21.

8.31 Percentage share of each district in terms of number of units & employment provided and that in terms of investment & value of production are shown in Figures 8.6 and 8.7. From the figures, it is clear that Ernakulam district stood at the highest position in terms of number of units, employment provided, investment and value of production and Wayanad district at the lowest position.



Number of SSI units & Employment

Fig 8.6

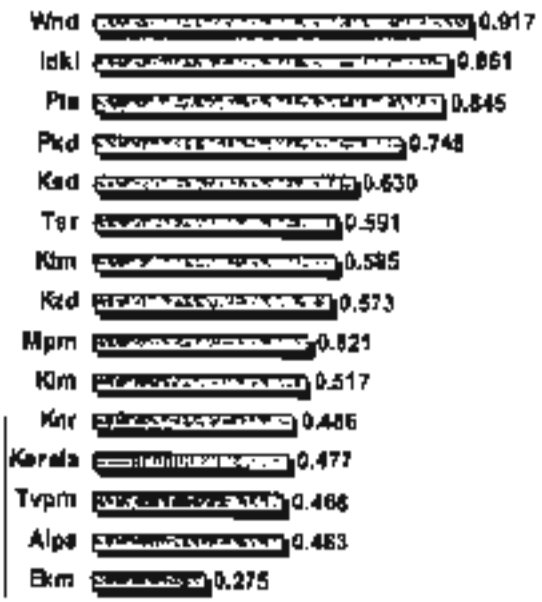


Investment & Production in the SSI Units

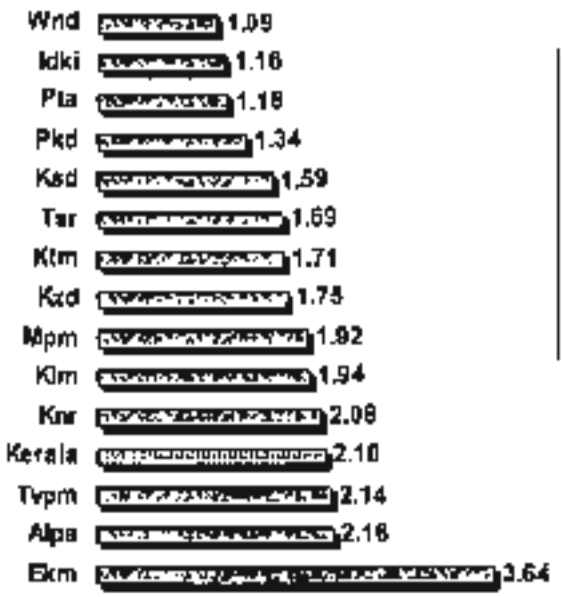
Fig 8.7

8.32 The average investment per worker showed an increasing trend this year and it reached to 0.83 lakh per worker from last year's 0.75 lakh. But the average investment for an SSI unit diminished from Rs.3.76 lakh to Rs.3.06 lakh during 2006-07.

8.33 A comparison of investment made for unit production in the SSI units of each district and the State is depicted below in Figure 8.8 and the production – investment ratio in the districts and the State are given in Figure 8.9.



Investment for unit Production
Fig 8.8



Production - Investment Ratio
Fig 8.9

8.34 From the above figures we can see that, the investment made by the SSI units in Kerala to produce goods and services worth Rupee One lakh is Rs.0.477 lakh. In other words, the value of production through the SSI Units in Kerala is 2.10 times the investment made. Ernakulam is the most potential district for small-scale units by producing goods worth more than three times the investment. Alapuzha, Thiruvananthapuram, and Kannur are in the succeeding position. In Wayanad, Idukki and Palakkad the SSI units are not much profitable.

8.35 The working status of SSI units in Kerala is given in Appendix 8.22. Out of the total 195960 units registered so far in the State, the number of units identified as sick as on March 2007 is 7586. Among the sick units, 2376 units are registered for revival and 1280 units are revived. The District Industries Centres revived eight sick units at Kollam, four at Wayanad, two at Kannur and one at Thrissur during 2006-07.

8.36 During year 2006-07, 1849 Enterprises have filed Memorandum under MSMED Part II. Details of Enterprises that filed Memorandum under the Act are given in Table 8.6.

Table 8.6
Details of Enterprises Filed Memorandum under MSMED Act Part II – 2006-07

Sl. No.	District	No. of Enterprises	Investment (Rs. Lakh)	Value of Goods Produced	Employment Provided
1	Thiruvananthapuram	323	2985	12982	2752
2	Kollam	221	2151	10044	1402
3	Pathanamthitta	27	69	150	82
4	Alapuzha	190	1417	3729	1402
5	Kottayam	137	2609	6003	975
6	Idukki	73	953	1729	415
7	Ernakulam	241	7186	17559	2472
8	Thrissur	99	1082	3225	646
9	Palakkad	87	1137	2641	653
10	Malappuram	117	2630	8874	793
11	Kozhikode	105	628	1428	533
12	Wayanad	58	491	230	228
13	Kannur	151	842	2721	968
14	Kasaragod	20	314	260	153
	Total	**1849**	**24494**	**71575**	**13474**

Source Directorate of Industries & Commerce

Box 8.2
Trade Technology Business Show 2007

The Trade Technology Business Show (TTBS) 2007 is conducted by Department of Industries and Commerce in association with Kerala Bureau of Industrial Promotion (K-Bip), KSIDC and KINFRA at Kochi on September 2007 TTBS 2007 created a platform for industrialists in Kerala to have in-depth interaction and one to one meetings with Business Houses/Buyers/Trade Associates/Trade Representatives of Foreign Embassies from all over the country and abroad. Food and Agro-processing, Ayurveda and Herbal, Coir, Handlooms, Handicrafts, Bamboo and Screwpine, Rubber and Rubber products are the seven SME sectors showcased at the TTBS 2007. This Meet was a part of Kerala Government's effort to promote the SME sector in the global markets and help the manufacturing sector to access larger markets, to introduce latest technology and machinery for their products and to know about international product standards.

Self Employment Programme under Prime Minister's Rozgar Yojana (PMRY)

8.37 The PMRY Programme achieved a good performance during the year 2006 – 07. 29088 cases were sanctioned during the year under review against the target 28000 number of applications. An amount of Rs.112.61 crores was also disbursed to 23248 applicants. Details of achievements under Self Employment Programme – PMRY during 2007 – 08 are given in Appendix 8.23.

8.38 The State has achieved only 103.89 per cent of the target under sanction of loans under PMRY scheme during 2006-07., which is lower than the percentage sanction to target during

2005-06. Pathanamthitta and Kasaragod districts could not achieve 100 per cent sanction to target. The performance under PMRY during the last five years is given in Table 8.7.

Table 8.7
Performance under PMRY in Kerala

Programme Year	Target (No)	Sanction		Disbursement		Percentage of			
		Number	Amount (Rs. Lakh)	Number	Amount (Rs. Lakh)	(3) to (2)	(5) to (2)	(5) to (3)	(6) to (4)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2002-03	19250	16297	8982	12589	6781	84.66	65.40	77.25	75.50
2003-04	20350	20377	10900	16945	8376	100.13	83.27	83.16	76.84
2004-05	25500	25813	12708	20599	9788	101.23	80.78	79.80	77.02
2005-06	28000	29461	14573	23623	11229	105.22	84.37	80.18	77.05
2006-07	28000	29088	14220	23248	11261	103.89	83.03	79.92	79.19

Source: SLBC and DIC

8.39 The State has disbursed 79.19 per cent of the sanctioned amount towards 79.92 per cent of applications sanctioned so as to achieve 83.03 per cent of the target during the programme year 2006-07.

8.40 The PMRY target for the State is enhanced to 33700 for the programme year 2007-08 and there is an increase of 20.36 per cent in the target. The Ministry of Agriculture and Rural Industries has issued revised guidelines for PMRY Scheme for the year 2007-08.

Box 8.3
Revised Guidelines for PMRY

- Project cost has been enhanced to Rs.2.00 lakh for Service & Business and to Rs 5.00 lakh for industrial activities.
- Subsidy increased from Rs.7500/- to Rs.12500/- per beneficiary
- Ceiling on family income increased from Rs.40,000/- to one lakh per annum
- Self Help Groups can be considered for assistance under the scheme and subsidy for SHG is Rs.15, 000/- per beneficiary subject to ceiling of Rs.1.25 lakh per SHG.
- Training cost per beneficiary enhanced from Rs.1000/- to Rs.2500/- for industry projects and from Rs.500/- to Rs.1250/- for service/business projects.
- Stipend given to beneficiaries increased to Rs.750/- for industry projects and Rs.375/- for service/business projects.

Industrial Co-operatives

8.41 Out of the total number of 892 Industrial Co-operatives 14 new societies were registered during 2006 – 07. Of the total number of registered societies, 193 are SCs, 3 are STs, 336 are

women and 360 societies are general. Regarding the number of societies, Kollam district stands first, followed by Kannur and Thiruvananthapuram. Details of Industrial Co-operative Societies in Kerala as on 30-06-2007 are given in Appendix 8.24.

Bank Credit to SSI Sector

8.42 The outstanding bank credit to various sectors at the end of March 2007 was Rs.64273 crore as against Rs. 51919 crore in the previous year. The flow of credit to SSI sector showed a considerable increase in absolute terms from Rs. 3708 crore in 2006 to Rs.4391 crore in 2007. The status of flow of credit to various sectors is given in Appendix 8.25.

KINFRA Food Parks

8.43 Government has given special thrust to promotion of food processing industry due to the enormous potential of the sector for development. With the objective of boosting industrial growth, KINFRA has been promoting the concept of Theme Parks, which have been set up for the exclusive growth and development of chosen and specified industrial sectors. Food Processing Parks, Apparel Park, Film and Video Park, Herbal and Ayurveda Parks are some examples of the theme parks already implemented by KINFRA. Two Food Processing Parks had already been set up by KINFRA, one at Kakkancherry near Kozhikode and the other at Mazhuvannur near Ernakulam. A third Food Park at Adoor is under implementation at present. 85 acres of land has been acquired for developing the specific infrastructure for the same. MOFPI, Government of India proposes to set up 10 mega food parks in the country. Under the scheme, KINFRA proposes to develop a Mega Food Park in Wayanad district. Further, KINFRA has a plan to develop a Spices Park at Idukki for the processing of spices. Details of Food Processing Units in KINFRA Parks during 2006-07 and as on March 2007 are given in Table 8.8 and Table 8.9 respectively.

Table 8.8
Details of Food Processing Units in KINFRA Parks during 2006-07

Sl. No.	Name of Park	Total area acquired (acres)	No. of units	Area allotted (acres)	Investment (Rs. Lakh)	Employment (Nos)
1	Kinfra Small Industries Park, Mazhuvannur, EKM.	65	2	1.3	558.4	60
2	Food Processing Park, Kakkanchery, Malappuram.	60	4	1.27	181.1	62
3	Small Industries park, Thumba	40		2.00	540.00	105
4	Small Industries Park, Sithamgoly	60	5	5.4	434.91	97
5	Small Industries Park, Wayanad	50	4	0.11	297.00	75
6	Small Industries Park, Koratty	20	9.7	5	1237.09	230

Source: KINFRA, Tvpm

Table 8.9
Details of Food Processing Units in KINFRA Parks as on March 2007

Sl. No.	Name of Park	Total area acquired (acres)	Area allotted (acres)	No. of units	Investment (Rs. Lakh)	Employment (No)
1	Kinfra Small Industries Park, Mazhuvannur	65	27.26	27	3661.83	556
2	Food Processing Park, Kakkancherry, Malappuram	60	11.22	18	2024.2	295
3	Small Industries Park, Thumba	40	5.9	11	1148.75	206
4	Small Industries Park, Sitharamgoly	60	9.35	9	1416.41	322
5	Small Industries Park, Wayanad	50	2.11	6	359.00	91
6	Small Industries Park, Koratty	20	9.7	5.	1237.09	230

Source. KINFRA, Tvpm

8.44 ADFIK has undertaken the State Nodal Agency Work on behalf of KINFRA. They recommended 33 proposals amounting to an assistance of Rs. 909.19 lakhs in 2006-07 of which about 25 proposals deal with setting up new factories / expansion of existing factories, four proposals deal with Human Resource Development, one proposal deals with quality systems and three proposals with promotional activities.

8.45 About 30 proposals have been sanctioned by Ministry of food processing Industries, Government of India in 206-07 amounting to an assistance of Rs. 861.07 lakh of which about 24 proposals of 844.76 lakh deal with setting up new factories / expansion of existing units, two proposals of Rs. 5 lakhs deal with HRD, two proposals with 10 lakhs deal with quality systems and two proposals of Rs. 1.31 lakh deal with promotional activities.

8.46 ADFIK is also handling the operation and maintenance of common facility centers in KINFRA parks such as Quality Control Laboratories, Incubation Center and Cold Storages. For the Q.C Labs at KINFRA Parks at Mazhavanoor and Kakkancherry the procurement of equipments have been completed and selection of operating agency is about to be completed. In the case of Incubation Center at KINFRA Park in Kakkancherry, most of the equipments have been delivered, operating agency has been selected, with only the installation of utility lines pending. For the Cold Storages at KINFRA Parks at Mazhavanoor and Kakkancherry the equipments have been installed whereas the selection of Operating Agency is under progress.

Handloom Industry

8.47 Among the Traditional Industries of Kerala, Handloom sector stands second to the coir industry in providing employment to the tune of 1.75 lakh persons. The Industry in the State is highly concentrated in Thiruvananthapuram and Kannur districts. Palakkad, Kozhikode, Trissur,

Ernakulam, Kollam and Kasargod districts also have some concentration of the Industry. Out of the total number of looms, the co-operative sector occupies 94 per cent and the rest, industrial entrepreneurs and both consists of factory type and cottage type societies. By the end of March 2007, there were 758 PHWCS consisting of 155 factory type societies. The district wise details of handloom societies in the state are given in Appendix 8.26.

8.48 Kannur district has 11050 looms with 73 registered weavers' co operative societies and 79 private handloom units. Lungi, grey sari, furnishing material and dhothies are the major handloom items produced in the state and which accounts 67 per cent of the total production in the Industry.

8.49 The Southern region in the state produces 54 per cent of the major handloom items followed by the North (32 per cent) and Central region (14 per cent). The overall production of cloth in Kerala shows a marginal increase of 0.10 million meters from 62.38 million meters in 2005-06 to 62.48 million meters in 2006-07. Out of the total handloom production in the state, 96.11 per cent is from the co operative sector and the rest (3.89 per cent) is by the units in the entrepreneurial sector

8.50 Under the scheme Establishment of Mini Pre-loom Process Centres, financial assistance was provided to factory type PHWCS and private entrepreneurs to set up Mini pre-loom process centres. This enabled the societies and other units engaged in production of handloom products in the State to stop the dependence of facilities outside the State for pre-loom activities such as warping, sizing and dying. Under the Integrated Handloom Cluster Development, a scheme to facilitate sustainable development to handloom weavers is located, which will address the requirements of the cluster in a co-ordinate and comprehensive manner. Setting up of CFCs and showroom, upgradation and purchase of accessories, organizing/participation of trade fairs, workshops, seminars etc are the eligible components for assistance under the scheme. Out of the 20 such clusters identified through out the country for IHCD Scheme, one is from Kerala (Thiruvananthapuram) and Hanveev is identified as the implementing agency.

Box 8.4
Promotion of Handloom – New Initiatives

Government have launched a new scheme called "Uniform made of Handloom Clothes to School Children" in which school children should wear clothes made of Handloom at least one working day in a week. The scheme is expected to generate employment to at least 20000 weavers and to some extent to keep the traditional heritage of the State of Kerala. The project has been initiated by Textile Project Development Centre (TPDC). Another project called "Kerala Thanimaykku Kaithari", under which Government officials would wear handloom clothe at least one working day in a week.

8.51 Hantex and Hanveev are the two State level agencies dealing with the procurement and marketing of handloom fabrics. Hantex is an apex body of handloom co-operatives established for the supply of raw materials for the primary weaver's societies and for the marketing of their products. There are 152 sales depots, two weaving factories, two garment units and one cloth processing unit and four regional offices working under this apex organization. The value of yarn purchased is Rs.5.39 crore and value of cloth procured is Rs.6.39 crore during 2006-07 as against Rs 6.56 crore and Rs.7.11 crore respectively during the previous year. Out of the total produce of

the societies, 80 per cent is marketed through Hantex and the rest is through own retail shops The details of the working results of Hantex are given in Appendix 8.28.

8.52 Handloom Industry is also assisted by an another agency called the Kerala State Handloom Development Corporation (Hanveev) which is outside the purview of the co operative fold. The Hanveev is acting as a link between the weavers and consumers and to eliminate the middlemen. The Corporation supplies raw materials to the weavers at a reasonable price and helps to market their products also. There are 33 production centres/ clusters and three regional offices (Thiruvananthapuram, Ernakulam and Kannur) presently working under the Corporation. The company has a strength of 6500 registered weavers. The sales turnover of the Corporation has been increased from Rs 1486 65 lakh in 2005-06 to Rs.1500 98 lakh in 2006-07. The accumulated loss of the Corporation has increased from Rs.2753.42 lakh in 2005-06 to Rs.3132.49 lakh in 2006-07. The working results of Hanveev are given in Appendix.8.29 and the details of production, accumulated loss etc. of Hanveev from 2000-01 to 2006-07 are given in Table 8.10.

Table 8.10
Performance of Hanveev from 2000-01 to 2006-07

Year	Production		Sales Turnover (Rs. Lakh)	Accumulated Loss (Rs. Lakh)
	Quantity (lakh meters)	Value (Rs. Lakh)		
2000-01	19.11	797.00	2032.22	785.48
2001-02	8.48	354.00	1688.00	992.65
2002-03	8.20	335.00	990 00	1441.29
2003-04	12.30	515.74	1640.85	2085.64
2004-05	15.93	772.51	1603.84	2753 42
2005-06	16.88	686 56	1486.65	3008.44
2006-07	13.20	493.32	1500.98	3132.49

Source: Hanveev

8.53 Kerala Garments Ltd., registered in 1974 is a fully owned subsidiary of Hanveev. Stitching and sale of readymade garments are the main activities of the company. The Company produced 33000 pieces of readymade garments valued at Rs.23 lakh during 2006-07 (up to December 2006) against the production of 34000 garments valued at Rs.24 lakh in the previous year. It realized stitching charges around Rs.19.41 lakh and sold ready-made garments worth Rs.7.54 lakh. The loss of the company during the year under report was Rs.22 lakh compared to Rs.28 59 lakh in 2005-06 The accumulated loss of the company increased to Rs 31.32 crore and it was closed on December 2006.

8.54 Out of the total number of 3800 power looms in the State during 2006 – 07, 1381 looms are in the co-operative sector (36 34%). There are 33 power loom co-operative societies in the State with a membership of 6600 persons, of which 1223 are women.

Handicrafts

8.55 Handicrafts Industry is a major area for employment generation in Kerala by upholding our tradition and culture. Coconut shell carving, straw picture making, cane work, bamboo and reed weaving, ivory carving, bell metal casting, screw-pine and mat weaving are the major handicraft items in our state. Kerala State Handicrafts Apex Co-operative Society (SURABHI),

Handicrafts Development Corporation and Artisans Development Corporation are the major promotional agencies of the Industry.

8.56 Kerala State Handicrafts Apex Co-operative Society (SURABHI), established in 1964, is an organization sponsored by Government of Kerala and Government of India for the development of handicrafts industry in the State. SURABHI has 103 primary co-operative societies to market their products through a network of 16 sales showrooms across the country. During 2006-07, the Society conducted eight exhibitions in various centers and a Craft Bazar at Ernakulam by participating more than 100 artisans from different States. The Society conducted six training programmes and one design workshop for primary societies and three skill upgradation training programmes and three design workshops for Bamboo Cluster at Thrissur, Straw Picture Cluster at Kollam and Wood Cluster at Ernakulam. During 2006-07, the Society purchased goods worth Rs 258 lakh and the total sales is Rs.359 lakh.

8.57 The Handicrafts Development Corporation is a Government of Kerala undertaking established in 1968 with the objective of developing handicrafts sector in Kerala. The Corporation is procuring and marketing handicraft products by giving fair returns to the artisans through its 18 Kairali emporia, spread all over India. The sales turnover of the Corporation increased to Rs.1113 lakh in 2006-07 from Rs.1064.73 lakh in 2005-06. The accumulated loss of the Corporation as on 31st 2007 was Rs.810.18 lakh.

8.58 The Corporation has submitted project proposals with a total cost of Rs.687.52 lakh to the Development Commissioner (Handicrafts) for the following programmes.

- Setting up of State Handicrafts Marketing Mall at Thiruvananthapuram
- Conservation of Heritage Building SMSM Institute, Thiruvananthapuram
- Opening of new showrooms at Palakkad, Kozhikkode, Mumbai and Mangalore
- Raw Material Bank for wood, fiber, cane & Bamboo etc. at C.F.S.C., Thiruvananthapuram
- Integrated Design & Technology Development project in Wooden Crafts at C.F.S.C., Thiruvananthapuram

8.59 The Corporation is implementing six cluster projects under 'Baba Ambedkar Hasthashilpa Vikas Yojana (AHVY)' sanctioned by the Development Commissioner (Handicraft), Ministry of Textiles, Government of India. The maximum project cost for a cluster is Rs.60.00 lakh. Baseline surveys were completed for all the six clusters and the reports were submitted to the DC (Handicraft). Under the Project, Artisan Identity Cards were issued to 641 beneficiaries, Artisan Credit Cards to 80 beneficiaries and 835 beneficiaries were enrolled under the Janashree Bhima Yojana. The project will also benefit 350 artisans through the activities Design Development Workshop, Skill Upgradation Training and Exhibitions. The clusters coming under AHVY during 2006-07 are the following.

- Embroidery Works at Thirupuram, Thiruvananthapuram
- Cane & Bamboo Works at Champarambu, Kollam
- Lace Work Craft at Eravipuram, Kollam
- Brass & Bell Metal Work at Mannar, Alappuzha
- Coconut Shell & Stem Work at Koyilandy, Kozhikkode
- Bamboo & Cane Work at Pokkottumpadam, Malappuram

8.60 The artisans in the trades of pottery, copper, bronze, gold smithy, carpentry etc. are assisted by the Kerala Artisans Development Corporation (KADCO). Assistance is given to them for establishing production units, promoting marketing of products and providing employment opportunities directly and indirectly through schemes of trade fairs and marketing centres. The loss of the Corporation during 2006-07 was Rs.15.93 lakh as against Rs.5.36 lakh in 2005-06 and the accumulated loss at the end of March 2007 was Rs.234 05 lakh. KADCO is approved as one of the state agencies for the implementation of schemes financed by the National Backward Classes Finance and Development Corporation (NBCFDC). For the direct sale of the artisans' products to the public, the Corporation is conducting exhibitions through out the state.

Bamboo Industry

8.61 Kerala is one of the major diversity centres for bamboo species. The State accounts for about 19 per cent of the total bamboo distributed in India. In Kerala, bamboo is used as a raw material in pulp and paper, bamboo ply and traditional industries. The pulp and paper and bamboo ply industry belongs to organized sector, while the traditional industry falls in the unorganized sector. The Bamboo industry in Kerala provides livelihood to about three lakh workers mostly belonging to the tribes and other weaker sections of the society, majority of which are women.

8.62 The Kerala State Bamboo Corporation was set up in 1971 by Government to ensure a steady supply of raw material to the artisans and reeds to cooperative societies and traditional users. At present, the major activities of the Corporation are conversion of reeds collected from forest into bamboo mat by traditional bamboo workers, manufacture and sale of bamboo ply, and sale of bamboo mats. About 21 Procurement Depots with its sub centres, nine Reeds Collection centres, 13 Reed Distribution Centres and one manufacturing unit for the production of Bamboo Ply are working under the corporation. During 2006-07, the total turnover of the Corporation was Rs.912.59 lakh, which includes Rs.642.82 lakh towards sale of bamboo ply. The loss of the Corporation during 2006-07 was Rs.196.81 lakh as against Rs.195.71 lakh in 2005-06 enhancing the cumulative loss to Rs.1132.73 lakh. The Corporation introduced the use of "Thick Core Mat" in the place of core mats now using in the production of bamboo ply and started the production of Flattened Bamboo Board with financial assistance from National Mission of Bamboo Applications (NMBA).

8.63 The Kerala State Bamboo Mission was constituted in 2003 with the aim of marshalling the scattered resources of the State and adopting a focused approach to revitalise the sector. The State Bamboo Mission under K-Bip is designated as the Bamboo Development Agency (BDA) of the State for the implementation of the National Bamboo Mission Programmes. The major activities undertaken by the State Bamboo Mission during 2006-07 are:

- Kerala Bamboo Fest 2007 at Kozhikode
- Screw pine Cluster at Vaikom
- Technological tie-up with NMBA
- Manual on Bamboo Cultivation
- Skill Upgradation Training Workshop for Screw pine Artisans

Coir Industry

8.64 Coir Industry in India is an agro-based traditional rural industry and largely confined to coconut producing States. Sri Lanka, Thailand and Indonesia are the other coir producing

countries in the world. A significant share of world coir production is from India and Sri Lanka. Being highly labour intensive, the industry provides employment to 5.86 lakh people belonging to economically weaker section of the rural population of the country. An important feature of the industry is that over 80 per cent of the workers engaged are women.

8.65 Coir Industry is one of the major traditional industries in Kerala, consisting of three major sub-sectors, viz. fibre extraction sector, spinning sector, and weaving sector. Among the twenty three varieties of coir produced, Anjengo yarn is the finest yarn produced in Kerala. The industry employs 3.75 lakh workers and 76 per cent of them are women.

8.66 Even though intensive steps were taken to revive the sector, it still remains as a sick traditional industry due to the competition from the products of other natural as well as synthetic fibers, both in domestic and international markets. Problems like non-professional management system in the co-operative sector, reluctance to adopt mechanization, shortage of husk due to the attack of mandari disease, unhygienic surroundings and conditions in the work area of traditional retting and beating operations have resulted in the reduction of fiber production and an unprecedented increase in the price of fiber in the State, and huge quantity of fiber have to be purchased from Tamilnadu. The non-commissioning of eleven defibering mills out of 56 defibering units already sanctioned by the government in the co-operative sector under the Integrated Coir Development Programme (ICDP) for mechanized fiber production, unsatisfactory working of most of the units already commissioned, non- availability of husk etc, have once again worsened the situation. The stoppage of Minimum Export Price (MEP) and Rebate schemes by the Government of India have also contributed considerably to the present crises of the industry, especially in the co-operative sector. In the case of Market Development Assistance (MDA), which was introduced in lieu of rebate system, was not much helpful either to Apex society (COIRFED) or to the Primary Co-operative Societies, because of the impracticable conditions and limitations stipulated for the utilization of MDA. As part of Government's effort to revive the existing defibering units in the co-operative sector and opening new units in the private sector, Coir Department is offering 50 percent subsidy on their capital investment limiting to Rs.10.00 lakh per unit. As a result 74 applicants from the private sector have been registered and 19 of them have started the units.

8.67 The major players in the Kerala Coir Industry are yarn producers, manufacturers / producers, public sector companies, exporters, depot holders, workers and co-operative societies. The dominance of co-operative sector is the peculiarity of coir industry in Kerala. A good number of primary co-operative societies are not functioning effectively. Out of 804 registered Coir co-operative societies, 410 are now working and only 31 are making profit. 170 coir cooperative societies are now on the verge of liquidation. Even the Apex Coir co-operative Society - Coirfed - is working in loss and facing financial crisis for the last few years. The public sector undertakings viz. Kerala State Coir Corporation (KSCC) and Foam Mattings (India) Ltd (FOMIL) are also running in loss due to their inability to produce more value added products, new designs in accordance with the changing taste of consumers, lack of innovative marketing and R&D activities. Details of various types of co-operative societies, their activities during 2006-07 and the district wise details of Coir Co-operatives are given in Appendices 8.31, 8.32 & 8.33.

8.68 A total expenditure of Rs.47.97 crore was made for various plan schemes in coir sector during the year under review. Under Revitalisation Programme, Rs.19.827 crores was disbursed to the coir co-operative societies and Rs.8.50 crores was spent for implementing Distress Purchase Scheme. To help small scale producers in the coir sector Rs.25.00 lakh was expended under the scheme Common Facility Service Centre, during 2006-07.

8.69 Among the items of export, coir fiber, curled coir, coir pith, coir yarn, coir geo-textiles, handloom mat, tufted mat, handloom matting and rubberized coir showed an increase and coir rugs & carpets, coir rope, powerloom mat and matting have recorded a decrease. The export of coir and coir products from India during 2006-07 was 168754.75 tonnes valued at Rs.60516.59 lakh as against 136026.97 tonnes valued at Rs.50844.75 lakh in 2005-06. USA is the largest importer of coir products from India followed by Germany, UK, France, Netherlands, Italy and European countries. Item wise export of coir and coir products from India during 2005-06 and 2006-07 are given in Appendix 8.34.

8.70 A comprehensive Geo-textile Programme has been launched for popularizing the concept and application of coir Geo-textiles. The coir Geo-textiles has been identified as a major coir product, with huge market potential in the multidisciplinary Geo-textile engineering applications. Coirfed, Kerala State Coir Corporation (KSCC) and Foam Mattings (India) Limited have been implementing many pilot projects and demonstration schemes for the popularization of coir Geo-textiles. The KSCC has implemented a number of projects in association with other research institutions for the development and promotion of coir Geo-textiles applications for varied purpose like erosion control, soil conservation, road construction etc. An amount of Rs.50.00 lakh was expended to implement the Geo-textiles Development Programme during 2006-07.

8.71 COIRFED, the Apex Federation of Primary Co-operative Societies, is engaged in the manufacture of coir fiber, coir yarn and coir products. The major portion of coir yarn produced by the Primary Coir Co-operatives is marketed by the Coirfed. The coir products produced by Coir Mats & Mattings Co-operative Societies (CMMCS), Small Scale Coir Manufacturers Primary Co-operative Society (SSCMPCS) etc. are chiefly marketed by themselves and the coirfed and KSCC also come for their marketing needs occasionally. The annual turnover of Foam Mating (India) Ltd 2006-07 was Rs.480.49 lakh, while that of KSCC was only Rs.340.93 lakh.

8.72 National Coir Research and Management Institute (NCRMI) has been conducting studies for the development of new coir technologies in collaboration with similar research organizations across the country like CIRCOT, NIRJAFT, RRL and NIT. NCRMI has created a brand image for the coir products of the State viz. "Kerala Coir – Golden Yarn of God's Own Country" for improving market in international and domestic markets.

Khadi and Village Industries

8.73 The Khadi and Village Industries Board (KVIB) carries out its activities through co-operatives societies, registered institutions and departmental units by availing financial assistance from State Government, Khadi Commission and Nationalised Banks.

8.74 During 2006-07, under Rural Employment Generation Programme (REGP) of Government of India, Khadi Board has disbursed an amount of Rs.776.84 lakh to 503 units as margin money grant by providing employment to 14312 persons. Three awareness camps, two district level exhibitions and State level exhibitions were organized by the Board during 2006-07.

8.75 Products worth Rs.157.86 crore were produced through the aided units of the Khadi and Village Industries Board and products worth Rs.194.52 crores were sold and employment has been provided to 156310 persons. Details of production, sales, employment and wages paid are given in Appendix 8.37.

8.76 The Board took a remarkable achievement in the weaving sector by replacing 200 numbers of six spindle charkas by new eight spindle charkas in the departmental production centres of Thiruvananthapuram, Kollam, Pathanamthitta, Kottayam, Ernakulam, and Malappuram. The Board also extended production incentive to Khadi artisans in the State @ 10 paisa per hank to spinners and @ 40 paisa per hank used for weaving to the weavers. 204 looms were also purchased and installed under Payyannur Khadi centre, Kottayam and Kollam projects.

8.77 During the period under review, the Board revived seven spinning units and one weaving unit and started a weaving unit at Karinganoor in Kollam district providing employment to 50 artisans The Board constructed work-sheds for the units at Sreemoolanagaram in Enakulam district, Mannur in Palakkad, Silk Weaving Units at Poozhikkunnu in Thiruvananthapuram, Ranni-Perinad in Pathanamthitta and godown at Mulavukad in Ernakulam district

8.78 As part of popularizing Khadi / Handloom, the State Government introduced Khadi/ Handloom uniform in schools once in a week. Khadi Board supplied 54,019 uniforms to students in 141 schools.

8.79 The Board established a paper carry bag unit at Kizhakkambalam in Ernakulam district in order to reduce the use of plastic and to popularize the paper products.

8.80 During the period under review, the Board received Rs.77.76 lakh from various Panchayats in Thiruvananthapuram, Alappuzha, Kottayam, Malappuram, Kozhikode and Kannur districts for the development activities of Khadi and Village industries. The District Panchayat, Kozhikode constructed a workshed, investing Rs.18.00 lakh, for honey processing unit at Balussery and handed over the same to the Board.

8.81 The Board has 218 sales outlets for the products of Khadi and Village Industries and sold goods worth of Rs.1217.13 lakh during 2006-07. District wise details are given in Appendix 8.38.

Sericulture

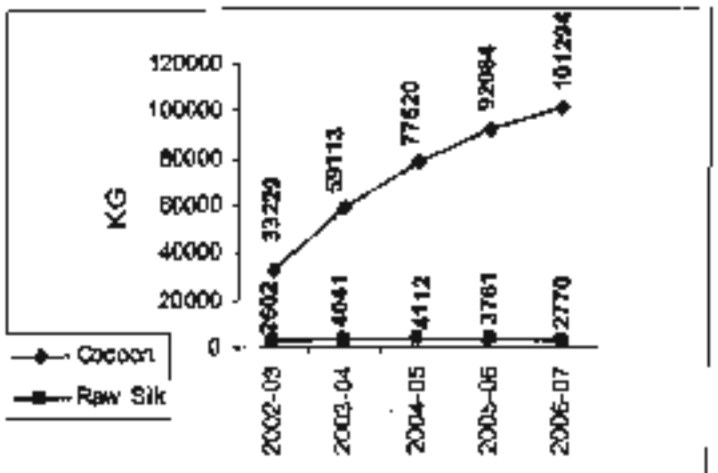
8.82 Sericulture is an agro-based industry promoted as a subsidiary occupation in Kerala. State Sericulture Co-operative Federation (SERIFED) is the nodal agency for promoting sericulture activities. It is an apex body of Sericulture Co-operative Societies formed with the objective of developing sericulture and silk industry in the State through the member co-operative societies.

8.83 During the period under review the cocoon production has increased to 101294 KGs in 2006-07 as against 92083 KGs in 2005-06 by showing a growth of 10 per cent. The year-wise performance in terms of mulberry plantation, disease free laying supply (DFLs), cocoon production and raw silk production is given in the Table 8.11. The district-wise details of physical achievements during 2005-06 and 2006-07 are given in Appendix 8.39.

Table 8.11
Status of Sericulture

Year	Production in Acre (cum)	No. of Farmers (cum)	DFLs Distributed (Nos)	Cocoon Production (Kg)	Raw Silk Production (Kg)
1	2	3	4	5	6
2002-03	1414	2366	98369	33229	2602
2003-04	1981	3216	154125	59113	4041
2004-05	2435	3975	185025	77620	4112
2005-06	2800	4521	210055	92084	3761
2006-07	3352	5175	240462	101294	2770

Source: Serifed



Trend in the Production of Cocoon & Raw Silk
Fig 8.10

8.84 The Figure 8.10 shows the production of cocoon and raw silk from 2002-03 to 2006-07. While cocoon production is increasing, raw silk production is diminishing due to the increased sale of cocoon in the open cocoon market at Palakkad.

8.85 Under cluster based approach for development of Sericulture, the selected 40 clusters are still continuing and 20 additional clusters also selected during 2006-07 for the integrated development of the activity. For strengthening the marketing activities an open cocoon market was established at Palakkad, during 2005-06, and 70 per cent the total cocoon is marketed through the same. During 2006-07, 78.77 MTs of cocoon were marketed through the Palakkad market and earned Rs.1.20 crore from neighboring States as cost of cocoon. The Silk Exchange functioning at Uduma in Kasaragod marketed 2.71 MTs of Raw silk and earned Rs.27.67 lakh from neighbouring States during 2006-07.

Cashew Industry

8.86 The total export of cashew kernels from India during 2006-07 was 118540 MT, valued at Rs.2455.15 crore in comparison with the export of 114143 MT cashew kernels valued at Rs.2514.86 crore during 2005-06. Details of export of cashew kernels from Kerala and India from 2000-01 to 2006-07 are given in Table 8.12.

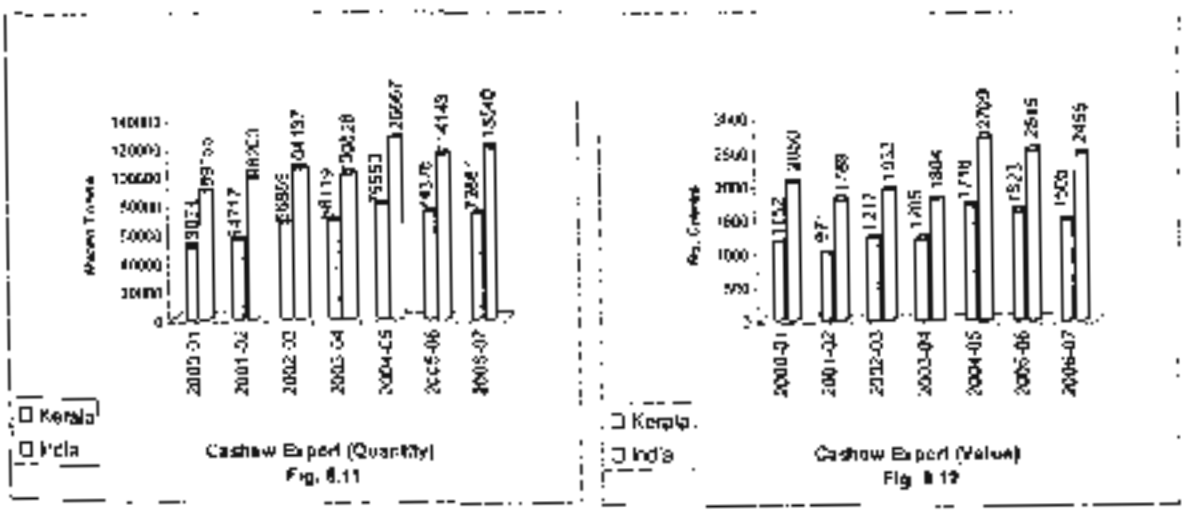
Table 8.12
Export of Cashew Kernels from Kerala and India from 2000-01 to 2006-07

(Quantity: MT, Value: Rs. Crore)

Year	Kerala		India		Share of Kerala (per cent)	
	Quantity	Value	Quantity	Value	Quantity	Value
2000-01	49874	1152	89155	2050	56	56
2001-02	54717	971	98203	1789	56	54
2002-03	66859	1217	104137	1933	64	63
2003-04	68119	1205	100828	1804	68	67
2004-05	79950	1716	126667	2709	63	63
2005-06	74376	1623	114143	2515	65	65
2006-07	72861	1505	118540	2455	61	61

Source: Cashew Export Promotion Council, Kochi.

8.87 Growth of cashew export from Kerala and India (Quantity and Value) are given in Figure 8.11 and Figure 8.12



8.88 The Kerala State Cashew Development Corporation (KSCDC) and Cashew Workers Apex Cooperative Society (CAPEX) are the two State agencies engaged in the cashew processing sector in Kerala. KSCDC owns 30 cashew factories spread out in the District of Thiruvananthapuram, Kollam, Alappuzha, Thrissur and Kannur. In KSCDC there are about 15000 workers and majority of them are women. KSCDC exports cashew kernels and cashew shell liquid. Raw nuts are mainly imported to supplement the local availability. During 2006-07 the Corporation provided employment for 195 days as against 230 days in 2005-06.

8.89 The sales turnover, working days in factories and loss of the corporation during the last five years is given in Table 8.13.

Table 8.13
Performance of Cashew Development Corporation

Period	working days in factories	Turnover (Rs. lakh)	Loss (Rs. lakh)
2001-02	23	5083.69	2995.24
2002-03	nil	164.61	3033.54
2003-04	17	1222.31	1782.30
2004-05	67	3587.13	297.16
2005-06	230	9100.89	3968.17
2006-07	195	6364.14	1243

Source: KSCDC

8.90 CAPEX is the apex society of cashew workers primary societies with headquarters at Kollam. The Society owns 10 factories. There are about 4000 workers and 225 staff under this apex society. CAPEX incurred a loss of Rs.334.39 lakh in 2006-07 while it was Rs.416.27 lakh in 2005-06

8.91 An expert committee was constituted by Government under the Chairmanship of Dr.Mridul Eapen, Member, State Planning Board to study the financial position of KSCDC and CAPEX. Following are the major recommendations of the committee.

1. As there is huge loss on account of high purchase price, an effective purchase strategy ensuring a continuous supply of units is urgently required.
2. Sales value has to be increased through better timing of sales, exploring the domestic market with innovative value added products and consumer packs.
3. To make continuous availability and processing of raw nuts for the profitable functioning of the units under KSCDC and CAPEX.
4. The Committee also recommends release of more plan funds for the upgradation and extension work under KSCDC and CAPEX.
5. The Committee strongly recommended for the renewal of lease/ requisition of the factories not owned by KSCDC and CAPEX.

Beedi Industry

8.92 Beedi Industry in Kerala is concentrated on Kozhikkode, Kannur and Kasaragode. The Kerala Dinesh Beedi Workers Central Co-operative Society is the only agency in the State to promote beedi industry in the organized sector. During 2006-07, raw materials worth Rs.2.17 crore were procured and 162.28 crores of beedi were produced through the Society. The society provided employment to 11000 workers and the sales turnover during the year 2006-07 was Rs.35.28 crore while the net profit of the society was Rs.20.85 lakh Further an amount of Rs.16 72 crore was paid as wages. The society has embarked upon product diversification programme and Dinesh Foods and Dinesh Umbrella are now in the market of Kerala. A Dinesh Garment Unit was started during 2006-07 and training was given to 150 persons.

Industrial Promotion

8.93 Promotional institutions and public sector manufacturing units are given prime focus under the programmes of medium and large industries. Government of Kerala assists the industrial units by providing financial assistance, infrastructure and training / consultancy services. Government encourages all sorts of investments on mutually beneficial terms which will positively contribute for the growth of the economy, employment generation and increase in tax revenue. Important agencies / departments engaged in the promotion industry in the State are the following.

- Kerala Financial Corporation (KFC)
- Kerala State Industrial Development Corporation (KSIDC)
- Small Industries Development Bank of India (SIDBI)
- Kerala Industrial Infrastructure Development Corporation (KINFRA)
- Infrastructure Kerala Ltd (INKEL)
- Directorate of Industries and Commerce (DIC)
- Kerala Small Industries Development Corporation (SIDCO)
- MSME Development Institute (formerly SISI)
- Kerala Industrial and Technical Consultancy Organisation (KITCO)
- Kerala Bureau of Industrial Promotion (K-bip)
- Centre for Management Development (CMD)

Industrial Financing

Kerala Financial Corporation (KFC)

8.94 The Corporation continued its thrust on lending to the SME segment under the SME fund scheme and offered one time settlement facility to borrowers so that hard and deserving cases were settled without recovery steps. For the SSI segment, Corporation sanctioned an amount of Rs.5030 lakh for 239 projects, which is much higher than that of the previous year. But in the case of non – SSI segment they sanctioned Rs.8553 lakh for 222 cases with a variation of Rs.41 lakhs compared to 2005-06 The total sanctioned amount for 2006-07 is Rs.13583 lakhs as against Rs.12113 lakhs during 2005-06. The Corporation disbursed a total amount of Rs.9725 lakhs for 364 projects as against Rs.7852 lakh during 2005-06 which is 24 per cent higher than that of the previous year.

8.95 The operating profit of the Corporation increased from Rs.1138 lakh to Rs.1254 lakh in 2006-07. The total recovery for the year was Rs.199.07 crore as against Rs.213 89 crore during 2005-06. The Corporation continued its efforts on reducing NPA by adopting effective strategy to bring down the net NPAs to 48.52 per cent during the year as against 56.89 per cent last year. Capital to Risk Assets Ratio (CRAR) improved from 18.88 per cent to 20.35 per cent as on March 2007. The Corporation redeemed SLR bonds of Rs.43.31crores during the year and the balance outstanding was Rs.143.63 crore. An amount of Rs.1.33 crore was paid to the State Government as commission for guarantee extended for SLR Bonds and fixed Deposits.

8.96 The performance of KFC at a glance is given in Table 8.14

Table 8.14
Performance of KFC

(Rs. lakh)

Sl. No	Item	2005-06	2006-07
1	Sanctioned Amount (gross)	12113	13583
2	Disbursements	7852	9725
3	Recovery	21389	19907
4	Operating Profit	1138	1254
5	Net Profit	177	44
6	Capital Adequacy Ratio (%) (CAR)	18.88	20.35
7	Current Recovery (%)	36.89	20.92
8	Net worth to capital employed	17.22	19.84

Source: KFC, Thiruvananthapuram

Kerala State Industrial Development Corporation (KSIDC)

8.97 KSIDC's range of service include identification of viable projects, cost sharing of feasibility studies, promoting entrepreneurs at all levels of project implementation, syndication of finance and financial structuring of projects, assisting as the nodal agency for the Single Window Clearance scheme at State level, conducting exhibitions and seminars in order to create investor awareness about the State, organizing business delegations to foreign countries to attract investments providing term loan financing and equity participation and facilitating infrastructure development for industry

8.98 During 2006-07, KSIDC completed six projects with a total investment of Rs.47.00 crore and direct employment potential for 306 persons as against an investment of Rs.248 crore and employment of 1543 persons during 2005-06. 35 projects with an aggregate cost of Rs.516 crore are under implementation which will provide employment to 6176 persons on completion.

8.99 The total financial sanction comprising share capital and loan for various industries during 2006-07 amounted to Rs.112 crore and sanctioned financial assistance to 16 projects with an estimated investment of Rs.217 crore providing employment to 1010 persons. The total disbursement during the year was Rs.103 crores and the total recovery of principal and interest on loan from assisted units amounted to Rs.49 crore. The operating profit of the Corporation was Rs.42 crore as against Rs 22 crore in the previous year.

Major Initiatives of KSIDC

- Integrated Industrial Township at Kinalur, Kozhikode with assistance from Malasian Government
- Electronic Hub at Kochi & Thiruvananthapuram
- Free Trade and Warehousing Zone at Kochi Ornamental Fish Park with State Fisheries Resource Management (FIRMA)
- Knowledge City at Kochi
- Life Sciences Park, Thiruvananthapuram
- Petro Chemical Complex and Gas Pipeline
- Health Care Park, Thiruvananthapuram

8.100 It is estimated that the Mega projects of KSIDC amounting to Rs.32260 crore will provide employment to 153500 persons in the State

8.101 The Industrial Growth Centres of KSIDC are under various stages of development and thrust is giving for improving essential infrastructural facilities in these IGCs, in order to attract entrepreneurs. Out of the total area of 1109 acres only 45 acres are allotted to industrialists. Seven units are functioning in these IGCs with an investment of Rs.5375 lakh providing employment to 665 persons.

Small Industries Development Bank of India (SIDBI)

8.102 Small Industries Development Bank of India (SIDBI) is the principal financial institution for the promotion, financing and development of industries in the SME sector. SIDBI has emerged as a direct finance provider to eligible MSMEs and acts as the nodal agency for the following schemes sponsored by Government of India.

- Technology Upgradation Fund Scheme for Textile Industries (TUFS)
- Integrated Infrastructure Development Scheme (IIDS)
- Credit Linked Capital Subsidy Scheme (CLCSS)
- Integrated Development of Leather Sector Scheme (IDLSS)
- Vendor Development Scheme (VDS)
- SME – IT Loan Schemes

8.103 SIDBI extends indirect financial assistance also, by way of refinance facilities to primary lending institutions namely KFC, KSIDC and Commercial Banks against their loans granted to small scale units.

8.104 SIDBI, Kochi sanctioned Rs.780.81 crore and disbursed Rs 749 23 crore under its various schemes of assistance during the finance year 2006-07 to small scale sector including service sector in the State Of the total amount disbursed, Rs.380 lakh was spent under micro credit scheme in the State.

8.105 The Rural Industries Programme (RIP) of SIDBI aims at creation of rural employment through enterprise promotion in rural and semi-urban areas and addresses problems such as rural unemployment, urban migration, under-utilisation of know-how and latent rural resources. Through the intervention of SIDBI's implementing agency APITCO, Rural Industries Programme has been implementing in the districts of Malappuram, Wayanad, Thrissur and Palakkad. As on March 31, 2007, around 2000 units have been promoted under RIP by sanctioning and disbursing an amount of Rs.33.92 lakh in all the four RIP districts of Kerala, put together.

8.106 Based on the modifications suggested in the "Package for Promotion of Micro and Small Enterprises" the Credit Guarantee Fund Trust for Small Industries (CGTSI) has been renamed as 'Credit Guarantee Fund Trust for Micro and Small Enterprises' (CGTMSE). The recent modifications announced by CGTMSE are briefed below

- The coverage of the scheme is now extended to all new and existing Micro and Small Enterprises, both in manufacturing as well as in the service sector
- The eligible loan limit under the scheme has been enhanced to Rs.50.00 lakh from Rs.25.00 lakh as earlier
- The extent of guarantee cover has been raised from 75 per cent to 80 per cent in respect of (a) loans to Micro Enterprises upto Rs 5.00 lakh; and (b) loans to Micro and Small Enterprises operated and/or owned by women entrepreneurs

8.107 CGTSME has so far approved guarantee covers to more than 78000 SME units aggregating a loan amount of Rs.2029.00 crore. Out of these, guarantee covers to the State of Kerala is more than 12930 units aggregating Rs.177.16 crore.

Box 8.5
SME Rating Agency of India Limited (SMERA)

SIDBI along with D&B, CIBIL, and many leading banks has launched the country's first rating agency viz. SME Rating Agency of India Limited (SMERA) that focuses primarily on the Indian SME segment. SMERA's primary objective is to provide ratings that are comprehensive, transparent and reliable. This would facilitate greater and easier flow of credit from the banking sector to SMEs.

Industrial Infrastructure

Kerala Industrial Infrastructure Development Corporation (KINFRA)

8.108 Since inception, KINFRA has mainly identified itself with land acquisition and development of industrial infrastructure in the form of parks / townships / zones. Kinfra enjoys the authority to acquire land at strategic locations and this facility can be utilized in the systematic development of industries by balancing social, regional and ecological requirements.

8.109 Kinfra has industrial parks in various sectors with 292 operating units with an investment of Rs.50467 lakh by providing employment to 16966 persons.

8.110 Following were the major activities of KINFRA during the year 2006-07.

- Construction of an animation building with 100000 sq. ft. to provide studio space for animation companies in KINFRA Film and Video Park, Trivandrum, has been completed.
- The proposal to set up an International Animation School in KINFRA Film and Video Park, Trivandrum under the ASIDE - PPP scheme has been approved by the Government of India.
- Expansion of KINFRA International Apparel Park, under APES scheme is in progress.
- Augmentation of utilities like power and water supply by KINFRA Export Promotion Industrial Park, Kochi to Info - Park and Smart City projects under ASIDE scheme are in progress
- Development works of a Bio-technology Park in 50 acres of land at Kalamassery with private sector participation would start during 2007-08 itself.
- Development of Bio- Technology Incubation Centre in the Bio technology Park, Kochi, which would house common equipment and instrument facilities like Green House & Hardening facilities, Tissue Culture facilities, Analytical and QC labs, extraction facilities for plant – based value added materials and Bio-informatics and Patent Facilitation Centre, is nearing completion.
- Development of an Integrated Infrastructure Development Centre & Food Processing Park in 85 acres of land at Enadimangalam village of Adoor Taluk, with financial assistance of Government of India for developing the specific infrastructure facilities in progress.
- Setting up of a Textile Centre in 126 acres of land at Taliparamba in Kannur District with financial assistance under the Textile Centre Infrastructure Development (TCID) Scheme of Ministry of Textiles, Government of India. The allotment of land would start from 2007- 2008.
- Setting up of an International Exhibition and Trade Center in 40 acres of land at Kalamassery with private sector participation.
- Establishment of an Integrated Textile Park in 350 acres of land at Palakkad under SITP Scheme of Ministry of Textiles, Government of India, to provide the textile industry with world class infrastructure facilities for setting up textile units.
- Setting up of a "Product Specific Special Economic Zone" with world – class infrastructure for Electronics Industry in 30 acres of land at Hi-tech Park in Kalamassery to create a superior environment for the development of Hi-tech, non - polluting, export oriented industries in Kerala.
- Setting up of a "Product Specific Special Economic Zone with world class infrastructure facilities for "Animation and Gaming Industries" using the ambience and facilities of the KINFRA Film & Video Park Trivandrum.
- Setting up of a "Product Specific Special Economic Zone with world–class infrastructure facilities for Food Processing, using the facilities available at the KINFRA Food Processing Park, Kakkancherry.
- Development of a Small Industries Park in Kunnamthanam, Pathanamthitta.

New Projects of KINFRA

- Industrial Park in 70.85 acres of land in Kidangoor, Kottayam district.
- Mega Food Park in Wayanad which will offer an integrated backward and forward linkages and post management facilities in addition to a world class supply chain, state of art basic and specific infrastructure facilities for processing of food and a close interface between research and industry.
- Knowledge Parks in Thrissur and Kozhikode to accelerate the development of a Knowledge – Based – Economy in Kerala.
- Spices Park in Idukki as a joint venture between KINFRA and Spices Board.

8.111 Details of allotments, investments, employment in Kinfra Industrail Parks is given in this Table 8.15.

Table 8.15
Allotments in KINFRA Industrial Parks on 31.3.2007

Sl.No	Name of the Park	No. of Units	Area Allotted		Investment (Rs. Lakh)	Employment (Nos)
			Land	Built-up Space		
			Acre	Sq.ft.		
1	KINFRA Small Industries park Trivandrum	61	32.09		3710.03	1495
2	KINFRA International Apparel Park Trivandrum	14	19.33	256856.00	9384.00	4879
3	KINFRA Film and Video Park Trivandrum	13	23.95		7022.11	3501
4	KINFRA Export Promotion Industrial Park, Cochin	16	61.57		6502.85	2753
5	KINFRA Small Industries Park, Mazhuvannur, Ernakulam	53	39.2		5371.18	1131
6	KINFRA Small Industries Park, Koratty	17	14.52		2016.14	458
7	KINFRA Food Processing Park, Kakkanchery	23	17.45		2869.2	396
8	KINFRA Small Industries Park, Thalassery	21	30.87		3823.19	654
9	KINFRA Small Industries Park, Seethangoli	40	30.73		3970.11	723
10	KINFRA Small Industries Park, Kalpetta	13	6.20		2353.51	296
11	KINFRA Neospace, Malappuram	19		26070	660.02	380
12	KINFRA Park, Palakkad	2	178.24		2785.00	300
	Total	**292**	**454.15**	**282926**	**50467.34**	**16966**

Source: Kinfra

Infrastructure Kerala Limited (INKEL)

8.112 Infrastructure Kerala Limited (INKEL) was set up by the Government of Kerala with the unique objective of increasing the pace of industrial infrastructure development in the State. The Company will promotes, set up, operate, maintenance, sell and deal with infrastructure facilities, projects and ventures including SEZs, industrial parks, estates, roads, rail and other transport facilities etc. A public private enterprise, INKEL has a paid up capital of one billion rupees with Government holding 26 per cent stake and 74 per cent private participation.

Directorate of Industries and Commerce (DIC)

8.113 Directorate of Industries and Commerce (DIC) provides infrastructure facilities for small scale sector by acquiring land and developing it into development area /plots with facilities like developed land, road, water supply, electricity etc. At present there are 36 DAs/DPs under the Industries Department having a total acquired area of 2471.634 acres and allotable area of 2254.08 acres. An area of 1975.575 acres has been allotted which accounts for 88 percent of the allotable area. The total number of SSI units in DAs/DPs in the State is 2115 of which 1819 units are working and 296 units are closed ones. DA Kanjikode is the biggest one in the State having 512.75 acres of allotted land with the largest number of working units (264). 110 Mini Industrial Estates also exist in all districts except in Wayanad, under the Industries Department with 619 working SSI units employing 2959 persons. The details of DA/DP and Mini Industrial Estates under Industries Department are given in Appendices 8.48 and 8.49.

Kerala Small Industries Development Corporation (SIDCO)

8.114 The Small Industries Development Corporations provide infrastructure, raw material input assistance and marketing support to the SSI sector, consultancy services, import and export services, technology upgradation, training programmes, business information etc. for strengthening the the SSI sector in the Country.The major activities of Kerala Small Industries Development Corporation (SIDCO) are distribution of raw materials to SSI units, marketing its products, providing infrastructure facilities by setting up industrial estates, mini industrial estates and industrial parks, execution of construction works to Industries Department and public sector units etc. SIDCO has seven emporia and seven marketing centres for the procurement and supply of 28 items produced by SSI units and assisted 100 SSI units during 2006-07. There are 17 conventional industrial estates, 36 mini industrial estates and nearly 950 working units in these estates. These units provided nearly 3450 direct and 10000 indirect employment opportunities. SIDCO has earned a profit of Rs.78.52 lakh during 2006-07 and imported 450 Metric Tones of Paraffin Wax worth Rs.2.00 crore from China under Japanese Debt Relief Grant Assistance Scheme. Details of industrial estates and mini industrial estates under SIDCO are given in Appendices 8.50 and 8.51.

Human Resource Development

MSME Development Institute (formerly Small Industries Service Institute - SISI)

8.115 Micro, Small and Medium Enterprises Development Institute, Thrissur (formerly SISI) is a promotional and developmental agency under the Small Industries Development Organisation (SIDO), Ministry of Small-Scale Industry, Government of India. The Institute provides a wide range of need based support services for promotion, development and modernization of small scale industries in the State of Kerala and Union Territory of Lakshadweep.

8.116 During 2006-07, 18 Motivation Campaigns (MCs) were organized for various categories like educated unemployed youth, weaker sections of the society, women, technocrats etc. Two motivation campaigns were conducted exclusively for OBC categories with preference to women and one was conducted exclusively for women. A total of 1627 persons actively participated and availed benefit of the campaigns.

8.117 A total of 403 persons were trained under 16 Entrepreneurship Development Programmes (EDPs) conducted during 2006-07. Of the 16 EDPs, 13 are product & process oriented and the others are general. Among the 11 Management Development Programmes organized during the year, seven MDPs are arranged exclusively for SME clusters in Kerala.

8.118 In addition to the Government programmes such as MCs, EDPs, and MDPs, the Institute organized a number of self-supporting skill development programmes operating under the PD account. The objective of the programme was to promote efficiency and self confidence among the educated youth and potential entrepreneurs to mould them to start their own ventures. 23 programmes were conducted to train 413 persons and the Institute earned a revenue of Rs.4.52 lakh from these programmes.

8.119 Under workshop services, three workshops attached to this Institute, namely, General Engineering Workshop, Footwear Service Centre, and Fruit and Vegetable Processing Centre conducted common facility services to SSI units for various job works, developing new products and rendering technical trainings etc. During 2006-07, the three workshops together earned revenue of Rs.5.68 lakh against the target of Rs.7.5 lakh.

8.120 The Institute organized awareness programmes on the following areas during the year.

- Energy Conservation
- Cluster Development Programmes
- Trade Related Entrepreneurship Assistance and Development (TREAD)
- World Trade Organisation (WTO)
- Intellectual Property Rights (IPR)
- Central Schemes for micro and small industry sector
- Entrepreneurship Development

Kerala Industrial and Technical Consultancy Organization (KITCO)

8.121 Kerala Industrial and Technical Consultancy Organization caters to the consultancy needs of entrepreneurs in the small and medium industries in the State. During the year under review, KITCO earned a total revenue of Rs.792.06 lakh as against Rs.598.32 lakh during 2005-06. The company achieved a growth rate of 33 per cent during 2006-07 as against 36 per cent during the previous year. The company involved in a variety of activities rendering consultancy services in different fields, but mainly in the fields of detailed engineering and human resources development. The other activities include preparation of detailed project reports, valuation of assets, energy audit, industrial and infrastructure projects. Major assignments completed by KITCO during 2006-07 are given in Box 8.6.

Box 8.6

Major Assignments of KITCO during 2006-07

Detailed Project Reports	13
Market Survey	2
Asset Valuation	16
Human Resource Development Programme	23
Energy Conservation	2
Industrial Projects	44
Infrastructure Projects	22
Tourism Projects	18

Kerala Bureau of Industrial Promotion (K-BIP)

8.122 Kerala Bureau of Industrial Promotion (K-BIP), set up in 1991, provides operational flexibility and acts as support mechanism for the Industries Department of the State Government. The Bureau functions as an interface between the prospective entrepreneurs and other State agencies. It is the repository of information regarding SSIs, Infrastructure and Technology databases. K-BIP conducted the following programmes during 2006-07.

- The National Centre for HACCP Certification (NCHC) associated with K-BIP has initiated the process of auditing and certification of HACCP to 29 Food Processing Units from Kerala.
- Advanced training programme on HACCP Audit Procedures
- Participated in the International Fair on Food, Food Processing & Related Equipments, Hotel & Restaurant Equipments and Supplies, *Aahar – Autumn Show 2006* organised by India Trade Promotion Organisation (ITPO) at Chennai
- Organised Technical workshops, Awareness programmes, Interactive seminars on Food Processing, Food Safety & HACCP, Cluster Development etc. through out Kerala, which is beneficial for the existing and prospective entrepreneurs of the State.

Box 8.7
Merger of KEREXIL with K-BIP

Government, vide Order No: (MS). No: 69/07/ID dated May 29, 2007, has accorded sanction to merge KEREXIL with K-BIP. Accordingly, KEREXIL has been closed with effect from June 30, 2007 and the assets of KEREXIL are being transferred to K-BIP.

Centre for Management Development (CMD)

8.123 During 2006-07, Centre for Management Development (CMD) undertook several research assignments for Government of India, Government of Kerala as well as the corporate enterprises and development agencies. It continues to provide professional support to RIAB. The major activities undertaken by CMD during 2006-07 are given in Box 8.8.

Box 8.8
Major Activities of CMD

- Conducted a study covering a number of activities including analysis of the existing plan guidelines and evaluating the current planning process in the local governments for developing manuals and plan Rules for formulation, implementation monitoring etc.
- Organisation study, work study and method study in LSGIs
- Impact assessment study of All Kerala Tribal Development Rubber Plantation Project
- Evaluation Study of Rubber Plantation Development scheme
- Evaluation study on procuring, quality upgradation and product diversification scheme
- District Level Monitoring of all programmes of Ministry of RD Government of India
- Monitoring of RSVY
- Study on Financial inclusion, Farmer's indebtedness and farmers suicides

8.124 Besides conducting studies and research, CMD conducted 94 Micro Enterprises Development Programmes (MEDP) in association with LSGIs and Ministry of S&T, Government of India to benefit around 2770 persons in the manufacturing / production and service sectors. Also, CMD organized 10 Management Development Programmes for the benefit of entrepreneurs and those working in micro enterprises.

Cluster Development

8.125 Cluster is a sectoral and geographical concentration of enterprises, which have common opportunities and face similar threats. Govt. of India has launched the scheme 'Small Industry Cluster Development Programme', through which project based incentives are being provided for the cluster development. The State Government also provides support of Cluster Development Agents and financial support in the form of Margin money loan, grant assistance etc. The Cluster Development Programme was initiated in the State through Kerala Bureau of Industrial Promotion (K-BIP); based on the UNIDO (United Nations Industrial Development Organisation) guidelines for cost reduction, value addition, technology upgradation, market widening, skill upgradation, research and development etc. Development Commissioner (MSME), Development Commissioner (Handicrafts), Small Industries Development Bank of India, State Bank of India, NABARD etc. are the various government agencies involved in Cluster Development Programme.

8.126 K-BIP has identified more than 60 clusters in various sectors in the State and around 50 consortia have been formed and registered in different clusters for setting up Raw Material Bank (RMB), Common Facility Centre (CFC) and marketing activities. The registered consortia in the clusters act as Special Purpose Vehicle (SPV) for the development of clusters. The major sectors developed as clusters are Food, General Engineering, Garments, Wood, Handicrafts, Rubber etc.

8.127 Sector specific clusters of industrial units are being promoted with the assistance of financial institutions and skill development facilitated through facility centres and training institutions. Government have trained 83 officials from the Department of Industries & Commerce and 36 officials from Coir Department as Cluster Development Agents (CDA) as per UNIDO guidelines.

8.128 The details of newly developed clusters during 2006-07 are given in Table 8.16.

Table 8.16
Details of Approved Clusters during 2006-07

District	Name of Cluster
Alappuzha	(1) M/S Seethal Soda Cluster (P) Ltd, Alappuzha
	(2) M/S Perumbavoor Apparels Consortium (P) Ltd, Alappuzha
Kottayam	(3) M/S Green Gold Cane Consortium (P) Ltd, Mundakkayam
	(4) M/S Mother Toys Consortium (P) Ltd, Kottayam
Ernakulam	(5) M/S Printers Consortium (P) Ltd, Ernakulam
	(6) M/S Business Forms Consortium (Kerala) Pvt Ltd, Ernakulam

Source: Department of Industries & Commerce

8.129 The Development Commissioner, MSME has sanctioned financial assistance to various clusters in Kerala for setting up Common Facility Centre and their details are given in Table 8.17.

Table 8.17
Details of Financial Assistance to Various Clusters

(Rs. Lakh)

Sl. No.	Cluster	Govt. of India	Govt. of Kerala	Consortium
	During 2006-07			
1	Tile Cluster, Thrissur	249.65	99.86	149.79
2	Rice Mill Cluster, Kalady	427.50	147.10	70.40
3	Plywood Cluster, Perumbavoor	235.31	67.23	33.62
4	Plastic Cluster, Aluva	315.00	92.00	53.00
	Total	**1227.46**	**406.19**	**306.81**
	During 2007-08 (Up to 9/2007)			
5	Wood Furniture Cluster, Ernakulam	245.29	25.00	220.29
6	Wood Cluster, Malappuram	160.23	45.78	22.89
7	Offset Printers Cluster, Kozhikode	318.64	95.04	75.52
	Total	**724.16**	**165.82**	**318.70**

Source: Kerala Bureau of Industrial promotion

8.130 An amount of Rs.123.20 lakh was sanctioned by the Development Commissioner (MSME) for conducting Benchmark Study in 20 selected clusters in Kerala. The study works are in progress and the details of selected clusters are given below.

- General Engineering: Pathanamthitta, Ernakulam, Palakkad, Kozhikode, Malappuram, Kannur
- Food: Kollam, Pathanamthitta, Alappuzha, Kottayam, Kozhikode
- Garments: Alappuzha, Ernakulam, Malappuram
- Soft Toys: Kottayam
- Rubber: Ernakulam, Malappuram
- Home Furnishing: Ernakulam
- Wood: Malappuram
- Soft Wood: Kannur

8.131 K-BIP conducted various cluster promotion activities in the State during 2006-07.

- Product specific Technical Workshop on Food Processing Sector
- Interactive session with successful CDAs and cluster members
- Kerala Cluster Products Expo 2006 at Kochi
- Management Training Programmes to stakeholders of cluster consortia
- Interactive session with Export Promotion Councils/ Commodity Boards

8.132 In Kerala, the MSME Development Institute also actively participates in Small Industry Cluster Development Programme (SICDP) of Government of India During 2006-07, Government of India sanctioned Rs.3.00 lakh to the Institute for preparation of diagnostic study reports of six clusters in Kerala and Rs.1.04 lakh was expended for diagnostic studies of five clusters. Details of fund sanctioned and utilized during the year in given in Table 8.18

Table 8.18
Clusters Selected by MSMED Institute for Diagnostic Study

Sl. No.	Name of Cluster	Location	Fund Sanctioned (Rs)	Amount Utilised (Rs)
1	Light Engineering	Perinjanam G. Pt	50000	20000
2	Agricultural Implements	Kulappully near Shoranur	50000	Nil (Already been done by the State Government)
3	Diamond	Kaiparambu, Choondal, Tholur and Avanur G.Pt.	50000	20000
4	Rice Mill	Palakkad Town	50000	21212
5	Note Book	Kunnamkulam Municipality area	50000	17460
6	Dies & Moulds	Thrissur Corporation Area and Avanur G.Pt.	50000	25000
	Total		**300000**	**103672**

Source: MSMED Institute, Kochi

8.133 During 2006-07, the Institute rendered assistance to the following clusters.

- Cherkala Potters Cluster, Kasaragod
- Electric Fans and Mixies Cluster, Kannur
- Light Engineering Cluster, Perinjanam
- Wood Cluster, Perinthalmanna
- Machinery Manufactures Cluster, Thrissur
- Rice Millers Consortium, Palakkad
- Light Engineering Industries Cluster, Kannur

- General Engineering Cluster, Kannur
- Agricultural Implements Cluster, Shoranur
- Rubber Cluster, Changanacherry

8.134 NABARD has prepared a scheme for financing handloom weavers' groups to be formed by those weavers who are outside the co-operative fold, members of weak PHWCS, traders, master craftsmen, NGOs, entrepreneurs etc. For this scheme, NABARD identified 100 clusters under Handloom sector.

Special Economic Zone

8.135 Special Economic Zone provides high quality and world class infrastructure designed to render cost of products, delivery, logistics and transactions competitive on global basis. The special policy disseminated by the Central Government provides for setting up of SEZs in the public, private, joint sector or by State Governments. The units operating in Special Economic Zones are excluded from the sectoral restrictions prevalent in the conventional manufacturing sector. Apart from this, these units also enjoy other benefits like single – window clearance, 100 per cent exemption of income tax for the first five years, self certificate of activities exemption from routine customs check etc.

8.136 In India, the total number of valid formal approvals of Special Economic Zone as on August 2007 is 366 of which 142 are notified SEZs. The total investment made in the notified Special Economic Zones comes to Rs.46705 crore with an employment of 40153 during 2006-07. The export from these Special Economic Zones was for Rs.34787 crore with a growth of 52 per cent over the previous year.

Cochin Special Economic Zone (CSEZ)

8.137 The Cochin Special Economic Zone (CSEZ) is one of the seven Special Economic Zones of Central Government. It was set up as a Multi – Product Export Processing Zone in 1984 to boost exports from the State. The Cochin Export Processing Zone was converted into a Special Economic Zone in November 2000. Spread over an area of 103 acres in the newly emerging Kakkanad, mere five kilometers away from the city center, on the Cochin Seaport Airport Highway, it is well connected to the National Highway network.

8.138 CSEZ is a multi product zone with 81 working units and four under implementation units (as on 31.3.2007) in sectors as varied as software, hardware, engineering, readymade garments, food processing, rubber products, gem & jewellery, manufacturing and with more than 7800 employees making it the single largest employment destination in the State. Both Multi National Corporations and domestic corporates have set up their units in this zone. Export during 2006-07 was of Rs.1037.52 crore as against Rs.696.00 crore during 2005-06, thereby registering a growth of 49.07 per cent.

8.139 CSEZ stands out amongst the SEZs in India as having the world class infrastructure for attracting investors globally. Besides operating the Central Government owned CSEZ, the jurisdiction of the Development Commissioner extends to new SEZs being set up in Kerala & Karnataka and also the 100% Export Oriented Units (EQUs) in Kerala, Karnataka, Lakshadweep and Mahe.

8.140 During 2006-07, 61 units have been in operation and 19 under implementation units in Kerala. One unit operates in Lakshadweep. Export from EQUs of Kerala was of Rs.1071 crore during 2006-07 and the export during 2007 – 08 is projected as Rs.1250 crore.

8.141 Five Special Economic Zones have been notified in Kerala during 2006-07, of which three are IT / ITES zones and two Port Based Zones. Industry wise Export performance of units in CSEZ for 2005-06 and 2006-07 is given in Table 8.19.

Table 8.19
Industry-wise Export Performance of Units in CSEZ

(Rs. lakh)

Sector	No. of Exporting Units as on 31.10.2007	2005-06	2006-07
Electronic Hardware	08	32794	33000
Electronic Software	21	1388	4903
Garments	05	5536	9267
Gem & Jewellery	07	2587	21894
Plastic & Rubber products	11	2865	4340
Engineering	10	5752	6078
Food & Agro	10	6562	13088
Others	22	12116	11182
Total	94	**69600**	**103752**

Source: CSEZ

8.142 After the Special Economic Zone Act followed by SEZ Rules of Government of India, along with other States, Kerala has also experienced a rapid increase in the number of proposals and approved SEZs. Eight SEZs have been notified for Kerala after SEZ Act 2005 and the details are given in Table 8.20.

Table 8.20
Details of Notified SEZs in Kerala after SEZ Act 2005

Sl.No	Name of SEZ	Product / Type	Area (hectare)	No. of units	Employment proposed
1	Cochin Port Trust, Puthuvypin	Port based	285.84		
2	Cochin Port Trust, Vallarpadam	Port based	115.25		
3	Electronic Technology Park	IT / ITES	12.55	1	9500
4	Electronic Technology Park	IT/ITES	34.00		5000
5	KINFRA	Animation & Gameing	10.12	2	8000
6	KINFRA	Food Processing	12.52		2000
7	KINFRA	Electronics Industries	12.14		3000
8	Infopark	IT / ITES	30.77	1	25,000

Source: Official Website on SEZ, Govt. of India

8.143 In principle approvals granted in the Board of Approvals after coming into force of SEZ rules are the following

1. Smart City - Infrastructure Private Limited - Kakkanad
2. Sutherland Global Services Private Limited - Kalamassery

8.144 Apart from these SEZs, Technopark and KSIDC are planning to have more SEZs for which land acquisition is in progress. The Industrial Growth Centres of KSIDC will also be converted as SEZs as and when the works are completed

Mining

8.145 Kerala is endowed with a number of deposits such as heavy mineral sand, china clay, iron ore, graphite, bauxite, silica sand, lignite, lime shell, granite etc. However mining activities on large scale are confined mainly to a few minerals such as heavy mineral sand, china clay, silica sand, limestone and graphite. Heavy mineral sand and china clay contribute more than 90 per cent of the total value of mineral production in the State

8.146 The Department of Mining & Geology has taken up investigation programmes of urgent nature for the benefit of the mineral based industries in the State and for the general public as per the directions of the Government from time to time. Based on the results of the reconnaissance and preliminary geological surveys including pitting and trenching, the Department takes up detailed exploration such as drilling, sampling and preparation of contour map after conducting contour survey samples collected during the investigation, are being analysed in the laboratories which include china clay, silica sand, graphite, bauxite, limestone, lime shell, stream sediments rock samples etc.

8.147 Investigation for China clay had been conducted in the following areas during 2006-07.

Table 8.21
Investigation for China Clay

District	Area	No. of Borcholes	Depth (Meters)
Thiruvananthapuram	Sasthavattom	3	94.75
Kollam	Mulavana	5	154.50
Kollam	Kundara	3	81.00
Kasaragod	Erikulam	3	80.50
Kasaragod	Paivalika	4	155.50
Kasaragod	Kumumangal Padavu	5	212.00
Kasaragod	Moonu Road – Malpacherry	4	93.00

Source: Department of Mining & Geology

8.148 As per the recommendation of the Public Accounts Committee, the Department had taken up a programme for Minor Mineral Quarry Mapping in all districts to prepare a database. During the survey 1193 minor mineral quarries and 102 crusher units were surveyed and collected data covering 104 villages in Kollam, Kottarakara, Pathanapuram, Karunagapally and Kunnathoor taluks of Kollam district and Thiruvananthapuram, Neyyattinkara and Nedumangad taluks of Thiruvananthapuram district.

8.149 The Department has conducted studies on landslide occurrence in and around Nadapuram in Kozhikode, bauxite mining area in Seethangoli in Kasaragod district and in Vattakayal area of Sakthikulngara village of Kollam District. Assessment of availability of river sand in

Kulathupuzha River was also carried out during 2006-07. A survey to demarcate the landslide prone areas in Idukki district has identified that Munnar, Devikulam, Cheruthoni, Elappara and near by areas are prone to landslide.

8.150 During 2006-07, the gem testing laboratory had identified 2586 gem stones/ synthetic stones by collecting Rs.5.03 lakh which is 13 per cent higher than that of 2005-06. A total of 283 china clay samples were collected for the investigation of china clay from different parts of the State and analyzed in the laboratory

8.151 The Department continued to implement effectively the provision of the Mines and Minerals Act 1957 and the Rules. Mineral concessions for minor minerals are sanctioned as per the Kerala Concessions Rules 1967. The various mineral concessions in force as on 31.3.2007 are given below.

Table 8.22
Mineral Concessions

Sl. No.	Mineral Concessions	Major Minerals	Minor Minerals
1	Prospecting Licenses	15	15
2	Mining Lease	83	
3	Reconnaissance permit	1	771
4	Quarrying Permit		2917
5	Quarrying Lease		361
6	Registered Metal Crusher		83

Source: Department of Mining & Geology

8.152 During the year 2006-07 the Department collected revenue of Rs.2646.83 lakh. The district-wise details are given in the following Table 8.23.

Table 8.23
Revenue Collection of Mining & Geology Department

Name of Office	Revenue Collection (Rs. lakh)		
	Major Mineral	Minor Mineral	Total
Thiruvananthapuram	106.28	184.07	290.35
Kollam	202.28	239.60	441.88
Pathanamthitta		120.19	120.19
Kottayam	20.66	104.57	125.23
Idukki		72.71	72.71
Alappuzha	24.55	25.48	50.03
Ernakulam	0.13	147.81	147.94
Thrissur		232.15	232.15
Malappuram		232.41	232.41
Palakkad	232.69	183.16	415.85
Kozhikode		164.85	164.85
Kasaragod	12.49	86.52	99.01
Wayanad	0.24	40.68	40.92
Special Office Cherthalai	27.21	4.20	31.41
Kannur	13.14	104.57	117.71
Kerala Mineral Squad (NR)		14.06	14.06
Kerala Mineral Squad (SR)	0.25	21.85	22.10
Directorate	14.33	13.70	28.03
Total	**654.25**	**1992.58**	**2646.83**

Source: Department of Mining & Geology

CHAPTER 9

TOURISM

India's most idyllic State, Kerala is today one of the most sought after tourist destinations in the world. Kerala, known as God's Own Country, having beautiful hills and valleys, lakes, backwaters, lagoons, seashore associated with rich heritage of art, culture, indigenous medicines coupled with ideal climatic conditions creates a paradise for tourists. Today Kerala Tourism is a global super brand and is recognized as a pioneer and trend setter in the country. Its unique culture and traditions, coupled with its varied demography has made Kerala one of the most popular tourist destinations in the world. Scheduled beaches, palm fringed backwaters, exotic wildlife, monuments, art forms and festivals give it a distinctive charm Apart from being a tourist destination, Kerala is also India's most advanced society, cleanest and most peaceful state. 'Responsible Tourism' is adopted as the cornerstone for the tourism development in the state. Tourism enriches itself and indeed the economy. As per a sample survey of various sources of tourist information, official website of Kerala Tourism is the main source of information about tourism for the tourists.

9.2 Popular attractions in the state include the beaches such as Kovalam, Varkala, Marari, Bekal and Kannur. Kerala's most popular backwater destinations are Kumarakom, Alappuzha, Kollam, Kochi and Kozhikode, and its best known hill stations are Ponmudi, Munnar, Wayanad and Wagamon. Kerala has a number of well- known wildlife reserves, including the Periyar Wildlife Sanctuary, Eravikulam National Park, Thattekkad Bird Sanctuary and Parambikulam Wildlife Sanctuary .

9.3 Health / wellness tourism has been one of the strongest growth sectors over the past few years for Kerala, which has attracted attention as the home of Ayurvedic medicine - an ancient Indian science of natural medicinal herbs used for curative and relaxation purposes. Kerala is extremely rich in terms of culture and heritage- the traditional classical and folk arts in the state dates back over a thousand years.

9.4 **The following are the mantra of success of Kerala tourism**

- Strong Brand positioning
- Thinking out of the Box
- Products differentiation
- Model public – private partnership
- Tremendous political support
- Public Acceptance

Performance of Kerala Tourism

9.5 Kerala Tourism continued to win world wide awards and recognitions and few of them are listed

- Best Tourism State Award from Government of India in 2006-07 followed by two more awards for best tourism village – **Aranmula** and best tourism. website- **www.keralatourism.org**

- Kerala selected as the 3rd best tourist destination in Asia by Smart Travel Asia
- One of the three finalist international destinations in WTTC's "Tourism for Tomorrow" awards, 2006
- PATA Grand award for "Zero Waste" in the Environment category and two Gold awards for Kumbalangi Tourism Village and Ayurveda - Mantra of Nirmaya Book, 2006
- UNESCO Asia Pacific Heritage Awards for Heritage Conservation, 2006
- Six times winner of Best Tourism State award from India Government in the last seven years
- Berlin Golden City Gate Award (ITB Berlin) for the best tourism film

Tourist Statistics

Foreign and Domestic Tourist Arrivals –Key Trends

9.6 Kerala achieves highest growth rate in tourist arrivals. The number of foreign tourist arrived in Kerala in the year 2006 is 4, 28,534 against 3, 46,499 in 2005. It shows an increase of 23 68 per cent over the previous year. About two third of foreign tourist come to Kerala by Road and Rail, after entering India through other states. The average annual growth rate of foreign tourist arrival from 1991 to 2006 is 25 per cent. Appendix 9.1 gives the details of foreign tourist arrivals in Kerala and in India from 2002 to 2006. Fig 9.1 gives a comparison of growth of foreign tourist arrivals in Kerala and India.

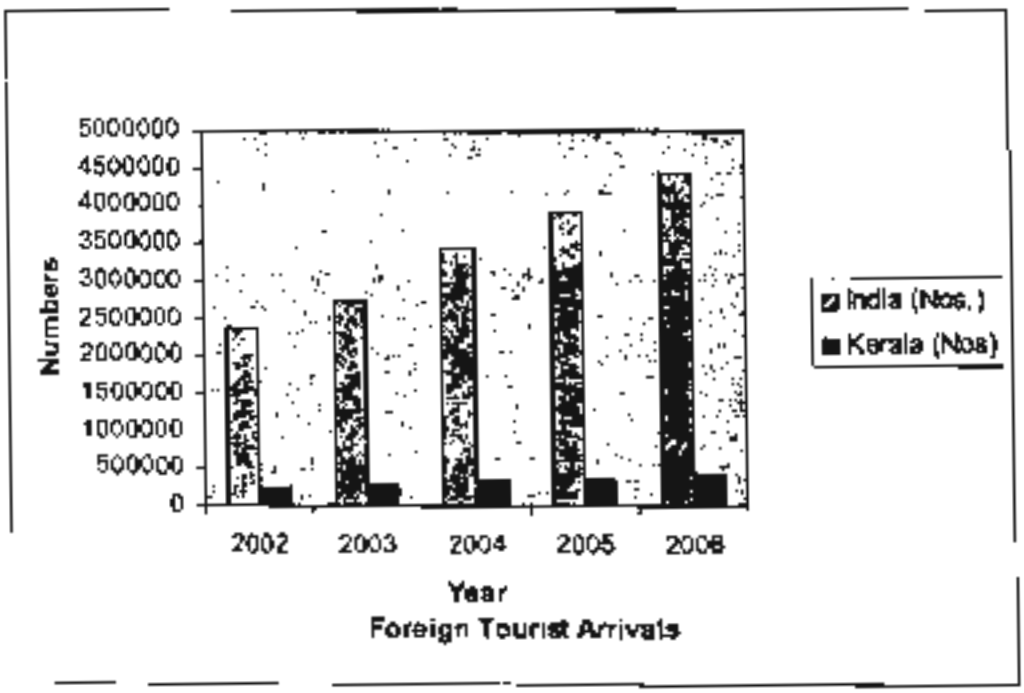


Fig. 9.1

9.7 The number of domestic tourists to Kerala in the year 2006 is 62, 71,724 against 59, 46,423 in 2005. It shows an increase of 5.47 per cent over the previous year. The average annual growth rate of domestic tourist arrival from 1991 to 2006 is 35 per cent. Appendix 9.2 gives the domestic tourist arrivals to Kerala from 2002 to 2006 The growth in foreign and domestic tourist arrivals to Kerala from 2002 to 2006 is given in fig 9.2.

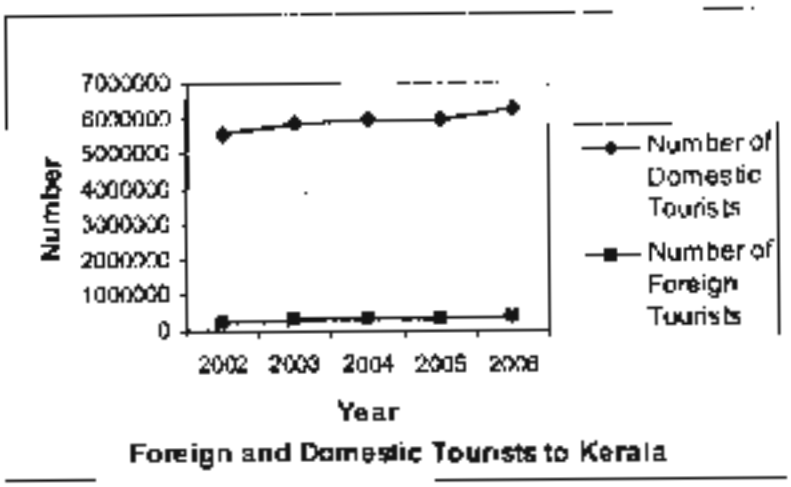


Fig. 9.2

District wise arrival of foreign and domestic tourists in Kerala

9.8 It is observed that Thiruvananthapuram and Ernakulam are continuing as the leading districts for the last few years on the basis of foreign tourists arrivals to Kerala. Ernakulam and Thrissur are the leading districts on the basis of the domestic tourist's arrival to Kerala. The leading district for foreign tourist's arrival to Kerala is Thiruvananthapuram and that for domestic tourist's arrival is Thrissur. Considering the district wise foreign tourist arrival, Wayanad district shows the highest variation of 177.18 per cent over 2005. The district wise arrival of foreign and domestic tourists for the last two years is given in Appendix 9.3.

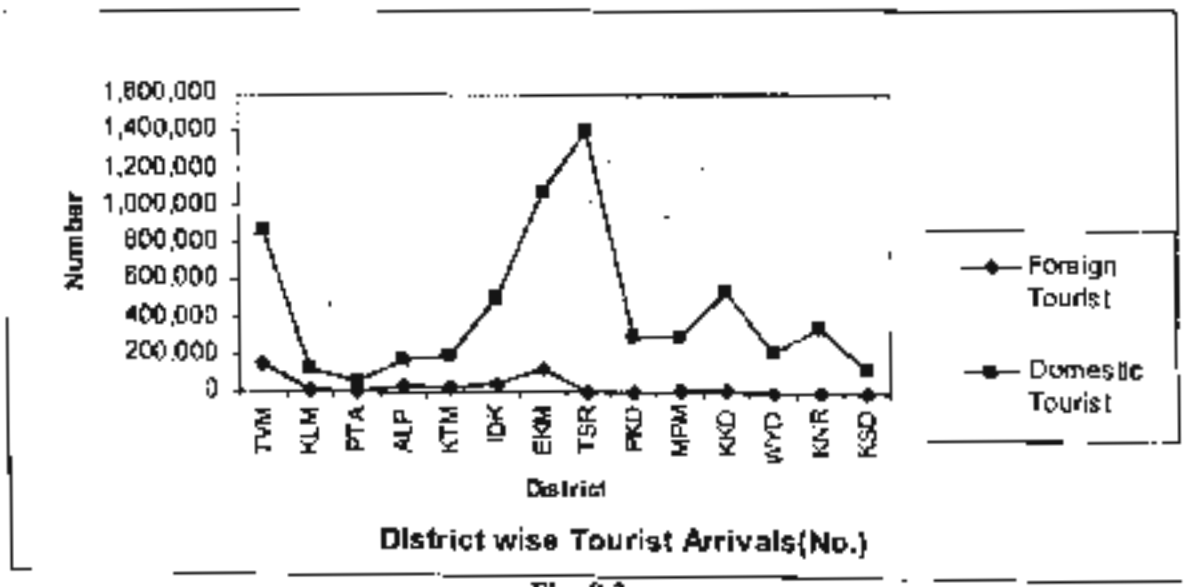


Fig. 9.3

Indicators on Economic Impact of Tourism

9.9 The tourism sector happens to be one of the largest earners of foreign exchange in the World, and has acquired tremendous significance in recent years. The sector is growing at a fast pace, especially in the developing countries. The tourism industry is a major contributor to the State's economy.

9.10 Appendix 9.4 gives earnings from foreign tourists (2002-2006). It is found that the foreign exchange earning during the year 2006 is Rs.1988.40 crore which recorded a growth of 28.09 per cent over the previous year. The total revenue generated from tourism comes to Rs. 9126 crore, showing an increase of 17.94 per cent over the last year and the tourism contribution to state's GDP is 7.70 per cent. The total employment generated from tourism is around 10 lakhs including skilled, semiskilled and unskilled employment. The tourism investment per year in the state is approximately Rs. 1000 crore. From the graph shown below, it is clear that earnings from Tourism show an increasing trend over the years.

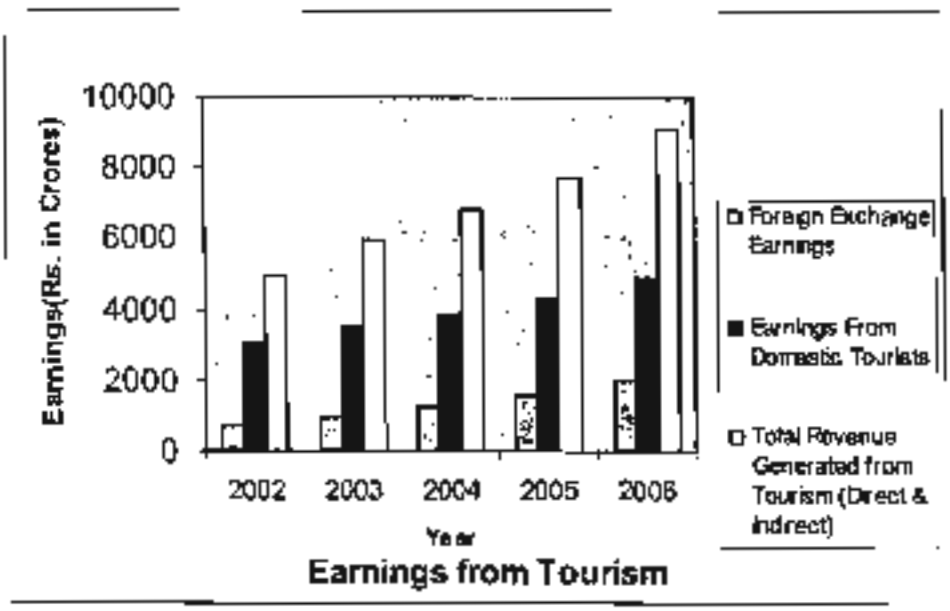


Fig. 9.4

State Financial Assistance

9.11 The State plan allocation for tourism for the years 2003-08 are given in Appendix 9.5. The Department of Tourism has spent cent per cent of its plan allocation during the last year.

Central Financial Assistance

9.12 The Ministry of Tourism, Government of India assists State Government in executing the following schemes.

- Assistance for development of Dams at Neyyar, Peechi, Vazhani and Malankara
- Assistance for development of craft village at Irungal, Kumarakom and Vagamon

The central Plan Allocation for Tourism 2003-08 is given in appendix 9.6

Marketing Initiatives

9.13 Kerala Tourism is noted for its innovative and market focused campaigns.

- Synergy Quest – one kind of tourism research project launched by Kerala Tourism to assess the impact of marketing initiatives of Kerala tourism
- 'Grand Kerala Shopping Festival' – a bold initiative to make Kerala, the shopping hub in the country.
- New initiative for the promotion of Monsoon Tourism
- New initiatives for promoting Kerala as one of the best health tourism destinations in the World

Cultural Initiatives

9.14 The following are the Cultural Initiatives

- 'Ultsavam' – year long festival of traditional arts spread through out the State
- Joint Initiative with Cultural Department to promote traditional arts and festivals
- State wide programmes for the promotion of local cultural programmes

New Policy Initiatives

9.15 The new initiatives of Kerala Tourism during 2006-07 are as follows

- New policy initiative on Responsible Tourism
- Destination Management Committees to be formulated in every tourist destinations
- Initiated action for starting Tourist Information Offices at West Bengal and Mysore
- Initiated schemes for promoting souvenir industry
- DTPC's reconstituted
- Initiative for identifying lesser known and unseen places for developing into tourist centers with necessary infrastructure
- Initiative to develop more dormitory accommodations at major tourist centers

Infrastructure Development

9.16 Department of tourism has initiated various projects for the development of basic infrastructure at tourist destinations, improvement of tourism attractions at the destinations. The important initiatives under infrastructure development are.

- Additional works at the International Boat Jetty Complex at Ernakulam-Development of walkway along backwater shore near Subhash Park and KSRTC bus stand at Kochi.
- Boat club at Thanneermukkam
- Sarovaram project at Kozhikkode-Conservation of Kottuli Wetlands at Kozhikkode.
- Clean destination Campaign in association with Kudumbashree at all major tourist centers.
- Implementation of first phase of Responsible Tourism at Kovalam, Kumarakom, Thekkady and Wayanad.
- 'My village, Tourism friendly Village' – scheme launched to identify and develop unknown rural tourist destinations with participation of local bodies
- 'Wake up to Malabar' - comprehensive plan to promote North Kerala

- 'Vazhiyoram' - a unique scheme for development of way side facilities through private participation
- International Convention Centre at Thiruvananthapuram
- Kerala house at Chennai initiated
- New scheme on Farm Tourism started
- 'Tourism Conservation and Performance Act' – To regulate tourism development

9.17 Bekal Resorts Development Corporation Ltd is a company formed by the Government of Kerala for the Bekal Tourism Project. The aim of BRDC is to develop the infrastructure needed for tourism development centered at Bekal beach.

- Sites were undertaken and developed
- Infrastructure facilities like Water supply, road, High tension lines, bekal fort rest house renovation, parking area near bekal kotta are developed.

9.18 DTPC's are mainly concentrating on tourism activities like improvement of hygiene at tourist destinations by working along with the local bodies, coordination of tourism clubs for creation of tourism awareness and preparation of host community, promotion of home – stay scheme, local basic infrastructure projects like boat jetties, tourist facilitation, pay and use toilets – development of parks, promotion of tourism clubs, holding awareness campaign and developing basic infrastructure etc

Joint Sector Projects for Quality Infrastructure

9.19 The government is offering various incentives to the private sector for the development of infrastructure to facilitate growth of tourism. Some of the initiatives include granting of industry status to tourism

9.20 Tourist Resort (Kerala) Ltd is the agency meant for joint venture projects and they already started joint venture companies with TAJ and OBROY Hotel groups.

Tourist Accommodation

9.21 The hotel sector forms one of the most important parts of tourism industry. Kerala has to its credit a total of 8510 rooms in classified hotels, the maximum number of rooms being in 3-Star categories. The details of availability of accommodation facility in classified hotels in 2005 and 2006 are given as Appendix 9.7

9.22 KTDC is a commercial agency, which is actively participating in building up basic infrastructure needed for the development of tourism in the State. They operate star hotels, budget hotels, motel Araams and way side facilities, Yatri Nivases, restaurants and beer parlours, central reservation systems and conducted tours.

9.23 The number of bed available for the year 2006-07 is around 427475 Of this domestic tourists occupied 208933 and foreign tourists 37484 beds. The details of income and operational expenditure details for 2006-07 is given in Appendix 9.8

Eco - Tourism

9.24 Kerala is famous especially for its ecotourism initiatives. Tourism is an environmental development industry .The following are the objectives of Eco-tourism.

- To convert entire tourism industry in Kerala into Eco-friendly mode
- To strengthen Eco-tourism development initiatives in the State.
- To ensure local community involvement in tourism initiatives leading to employment and income generation.
- To create public awareness and involment in responsible tourism development.

Thenmala Ecotourism Project

9.25 The first phase of the Thenmala Ecotourism project was inaugurated during 1999 with the commencement of boating in the Shenduruney Wildlife Sanctuary reservoir and the Deer Rehabilitation center The second phase of the Thenmala Ecotourism project was inaugurated during 2001 with the commencement of eco-friendly general tourism activities like Leisure Zone, which is having Sculpture Garden, Board Walk, etc., Adventure Zone, which provides Elevated Walkway, Mountain Biking, Rock Climbing, River Crossing and Culture Zone, which is having the Musical Dancing Fountain, Amphitheatre, Restaurant etc.

9.26 The details of the revenue generated and the number of tourists visited from 2000 to 2007 are as detailed below

Financial Year	Number of tourist visited	Revenue generated (in rupees)
2000-2001	26148	445437
2001-02	41161	1138839
2002-03	65075	2147985
2003-04	118404	4044571
2004-05	104622	3563820
2005-06	114443	3926430
2006-07	120178	4954459
April 2007 to August 2007	38790 (Aprox)	1672711/-

Ecotourism initiatives Implemented Through Forest Department

9.27 The Forest Department is evolving modalities for developing community based ecotourism products to the already identified potential ecotourism spots through the institution of Vana Samrakshana Smithy (VSS) / Eco Development Committees (EDC) ie., the committee of the local dependent communities. Certain successful models of these efforts are programmes at Athirappally, Vazhachal and Thekkady, Community led ecotourism activities are already in place at Palaruvi, Kallar, Chinnar, Aralam, Thommankoothu etc.

9.28 During this year new initiatives has been taken to establish community led ecotourism in the following areas.

1. Training for tribal of Wayanad as Tourist guide (Wayanad District)
2. Chimmony Wildlife Sanctuary (Thrissur District)
3. Aralam Wildlife Sanctuary (IIIrd Phase) (Kannur District)
4. Thripunithura Garden of plants of Hortus - Malabarious (Ernakulam District)
5. Plan preparation of Malabar mangrove Ecotourism Circuit
6. Thenmala (Kollam District)

Jadayupara Tourism Project

9.29 Jadayupara is a huge bear rock with small rock boulders in the Kottarakkara taluk of Kollam district. From the name itself it is understood that this is connected to the legendary bird Jadayu in the epic Ramayana. The proposed project is to be developed in the 63 acres provided to Department of Tourism. It is proposed to develop the road and it's surrounding as ecofriendly tourism spot targeting tourists with pilgrim interest, nature specialty interest, picnic interest and ethnic interest.

Human Resource Development

Kerala Institute of Travel and Tourism Studies (KITTS)

9.30 KITTS imparts quality education and training in the field of Travel and Tourism. The institute established in 1988, caters to the manpower requirement of tourism industry by offering various courses directly benefiting the industry. The institute has excellent record of placement for students of its courses and the alumni are spread all over the world occupying responsible position in various sectors in tourism industry.

Training Programmes

9.31 The institute conducted twelve training Programmes for students, teachers, guides, VSS lifeguard, tourism police and Masseurs who are involved in tourism related sectors.

National Seminar

9.32 KITTS organized national seminar on the theme "Issue and Trends in Ecotourism."

Publications

9.33 The following are the publications during the year

- "Green portal" half yearly academic Journal
- "Tourism Vogue" monthly news letter
- "Patheeyam" Malayalam publication

Activities conducted during the year

9.34 New initiatives are taken to uplift KITTS to a deemed University at national level. MBA in Travel and Tourism, Airport handling and customer relations management are the new courses to be started for which steps are taken.

Relationship with Foreign University

9.35 New courses in relation with foreign universities and faculty – students exchange programmes were conducted.

Courses offered at KITTS

9.36 KITTS and its regional centers at Malayattoor, Kozhikode and Alappuzha offered 9 courses and 255 students participated The following new courses are offered at different centers

- Kozhikode Centre offered new course in event management and Post graduate diploma course in Air hostess and hospitality management
- Alappuzha Centre offered new course for guides.
- Malayattoor centre offered three year diploma in food production giving emphasis on Kerala food and Food Processing project in relation with local agriculturists / kudumbashree.
- Thalassery Centre offered new training programmes for guides, Kudumbashree, agriculturists, people representatives etc. and Back up to tourism activities in Malabar area.

9.37 The following are the various projects initiated for the development of human resources

- 'Kerala Souvenirs' - a unique project launched for design development and capacity building
- 'Let's learn' – a unique HR initiative launched for skill development in the tourism and hospitality sector
- International hospitality Management Institute started at Kozhikode
- Food Craft Institutes brought under 'Tourism'

Promotion and Publicity

9.38 The Department of Tourism has taken up various innovative initiatives in promotion and publicity. The result is evident from the very high growth rate of tourist arrivals Kerala is witnessing now. The major initiatives in the promotion include conducting fairs and festivals, participation in major tourism marts, advertising in print and electronic media etc. The following are some International and National festivals and fairs participated by Kerala Tourism.

- Arabian Travel Mart at Dubai
- International Leisure Travel Mart at France
- World Travel Mart at London
- FITUR – 07 at spain
- International Travel Borse at Berlin
- Travel and Tourism Fair, Bangalore, Chennai and Kalkatta
- India International Travel Mart, Mumbai
- India International Trade Fair, New Delhi
- South Asia Travel and Tourism Exchange, New Delhi

9.39 In short, the Tourism Industry in Kerala witnessed a remarkable growth in this year in the field of number of foreign and domestic tourists arrival, earnings from tourism, investment in tourism and total employment generation.

CHAPTER 10

INFRASTRUCTURE

A well developed system of transport and communication is essential for economic development of a country. Good physical connectivity in the urban and rural areas is essential for economic growth. India's transport sector is large and diverse catering to the needs of 102.7 crores of people. India has the largest road network in the World. It carries 65 percent of the freight and 90 percent of the passenger traffic in the country.

10.2 Transportation is an integral part of the commercial and social development of the Nation. The infrastructure for transport consists of roads, bridges, and other transport modes like railways, airways and inland waterways. Of the various modes of transport, road transport is vital to economic development, trade and social upgradation. India has a large network of roads, aggregating 3.3 million Kms, comprising National Highways, State Highways, Major / Other District Roads and Village / Rural Roads.

10.3 Kerala can be proud of the fact that it has developed a good road network compared to other States in India. Transport infrastructure of Kerala consists of 1.62 lakh Km of road 1148 Km of Railways, 1687 Km of Inland waterways and 111 statute miles of Airways and 17 ports. Even though it is comparatively better placed than most other States as regards road length, the quality of many of these roads are poor.

10.4 Efficient transport connectivity between urban centres within the State as well as with other States is essential for boosting economic development. In Kerala, connectivity has not been established in all the habitats. The traffic density in National Highways and State Highways in the State has already surpassed the capacity of two lanes, there by warranting four and six lanes especially in the high-density corridors.

10.5 Since widening of existing highways may create more problems, alternate routes / roads construction along new alignment, free of utility hindrances is the solution to the road sector issue. Road development in the capital city has been initiated with the Capital Region Development Programme. With the upcoming of Vizhinjam Port and Kochuveli Railway Terminal projects and development of Technopark, the capital city will have a facelift. Like wise the Vallarpadam container Transhipment Terminal, LNG Terminal, KINFRA IT Park and Smart City Projects Kochi, will further improve the status of the State in a short time. These developments cannot be completed without proper connectivity between urban centres and efficient transport system within the Cities

Road Transport

10.6 Transport demand in India has been growing rapidly. In recent years this demand has shifted among transport systems, mainly to the advantage of road transport. During the period 1992 –93 to 2004 – 05 demand for road freight transport in India had grown at an annual average rate of 6.7 percent while GDP grew at an average of 6.2 percent. Table 10.1 depicts the strength of road network in the Country.

Table 10.1
Strength of Road Network in India

	(In Km)
1. Express Ways	200
2. National Highways (NH)	66590
3. State Highways (SH)	131899
4. Major District Roads (MDR)	467763
5. Rural and Other Roads	2650000
Total length	**33 Lakh (Km) (Approx)**

Source : NHAI

National Highways

10.7 The Central Government is responsible for development and maintenance of National Highways in the Country. The total length of NH in the Country is 66,590 Kms. Development and maintenance work of National Highways are carried out through three agencies, viz. National Highway Authority of India (NHAI), State Public Works Departments (PWDs) and Border Road Organization (BRO).

10.8 In order to give a boost to the economic development of the country, a massive programme for 4/6 laning to 13,146 Km of national highways has been taken up since 1999 under National Highways Development Project (NHDP) and is targeted to complete by December 2007 at an estimated cost of Rs 54,000.00 Crore (at 1999 prices). This is perhaps one of the largest programmes of road development taken up in the country. The project is implemented by the National Highway Authority of India (NHAI).

10.9 The phase I and II of NHDP comprises (i) Golden Quadrilateral, i.e. National Highways connecting four metropolitan cities, namely Delhi, Mumbai, Chennai and Kolkata having an aggregate length of 5,846 Kms (ii) North South and East-West corridor which comprises four – laning of 7300 Km of NHs connecting North South corridor from Srinagar to Kanyakumari with Kochi - Salem spur and East- West corridor from Silchar to Porbandar (iii) A length of 380 Km of NHs proposed to be upgraded to four - lane standards by providing connectivity to 10 major ports of the country, and (iv) upgradation of 831 Km of other important NHs. The total estimated cost of NHDP phase I & II having a total length of 14,357 Km is about Rs. 64,639 crore.

The present status of NHDP I & II as on April 2006 is as under.

- Golden Quadrilateral (GQ): Four laning of 5319 Kms completed. And the balance 527 Km length is under implementation.
- North South & East - West Corridor: Four laning of 822 Kms length completed and 4892 Km length is under implementation.
- Port connectivity project & Other National Highways: 103 Kms completed and 247 Km is under implementation. Out of 831 Km of Other NHs, 287 Km is completed and 524 Km is under implementation.

National Highways in Kerala

10.10 National Highways form the prime arterial routes and span about 66,590 Km throughout the country and cater to 45 percent of the total road transport demand The National Highway network in Kerala is of length 1523.954 Km. This is only 2.3% of total National Highways in the country. There are eight National Highways in the State. Details are given in Table 10.2

Table 10.2
National Highways in Kerala

Sl.No.	Name of NH	Length (Km)	Single lane (Km)	Double Lane (Km)	Four Lane (Km)
1	NH 47 Walayar – Kaliyakkavila (Salem – Kanyakumari)	416.800		380.800	36 000
2	NH 17 Thalapadi – Edappally (Panavel - Edappally)	420.777	395.800	25.000	
3	NH 49 Kundannoor – Bodimettu (Kochi - Madurai)	167.593	167.600		
4	NH 47A Kundannoor – Willingtun Island	5.900		5.900	
5	NH 208 Kollam – Aryankavu (Kollam – Thirumangalam)	81.280	81.000		
6	NH 212 Kozhikode – Methanga (Kozhikode – Mysore)	117.000	117.000		
7	NH 213 Palakkad - Kozhikode	125.304	125.300		
8	NH 220 Kollam – Kumily (Kollam - Theni)	189.300	189.300		
	Total Length	**1523.954**	**1076.000**	**411.700**	**36.000**

Source : PWD (NH)

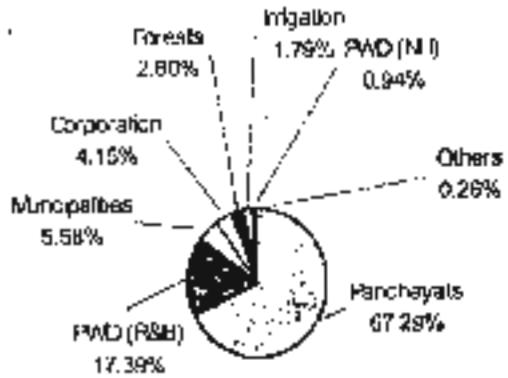
State Road Network

10.11 The major development indicators of transport and communication sector in the State since 1999 are given in Appendix 10.1. On the road front, traffic has been growing at a rate of about 11 percent every year, resulting in excessive pressure on the roads in the State. The total road length in Kerala during 2006 – 07 increased to 162149 Km from 160944 Km in the previous year. Road density in the State is 417 Km/100 Sq:Km and it is far ahead of national average of 100.39 Km/100 Sq:Km. The length of road per lakh population is 509 23 Km and it is much higher than the national average of 321.3 Km. Roads maintained by different agencies in the State are shown in Table 10.3

Table 10.3
Agency wise Distribution of State Roads

Sl.No	Name of Department	Length (KM)	Percentage
1	Panchayats	109105	67.29
2	PWD (R&B)	28203	17.39
3	Municipalities	9042	5.58
4	Corporations	6734	4.15
5	Forests	4215	2.60
6	Irrigation	2898	1.79
7	PWD (NH)	1524	0.94
8	Others(Railway, KSEB)	428	0.26
	Total	**162149.00**	**100**

Category of road network in Kerala is illustrated in Fig 10.1



The Length of roads maintained by different Agencies in Kerala during 2006-07
Fig 10.1

10.12 The Agencies maintaining roads in the State include PWD, Local self-government, National Highways, Irrigation Department, KSEB etc. Out of the total road length, 109105 Kms are maintained by the Panchayats (67.29%) followed by 28203 Km (17.39%) by the PWD Corporations and Municipalities maintained a road length of 15776 Km (9.73%) and NHs covered 1524 Km (0.93%). While Irrigation Department maintained 2898 Km (1.79%) of road, the share of Forest Department was 4215 Km (2.60 %) and that of KSEB, 364 Km.

10.13 Analyzing surface – wise, roads maintained by PWD, black topped surface roads increased from 19959 Km in 2000 to 23042 Km in 2007. Of the total road length, 28203 Km is maintained by PWD (R & B) The PWD road density comes to 72 Kms per 100 Sq:Km of area and 88 Kms per lakh population. The PWD roads fall broadly under two categories, Viz. State Highways (SH) 4137 Km, and Major District Roads (MDR) 24066 Km. Total length of road under PWD includes the ODR/VR category converted to MDR of 13011 Km between 2001 and 2006 As part of decentralization of powers to Local Self Governments, the maintenance of village roads are vested with the concerned local governments.

10.14 Eventhough Kerala has a very good connectivity with all villages, there are gaps in intermodal connectivity. There are some initiatives such as seaport-airport road implemented through RBDCK, but needs a network approach for establishing an effective road link. Also due to 'open sky policy' of Central Government and commissioning of Vallarpadam Container Transhipment Terminal and proposed Vizhinjam Port, there will be increase in demand for inter modal connectivity. PWD has established a fully functional GIS system using satellite imagery and topo sheets. Using this system PWD will be developing a scheme for improving Inter Modal connectivity. By upgrading and widening important corridors, fast and safe movement of passengers and cargo will be possible which in turn will increase economic activity

10.15 As on March 2007 there were 2179 bridges (627 on SH and 1552 on MDR) and 51422 culverts (11512 on SH and 39910 on MDR) on PWD roads. Of them 148 bridges need reconstruction/renovation and 1519 culverts are not in good condition. The number of bridges and culverts in the PWD roads are given in Appendix 10.6

Road Network Quality

10.16 The overall network quality of PWD roads is much below the prescribed standard set forth by the Indian Road Congress (IRC) PWD is maintaining 26273 Km of road network including the recently upgraded ODR. Due to poor network quality, State is loosing huge amount of money through increased vehicle operating cost and accidents. Therefore improvement in the quality of road network is the need of the hour. PWD has developed a modern system called Road Maintenance and Management System (RMMS) which can be used for assessing the road network quality and appropriate maintenance strategy for bringing down the road roughness to acceptable limits

Major Problems of PWD

- Low budgetary allocation
- Delay in completion of works due to various reasons such as
  - Untimely release of fund
  - Lengthy monsoons and heavy seasonal rainfall
  - Delay in LA procedures
  - Non availability of Bitumen
- High spill over commitments
- Poor pavement conditions/structural deficiencies
- Poor geometrics
- Poor shoulder conditions
- Narrow/weak bridges
- Non timely maintenance of road
- Inferior technology in construction methods
- Lack of co-ordination with the departments such as KSEB, KWA, TELECOM
- Unauthorised occupancy on road sides by the vendors etc.

Policies and Priorities of PWD (R&B)

10.17 Recognising the need to improve, upgrade and rehabilitate the road network, major investment for upgradation and rehabilitation of both the capacity and quality of the core road networks have been formulated by the PWD The focus in the Eleventh Plan is on the capacity and structural improvement to the State Highway network. Kerala PWD has initiated implementation of the Institutional Strengthening Action Plan (ISAP), a component of World Bank aided Kerala State Transport Project. ISAP covers the institutional framework that provided legality and underpins the proper functioning of the PWD. Steps are being taken to modernise and improve PWD's performance covering all its activities so as to keep pace with the new developments and requirements.

10.18 The government has formally endorsed ISAP. Based on ISAP the PWD is developing programmes for

- Establishment of a core road network for Kerala
- Formulation of Road Policy
- Human resource development strategy
- Improving PWD's financial management capacities
- Capacity building for planning and policy functions
- A management information system
- Strengthening environmental and social impact monitoring

- Improving procurement procedures
- Strengthening road safety engineering capacities
- Incorporate IT throughout the Organisation
- Revision of outdated codes and manuals
- Introducing quality management
- Strengthening routine maintenance management system in PWD

10.19 These measures are expected to reform PWD into a modern agency that will serve as a knowledge provider, while sourcing private sector capacities. Thus ISAP will assist PWD in moving from a traditional road infrastructure execution agency to a market driven modern transportation.

Road Safety Programme

10.20 Government of Kerala has initiated various programmes to address the alarming issue of increasing road accidents by co-ordinating all stakeholders of Road Safety viz. Engineering, Education and Enforcement agencies. Traffic Police, Motor Vehicle Department, Road Safety Council, Research and Academic Institution and other State Government Agencies are responsible for Road Safety. Public Works Department is primarily responsible for Engineering aspect and safety engineering as part of World Bank Aided KSTP.

Initiatives in PWD

- **Constitution of Road Safety Unit**

10.21 A road safety unit has been constituted under Chief Engineer (R&B and IT) supported by an Executive Engineer, 2 Assistant Executive Engineers and 2 Assistant Engineers

- **Road Safety Engineering Port Kit**

1022 A Comprehensive road safety tool kit has been developed for accident prevention and accident reduction.

Activities

- Blackspot improvement programme
- Road Safety Audit Model Road
- Demonstration of signs and Markings
- Junction Improvement Schemes
- Mass Action Schemes
- Safety improvement of hazardous locations in NH 17 and NH 47
- Safety assessment of RMC roads
- Road Accident Data base

Road Safety Audit-Model Road

10.23 The section of road between Thiruvananthapuram and Kollam of NH 47 has been selected as Model Road to demonstrate as model road with regard to Road safety, co-ordinating all stakeholders of Road Safety. The road safety cell undertook a safety audit for the road and bids are now at the tendering stage. The salient features of Road Safety Audit Model are given in Box No. 10.1

Box 10.1
Salient Features of Road Safety Audit Model

- Complete signs and Markings to demonstrate and enforce under Road Safety Action Plan
- No overtaking centre line based on visibility check
- Roundabouts, junction with Traffic signal and priority junction for demonstration
- School Zone treatment
- Pedestrian crossing treatment
- Highly visible studs and markings
- Crash barrier for deep drops
- Delineation to guide drivers at night
- Curve treatment with Chevrons

Public Private Partnership

10.24 Traditionally the road projects were financed only out of the budgetary grants and were controlled/ supervised by Government. To encourage participation of private sector in road projects the Department has laid down comprehensive policy guidelines for private sector participation in the Highway sector, Government have also announced several incentives such as tax exemptions and duty free import of road building equipments and machinery to encourage private sector participation.

10.25 The pro-active steps taken by Kerala PWD for road development in the State are given in Box 10.2

Box 10.2
Proactive steps taken by the Kerala PWD

- Established a State-level Empowered Committee, headed by Principal Secretary – PWD, to oversee implementation of projects.
- A multi-disciplinary project management team has also been constituted within the PWD
- Completed a comprehensive Institutional Development Study and prepared an Institutional Strengthening Action Plan (ISAP) The ISAP recommendations are being implemented in a time-bound manner.
- Constituted four dedicated working groups and a committee for Chief Engineers, from within the Organization, to fine-tune and expedite the ISAP implementation.
- A draft Road Development Policy for Kerala has been formulated and deliberations are on to finalises the policy.
- The Kerala Tolls Act (1983) was studied with a view to facilitating greater private sector participation in the road sector.
- The Kerala Road Fund Act was enacted in November 2001, establishing the Road Fund Board.
- The GOK drafted a Medium – Term Fiscal Plan (MTFP) for fund requirements and financing sources of road sector projects MTFP includes
  (1) adequate and timely counterpart project funding,

(2) increasing road maintenance allocations to meet prescribed norms in the second year of the project; and
(3) progressive clearing of pending bills to contractors and reduction in payables position within four months of expenditure, within next two years

- The Roads and Bridges Development Corporation of Kerala, (RBDCK) was created to promote private investment in the road sector and improve road infrastructure efficiency by corporatising some traditional PWD functions.
- Enacted the Kerala Highway Protection Act (1999) in order to protect highway corridors from encroachments, regulate ribbon developments and prevent undesirable land use practices;
- GoK recently completed one major project on a BOT basis Other BOT schemes to build NH bypasses will begin soon.
- Several key road sector studies, such as, Core Road Network Study to identify on road maintenance planning, and several road safety studies have been completed.
- The Resettlement and Rehabilitation(R & R) Policy FrameWork has been approved and ratified. Besides this the Sectoral Environmental Assessment (SEA), Environmental Impact Assessment (EIA), Environmental Management Plans (EMP) and Resettlement Action Plan (RAP) have been completed and made available to the World Bank's Public Information Centre and in project districts for public review and comments.
- An inter model road safety specialist was appointed to train PWD staff to analyze, accidents site, assist them in improving black spots, and help the PWD to develop a road safety strategic action plan. A Road Safety Action Plan has been drawn up.
- Computerization of PWD is being done in a phased manner. Project Financial Management System (PFMS) has been developed in the project office and adapting this facility into PWD offices has commenced.

Road Fund Board

10.26 Recognizing the need for mobilizing greater non-budgetary resources for development and maintenance of the PWD road network, regulatory and institutional initiatives were undertaken for generating more user charges and mobilizing greater private sector involvement in road projects. The Kerala Road Fund Board was constituted under the Kerala Road Fund Act 2001, which became law during 2001. The purpose of the Road Fund is to finance

- Routine recurrent and periodic maintenance of PWD roads
- Development of existing road net work system including upgrading of any road maintained by the PWD.
- Construction of new roads wherever necessary
- Road Safety Project are found essential for safe and smooth traffic
- Research related to maintenance and development of roads
- Any cost-sharing, donor-funded project intended for all or any of the purposes mentioned

10.27 The Government shall contribute to the fund every year an amount equal to 10% of the tax collected by them in the previous year under the provisions of the Kerala Motor Vehicles Taxation Act, 1976 and the said amount shall be charged on the Consolidated Fund of the State.

Research and Development in Road Sector

10.28 Research and Development activities have an important role to play in meeting the challenges of modernizing the road system, technology upgradation and funding cost effective solutions to infrastructure problems in general. Design Research Investigation and Quality Control Board (DRIQ Board), Kerala Highway Research Institute (KHRI) and National Transportation Planning and Research Centre (NATPAC) are engaged in research and development activities of the road sector. The DRIQ Board consists of the following three divisions

- Design
- Research and Project Preparation Unit
- Quality Control and Computer cell

10.29 The Design Wing of DRIQ Board attempt to structural design of the multi storied buildings and bridges throughout the State on technically sound base conforming to latest of BIS/IRC stipulations providing feasibilities for field engineers of the PWD to work with. Most of the Bridges and Buildings constructed by the PWD are being planned and designed by the Design Wing. The designs prepared are practical, cost effective and comprehensive

10.30 During 2006 – 07 the Bridges Design Wing has completed detailed design of 15 Nos and general design of 10 Nos. The Board has also completed design work of 12 buildings and 39 Nos of Highway Designs.

Kerala Highway Research Institute (KHRI)

10.31 The main objective of KHRI is to cater to the needs of all the wings of PWD in carrying out Laboratory tests and Field tests of Samples of flexible pavements, building materials, concrete, soil, bricks, tiles, steel etc and also to conduct traffic studies It carries out mix design for concrete as well as Bitumen mixtures of various engineering applications, undertake applied research work in the filed of Traffic and Transportation Engineering, Geo – technical Engineering, Flexible pavements, concrete and steel structures. KHRI has developed into a good training centre for providing training to engineers in service on quality control of work, mix design and project preparation. Government has declared the institute as a regular training centre. The long-term objectives include continuous training programme for PWD staff on various topics through co-ordination of the PWD human resource cell, updation of laboratory equipments and improvisation of infrastructure to the arising needs and to develop as 'Centre of Excellence in Training'

10.32 The other objective include establishment of facility on quality control and testing for private and government sectors such as proper documented internal procedures, accreditation and act as monitoring and certifying body for all standards for PWD throughout Kerala. The Institute has extended its activities to the filed of detailed survey works using modern computerised equipments like Total Station and Auto level. Engineering college students and polytechnic students from inside and outside Kerala do project work in this institute. Central Public Works Department (CPWD), Airport Authority of India (AAI), ISRO, Techno park, BHEL, Powergrid Corporation, BSNL etc use the facilities of KHRI for testing and studies. KHRI provides the only technical reference library for PWD. The activities of KHRI during the last three years are given in the table no. 10.4

Table 10.4
Activities of KHRI from 2004 – 05 to 2006 – 07

	2004 - 05	2005 - 06	2006-07
Testing of various materials	730	1108	1443
Research study on soil Explorations, Soil Testing, quality, evaluation work, silt contents etc	37 Nos	48 Nos	56 Nos

Source : KHRI

National Transportation Planning and Research Centre (NATPAC)

10.33 National Transportation Planning and Research Centre (NATPAC) was established in 1976 as a unit of Kerala State Electronic Development Corporation (KELTRON) with a mandate to promote scientific research, planning and development in all aspects of transportation. In 1982, NATPAC was registered as a society and brought under the Department of Science, Technology and Environment, Government of Kerala as an autonomous R&D institution. Consequent to the formation of Kerala State Council for Science, Technology and Environment (KSCSTE) NATPAC was amalgamated to the new council in 2003 and is functioning as R&D Centre for KSCSTE.

10.34 NATPAC has been set up to undertake Research, Training and consultancy projects pertaining to transport sector in the State. NATPAC has taken up studies on all modes of transportation covering road, rail, water, seaport and airport.

Activities during 2006 - 07

10.35 NATPAC undertakes R&D, Project Planning and Extension activities and Training Programmes in the area of Traffic and Transportation.

- 16 research studies and 6 sponsored projects.
- Detailed inventory of roads in hilly regions between Kasaragod and Thiruvananthapuram districts and suggested most flexible alignment for development of Hill Highway in the State.
- "Inventory of roads at Panchayat level" and prepared digitized maps for 2 block Panchayats in Ernakulam district.
- Prepared project report for transport infrastructure development for Neyyattinkara town.
- Formulated Traffic and Transportation Development Plan for Kochi Corporation.
- Initiated studies for identifying alternative materials for road pavement using rubber and modified bitumen and waste plastic.
- A study on "Resource Mapping and Construction Materials" is being carried out for Kollam District.
- A study on Fare Policy and pricing of Public Transport Services" is carried out by NATPAC to suggest Rational Fare Policy for bus transport operation in the State. It also studied the "operational efficiency of KSRTC minibus services in Thiruvananthapuram district".

- NATPAC conducted a study on Traffic potentials of inland navigation and established the economy of Inland Water Transport operation in NW-3. A feasibility analysis for operating cruise vessel between Vizhinjam and Mangalore Port has been carried out.

10.36 Road Safety Programmes conducted by NATPAC is shown in the box given below.

Box 10.3
Road Safety Programmes of NATPAC

- Safe Road to School – a proactive programme for promoting safety of school children.
- Safe Community Programme for selected Panchayats.
- Accident abatement measures for selected urban areas.
- Strategies for safe transportation of dangerous goods in Kerala.
- Pre – and Post – enforcement impact on the use of helmet and seatbelt in selected cities

10.37 Road Safety Cell in NATPAC conducts exhibitions, awareness programmes, and publication of traffic education materials and short films on Road safety.

Kerala State Transport Project (KSTP) – World Bank Aided Project

10.38 Kerala State Transport Project (KSTP), an initiative of Public Works Department of Government of Kerala was officially launched in June 2002 to improve 1600 km. of State Road Network and 77 K.M of Inland Water Transport (IWT) with the World Bank assistance of US$ 225 million (Rs. 1224 crores) Total cost of the project is US$ 336 million (Rs. 1612.8 crores) with State Government contribution of US$ 81 million (388.8 crores). The project period is five years and closing date is 31.12.2007.

10.39 The original project contained four main components (1) Upgradation and widening of about 600 km length and high priority to State highways and piloting IWT component for improving of inland waterways of about 77Km canal length, for exploring the revival of the IWT system in Kerala (2) Periodic maintenance of 1000 Km State Roads (3) Reforming Road and IWT associated institutions and strengthening their capacities by implementing the Institutional Strengthening Action Plan (ISAP) and (4) Road Safety Action Plan and improvement of black spots and awareness.

10.40 The main project component and their Project Appraisal Document amounts are shown below.

Table 10.5
Project Component of KSTP

Sl. No	Project Major Component	Amount as per PAD (crores)
1	Upgradation of 600 km roads (improving and widening to standard two lines) and 77 km of feeder canals	1231.4
2	Heavy maintenance of 1000 km roads (strengthening and marking)	273.7
3	Institutional strengthening of PWD (reorganizing PWD structure, establishing IT road safety & environmental cells, financial management system, revising codes, technical documents and technical specifications)	80.8
4.	Road safety (Engineering, Awareness and accident improvement programme)	26.9
	Total	**1612.8**

Source : KSTP

10.41 As seen from the above table more than 75% of the project amount is for upgradation work of 600 km of roads. 254 km upgradation was taken up in phase I in three packages. Out of this 49 km has been completed in one package but the main contractors for other two packages terminated the work in December 2006 leaving 205 km of roads in various stages of completion. These works were re-tendered and one package of 78 km has been awarded on 30.8.2007 but the work is yet to start. The decision about awarding the work for the third package covering 127 km is yet to be taken by the Government. The clearance to go ahead with the Phase II upgradation works for 327 km will be given by the World Bank only after securing the contracts for Phase I works

10.42 Out of 1000 km heavy maintenance works, 880 km have been completed. Under Institutional Strengthening of PWD revision of codes and manuals, development of geographical information system, road information management system, road and bridge maintenance management system, computerization up to division level have been completed.

10.43 Under road safety component, improvement of 30 black spots is over. Computer based accident management system has been developed and software installed in more than 50 Police Stations by the Police Department. More than 15 road safety awareness campaigns have been conducted so far.

10.44 Year wise budget allocation and expenditure for the year 2002-03 to 2007-08 as on 31.10.2007 is given below.

Table 10.6
Kerala State Transport Project Year wise Outlay and expenditure (10/07)

(Amount crores)

Year	Budget Provision	Expenditure
2002-03	100.00	66.94
2003-04	155.00	145.90
2004-05	235.00	197.41
2005-06	575.00	313.21
2006-07	575.00	146.07
2007-08 (upto 31.10.2007)	575.00	60.28
Total	**2215.00**	**929.81**

Source KSTP

Kerala State Road Transport Corporation (KSRTC)

10.45 Kerala State Road Transport Corporation (KSRTC) is the largest single public sector undertaking which carries out transport operations in the State. Road transport acts as the feeder service to the rail, air and inland waters transport. The vehicle density of the State is very high compared to many other States in India. The road freight services are wholly owned and operated by the private sector.

10.46 Private operators mainly carry out the passenger transport operations in Kerala. In South India, except Kerala the percentage of public transport in Karnataka, Andhra Pradesh and Tamilnadu is 95 to 98% when compared to private buses. Whereas in Kerala the growth of public transport was stagnated for the last 3 decades and the percentage of public transport was 20% in 1980. Now it has come down to 13% Reckoning unauthorized parallel service and stage carriages, KSRTC is having only 8% service in Kerala

10.47 The number of buses owned by KSRTC decreased from 4668 in 2006 to 4559 in 2007. Of which 1135 are aged above 10 years (24.89%). The age wise details of KSRTC buses are given in Appendix 10.15. The number of schedules operated as on 31.3.2007 in 3335 About 12045 lakh passengers travelled in KSRTC buses during 2006 – 07. The major indicators showing operational efficiency of KSRTC are given in Appendix 10.16. The major issues and problems of KSRTC are given in Box 10. 4.

Box 10.4
Issues/Problems of KSRTC

- Ageing fleet
- High cost of operation per bus per day
- High staff vehicle ratio
- Inadequate earnings to meet the total cost of operation
- Operation in uneconomic routes
- Operating loses
- Operation by parallel service
- Concessional Travel
- Very poor performance of 30% of operating units of KSRTC
- Poor labour productivity improvements and reduction in personnel expenses
- High maintenance cost per vehicle
- Below efficient application of computers
- Very poor upkeep of bus stations and passengers amenities
- Fare concessions not fully reimbursed
- Insufficient capital contribution by Government

10.48 Being a public utility service, KSRTC cannot function on purely commercial lines and certain services have to be operated under pressure from the public and people's representatives. The revenue earnings of some of these services are not cost effective and the losses suffered gives a severe impact on the overall financial performance of KSRTC. Some of the major decisions

taken by the Government and carried out by KSRTC such as pension payment to employees, free and concessional travel facilities extended on the students and weaker sections of society, special service operations during festival and pilgrim seasons etc cause serious threat to the financial stability of the Corporation

10.49 The KSRTC is the only SRTC in India paying pension and pensionary benefits from ... own resources It comes to about 18.00 crores per month and causes such a drain on the organization that no funds are available for investment. The frequent increase in the price of diesel adds burden to the Corporation. Lack of adequate investment by Central and State Governments is another major factor contributing to the losses suffered by KSRTC. The Corporation is not getting any financial investment from Central Government since 1992-1993. For the past few years Kerala Government is providing only Rs 5.00 crores per annum to KSRTC towards infrastructure development. Since KSRTC is consistently running on losses, it is very difficult to meet its capital requirements from internal resources. The loans availed by KSRTC is not even sufficient to repay the earlier debts.

10.50 KSRTC is running at a loss in the tune of Rs 200.00 crore per year. The shortfall in the cash flow is greater than losses, because of the pressure to repay the borrowings and also to meet the past and over due liabilities. In addition to losses, KSRTC is expected to pay Rs 15.80 crore (Principal & Interest) per month towards loan repayment to Kerala Transport Development Finance Corporation. The monthly cash flow report shows a deficit of Rs 20.70 crore. However, meeting of non-operating expenses like pension and provision for historically accumulated liabilities contribute to a net loss. The operational efficiency of KSRTC compared to Kerala and all India figures is given in Table No. 10.7

Table 10.7
Comparison of Operational Efficiency of KSRTC with other States

	KSRTC	Karnataka SRTC	All India
1. Revenue/km	1913 P	1603 P	1627 P
2. Fleet utilisation	79%	95.3%	92%
3. Fuel & Lub/km (paise)	848 P	658 P	662 P
4. Mileage per litre (KMPL)	4.09	5.07	4.89
5. Tyres & Tubes KM (Paise)	96 P	51 P	42P
6. Spares and others /Km (Paise)	65 P	28 P	47.5 P
7. Total Cost	2359	1686	1896
8. Staff per bus	7.1	5.5	6.7

Source KSRTC

10.51 From the table 10.7, it is obvious that fares in Kerala are above the National Average and Kerala ranks among the State with highest cost of ticket per kilometer. The all other operational parameters like fuel consumption, use of spares, tyres etc is 50 to 100 percent more costly than neighboring States. The following table provides comparison of important statistical data of Kerala RTC, Karnataka RTC and Andhra Pradesh RTC.

Table 10.8
Comparison of Important Statistical data of southern RTC's

Sl. No.	Data of Particulars	Kerala RTC	Karnataka RTC	Andhra Pradesh RTC
1	Fleet Strength	4559	5853	18214
2	% of total transport strength STU	13%	95%	98%
3	Man Power	20657 (p) 11044 (E)	27713	1,15,574
4	Staff Ratio	7.59	5.05	6.34
5	Total Km operated per day	11.32 lakh	20.7 lakh	61.67 lakh
6	Vehicle utilisation per day	247.36 km	362 km	352.9 km
7	Fleet utilisation	77.46%	92.5%	99.5%
8	Km/ltr of diesel (KMPL)	4.09	5.07	5.2
9	CPKM (cost per km)	Rs.25.74	Rs. 17.56	Not available
10	Break down rate	0.62	0.08	0.14
11	Accident rate (per lakh kms)	0.29	0.18	0.12

Source: KSRTC
P- Permanent E Empanelled

Performance of KSRTC during 2006 - 07 is given in Box 10.-5

Box 10.5
Performance of KSRTC during 2006 – 07

- 92 new buses (1 A/C Air Bus, 19 Super Fast, 5 Fast Passenger, 25 Mini Buses and 42 Venad) were commissioned.
- Implemented Electronic Ticketing Machine (ETM) in 18 Depots
- New sub Depot opened at Thalassery
- Schedules are rescheduled to get better Earning per KM (EPKM)
- Training were given to more than 6000 drivers for safe and fuel efficient driving habit
- KMPL increased from 3.87 to 4.09
- Tyre consumption reduced
- Local purchase has been reduced
- An accident Information & Control system (AICS) has been introduced to collect all relevant information on each and every accident in detail and to take remedial measures with a view to bring down accident rate.
- Audit wing strengthened and cost reduction achieved
- Ticket inspection strengthened and revenue loss reduced
- The legal section has taken very effective steps to reduce the court cases
- Zonal Officers were posted to attend all operational issues

Box 10.6
Civil Works

- Opening of new Bus station building at Adoor
- Completed construction of Bus station building at Pathanapuram
- Construction of two- bay garage at Attingal Depot
- Bus station yard developed at Mavelikkara
- Construction of SM office room, waiting shed and ADE's room at Kasaragod
- Construction of staff retiring room at Thiruvalla depot
- Attended repairs and maintenance at Perumbavoor Bus Station

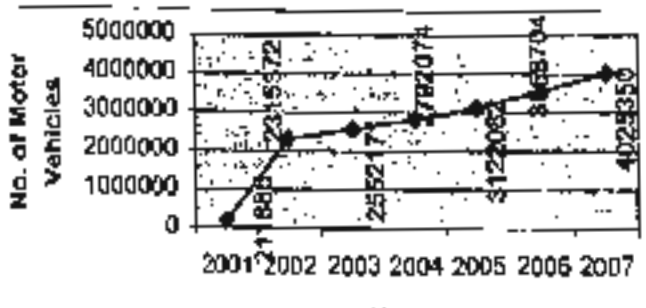
10.52 The Corporation has revised the schedules to get better EPKM EPKM has increased from Rs 20.74 to Rs 22.21. New incentive schemes were introduced in 20 units for getting better collection It is estimated that KSRTC has achieved a net saving of around Rs. 15.70 crore per month by resorting to fuel saving techniques. Even though fuel efficiency has been increased, it is now reduced from 4 16km/lit to 4 km/lit due to poor riding quality of roads. In 2005, the number of accidents involving KSRTC buses was 1513. In 2006 it was 1214 and in 2007 upto the month of August there were only 565 accidents.

10.53 The Corporation has purchased chasis through open tender and reduced prices by Rs 1.51 lakh on TATA and Rs. 1.33 lakh on Leyland. The unutilised bus body building units workshops are now functional for bus body building. KSRTC has taken steps to construct bus terminal complexes in 30 identified depots to generate more income. As a first step shopping complexes will be constructed at Ankamaly. The Corporation has decided to construct bus terminal complexes at Thampanoor, Fort (Thiruvananthapuram), Kozhikode, Peroorkkada and Malappuram under BOT scheme with KIDFC. During the period Inter State agreement with Tamilnadu has already been signed.

Motor Vehicle Population

10.54 Motor Vehicle Department is one of the major revenue earning departments of the State. The department was formed in 1958 as a two – tier system, namely one Head Office at State level and Regional Transport Offices at district level. Subsequently to improve the functional efficiency, a four – tier system was introduced In addition, to regulate the interstate transport services, Motor Vehicle check posts were also established at borders with neighboring States. There are 17 Motor Vehicles check posts in the State.

10.55 The Motor Vehicle registration in the State is showing a steady increase in the past few years indicating a steep rise in the traffic on our roads. The growth of vehicle population in Kerala is 13.01 percent. The growth of Motor Vehicles since 2000 – 01 is shown in fig. 10.2.

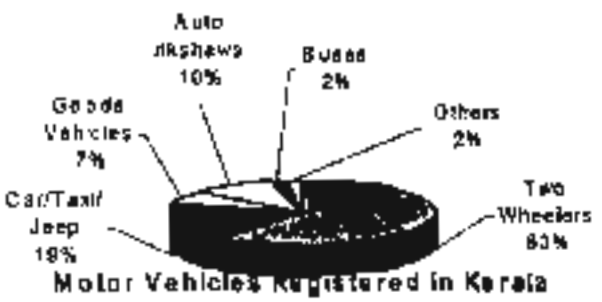


Growth of Motor Vehicles in Kerala since 2001

Fig 10.2

10.56 The number of Motor Vehicles having valid registration as on 31.3.2007 is 40,25,350 as against 35,59,504 in the previous year. The newly registered vehicles come to 465846 (13.08%) during 2006 – 07. The percentage of category wise motor vehicles registered during 2006 – 07 is shown in figure 10.3

10.57 The vehicular density in the State is high compared to may other States in India. Kerala has 10358 vehicles per sq.km of area and 12641 vehicles per lakh population.



Motor Vehicles Registered in Kerala during 2006-07 (Category Wise)

Fig 10.3

10.58 The district – wise details of vehicles newly registered, vehicles with valid registration and growth of vehicles in Kerala are given in appendices 10.7 and 10.8. An analysis of growth of Motor Vehicles and its impact on local development in the State reveals that the vehicle population have increased from 15.1 lakh in 1998 to 40.25 lakh in 2007, while only marginal increase has been achieved in augmentation of road length.

10.59 The transport system in Kerala is consumer oriented and passenger movement account for major portion of transportation. Goods transport in the State is mostly carried out through road transport. The number of goods vehicles (four wheelers and above) registered in the State increased from 681383 to 768547 as on 31.3.2007.

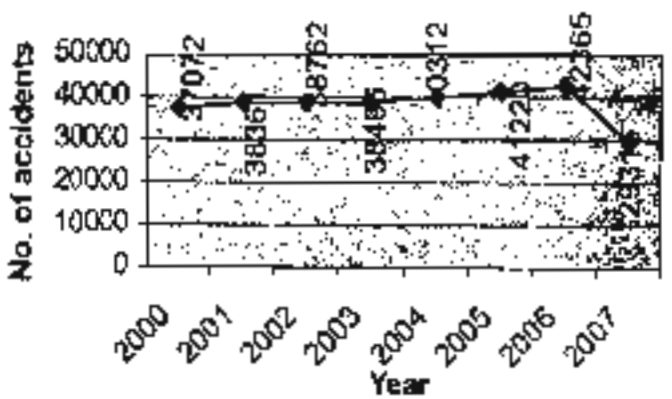
10.60 About 1276 vehicles are newly added to vehicles population every day. Out of which 870 are two wheelers. The details of category wise growth of motor vehicles in Kerala since 1990 are given in Appendix 10.10. The highest vehicle population was recorded in Ernakulam district with 59451 (12.76%) followed by Thiruvananthapuram with 50565 (10.85%). Wayanad has the lowest number of motor vehicles 3701 (0.79%). The tremendous increase in volume of road traffic in recent years has caused increase in road accidents.

Road Accidents

10.61 India is undergoing a major change in the causes of mortality accompanied by a rapid motorization and urbanization. In India, around 4.4 lakh road accidents (one road accident every minute) resulting in death of 94,968 persons (one road accident death every 6 minutes) took place in the year 2006.

10.62 Rapid increase in number of motor vehicles especially during the last two decades has been the major reason for the increasing number of road accidents in our State. The vehicle population has increased by 10 times between 1980 and 2000 and by 3 times between 1990 and 2000. Almost 60 percent of motor vehicles in the State are two wheelers. Two wheeler population increased from mere 0.5 lakh in 1980 to 24.19 lakh in 2007.

10.63 The increasing trend of traffic accidents is a matter of great concern. Kerala ranks third position in the country, next to Maharasthra and Tamilnadu. The accident rate of Kerala is the highest in the country with 15 accidents per 1000 vehicles, twice that of all India average. Even bigger States like Uttar Pradesh, Madhya Pradesh, Gujarat, Rajastan and Andhra Pradesh have reported far less number of accidents compared to Kerala. The trend of Motor Vehicle accidents in Kerala is shown in the Figure 10.4



Trend of Road Accidents in Kerala

Fig 10.4

Table 10.9

Statistics on Road accidents per day

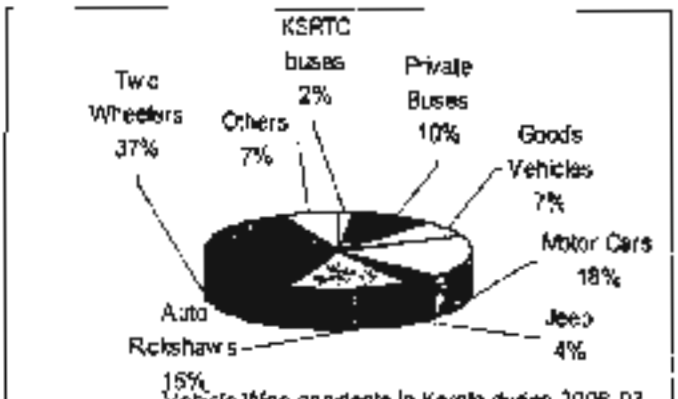
Sl. No.	Description	2005 - 06	2006 - 07
1	No. of accidents	116	80
2	No. of persons killed/injured	140	101
3	Accidents involving two wheelers	59	34
4	Accidents by KSRTC Buses	4	2

Source : State Crime Records Bureau

10.64 Police records show that "rash and negligent driving" on the part of drivers is the main cause of road accidents. According to the records, almost 95% of accidents were caused due to fault of the driver of motor vehicles. The rest of the accidents were caused due to various other reasons like traffic, bad weather, poor road condition, fault of pedestrians etc. The main causes of road accidents are

- Rash driving and unhealthy competition of vehicles
- Defective eye sight of drivers
- Poor surface conditions, badly maintained side shoulders
- Uncontrolled access streets and unmanned junctions
- Least regard to traffic rules
- Haphazard parking on road side
- Location of bus stops close to junctions
- Lack of pedestrian crossing, walkway facilities etc
- Encroachments/dumping of materials on the road
- Protruded lamp posts, unscientific check barriers, speed breakers etc.

10.65 The percentage of category wise and vehicle wise accidents in Kerala during 2006 – 07 is shown in fig. 10.5



Vehicle Wise accidents in Kerala during 2006-07

Fig 10.5

Kerala Transport Development Finance Corporation (KTDFC)

10.66 The KTDFC was set up exclusively for financing transport services in the State and started functioning in 1991-92 with equity capital contribution from State Government. It is a non-banking Financial Company registered under the Reserve Bank of India and started commercial business in 1992. The Corporation was formed with the objective of providing loan to KSRTC and other Governmental/Quasi Government Organization and individuals for purchase of new vehicles. The Corporation also finance transport sector through hypothecation of transport vehicles used by individuals, firms and companies particularly by KSRTC and for building up commercially viable Infrastructural facilities of KSRTC and also assist transport undertaking with Road Transport Operators (SRTO) for the purchase of commercial vehicles. The company is mobilising the funds required for these business activities through the issue of Bonds, fixed deposits with Government guarantee. The Corporation also accepts fixed deposits from public. The authorized capital of the company is Rs.50.00 crores and paid up capital is Rs. 43.83 crores.

Railways

10.67 Indian railways which is the world's second largest rail network under a single management, has been contributing to the country's industrial and economic development for over 150 years. It has bound the economic life of the country and helped in accelerating the development of industry and agriculture. The growth of Indian Railways in the 150 years of its existence is phenomenal. The network runs multi gauge operations extending over 63,645 route km.

10.68 Indian Railways are now in the process of inducting new designs of fuel-efficient loco motives of higher horse – power, high-speed coaches and modern bogies for freight traffic. Modern signaling like panel – interlocking, centralized traffic control, automatic signalling and multi aspect colour bright signalling are being introduced.

10.69 Railways have a significant role to play in the transport system of the State. The Railway division at Thiruvananthapuram, Palghat and Madurai jointly carry out transport operations in Kerala. The poor development in rail transport is a bottleneck in the industrialization of the State. The railway network extends over 1148 route Kms in Kerala of which 111.14 km are meter gauge. The total route length of Railways in Thiruvananthapuram Division is 625.80 km.

Table 10.10

Performance of Railway Division, Thiruvananthapuram during 2006 - 07

Sl. No.			
1	Total railway route length in Thiruvananthapuram Division as on 31.3.2007	625.80	
2	Length of Broad gauge (in Kms)	1078.810	
3	Length of Meter gauge (in Kms)	Nil	
4	Total No. of passengers through Railway in the Division during 2005-06, 2006-07	2005-06 712 lakhs	2006-07 796 lakhs
(a)	Originating	712 lakhs	796 lakhs
(b)	Terminating	745 lakhs	835 lakhs
5	No. of railway routes with distance of each route under the Division		
	1. Shoranur-Ernakulam Jn. (Double line)	106.85 Kms	
	2. Ernakulam Jn-Kayamkulam Jn(Single line)	114.66 Kms	
	3. Ernakul Jn – Alleppey-Kayamkulam Jn(Single line)	100.34 Kms	
	4. Kayamkulam-Jn-Trivandrum Central (Double line)	105.32 Kms	
	5. Trivandrum Central-Nagarcoil Jn (Single line)	71.05 Kms	
	6. Trichur-Guruvayoor(single line)	22.63 Kms	
	7. Nagercoil Jn – Tirunelveli (Single line)	73.29 Kms	
	8. Nagercoil Jn-Kanniyakumari	15.51 Kms	
	9. Ernakulam Jn – Cochin Harbour Terminus (Single line)	7.75 Kms	
6	No. of Railway stations in the Division	105	

7	Total Goods traffic in Kerala during 2005-06 & 2006-07	2005-06 22.29 MTs 2006-07 25.66 MTs
8	Revenue receipts from passenger during 2005-06 & 2006-07	2005 -06 291.99crores 2006-07 359.12 crores
9	Revenue receipts from goods traffic during 2005-06&2006-07	2005-06 92.47crores 2006-07 102.15 crores
10	No. of trains operated during 2005-06 and 2006-07 form Kerala under the Divison	2005-06 / 2006-07 Exp.Trains 20280 / 20655 Pass.Trains 18250 / 18250 Specials 853 / 675
11	No. of new train services started from Kerala during 2006-07(Specify the route)	1. Train No.2698/2697 Trivandrum Central-Chennai Central Superfast Exp.(Weekly)via Kottayam 2. Train No.6316/6315 Kochuveli-Bangalore City Exp(Weekly) via Alleppey
12	Length of road maintained by Railway (CC,BT,Metalled,Others)	CC - 0.35 Kms BT - 32.03 Kms Others - Nil Total - 43.43 Kms

Source: Thiruvananthapuram Railway Division

10.70 The Thiruvananthapuram Division has operated 20655 Express / Mail trains, 18250 passenger trains and 675 special trains. Thiruvananthapuram Division carried 1631 lakh passengers during 2006-07 as against 1457 lakh passengers in the previous year. The total revenue receipts from passengers in 2006-07 amounted to Rs. 359.12 crores in Thiruvananthapuram division as against Rs. 291.99 crores in previous year showing 22.99% increase in revenue. Similarly the total revenue receipts from goods traffic increased from Rs. 92.47 crore is 2005-06 to Rs. 102.15 crores, having an increase of 10.47%. The goods traffic has increased during 2006-07 from 22.29 MTS to 25.66 MTS (15.12% increase) in this division. There are 105 railway stations in the Thiruvananthapuram Railway Division. Two new train services started from Kerala during 2006-07

1. Train No 2698/2697 – Thiruvananthapuram central – Chennai Central super fast Express (weekly) via Kottayam
2. Traint No. 6316/6315 Kochuveli – Bangalore city Express (weekly) via. Alleppy

10.71 The present railway system is mainly coastal and does not reach the major agricultural and plantation areas of the State. The pressure on the road system in Kerala is extremely heavy and the need for development on rail system and the introduction of more routes and services are sought from Government of India.

Water Transport

Port Sector

National Scenario

10.72 India has 12 major ports and 187 non major ports along its 7517 Km long Indian coastline. The major ports are developed and managed by the respective Port Trusts under the control of Government of India and the non major ports come under the jurisdiction of the respective State Governments.

10.73 Mumbai, Jawaharlal Nehru at Nhava Sheva, Kandla, Mormagao, new Mangalore and Cochin on the west coast and Kolkotta/Haldia, Paradip, Visakhapatnam, Chennai, Ennore and Tuticorin in the East Coast are the major ports. Of the 12 major ports, 11 are run by the Port Trusts while the port at Ennore is run by a corporation under the Central Government.

10.74 At the time of independence India had only five major ports. After independence development of ports was taken up in a planned manner. Mechanization and modernization of cargo handling facilities at ports have been a thrust area in recent years, with the emphasis on development of infrastructure. Deepening of ports to receive larger vessels is the main priority area.

10.75 Major ports in India handle nearly 75% of the total cargo traffic. 70% of the traffic at major ports by volume is dry and liquid bulk, remaining 30% is general cargo including containers. Containerized cargo has grown at a rate of about 14% p.a over the last 5 years.

10.76 Cargo handling of the major ports is projected to grow at 7.7% p.a till 2011 - 12. The New Foreign Trade Policy envisages doubling of Indias' share in global exports in next five years to $ 150 billion (Rs. 675000 crores).

10.77 Two major Government projects underway are the project 'Sethusamudram', dredging of the Palk Strait in South India to facilitate maritime trade through it, and National Maritime Development Programme for modernization and expansion of port capacities.

10.78 The experience of operating berths through PPPs at some of the major ports in India has been quite successful. It has, therefore, been decided to expand the programme and allocate new berths to be constructed through PPPs. Government has also decided to empower and enable the 12 major ports to attain world class standards. To this end, each port is preparing a Master Plan for 20 years and an Action Plan for seven years. Recognizing that the shipping industry is moving towards large vessels, a plan for capital dredging of channels in major ports has also been formulated.

10.79 A plan for improving rail road connectivity of major ports is visualized to be implemented within a period of three years. Changes in customs procedures are being carried out with a view to reducing the dwell time and transaction costs. Government has also delegated powers to the respective Port Trusts for facilitating speedier decision making and implementation.

10.80 The National Maritime Development Programme is expected to bring a total investment of over Rs. 50,000 crore in the port infrastructure. Such improvement in the scale and quality of Indian port infrastructure will significantly improve India's competitive advantage in an increasingly globalized world.

Kerala Port Sector

10.81 Along its coastline of 585 Kms Kerala has one major port at Cochin and 17 non major ports. The non major ports are under the administration of Government of Kerala. Government of Kerala intends to provide a boost to coastal shipping with the development of ports, which will ease the burden on the heavily congested highways in the State apart from savings in transportation cost. Government, besides acting as a catalyst for establishment of ship repair and ship building industries, would also encourage other port based industries contributing to the development of ports. This includes warehouses, container freight stations, tourism complex, captive power plants etc.

Private Sector Participation

10.82 Recognizing the need to develop the ports in a time bound manner, but not having adequate resources for the same, Government of Kerala decided to encourage private sector participation Government is committed to seek private sector investments into the port sector and therefore to create a framework for such participation, the Kerala Port Policy was announced. State level policy interventions for enabling infrastructure development in Public Private Participation (PPP) format strengthen this policy.

Box 10.7
Objectives of the Government of Kerala Port Policy

1. Kerala shall target a place among the top three maritime States of the country in terms of cargo handled in the next ten years, that is, by the year 2014.
2. Facilitate achievement of optimal multi-model transport and logistic chain outcomes by establishing an efficient and commercially viable transport system. This will be achieved by carrying out co-ordinated development of multi-purpose ports, transhipment bunks, inland waterways, coastal shipping inland terminal cargo handling and storage facilities, railways and road linkages.
3. Promote port based and Maritime Industries.
4. Ensure protection of environment and coastal zones.
5. Promote establishment of passenger terminal and marinas.

Cochin Port

10.83 Cochin Port is the only major port in Kerala. It is an ISO 9001 – 2000 certified port administered by a Board of Trustees under the Major Port Trust Act 1963. It spreads over 827 hectares. It has a water frontage of 7.5 Km. The port has connectivity to hinterland through NH 47, NH 17 and NH 49. Rail links to the Konkan and Southern Railway also give key rail access to its hinterland. An inland waterway connecting to Kollam and Kottappuram on either side is being developed by the Inland Waterways Authority of India. 97% of the total volume of traffic from the Cochin Port is accounted by Kerala, though the hinterland of the port spreads to parts of Tamilnadu and Karnataka States.

10.84 38 cruise vessels visited the Cochin port during 2006 – 07. The port handled a traffic of 152.57 lakh tonnes as against 138.88 lakh tonnes in the previous year. The container traffic

throughput for the year was 226808 TEUs. During 2006 – 07 the port recorded an average pre - berthing detention time of 13.97 hours, average turnaround time of 2.75 days and average output per berth-day to the tune of 8282 metric tonnes as against the previous figures of 13.7 hours, 2.6 days and 7767 metric tonnes respectively.

10.85 The operating ratio of the port during 2006 – 07 was to the tune of 68.40% compared to 67.88% during the previous year. The port also recorded an operating income of Rs 212.07 crores and operating surplus of Rs. 64.51 crores as against 198.94 crores and 63.90 crores respectively, during the year before.

10.86 The number of container vessels called at Cochin Port decreased from 421 in 2005 - 06 to 382 in 2006 – 07 showing a decrease of 9.26%. At the same time the number of passenger vessels increased from 26 in 2005 –06 to 38 during 2006 – 07 representing an increase of 46.15%. There is also an upward trend in the number of dry bulk vessels and volume of net registered tonnage as shown at Appendix 10.21

Table 10.11

Number of Ships called at Cochin Port during 2006 - 07

Sl. No	Type of Vessel	No. of Ships		% Variation increase (+)/	Net Registered Tonnage		% Variation increase (+)/
		2005-06	2006-07	Decrease (-)	2005 - 06	2006 - 07	Decrease (-)
1	Container	421	382	9.26	2326724	2675191	14.98
2	Break Bulk	109	92	-15.60	308221	261914	-15.02
3	Dry Bulk	50	54	8.00	495115	532485	7.55
4	Liquid Bulk	383	382	-0.26	5200593	5550643	6.73
5	Passenger (Foreign)	26	38	46.15	297961	380077	27.56
6	Others	236	225	-4.66	200985	171031	-14.90
	Total	**1225**	**1173**	**-4.24**	**8829599**	**9571341**	**8.40**

Source : Cochin Port Trust

Vallarpadam International Container Transhipment Terminal

10.87 The Prime Minister of India laid the foundation stone for Vallarpadam International Container Transhipment Terminal during 1995. Completion of this prestigious project would make the Cochin port a major hub port in the Indian Ocean region The emergence of the hub port would strategically help to bring in a check and balance in the port operations.

10.88 At present containers from the Indian sub continent are being transshipped to Colombo. With the development of Vallarpadam Mother Vessels come to Cochi and consolidate and carry the containers from other ports of India to the outside world.

10.89 As per the Asian Development Bank (ADB) projection for G.D.P growth, traffic through Cochi port could be over two million TEUs by 2012 and by 2022 it is projected to go up to 3.3 million TEUs.

10.90 The International Container Transhipment Terminal brings India's maritime trade a tremendous saving. Besides, the project will ensure rapid development of the State that has lagged in industrialization and generate employment and facilitate investment to the tune of Rs.

7500 crores. Such a development would have a cascading effect on the industrial, economic, commercial and social growth of the State.

Vizhinjam Deep Water International Container Transhipment Terminal

10.91 Government has decided to develop the Vizhinjam Container Transhipment Terminal with Public Private Participation. This scheme has already been identified for Fast Track implementation. Development of infrastructure facilities like land acquisition, development of rail & road connectivity, water supply, power supply, dredging sanitation etc. for the development of Vizhinjam Deep Water International Transhipment Terminal will be carried out by Government through Vizhinjam International Seaport Limited.

10.92 The proximity to International Sea routes, a natural water depth of 20 meters (the criterion for an international port), minimum dredging and the lack of any potential ecological impact make Vizhinjam a natural choice for constructing the country's first international transhipment terminal. It is estimated that the absence of a transhipment terminal costs the nation around Rs. 1000 crores per annum.

10.93 The construction of a Terminal at Vizhinjam will increase the country's proximity to the international sea route, which links Europe, Persian Gulf and the Far East. Vizhinjam Deep Water Container Transhipment Terminal when completed would be able to cater to container vessels up to 8000 TEUs in the initial phase and 10000 to 12000 TEUs sizes in the subsequent phases.

Box 10. 8
Strategic Advantage of Vizhinjam

- Availability of 20m contour within a nautical mile off the cost
- Minimal Littoral drift along the cost and therefore hardly any maintenance dredging.
- Proximity to national/regional road, rail net work
- Immediacy to international shipping route connecting Persian Gulf, Far East and Australia.
- Nestled in the tip of Thiruvananthapuram, the city that has an international airport, human resources and social infrastructure.

10.94 Government of Kerala invited global tender for the project and is under processing. The estimated cost of the Project is worked out at Rs 5348.00 Crores and the first stage of the project is expected to be completed within three years.

Non Major Ports

10.95 The Non Major ports are under the direct control of State Government. The Government agencies involved in the development of ports in the State is Port Department, Harbour Engineering Department, Hydrographic Survey Wing and Kerala State Maritime Development Corporation

Box 10.9
Ports in Kerala

Major Port	:	Cochin
Non major Ports	:	Neendakara, Alappuzha, Beypore Vizhinjam, Valiathura, Thangasseri, Munambam, Ponnani, Vadakara, Thalasseri, Kannur, Azhikal, Kasaragod
Non major Ports yet to start functioning	:	Manjeswaram, Neeleswaram, Kayamkulam, Manakkodam

10.96 Commodity – wise traffic handled in intermediate and minor ports during the year 2006 – 07 are shown in appendix 10.22 Cargo handling during 2006 – 07 was confined mainly to Kozhikode, Vizhinjam and Azhikkal ports. The number of steamers and sailing vessels that called at non- major ports during 2006 – 07 are shown at appendix 10.23. 462 steamers and sailing vessels called at intermediate and minor ports during 2006 – 07with registered tonnage of 346067. This is against the figure of 425 and 131817 respectively during 2005 – 06.

10.97 The number of crafts privately owned registered at these ports are shown in appendix 10.24. Alappuzha port recorded the top with registration/renewal of 1306 numbers

10.98 Statement showing the revenue collection at the non-major ports during 2006-07 is shown in Appendix 10.25 The revenue collected during the year is Rs 212.54 lakh, against the collection of Rs 227.47 lakh during 2005-06.

Development of Beypore Cargo Harbour

10.99 Construction of passenger terminal, renovation of the old godown number 1 and dredging of 8500m^3 were carried out at the Harbour during 2006 – 07 Dredging of 100m wharf completed. A detailed project report for the development of Beypore Cargo Harbour is under preparation.

Development of Azhikkal Cargo Harbour

10.100 The work of breakwater at Azhikkal side reached up to 996m out of 1150m and that at Mattul side reached up to 870m out of 1070m. Construction of approach road, weighbridge installation and land acquisition were completed. Water supply works also completed. Construction of new wharf is progressing.

Development of Vizhinjam Port

10.101 Resurfacing of road from Azhakulam to fire station and road to Theatre junction at Vizhinjam were completed. Work of watchmen shed at leeward breakwater, sanitary facilities for the port staff, electrification of Ist floor of building to signal station, providing rolling shutters to

transit shed, providing water supply and sanitary arrangements to the first floor of signal station and maintenance of road from light house to Azhakulam etc were completed.

10.102 Casting and placing of concrete blocks over main breakwater at Vizhinjam completed. Rectification of damages to the cargo wharf at Vizhinjam Leeward Breakwater completed.

Cargo Berth at Thangassery

10.103 A cargo berth at Thangassery has been completed and pile cap concreted. The total expenditure incurred for the development works at this port is Rs.458.97 lakh. Procurement of a 600 HP Tug for the port is on the way.

Hydrographic Survey Wing

10.104 The Hydrographic Survey Wing was constituted in 1968 as a component of the Kerala State Port Department with a view to cater to the requirements of Hydrographic Investigation for the development of the minor and intermediate ports of Maritime State of Kerala. Hydrographic Surveys of various Ports are being conducted by the wing.

10.105 The Hydrographic survey comprises of triangulation, coast lining, sounding operation, tidal observations, bottom sampling, current observation, location of under water dangers such as rocks, wrecks etc and preparation of charts delineating the data collected during the Survey.

10.106 The Hydrographic Survey can decide exactly the quantum of water available in the reservoirs. It will also reveal the sedimentation and siltation taken place in the reservoir.

10.107 For development of Ports and construction of new ports, the information collected during the Survey are analysed and utilizing these informations, model studies are conducted by the Central Water and Power Research Station, Pune.

10.108 The surveys for the fishery harbour and fish landing centres of various places were conducted during the Xth plan period. The Hydrographic Survey in the Inland Navigation Canal from Kolli to Kottappuram (35 KM) and the Hydrographic Survey in the Tsunami affected area (Thangassery to Thottappally - 50 Kms) are the prestigious works conducted for irrigation department and CESS respectively.

10.109 During the financial year 2006-07, Hydrographic Survey of Vizhinjam, Munambam, Kayamkulam, Thangassery, Neendakara, Muthalapozhi, Azhikkal, Beyporc, Vellayil, Puthiyappa Fishing Harbour, Koyilandi and Coastline Survey of Manjeswarm, Neendakara Fishing Harbour, Thangassery Fishing Harbour, Round the clock Tidal observation and meteorological data collection at Neendakara, pre-dredging Survey at Tuticorin Fishing Harbour were conducted and charts were prepared. A new survey vessel is under construction and the renovation of survey vessel M.V. Hydrographer was also carried out.

Inland Water Transport

National Scenario

10.110 Inland Water Transport includes natural modes like navigable rivers and artificial modes such as canals. The inland waterways have played an important role in the Indian Transport System since ancient times. It is the most fuel efficient, economic and environment friendly

mode of transport among all other transport systems. India has about 14,500 Km of Inland Waterways network comprising rivers, lakes and canals. However, in recent times the importance of this mode of transport has declined considerably with expansion of road and rail transport, diversion of river water for irrigation, accumulation of silt in rivers due to deforestation, and failure to modernize the fleet to suit local conditions.

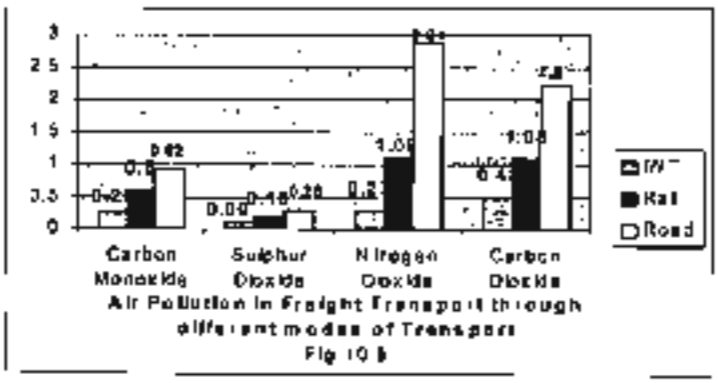
10.111 The transportation of goods in an organized form through the inland waterways is confined to West Bengal, Assam, parts of North Eastern Region and Goa

10.112 Inland Water Transport has advantages over railways and roadways both in terms of cost and energy consumption in cargo transportation A recent study conducted by the National Council for Applied Economic Research (NCAER) reveals that the per tonne kilometer cost of transportation by inland waterway is Re. 0.55 compared to Re. 1 by road. While one Horse Power (HP) can move 150 kg of Cargo on road and 500 kg on rail, the same power can move 4,000 kg on waterways. In terms of fuel savings, one litre HSD can transport 105 tonne kms of cargo by IWT, against 24 tonne kms by road. The phenomenal savings in fuel consumption is shown in Table – 10.12 and Fig 10.6.

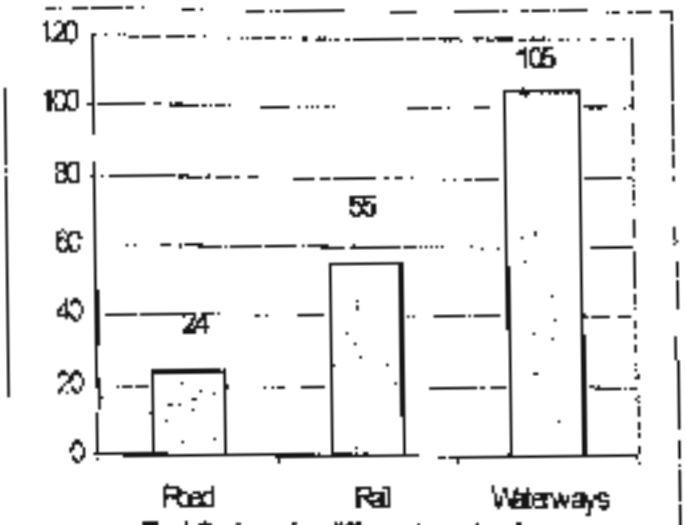
Table 10.12
Potential Savings in Inland Water Transport

Percentage shifting of Inland cargo to IWT mode	Total available cargo for IWT (In billion tonne KM)	Saving of HSD (In lakh KL)	Savings in cost @ Rs. 35 per litre (Rs. in Cr)
1%	10	3.22	Rs.1127
1.5%	15	4.82	Rs 1690
2.0%	20	6.44	Rs.2254
2.5%	25	8.05	Rs.3041
3.0%	30	9 66	Rs.3381

Source : Mobility, Vo. VIII, Issue 2, NATPAC



10.113 The Inland Water Transport is a gifted mode of transport for maintaining the ecological balance as it has the least impact on the environment amongst the various modes of transport (Fig 10.7). The cost of infrastructural development is relatively cheaper as compared to other modes.



Fuel Savings by different mode of Transport(Tonne Km/Lit)

Fig 10. 7

10.114 The National Transport Policy Committee had identified 10 waterways for initial consideration for development as National Waterways. The Inland Waterways Authority of India (IWAI), the autonomous body responsible for regulation and development of water ways (set up in 1986), had declared three national waterways. N.W - 1 is Ganga – Bhagirathi – Hooghly river system from Allahabad to Haldia covering a distance of 1629 kms passing through three States, U.P, Bihar and West Bengal. The N.W – 2 is on the Brahmaputhra river from Dhubri Sadiya covering 891 km passing through Assam and linking the North East Region to the main ports of Calcutta and Haldia, which is also a major link to Bangladesh. The N.W - 3 is the portion of West Cost Canal from Kottapuram to Kollam, including Chambakara and Udyogamandal in Kerala consisting natural lakes, backwaters, a river section and man-made canals.

10.115 The following three more waterways are proposed for declaring as National Waterways

1. NW 4- Godawari and Krishna rivers along with Kakinada – Pondichery canals
2. NW 5 - East Coast Canal along with Brahmani river
3. NW 6 - Mahanadi delta and Barak river

The cargo movement details for NW 1, 2 and 3 are given in Table 10.13

Table 10.13

Cargo Movement for NW1,2,3 Goa &Mumbai

Sl. No.	Stretch	2000-2001 Tonne	2001-2002 Tonne	2002-2003 Tonne	2003-2004 Tonne(T) Tonne km (Tkm)	2004-2005 Tonne (T) Tonne km (Tkm)
1	NW-1	3,35,356	4,11,238	6,32,037	7,86,159 T 15,95,73,347 Tkm	8,87,328 T 31,18,82,762 Tkm
2	NW-2	49,768	41,453	98,354	7,95,661 T 2,94,93,94 Tkm	8,18,683 T 2,51,63,162 Tkm
3	NW-3	1,05,151	11,64,460	11,88,156	13,62,149 T 2,19,13,759 Tkm	10,53,867 T 1,53,77,312 Tkm
Total NWs		14,70,275	16,17,151	19,18,547	29,43,969 T 21,09,81,052 Tkm	27,59,878 T 35,24,21,236 Tkm

Source : Mobility , Vo. VIII , Issue 2, NATPAC

Inland Water Transport in Kerala

10.116 The State of Kerala, with numerous backwaters, is one of the States in India, where waterways are successfully used for commercial Inland Water Transport. The transportation is mainly done with country craft and passenger vessels. There are 41 navigable rivers in Kerala. The total length of the Inland Waterways in the State is 1687 Kms.

10.117 The Inland Canals play an important role in the economy of the State as they inter-connect the rivers on the banks of which are situated places of commercial and industrial importance and also give a connection from interior places to the West Coast Canal System. The West Coast Canal is having total length of 560 Kms starting from Kovalam to Hosdurg. Cochi-Kollam section is the most important portion of the West Coast Canal and carries about 60 percent of the total tonnage cargo carried by inland waterways of the State. It connects the major industrial belt of Aluva Udyogamandal and CEPZ at the north and the commercial town of Kollam in the south. The Vembanad Lake have 83 km long waterway extending over an area of 205 sqkm has Cochi at the northern end and Alapuzha at the southern end. Five rivers drain into this lake and these rivers are navigable for a length of about 30 kms upstream from the points of outfall. The low-laying areas of Kuttanad, the once rice bowl of Kerala, is adjacent to this lake. List of navigable feeder routes connected to NW 3 in WCC is given in Table- 10.14

Table 10.14
Navigable Feeder Canals in NW3

Sl. No	Feeder Canals in NW3	Length (Km)
1	Ernakulam-Alappuzha	73.6
2	Alappuzha-Quilon	78.4
3	Alappuzha-Kottayam	28.8
4	Alappuzha-Changanassery	32.0
5	Kottayam-Ambalapuzha	43.0
6	Changanassery-Neelamperoor	27.0
7	Quilon-Kadapuzha	23.4
8	Alappuzha-Pulikeezhu	38.4
9	Alappuzha-Manar	40.00
10	Muhama-Kumarakam	9.6
11	Vaikom-Athirampuzha	31.2
12	Vaikom-Pallipuram	3.0
13	Changanassery-Payipad	42.0
14	Changanassery-Neerattapuram	9.0
15	Chengannur-Pulikeezhu	21.0
	Total length of canals	**500.4**

Source Mobility, Vol.VIII, Issue 2, NATPAC

10.118 The cargo transportation in NW 3 includes transportation of sulphur, rock phosphate, liquefied ammonia gas, furnace oil and concentrated petroleum products.

10.119 NATPAC conducted the techno economic feasibility study of WCC for considering the extension of NW 3. It is estimated that the traffic will grow substantially as shown in Table 10.15.

Table 10.15
Expected Growth of Traffic in the Sections of NW3

(traffic '000 tonnes)

Stretch	Kovalam-Kollam section				Kottappuram-Kasaragod section			
Year	2006	2011	2016	2020	2006	2011	2016	2020
Containerized cargo	1494	2493	4801	8108	2729	4555	8771	14814
Non Containerized cargo	293	489	942	1591	789	1317	2536	4283
POL	194	324	624	1054	201	335	646	1091
Total	**1981**	**3306**	**6367**	**10753**	**3719**	**6207**	**11953**	**20188**

Source: Mobility, Vol.VIII, Issue 2, NATPAC

10.120 The main constraints to the expansion of Inland Water transport in the State are lack of depth in the waterway caused by silting, lack of maintenance of navigation system and bank protection, accelerated growth of the water hyacinth, lack of modern inland craft terminals and cargo handling system.

10.121 The 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).

10.122 As part of a programme for developing waterways by the Central Government, a length of 168 Km of waterway from Kollam to Kottapuram of West Coast Canal including Udyogamandal and Champakara canal was declared as National Water Way No. III. The Canal coming under National Waterway III are shown in Table 10.16

Table 10.16
The details of National Waterway No.3

Sl. No.	Sector/Section	Distance (Km)
1	Kottapuram - Kochi	00-30
2	Kochi - Alappuzha	30-92
3	Alappuzha - Kollam	92-168
4	Udyogamandal	23
5	Champakara	14
	Total	**205**

Source : CSIND

10.123 By improving the Inland Water Transport Canals, a major portion of the bulk cargos transported through road will be diverted to the waterway and thereby reduce the present and future transport pressure on the road network. Presently inland waterways carry a meager 0.15 percent of the total freight traffic. It is expected that 17 – 20 percent of the goods traffic now being transported by road in Kerala can be diverted to waterways. The maintenance and upkeep of inland waterway is essential considering its importance in the field of tourism also. Since the West Coast Canal is being developed for movement of bulk carriages, the necessity to develop feeder canal system and navigable stretches of rivers from isolated areas to the main artery of water routes become imperative. Hence Government of Kerala has undertaken a programme to

improve feeder canals, portion of the West Coast Canal not declared as National Waterway, modernization of Jetties etc with possible assistance from Government of India

10.124 Three feeder canals in Kerala are selected for improvement as pilot project based on the preliminary reports prepared by the Irrigation Department of Kerala.

1. Alappuzha - Kottayam Canal (23 km)
2. Alappuzha - Changanacherry canal (28 km)
3. Kottayam - Vaikom Canal (42 km)

The project is a part of Kerala State Transport Project (KSTP).

10.125 Improvement and modernization of inland waterways and canals, construction and maintenance of jetties etc are also taken up utilizing the State fund.

10.126 Waterway development and IWT operations are labour – intensive. A study conducted by NATPAC reveals that for each direct employment there is a 2.5 times of indirect jobs involved.

12th Finance Commission Award

10.127 The 12th Finance Commission has awarded an amount of Rs. 225 crores for Inland Water Transport development in the State during the period 2006-2010. The works proposed to be undertaken under the award are divided into two phases.

Box 10.10
Programme of 12th Finance Commission Award

Phase I Programme

- Deepening of the exiting canal to a minimum depth of 1.7 m and a minimum width of 10m with vertical clearance of 5.0 m
- Side protection of the exiting Waterway using pile and slab in the vicinity of towns and cities and dry rubble packing in other areas where necessary
- Providing re-inforced concrete lining for the existing tunnel

Phase II Programme

- Construction of Boat jetties and aprons
- Reconstruction of bridges
- Formation of canals in the uncut portion

10.128 Government has accorded administrative sanction for Rs. 52.25 crores for the works of the year 2006-07. 101.64 kms of the waterway is scheduled to be covered during the first year of the programme with deepening and widening to the state waterway standards providing side protection with pile, slab and gabion structures and improvement of important feeder canals.

Kerala Shipping and Inland Navigation Corporation Ltd

10.129 Kerala Shipping and Inland Navigation Corporation Ltd is engaged in transportation of cargo and passengers. The corporation has 12 barges, 11 boats and 2 jhankars. The number of trips during 2006 – 07 is 8318 and carried 529090 passengers. The Corporation operated a gross

route distance of 40937 kms The volume of cargo carried is 592137 (000 tonnes). The corporation is employing 260 persons. The operational statistics of the KSINC Ltd are shown in appendix – 10 26

10.130 The company has diversified significantly to construction and maintenance activities. Construction of a fisheries research vessel for CIFT, two smaller sea going boats and two house boats are progressing.

State Water Transport Department

10.131 State Water Transport Department was started during 1968 It operates passenger boats in the water logged areas of Alappuzha, Kollam, Kottayam, Ernakulam, Kannur and Kasaragod districts. The gross route distance of the department is 6775 kms with scheduled trips of 646. The number of boats in operation of the department decreased from 49 to 47 during 2006-07. The number of passengers carried by these services increased to 153 lakhs during 2006-07 as against 148.29 lakhs in 2005-06 The total revenue receipt of the department during 2006-07 is Rs. 479 lakhs. At present the department is employing 786 persons against the figure of 1003 in 2005-06. The revenue loss of the department increased from Rs. 996 lakhs in 2005-06 to Rs. 1114 lakhs during 2006-07 (Appendix 10.26)

Air Transport

10 132 Kerala has three airports at Thiruvananthapuram, Kochi and Kozhikode handling both international and domestic flights. Out of the three international airports Thiruvananthapuram and Kozhikode airports are owned by Government of India and that at Kochi is owned by Cochin International Airport Ltd (CIAL), a company set up by GoK with public private participation. The traffic dealt with by the three airports has been growing steadily in recent years due to increased tourist arrivals, large number of Keralaites working in Gulf and other countries and also as a result of the 'Opensky' policy measures taken by Government of India. During 2005 – 06, 62390 flights (31225 domestic and 31165 international) were operated from the three airports. Details of flights operated and passengers travelled during 2006 – 07 from the three airports are shown in Table 10.17

Table 10.17
Details of Flights operated & passengers travelled during 2006 – 07

Airport	International		Domestic	
	Flights (Nos)	Passengers (Nos)	Flights (Nos)	Passengers (Nos)
Thiruvananthapuram	9430	1178076	8804	596223
Kozhikode	7563	900345	5920	233342
Kochi	14172	1429172	16501	1131898
Total	**31165**	**3507593**	**31225**	**1961463**

Source: International Airports, TVPM, Kozhikode and Kochi

10.133 During 2006 – 07 5469056 passengers (1961463 domestic and 3507593 international) were travelled as against 4110750 passengers travelled in previous year. Details of flights operated during 2005 – 06 and 2006 – 07 by the three airports are shown in Appendix 10.27(A), (B) and (C).

Cargo Traffic

10.134 Kerala State Industrial Enterprises (KSIE) is the official export house for the promotion of exports as recognised by Government of India. The Company is engaged in the operation of two Air Cargo complexes at Thiruvananthapuram and Kozhikode Airports. It is also engaged in trading activities through its three Sales Emporia at Thiruvananthapuram, Ernakulam and Kozhikode and also through its e-com site 'keralaeade.com'.

10.135 During the year 2006-07, the Company has earned a net profit (before tax) of Rs 501.36 lakh from a total turnover of Rs 1261.95 lakh. This is against the net profit of Rs 388.43 lakh from a total turnover of Rs 1017.33 lakh during the previous year. During 2006-07, the two Air Cargo Complexes handled 30075 MT of export cargo and 18896 MT of import cargo. The Company has been registering steady increase in its turnover and profit all through the years. Details of Export and Import cargo is furnished in Table No. 10. 18

Table 10.18
Details of Export and Import through Air Cargo Complexes at Thiruvananthapuram and Kozhikode from 2003-04 to 2006-07

Year	Export (MT)	Import (MT)	Value (Rs Lakh)
2003-04	25545	12177	571.13
2004-05	25550	13482	681.32
2005-06	24166	14990	1017.32
2006-07	30075	18896	1261.95

Source : KSIE

Passport

10.136 The passport issuing offices in the State are at Thiruvananthapuram, Kochi and Kozhikode. The total number of applications for passport received in the State during 2006 – 07 is 568922 as against 55700 in 2005 – 06. The number of passports issued increased from 559302 in 2005 – 06 to 583982 in 2006 – 07. The passport office wise details of applications received and number of passports issued are shown in Appendix 10 28.

Emigration

10.137 The Protector of Emigrants, Cochin under the Ministry of Overseas Indian Affairs, Government of India, issued emigrants clearance to 56,085 emigrants as on 30.9.2007.

Communications

Postal Services

10.138 Indian Postal System is the largest in the world with a network of about 1.56 lakh post offices spread all over the country

10.139 Kerala Postal Circle provides Postal needs of whole Kerala State, Union Territory of Lakshadeep and Mahe, a part of Union Territory of Pondicherry. There are 5070 post offices functioning in the State.

10.140 Besides the traditional Postal Services viz mail, delivery of ordinary and accountable postal articles, Money orders, Indian postal orders, Value Payable Services, Post office Saving Bank, Postal Life Insurance etc, the Department of Posts also does agency services like

International Money Transfer Services (IMTS), sale of various application forms, passport service etc. with its vast network. In IMTS, Kerala Postal Circle ranks second position in the country. Department also provides services like e-post, instant Money orders, Logistic post, Business post, Express parcel post, Media post etc.

10.141 With effect from 01.09.2007, Speed Post Booking facility has been extended to all post offices of this Postal Circle, which is first time in the country. In order to make delivery of speed post articles more efficiently, three Reva Cars have been brought into use at Thiruvananthapuram on experimental basis and this will be extended to other major cities also.

10.142 All 51 Head Post offices and 557 Departmental Sub Post offices have been computerized at the end of Tenth Plan and it is proposed to computerize the remaining Departmental Sub Post offices and Extra Departmental Sub post offices during the Eleventh Plan. It is also proposed to connect 46 offices under wide area net work for which action had already been initiated.

The Postal System in Kerala at a glance is given in Box 10.11

Box 10.11
Postal System in Kerala at a glance

Sl. No.	Particulars	Numbers
1	Number of Post Offices functioned during 2006 - 07	5070
2	Head Post Offices	51
3	Sub Post Offices	1451
4	Extra Departmental Sub Post Offices	468
5	Branch Offices	3100
6	Speed Post Centres	208
7	Other Postal Services	101
8	Rural Post Offices	4201
9	Urban Post Offices	869
10	Area served by one Post Office (sq.km)	7.68
11	Population Served by one Post Office	6296

10.143 Category - wise details of Postal Services, rural/urban split up of post offices and details of area and population served by one post office etc. are given in appendices 10.29 to 10.33

Telecommunication

10.144 Telecommunication is one of the prime support services needed for rapid growth and modernization of the economy. It is one of the fastest growing sectors of the economy and has immense potential of growth in future. The telecom sector in the country has been witnessing a continuous process of reforms since 1991. The operation network of the erstwhile department of telecom has been converted into Public Sector undertaking called Bharat Sanchar Nigam Ltd. (BSNL). The company had become operational from 1.10.2000. The policies and programmes of the department are guided by the basic goal of creating a world class telecom infrastructure in order to provide the Information Communication Technology (ICT) based sector needs of modern economy on the least cost basis.

10.145 Kerala Telecom Circle Serves the whole of Kerala State, the Union Territory of Lakshadweep and part of Union Territory of Pondicherry (Mahe). The Circle has 11 major SSAs

and one minor SSA of Lakshadweep. Out of the 11 major Secondary Switching Areas, 5 are headed by Principal General Managers and 7 are headed by General Managers. Lakshadweep minor SSA is headed by a Telecom District Manager. Kerala Circle has an impressive record performance in telecom sector and Kerala has the rare destination of being the first State in the country having all automatic telephone exchanges. Kerala Circle becomes the first State to provide Public Telephone facilities in all Panchayat headquarters. Kerala is also the first State to provide Public Telephone in every village, by 1995. Kerala has the unique status of providing STD facility to all telephone exchanges.

10.146 The State has a telephone density of 191 per 1000 population with BSNL connections. Kerala Telecom Circle has modern telecom network spanning its length and breadth and comprises the state-of-the-art Digital switches interconnected by reliable Optical Fibre/Microwave/Satellite media. The State is served by 1237 automatic exchanges as on 30.9.2007, all of which are Digital electronics.

10.147 The number of telephone connections working is 60.96 lakhs (Landline – 36.03, WLL – 4.33 and Mobile 20.60). The Kerala Telecom circle has the 2nd largest telecom network out of 24 territorial circles in the country.

10.148 Sancharnet (Dial up internet) and Board band (High Speed Internet) are provided in all the SSAs. Multiplay service has been introduced in all SSAs There are a total of 419241 internet customers and 64735 broadband customers in the circle. Public Grievance cell is working at circle level with '1094' and district level '1095' other than computerized 198 Fault repair services. Call Centre with 1500 is fully functioning for Kerala. Call Centre for Mobile Service is 9447024365. Internet helpline is also working at 1957 for Kerala circle. The status of Kerala Telecom Circle as on 30.9 2007 is given in box 10.12

Box 10.12
Status of Telecom Sector in Kerala

1	No. of Telephone exchanges	:	1237
2	Equipped Capacity	:	663725
3	Telephone Density	:	191/1000 population
4	New cellular connections provided	:	456060
5	No. of Internet connections provided	:	150213
6	No. of Broad band connections provided	:	39499

The number of mobile connection in Kerala by different service providers is given in Box 10. 13.

Box 10.13
Number of Connections-Provider-wise

Idea	24.01
BSNL	21.08
Reliance	17.33
Vodafone	17.17
Airtel	14.27
Total	**99.59**

Urban Development

10.150 In Kerala the urban system consists of 5 Municipal Corporations, 53 Municipalities and 40 urban agglomerations. More than one fourth of the population live in urban areas (25.5%) and this is a little less than the National average (27.78%). Compared to other states the urban- rural system in Kerala have many distinct characteristics. It is very difficult to say where the rural area ends and the urban area starts since the features in rural and urban areas are almost alike.

10.151 Urbanization trend in the state shows slow progress and it is presented in Table-10.19 .This table shows that number of urban agglomerations /towns has increased over the period from 1901 to 2001, but the change from 1991 to 2001 is only marginal. There were 197 census urban towns (65 statutory towns and 132 census towns) in the state in 1991 which was changed to 159 (60 statutory towns and 99 census towns) in 2001

Table 10.19
Trends in Urbanization of Kerala 1901-2001

SLNo.	Census Year	Total number of Urban Towns	Total Population (in crores)	Total Urban Population (in crores)	Percentages of Urban Population	Decennial growth (%)
1	2	3	4	5	6	7
1	1901	21(9)	0.64	0.04	7.11	
2	1911	27(14)	0.71	0.05	7.34	+15.44
3	1921	44(23)	0.78	0.07	8.73	+29.78
4	1931	53(23)	0.95	0.09	9.64	+34.58
5	1941	62(23)	1.10	0.12	10.84	+30.47
6	1951	94(25)	1.35	0.18	13.48	+52.72
7	1961	92(30)	1.69	0.25	15.11	+39.89
8	1971	88(32)	2.13	0.35	16.24	+35.72
9	1981	106(48)	2.55	0.48	18.74	+37.64
10	1991	197(65)	2.91	0.77	26.39	+60.97
11	2001	159(60)	3.18	0.83	25.96	+7.64

Source: Census 2001 Government of India, New Delhi
Note. Number of statutory towns are given within brackets

10.152 The population of Kerala has increased from 254 lakhs in 1981 to 290 lakhs in 1991 and 318.38 lakhs in 2001. This growth marks an increase of 14.32 per cent during 1981 to 1991 and 9.78 percent during 1991 to 2001. The population density was 747 persons per sq km in 1991, increasing to 819 persons per sq km in 2001. The density of population varies from the coastal plains to the highland regions, the highest in the coastal land and the lowest in the highland. The share of urban population in Kerala recorded steady from 7.11% in 1901 to 26.39% in 1991, but then declined to 25.96% in 2001. The growth in urban population is due to the increase in number of urban areas and urbanization in the fringe areas.

10.153 The settlement pattern of Kerala is most intriguing on account of the limited land availability and the composite nature of family income. The population has got settled all along the transportation routes in non-nucleated settlements with the conjuration points wherever community facilities have been created such as schools, administration and market centres etc. The geographical features, availability of subsoil water, climatic factors, easy access to transportation corridors and the socio-economic factors have contributed to the development of a dispersed settlement pattern spread all over the State. The effectiveness of investments in

infrastructure development and social services, is considerably reduced since the scarce resources are spread too thinly throughout Kerala and the accruing benefit is only marginal.

10.154 In Kerala, urban content has been increasing from 7.11% in 1901 to 26.39% in 1991, but a slight decline seen in the decade from 1991 to 2001. This is partially due to the declassification of Pandalam, Piravom, Koothattukulam and Manarkad municipalities during 1991-2001. The declassification of Eloor and Eattupetta municipalities has not affected urbanization due to classification of the area contained in these municipalities as census towns in 2001 census.

10.155 Declassification of a few census towns in 2001 as rural has also contributed to the lower proportion of urban population in the state. Among the districts, the percentage of urbanization has varied from 3.8% in Wayanad to 50.4% in Kannur. Ernakulam District follows Kannur with 47.6% urban population. In six districts of Kannur, Ernakulam, Kozhikode, Thiruvananthapuram, Alappuzha and Thrissur, the percentage of urban population is higher than the state average. In three districts namely Wayanad, Malappuram and Idukki, the urban population is 10% or less

10.156 It is seen that more urban centres are located along the main transportation routes with about 75% by the side of National Highway or the railway line. The average distance between these urban centres is about 15 Km. The settlement pattern is characterized by scattered settlements of varying sizes. The overall development presents a rural urban continuum or 'rurban' character. This has led to the development of evenly spaced urban centres. Due to the nearness of the urban centres and the easy availability of infrastructure facilities even in rural areas, there is practically no push factor to urban areas from rural areas. The fast urbanization trend noticed in Kerala is not due to the rural to urban migration, but rather due to the transformation of the rural areas due to occupational shift.

Urban Slum Population

10.157 The concept of slums and its definition vary considerably across the states depending upon the socio-economic conditions or local perceptions prevailing in the society. There are regional differences in the names of slums but physical characteristics in most of these are essentially the same. As per 2001 Census, a total of 425.8 lakh population live in slums of 640 cities/towns across 26 states and union territories, which constitutes 4% of the total population of the Country. In terms of percentage of slum population to the total population of cities/towns having reported slums, Meghalaya has the highest proportion of slum population (65%) followed by Maharashtra (33.3%) and Andhra Pradesh (32.2%).

Box 10.14

Kerala has the lowest proportion of slum population (2%) as compared to the total population of 13 cities/towns having reported slums.

10.158 The slum population constitutes nearly 15% of the total urban population of the country. Among the states, as percentage of the urban population, Maharashtra has the highest proportion of slum population (27.3%) followed by Andhra Pradesh(24.9%) and Haryana(23.2%). Kerala has the lowest percentage of slum population in the urban area (0.8%) while Goa (2.2%) and Assam (2.4%) have also a very low proportion of slum population.

10.159 In Kerala only 13 cities/towns reported slums with a population of 64556 persons which constitute 0.78% of the urban population. Details of slum population of 13 cities/towns are given in Appendix –10.35. Of the total slum population more than 13% of the children in 0-6 age group are living in slums. The details of slum population as compared to the urban population of Kerala are given in Table 10.20

Table 10.20
Details of slum population as compared to the urban population in Kerala

Sl.No	Items	Urban	Slum	Percentage
1	Total Population (Nos.)	8266925	64556	0.78
	Male	4017332	31699	0.79
	Female	4249593	32857	0.77
2	Child (0-6) Population	935460	8645	0.92
3	Sex Ratio (000 Males)	1058	1037	-
4	Child (0-6) Sex Ratio	958	935	-
5	Literacy rate	93.2	83.9	-

Source. Census India 2001

Urbanisation Policy for Kerala

10.160 Urbanisation is an important aspect of the process of economic and social development and is connected with many problems such as migration from villages to towns, relative cost of providing economic and social services in the towns of varying sizes, provision of housing for different sections of the population, provision of facilities like water supply, sanitation, transport and power, pattern of economic development, location and dispersal of industries, civic administration etc

10.161 The main objective of Urban Development Policy as envisaged by the National Commission on Urbanisation included the following:

i) Saving the super-metros and national cities and also reviving their economies

ii) Development of fast growing intermediary level urban centres by ensuring financial investment for maintaining the existing infrastructure and augmenting it to a level wherein they will be more efficient urban entities and

iii) Development of stagnating towns by providing gainful employment opportunities

10.162 In Kerala situation, the development of tertiary sector is the main cause of urbanization. It is not the outcome of accelerated industrialization and urbanization, as seen in Tamil Nadu, Maharashtra, Andhra Pradesh and Karanataka.Kannur district, with an urban population of 50.4% is ranked first in urban content, but 11th in per capita income. This is mainly due to the prevalence of low-income generating small-scale industries. Ernakulam District with an urban content of 47.6 % is ranking second in urban content and first in per capita income. This is due to production specialization in industrial activities and port induced service sector development. Idukki district though ranks 13th in urban content, is second in per capita income. This is due to production specialization in plantation crops.

Urban Development Strategy

10.163 The State Urban development Strategy prepared in 1996 states that the first priority in the strategy for urban development shall be given for Kochi Urban Agglomeration. Second priority is for Thiruvananthapuram Urban Agglomeration and the third for Kozhikode Urban Agglomeration. Major parameters considered in evolving the State Urban Development Strategy were:

- Density of population
- Functional linkage with parent settlement
- Functional dependency of the surrounding panchayats
- Corridor development along major arterial roads
- Transportation and land use
- Functional category of town in the region

Urban Development Programmes

10.164 The major Urban Development Programmes implemented at the state level are given below.

1. Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)

10.165 Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) was launched during the year 2005-06 to improve the infrastructure in small and medium towns in the Country. In Kerala, 54 urban local bodies (excluding Thiruvananthapuram, and Kochi Corporations, Thrippunithura and Kalamasseri Municipalities) are eligible for getting financial assistance under the scheme.

The objectives of this Scheme are:

- Improving infrastructural facilities and helping in the creation of durable public assets in small and medium towns having potential to emerge as regional centres of economic growth and employment, thereby reducing the inclination of the people belonging to rural and smaller urban areas to migrate to bigger cities and towns for jobs or settlement.
- Decentralising economic growth and employment opportunities and promoting dispersed urbanization while taking due advantage of the functional interlinkages between villages, towns and cities through a regional planning approach.
- Increasing the availability of sites for housing, commercial and industrial uses and promoting the principles of planned and orderly spatial development
- Integrating spatial and socio-economic planning as envisaged in the Constitution (74th Amendment) Act, 1992 and preparing and implementing Town/City Development Plans.
- Promoting resource-generating schemes for the urban local bodies to improve their overall financial position and ability to undertake long-term infrastructure development programmes on their own as well as to repay the borrowed capital and usher in necessary municipal reforms.

10.166 The funding pattern is 80:20 shared by the Central and State Governments. The State Share (20%) would be equally shared (ie.10% each) by State Government and the participating Urban Local Self Governments.

10.167 During 2007-08, 10 projects were sanctioned under this scheme with an approved cost of Rs. 316.84 crore and out of this Rs.31.28 crore was released. Details are given below.

Table 10.23
Details of projects sanctioned under UIDSSMT

(Rs. in Crore)

Sl.No	Name of Towns	Component	Approved Cost
1	Neyyatinkara	Solid Waste Management	3.49
2	Attingal	Solid Waste Management	3.06
3	Punalur	Solid Waste Management	4.82
4	Changanassery	Solid Waste Management	3.90
5	Pathanamthitta	Solid Waste Management	3.80
6	Perinthalmanna	Solid Waste Management	5.22
7	Payyannur	Water supply	40.19
8	Alappuzha	Water supply	91.94
9	Trissur	Water supply	110.64
10	Chalakkudy	Sewerage	49.78
	Total		**316.84**

Source,KSUDP

2. Capital City Development Project

10.168 The Capital City Development Project was introduced during 2003-04 to improve the quality of life in the capital city by strengthening and improving the critical infrastructure like roads, water supply augmentation, solid waste management, and surface water drainage and city beautification. The major projects under taken in the Capital City Development project are:

- Development of Vizhinjam Port Project for developing mother cargo transshipment terminal.
- Landfill Facility at Vilappilsala
- Supply of tools and equipments, purchase of tipper Lorries, etc to Thiruvananthapuram Corporation for the development of ISWM.
- Restoration of Parvathy Puthanar Canal and Master Planning of Theerapatham area.
- Upgradation of Electrical crematorium at Thycaud
- Flood Prevention and Beautification of the Karamana and Killi River and the Ulloor Thodu
- To modernize bus stand at Thampanoor and construct new terminal at Enchakkal by acquiring 5 acres of land.

10.169 Details of projects under taken by Capital city Development Programme during 2005-06 and 2006-07 is given in Appendix.10.36

3. Development Authorities

(i) Thiruvananthapuram Development Authority (TRIDA)

10.170 TRIDA is the primary implementing agency for the overall developments in the Capital city. TRIDA has been appointed as the nodal agency for the land acquisition related works as a part of the Capital Region Development Programme. Under Capital Region Development Programme, 12 roads totaling to a distance of 42.6 Km have been taken up for improvements. Out of which 13.74 Km road works have been completed. The construction of fly over at Bakery Junction is also completed. The other road projects taken up by TRIDA viz. Vellayambalam – Thycaud & Bakery- Poojappura are under progress. Construction of "C" Block at Palayam is a

project, which envisages widening and improvement of roads development on the Connemara market including the rehabilitation of the existing traders. Estimated cost of the construction of "C" Block at Palayam is Rs.5.25 crore and expenditure as on 31st October 2007 is 295.84 lakh. 75% of the project has been completed.

(ii) Greater Cochin Development Authority (GCDA)

10.171 Greater Cochin Authority is the Planning and Development Authority of the metropolitan area of Cochin which is the urban hinterland of Cochin port. The jurisdiction area of GCDA comprises of Cochin city- the commercial capital of Kerala, 6 municipalities and 25 intervening Panchayats covering an area of 632 sq km

The major works completed by Greater Cochin Development Authority are given below.

- Edathala Housing Scheme(type I, II,III) - Phase II
- Kalloor -Kadavanthara road.
- Construction of mini community hall at Kasturba Nagar.
- Works on JNI Stadium, Kalloor.
- Parambithara to GCDA road.
- Construction of drain and cleaning the existing drain at Gandhi Nagar Shopping Complex.
- Maintenance works of KK road.
- Metalling works of road to Central Water Commission near CMFRI

Details of major programmes under taken by GCDA during 2007 are given in Appendix 10.37

4. Kerala Sustainable Urban Development Project (KSUDP)

10.172 The Kerala Sustainable Urban Development Project is an externally aided project funded by the ADB in the sectors of (1) Water Supply, (2) Sewerage and Sanitation, (3) Urban Drainage (4) Solid Waste Management (5) Roads and Transportation and (6) Poverty Alleviation in the five Municipal Corporations of Thiruvananthapuram, Kollam, Kochi, Thrissur and Kozhikkode. The overall development goal of the project is to ensure sustainable growth and reduce poverty in the Municipal Corporations of Kerala. The development purpose of the project is to assist Local Self Governments to "Promote good urban management, develop and expand urban infrastructure to increase economic opportunities and to reduce vulnerability to environmental degradation and urban poverty". The projects are being evolved with technical assistance from ADB with the following components.

- Promote good governance in Municipal Management.
- Develop and expand urban infrastructure.
- Formulate support programmes for improving urban social services for the elderly, destitute, women and street children.

An amount of Rs.250 crore is provided during 2007-08.

Details of major projects included under KSUDP are given in Appendix 10.38

5. Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

10.173 Cities and towns of India constitute the world's second largest urban system. Government of India has approved a Mission Mode approach for implementation of urban infrastructure improvement programme in a time bound manner in selected cities. The mission entrusted with this task is known as the Jawaharlal Nehru Urban Renewal Mission.

The Mission objectives are:

(a) Focused attention to integrated development of infrastructure services in the cities covered under the Mission.

(b) Secure effective linkages between asset creation and asset management so that the infrastructure and services created in the cities are not only maintained efficiently, but also become self-sustaining overtime.

(c) Ensure adequate investment of funds to fulfill deficiencies in the urban infrastructure services.

(d) To take up urban renewal programme, i.e. Redevelopment of inner cities area to reduce congestion.

(e) For providing basic service to urban poor.

Admissible components included in the mission are:

(i) Redevelopment of inner city areas
(ii) Water supply and sanitation
(iii) Sewerage and solid waste management
(iv) Construction and improvement of drains/storm water drains
(v) Urban Transport including roads, highways/expressways/MRTS/metro projects
(vi) Parking lots/spaces on Public Private Partnership basis
(vii) Development of heritage areas
(viii) Prevention and Rehabilitation of soil erosion/landslides only in case of special category states where such problems are common
(ix) Preservation of water bodies

10.174 Corporations of Thiruvananthapuram and Kochi were selected for implementation of the project. The project is planned for completion by 2012

Details of projects approved for implementation under JNNURM is given in Table 10.22

Table 10.22
Projects approved for implementation under JNNURM

(Amount in Lakh)

Sl. No	Name of projects	Total approved cost	Central share	State share	ULB share	Amount released by GOI
	Thiruvananthapuram					
1	Improvement of water supply system	8716	6972.80	871.60	871.60	881.56
2	Improvement of sewerage system	21541	17232.8	2154.10	2154.10	861.64
	Kochi					
1	Improvement of water supply system	20117	10058.50	6035.10	4023.40	502.92
2	Improvement of sewerage system	7841	3920.50	2352.30	1568.20	935.13
3	Solid waste management system	8812	4410.50	2643.60	1762.40	1101.50
4	Upgrading surface water drainage to central area of Kochi	978	489	293.40	195.60	122.25
	Total	**68005**	**43084.10**	**14350.10**	**10575.30**	**4405.00**

Source: KSUDP

CHAPTER 11

Education

Kerala's stupendous achievements in the field of social development and high quality of living of the state are mainly attributed to the educational advancement the state has made over several years. The state is striving hard for sustaining the existing momentum attained in the field of education and aim for high quality education. Educational advancement of the state has received applause from various quarters. Developmental economists like Amartya Sen, Jean Dreaze etc. in their works have made several references to Kerala's success in attaining phenomenal advancement in the Education frontier.

Literacy

11.2 Kerala has the unique distinction of having a literacy rate which is comparable to the most developed countries of the world. Kerala's literacy rate which was only 47.18% in 1951 almost doubled in 2001. According to 2001 census, the literacy rate of Kerala is 90.92% against the All India average of 65.38%. Kerala's male and female literacy rate of 94.20% and 87.86% are far above the corresponding national figures of 75.85% and 54.16% respectively.

11.3 The District wise analysis shows that Kottayam has the highest literacy rate (95.90%) and Palakkad district recorded the lowest literacy rate (84.31%). More details are given in Appendix.11.1 The maximum number of illiterates is in Malappuram district as per the figures for 2006-07. Wayanad district accounted for the maximum number of new literates during the year 2006-07. The details are given in Appendix 11.2

Box 11.1

On 4th February, 1990 Ernakulam was declared as the first totally literate District of India by the Prime Minister. The 1981 census of India estimated that 23.18 percent of the district population was illiterate, the corresponding figures for the years 1991 and 2001 were 7.65 % and 6.58% respectively. Usually, a society which has more than 90% literacy is considered as a total literate society.

School Education

11.4 As per the figures of 2006-07 there are 12644 schools in Kerala. Among these 2790 are high schools, 3037 are UP schools and 6817 are LP schools. Out of this 12644 schools (35.57%) are in Government Sector, 57.66% in Private Aided sector and 6.77% in Private unaided sector. Private Unaided schools are more prevalent in High school section, where they constitute 13.12% of total high schools in the State. The number of Private Aided Schools is more than Government Schools in all sections.

District wise and stage wise number of Schools in Kerala during 2006-07 is given in Appendix 11.3. Stage wise number of schools is given in Table 11.1.

Table 11.1
Stage wise number of schools - 2006-07

	High Schools	UP School	LP school	Total
Government	996	954	2548	4498
Private Aided	1428	1870	3992	7290
Unaided	366	213	277	856
Total	2790	3037	6817	12644

Source: Directorate of Public Instruction

11.5 Besides this, 587 CBSE Schools, 100 ICSE schools, 26 Kendriya Vidyalaya and 14 Jawahar Navodayas are functioning in the State. The District wise details of schools following other than State syllabus during the year 2007-08 is given in Appendix11.4

Facilities in Government Schools

11.6 The physical infrastructure of Government Schools has improved significantly due to the involvement of Local Self Government Institutions under Decentralized Planning. Programmes like Sarva Siksha Abhiyan(SSA) also have contributed immensely in developing the physical infrastructure in schools. The latest statistics shows that 4461 Government Schools have pucca building while 37 are having thatched sheds. The schools functioning in thatched sheds are only 0.82 % of total Government Schools. It is expected that within a short period of time all Government Schools have pucca buildings.

11.7 However, own buildings have to be constructed for 230 Government schools in the State. 183 Government LP schools, 41 UP Schools and 6 High Schools are working in rented buildings. District wise details about the building facilities of Government Schools in the State during 2006-07 is given in Appendix11.5

11.8 Among Indian States, Kerala has the unmatched record of 97.27% Government Schools having access to Drinking water and 95.82% of Government Schools having Urinal/latrinal facilities. District wise details of Government schools having drinking water/latrines/urinal facilities in Kerala are given in Appendix 11.6.

Box 11.2

According to a Report titled "Flash Statistics; Elementary Education in India: Progress towards Universal Elementary Education 2006-07" prepared by National University of Educational Planning and Administration Kerala Continues to be the top achiever State in the composite Primary and Upper Primary education followed by Puducherry, Delhi and Tamil Nadu. The Educational Development Index (EDI) is used for this study which takes in to account 23 variables for calculating the Index

Enrolment of Students

11.9 Over the years the enrolment of students has been showing a slight decline. This is due to change in demographic pattern of the State. There is an overall decline in enrolment of the students from 47.19 lakh in 2006-07 to 46.26 lakh in 2007-08. A decline of 1.97% has been recorded in the enrolment of students in 2007-08 as compared to 2006-07. There was a decline of

71,800 students in LP section and 26,452 students in High School Section. Enrolment of students in UP school section accounted an increase of 5,187 students compared to 2006-07. LP School Section accounted for more than 73% of total reduction in the enrolment of students. The enrolment of students in schools in Kerala stage wise and management wise during the year 2006-07 & 2007-08 are given in Table11.2

Table 11.2
Enrolment of students in schools in Kerala stage wise and management wise 2006-07 & 2007-08

(in lakh)

Year	LPS	UPS	HS	Total
2006-07	17.89	14.64	14.66	47.19
2007-08	17.18	14.69	14.39	46.26

Source: Directorate of Public Instruction

11.10 Enrolment of students in Lower Primary, Upper Primary and High School sections are 37.14%, 31.76% and 31.10% respectively

11.11 Management wise enrolment of students shows that 61.51% are in the Private Aided Schools, 30.56% in Government Schools and the remaining 7.93% are in Private Unaided Schools. The enrolment of students as management wise and standard wise during the year 2007-08 is given in Appendix 11.7 District wise, stage wise enrolment of students in Schools during 2007-08 is given in Appendix11.8

Enrolment of Girls Students

11.12 The girl students constitute 49.23% of total student enrolment in schools The percentage of girl students at LP, UP and High School stage stood at 49.63%, 48.82% and 49.16% respectively. All districts of Kerala show a uniform pattern in the enrolment of Girls students.

SC/ST enrolment

11.13 SC Students constitute 10.74% of total student enrolment during the year 2006-07. In the LP section 11.34% of total student enrolments are from SC population. In UP and High School section enrolment of SC students account for 10.79% and 9.94% respectively.

11.14 ST students enrolment during the year 2006-07 was 68,781 which accounted for 1.46% of total student enrolment. The Enrolment of SC/ST Students at School level during 2006-07 is given in Table . 11.3

Table 11.3
Enrolment of SC/ST Students at School level 2006-07

Section	Total	SC	% to Total	ST	% Total
LP	1789417	202913	11.34	32802	1.83
UP	1464081	157981	10.79	20638	1.41
HS	1465978	145762	9.94	15341	1.05
Total	4719476	506656	10.74	68781	1.46

Source: Directorate of Public Instruction

The standard wise strength of SC/ST students during 2007-08 is given in Appendix11.9

Dropout rate

11.15 One of the major indicators of good school education system is the lower dropout rate. The drop out ratio is very low in Kerala. During 2005-06, the dropout rate was 0.59% at lower primary level, 0.52% at upper primary level and 1.29% at High School Level. District wise analysis shows that Wayanad has the highest dropout ratio at Lower Primary stage (1.65%) and Kasargode has the highest dropout ratio in the Upper Primary and high schools stage, 1.31% and 2.69% respectively

District wise/Stage wise dropout ratio in schools is given in Appendix. 11.10

Number of Teachers

11.16 The number of school Teachers in Kerala during 2006-07 was 1,76,126 including TTI Teachers. Out of this 55,130(31.30%) are in Government sector, 1,06,936(60.72%) are in Private Aided Sector and 14,060(7.98%) are in unaided schools Stage wise distribution of teachers show that 23.32% teachers are in Lower Primary Sections, 25.79% are in Upper Primary Schools and 50.33% are in High Schools. 70.41% of teachers in schools are women. The Teacher Pupil ratio during 2006-07 works out to be 1.27.

11.17 The stage wise and management wise number of teachers in schools in Kerala is given in Appendix 11.11

Protected Teachers

11.18 The number of protected teachers both in Government and Aided Schools stood at 3257 during 2006-07. It consists of 536 high school teachers, 1852 PD teachers and 869 Special teachers. Out of the 3257 protected teachers 1546 teachers have been deployed in Government School, 997 have been retained in parent school, 166 teachers have been deployed in other Aided School and a total 548 teachers have been undeployed. District wise data reveal that the highest number of protected teachers is in Kannur District followed by Kozhikode and Kollam. Wayanad District has the lowest number of protected teachers in the state. The District wise details of protected Teachers in the year 2006-07 is given in Appendix 11.12.

Pass percentage in SSLC Examination

11.19 SSLC pass percentage has shown a considerable improvement in the year 2007 as compared to the previous years. The pass percentage in the SSLC examination of 2007 is 82.23% while the figure for 2005 and 2006 is 58.61% and 69.33% respectively. Total number of students who appeared for the SSLC examination in 2007 is 4,58,890. Of this 2,31,634 (50.47%) are girls. SC and ST students constitute 9.30% and 1.07% of the total students. The pass percentage of SC students is 65.17% and ST students is 60.67%. The details of results of SSLC Examination in the year 2005, 2006 and 2007 are given in Appendix 11.13.

Sarva Shiksha Abhiyan (SSA)

11.20 Sarva Shiksha Abhiyan is Government of India's flagship programme for achievement of Universalization of Elementary Education (UEE) in a time bound manner, as mandated by 86th amendment to the Constitution of India making free and compulsory education to the children of 6-14 years age group, a fundamental right. SSA is being implemented in partnership with State Governments to cover the entire country and address the needs of 192 million children in 1.1

million habitations. SSA has a special focus on girl's education and children with special needs. SSA also seeks to provide computer education to bridge the digital divide.

11.21 The total funds available for SSA project implementation for the State during 2006-07 amounted to Rs. 10954 lakh. The break up of funds is given in table11.4.

Table 11.4
SSA Kerala Fund Pattern

(Rs. in lakh)

a	Opening Balance	2912
b	Government of India	4382
c	Government of Kerala	160
d	Local Self Government Institutions	3500
	Total	**10954**

Source. Sarva Shiksha Abhiyan Kerala

11.22 The expenditure of SSA in Kerala as on 31.3.2007 amounted to Rs. 10400 lakh which amounts to 94.94% of total fund. The physical targets and achievements of SSA during the year is given in Table 11.5

Table 11.5
Physical targets and achievements of SSA during 2006-07

Sl. No	Activity	Physical Target	Physical Achievements
1	BRC	152	152(cumulative)
2	CRC	1356	1356(Cumulative)
3	Civil Works	2326(Units)	1475(Units)
4	AIE/MGLC (No. of Children)	16109	15760
5	Free Text Books (No. of Children)	17.34 lakh	17.13 lakh
6	IED (CWSN) No. of Students	1.32 lakh	1.26 lakh
7	Maintence & MIS(Outlay)	5860	5273
8	Management & MIS(Outlay)	740.38 lakh	464.38 lakh(Expenditure)
9	Research & Evaluation	650	316 Action Researches Conducted
10	School Grants(Schools Units)	14435	14198
11	Teacher Grants(No)	129369	127106
12	TLE(OBB)	Not implemented	During 2006-'07
13	Teacher Training	129369	129369
14	Community Mobilisation	34000	22000

Source: SSA Kerala

Higher Secondary Education

11.23 The Higher Secondary Course was part of the higher education system for many decades. The process of de-linking and attaching it to the school system was started during 1990-91 and completed within a decade. Three groups viz; Science, Humanities and Commerce are offered at the Higher Secondary stage.

11.24 There are at present 1697 Higher Secondary Schools in the state. Out of this 729(42.96%) are Government Schools, 529(31.17%) are in the Private Aided Sector and the remaining 439(25.87%) are unaided schools.

11.25 There are 5804 batches for higher secondary courses in 2007. Science group has the maximum batch(57.46% of total batch) followed by commerce and humanities. Among the districts, Malappuram rank first both in number of higher secondary schools and number of batches. Three Districts viz; Malappuram, Ernakulam and Thiruvananthapuram account for 31.70% of total number higher secondary schools in the state. District wise/management wise number of higher Secondary Schools in Kerala in 2007 is given in Appendix 11.14.

11.26 Sanctioned seats for Higher Secondary Course during 2006-07 are 348240. The sanctioned intake in Government Schools is 129780, in Aided Schools is 134100 and in unaided schools is 84360. The details of batch wise annual intake of students in Higher Secondary schools in 2006-07 is given in Appendix 11.15.

11.27 In Government Sector the total number of teachers are 10622. Out of this 59.60% are senior higher secondary school teachers and 40.40% are junior higher secondary school teachers. The total number of teachers in Aided Schools is 10509. The detailed staff position at Government and Aided Higher Secondary Schools in the year 2006-07 is given in Table 11.6

Table 11.6
Staff Position at Higher Secondary Schools-2006-07

Sl. No	Name of Post	Govt. Sector	Aided Sector
1	Principal	699	533
2	Higher Secondary Teachers(Senior)	6331	6112
3	Higher Secondary Teachers(Junior)	4291	4397
4	Lab Assistant	1306	1058

Source: Directorate of Higher Secondary Education

11.28 The pass percentage of students in Higher Secondary Examination in the year 2006-07 is 65%. The pass percentage of girls is 69.83% and of boys is 58.55%. The pass percentage of SC students in Higher Secondary Examination is 47% and ST students is 40%. The detail of number of Total, SC and ST students appeared and passed in Higher Secondary Examination is given in Appendix 11.16.

Vocational Higher Secondary Education

11.29 Vocational Higher Secondary Education was introduced in the State in 1983-84 with the objective of providing skillful and job oriented training to students. Vocational Higher Secondary Education was introduced in 19 Government High Schools during 1983-84. At present there are 389 VHSS, of which 261 are in the Government sector and 128 are in the aided sector. Government VHSS include the newly sanctioned 14 VHSS in Northern Region of the State. The Actual intake of students in Vocational Higher Secondary Schools during 2007-08 is 46998.

11.30 Out of the 46998 studying in Vocational Higher Secondary Schools, 24375 are girls(51.86%). SC students constitute 8.07% of total students in VHSS and ST students constitute 0.40% of total students.

11.31 District wise details of Vocational Higher Secondary schoo. shows that Kollam has the maximum number of Vocational Higher Secondary schools. The relatively small number of Vocational Higher Secondary Schools in Northern region of the State has prompted the Government to start 14 new Government Vocational Higher Secondary Schools in the region during 2007-08 District wise details of Vocational Higher Secondary schools and courses are given in Appendix 11.17.Details on the number of students appeared and passed in VHSE examination from 1998 to 2007 is given in Appendix 11.18.

University and Higher Education.

11 32 There are 7 Universities in Kerala out of which 4 Universities namely Kerala, Mahatma Gandhi, Calicut and Kannur Universities are offering various courses and are general in nature. Cochin University of Science and Technology, Sree Sankaracharya University of Sanskrit and Kerala Agricultural University are the other 3 Universities functioning in the State Sree Sankaracharya University of Sanskrit and Kannur University are the recently formed Universities, established in 1993 and 1995 respectively.

11 33 Universities in Kerala have now shifted the emphasis from conventional courses to professional and technical job oriented courses while giving sanction to new courses.

Grant to Universities

11 34 The State Government provide plan and non plan grants to universities which are a major source of revenue of the Universities. An amount of Rs. 154 47 crore has been earmarked during 2007-08 as grant to Universities, of which Rs. 21.75 crore has been provided as Plan Grant and Rs. 132.72 crore as Non Plan Grant Kerala University has received the maximum grant during 2007-08. Around 86% of total budget estimate of the Universities is set apart as non plan in 2007-08. Details of Plan and Non plan grant to Universities is given in Table 11.7.

Table 11.7

Plan and Non plan grant to Universities in Kerala

(Rs.Crore)

Name of University	2005-06 Accounts			2006-07 Revised Estimate			2007-08 Budget Estimate		
	Plan	Non Plan	Total	Plan	Non Plan	Total	Plan	Non Plan	Total
Kerala	4.5	48.28	52 78	4.75	53.1	57.85	4 75	55	59.75
Calicut	2.63	33 78	36.41	3.75	36.32	40.07	3.75	39 95	43.7
Mahatma Gandhi	4 5	20.16	24.66	4.75	21 67	26.42	4.75	22.89	27.64
Sree Sankaracharya	1.5	5.5	7	1.5	10.48	11.98	1.5	10.48	11.98
Kannur	7	4.01	11.01	7	4	11	7	4.4	11.4
Total	**20.13**	**111.73**	**131.86**	**21.75**	**125.57**	**147.32**	**21.75**	**132.72**	**154.47**

Source: Detailed Budget Estimates 2007-08, Vol . I Government of Kerala

Arts and Science Colleges

11.35 Arts and Science Colleges dominate the higher education sector in Kerala 189 Arts and Science College are functioning in the state. Out of this 39 are Government Colleges and 150 are Aided Colleges. Among the Districts Ernakulam has the maximum number of colleges in Kerala (25 No.). Alappuzha and Pathanamthitta do not have Government colleges. District wise number of Arts and Science Colleges is given in Appendix 11.19. Mahatma Gandhi University has the

largest number of colleges affiliated to it followed by Calicut University. Apart from the Government and Aided Colleges Unaided Arts and Science Colleges are also functioning in the State. A total of 153 Unaided Arts and Science colleges are affiliated to Kerala, Mahatma Gandhi, Calicut and Kannur Universities. University wise and Management wise number of Arts and Science Colleges is given in Table 11.8.

Table 11.8

University wise Arts and Science Colleges 2007

Sl.No	Name of University	Government	Aided	Total	Unaided
1	Kerala	9	37	46	15
2	Calicut	17	45	62	58
3	Mahatma Gandhi	7	56	63	54
4	Kannur	6	12	18	26
	Total	**39**	**150**	**189**	**153**

Source: Directorate of Collegiate Education

Enrolment of Students

11.36 The total number of students enrolled in various Arts and Science Colleges (excluding unaided colleges) under the four general Universities in Kerala during 2007 is 1.73 lakh as compared to 1.79 lakh in 2006. 21854 is the intake capacity in Unaided Arts and Science colleges affiliated to Kerala, M.G, Calicut and Kannur Universities. A substantial decrease of 6204 students is recorded during this year. The number of students enrolled for BA, BSc, B.Com courses during 2007 showed a decline of 4246 students as compared to the year 2006.

11.37 The reduction of enrollment of students for Post graduate course is 1958 over the last year. Of the 1.73 lakhs student enrolled 1.52 lakh(87.95%) are degree students and the rest 20,790 (12.05%) are post graduate students. Girl students outnumber boy students as 67.47 % of students enrolled are girls. The details are given in the Table 11.9.

Table 11.9

Enrolments of students in Arts and Science colleges

Name of Course	2006			2007			2006&2007 Increase/ Decrease in enrolment
	Boys	Girls	Total	Boys	Girls	Total	
BA	22367	45169	67536	21286	42958	64244	-3292
BSc	19788	44382	64170	18811	44210	63021	-1149
BCom	11338	12985	24325	11513	13005	24518	+ 195
Sub Total	**53493**	**102536**	**156029**	**51610**	**100173**	**151783**	**-4246**
MA	2130	6330	8460	1514	6001	7515	-945
MSc	2414	8249	10663	2079	7855	9934	-729
M.Com	1216	2409	3625	940	2401	3341	-284
Sub Total	5760	16988	22748	4533	16257	20790	-1958
Total	**59253**	**119524**	**178777**	**56143**	**116430**	**172573**	**-6204**

Source: Directorate of Collegiate Education

11.38 Out of the total 1.52 lakh students enrolled for Degree Courses, 42.33% enrolled for BA course and 41.52% for BSc Course. Bcom students constitute 16.15% of total Degree students. Sixteen subjects are offered for BA courses, of which largest number of students is admitted to Economics followed by English and Malayalam. 15 subjects are offered for BSc course and majority of students have chosen Mathematics followed by Physics, Chemistry and Zoology. The

details of enrolment of students in Arts and Science Colleges for B.A, BSc and BCom are given in Appendices 11.20 to 11.22.

11.39 Out of the total 20790 students who have enrolled for post Graduate courses 78.20% are girls. 47.78% of post graduate students in Arts and Science Colleges are doing MSc courses. MA and MCom students constitute 36.15% and 16.07% of the total post graduate students respectively. A total of 16 subjects are offered for MA course and the largest number of students have chosen Economics. 10 subjects are offered for MSc courses and maximum number of students is admitted to Mathematics. The subject wise enrolment of students in Post Graduate courses is given in Appendices 11.23 to 11.25.

11.40 The number of teachers in Arts and Science colleges in 2006-07 is 9697 University wise break up of teacher's shows that the maximum number of teachers is in Mahathma Gandhi University followed by Kerala University The percentage of women teachers is 45% of the total teachers in Arts and Science Colleges of the State. The University wise number of teachers in arts and science colleges is shown in Appendix 11.26.

SC, ST students

11.41 During the year 2006-07 21,103 SC students enrolled in colleges for courses including M.Phil, M.B.A, BEd and M.Ed. Enrolment of SC students for BA and BSc courses during the same year was 9083 and 6236 respectively. The SC girls outnumber SC boys in enrolment in colleges. SC girls constitute 66% of total SC students in colleges.

11.42 2555 scheduled tribe students enrolled for courses in colleges in the year 2006-07. 239 ST students enrolled for Master Degree courses in 2006-07. 2316 ST students registered for Degree courses. Out of the total 2555 ST Students 876(34.29%) are boys and 1679(65.71%) are girls. Details of Scheduled Caste and Scheduled Tribe students in Arts and Science colleges during 2006-07 is given in Appendix 11.27.

Box 11.3
The Kerala State Higher Education Council

The Kerala State Higher Education Council has been constituted by the Kerala Government on the basis of the Higher Education Council Act 2007. The Higher Education council is established with the objective to render advice to the Government, Universities and other institutions of Higher Education in the State, to coordinate the roles of the Government, Universities and apex regulatory agencies in higher education within the state to evolve new concepts and programmes in higher education and to provide common facilities in higher education without impinging upon the autonomy of other institutions of higher education.

Higher Education council has 32 member Advisory council, 35 member Governing Council and 9 member Executive council. The council is chaired by the Education minister of the State and Vice Chairman of the council is Dr. K. N. Panikkar, the eminent academician.

The council has constituted 9 committees to submit proposals for the restructuring of higher education. Since the Universities are actively involved in the consultative process, it is expected that the Universities would implement the recommendations of the council. The reforms which the council proposed to undertake in the undergraduate courses are major changes in pedagogy, content and structure of the undergraduate programme. The major change being contemplated is switch over to inter disciplinary courses. Setting up of clusters of colleges and formulating the state policy on Higher Education are also on the anvil.

Technical Education

11.43 The Technical Education system in the State includes courses in Engineering Technology, Management, Architecture etc. at diploma, degree, postgraduate and research levels. Engineering colleges, Technical High Schools, College of Fine Arts, Polytechnic college, Government Commercial Institutes, Government Tailoring and garment making centre and industrial schools come under the purview of Technical Education System of the State National Institute of Technology, Kozhikode, having the Deemed University status offers graduate and post graduate courses. Cochin University of science and Technology (CUSAT) is short listed by MHRD, Government of India for upgradation to the status of IIEST

11.44 Self Financing institutions are also functioning in Technical Education sector in the state. The details are given in Table 11.10

Table 11.10
Self Financing institutions in Technical Education

Sl.No	Institutions	No. of Colleges
1	Engineering College	72
2	Polytechnic	9
3	Technical High Schools	5
4	MCA	26
	Total	**112**

Source: Directorate of Technical Education

Engineering Colleges

11.45 The number of Engineering Colleges has increased manifold in recent years. The number of engineering colleges at the end of the Ninth Five Year Plan has almost doubled now. At present there are 84 Engineering Colleges in the state with a sanctioned intake of 24822. Out of 84 Engineering Colleges, 11 are Government Colleges and 3 in the private aided sector and 70 Engineering Colleges are self financing. In the 11 Government Engineering Colleges in the State 2 Colleges are managed by Kerala Agricultural University These Colleges are College of Diary Science and Technology, Mannuthy and Kelappaji College of Agricultural Engineering and Technology, Tavanur, Malappuram. The sanctioned intake of students in Engineering Colleges shows that 2792,1460,20570 are the sanctioned intake of Government, Private Aided, Private Unaided Engineering Colleges respectively.

11.46 University wise analysis shows that the maximum number of Engineering colleges in the state is in MG University(22) followed by University of Kerala(19), Calicut University (18) and CUSAT(18). The details are given in Table 11.11.

Table 11.11
University wise number of Engineering Colleges in Kerala -2007

SL No	Name of University	No. of Colleges
1	University of Kerala	19
2	Mahatma Gandhi University	22
3	Calicut University	18
4	Kannur University	5
5	CUSAT	18
6	Agricultural University	2
	Total	**84**

Source: Directorate of Technical Education

11.47 Thiruvananthapuram district has the largest number of Engineering Colleges(15) followed by Ernakulam (13). District wise and management wise number of Engineering Colleges and sanctioned intake are given in Appendix 11.28. Branch wise distribution of seats in Engineering colleges is given in Appendix 11.29.

Polytechnics and Technical High Schools

11.48 There are 43 Government Polytechnics and 6 private Aided Polytechnics in Kerala during 2007-08. The annual intake of students in Government Polytechnics and Private Aided Polytechnics are 8360 and 1500 respectively for 2007-08. The details are given in Appendices11.30. Altogether 23 trades are offered in Polytechnics. Among these trades more seats are provided in trades like Electronics (1770), Computer Engineering (1640), Mechanical Engineering (1310) etc. Trade wise Annual intake of students in Polytechnics during 2007-08 is given in Appendix 11.31.

11.49 Total number of students in Government Polytechnics in 2007 is 24620 and students in Private Aided Polytechnics is 4610. Thus, total number of students in Polytechnics in Kerala in the year 2007 are 29230. Out of this girls constitute only a little more than 10%. The number of teachers in Polytechnics in the state is 1753 in 2007. Here again, the number of women teachers is only less than 10% of the total teachers in Polytechnics. Details are given in Appendix 11.32. Including Government and Private Aided Polytechnics number of SC/ST students is 2911. The details of SC/ST Students and SC/ST teachers in Polytechnics for the years 2005-06 and 2006-07 are given in Appendix11.33.

11.50 In addition to this 7 model Polytechnics are functioning under IHRD. The Actual intake of students in these Polytechnics during 2007-08 is 771.

11.51 39 Government Technical High Schools are functioning in the State. 5 Self financing Technical High Schools are also existing. Trade wise annual intake of students in Technical High Schools in 2007-08 is 2295. Total number of students in Technical High Schools in 2007-08 is 6300 out of which girls constitute a meager 10% of total students. Number of students and Teachers in Technical High Schools from 2005-06 to 2007-08 is given in Appendix 11.34

11.52 SC students in Technical High Schools (510) accounted for 8% of total students. ST students in Technical High Schools constitute 1.94% of total students. Details are given in Appendix11.35.

Technical Education Quality Improvement Programme(TEQIP)

11.53 Technical Education Quality Improvement Programme (TEQIP) of Government of India aims to upscale and support the ongoing effort to improve quality of Technical Education and enhance existing capacities of the institutions to become dynamic, demand driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological development occurring at national and international levels. Currently 13 States including Kerala are participating in the project. The following 5 Engineering Institutions in the State are part of this project in addition to Centrally Sponsored institution, NIT Calicut.

1. College of Engineering, Thiruvananthapuram.
2. LBS College of Engineering, Kasargode
3. SCT College of Engineering, Thiruvananthapuram
4. Model Engineering College, Kochi
5. College of Engineering, Chengannur

The Government of India has secured an IDA credit from the World Bank an amount sufficient to finance expenditure under the TEQIP.

11.54 The Project is scheduled to be completed by June 2008. Key components of the project are promotion of academic excellence, networking of institutions, service to community and economy, establishment and strengthening of project management structures and research and training in Education Planning and Management.

Cochin University of Science and Technology(CUSAT)

11.55 The University was established in 1971 through an act of legislation for the promotion of graduate and post graduate studies and advanced research in applied science, technology, industry, commerce, management and social science.

11.56 CUSAT at present has 8 international academic linkages. Student placement activities are given due importance. Independent centres have been formed to pursue research in thrust areas. Notable among these centres are Centre for Fish Disease Diagnosis and Management and Centre for Monsoon studies.

11.57 It is expected that there will be a paradigm shift in the status of CUSAT consequent to its being short listed as one among the 5 institutions across the country for up gradation to IIEST by the ministry of Human Resource Development, Government of India. Department wise details of courses in CUSAT are shown in Appendix 11.36.

Institute of Human Resource Development (IHRD)

11.58 IHRD was established by the State Government under Travancore, Cochin Library, Scientific and Charitable Societies Registration Act of 1955 in order to develop the fields of Electronics, Computer and allied areas. IHRD has a network of 65 institutions which include 9 Engineering Colleges, 7 Model Polytechnics, 18 College of Applied Science, 26 Technical Higher Secondary Schools, 3 Extension Centres and 2 Regional Centres. In addition to this PGDCA course and Data Entry Technique and PC Maintenance Courses are also conducted by IHRD. Institutions and Annual Intake of students under IHRD are given in Table 11.12.

Table 11.12
Institutions and Annual intake of students under IHRD- 2007

Sl.No	Institution	No. of Institutions	Annual intake	Students Admitted
1	College of Engineering	9	1609	1554
2	Model Polytechnic College	7	780	771
3	College of Applied Science	18	1670	1465
4	Technical Higher Secondary School			
	a) Secondary	9	700	652
	b) Higher Secondary	26	2810	2185

11.59 The Model Engineering College, Ernakulam and College of Engineering Chengannur under IHRD are selected for financial assistance under Technical Education Quality Improvement Programme (TEQIP) of Government of India for achieving academic excellence. Under the Scheme an amount of Rs. 5.89 crores and Rs.5.989 crores have been sanctioned for 5 years for Model Engineering College Ernakulam and college of Engineering, Chengannur. This assistance will enhance the existing capacities of the institution to become quality institutions responsive to rapid economic and technological developments at National/ international levels. As per the directions of Government many academic reforms like implementation of grading system in Technical Higher Secondary Schools and semester pattern of study in Model Polytechnics, under the management of IHRD have been undertaken during the last year.

Educational Institutions in the Co-operative sector

11.60 The presence of co-operative institutions in education sector is a unique feature of Kerala. 2 Medical Colleges and 5 Engineering Colleges are functioning in Co-operative sector in the state. Cooperative Medical College Kochi and Pariyaram Medical College are offering MBBS, MD, MS, General Nursing Courses etc. The details of Engineering Colleges functioning in the Cooperative Sector are given in Appendix. 11.37.

Expenditure on Education

11.61 Total Expenditure on Education during the year 2005-06 is Rs. 3382.65 crores which is 5.46% more than the expenditure during 2004-05. Rs. 5462.4 crores is the budget estimate on education, which is 13.27% more than the corresponding figure during 2006-07. The details of expenditure on education during 2005-06, revised budget estimate for 2006-07 and budget estimate for 2007-08 are given in Table. 11.13

Table 11.13
Budget Estimate and Expenditure on Education

(Rs. Crore)

Sl. No	Stage	Expenditure 2005-06			Revised Budget Estimate 2006-07			Budget Estimate 2007-08		
		Plan	Non plan	Total	Plan	Non plan	Total	Plan	Non plan	Total
1	Elementary Education	30.95	1366.33	1397.28	6.5	1918.59	1925.09	6.5	2216.08	2222.58
2	Secondary Education	11.88	1230.04	1241.92	66.06	1872.56	1938.62	63.55	2221.87	2285.42
3	University and Higher Education	33.61	486.07	519.68	32.6	647.67	680.27	37.22	663.44	700.66
4	Adult Education	2.45	---	2.45	3.6	0.0001	3.6001	2.1	0.0001	2.1001
5	Language Development	1.8	14.57	16.37	2.16	16.83	18.99	1.56	22.2	23.76
6	General	29.78	4.28	34.06	31.71	8.65	40.36	11.57	9.27	20.84
	Sub Total General Education	110.47	3101.29	3211.76	142.63	4464.3	4606.93	122.5	5132.86	5255.36
7	Technical Education	43.37	127.52	170.89	40.45	175.08	215.53	29.31	177.74	207.05
	Total Education	153.84	3228.81	3382.65	183.08	4639.38	4822.46	151.81	5310.6	5462.41

Source:- Demand for Grants and Detailed Budget Estimates 2007-08 vol. I Government of Kerala

11.62 Out of the total expenditure of Rs. 3382.65 crore during 2005-06, Elementary Education accounted for 41.31% and Secondary Educations share was 36.71%. University and Higher Education expenditure in 2005-06 accounted for 15.36% of total expenditure on Education. Non Plan expenditure accounted for 95.45% and Plan expenditure 4.55% of the total expenditure on Education during 2005-06.

Industrial Training Institutes

11.63 The craftsman training scheme was introduced by the Government of India in 1950 to ensure a steady flow of skilled workers in different trades for the domestic industry. The day to day administration of ITIs under the craftsman training scheme was transferred to the State Government/ Union territory administrations with effect from the year 1956. The department was named as 'Industrial Training Department' in 1970. This department is in charge of the craftsman training and apprentice-ship training schemes. Department conducts craftsman training through Industrial Training Institutes (ITIs), Industrial Training Centers (ITCs) and Related Instruction Centers (RICs). Thirty three Industrial Training Institutes and one Basic Training Centre (BTC, Kollam) are functioning in the State. In addition to this there are 354 ITCs. There are also 41 ITCs under SC Development Department and one under ST Development Department. District-wise distribution of ITIs is given in the following Table:

Table 11.14
District-wise ITI's in the State

Sl.No.	District	No. of ITIs
1	Thiruvananthapuram	5
2	Kollam	3+1*
3	Pathanamthitta	1
4	Alappuzha	2
5	Kottayam	2
6	Idukki	1
7	Ernakulam	2
8	Thrissur	3
9	Palakkad	4
10	Malappuram	2
11	Wayanad	1
12	Kozhikode	3
13	Kannur	2
14	Kasaragod	2
	Total	**34**

Source: Industrial Training Department
**Basic Training Centre (BTC)*

11.64 The 33 government ITIs in the State are ITI Dhanuvachapuram, ITI Chackai, Thiruvananthapuram, ITI For Women Kazhakkuttom, ITI Attingal, ITI Aryanad, ITI Chathannoor, ITI Chandanathope,Kollam, ITI For Women, Kollam, ITI Chengannur, ITI For Women, Chengannur, ITI Chenneerkara, ITI Ettumanoor, ITI Pallickathode, ITI Kattappana, ITI Kalamassery, ITI For Women, Kalamassery, ITI Chalakudy, ITI For Women, Chalakudy, ITI Mala, ITI Malampuzha, ITI For Women, Malampuzha, ITI Kuzhalmannam, ITI Nilambur, ITI Areacode, ITI Kozhikode, ITI For Women, Kozhikode, ITI Quilandy, ITI Kannur, ITI For Women, Kannur, ITI Kayyur, ITI, Kalpetta, ITI Kasaragode and ITI Attappadi.

11.65 Total seat strength under Industrial Training Institute was 9951 in 2006-07 and trainees enrolled was 9067 (Appendix 11.38) As against this, the total enrolment is 9183 in 2007-08.Out of 9183, SC and ST students accounts 1354 and 86 respectively and girls 1940. Similarly number of trainees admitted during 2006-07 in ITCs was 15000 as against the last year's enrolment of 14806 (Appendix 11.39) The Industrial Training Institutes are conducting one year, two year and three year courses.

11.66 There are 24 trades in one year course. Similarly there are 19 trades in two year course of which no person was admitted in electro plating. In the one year course, the students strength is highest in trades like DTPO (865) welder (825), COPA (612), carpenter (435) and plumber (435) and the total strength of the one year course accounts to 4986 (Appendix11.40). Out of the total strength of 5163 students in the two year courses, 698 are in fitter trade and 648 are in Electronic Mechanic (Appendix 11.41).

Centers of Excellence

11.67 Government of India and DGET has introduced a Centrally Sponsored Scheme of upgradation of ITIs into Centers of Excellence in order to produce world class work force, which can keep pace with the technological and skill demands of the industry. With this view, Government of India had decided to upgrade 500 ITIs in the country into Centres of Excellence in a phased manner, at the rate of 100 ITIs in every year.

11.68 Government of India had upgraded 8 ITIs in Kerala State into Centres of Excellence in a phased manner. The details are furnished in the following Table.

Table 11.15
Up gradation of ITIs into Centers of Excellence in different phases

Sl No	ITI	Sector/Course
	Phase I	
1	ITI Chackai	Automobile
2	ITI Chandanathope	Automobile
3	ITI Kalamassery	Automobile
4	ITI Ettumanoor	Production and Manufacturing
5	ITI Chalakudy	Production and Manufacturing
	Phase II	
6	Pallickathode	Hospitality Management and Tourism
7	Dhanuvachapuram	Production and Manufacturing
8	Kollam (W)	Food Processing
	Phase III	
9	Malampuzha	Industrial Sector Electrical

Source: Industrial Training Department

Modern Trades in ITIs

11.69 Up gradation of trades have been envisaged through retraining and updating the skill of teachers and modernisation of the existing equipments. During 2003, 13 units in 5 trades were introduced in 9 ITIs. Similarly during 2004, 20 units in 8 trades were introduced in 12 ITIs. During 2005, 26 units in 13 trades were introduced in 13 ITIs. In 2006, 4 units in 4 trades were introduced in 2 ITIs and in 2007, 26 units in 13 trades were introduced in 13 ITIs (Appendix 11.42).

Apprenticeship Training

11.70 Apprenticeship training is also provided through 9 RICs (Related Instruction Centers) and 5 ITIs. It has been observed that, the approved seat strength for apprenticeship were not utilised fully. During 2005, only 6660 apprentices were trained as against the seat strength of 7338. Similarly during 2006, only 6920 apprentices were trained against the seat strength of 7899. In 2007, 7445 apprentices were trained as against the seat strength of 8401. Out of this 6633 were boys and 812 were girls in 2007 (Appendix 11.43).

Annual Intake and Out turn of ITIs Students

11.71 The joining and passing out ratio in the ITIs is much higher in comparison with college level courses. In the case of SC students, it was much more alarming. Out of 5106 students admitted in two year course in 2004, only 65% (3301) passed the course. Compared to this of the 5363 students admitted in 2005, 3362 (63 %) passed out.

11.72 In case of regular trainees percentage of pass of ITI students was much impressive. It was around 70 per cent while in case of ITC students, it was around 50 per cent only. Details in this regard are furnished in the following Table:

Table 11.16
Result analysis of regular trainees during the last three years

Year of trade test	ITI/ITC	No. of Trainees appeared	No. of trainees passed	Per cent
July 2005	ITI	7367	5553	75
	ITC	13640	7090	52
July 2006	ITI	8080	5850	72
	ITC	17458	9406	54
July 2007	ITI	8320	5750	69
	ITC	18250	9706	53

Source: Industrial Training Department

Sports and Youth Services

11.73 Kerala has many talented sports persons who have excelled in national and international games. Many of them have won laurels for the State in various items. However, Government has not been able to provide adequate infrastructure in this field to budding sports men and women. Attempt is made by the Government to augment the funds available for sports by setting up lottery, for this specific purpose.

The total plan provision to the sports and youth services in 2006-07 was Rs.1250 lakhs and the entire amount was spent for the promotion of sports and youth empowerment activities. The activities carried out by the sports promotional agencies in the year 2006-07 is summarised in the following section.

Kerala State Sports Council

11.74 As apex agency for promoting sports and games in the State, the Council has been carrying out activities for the overall development of sports in Kerala. The powers and functions of the Council are laid down in Sports Act 2000, and the Sports Council functions accordingly.

11.75 There are nine centralised sports and youth services hostels, thirty sports hostels in colleges and nineteen sports hostels in schools which are financially supported and administered by the Council.

11.76 The Council has been organising coaching camps and tournaments, upgrading sports infrastructural facilities and assisting district sports councils for the conduct of Hostel Selection Trials and District level tournaments. The Council provided assistance to 8 sports clubs during this year for procuring sports equipments.

11.77 State championship Tournament 2006-07, District and State level Rural sports tournaments were also conducted . Sports events were also organised for women, from Block to State level.

11.78 The modernisation works of High Altitude Training Centre, Munnar, swimming pool in Manikkal Panchayat , Indoor stadium, Kannur, Sports Complex, Attingal and Synthetic track, Kochi were continued in 2006-07.

11.79 The participants in the 33rd National Games in Assam won several medals for the state. (Altogether Thirty One gold, Nineteen Silver and Twenty five Bronze medals) Twelve gold medals, eight silver medals and six bronze medals were for Athletics and others were for events like Acquatics, Badminton, Kayacking, Rowing etc.

11.80 Sports Council provided financial assistance for conducting water sports like Champakulam and Thiruvallam Vallam Kali.

11.81 Medal winners in the National and International sports events, and winners of Asian Games 2006 were given cash awards.

Directorate of Sports and Youths Affairs

11.82 The Directorate organise Tournaments, co-ordinate sports events and provide assistance to Institutions for the creation of sports infrastructure and maintenance of sports assets. A pension scheme (@ Rs 525 per month) is also administered for Circus artists.

11.83 The Directorate in the year 2006-07 provided financial assistance to 17 institutions for the maintenance and development works of play fields and stadiums.

11.84 Renovation of Jimmy George Indoor Stadium was completed and re-opened in the year 2007. Laying of synthetic track in Maharaja's College was completed and dedicated to Sports Council of Kerala

11.85 Directorate has been financially assisting forty two selected schools in the state for conducting Tack-won-do training. In the state level Tack-won-do championship held in December 2006 thirty won medals who later became runner up in the National School champion ship held at Bombay in February 2007.

11.86 Rajiv Gandhi Sports Medicine Centre, attached to the Directorate held Seminars during this year for Sports persons, Coaches and Physical education teachers in subjects like prevention and management of injuries, doping etc.

11.87 The Directorate organised District and State level Civil Service tournaments and hosted All India Civil Service Volley Ball Tournament, Feb 2007

11.88 Pension was given to 876 circus artists during this year.

Kerala State Youth Welfare Board

11.89 Kerala State Youth Welfare Board was constituted in 1985, with the objective of empowering youth and developing their talents for the betterment of the nation. The Board provide financial and organisational support to the recognised youth clubs in the state for conducting programmes towards this end. Programmes are co-ordinated through the District centres which also function as career guidance and information centres.

11.90 In the year 2006-07, the Board provided financial assistance to 80 youth clubs for conducting Awareness programmes on Environment, formation of nature clubs and also for programmes against social evils like alcoholism, drug abuse etc.

11.91 "Yuvajyothi" is an employment training programme which is organised through youth clubs. Altogether 91 youth clubs were given financial assistance for conducting the programmes.

11.92 Sports kits were distributed to 234 rural-youth clubs during this year for encouraging sports and games at the grass root level.

11.93 The Board organised Kerala Youth Forum 2007 in different venues at Thiruvananthapuram (19th to 25th May 2007) for conducting Book Fair, exhibition cum sales of the products made by various youth clubs, Seminars on 'empowering adolescents', cultural exchange programmes, Job Fest etc. Youths from Orissa and MadhyaPradesh participated in the cultural exchange programmes. Nearly 30 corporate houses and service providers took part in the job fest and 682 youths were selected for jobs (Table11.17).

Table 11.17
Job Fair 2006-07

Candidates Registered	8632
Candidates Short Listed	1408
Candidates Selected for jobs	682

Source: Kerala State Youth Welfare Board-2007

11.94 In the State level and District level 'Youth leadership' camp organised in March 2007, selected youths from active youth clubs were given training in leadership skills, personality development etc.

11.95 Training youths in adventure sports is the other important regular event conducted by the Board. During this year, 540 youths were trained in Paragliding, Trekking, Wind Surfing, Parasailing etc. Women took part in the Trekking event.

11.96 'Keralotsavam ' is a mega festival conducted yearly for youths in the age group of 15-35 who have no other platforms to present their cultural talents. The festival is organised through the Panchayats, Municipalities and Corporations.

11.97 State level Keralotsavam was held from 6th to 9th December 2007 in Thrissur district. More than four thousand youths participated in this festival. Competition was held in eighteen items like classical dance, Folk dance, Drama, Elocution, Instrumental Music etc. Traditional items like Kathakali, Ottamthullal etc. were also conducted. Agricultural sports events like climbing of Coconut tree, Maramadi and other Sports and Games competitions were also held. Special awards were also given to youths for their outstanding service to society.

Art and Culture

11.98 Kerala has a rich cultural tradition. Over the last fifty years, Govt. has established many cultural institutions for the promotion of Art and Culture. Academies, Publishing Houses, Cultural centres, Institutions of Fine Arts, Folk Arts, Research Centres and Directorates like Museums and Zoos, Archaeology and Archives etc. are such institutions. New ones are also being institutionalised to carry out new functions. Government provided Rs. 2302 lakhs as plan assistance to this sector in the year 2006-07 and 83% of this amount was spent up to march 2007.

The following section is a brief summary of activities carried out by these institutions in the year 2006-07

1. Kerala Sahithya Academy

11.99 Sahitya Academy organise Literary Programmes, publish books, honour writers and participate in exhibitions for the promotion of Malayalam literature This year, the Academy has launched a cultural "Renaissance Programme". The event was marked by the centenary celebration of 'Veenapoovu'

11.100 Academy celebrated the centenary of great Poet Sri. P. Kunji Raman Nair. Awards were given to well known writers in the 50th Annual conference of the Academy. Memorial lectures, debates and seminars were organised during this year in honour of renowned writers of Kerala like Pavanan, Uroob, Ayyappa Paniker, Edasseri, Appan Thampuran, M. P. Sankunni Nair etc. A Book- Festival of the cultural institutions was organised. The sixth annual national Book-festival was conducted in association with District Library Council Literary Programmes were part of the Festival. Art and Literary competitions were held for children. During this year, 212 persons visited the Academy's Appan Thampuran Literary Museum.

11.101 The Academy's books, has increased to 325 this year. Journals like 'Sahitya Chakravalam' and 'Sahitya Lokam' were supplemented by special issues on literary life history of renowned writers Sahitya Academy published 15 books during this year and 55 other Malayalam books are under print.

2. Sangeetha Nataka Academy.

11.102 Sangeetha Nataka Academy conduct festivals, competitions and seminars for promoting dance, drama and music. State level drama competition and children's Drama competition were held during this year.Artists from Kerala Kalamandalam presented Lecture-Demonstrations in

Mohiniyattam.Renowned musicians performed during the "Shadkala Govinda Marar" Sangeethotsavam organised by the Academy.Kerala Piravi was celebrated with distinct items like Jugalbandi, folk songs, Kathakali etc.Tribal Festival, Kathak, Dance Festival and Swathi Sangeetha Festival were the other cultural events organised during this year.

3. Kerala Lalithakala Academy

11.103 The Academy promote the talents of painters and sculptors through camps, demonstrations and exhibitions.

11.104 Renowned artists took part in the State level camps and exhibitions on drawing, sculpture, photography etc organised during this year. Illustration camps were also organised for the Journal-artists. Demonstrations in water colour painting were also held in many parts of the state.

11.105 A week long camp was organised exclusively for women artists from all over India. An exhibition of paintings and drawings was organised for the Malayalee Residents in the New Delhi Travancore Art Gallery.

11.106 The Academy financially assisted 22 Artists during 2006-07 for exhibiting their paintings and drawings .Books worth Rs 2.44 lakhs has been bought for the Reference Library during this year

4. Kerala Folk Lore Academy

11.107 Folk Lore Academy carry out programmes for popularising Folk Art forms. The Academy held South Indian Folk music Festival in association with South Zone cultural centre, Thanjavoor. Scholars from Tamilnadu participated in the festival. Folk items of Karnataka and Tamilnadu were also presented Magical Ritual 'Gaddika' was staged during the inaugural ceremony of 'Uyirppu'(Defence), an awareness programme against the suicidal tendency of farmers of Wayanadu. In the four day 'Tribal Art Festival' which was held in Sultan Batheri about 30 Tribal art forms like Gaddika, Muduka dance etc were staged. Seminars on the challenges of 'Tribal Culture' and 'Tribal Arts' were also conducted. In the three day-workshop on 'Kuthiyottam', about 40 Folk dance groups performed various folk art forms. A new Theyyam sculpture was made and showcased in the Folklore Museum. Three fellowships and Twenty Eight awards were given to distinguished performing artists.

11.108 The Academy modernised Open Air Stage stadium for conducting monthly programmes. Stipend @ Rs. 150 was given to One hundred and twenty five students of Folk Arts and Rs. 1.05 lakhs was given to folk artists for treatment purposes.

5. Chalachitra Academy

11.109 The Academy organise programmes like National and International Film festivals and institute Film-TV awards for promoting Film and TV medias Documentary and short Film festival is due to begin this year. The Academy organised the 11th International film festival in December. 2006 and the 12th International film festival in Dec.2007. Due importance was given to Asian, African and Latin American movies. In the fourth National Film Festival held in October 2007, award movies were screened. A retrospective on Shyam Benegal movies was also held.

11.110 Touring Talkies Programmes were organised in many parts of the state for showing good movies and for the development of film societies. Scholarships are being given to students of Film Institutes.

11.111 An international film centre in the two acres of the KINFRA land is the forth coming project of the Academy.

6. State Institute of Children's Literature

11.112 The Institute organise programmes, literary competitions, and publish children's periodicals for promoting the literary and cultural competitiveness of children and their creative talents.

11.113 The Institute has published 19 books for children during this year. The Children's monthly magazine'Thaluru' has been brought out in new form since June 2007. A camp was held for children in collaboration with Vyloppilli Samskriti Bhavan. In the Thaliru scholarship examination held in 2007, five lakh students participated. In the district level competition six children were selected for scholarship. (Three each from UP and High School)

11.114 Altogether twenty nine exhibitions were held till December 2007 in various places in collaboration with Sahitya Vedi, Library Council etc. The amount collected was above Rs. 25 lakhs. The Publications of the Institute worth Rs. 4 lakh were also sold through Kerala Book Marketing Society and Current Books.

7. The State Institute of Languages

11.115 The State Institute of Languages publish books, organise seminars, festivals, exhibitions and other activities for the enrichment of Malayalam language.

11.116 The institute has published fifty books on various subjects, authentically dealing with kerala's social and cultural transition over a period of time and the manner in which they have influenced kerala's development. In this series, eleven more books like Keraliya vadyakala, Charithrathinte Mudrakal, Arts of modern Kerala, Mappilappattu, etc were also published .

11.117 Of late, Digital technology have been made use of for the enrichment of Malayalam language. Scope of internet has also widened Many of the cultural activists and organisations are unaware of this technological progress. Therefore Seminars were organised in five districts for creating awareness in this regard.

11.118 An international book festival was held in Nov, 2007. Poets and writers from other countries participated. Books worth Rs. 1 crore were sold in this festival.

11.119 The Institute is presently engaged in the writing of a detailed and complete language history for the benefit of researchers in Malayalam language.The Institute has also started a mobile Book- Selling unit during this year.

11.120 Books worth Rs. 1 crore and Rs. 3 lakh could be sold by organising forty four exhibitions during the period between April 2006 and March 2007. The Institute also published 85 books upto December 2007.

8. Kerala Book Marketing Society

11.121 Kerala Book Marketing Society is an agency for selling publications of Government institutions, Kerala Sahitya Academy and National Book Trust. Books are sold through their ten branches. The Society participate in exhibitions and organise Book Fairs for promoting sales.

11.122 During this year, KBMS participated in the exhibition organised by Library Council and another one by Techno Park. Book Fairs were organised in twelve different locations like Ernakulam, Alwaye, Thiruvananthapuram, Moovattupuzha, Kollam, Palakkad, etc.

11.123 The income of the society during the year through sales was Rs. 60.68 lakhs.

9. Kerala State Library Council

11.124 State Library Council provide grant to 6640 member libraries and assist in the Library service strengthening activities.

11.125 A model village library has been started in all the 14 districts. These libraries function as social and cultural development centres with separate wings for women, children, youths, farmers, etc. The council spent Rs. 20 lakhs in 2006-07 for the activities of Model libraries in the state. The council has started Academic study centres in selected libraries one from each district. Reference facilities are provided for college students and Researchers.

11.126 The council has financially assisted the circulating library books programme for rural women. Assistance was also provided for Juvenile library services during this year.

11.127 Monthly allowances @ of Rs. 750 was provided to women librarians in 93 centres and Rs. 3.36 lakhs was provided as grant for buying books for the member libraries. Rs. 1.20 lakhs was provided as grant for Orphanage Library service.

11.128 A new scheme namely reference book kits and Book shelves was introduced in the 100 selected libraries of the district during this year in which financial assistance of Rs. 6.14 lakhs was provided for Book shelves and Rs. 27.65 lakhs for reference books.

11.129 Computer and other accessories was provided for 28 libraries in the state. Library service has been started for the inmates of mental hospital in Thiruvananthapuram during this year .

10. State Central Library

11.130 State Central Library has a variety of documents for reference in all subjects including Fine Arts and Braille collections.

11.131 The total membership of the library is 46,500. The number of documents available are 3,26,178. All the leading dailies, and 188 periodicals(including 32 periodicals for children) are available here. In the children's block Multimedia Computer systems, LCD projector and Edusat terminal etc were installed.

11.132 Modernisation of the Library is in progress. Books and periodicals are issued through the Libsys software.

11.133 Radio frequency Identification System enabling, check in and check out system, has also been installed during this year.

11.134 The library has launched many programmes for improving the efficiency of service delivery. A job oriented certificate course in Library and Information science, namely 'Earn while you learn' entitling students for an incentive of Rs. 950 is one such programme introduced this year.

11. Kerala Council for Historical Research (KCHR)

11.135 Kerala Council for Historical Research (KCHR)is an autonomous, Social Science Research organisation for promoting research studies in History and other Social Sciences. KCHR formulate projects for creating a comprehensive data base for research on Kerala History and has been publishing historical research materials. Training programmes are also organised for bringing about qualitative change in the teaching of History. KCHR has been identified as the nodal agency in undertaking research projects in the conservation of Kerala's cultural and historical heritage.

11.136 In the year 2006-07, the Council organised training programmes for the Local Government institutions and cultural organisations in aspects like historical, archaeological and cultural survey, data collection, analysis, compilation, editing etc.

11.137 KCHR has compiled the local history of Vellanad Panchayat and an Encyclopedia of Malayalam proverbs during this year. "The Malayalam Manuscripts in Paris" by Dr. M. R. Raghava Varrier is to be published shortly.

11.138 The Library has been modernised during this year and the new arrivals are being published in "The Hindu" daily on a weekly basis.

12. The Centre for Heritage Studies (CHS, Thrippunithura)

11.139 Centre for Heritage Studies incepted in the year 2000, is an autonomous Academic and research centre for promoting Heritage and Cultural studies. The centre conduct P.G. Diploma in Archaeology, Museology, Archival studies, conservation and Heritage Tourism Management and research programmes. It is also a training centre for teachers and demonstrators in theoretical and practical subjects like primitive, ancient, medieval and modern art The centre has conducted site excavations in collaboration with the Department of Archaeology.

11.140 The centre during the year 2007 conducted short term job-training courses for the B.A History students of four colleges. As part of World Heritage Day 2006 celebrations, a seminar was held on preservation of monuments and sites. A one day seminar was also organised for students and representatives of panchayats in the auspicious 'Kerala Piravi day'. Awareness programmes on heritage conservation were conducted for the representatives of Panchayats in Kanhangad and Kannur The centre also imparted capacity building programme for the officials of the Department of Archaeology. A special training programme on "Wayanad Heritage Eco-Tourism" has been started for 15 native tribals of Sultan Bathery .

11.141 CHS organised a two-day National Seminar sponsored by(ICHR), New Delhi, on "Indo-European Contacts in Technology, Art & Culture-Cochin Through Centuries" in November 2007.

11.142 A special programme for creating awareness on the importance of medicinal plants was organised for the housewives in Ernakulam district in November 2007. A heritage site-seeing trip was also arranged for the participants. A training programme was organised for the students of the Heritage Eco-Tourism in collaboration with KITTS. A holiday camp programme was conducted in December 2007 for 33 students of Higher Secondary School for promoting heritage awareness.
11.143 As a Tourist centre the Hill Palace Campus has been organising programmes for tourists.The annual income by way of ticket collection for the year 2006-07 is Rs. 23.22 lakh.

11.144 The Hill Palace Museum campus in an area of 52 acres, has a Deer park and a garden of medicinal plants known as Hortus Malabaricus. This plant nursery is also a source of income for the museum.

13. Margi

11.145 'Margi' is a cultural centre for promoting 'Kathakali' and 'Koodiyattam'. 'Koodiyattam' has been proclaimed as a World Heritage art by UNESCO in 2001. A large number of tourists visit this centre.

11.146 'Margi' has a permanent group of forty accomplished senior artists. Performances are strictly in the traditional style. Classical art forms like 'Chakyarkoothu' 'Nizhalkoothu' etc are also organised on festive occasions.

11.147 'Margi' staged seventy two'Kathakali' and fifty two 'Koodiyattam' programmes during this year. Programmes were staged in Temples, Koothambalams, Colleges, University centres and other institutions Many of these programmes were sponsored by Kendra Sangeetha Nataka Academi, Ministry of Culture, Government of India and UNESCO, Japan Funds- in-Trust.

11.148 A twelve day festival of 'Nangiarkoothu' was organised in Ambalapuzha Sri. Krishna Swami Temple.

11.149 Directory of Koodiyattam institutions Gurus and Practitioners was published with the assistance of UNESCO Japan Funds-in Trust programme in May 2007.

11.150 'Margi' organised a month long tour of Japan, Honkong, Indonesia and Korea in Aug 2007. In this festival of India series Ten Kathakali programmes were staged.

14. Kerala Kalamandalam.

11.151 Kerala Kalamandalam, (set up by poet Sri. Vallathol Narayana Menon) is an institution for training and research in classical art forms such as Kathakali, Mohiniyattam, Chakyarkoothu, Thullal and Kalari arts. Union government proclaimed Kalamandalam a Deemed University in 2006, the Diamond Jubilee year of the institution. Kalamandalam has initiated several measures for upgrading the institution to the standards required of a deemed University. The Institution has introduced PG and research courses, initiated infrastructural developmental activities and enhanced the Library referral unit etc by adhering to UGC norms. The student strength is 450. During this year, a separate hostel for girls was constructed, books worth Rs. 74,962 was bought for the library and new furnishings, computers, power generators etc were installed. Kalaries and other buildings were renovated and the renovation of 'Vallathol Museum' and 'Koothambalam' were started. A modern documentation centre and recording studio designed by Habitat technology group has also been inaugurated in Nov, 2007. A proposal has also been submitted to

Government for constructing an academic complex in the traditional architectural style, on the banks of river 'Nila'.

11.152 New P.G and research courses in 'Mohiniyattam', 'Kathakali' and 'Koodiyattam' were introduced. New faculty group of eminent scholars and artists were also formed. Seminars on 'Kathakali', 'Thullal' and Koodiyattam and National level seminar on Dance choreography were also conducted during this year in which more than 1000 delegates and 300 artists participated.

15. Vasthu Vidya Gurukulam

11.153 'Vasthu Vidya Gurukulam' in Aranmula is an institution for promoting the traditional architecture 'Vasthu Vidya' and 'Mural painting'. Gurukulam is also a recognised university for conducting courses in Vasthuvidya. Consultancy service in Vasthu principles is rendered for constructing houses and other buildings. Gurukulam has designed 4000 residential buildings, 110 temples and 10 churches in the last fourteen years. Mural painting drawn in natural colours are exhibited in the Mural Art Gallery. Books on traditional architecture of Kerala has also been published in collaboration with M.G. Univeristy, Kottayam. The Mural painting on "Last Supper" in the traditional style was drawn and entrusted to Vathican Museum.

11.154 During this year, Gurukulam published various text books on Vasthuvidya in association with Mahatma Gandhi University. Documentation of all the important architectural buildings in South India has been completed. Altogether 450 registrations were made in the consultancy wing during this period.

11.155 Construction of Koothambalam in the premises of Thrissur Ramanilayam is in progress.

11.156 A seminar in "Vasthuvidya" was conducted in association with Institution of Engineers.

16. Guru Gopinath Natanagramam

11.157 Guru Gopinath Natana Gramam is a cultural institution for imparting training in classical dance and music with special focus, on popularising 'Kerala Natanam' which is a combination of Kathakali and Koodiyattam.

11.158 Natana Gramam conducts regular and vacation classes in dance items, music and other performing arts like Ottamthullal. There are altogether two hundred and twenty students learning in this institution.

11.159 The students presented programmes like Kerala Natanam and Veena concerts during Onam Festival 2007 and on other occasions in various venues. The procedural formalities for starting a four year Diploma course in 'Kerala Natanam' has been completed during this year.

11.160 Documentation of 'Kerala Natanam' is nearing completion. Two Kalaries have been newly built. Renovation of 'Art Gallery', 'Thullal kalari' and the construction of 'Administrative Block, etc are in progress.

11.161 Kerala Natanam festival was conducted in four districts in association with Local bodies, this year.

17. Kumaranasan National Institute of Culture

11.162 The age old memorial in the name of great poet Kumaranasan has become a cultural pilgrimage centre inspiring common man through its cultural and literary activities and beautiful land scaping. The Institute has a vast collection of Mural paintings.

11.163 The National Poets meet, held in the auspicious occasion of Kumaran Asan's Birth Anniversary was enriched with Seminars, Symposiums, classical and folk dances. In the International Poet's meet organised in July 2007, poems were recited by fifteen foreign and fifty Indian poets

11.164 Literary activities for children were organised through the 'Balasree Club' and 'Sargasree club' for writers and artists.

11.165 Many developmental activities were undertaken during the year 2007. A double storied building for National Heritage Museum was constructed in the premises of Asan Smarakam with the financial assistance of District, Block and Grama panchayats Kumaranasan Memorial was modernised and renamed as 'Asan Museum'. A Library was built with research, reference and lending facilities and a children's corner. There are as many as 25000 books in this library. Construction of a Mini Conference Hall is in progress.

18 Multi Purpose Cultural Complex Society, Thiruvananthapuram (Valloppilly Samskrithi Bhavan)

11.166 Samskrithi Bhavan organise festivals, dance programmes and other literary activities for inspiring artists and encouraging students.

11.167 Weekly programmes in Kathakali, chakyarkoothu, Nangiarkoothu, Koodiyattam, Ottamthullal, Vilpattu, Poothappattu, Sangeetha Kacheri, Classical dances and dramas were organised this year.

11.168 'Mudra Fest' is an important annual programme of Samskriti Bhavan Renowned dancers of India performed in the festival organised in September, 2006. Fifty delegates attended the Mudra Festival held in September 2007. The programmes were classical dances and lecture demonstrations.

11.169 A four day long literary camp was held for the students who won first and second position in District level school youth festival Eminent writers and poets participated in the camp.

11.170 Samskriti Bhavan Library was strengthened with a research wing. Maintenance works were carried out in the 'Koothambalam'. Fire fighting installation work is in progress

19 Jawahar Balabhavan

11.171 Balabhavan impart training in arts and crafts for children between the age of four and sixteen. Classes are held after school hours and during vacations. Training is imparted in all forms of creative arts, and crafts, on items like aeromodelling, Kalaripayattu and in courses like General knowledge, Yoga, Electronics, Spoken English, Personality Development etc.

11.172 Nearly 2300 children attended the vacation classes during this year . One hundred and fifty three Children attended the evening and three hundred and eighty four children attended the holiday classes

11.173 Balabhavan hosted, the zonal selection camp for National Balasree award during this year. Four children from Balabhavan were selected for the National Selection camp'.

20 Archives

11.174 The Department acquires records from various Departments and other sources, scrutinise and conserve them as per archival norms. The paper records, palm leaf records 'Churnas' etc have been protected and preserved scientifically. The Reprographic section has been modernised by procuring computers, printers etc. Furniture and other articles were bought for the 'Record Management' Section. Records kept in the Secretariat cellar of the different Administrative Departments of the Secretariat upto the year 1980 have been transferred to the State Archives Department. INA Records of the Ex. INA association was also procured by the Department during the year 2007

11.175 Exhibitions and seminars were organised in all the districts and in other places like Punalur, Nedumangad, Mananthavadi, and Kalpetta for creating archival awareness among the Public.

11.176 In the week long Archival programmes organised jointly by the Archives Department and Anchalummoodu Block Panchayath, archival records-exhibition' and 'Seminar on Regional History was also, conducted

11.177 Training in Record management was imparted to the staff of the Archives Department and for the staff of the record room of other departments. A workshop on conservation and reprography was also conducted for the staff of the Archives Department during this year.

11.178 The books published by the Department during this year were

1. Selected speeches of Freedom Fighters
2. Prohibited writing of Freedom Fighters
3. History of Freedom Movement in Kerala Vol III
4. Index to Neetus of Travancore-I
5. Index to Neetus of Travancore-II
6. Ancient Scripts of Kerala
7. Guide to records-Central Archives, Thiruvananthapuram
8. Guide to Records-Regional Archives, Ernakulam
9. Selected documents on Vaikom Satyagraha
10. Kerala State Archives Bulletin
11. Cultural Heritage & District Management,

11.179 A mobile Heritage Exhibition Unit' and a project for Digitalisation of paper records palm leaf records and rare books have been started during this year.

21 Archaeology

11.180 Archaeology Department carry out various heritage conservation activities. Periodical explorations and excavations are conducted in search of archaeological remains. Ancient monuments and traditional structures like Forts, bridges, caves, buildings etc are protected and maintained. Mural paintings in temples and churches, oil paintings in palaces etc are also scientifically conserved.

11.181 Structural conservation works were carried out in the Padmanabhapuram palace, Kalpathur, Venkithevar, Ariyannur temples, Sakthan Thampuran palace , Hill palace. St. Sebastian Church, Chennamangalam, Chandragiri and Powelkotta, Pundareekapuram Vishnu Temple, Kuttemperur temple etc during 2007.

11.182 Conservation works of various protected monuments were also completed. Mural paintings of several temples were scientifically conserved during this year. Fort Area Heritage Zone Thiruvananthapuram, Heritage complex Thrippunithura, Forts of North Kerala, Kilimanoor Palace etc are the other conservation works which are in progress.

22 Museums and Zoos

11.183 The Directorate for Museums and Zoos carried out many modernisation and maintenance activities in the Museum and Zoo institutions in Thiruvananthapuram, Thrissur and Kozhikode during the year 2006-07. Animals like male elephant, Lesser Adjutant stork and King cobra were acquired for the Zoo

11.184 An enclosure for Jaguars and Aviaries for Grey Heron, Painted Storks, White Ibises, Spoon Bill etc were built in the year 2007. Renovation of old Carnivora cage in Thiruvananthapuram Zoo, enclosures of Rhinoceros, Sambar Deer, Nilgiri Tahr, Elephant, Spotted Deer and for the Deers of the Thrissur Zoo were also carried out.

11.185 Conservation of Raja Ravi Varma painting was done by the National Museum, Delhi and those of the Metal and wooden objects of Napier Museum by INTACH. Maintenance works were done in the State Museum and Zoo, Thrissur. Newly renovated Sree Chitra Enclave was kept open for the public in July, 2007. Fourteen mural paintings highlighting the land marks in the evolution of Travancore state drawn by renowned Mural artists of Kerala has also been exhibited in this enclave.

11.186 Sanitary measures were taken to eradicate the contagious FMD disease. In view of this epidemic which resulted in the closure of Zoo for two weeks steps have been taken to upgrade the Zoo hospital with modern Lab-facilities, in order to circumvent such emergencies

23. Kerala State Film Development Corporation, Thiruvananthapuram

11.187 KSFDC (a Public limited company) has been providing supporting facilities for the production of feature films and documentaries, since 1975. The corporation own ten theatres and the Chithranjali studio.

11.188 KSFDC has successfully launched several modernising works and evolved new programmes for raising its revenue during this year. The studio has been modernised by equipping the studio with modern lights, Track, Trolly and other latest film equipments. KSFDC has initiated works for modernising shooting floor with Temple sets, constructing cottages, convention centre, coffee bar, telescope(fitted 10 feet high) Childrens park, Butterfly park etc in order to develop the studio premises in to a tourist spot and thus raise the source of revenue.

11.189 KSFDC is in the initial process for commissioning one dubbing theatre at Kochi. Centralised charting system has been introduced for all theatres of KSFDC under a charting committee to ensure film release simultaneously in all theatres.

11.190 Maintenance works and other modernisation works have been carried out in all the ten theatres.

CHAPTER 12

MEDICAL AND PUBLIC HEALTH

Despite its better health outcomes, Kerala faces some major problems in the health care sector today - continuing inadequacy of basic health facilities and out of pocket expenditure for the poorer sections; rapidly increasing diseases associated with lifestyle and ageing, prevalence of environmental diseases and higher prevalence of mental health problems. Usually health status is measured in terms of mortality indicators like Death rate, Infant mortality rate and Expectation of life at birth among others. Mortality indicators show that health status of Kerala is far advanced than the rest of the country and are even comparable with developed countries. This outstanding progress of health status has no doubt been achieved through widespread growth of institutions in public, private, co-operative sectors combined with people's health awareness, active implementation of our Family welfare programmes and the active involvement of the National Rural Health Mission.

12.2 The basic health indicators of Kerala and India are given in Table-12.1. Though Kerala has attained better health care indicators, the people are still facing the problem of high morbidity both from the re-emerging new communicable and non- communicable diseases. Higher prevalence of mental health problems including the higher suicide rates, health problems and death due to road traffic accidents and other traumas are other dimensions of the health problems in Kerala. Considerable efforts are afoot to revamp the public health system.

Table 12.1

Health Development indicators- Kerala & India –2007

Health Indicators	Kerala	India
Birth rate (per '000 population)	15.00	23.80
Death rate (")	6.40	7.60
Infant mortality rate (")	14.00	58.00
Maternal mortality ratio (per lakh/live births)*	110	300
Total Fertility rate (per woman)	1.70	2.90
Couple Protection rate (%)	72.10	52
Life at birth		
Male	70.90	61.80
Female	76.00	63.50
Total	73.45	62.70

Source: Directorate of Health Services

** Refers to the period 2001-03*

Health care Infrastructure

Government Sector

12.3 Kerala's health care system consists of allopathy, ayurveda and homoeopathy. Three systems of medicine together have 2711 institutions in the government sector with 50743 beds. The present status is given in Table 12.2. Out of the total institutions, 47% are under Allopathy, 32% under Ayurveda and 21% in Homoeopathy. Out of the total beds, 90% are under allopathy, 8% under Ayurveda and 2% under Homoeopathy.

Table 12.2
Medical institutions, beds and patients treated under three systems of medicine in Govt. Sector during 2006 and 2007

Sl. No	Systems of medicine	Institutions		Beds		Patients treated-2006(Lakh)		Patients treated-2007(Lakh)	
		2006	2007	2006	2007	IP	OP	IP	OP
1	Allopathy*	1279	1279	45405	45553	23.0	461.77	20..27	468.11
2	Ayurveda	871	871	3940	4020	0.57	209.9	0.50	222.47
3	Homoeopathy	561	561	1170	1170	0.21	127.6	0.25	135.33
	Total	2711	2711	50515	50743	23.78	799.27	21.02	825.91

* Excluding Sub centres

12.4 The three systems together treated around 21.02 lakh inpatients and 825.91 lakh outpatients during 2007 as against 23.78 lakh inpatients and 799.27 lakh outpatients during 2006. In-patients decreased by 11.6% and outpatients treated increased by 3.3% in the given period.

Co-operative Sector

12.5 There are 81 co-operative hospitals with 6129 beds and 719 doctors and 2772 nurses and para medical staff in Kerala. However, among these some hospitals are under liquidation and some not functioning. The patients treated as inpatient during 2007 was 3.6 lakh and as outpatients 19.9 lakh. District wise details are given in Appendix 12.1

Private Sector

12.6 Details of private health care facilities in Kerala are available only for 2004. A study conducted by Department of Economics and Statistics shows that there were 4825 allopathic medical institutions with 57071 beds, 4332 ayurveda institutions with 5502 beds and 3226 homoeopathic institutions with 813 beds in the year 2004.

Insurance Medical Services

12.7 There are 12 ESI hospitals with 1123 beds and 137 dispensaries in the State. There are 241 doctors working in hospitals and 316 doctors in dispensaries. The number of other paramedical staff including nurses working both in hospitals and dispensaries come to 740. District-wise details of ESI hospitals, dispensaries, medical and para medical personnel are given in Appendix.12.2

Beds per lakh population in Kerala

12.8 The three systems together have 50743 beds in the Govt. sector. The beds per lakh population are 159 in government sector. District wise details of medical institutions and beds per lakh population are given in Appendix 12.3. Over and above the beds in government sector, there are 70638 beds in ESI, Co-operative and private sector. The combined bed population ratio is 381 beds per lakh population. The relevant details are given in Table- 12.3.

Table 12.3
Total beds under different sectors

Category	No. of beds	Beds per lakh population*
Government sector (including three systems)	50743	159
ESI Hospitals	1123	4
Co-operative sector	6129	19
Private sector	63386	199
Total	**121381**	**381**

* Population based on 2001 Census

Directorate of Health Services

12.9 There are 1303 institutions and 41077 beds under the Directorate of Health services. Institutions include 136 hospitals, 929 primary health centres, 114 community health centres, 59 dispensaries, 18 TB clinics/ centres, 29 Grant in aid institutions and 18 leprosy control clinics/ units. Besides there are 5094 sub centres. Out of the total beds, 23665 (57.6%) beds are in hospitals, 7675 (18.7%) are in primary health centres and 4730 (11.5%) are in community health centres and 366 (0.9%) are in dispensaries and TB clinics. District wise details of institutions and beds are given in Appendix.12.4

Patients treated

12.10 During 2006-07, 457.1 lakh persons (repeated cases) availed medical treatment in various institutions under Directorate of Health Services, of which, 16.6 lakh persons were treated as IP cases and 440.5 lakh as OP cases. Also 87283 major operations were conducted during the same period. District wise details of IP, OP cases and major/minor operations conducted are given in Appendix- 12.5

Immunization coverage

12.11 Kerala has almost attained universal immunization. During 2006-07, the coverage of BCG was 99.7% Similarly the coverage of DPT, Polio, Measles and TT for pregnant women was 92.8%, 92.1%, 88.1% and 88.3% respectively. Target and achievements of immunization programmes in Kerala during 2005-06 and 2006-07 are given in Appendix-12.6. The coverage of immunization programmes in Kerala during 2006-07 is given in Table.12.4.

Table 12.4
Coverage of Immunization Programme in Kerala (2006-07)

Sl. No.	Programme	Coverage (%)
1	DPT	96.7
2	Polio	100.1
3	BCG	102
4	Measles	97.6
5	TT for Pregnant Women	105.2
6	TT for 5 years	94.1
7	TT for 10 years	99.9
8	TT for 16 years	97.7

Source: Directorate of Health Services

Principal diseases and death

12.12 During 2006, 310.83 lakh persons had been affected by various diseases, which increased to 322.43 lakh in 2007. An analysis would show that the incidence of Enteric Fever, Diarrhoeal Diseases, Viral Hepatitis-A, Viral Hepatitis-B, Menningitis, Pulmonary Tuberculosis, Acute Respiratory Infection, Dengue Fever etc. are coming down while that of, Chickenpox, communicable and non communicable diseases etc. are on the rise. Increasing pollution, increase in use of fossil fuel, tobacco use, vehicle transport, increasing sedentary habits and ageing may be the reasons of increase in non communicable diseases. Deaths reported during 2007 were 4667 as against 5990 in 2006, which showed a decline of 22%. Due to the outbreak of chickungunia disease and recent spread of viral fever and its after effect, people have suffered a lot. The relevant details of the incidence of some diseases are given in Appendices-12.7, 12.8, 12.9, 12.23 and 12.24.

Prevalence rate of major public health diseases

12.13 A major achievement in health front is the eradication/ reduction of major public health diseases like small pox, filaria, malaria etc Prevalence rate of pneumonia and chickenpox have increased but that of other diseases is decreasing The prevalence rate of major public health diseases in Kerala during 2006 and 2007 are given in Table 12.5.

Table 12.5
Prevalence Rate of Public Health Diseases

Sl. No.	Disease	Prevalence Rate per 1000 population	
		2006	2007
1	Leprosy	0.29	0.21
2	Filaria	0.03	0.03
3	Malaria	0.08	0.06
4	T.B	0.64	0.40
5	Acute Diarrhoeal Diseases	16.55	14.14
6	Pneumonia	0.68	0.76
7	Enteric Fever	0.29	0.19
8	Measles	0.09	0.08
9	Respiratory Infection	262.61	233.88
10	Chicken pox	0.15	0.41

Source: Directorate of Health Services

Chronic Diseases

12.14 Among chronic diseases, Cardio vascular disease, Cancer, Hypertension and Diabetes Mellitus stand at the top Sedentary lifestyle, lack of physical activity and obesity increases the risk of chronic diseases.

Cancer

12.15 Cancers in all forms are causing about 12 percent of deaths throughout the world In the developed countries cancer is the second leading cause of death accounting for 21% (2.5 million) of all mortality. In the developing countries cancer ranks third as a cause of death and accounts

for 9.5% (3.8 million) of all deaths. Tobacco, alcohol, infections and hormone changes contribute towards occurrence of common cancers all over the world.

12.16 Cancer has become one of the ten leading causes of death in India. It is estimated that there are nearly 1.5 – 2 million cancer cases at any given point of time. Over 7 lakh new cases of cancer and 3 lakh deaths occur annually due to cancer. Nearly 15 lakh patients require facilities for diagnosis, treatment and follow up at a given time. Data from population-based registries under National Cancer Registry Programme indicate that the leading sites of cancer are oral cavity, lungs, oesophagus and stomach among men and cervix, breast and oral cavity among women. Cancers, namely those of oral cavity and lungs in males and cervix and breast in females account for over 50% of all cancer deaths in India. WHO has estimated that 91 percent of oral cancers in South - East Asia are directly attributable to the use of tobacco and this is the leading cause of oral cavity and lung cancer in India. An estimate shows that the total cancer burden in India for all sites will increase from 7 lakh new cases per year to 14 lakh by 2026.

12.17 Cancer usually occurs in the later years of life and with increase in life expectancy to more than 60 years, the numbers would grow. Data collected from RCC shows that more patients are treated in the age group of 45-74 years. Details of cancer patients treated age group wise are shown in Table-12.6

Table 12.6
Cancer patients treated by age group (Up to September 2007)

Age group	0-14	15-29	30-44	45-59	60-74	75+	Total
Patients treated	496	857	2026	3853	2984	693	10909

Source: Regional Cancer Centre, Thiruvananthapuram

Details of 10 leading sites of cancer and patients treated by sex are given in Table 12.7

Table 12.7
Leading sites of cancer and patients treated by sex (Up to September 2006)

(Nos.)

Sl. No	Male		Female	
	Site	Patients treated	Site	Patients treated
1	Oral cavity	817	Breast	1385
2	Lungs	591	Thyroid	508
3	Blood	383	Cervix	473
4	Lymphatic system	284	Oral cavity	388
5	Pharynx	252	Blood	256
6	Stomach	229	Ovary	218
7	Larynx	223	Lymphatic system	155
8	Oesophagus	218	Corpus Uteri	127
9	Brain	168	Brain	116
10	Thyroid	163	Lungs	108

Source: Regional Cancer Centre, Thiruvananthapuram

HIV/AIDS

12.18 For the world as a whole now, HIV/AIDS is a leading cause of death among adults aged 15-59 years. It has already killed more than 20 million people and an estimated 34-46 million people are living with this disease. Today one in every 12 African adult has HIV/AIDS. The American and the Caribbean have the second highest prevalence of HIV in the world after the Sub Saharan Africa. In Asia, an estimated 7.4 million people are living with HIV, around half a million are believed to have died of AIDS in 2003 and about 1.1 million are suspected to have become newly infected with HIV.

12.19 HIV infection and AIDS cases were detected in India in 1986. With more than 5.1 million estimated HIV positive in the country, India has the largest population of HIV infected people outside South Africa. Six states in India viz. Manipur, Nagaland, Maharashtra, Andhra Pradesh, Karnataka and Tamilnadu are identified as high incidence states because the prevalence of HIV/AIDS in the general population is more than 1%. Over 32% of all reported AIDS cases in India occur among young people in the age group of 15-29 years. AIDS cases reported in India since 31st July 2005 is given below.

Table 12.8

AIDS cases reported in India since 31st July 2005

Age group	Male	Female	Total
0-14	2860	1994	4854
15-29	21782	14405	36187
30-49	48342	14508	62850
> 50	6057	1660	7717
Total	**79041**	**32567**	**111608**

12.20 First HIV positive case was identified in Kerala in 1987. Till 2004, number of AIDS cases reported from different parts of Kerala is 2003, out of it 619 persons died. AIDS cases reported through two Care Centres of Kerala State AIDS Control Society during 2005 is 218, out of which 67 persons died. Kerala has an estimated HIV population between 70,000 and 1,00,000. Roughly 500 children are born with HIV every year. It is likely that there are at least 3500 HIV positive children below 10 years in the State. During 2007, 838 AIDS cases were reported and 175 died in Kerala. Details are given in Table 12.9.

Table 12.9

AIDS cases reported during 2006

Category	AIDS cases reported	Death
Male	530	--
Female	277	--
Children	31	--
Total	**838**	**175**

Source: Kerala State AIDS Control Society

Mental Health

12.21 It is estimated that about 1% of the population at any given time suffers from mental illness. Similarly another 2 to 3% may suffer from mental disorders which may not be severe. The tendency of committing suicide is a major problem in Kerala, which is reported at 28.8 per one lakh people. According to Crimes Record Bureau the suicide rate in Kerala is almost three times the national average of 11.6 per one lakh. Kerala accounts for 10.1% of all suicides in India while the state population is only 3% of India.

12.22 Mental Health Care in Kerala is confined to three mental hospitals at Thiruvananthapuram, Thrissur and Kozhikode. A few beds are also attached to Medical Colleges and a few district hospitals. There are 1714 beds in mental hospitals. But mental health personnel to deal with mental patients are relatively few in Kerala. For instance, in Kerala there are only 85 psychiatrists in government service and 157 in private service. Number of psychiatrists is only 0.77 per one-lakh mental patients. Also there are no nurses specialized in psychiatry in Kerala. Details of facilities in Mental Health Centres are given below.

Table 12.10
Mental Health Services in Kerala

Sl.No.	Facilities	(Nos.)
1	Mental Hospital Beds	
	(i) 3 Mental Hospitals	1342
	(ii) Medical Colleges	216
	(iii) General Hospital	156
	Total	**1714**
2	Man Power	
	(i) Private Service Psychiatrists	157
	(ii) Government Service Psychiatrists	85
	Total	**242**
3	Clinical Psychologists	7
4	Psychiatric Social Worker	11

Blood units

12.23 There are 137 blood banks in Kerala registered under Central Drugs and Cosmetics Act. Out of these, 33 are in government/autonomous sector and 104 in private sector. During 2006, 2.9 lakh units of blood were collected and out of it 1.3 lakh units (46.4%) were from govt./ autonomous institutions and 1.6 lakh units (53.6%) from private institutions. The five Medical Colleges together collected 66997 units of blood, which formed 23.5% of the total blood units collected. During 2007 (till October) 2.6 lakh blood units were collected.

12.24 According to WHO norms, 70% of the beds are active and each such bed requires 7 units of blood in a year. Therefore the demand for blood in the state is estimated at 2.13 lakh units in the Government sector. Market value of one unit of blood is around Rs. 700. Details of blood units collected during the last 3 years are given in Appendix.12.10.

Medical Education and Training

12.25 Three systems of medicine have separate education and training: medical education, training and research under allopathy are implemented through government, Co-operative and

self- financing sector. There are 5 medical colleges, 3 dental colleges, 5 nursing colleges and two pharmacy colleges in the government sector with an annual intake of 800 for MBBS, 120 for BDS, 300 for BSc. nursing and 80 seats for B.Pharm. Also there are two medical colleges in the Co-operative sector with an annual intake of 100 each for MBBS. In the self- financing sector, six medical colleges, six dental colleges and eight ayurveda colleges, 17 pharmacy colleges and 42 nursing colleges have been started during the last three years. Details of medical colleges and annual intake of students in government and self-financing colleges are given in Table - 12.11.

Table 12.11
Details of Medical Colleges and intake of students for Degree course

Medical Colleges	Courses	Government		Cooperative/aided		Self-financing		TOTAL	
		Number	Intake	Number	Intake	Number	Intake	Number	Intake
1	2	3	4	5	6	7	8	9	10
1. Allopathy	MBBS	5	800	2	200	6	600	13	1600
2. Dental	BDS	3	120	--	–	6	340	9	460
3. Ayurveda	BAMS	3	140	2	90	8	400	13	630
4. Homoeopathy	BHMS	2	100	3	150	–	–	5	250
Total		**13**	**1160**	**7**	**440**	**20**	**1340**	**40**	**2940**
5. Nursing Colleges	BSc	5	300	--	–	42	2100	47	2400
6. Pharmacy Colleges	B Pharm	2	80	1	60	17	980	20	1120
Total		**7**	**380**	**1**	**60**	**59**	**3080**	**67**	**3520**

12.26 In addition 197 seats for PG Degree and 37 seats for super specialty courses are available in these government medical institutions. More details of medical/paramedical courses conducted in government medical colleges are given in Appendix.12.11

12.27 Five government medical college hospitals under allopathy together have 9117 beds, which constitute 18% of the total beds in government sector. Inpatients treated were 3.7 lakh during 2007, which shows a decrease of 2.6% over 2006. Outpatients treated increased significantly. But major operations conducted during 2007 decreased by 2.1% over 2006. Details of beds, patients treated, major operations conducted, delivery cases attended etc. are given in the Table 12.12.

Table 12.12
Beds, Patients treated and operations conducted in Government Medical College Hospitals during 2006 (till November)

(No.)

Sl. No.	Medical college Hospitals	Beds (Nos.)	Inpatients	Outpatients	Major Operations conducted	Delivery cases attended
1	Thiruvananthapuram	3421	96700	798000	38455	8400
2	Alappuzha	1031	39394	378540	1163	3097
3	Kollayam	1286	53743	654634	8240	7300
4	Thrissur	999	64367	346890	2376	3800
5	Kozhikode	2380	114931	580319	20062	15942
	Total	**9117**	**369135**	**2758383**	**70296**	**38539**

Source: Directorate of Medical Education

Health Personnel

12.28 There are 25225 medical and para medical personnel attached to Directorate of Health Services-- 3862 are medical officers, 77 dentists, 8738 senior/junior nurses and 12548 para medical staff While analyzing doctor- population ratio in Kerala, for every 8244 population there is one medical officer under Directorate of Health Services District wise analysis shows that there exists considerable inter district variation. Doctor- population ratio varies from 1:5807 in Thiruvananthapuram district to 1:11343 in Malappuram district despite the fact that Malappuram has the highest proportion of medical institutions under the Directorate of Health Services. Relevant details are shown in Appendix.12.12.

12.29 In the government medical colleges, there are 39 categories of specialty departments and in each department there are four categories of posts viz. Tutor/ Lecturer, Assistant Professor, Associate Professor and Professor. The total number of clinical/ non-clinical doctors in the five government medical colleges and attached institutions comes to 2183 doctors. Details are given in Appendix-12.13. The doctor- population ratio, where doctors working in government system (allopathy) only were counted stood at 1:5267 In addition there are 933 registered medical practitioners in modern medicine, 217 under homoeopathy and 345 in ayurveda system Data relating to the registered medical and para medical practitioners are shown in Appendices-12.14 and 12.15

Nursing Education

12.30 Nursing education is imparted by DHS run institutions, approved private institutions, medical colleges and nursing colleges in the self-financing sector. There are 15 government nursing schools under Directorate of Health Services including a Nursing school exclusively for SC/ST in Kollam. These institutions conduct general nursing cum midwives course (3 year). The annual intake of these institutions is 354. Four institutions in Thiruvananathapuram, Kottayam, Palakkad and Kasaragod Districts conduct Junior Public Health Nurse (JPHN) course (18 months) with an annual intake of 45 each. Thus the annual intake of these 19 institutions is 534. Also there are nursing colleges attached to five Government medical colleges which conduct BSc. Nursing with annual intake of 300 students. Government Medical College Thiruvananthapuram and Kozhikode are conducing MSc. Nursing courses with annual intake of 24 students. Besides, there are 42 nursing colleges under self- financing sector with an annual intake of 50 students each. The available details are given in Appendix-12.16

Ayurveda

12.31 There are 117 Ayurveda Hospitals with 2744 beds and 747 Ayurveda dispensaries. Out of the dispensaries, 4 are visha chikitsa kendras, six siddha and one unani. Hospitals include 14 district hospitals, one nature cure hospital, one marma hospital, one siddha hospital, one panchakarma hospital, one ayurveda mental hospital and 96 government hospitals. Details are given in Table-12.13. During 2006, 223 lakh patients were treated in ayurveda institutions and out of them 222.5 lakh were outpatients and 0.5 lakh inpatients. During 2007 (upto September) 165. 55 lakh patients were treated. District-wise details of ayurveda hospitals, beds, dispensaries and patients treated are given in Appendix.12 17

Table 12.13
Distribution of beds in Ayurveda hospitals

(No.)

Sl. No.	Category	Number	Beds
1	District hospitals	14	950
2	Govt.hospitals	96	1664
3	Nature cure hospital	1	30
4	Siddha hospital	1	20
5	Panchakarma hospital	1	20
6	Marma hospital	1	10
7	Mental hospital	1	50
	Total	**115**	**2744**

Source. Directorate of Ayurveda

Ayurveda Medical Education

12.32 There are now 14 Ayurveda colleges in Kerala, of which 3 are in Government sector, 2 are in private sector and 9 are in self-financing sector. These colleges have an annual intake of 680 students for BAMS/BSMS courses and 82 students for postgraduate courses. The details of annual intake capacity in ayurveda colleges are given in Appendix-12.18. Medical college hospitals attached to the medical colleges under government and private aided have bed strength of 1246. During 2007, these hospitals together treated 6.2 lakh patients, and out of them 6.1 lakh were out patients. The details of beds and patients treated are given in Table 12.14

Table 12.14
Beds and patients treated in Ayurveda Colleges (2007)

(Nos)

Sl.No.	College Hospital	Beds	Out patients	In patients	Total
1	2	3	4	5	6
A.	**Government**				
1	Ayurveda College Hospital, Thiruvananthapuram.	638	103858	6373	110231
2	Ayurveda College Hospital, Thrippunithura.	205	308425	1103	309528
3	Ayurveda College Hospital, Kannur	100	14903	830	15733
	Sub Total	**943**	**427186**	**8306**	**435492**
B	**Private Aided**				
1	Vaidyaratnam Ayurveda College, Ollur	153	66423	1448	67871
2	Vaidyaratnam P.S. Varrier Ayurveda College Hospital, Kottakkal.	150	113307	1586	114893
	Sub Total	**303**	**179730**	**3034**	**182764**
	TOTAL	**1246**	**606916**	**11340**	**618256**

Source. Directorate of Ayurveda Medical Education

Homoeopathy

12.33 There are 31 hospitals and 525 dispensaries under Directorate of Homoeopathy. Hospitals include 14 district and 17 other hospitals. Total bed strength of these hospitals is 970. Out of the 525 dispensaries, 495 are in rural and 30 are in urban areas. During 2007, 152.7 lakh patients sought homoeopathy treatment and out of them, 0.31 lakh were inpatients and 152.4 lakh were out patients. District-wise details of institutions, beds and patients treated in homoeopathy hospitals during 2005-06 and 2006-07 are given in Appendix.12.19.

Homoeo Education

12.34 There are 5 homoeopathy medical colleges in the State, of which 2 are under government sector and 3 are in private aided sector. Total annual intake for BHMS course is 250 and for PG course is 36. Besides, the two government colleges conduct one year nurse cum pharmacist course with an annual intake of 60 students each. Details of courses and annual intake of students are given in Appendix-12.20. The hospitals attached to these colleges have 475 beds During 2007, these hospitals together treated 4.61 lakh patients. Out of them 4.54 lakhs were out patients. Details of beds and patients treated under homoeopathy medical colleges are given in Table 12.15

Table 12.15
Medical College hospital wise distribution of beds and Patients treated in 2006

Sl.No.	Name of Hospital	Beds (Nos.)	Patients Treated		Total
			IP	OP	
1	2	3	4	5	6
	Government				
1	Govt. Homoeopathic Medical College Hospital, Thiruvananthapuram.	100	1230	217462	218692
2	Govt. Homoeopathic Medical College Hospital, Kozhikode	100	1268	109397	110665
	Government Aided				
1	Dr. Padiar memorial Homoeopathic Medical College	50	4470	96754	101224
2	A.N.S.S.Homoeopathic Medical College	125	278	20818	21096
3	Sree Vidhyadhiraja Homoeopathic Medical College	25	206	9444	9650
	Total	**400**	**7452**	**453875**	**461327**

Source: Govt. Homoeopathic Medical College, Thiruvananthapuram

Family Welfare

12.35 Family welfare programme in Kerala is implemented through a network of government hospitals and community health centres in urban area and primary health centres in rural areas. Family welfare programmes are also implemented by private hospitals and clinics as well as non-governmental organizations. Kerala's achievement in family welfare front has been impressive in terms of major indicators viz. birth rate, death rate, maternal mortality rate, infant mortality rate, couple protection rate etc. State has achieved couple protection level of 53.48% in 2007. District

wise details of family welfare programmes and couples protected by effective family planning methods are given in Appendices-12.21 and 12.22.

Expenditure on Medical and Public Health

12.36 Kerala spends fairly substantial amount on medical and public health compared to other Indian states, which is evident from per capita government health expenditure. Including the investment of local governments, per capita expenditure on health is Rs.267 in 2002-03 and Rs.312 in 2003-04. Similarly expenditure on health to total state expenditure (Revenue & Capital only) was 5.4% in 2003-04 as against the national average of 4.6%. The expenditure on health including family welfare during 2002-03 to 2006-07 is given in Table-12.16

Table 12.16
Plan and non-plan expenditure on Medical and Public Health including Family Welfare

(Rs.Lakh)

Year	Expenditure on Medical and Public Health (excluding FW)			Expenditure on Family Welfare	Total	% to GSDP
	Plan	Non-Plan	Total			
1	2	3	4	5	6	7
2002-03	8950.08	62264.16	71214.24	9459.40	84974.02	1.06
2003-04	7148.08	67424.31	74572.39	11324.98	85897.37	1.0
2004-05	11126.94	73212.84	84339.78	10844.7	95184.48	1.02
2005-6	19963.25	76086.41	96049.66	10751.13	106800.79	0.9
2006-07(R.E)	18676.13	118343.97	137020.1	11620.00	148640.1	1.1

Source: Detailed Budget Estimates 2007-08

CHAPTER 13

HOUSING

Next to food and clothing, house as a shelter is a basic human need. It is a composite and complex good that fulfils some of the basic necessities of life. Housing is a leading sector in Kerala, generating employment and incomes to a large number of skilled, semi skilled and unskilled workers. It is estimated that overall employment generation in the economy due to investment in housing/construction is eight times the direct employment. Housing in Kerala has registered enormous growth both in terms of quality and quantity.

Demand for Housing

13.2 As per 2001 Population Census the State's population was 3.18 per cent of the country's population, but the housing stock in Kerala is 66 lakh, which was 3.75 per cent of the total stock of housing in the country. Based on the 2001 Census, there was only a numerical shortage of 0.63 lakh housing units in the State. However, housing inequality has widened in the State. More than 8 per cent of the households live in extremely poor quality or dilapidated houses. Taking into consideration the reconstruction of dilapidated houses and major repairs and renovation of a substantial numbers of houses, the total demand by 2011-12 is assessed at around 10 lakh units (see Economic Review 2006). Another aspect is the relatively high number of vacant houses in the State. More than 7.3 lakh houses are listed as vacant houses as per 2001 Census. Of this 5.1 lakh houses are in rural areas (7.4 per cent of rural houses) and the remaining 2.2 lakh in urban areas (9.1 per cent of urban houses).

13.3 More recent estimates of the housing situation have been made by several agencies. The total number of houses constructed during 1996-2006 works out to 5.77 lakh according to a survey conducted by the Housing Commissionerate based on a small sample of Panchayats, Municipalities and Corporations. The number of dilapidated houses worked out at 15.45 lakh and the houseless families were found to be 10.85 lakh. The projected total number of houses in the State by 2007 is found to be 69.85 lakh units. According to data collected from different agencies by the Housing Commissionerate, 7.19 lakh houses have been constructed under assisted schemes and 7.46 lakh units under loan scheme for the last 10 years. The percentage of assisted housing works out to be approximately 50 per cent of the total houses constructed during the period. So it can be presumed that 45 to 50 per cent of the total number of houses being constructed need assistance from Government/ Governmental agencies.

13.4 As per the data received from the Commissioner, Land Revenue, the number of landed but houseless people in the State of Kerala is 3.72 lakh and the number of landless and houseless people is 3.33 lakh. Considering the present trend in increase in population and houses, the population in 2011 is projected to be around 3.38 crore and the corresponding figure for number of houses will be 83.42 lakh. That is, 69.85 number of existing houses in 2007 plus 10.85 lakh units houseless in 2007 (taken from the survey of the Housing Commissioner) and balance to be constructed by 2011 based on demand and assumed family size of 4.05 in 2011.

Governmental Agencies

13.5 The State has always been implementing innovative schemes with substantial financial support to house the houseless among the weaker sections of the population. Several Governmental agencies are implementing housing schemes in the State. These agencies which are

mainly funding the house construction of the lower & middle income groups, the poor and destitutes are the Kerala State Housing Board, Kerala State Co-operative Housing Federation, Kerala State Development Corporation for SC/ST, SC/ST Development Department, Rural Development Department (including 'Ashraya' housing scheme of Kudumbashree for the destitutes), Fisheries Department, Sainik Welfare Department, Nirmithi Kendra, Kerala Police Housing and Construction Corporation Ltd, Kerala State Co-operative Agricultural and Rural Development Banks, Nationalised Banks and Local Self Governments are the major governmental agencies undertaking house construction for the people

13.6 Non-governmental agencies such as COSTFORD, Habitat Technology Group, Canfin Homes and Housefed have also helped in constructing houses.

13.7 The above agencies/departments have provided assistance to construct 9 lakh houses during 2003-07. Out of this 1.3 lakh house construction was in 2003-04 and 4.75 in 2006-07. During 2007-08 a total number of 0.29 lakh houses were constructed up to 30.09.07. These details are given in the following Table:

Table 13.1
Houses constructed by various agencies 2003-2007

(Numbers)

Year	Houses constructed
2003-04	129564
2004-05	155929
2005-06	110621
2006-07	474529
2007-08 (up to 30.09.07)	28508
Total	**899151**

Source. Housing Commissionerate

13.8 During 2006-07 Rural Development Department had constructed 0.31 lakh houses and Fisheries Department 0.02 lakh houses (Appendix 13.1)

13.9 In the recent Government effort to rebuild damaged houses for those affected by Tsunami along the coast, several NGOs have also contributed significantly towards construction of houses.

Kerala State Nirmithi Kendra

13.10 Kerala State Nirmithi Kendra (KESNIK) was established in 1989 to actively engage in the field of housing and habitat development through the propagation of Cost Effective and Environment Friendly (CEEF) technology The objectives of Kerala State Nirmithi Kendra are transfer of technology from lab to land, dissemination of CEEF technologies, training in alternative housing and building material technologies, implementing /demonstrating CEEF technologies by undertaking construction and consultancy projects.

13.11 The activities of KESNIK are technical consultancy and housing guidance, through Regional Rural Nirmithi Kendras, Information Centres at Panchayat Nirmithi Habitats / Gurukulam, Research and Development, Information and Extension Division, Applied Technology and Training Centre, Material Testing Lab. Production Centres, Revival of Traditional Architecture, Rain Water Harvesting and Training Programmes for Local Bodies.

13.12 Government has accorded sanction for construction of 5000 houses for BPL Scheduled Caste families in 14 districts of Kerala during 2007. The construction work of 2500 houses has been entrusted to Kerala State Nirmithi Kendra. The total outlay comes to Rs 17.5 crore with a unit cost of Rs 70 thousand The entire construction is in progress and is expected to be completed before February 2008 Construction of 100 houses for Tribes at Wayanad at a total cost of Rs 90 lakh is also in progress.

13.13 The Laurie Baker Nirmithi Training & Research Institute, the academic wing of Kerala State Nirmithi Kendra is proposed to take greater initiatives in conducting Post Graduate Programmes, Diploma level courses and short duration programmes on different aspects of housing, construction and project management including allied activities such as garden making and landscaping.

Kerala Police Housing and Construction Corporation Ltd

13.14 The Kerala Police Housing & Construction Corporation Ltd was established in 1990 with the objective of taking up construction activities for the Police, Fire & Rescue Services, Prisons, Vigilance and Anti-Corruption Bureau. The authorized share capital and paid up capital of the Corporation stands at Rs 10 crore and 27 lakh respectively. The Corporation raises institutional loans from HUDCO and LIC housing finance.

13.15 The funds raised by Kerala Police Housing & Construction Corporation Ltd are being utilized for the construction of District Police Offices, District Police Lines, Regional Forensic Science Laboratories, Crime Branch CID Offices, Special Branch CID Offices, District Police Control Rooms, Police Stations, Extension to Police Stations, Sub Divisional Police Offices, Circle Offices, Rest Rooms for Women Police Constables, Lower Subordinate Quarters & Upper Subordinate Quarters, Range DIG Offices, Zonal IG Offices, Aquatic Training Centre at Kerala Police Academy, Thrissur, DCRB Blocks, and Indoor Stadium at the Kerala Police Academy, Thrissur.

13.16 The details of projects completed from 1.4.2006 to 31.3.2007 are furnished in the following Table:

Table 13.2
Projects completed by the Kerala Police Housing & Construction Corporation Ltd (1.4.2006 to 31.3.2007)

(Numbers)

Sl.No	Projects	Completed
1	Police Stations	25
2	Women Police Constable Rest Room	37
3	Lower Subordinate Quarters	57
4	Upper Subordinate Quarters	20
5	Circle Inspector Office	15
6	Extension to Police Stations	35
7	PHQ Single Tower	1
8	Sub Divisional Police Office	2
9	Traffic Police Station	3
10	Police Line	2
11	CBCID Office	1
12	District Passport Cell	2
13	IPS Officers Flat	1
14	DIG Office	2
15	Forensic Science Laboratory	1
16	Other Miscellaneous works	7

Source: The Kerala Police Housing & Construction Corporation Ltd

13.17 Besides the allocation in State Budget, Corporation raises institutional finance from HUDCO and LIC. The Corporation refunded an amount of Rs 13.84 crore to the Government account as per the direction of the Government During 2007-08 no amount was raised from HUDCO as on 30.09.07. The details are given below.

Table 13.3
Fund raised by Kerala Police Housing & Construction Corporation Ltd.

(Rs lakh)

Year	HUDCO	State Budget	Other agencies
2003-04	240.00	255.00	5658.7
2004-05	120.00	289.00	3680.57
2005-06 (revised)	300.00	350.00	4411.15
2006-07(revised)	300.00	350.00	1042.50
2007-08(up to 30.09.07)	0	230.00	1384 *

Source: The Kerala Police Housing & Construction Corporation Ltd
** Rs1 3 84 crore refunded to Government Account.*

Kerala State Housing Board

13 18 Kerala State Housing Board is implementing Public Housing Schemes, Plotted Development Schemes, Commercial Complexes and Revenue Towers by mobilising institutional finance from HDFC. Banks etc. KSHB should initiate rigorous activities to raise more resources by way of aggressive loan recovery, consultancy services, sale of developed house plots, sale of completed houses, enhancing rents of rented out revenue towers etc.

13.19 Suraksha Housing Scheme: The Scheme is meant for economically weaker sections of people having at least 2 cents of land and without a habitable house Government subsidy of Rs 9 thousand per house is granted for constructing a house with the help of voluntary organisations or NGOs. During 2006-07, 145 houses were constructed, for which Rs 13.05 lakh was disbursed. During 2007-08, an amount of Rs 33.66 lakh has been disbursed up to 30.09.2007 for the construction of 374 houses.

13.20 Reconstruction of houses under One Lakh Housing Scheme: The one lakh housing scheme was launched in 1972 and a substantial number of houses are in need of renovation/reconstruction. The Kerala State Housing Board has proposed a new financial pattern of reconstruction of houses under the housing scheme costing Rs 1 lakh for a house. Out of this, the share of the beneficiary is Rs 25 thousand (including voluntary labour), share from philanthropists, Government & Non Government agencies, Local Bodies and from MLA/MP Fund is Rs 25 thousand and a Government subsidy of maximum of Rs 50 thousand to reconstruct single house/duplex houses. During 2006-07, 87 houses under OLHS were reconstructed with the Government share of Rs 17.40 lakh. During 2007-08, Rs 74.88 lakh has been disbursed up to 30 09 2007 for the re-construction of 380 houses.

13.21 Mythri Housing Scheme: The Scheme was implemented for economically weaker sections of the society. Under this scheme KSHB has sanctioned loan to 2.82 lakh beneficiaries and completed & handed over 2.65 houses to beneficiaries. KSHB had expended Rs 77130.46 lakh for the scheme so far. Out of this Rs 23845 59 lakh was capital subsidy from Government The scheme was wound up on 31.03.06.

13.22 In respect of financial assistance, the Central and State Governments are extending their support to a limited extent. In the case of loan component HUDCO was the main banker But

during the last two years HUDCO has not granted any amount by way of loan due to a large outstanding liability of the Housing Board. During 2006-07 KSHB had received Rs 4820 lakh financial assistance from the State Government and Rs 5.07 lakh from the Central Government. But no amount was received from any other agencies during 2007-08 so far The details are given in the following Table

Table 13.4
Fund raised by KSHB

(Rs lakh)

Year	Fund flow		Others
	State Government	HUDCO	
2002-03	5120	0	2520
2003-04	4100	1480.79	0
2004-05	5770	445.49	22.82
2005-06	6500	0	4552.69
2006-07	4820	0	5.07
2007-08 (up to 30.09.07)	0	0	0

Source: KSHB

Kerala State Co-operative Housing Federation

13.23 Kerala State Co-operative Housing Federation Ltd, registered on 23.09.1970 is the apex body for financing the Primary Co-operative Housing Societies in the State. At present 206 Primary Housing Co-operative Societies are affiliated to the Federation. The main sources of funds to the Federation are share capital contribution from member societies and State Government and borrowing from LIC, National Housing Bank, Housing and Urban Development Co-operation. The main objective of the Federation is to provide financing facilities for the affiliated Primary Co-operative Housing Societies for the construction of houses.

13.24 The Federation has received Rs 1413.98 lakh as share capital contribution from Government till 31.03.2007 leaving an outstanding balance of Rs 859.95 lakh. The Federation had mobilized Rs 6500 lakh in 2005-06 and Rs 4000 lakh in 2006-07 till 30.09.07 to strengthen the housing activities of the State. The details in this regard from 2003 to 2007 are furnished in the following Table

Table 13.5
Fund Flow to Kerala State Co-operative Housing Federation (2003-04 to 2006-07)

(Rs lakh)

Year	Funding agencies	Fund raised
2003-04	NHB	1500
2004-05	NHB	4500
	Canara bank	5000
2005-06	Canara bank	4000
	Federal bank	2500
2006-07(up to 30.09.07)	LIC of India	4000

Source: KSCHF

13.25 During 2006-07 (up to 30.09.07), construction of 0.09 lakh housing units was assisted by the Federation by disbursing an amount of Rs 10817.57 lakh. Out of this 0.01 lakh houses was for economically weaker sections (Appendix 13.2).

Financial Institutions

13.26 A large number of financial institutions have been providing assistance for house construction along with the Government agencies in the State. The financial institutions in this respect are Nationalized Banks, HUDCO, HDFC, LIC Housing Finance Ltd, Sundaram Home Finance, GIC Housing Finance, HOUSEFED, Dewan Housing Finance, Canfin Homes, BOB Housing Finance, Kerala State Co-operative Bank, Kerala State Co-operative Agricultural and Rural Development Bank Ltd, HSBC and KSHB. Consequent to the growing competition among these agencies in bank deposit rate and lending rates, the rates of housing loans are also changing with in short spells of time, and in recent months the rates of interest on housing loans have risen.

13.27 Current lowest floating interest rate for house loan is 9 per cent (up to 5 years, Indian Bank). The floating and fixed interest rates in the case of 32 institutions as on 31.10.07 are furnished in Appendix 13.3

HUDCO

13.28 Since its inception in 1970, HUDCO has made steady and significant strides in the field of housing in the country. Within a period of three decades HUDCO assisted construction of more than 143 lakh dwelling units in the country. HUDCO is providing assistance to institutions as well as to individuals

13.29 Besides housing finance, HUDCO is funding the construction of sanitation units, development of plots and urban infrastructure projects. In Kerala, HUDCO had granted funds to all the local bodies which had placed their requests. Besides, a good number of Government and semi-government organizations received financial assistance from HUDCO. Development Authorities, Police Housing and Construction Corporation, Kerala State Backward Classes Development Corporation, Kerala State Co-operative Bank, Kerala State Development Corporation for SC/ST, Kerala State Handicraft Apex Co-operative Society Ltd., Kerala State Housing Board, Kerala School Teachers & Non- teaching Staff Welfare Corporation, Kerala Urban & Rural Development /Finance Corporation, Kerala State Co-operative Federation for Fisheries Development Ltd and Kudumbashree are among the institutions which received assistance from HUDCO

13.30 Details of assistance regarding units, amount sanctioned and amount released by HUDCO during 2003-2007 are furnished below:

Table 13.6
Assistance provided by HUDCO to individuals

(Rs lakh)

Year	Units sanctioned	Amount sanctioned	Amount released
2003-04	411	927.98	1009.7
2004-05	370	1129.03	900.76
2005-06	116	344.6	1003.31
2006-07	82	228.83	210.75
2007-08 (up to 30.09.07)	29	114.93	131.08

Source: HUDCO

LIC Housing Finance Ltd

13.31 LIC Housing Finance Ltd is one of the largest housing finance companies in India. Incorporated on 19th June 1989 under the Companies Act 1956, the Company was promoted by LIC of India and went public in the year 1994. The Company launched its maiden GDR issue in 2004. The Authorized Capital of the Company is Rs 100 crore and its paid up capital is Rs 85 crore.

13.32 The main objective of the Company is providing long term finance to individuals for purchase/construction /repair and renovation of new/existing flats/houses. The Company also provides finance on existing property for business/personal needs and gives loans to professional for purchase/construction of clinics/nursing homes/diagnostic centres/office space.

13.33 The Company has set up a representative office in Dubai to cater to the Non-Resident Indians in the GLCC countries covering Bahrain, Dubai, Kuwait, Qatar and Saudi Arabia.

13.34 Today the Company has over 8 lakh house owners who have enjoyed the Company's financial assistance. The Company has so far disbursed Rs 25,000 crore. The Company also lends to corporate bodies and companies under different schemes for purchase/ construction of office premises for their own use, construction of staff quarters as also for onward lending to meet the requirements of employees, and also to builders and developers for residential and commercial projects.

13.35 In 2005-06, for the fifth year in a row, the Company received the 'AAA' credit rating from CRISIL, indicating the highest level of safety. The Company has been growing steadily since inception both in terms of business & profits.

13.36 The details on loan amount sanctioned and disbursed to assist house construction from 2003 to 2007 from Thiruvananthapuram area office is furnished in the following Table:

Table 13.7
Loan sanctioned and disbursed during 2003-07 by LIC Housing Finance Ltd, Thiruvananthapuram (Area office)

(Rs lakh)

Year	Amount sanctioned	Amount released
2003-04	3028.73	2269.54
2004-05	2192.92	1615.47
2005-06	2088.61	1513.88
2006-07	1862.00	1498.00
2007-08(up to 31.12.07)	1312.00	1300.00

Source: LIC Housing Finance Ltd

13.37 LIC Housing Finance Ltd through its scheme for senior citizens is giving hope to those who are not included in any of the above housing schemes. The Housing Finance Company is opening its first assisted living community centre in Bangalore in May with 100 units. The centre will have residential flats for senior citizens along with services like food, laundry and other house keeping services. The Company has started a 100 per cent subsidy "LICHFL CARE HOMES LIMITED" to conduct the business of providing 'Assisted Living Community Centers' for senior citizens.

CHAPTER 14

POVERTY AND SPECIAL PROGRAMMES FOR WEAKER SECTIONS

Poverty is a social phenomenon and can be defined in an inclusive sense as consisting of a number of elements; lack of access to, or availability of income-earning opportunities, basic health and education, food security; lack of adequate shelter, water or sanitation; lack of land or employment opportunities; and gender discrimination. The list is sometimes further enlarged to include: lack of participation in civil society, social exclusion, alienation, political instability and conflict. The wider defitnition, however, robs the concept of its specificity. In fact the more inclusive the definition is, the less specific it becomes. In India, accordingly, a very specific definition has been traditionally used, namely the fulfillment of the nutritional requirement of 2400 calories per person per day in rural areas and 2100 calories in urban areas. The poverty line is defined as that level of expenditure at which a person accesses this minimal level of calorie intake (which is not the same as the level of expenditure required solely for accessing this intake). The practice has been to take the level of expenditure corresponding to the poverty line in some base year and to update it for subsequent years for each state using the Consumer Price Index Number for Agricultural Labourers for rural areas and the Consumer Price Index Number for Industrial Workers for urban areas. Generally accepted definition of poverty, therefore, emphasizes minimum level of living rather than a reasonable level of living. The state-wise rural and urban poverty lines for 2004-05, arrived at on this basis, are in Table 14.1

Table 14.1
State Specific Poverty Lines for 2004-05

(Rs/month)

Sl. No.	State	Rural	Urban
1.	Andhra Pradesh	292.95	544.30
2.	Assam	387.64	378.38
3.	Bihar	356.36	461.40
4.	Gujarat	353.93	540.80
5.	Haryana	414.76	504.20
6.	Himachal Pradesh	394.20	504.20
7.	Jammu & Kashmir	391.26	504.20
8.	Karnataka	324.17	603.50
9.	Kerala	429.07	562.90
10.	Madhya Pradesh	324.48	569.00
11.	Maharashtra	362.25	664.50
12.	Orissa	325.65	544.00
13.	Punjab	410.38	456.10
14.	Rajasthan	374.57	531.10
15.	Tamilnadu	351.86	551.70
16.	Uttar Pradesh	369.76	487.10
17.	West Bengal	382.82	446.10
18.	All-India	358.03	540.40

14.2 This method, however, is extremely unsatisfactory. The CPIAL for instance is a Laspeyre price index with 1973-74 as its base year. When the poverty line updates using this index, the presumption is that the weighted average price increase of this commodity bundle is a measure of the "true" cost-of-living increase of the rural poor. This presumption is entirely unfounded for a number of reasons: first, there has been a significant increase in monetization in the economy. In the transition from kind to cash payments, traders' margin gets added which the CPIAL cannot possibly reflect. Secondly, the poor who had access to common resources earlier are now excluded from them and have to purchase them from the market which makes the increase in their cost of living much greater than what the CPIAL indicates. Thirdly, greater awareness of health needs, together with a shrinking of public health-care facilities, enforces larger health expenditures on the people, which again are not reflected in the CPIAL. For all these reasons the official poverty estimates based on the updating of a three decades-old "poverty line" represent gross underestimates. The magnitude of this underestimation can be seen from the fact that at the official poverty line for 1999-00, at which people should in principle have been able to access 2400 calories in rural India, the actual calories they could access was only 1890 per person.

14.3 The main source of data for poverty estimation is the National Sample Survey on Consumer Expenditure. Using these data and the poverty line estimated in the manner discussed earlier the incidence of poverty in the country is estimated to have behaved in the manner shown in Table 14.2.

Table14.2
Incidence of poverty in the country

Sl. No.	Year	Poverty Ratio (%)			Number of Poor (Million)		
		Rural	Urban	Combined	Rural	Urban	Combined
	2	3	4	5	6	7	8
	1973-74	56.40	49.00	54.90	261.30	60.00	321.30
	1977-78	53.10	45.20	51.30	264.30	64.60	328.90
	1983	45.70	40.80	44.5	252.00	70.90	322.90
	1987-88	39.10	38.20	38.90	231.90	75.20	307.10
	1993-94	37.30	32.40	36.00	244.00	76.30	320.30
	1999-2000	27.10	23.60	26.10	193.20	67.10	263.30
	2007*	21.10	15.10	19.30	170.50	49.60	220.10

Source: Tenth five-year Plan, vol.1 Planning Commission, GOI, New Delhi
**Poverty Projection for 2007*

14.4 Table 14.2 indicates that the poverty ratio has declined from 54.90 per cent in 1973-74 to 26.10 per cent in 1999-2000. The proportion of poor in the rural area fell from 56.4 to 27.1 in the same period; in urban areas the decline was from 49 to 23.6 percent. For reasons discussed earlier, these figures however are quite meaningless. Much debate has taken place in the country over the unreliability of the 1999-2000 estimates owing to the changes in recall period that characterized that round of the Survey. But a far more serious problem concerns the fact that the very "poverty line" taken for estimating poverty is a gross underestimate, so much so that if we make a direct estimation of poverty, simply by working out how many persons in rural India in 1999-2000 could not access 2400 calories per day (we can on the basis of the same NSS data make this calculation), then the figure comes to a staggering 75 percent! The official claims about declining poverty in the country therefore have very little basis in facts.

Poverty Scenario in Kerala

14.5 Kerala's recent initiatives in democratic decentralization have brought to the fore issues related to poverty and the role of different tiers of local government in poverty reduction. As participatory micro-level planning is being institutionalized, the need for a correct estimation of poverty and the question of a socially acceptable method for identifying the poor has assumed importance. The assessment of poverty at the local level can no longer be through vague and crude measures; such assessment would have to be transparent, comprehensive and simply reflecting the perceptions of the people along with those of the experts.

Assessment of Poverty

a) Poverty Assessment through sample surveys

14.6 Like in the rest of the country NSS Consumer Expenditure data have been used to identify the extent of poverty in the State. It is based on this assessment that central government funds for various Anti-Poverty programmes are released to the State. As per the NSSO 55th round (1999-2000), Kerala has poverty figures of 9.38 per cent in the rural area and 20.27 per cent in the urban areas, whereas at the all India level, it is 27.09 percent in rural areas and 23.62 percent in the urban areas. But as in the case of India as a whole, these figures are gross underestimates. At the official poverty line for 1999-2000 in rural Kerala, only 1440 calories could be accessed which is 960 calories short of the 2400 calories that define poverty! If we stick to the norm of 2400 calories for rural areas, then the number of persons in rural Kerala who could not access this norm in 1999-2000 comes to a staggering 82.5 percent! Even if we take a lower norm of 2100 calories for rural Kerala the proportion that could not access it in 1999-2000 still comes to 60 percent. And at a still lower norm of 1800 calories the proportion still comes to 38 percent. The figure of 9.38 percent therefore appears to be a completely arbitrary and meaningless figure, and a gross underestimation of rural poverty. This fact of underestimation is also borne out by other measures discussed below.

b) Other measures related to Poverty Assessment

14.7 The Human Poverty Index (HPI) using the UNDP methodology (Index of survival deprivation, deprivation of education and deprivation in economic provisioning with respect to safe water, health services and under-nourished children) is 15 for Kerala whereas it is 36.7 for the whole country. Similarly the Human Development Index (1995) (Index of life expectancy, educational attainment and income) for Kerala has been calculated as 0.638 whereas it is only 0.451 for the whole country. The HDI and HPI values for Kerala and some Asian countries make interesting comparison.

Table14.3
HDI and HPI Values for Kerala and some Asian Countries

Country/State	HDI Value (1995)	HPI Value (1996)
Kerala	0.638	15.0
India	0.451	36.7
Sri Lanka	0.716	20.7
Thailand	0.838	11.7
Malaysia	0.834	N.A
Indonesia	0.679	20.8
China	0.650	17.5

14.8 The Capability Poverty Measures (Index of percentages of under-nourished children, women with non-institutional deliveries and female illiteracy – (CPM-I using the stunting concept CPM-2 using the wasting concept) give Kerala the following position:

	CPM-1	CPM-2	Rank (least)
Kerala	12.0	10.7	1
India	52.3	45.0	1

14.9 Human Development Measures – HDM1 to measure capabilities and opportunities at the micro level and HDM2 to measure capabilities and opportunities at the macro level also give Kerala a high position.

HDM – 1

Income & Poverty Index	0.642(1)*	HDM-1 0.636(1)
Education Index	0.909(1)	
Health Index	0.951(1)	
Housing Index	0.089(13)	
Participation Index	0.587(1)	

14.10 Kerala is at the top in the country in human development index (0.638). This position is consistent since 1981. This is because of the physical quality of the life of the people. Punjab (0.537) stood next to Kerala followed by Tamilnadu (0.53); HDI is the lowest for Bihar. Poor States show relatively poor performance on HDI. Similarly, the economically better off States are the ones with relatively better performance on HDI. But the relation between HDI and the level of development does not show any correspondence in the case of middle income States. For example, some States like Kerala have high attainments of HDI at the same time there are States like Andhra Pradesh and West Bengal where HDI values are not as high The details are given below: -

Table 14.4

Human Development Index of Major States

States	1981		1991		2001	
	Index	Rank	Index	Rank	Index	Rank
1. Andhra Pradesh	0.298	9	0.377	9	.416	0
2. Assam	0.272	10	0.348	10	.386	4
3. Bihar	0.237	15	0.308	15	.367	5
4. Gujarat	0.360	4	0.431	6	.479	
5. Haryana	0.360	5	0.443	5	.509	
6. Karnataka	0.346.	6	0.412	7	.478	
7. Kerala	**0.500**	**1**	**0.591**	**1**	**.638**	
8. Madhya Pradesh	0.245	14	0.328	13	.394	2
9. Maharashtra	0.363	3	0.452	4	.523	
10. Orissa	0.267	11	0.345	12	.404	1
11. Punjab	0.411	2	0.475	2	.537	
12. Rajasthan	0.256	12	0.347	11	.424	
13. Tamilnadu	0.343	7	0.466	3	531	
14. Uttar Pradesh	0.255	13	0.314	14	.388	3
15 West Bengal	0.305	8	0.404	8	.472	
All India	**0.302**	-	**0.381**	-	.472	

c) **Innovative initiatives in assessment of poverty.**

14.11 In the early 90s, a break-through was made in the assessment of poverty in a pilot project on Urban Basic Services Programme in Alleppey Town, which was supported by UNICEF. It was felt that the conventional head count system was too much remote from the people and that a transparent index based on well-recognized features of poverty would be more acceptable. Trained Community Volunteers and ICDS Volunteers in seven Wards of Alleppey conducted a survey of 5728 families. The analysis of the survey led to the development of a set of nine criteria for identifying the most vulnerable families who were classified as risk families. The risk index or poverty index was formulated consisting of the following nine non-monetary factors, each reflecting a kind of deprivation

1.Kutcha House
2.No access to safe drinking water
3.No access to sanitary latrine
4.Illiterate adult in the family
5.Family having not more than one earning member
6.Family getting barely two meals a day or less
7 Presence of children below 5 years in the family
8 Alcoholic or drug addict in the family
9.Scheduled Caste or Scheduled Tribe family

A family, which had four or more of the risk factors, was classified as high-risk poor.

Poverty Profile

14.12 Though the poverty figures of the sample survey conducted by the NSSO in its 55th round amount to only 9.38% in rural and 20.27% in urban areas, the 1997 BPL census conducted by the Rural Development Department shows that it is 36.58% in rural areas and 27.8% as per the urban survey conducted by department of Urban Affairs. Interestingly the Community Based Organization of Poor created by the Kudumbashree has a membership of 32, 10,440 families. Absolute poverty, which has been the focus of attention in India, is closely linked to "simple unemployment". From the proposition that "simple unemployment" in the state is seriously underestimated, it would follow that the magnitude of absolute poverty too is underestimated. According to the Planning Commission's estimate, the rural poverty ratio in Kerala went down from 25.73 percent in 1993-94 to a mere 9.4 percent in 1999-2000 But while rural poverty is officially defined in terms of a calorie norm of 2400 per person per day, these poverty percentages do not actually refer to the population falling below this norm on the two dates. They refer to the population below a "poverty line". This "line" corresponded to the level of expenditure at which a person got 2400 calories per day in the base year, and is updated for every subsequent year by using the Consumer Price Index for Agricultural Labourers. There would be no problem with the use of this "poverty line" if it was the case that those on this line on any date were actually accessing at least 2400 calories per person per day But the amount of calories accessed in Kerala at the "poverty lines" corresponding to the two dates mentioned above was only 1526 and 1440 respectively.

14.13 From 61st round of the National Sample Survey (NSS) conducted in 2004-05, it is estimated that all India poverty in 2004-05 was 28.7 percent in rural areas, 25.9 percent in Urban areas and 27.9 percent overall. But in Kerala it was 13.2 percent in rural areas and 20.6 percent in urban areas during 2004-05. While during 1993-94 the all India Rural poverty was 37.2 percent and 32.6 percent was urban poverty, that of Kerala was 25.4 percent in rural and 24.3

percent was urban poverty. The 61st round data confirms that the some what faster post reforms GDP growth has not been accompanied by more rapid poverty reduction. It has, in fact, been accompanied by an increase in inequality.

14.14 Although poverty did reduce between 1993-94 and 2004-05 the pace of poverty reduction was lower than in the previous two decades. Taking the rural and urban together, the pace of poverty reduction fell from 1.1 percent point per annum during 1973-88 to only 0.6 percent point per annum during 1987-1993 and 0.7 percent point per annum during 1993-2005. The 61st round should, therefore, set at rest all claims that economic reforms have led to faster poverty reduction.

14.15 The rather strange upshot from the various available NSS data sets used together with official price deflators is that while the period from 1989-90 to 1998 saw insignificant rural poverty reduction despite fairly high growth in measured agricultural GDP, the period after 1999-2000 is associated with significant rural poverty reduction despite stagnant agricultural growth. In conjunction with the fact that the 61st round results reported show that the annual rate of urban poverty reduction nearly halved in the period 1993-05 as compared to 1983-94, although GDP growth accelerated, there is a general indication of disassociation between GDP growth and poverty reduction in the post reform period.

14.16 Gender differences in average income from employment were very prominent. While women employees earned Rs.1185, 1146 and 3570 respectively in Primary, Secondary and Tertiary sectors, the male employees earned Rs.2560, 3510and 4216 respectively.

Special Features of Poverty in Kerala

Spread out Population

14.17 In Kerala neither in villages nor in towns, people live in scattered habitats. The population is spread out over the geographical area. This habitation pattern often costs more for providing infrastructure facilities such as housing, water supply and sanitation etc. The pattern of the habitat has also influenced the life style of the individuals and families.

Educated poor

14.18 Though poverty rate more or less equates with the all India rate the structure of poverty is entirely different from that of the country. With the progressive reform initiatives of the State Government from time to time, the literacy levels are very high in the state and consequently the poor families also are conscious about the value of education. In Kerala 100% children at the age of 5 are enrolled in school and the drop out rate is as low as 1.5%. The compulsory schooling has rather become a culture of the state. This has resulted in educated unemployment.

Assetless poor

14.19 As far as the poor are concerned, they do not possess any income generating assets especially agricultural land or any other form of assets. The tiny homestead most of them acquired by virtue of the land reforms has been further fragmented decades ago; keeps them in poverty for generations and assetlessness.

Malnutrition

14.20 The statistics show that in Kerala there are 36, 53,578 children in the age group of 0-6 and out of this 9, 89,868 are in the pre school age group i.e. 3-5. Of the population of pre school children, 50% are covered by the Anganyadies of Social Welfare Department and 30% covered by other institutions. The remaining 20% children are out side pre schooling.

New Strategy of Poverty Reduction

14.21 Stated briefly, the failure of anti-poverty programmes in the past can be attributed to the fixation of target, lack of involvement of beneficiaries, absence of poor understanding of poverty and its causes and manifestations, the top down approach and the over dependence of bureaucracy. Kerala is seeking to achieve a breakthrough in participatory poverty reduction through Kudumbashree, which is implemented by the State Poverty Eradication Mission through the local governments. All urban local governments and Village Panchayats have been included under Kudumbashree.

Kudumbashree Programmes in Rural Areas

14.22 State Poverty Eradication Mission implements this Programme by organizing the poor by creating community based structures of women below poverty line with focus on self help, demand – led convergence of available services and resources under the leadership of the Local Governments. The key components of the programmes are:

- Enabling certain minimum needs infrastructure, setting up of micro enterprises and capacity building of the poor
- Providing high quality support services for the design and implementation of self-employment ventures.
- Setting up of Challenge Fund to support pro – poor policies of the Local Governments, a Technology fund to support transfer of technology relevant for poverty reduction, an Innovation fund to support path breaking innovations in poverty reduction and a common revolving fund to provide seed capital for micro enterprises.
- Expansion of Asraya:- Destitute Identification Rehabilitation and Monitoring Project was launched during 2002-03 in 101 Grama Panchayats and later expanded to all grama panchayaths.
- Generating jobs for educated youth.
- Special schools for physically and mentally challenged.
- Conduct an evaluation study on Kudumbashree.

Community Based Organizations for the Poor

14.23 The Kudumbashree programme covered the entire rural area in the state formed 168157 NHGs, 15832 ADS and 999 CDS. Community Based Organizations, which has coverage of 3243395 families, mobilized a sum of Rs. 8480312526 crores as thrift fund and disbursed credit to the tune of Rs.21861166334 crores to its members. The Panchayat functionaries and CDS/ADS Office bearers were trained utilizing the plan funds for strengthening the CBOs. [District wise details Appendix 14.2]

Linkage Banking

14.24 The Linkage Banking Programme was launched during 2002-2003 after proper grading the NHGs as per NABARD norms. During 2002 - 03, and up to 31st October 2007, 108562 were

graded and 86805 NHGs were linked with banks. A sum of Rs.48385.98lakhs has been made available to the NHGs as loan. [District wise details Appendix 14.3]

Lease Land Farming

14.25 The Lease Land Farming programme, initiated in the rural areas during the year 2002-03, has been successfully extended to 820 Grama Panchayats. In these Panchayats 27316 NHGs consisting of 223779 families have participated in the programme. During the year 2006-07, through this programme 46782.36 Acres of land has been brought under cultivation [District wise details Appendix 14.4]

Bala Sabha

14.26 During 2004 - 05, Bala Sabha that intends to prevent intergenerational transmission of poverty, has been extended to the rural area also. So far, 41872 balasabhas have been formed with 728978 children. [District wise details Appendix 14.5]

IT Enabled services to the Poor

14.27 An innovative component in the Destitute Identification Rehabilitation and Monitoring project is the online monitoring system built in the project. As per the project, the CDS Office will be computerized in these Panchayats where the destitute rehabilitation project is taken up and the system provided would be best utilized for the benefit of the poor.

Micro Enterprises in Rural areas

14 28 The State budget provides support to set up micro enterprises of women. It has been set up in the pattern of the SGSY. So far 3165 groups of micro enterprises of women have been set up in the rural areas. The activities are diverse and innovative in nature. Apart from this, about 1155 individual enterprises are also functioning in the rural areas. [District wise details Appendix 14 6 & 14.7]

Self Sufficient, Self reliant and Sustainable CDS

14.29 The scaling up of Kudumbashree programme to rural areas has been completed and the CDS System is in vogue in all the Grama Panchayats. But still there is a lot to go to achieve the end goal of Kudumbashree. Therefore, it has been decided to develop a few Panchayats, at least one from each District as a model in poverty alleviation. With the objective of total eradication of poverty, the novel programme 'Self sufficient, Self reliant and sustainable CDS' has been launched.

Box 14.1
Kudumbashree – The Journey so far

The significant achievements of Kudumbashree are listed below:

- Kudumbashree Programme has been extended through out the State.
- Thrift Fund collection crossed Rs. 848.03 crores
- Internal lending to the tune of Rs.2186 crores
- Under Linkage Banking scheme, 108562 NHGs were graded and 86805 NHGs linked with banks.
- Credit flow Rs.483.86 crores through linkage banking.
- Formed 41872 Balasabhas with 728978 children
- Bhavanashree – 4928 houses constructed using credit amounting to Rs.1715.66 lakh from banks, during 2007-08
- Ashraya Destitute Identification, Rehabilitation and Monitoring (DIRM) Programme launched in 640 Grama Panchayats and 17 Municipalities.
- Started 118 Vidyashree units under IT @ School Programme.
- Cluster Development Programme with the support of Industries Department.
- Multi purpose job clubs formed with the financial support of SC Development Department.
- Loan linked Micro Housing scheme launched with the support of Banks.

Source: Kudumbashree, Government of Kerala

Ashraya - A programme for Community based rehabilitation of destitute families.

14.30 Ashraya is the first integrated programme for tackling the poorest of the poor who live at the margins of the economy, society and polity without a voice or the power of choice, with no capabilities to access entitlements – the really 'excluded'. It originated from the realization that even in a State like Kerala, the benefits of Anti-Poverty policies and programmes do not reach the absolutely poor, who constitute only about two percent of the population.

14.31 As of now, there are no schemes akin to Asraya in India targeting the poorest of the poor. Thus, Ashraya is a pioneer, developing a model, which can be adapted by the rest of the country. Hence, special support from Government of India is expected.

Box 14.2
The key features of the programme 'Ashraya' are:

1. It is a sub – programme of Kudumbashree, the highly successful anti – poverty mission mode programme implemented through community-based organizations of Kudumbashree. This three - tier network organization include every poor family in the State and each family being represented by a woman.
2. These CBOs identify the poorest of the poor using socially accepted objective indicators of poverty.
3. The Grama Panchayats and Municipalities are the real planners of this project with Government playing the role of an active facilitator.
4. After transparent identification participatory plans are prepared for each destitute family on the basis of close interaction with the family members and on-site verification of details.

5. The plans are implemented by converging services and resources from different sources including PDS, Special Nutrition, Health, Remedial Education, Pensions, Basic Minimum services, Skill Development, etc. Gaps are filled up with funds from Panchayats and Municipalities with the State share being limited to 25% of the project cost or Rs.10 lakhs whichever is lower.
6. The entire programme is monitored regularly. The destitute families would be taken care of till they achieve a minimum standard of life. Thus Ashraya is not one-time assistance but is a promise of continuous support till the objective is realized.

Source: Kudumbashree, Government of Kerala

14.32 The destitute identification, rehabilitation and monitoring as a composite programme is an extension of the poverty eradication mission of Kudumbashree through the Community based Organizations of poor. The Mission has rekindled their hope and sensitized the Local Self Government institutions about their new roles in focussed poverty eradication through community development.

The Destitutes

14.33 The destitutes are the poorest of the poor. They are the outliers of the development scenario in the negative extreme. They live at the margins of the economy, society and polity. They do not have a voice or the power of choice. They face the worst forms of deprivation and lack of access to the minimum services. They are exposed to all forms of vulnerability and do not have any safety net against risks. Their income is below subsistence and they are dependent. These faceless, powerless people lack capabilities and are neither aware of their entitlements nor can they access them. They neither compete nor bargain. They drift pushed by circumstances. Severity of destitution is by unfavorable physical gender or caste status. That is, disability being a disabled, being a widow, belonging to a scheduled caste or tribe can singly or in combination aggravate the suffering. The collapse of the traditional social support systems has orphaned the destitutes. They are sometimes objects of charity But they are never subjects of development. They have to be invested with identity, personality and empowered to stand on their own. Only an Antyodaya approach can reach them. Only care and support can lift them, They can develop only after a period of well - targeted well - designed welfare.

Identification of Destitute families

14.34 The destitute families are identified following the 9-point indices developed by the State Poverty Eradication Mission.

Rural

1. No Land /Less than 10 cents of Land
2. No house/Dilapidated House
3. No Sanitary Latrine
4. No access to safe drinking water within 300 meters
5. Women headed house hold/ Presence of a widow, divorcee / abandoned lady/ Unwed mother
6. No regularly employed person in the family
7. Socially Disadvantaged Groups (SC/ST)

7. Presence of Mentally or physically challenged person / chronically ill Member in the family
9. Families with an illiterate adult member

14.35 The identification is done transparently through the Neighborhood Groups (NHG) network of Kudumbashree. The members of Neighborhood Groups belong to poor families but need not be destitute. At the same time, since the members of Neighborhood Groups belong to a specific geographical area, they know who all the specified destitute families within their Neighborhood are better than anyone else. The preparation of Micro Plan using the Risk Indices and problem identification mechanism also enables them to identify the destitute families in their vicinity.

Samagra - Local Production Marketing Network

14.36 Samagra is an innovative programme independently evolved by Kudumbashree incorporating Rural Business Hub initiative launched by Ministry of Panchayati Raj, Government of India and micro enterprise development activities of Kudumbashree. In general Samagra means comprehensive development job. This is an all inclusive programme encompassing all the components from production to marketing, helping the people involved to derive maximum possible income and thereby improving the returns from livelihood of the people in that area.

This programme is to be implemented by involving all the agencies working in that area under the leadership of the local government with the following objectives:-

- Productivity improvement
- Quality enhancement
- Product diversification
- Ensuring market for the produce
- Increased people participation
- Increased women participation
- Poverty reduction
- Capacity Building

Market Interventions of Kudumbashree

14.37 The State Poverty Eradication Mission – Kudumbashree and the Local Self Governments have jointly taken up a comprehensive study during September/October 2006 on the socio economic impact of Micro enterprises created the Local Self Governments and various Government departments and agencies including Kudumbashree. It revealed that in many of the LSGs the marketing of products of Kudumbashree micro enterprises and Kudumbashree NHGs are facing difficulty. The lack of market for the products and the inability to compete against standard products is an important factor on sustainability of the enterprise. To meet this challenge the state Poverty Eradication Mission decided to set up Monthly markets in each district on a specified days and venue. The entrepreneurs are given opportunity to bring their products and directly sell to the customers. It has facilitated increased production and efforts at standardization of product quality and presentation by entrepreneurs. The monthly markets held from October 2007 to December 2007 attracted 2,463 entrepreneurs and had a turnover of Rs. 45,95,838/-. The monthly market of Kudumbashree was begun as a preliminary to the setting up of innovative market centered in each Grama Panchayat/Municipality exclusively for the products of enterprises created under the leadership of LSGs.

14.38 A detailed plan for inter district transfer of products is being tried out through Monthly markets which can sustain itself with the setting up of permanent market centers. Action is underway to develop an umbrella brand value for Kudumbashree products.

Other major poverty alleviation programmes

14.39 Other major poverty alleviation programmes implemented in the state through Panchayat Raj Institutions are Swarnajayanthi Gram Swarozgar Yojana (SGSY), Indira Awas Yojana (IAY), Sampoorna Gramin Rozgar Yojana (SGRY) and Pradhan Mantri Gram Sadak Yojana (PMGSY)

1. Swarnajayanti Gram Swarozgar Yojana (SGSY)

14.40 The objective of the programme is to provide self employment to the poor establishing a large number of micro enterprises in the rural areas building upon the potential of the rural poor. Emphasis will be given to group approach in this programme.

(1) The objective of SGSY is to uplift every assisted family above the poverty line within three years time. SGSY is conceived as a holistic programme of micro enterprises covering all aspects of self employment viz. Formation of self-help groups, capacity building, and planning activity clusters infrastructure buildup, technology, credit and marketing.

(2) This Programme will adopt a project approach in each key activity. SGSY is a credit cum subsidy programme where credit forms the critical component. This programme lays emphasis on skill development through training courses. It also proposes to ensure technology up gradation in identified activity clusters.

(3) Subsidy under SGSY will be uniform at 30% of the project cost subject to maximum of Rs. 7500/-. In respect of SC/STs this will be 50% and Rs. 10,000/-respectively For group Swarozgaris the subsidy would be at 50% of the project cost subject to per capita subsidy of Rs. 10,000/- of Rs. 1.25 lakhs whichever is less. There will be no limit on subsidy for irrigation projects. The programme expects at least 50% of the Swarozgaris to be SC/STs, 40% to be women and 3% to be disabled.

The allocation and release of the scheme for the years 2006-07 and till the end of November 2007 are indicated below:

Table 14.5
Allocation, Release and Expenditure of SGSY

(Amount Rs in Lakhs)

Year	Opening balance	Allocation			Release			Total fund	Expenditure	% of exp.
		Centre	State	Total	Centre	State	Total			
2006-07	113.15	1996.54	1288	3284.54	1994.78	664.93	2659.71	2773.22	2717.76	98
2007-08 (Nov. 07)	53.29	3042.75	1288	4330.75	1521.38	507.12	2028.50	2081.79	1546.89	74
TOTAL	**166.44**	**5039.29**	**2576**	**7615.29**	**3516.16**	**1172.05**	**4688.21**	**4855.01**	**4264.65**	**88**

Total amount of subsidy and credit disbursed to SHGs and individual swarozgaris during 2006-07 and up to the month of November 2007-08 are as follows:

Table 14.6
Credit and Subsidy Disbursed

Year	Credit disbursed to (Rs.in Lakhs)			Subsidy disbursed to (Rs.in Lakhs)		
	SHGs	Ind.Swaroz-garis	Total	SHGs	Ind.Swaroz-garis	Total
2006-07	2793.03	1136.89	3929.92	1500.43	485.36	1985.79
2007-08 (Nov. 07)	1922.75	694.44	2617.19	863.68	271.05	1134.73
Total	**4715.78**	**1831.33**	**6547.11**	**2364.11**	**756.41**	**3120.52**

14.41 A total numbers of 1395 SHGs, started economic activities, covering 18089 members during 2006-07 and in the case of individual swarozgaries, the coverage is 5022. During the current financial year up to the month of November 2007, 757 enterprises covering 9522 members and 2815 swarozgaris were benefited by the programmes as shown in the Table 14.7

Table 14.7
Achievement of SGSY during 2006-07 & 2007-2008 as on November 2007

Year	Self Help Group (No of members covered)					No.of Individual Swarozgaris				
	Total	SC	ST	Women	Disabled	Total	SC	ST	Women	Disabled
2006-07	18089	5898	700	15650	127	5022	4181	268	2322	557
2007-08 (Nov. 07)	9522	3267	452	7681	156	2815	2183	203	1184	332
TOTAL	**27611**	**9165**	**1152**	**23331**	**283**	**7837**	**6364**	**471**	**3506**	**889**

2. Indira Awaas Yojana (IAY)

14.42 The objective of Indira Awas Yojana is to help construction of dwelling units by members of SC/ST, freed bonded labourers and also non-SC/ST, rural poor below poverty line by providing them with grant-in-aid @ Rs. 27,500/- per house. This is a Centrally Sponsored Scheme sharing cost between Centre and State in the ratio of 75:25.

14.43 The beneficiaries of the scheme are selected by Grama Sabhas, having at least two cents of land for house construction. They should not have dwelling units fit for occupation. The assistance is sanctioned to the female members of the family or in the joint name of husband and wife. House constructed under the scheme should have not less than 20 sq.mts of plinth area but no plans or design is prescribed.

14.44 Out of the total allocation for Indira Awas Yojana, up to 20% of the total funds can be utilized for up gradation of existing kutcha houses and towards subsidy for construction of houses with credit from Banks/Financial Institutions. The maximum assistance available is Rs. 12,500/- per family

14.45 The Physical achievements during 2006-07 & up to the month of November 2007-08 are as follows:

14.56 Rural Development Department is the nodal agency for implementation of the programme in the State. The programme is under implementation in 55 Blocks spread over all the 14 districts. PMGSY is a 100% centrally sponsored scheme at present. Government of India has released Rs 13697.00 lakhs since the inception of the scheme. The total fund available including interest is Rs.13788.56 lakhs. Out of this Rs 11495.09 Lakhs has been spent up to the month of October 2007.

Table 14.12

Physical And Financial Status as on 31 th October 2007

Rs. In Lakhs

Sl. No.		Phase-I (2000-01)	Phase-II (2001-02)	Phase-III (2003-04)	Phase-IV (2004-05)	Phase-V (2005-06)	Total
1	Project Cost	1990.00	5722.00	2077.00	5276.00	4843.54	19908.54
2	Total Number of Roads	33	184	53	96	84	450
3	Roads Completed	29	162	33	32		256
4	Road Dropped	0	7	1	6	7	21
5	Not Started	0	0	4	0	24	28
6	In Progress	4	15	15	58	53	145
7	Total	33	184	53	96	84	450
	Work details						
1	Length of roads taken up (Km)	106.610	287.976	99.065	179.472	163.919	837.042
2	Length of Roads Completed (in Km)	81.610	254.575	62.924	25.139	0	424.248
3	Length of Road in Progress (in Km)	25.000	26.157	29.766	154.333	98.72	333.976
4	Length of Road not Started	0.000		5.265	0	65.199	70.464
5	Length of Road Dropped (km)		7.244	1.11	0	0	8.354
Status of Roads in Progress (Number)							
I	BT Completed		2	0	0	0	2
II	BT in Progress		1	0	0	0	0
III	Metalling completed		2	1	12	0	15
IV	Metaling in Progress		0	9	16	8	33
V	Formation & CD completed		5	3	18	17	43
VI	Formation & CD in progress	4	6	2	12	28	52
SUB TOTAL		**4**	**16**	**15**	**58**	**53**	**145**

FINANCIAL						(Rs. In Lakhs)
Funds received	1990.00	5630.00	2077.00	2500.00	1500.00	13697.00
Interest		91.56	0.00		0.00	91.56
TOTAL	1990.00	5721.56	2077.00	2500.00	1500.00	13788.56
Expenditure [up to 30/11/2007]	1662.58	5250.71	1669.76	2603.72	308.32	11495.09
Percentage of Expenditure	83.55	91.77	80.39	104.15	20.55	83.37
BALANCE	327.42	470.85	407.24	-103.72	1191.68	2293.47

Source- Commissionorate of Rural Development

Scheme under National Rural Employment Guarantee Act- 2005

14.57 The National Rural Employment Guarantee Act, 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 house hold whose adult members volunteer to do unskilled manual work.

14.58 Every household whose adult members volunteer to do unskilled manual work would be entitled to get registered with the Grama Panchayat and get a job card. They may submit their names, age and the address of the household to the Grama Panchayat at the village level for issuance of a job card. It shall be the duty of the Grama Panchayat to register the household, after making such enquiry as it deems fit and issue a job card containing such details of adult members of the household affixing their photographs.

14.59 Every registered household would be entitled to at least 100 days guaranteed employment at the wage rate. The act provides that the wage rate specified from time to time under any such notification shall not be at a rate less than sixty rupees per day.

14.60 Every eligible applicant, subject to the household entitlement, is entitled to get work within 15 days for as many days as he/she applies. Applications for work must be for at least fourteen days of continuous work. A period of employment shall ordinarily be at least fourteen days continuously with not more than six days in a week.

14.61 If the eligible applicant is not provided employment within 15 days of receipt of applications or from the date from which the applicant seeks employment (in the advance applications), he or she shall be entitled to a daily unemployment allowance, in cash.

14.62 The central government will provide 90% of funds and State Governments will provide for 10% of the total funds.

Table 14.13
Details of Registration and Job Cards issued 2007-08 up to November 2007.

Sl No	Name of District	Registration					Job Cards Issued				
		SC	ST	BPL	Others	Total	SC	ST	BPL	Others	Total
1	Wayanad	7705	31031	69835	8855	117428	6821	29683	67893	5911	110308
2	Palakkad	38370	12943	179487	47650	183150	36100	11836	183150	67249	163837
3	Kasaragod	4702	5738	34356	41095	85891	524	322	1662	2701	5209
4	Idukki	23785	14081	71726	9951	119543	40	0	632	428	1100
	Total	74563	63793	355404	107552	506012	43485	41841	253337	76289	280454

Source. Commissionerate of Rural Development

The details of financial performance under NREGA during the year 2006-07 and 2007-08 up to November 2007 are indicated below.

Table 14.14
Financial Performance under NREGA during the Year 2006 to 2007 November

(Rs. lakh)

S L N o	District	Actual LOB as on 1st of April of the year	Release of last year has received during the current year		Release during current year		Misc. Receipts	Total Availability	Cumulative Expenditure				
			Centre	State	Centre	State			On Un Skilled wages	On Semi skilled and skilled wages	On Material	On Contingency	Total (10+11+12+13)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Wayanad	1966.45	0	0	2437.32	227.27	25.27	4656.31	2788.84	123	103.63	82.96	2976.65
2	Palakkad	1443.47	0	0	3586.06	249.13	51.01	5329.67	3027.51	143.28	232.29	232.13	3635.21
3	Kasaragod	0.00	0	0	647.53	0.00	0.00	647.53	0.00	0.00	0.00	13.15	13.15
4	Idukki	0.00	300	0	538.65	0.00	0.00	838.65	0.00	0.00	0.00	43.69	43.69
	Total	3409.92	300	0	7209.56	476.40	76.28	11472.16	5816.35	144.51	335.92	371.93	[illegible]

Source: Commissionerate of Rural Development

14.63 Wages and payments: Not less than Rs. 60 per day per person (the minimum wage in Kerala is Rs.125). Minimum wages fixed for agricultural labourers by the respective State Governments will be paid as wages under the schemes till such times that the central Governments, specifies wage rate which will not be less than Rs. 60 per day per person. Wages

will be paid fully in cash/partly in cash and partly in kind. However minimum 25% wages shall be paid in cash. Wages are to be paid on weekly basis and in any case not later than 15 days.

Box 14.3

The State Government shall meet the cost of the following.

- The cost of unemployment allowance payable under the scheme.
- 1/4th of the mentioned cost of the scheme including payment of wages to skilled and semi skilled works subject to the provisions of Schedule II of the NREG Act.
- Establish a fund called the State Employment Guarantee Fund.

14.64 The EGA is a unique opportunity to activate and empower the Panchayat Raj institution including Grama Panchayat and Grama Sabhas and it will give the scope for meaningful employment generation resulting in reduction of poverty in rural areas.

(Employment generation under NREGA .see Appendix 14.9,14.10)

The major responsibility for programme implementation has been given to the Panchayat Raj institutions

14.65 The NREG Act, 2005 gives priority for water harvesting and water conservation, drought proofing including afforestation and plantation, construction of irrigation canals, micro and minor irrigation works and provision of irrigation facilities to land owned by Scheduled Castes and Scheduled Tribes. Renovation of traditional water bodies, land development and rural connectivity has also to be given priority in the Annual Works Programme that is to be prepared by the implementing agencies.

14.66 Government of India issued the notification on 2.2.2006 to launch National Rural Employment Guarantee Act for 200 selected districts in the country. The act will be extended to the whole Kerala by April 2008

Box 14.4

Special Features of Kerala implementation

Kerala's approach was 12 – fold as stated below:

(1) To mitigate agrarian crisis through eco-restoration initiatives
(2) Lead role of PRIs
(3) To ensure additional income of Rs 12, 500/- per year to any family seeking employment. Every person working under the Scheme shall be entitled to wages at the minimum wage rate fixed by the State Government for agricultural labourers under the Minimum Wages Act, 1948. In the State, the minimum wage fixed is Rs. 125/-
(4) To eliminate middlemen through
    - Wages for the workers paid through individual bank accounts.
    - The Area Development Society provides a Volunteer who helps in organizing the work, ensures proper maintenance of muster rolls and provision of work-site facilities (She steps into the managerial space vacated by the Contractor)
    - Estimates discussed up-front with the labour groups
    - Estimates in local language exhibited at work sites.

- ADS Volunteer is paid daily minimum wage

(5) Low priority to roads (only 10 %)
(6) Gender sensitive planning and implementation leading to empowerment of poor women through

- Equal wages (strategic gender need)
- Managerial roles of ADS volunteer. She supervises all workers including men (in other work sites men alone are employed as supervisors)
- Work site facilities directly benefit women (gender friendly work sites)
- Aya for 5 children below the age of 6 years
- Increased work participation
- Own S B account – ownership of one's earnings
- There is positive change in the unequal gender related power equations in work sites
- Checking of migration of women to cities and other States as maidservants in households, to work in unorganized sector

(7) Improve common Property Resources thereby helping poverty reduction
(8) Social security
(9) Strengthen livelihood resource base of the poor.
(10) Fully integrating NREGA with anti poverty programmes
(11) Convergence with decentralized planning
(12) Enlarging the scope of NREGA - social security dimensions - campaign against illicit liquor, thrift promotion etc

Attappady Environment Conservation and Wasteland Development Project

14.67 The objectives of the project are "Ecological restoration of degraded wasteland in Attappady and development of replicable models of participatory eco-restoration, so as to prevent further degradation and promote sustainable method of livelihood to the local people (with special emphasis on tribal population) in harmony with resource base"

14.68 This is an eco-restoration project for reclamation of 507 Sq. Km degraded wasteland of Attappady and to provide livelihood to the local people particularly the Tribal population The Japan Bank for International Co-operation (JBIC) is assisting this project. The total cost of this Project is Rs. 219 crore, of which the external assistance Rs. 177 crore.

14.69 The project is being implemented in a phased manner through a huge network of grassroots level community organizations Prominent among these are the Users Association (UA) formed in 93 inhabited micro watersheds of the Project area. Further, there are the Ooru Vikasana Samithies (OVS), Joint Forest Management Committees (JFMC) and Local Action Groups (LAG) to execute the identified activities.

14.70 The State Government has set up a society named "Attappady Hills Area Development Society" (AHADS) for the implementation of the project.

The scope of the Project is to carry out the following works.

1. Solid and Biomass Management
2. Water Resources Development

3. Infrastructure facilities such as Project Offices, Equipment, Vehicles and Access roads
4. Detailed Survey, Detailed designing Evaluation
5. International Consultancy Services
6. Ecological Compatible Income Generating Schemes

The distinct but interlinked levels of Project Planning and Management have been adopted for the implementation of the Attappady Eco-restoration Project:

1. Perspective Planning at the project level through AHADS
2. At the watershed level through the Development Units (DUs)
3. At the level of micro-Watershed through the User Associations (UAs)
4. At the adivasi hamlets through Ooru Vikasana Samities
5. Interventions for forest conservation and afforestation through JFMCs

14.71 During the 2007-08 Government has released Rs.1750.00 Lakhs also. Out of the total available fund of Rs 1985.08 Lakhs including opening balance, an amount of Rs 1637.63 lakhs has been spent up to the month of November 2007-08.

Table 14.15
Release and Expenditure of Attappady Environment Conservation and Wasteland Development Project

Year	Opening balance	Release			Total Fund	Total Expdr.	% of Exp.
		Centre	State	Total			
2006-07	386.59	0.00	2000.00	2000.00	2386.59	2301.93	96
2007-08 (Nov. 2007)	235.08	0.00	1750.00	1750.00	1985.08	1637.63	82
TOTAL	**621.67**	**0.00**	**3750.00**	**3750.00**	**4371.67**	**3939.56**	**90**

Land Reforms

14.72 Distribution of surplus land is the important activity under Land Reforms. Surplus land was distributed to 230 families from 01-04-2006 to 31-01-2007. 103 SC and 11 ST families were benefited under this scheme, and they received 8.83 acres and 2 acres of land respectively. The distribution of surplus land to SC/ST and others from 01-04-2006 to 31-01-2007 is shown in Appendix 14.11

Urban Poverty

14.73 As per the National Commission on Urbanization, Poverty cannot be characterized adequately in terms of income, expenditure or consumption pattern alone. The focus should be a human upgradation for reduction of poverty. Thus what is required is a multi dimensional concept inclusive of the environment, access to services and social psychological supports.

14.74 High population density of urban area of Kerala has contributed to urban poverty. This manifests in many forms, such as urban slums, unemployment, lack of social services, and increasing violence and crime. As per the National Sample Survey Organization (NSSO) from its 61st round survey (2004-05) it is estimated that in Kerala the poverty ratio was 13.2% in rural areas and 20.6 % in urban areas. The magnitude of urban unemployment is also increasing due

to the weak economy. In particular, due to stagnation in manufacturing industry in Kerala, sufficient employment opportunities are not available for the urban dwellers. National Sample Survey data show that urban unemployment in Kerala is the second highest in India, at 10% in 2000 (only after Goa). Further, due to the rapid increase in land price and construction costs a good number of the urban population in Kerala are forced to live in slums. The living conditions of slum dwellers are very pathetic. Drinking water and sanitary facilities are grossly inadequate. Only one-fourth of households in slums have electricity. The composition of the poor has been changing –while rural poverty is getting concentrated in the agricultural labour and artisan households urban poverty is in the casual labour households.

14.75 A well-coordinated approach is necessary to reduce urban poverty. For which the following aspects have to be considered seriously.
(i) Employment opportunities of a permanent nature need to be made available to the poor both by macro strategies aimed at labour intensive growth and micro strategies to enable the poor to attain the skills needed by the formal and semi formal sectors. (ii) Self-employment, product development, and marketing. (iii) With the support of urban local bodies and State Government, basic urban infrastructure relating to housing, water supply, sanitation, electricity and roads have to be provided to a minimum standard. (iv) The access of the poor to quality health and education facilities needs to be ensured, which again calls for improving the service available through hospitals and schools. Finally, the most vulnerable groups need to be identified through a transparent index. A robust social protection system has to be set up for them, with a much higher level of support than at present. Many of these issues will be addressed through the proposed project in the urban sector.

14.76 Rapid growth of urban population, expansion of existing towns and cities and low investment in urban development have created serious deficiencies in basic amenities especially in the urban areas. The shortages are serious for the urban poor due to inequality in the access to these amenities.

14.77 Urban poverty reduction strategies are delivered through major centrally sponsored Urban Poverty Reduction Programmes viz. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY), Integrated Housing and Slum Development Programme (IHSDP) and Basic Services to the Urban Poor (BSUP) implemented by Kudumbashree. The physical and social developments as well as direct assistance to employment generation are the schemes taken up under these programmes. Kudumbashree has organized Community Based Organizations (CBOs) of the poor in the state. Community Development Societies (CDS) act as delivery system for various Centrally Sponsored Urban Poverty Reduction Programmes.

14.78 The CDSs has evolved and crafted an innovative methodology for assessing the urban poor. Every two years, a survey is conducted by using the poverty index following non-economic criteria with nine risk factors reflecting the poverty situations of families. The neighbourhood community verifies these factors with the identified families.

Box 14.5

The nine risk factors of the poverty index in urban area

A family having

- Less than 5 cents of land/no land
- Dilapidated house/no house
- No sanitary latrine
- No access to safe drinking water within 150 meters
- Women headed household
- No regular employed person in the family
- Socially disadvantaged groups SC/ST
- Mentally retarded/disabled/chronically ill member in the family
- Families without colour TV

Any family having 4 or more factors is classified as a family at risk.

Source. Kudumbashree, Thiruvananthapuram

Urban Poverty Reduction Programmes

1. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY)

14.79 Swarna Jayanthi Shahari Rozgar Yojana (SJSRY) is a Centrally Sponsored Scheme launched in December 1997. It is shared 75.25 basis by both Central and State Governments. The objective of this integrated poverty alleviation programme is to provide gainful employment to the urban unemployed and under employed poor by setting up of self employment ventures and taking up of wage employment in public works. The programme is being implemented by the Urban Local Bodies through Community Based Organization (CBOs) of the poor.

SJSRY has the following 3 components

(i) *Urban Self Employment Programme. (USEP)*
- Assistance for setting up individual enterprises
- Development of Women and Children in Urban Areas. (DWCUA) – Assistance to Urban Poor Women for setting up group enterprises

(ii) *Urban Wage Employment Programme.*
- Revolving Fund for Women Self Help Groups and Group Enterprises.
- Skill upgradation training, General training, Management of Community Development Societies.
- Conducting Urban household surveys

(iii) *Community Structure.*

14.80 **Urban Self Employment Programame**: Urban Self Employment Programame (USEP) assists individual urban poor for setting up gainful self employment ventures. The project cost is Rs. 50,000 per individual but if two or more eligible persons join together in a partnership, higher project cost is allowed, provided individual share does not exceed Rs. 50,000. Subsidy is provided at the rate of 15 % of the project cost subject to a maximum of Rs. 7500 per beneficiary. Beneficiary share is 5% of the project cost either in cash or in kind or both. Out of the total project cost, 80% is sanctioned as loan by financial institutions including Banks and Thrift and Credit Societies. A house to house survey for identification of genuine beneficiaries is being done. New economic Para methods are to be applied to identify the urban poor. Women beneficiaries belonging to widows, divorcees, single women, where women are the sole earners is to be ranked higher in priority. Not less than 30% of the beneficiaries should be women, 3% to

be reserved for disabled and Scheduled Caste / Scheduled Tribe beneficiaries are given special attention in proportion of their strength in the local population.

14.81 **Development of women and children in urban Areas:** Development of women and children in urban Areas (DWCUA) assist the urban poor women for starting gainful employment through group activity. The scheme is extended to the poor women of urban areas who decide to set up self employment enterprise as a group. Minimum number of a group is fixed as 10. The project cost is Rs. 25 lakhs or less. The DWCUA group is given a subsidy of Rs 1.25 lakh or 50% of the project cost whichever is less. To ensure the contribution of members, 5% of the project cost is brought as their share, either in cash or in kind or as both and 45% of the project cost is as bank loan.

14.82 These programmes are being implemented by the Urban Local Bodies through Community Based Organizations (CBOs) of the poor. Community Organizations like Neighborhood Groups (NHGs), Neighborhood Communities (NHCs) and Community Development Societies (CDSs) are set up at the target areas based on the Urban Basic Services for the Poor (UBSP) pattern. Identification of beneficiaries, Selection of Projects for micro enterprises, preparation of application, implementation, monitoring, social audit etc. are done through the community Development Society (CDS) system of the respective Urban Local Bodies.

14.83 Kudumbashree has organized Community Based Organization (CBOs) of the poor in all the 53 municipalities and 5 Corporations in the State. There are 13279 Neighborhood Groups (NHGs) covering 347545 BPL families, 1090 Area Development Societies (ADSs) and 59 Community Development Societies (CDSs). The CBOs in the urban areas act also as Thrift and Credit Societies and facilitate savings and credit to the poor. In 2007, the CBOs in urban areas mobilized thrift fund to the tune of Rs. 5232.09 lakhs and disbursed loan worth Rs. 6130.59 lakhs. District wise details of NHGs, ADSs, CDSs and Thrift Fund mobilized are given in Appendix.14.12

14.84 Under the SJSRY, so far Kudumbashree have developed 22488 micro enterprises of which 1889 units are group enterprises (each group with minimum 10 women) and 20599 are individual enterprises. Most of the group enterprises are innovative and are owned and operated by the women from poor families. Details of micro enterprises and group enterprises are given in Appendices 14.13 and 14.14. The activities of group enterprises include solid waste management, computer hardware manufacturing, post-partum care, data entry operation, health care, courier service, remedial education programme etc.

Table 14.16
Plan Progress of SJSRY (2004-05 to 2007-08)

(Rs in Lakhs)

Year	Fund Received				Expenditure	% of Expenditure
	Central Share	State share	Total	Funds available Including previous year balance		
2004-05	554.95	175.00	729.95	867.70	480.48	55.37
2005-06	681.26	227.09	908.35	1295.67	792.024	61.12
2006-07	639.22	213.07	852.29	1355.94	951.59	70.18
2007-08(Up to Dec.2007	not released	not released	-	404.35	428.00*	105.85

Source Kudumbashree, Thiruvananthapuram

*Expenditure include ULBs own fund and SJSRY interest fund

Table 14.17
Physical achievements of SJSRY (2004-05 to 2007-08)

Year	Individual Enterprises Developed	Group Enterprises Developed	Persons Trained	Mandays created under Wage Employment
2004-05	1615	139	4736	16400
2005-06	2055	179	4496	67000
2006-07	2010	241	4731	120800
2007-08 (Up to Dec.2007)	1152	94	1651	13700

Source Kudumbashree, Thiruvananthapuram

2. Integrated Housing & Slum Development Programme (IHSDP)

14.85 Integrated Housing and slums Development Programme (IHSDP) is launched during 2006-07 for housing and infrastructure development in urban slums by combining the centrally sponsored schemes of Valmiki Ambedkar Awas Yojana (VAMBAY) and National Slum Development Programme (NSDP). IHSDP is to be implemented in all towns and cities identified as per 2001 census except cities/towns covered under JNNURM. (Thiruvananthapuram and Kochi corporations)

14.86 The basic objective of the scheme is to strive for holistic slum development with a healthy and enabling urban environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas The components for assistance under the scheme will include slum improvement/upgradation/relocation of projects including upgradation/ new construction of houses and infrastructural facilities, like water supply and sewerage. Cost of land for such projects will not be provided under the programme and has to be borne by the State Government. Housing should not be provided as free to the beneficiaries by the State Government. A minimum of 12% beneficiary contribution should be stipulated, which in the case of SC/ST/BC/OBC/PH and other weaker sections shall be 10%. Minimum floor area of dwelling unit is not less than 25 sq.mtrs. Ceiling cost for dwelling unit will be @ Rs.80000 per unit for cities other than those covered under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

14.87 The funding pattern of IHSDP is 80:20 shared by Central and State Governments The State share (20%) would be equally shared by (10% each) the State government and the participating Urban Local Self Governments. Kudumbashree is the Nodal Agency for IHSDP. Central assistance released will go directly to the nodal agency as Additional Central Assistance. Release of central share to nodal agency will depend on availability of state share and submission of utilization certificates in accordance with the provisions of General Financial Rules. State share has to be deposited in a separate account to become eligible for the central grant. 50% of the central grant will be released to the State Nodal Agency after verification of the state share and on signing the tripartite Memorandum of Agreement.

14.88 During 2006-07, 15 projects were approved by GOI with a total project cost of Rs.6403.12 lakh and for 2007-08, 7 projects were approved with a total project cost of Rs.3918.08 lakh. Details of projects approved by GOI during 2006-07 and 2007-08 are given in Appendix.14.15

3. Basic Services to the Urban Poor (BSUP)

14.89 Basic Services to the Urban Poor (BSUP) is a sub-component of JNNURM and implemented through Kudumbashree Thiruvananthapuram and Kochi Corporations alone come under the scheme. The objective of the scheme is to provide basic services to the urban poor viz. housing, solid waste management, water supply, improvement of slums, construction and improvements of drains/storm water drains, sewerage, drainage, street lighting, health care etc.

The financing pattern of BSUP for Thiruvananthapuram is 80:20 and that of Kochi is 50:50 by the Government of India and State Government. Also a minimum share of 10-12% is stipulated as beneficiary share for individual benefits such as housing.

14.90 During 2006-07, projects having total cost of Rs.68.94 crore were approved. Of these Rs 42.33 crore is for Thiruvananthapuram and Rs.26.61 crore for Kochi Corporation. In 2007-08 projects having cost of Rs. 125.43 crore is approved for Thiruvananthapuram and Rs.104.45 crore for Kochi Corporation. Details of projects sanctioned under BSUP for the two Corporations during 2006-07 are given in Appendices 10.16, 10.17 and 10.18

SOCIAL SECURITY AND WELFARE

14.91 Through the Five Year Plans, Kerala State has witnessed remarkable achievements in social welfare activities through institutional care and pension schemes. The State's position on human and gender development based in terms of both Human Development Index (HDI) and Gender Development Index (GDI) brings this out clearly. The Human Development Index for Kerala ranks first among Indian States (0.500 in 1981, 0.591 in 1991, and 0.638 in 2001.-Ref: National Human Development Report 2001).

14.92 However, while Kerala has been a pioneer in adopting social security and welfare measures for the economically and socially weaker sections of the population in particular women, in terms of Shelter Homes, Rehabilitation measures, Pensions, Women specific Organisations, Welfare Funds for unorganized sector workers and so forth, the need for better quality delivery of services is emerging as a major requisite. It is essential to upgrade institutions as also to make provision for hitherto relatively neglected areas of concern - the ageing population, the physically and mentally challenged persons and growing problems of adolescents.

Social Security and Welfare through Institutional Care and Protection

14.93 Major welfare activities under institutional care and protection are undertaken by the following Government Departments, Commissions, Institutions, Corporations as given below, (Box: No-14.6).

Box 14.6
Major Government Departments and Agencies stands for social security measures

Sl. No.	Major Government Departments/Agencies	Major Activities
1	Social Welfare Department	Institutional care and protection, ICDS with Anganwadi Centers, etc.
2	Prisons Department	Welfare, protection, employment and economic upliftment of prisoners.
3	Sainik Welfare Department	Welfare of Ex-servicemen and war-widows.
4	State Commissionerate for Persons with Disabilities	Welfare and social security measures of disabled.

5	Women's Commission	Welfare and social justice measures addressing atrocities against women, adalaths, legal workshops, jagratha samithies, etc
6	Kerala State Women Development Corporation	Welfare, skill development, economic development through income generating and employment generating schemes.
7	National Institute of Speech and Hearing	Welfare, education, health activities of disabled in speech and hearing.
8	State Institute for the Mentally Handicapped	Welfare, education, skill development etc of mentally challenged persons.
9	Kerala State Handicapped Persons Welfare Corporation	Welfare, employment, income generating programmes of physically handicapped persons.

14.94 Apart from the above, there are other major Government departments and Agencies addressing the problems of deserving groups for social security and welfare measures such as Scheduled Castes Development Department, Scheduled Tribes Development Department, Kudumbashree etc. They stand for the welfare, education, skill development, income generating activities of SCs, STs, Poverty ridden groups respectively. Reviews on these activities are given in other respective chapters.

14.95 The major welfare institutions run by the Social Welfare Department, a pioneer institution in Kerala, offer the following major services as shown in Box: No.14.7.

Box 14.7

Major Welfare Institutions run by Social Welfare Department and Services

SLNo.	Name of Institutions	Services Offered
1	Mahilamandir	Maintenance, education, vocational training, rehabilitation of the abandoned women above the age of 13.
2	After Care Home	Care, protection and rehabilitation to Children/Adolescents in the age group of 14 to 21 coming from Juvenile Justice/Welfare Institutions.
3	Rescue Home	Protection and rehabilitation of girls above 13 engaged in immoral activities or who are in fear of being forced into such activities.
4	Children's Home	Functioning at Alappuzha provides care and protection to destitute and children of leprosy patients.
5	Old Age Homes & Day Care Centre	Care, protection and rehabilitation of the aged by providing food, clothing, medical services, shelter,etc.
6	Home for Physically Handicapped	Takes care of the maintenance and rehabilitation of the destitute handicapped above the age of 16. Separate homes for men and women.
7	Asha Bhavan	Mentally cured patients abandoned by relatives are taken care of by providing food, medicine, clothing, etc. and rehabilitation/reunion with family whenever possible.
8	Care Home for the Disabled	Maintenance, education, rehabilitation, etc of the handicapped children in the age group of 4-16.

9	Short Stay Home	Providing living amenities to women in distress arising out of family discord, and those fearing of being forced into immoral activities. They are given proper counseling and rehabilitated within a stipulated period.
10	Home for Mentally Deficient Children	To provide special education, maintenance and rehabilitation of mentally challenged children upto the age of 16.
11	Pratheeksha Bhavan	Care, protection, maintenance of those mentally challenged persons above the age of 16.
12	Vocational Training Centres	To provide vocational training courses for the physically handicapped boys and girls so as to rehabilitate them.

14.96 There are 50 Welfare Institutions in Kerala. They are 12 Mahila Mandirs, 15 Old Age Homes, 3 Homes for Physically Handicapped, 6 Asha Bhavans, 3 Care Home for the Disabled, 2 Rescue Homes, 3 After Care Homes,1 Children's Home, 1 Short Stay Home, 1 Home for Mentally Deficient Children, 1 Pratheeksha Bhavan and 2 Vocational Training Centres. Details are given in Table 14-18. The number of inmates in the Government welfare institutions is far below the sanctioned strength.

14.97 As against the total sanctioned strength of 3050 inmates in the 50 institutions, the occupants are 1466 in 2007, ie, below half of the strength. This needs to be examined. It could be that the stated strength no longer exists in practice due to financial difficulties in maintaining larger numbers. For improved delivery of services, it appears necessary to revamp these institutions. The sanctioned strength and district-wise beneficiaries in welfare institutions are given in Appendix 14.19

Table 14.18
Welfare Institutions, Sanctioned strength and Inmates – 2007

Sl. No.	Institutions	Numbers	Inmates(Nos)	Sanctioned Strength (Nos)
1	2	3	4	5
1	Mahilamandir	12	218	325
2	After Care Home	3	81	250
3	Rescue Home	2	27	200
4	Children's Home	1	22	50
5	Old Age Home	15	492	1225
6	Homes for Physically Handicapped	3	77	125
7	Asha Bhavan	6	191	300
8	Care Home for the disabled	3	102	125
9	Short Stay Home	1	17	50
10	Home for Mentally Deficient Children	1	25	50
11	Pratheeksha bhavan	1	34	50
12	Vocational Training Centre	2	180	300
	Total	**50**	**1466**	**3050**

Source: Social Welfare Department

Welfare of the Old Age People

14.98 The old age population (60+) in India is a fast growing phenomenon. The old age population in 1961 is 25.6 million while after 30 years i.e., in 1991 it is more than double which comes to 56.7 million. It is expected to increase to 113.26 million during the 25 years ending 2016. In percentage terms it is 5.8% in 1961 and 6.8% in 1991. Expected percentage of old age population by 2016 will come to 8.9%. Compared to other States the percentage of old age population in Kerala is higher; the percentage of old age population in 1961 is 5.83% and in 1991 it comes to 8.82% and in 2001 it is 9.79. It is expected to grow during 2011 to 11.74%, in 2021 it would be 15.63% and in 2026 it will come to 20%. The rate of increase will be doubled with in 25 years. **It is also to be noted that majority of old age people in Kerala are widows.** In 1991, among the old age people in the range of 60-69, 53.8% are widows and among those above 70 years it comes to 69.20 %.(see "State Old Age Policy 2006").

14.99 During 2006, the Social Welfare Department was running 15 Old Age Homes and 1 Day Care Centre for the aged and there are 487 inmates in these institutions as against the sanctioned strength of 1225 persons. But during 2007, it is reported that there are only 10 Old Age Homes and 1 Day Care Centre & Old Age Home with 397 inmates and a sanctioned strength of 1075. (Table 14.19).

Table 14.19

Old Age Homes and Day care Centre for Aged during 2007

Sl.No	Institution	Institutions	Total Inmates (Nos)	Sanctioned Strength (Nos)
1	Old Age Home	10	371	1000
2	Day care Centre & Old Age Home	1	26	75
	Total	**11**	**397**	**1075**

14.100 There are 774 Institutions run by NGOs with 53,899 inmates, while 85,000 is the sanctioned strength during the year 2007 which includes a large network of 617 Orphanages and Fondling Homes in the state run by NGOs (see Table 14.20). The total inmate in the Orphanages & Fondling Homes is 43,280 as against the sanctioned strength of 64,000. Available data show that during 2006, there were 707 Non-Governmental Organizations engaged in various social service activities with 64,073 inmates and a sanctioned strength of 67,574, in 622 Orphanages & Fondling Homes the total inmates number 52,064. Here, even though inmates are lesser than the previous year; the sanctioned strength has been increased from 67,574 to 85,000. The reasons for difference in the number of institutions and sanctioned strength from previous year are to be examined by the Department.

Table 14.20

Non-Governmental Welfare Organizations and inmates – 2007.

Sl.No	Category	Institutions(Nos)	Inmates (Nos)	Sanctioned strength (Nos)
1	Orphanages & Fondling Homes	617	43280	64000
2	Beggar Homes	4	419	5000
3	Home for Aged Infirm	153	10200	16000
	Total	**774**	**53899**	**85000**

Welfare of the Disabled

14.101 National Sample Survey Organization in the year 2002 estimated that the number of persons with disabilities is 1.85 crore which constitute 1.8% of the population of India.. Estimates by different types of disabilities are: (i) Locomotor disabled- 106.34 lakh, (ii) Hearing - 30.62 lakh, (iii) Speech - 21.55 lakh, (iv) Blindness - 20.13 lakh, (v) Low vision - 8.13 lakh, and (vi) Mental Retardation - 9.95 lakh. The results from Census 2001 are somewhat different, there are 2.19 crore persons with disabilities which constitute 2.13 per cent of population (India-2006). In Kerala, as per 2001 Census there are 8.61 lakh disabled persons which form 2.7% of the total population; it is also observed that approximately 5 lakh children have one form of disability or other (SPAC,Kerala 2004).

14.102 On the welfare of the disabled, the Social Welfare Department imparts social security to the disabled through institutional care and protection. A number of institutions are there and here too, the need for revamping to enable improved delivery of services and facilities appears to be essential.

14.103 There are 6 institutions for the care of physically and mentally retarded children in the state with facilities for 700 children; however there are only 439 inmates. Details are given in Table 14.21.

Table 14.21
Institutions for Physically & Mentally retarded persons – 2007

Sl.No	Institutions	Total Inmates (Nos)	Sanctioned Strength (Nos)
1	Home for Mentally Deficient children	25	50
2	Home for Physically Handicapped	77	125
3	Home for cured Mental patients	191	300
4	Care Home for Disabled Children	17	50
5	Home for Physically Handicapped (Aged)	95	125
6	Pratheeksha Bhavan (Home for Mentally Retarded above 16 years)	34	50
	Total	439	700

State Commissionerate for Persons with Disabilities

14.104 Persons with Disabilities Act, 1995 - a comprehensive law, has been enacted and enforced in February, 1996. The law deals with both prevention and promotion aspects of the rehabilitation such as education, employment and vocational training, creation of barrier free environment, provision of rehabilitation services for persons with disabilities, institutional services and supportive social security measures like unemployment allowances and grievance redressal machinery at the Central and State Level. The State Commissionerate in Kerala conducts awareness camps, mobile medical board as per PWD Act, redressal of the complaints of disabled persons, inspection of institutions for disabled, issuing certificate on disablement, seminars/meetings etc

National Institute of Speech and Hearing (NISH)

14.105 The National Institute of Speech and Hearing established in 1997 aims at the education, training, treatment and rehabilitation of hearing impaired persons. The major activities of the Institute are (i) Audiology and speech division. (ii) Pre-school parent Guidance centre, (iii) Vocational Training Centre (iv) Academic programmes (v) Medical Division including psychology. The first phase of construction of NISH campus commenced in 2004 on a 10-acre plot of land at Aakkulam. Now the Institute has shifted to the new building in August 2007.

14.106 The facilities available at NISH now include audiological evaluation, speech language rehabilitation, pre-school and parent guidance programme, ENT services, speech therapy, vocational courses, training programmes, research activities, etc.

Kerala State Handicapped Persons Welfare Corporation

14.107 Kerala State Handicapped Person's Welfare Corporation implements self employment programmes and distributes aids and appliances for disabled persons. On self-employment scheme a subsidy of 40% subject to a maximum of 2,500/- is given to the beneficiary through the various commercial banks throughout the state for income generating activity. During 2006-07, an amount of Rs.9.21 lakhs had been expended for self employment assistance. Table 14.22 gives details of self employment assistance provided to physically handicapped persons.

Table 14.22
Self Employment Assistance to Disabled Persons.

Year	Applications Received (Nos)	Applications sanctioned and forwarded to Banks	Applications sanctioned by the Bank(Nos)	Amount released by the Corporation (Rs)
1	2	3	4	5
2001-02	1348	1348	242	4,81,00
2002-03	1303	1303	281	5,62,500
2003-04	1256	1256	344	7,56,535
2004-05	1417	1417	314	7,73,475
2005-06	1503	1503	354	8,74,660
2006-07	1142	1142	370	9,21,020

14.108 The Corporation has been supplying free aids and appliances to disabled people with annual family income below Rs.60,000/- per year. Equipments like Tricycles, Wheel Chairs, Crutches, Calipers, Artificial Limbs, Hearing Aids, White Canes, Braille Slates, Colostomy Bags, etc. are the items being given to the beneficiaries. Every three years the disabled people have to be given new aids and appliances as per legal norms.

14.109 Details on Aids and Appliances distributed for the last few years by the Corporation is given below as Table 14.23

Table 14.23
Aids and Appliances Distributed through KSHPWC from 2000-01 to 2006-07

Year	No. of Aids and Appliances Distributed	Amount (Rs.in lakhs)
2000-01	4,003	66.42
2001-02	1,071	16.10
2002-03	1,644	33.07
2003-04	1,166	27.29
2004-05	1,368	34.26
2005-06	996	28.00
2006-07	2,069	43.78

14.110 Besides this, subsidy for Motorized Tricycle with a subsidy of Rs.5,000/- to disabled students and those self-employed for procuring motorized tricycle, cash award to the differentially abled persons @ Rs 2500/- each to the students who rank first in each district in SSLC Examination, coaching-cum-guidance for disabled people for competitive examinations, financial assistance to the disabled lottery agents, marriage assistance to the differentially abled girls, self help groups, etc. are promoted by the Corporation.

14.111 The Government has notified the KSHPWC as the nodal agency for programmes for the Old Age. It is essential to intervene more specifically in geriatric care and protection through multi-dimensional programmes as well as policies. It is declared in the State's Old Age Policy 2006 that practical steps will be taken to address problems of the most needy groups such as (1) People above 80 years old (2) Women , in particular widows, unmarried, women without children (3) Disabled and vulnerable (4) People without close relatives (5) People living alone in houses (6) People affected with serious and malignant diseases (7) Destitutes. To make life better for these old age people, practical steps and programmes are necessary. It is also noted that 56% of the 60+ who died during 1995 was on account of anemia due to lack of nutrition.

Box 14.8
Aids and Appliances

Through the Central scheme for Assistance to Disabled Persons for Purchase - Fitting of Aids and Appliances, 100 per cent financial assistance is provided to the implementing agencies. Aids and appliances amounting up to Rs. 6000 are covered under the scheme. However, for students with disabilities, the limit is Rs. 8000 during their study period after IX standard. It is provided free-of-cost if the income of the disabled beneficiary or his/her guardian is up to Rs. 6,500 p.m. and 50 per cent of the cost is covered, if the income of the beneficiary is between Rs. 6,501 to 10,000 p.m.

Source: India 2006.

State Institute for the Mentally Handicapped

14.112 C.H. Mohammed Koya Memorial State Institute for the Mentally Handicapped at Pangappara, Thiruvananthapuram is an autonomous society under Education Department

imparting special education, training and rehabilitation service to the mentally retarded in the State.

14.113 Diploma in Special Education (Mental Retardation) is a course recognized by the Rehabilitation Council of India and is conducted by the SIMH so as to generate trained personnel for dealing with mentally challenged children. The other schemes include parents training and counseling programme, guidance and counselling in rural areas, placement service for mentally retarded candidates, vocational training centres, assessment and early intervention centre, etc.

Social Security and Pension

14.114 Several pension schemes are being implemented by Government as a safety net for vulnerable sections of the society. There are more than 40 pension schemes of which 20 are financed by the State itself. These pension schemes are implemented direcly by the Government Departments or through different Welfare Fund Boards. More than 37 lakh people are benefited through different pension schemes.

14.115 The National Old Age Pension Scheme is part of National Social Assistance Programme of Government of India and was implemented from 1995 for persons above 65 years of age. During 2007, 1,41,956 persons are benefited while in 2006, only 1,31,912 persons were benefited by this scheme. Under this scheme, Central share is Rs.200 and State share is Rs.35 (total Rs.235) per month per beneficiaries. District wise beneficiaries on pension schemes implemented through Revenue Departments are given in Appendix 14.20. The details on the rate of assistance of social security/pension schemes in the State including Welfare Fund Boards are given is Appendix 14.21.

Social Security Measures Exclusively for Women

14.116 Women constitute 51.42 %(2001 census) of the total population of the state. Several schemes for the social security of women are under implementation. Destitute /widow pension is a major scheme. The scheme benefits 286867 women and the monthly rate of pension is Rs.110 during 2007. Of the total number of beneficiaries, Thiruvananthapuram has the largest number with 38635 women and the lowest number is in Idukki District with 3537 beneficiaries. Unmarried women above 50 years are also paid a monthly pension @ Rs.110 and the scheme benefited 35564 women during the period under review. Its district-wise details are given in Appendix 14.14. Financial assistance is also given to poor widows for the marriage of their daughters. The rate of assistance is Rs.5000.

Kerala Women's Commission

14.117 Kerala Women's Commission was established in 1996 as a statutory body constituted under Kerala Women's Commission Act 1990 (Act 17 of 1995) with the objective to improve the status of women in Kerala and to enquire into unfair practices against women. Conducting gender conscentisation seminars, adalaths, district level Jagratha Samithies, conducting DNA tests, publishing of Sthree Shakthi magazine, managing short stay home, petition/redressal are the major activities. The nature of complaints show that majority of them relate to harassment of women, harassment by husband, dowry harassment, and neigbours' nuisance. District-wise complaints received by Kerala Women's Commission from January 2007 to September 2007 are given as Appendix 14.22.

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Source: India 2006.

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14.116 Women constitute 51.42 %(2001 census) of the total population of the state. Several schemes for the social security of women are under implementation. Destitute /widow pension is a major scheme. The scheme benefits 286867 women and the monthly rate of pension is Rs.110 during 2007. Of the total number of beneficiaries, Thiruvananthapuram has the largest number with 38635 women and the lowest number is in Idukki District with 3537 beneficiaries. Unmarried women above 50 years are also paid a monthly pension @ Rs.110 and the scheme benefited 35564 women during the period under review. Its district-wise details are given in Appendix 14.14. Financial assistance is also given to poor widows for the marriage of their daughters. The rate of assistance is Rs.5000.

Kerala Women's Commission

14.117 Kerala Women's Commission was established in 1996 as a statutory body constituted under Kerala Women's Commission Act 1990 (Act 17 of 1995) with the objective to improve the status of women in Kerala and to enquire into unfair practices against women. Conducting gender conscentisation seminars, adalaths, district level Jagratha Samithies, conducting DNA tests, publishing of Sthree Shakthi magazine, managing short stay home, petition/redressal are the major activities. The nature of complaints show that majority of them relate to harassment of women, harassment by husband, dowry harassment, and neighbours' nuisance. District-wise complaints received by Kerala Women's Commission from January 2007 to September 2007 are given as Appendix 14.22.

The activities conducted by the Commission during 2007 are shown below as Table 14.24.

Table 14.24
Major Activities by the Kerala Women's Commission during 2007

Sl.No.	Particulars	Achievements (upto September,2007)
1	Seminars and Workshops	17 Nos.
2	Research Activities	3 projects
3	Adalaths	38
4	Sthreesakthi Newsletter	2000 copies
5	DNA Test	5 tests
6	Short Stay Home	24 inmates with 7 children are availing this facility
7	Jagratha Samithi	6 seminars

Kerala State Women Development Corporation

14.118 KSWDC was established in 1988 under the Companies Act 1956 with the objective of formulating, promoting and implementing women welfare and development schemes. KSWDC has been selected as State channelising agency for National Corporations such as NSFDC, NSTFDC, RMK, NBCFDC, NMDFC and NHFDC.

14.119 The Corporation initiates Self Employment Loans, Entreprenurship Development Programmes, Single Women Benefit Scheme, Working Women's Hostel, Integrated Women Empowerment Programme, Women Resource Centre, Day Care Centres in Public Offices etc., Apparel Training and Design Centre, Geriatric Home Nursing, Medical Transcription, etc. Activities for the years 2006-07 are given in detail in the chapter on Gender and Development.

Women Development Programmes

14.120 Major development programmes are implemented through the Social Welfare Department. Vocational Training Centres, starting of one day homes, economic support to women headed families, development of Anganwadi Centers as community resource centres for pregnant and lactating mothers, adolescent girls, and overall development of women and children are provided through various schemes and programmes.

Box 14.9
Women's Development Programmes of Government of India implemented in Kerala.

STEP: Support to Training and Employment Programmes for Women (STEP) was launched in 1986-87. It aims at making a significant impact on women in traditional sectors by upgrading skills and providing employment on project basis

Swawalambam: Previously known as NORAD/Women's Economic Programs, was launched in 1982-1983. The objective is to facilitate women to obtain employment or self-employment on a sustainable basis.

Swayamsidha: Swayamsidha is an integrated project for the development and empowerment of women based on the formation of Self Help Groups(SHG's)

Swa-Shakti: Also known as the Rural Women's Development and Empowerment Project supported by the World Bank and International Fund for Agricultural Development (IFAD). Not started in Kerala.

Condensed courses of Education of Women: This scheme implemented through the Central Social Welfare Board aims at facilitating social and economic empowerment of women and providing them with education and relevant skills.

Working Women's Hostel: Under this scheme assistance is provided to non-governmental organisations, co-operative bodies and other agencies engaged in the field of women's welfare, for construction of hostels.

Swadhar: This was launched in 2001-2002 for the benefit of women in difficult circumstances such as destitute widows, women prisoners released from jail, women survivors of natural disasters, trafficked women or victims of sexual crimes etc.

Short Stay Homes: This scheme was launched in the year 1969 and is now implemented through Central Social Welfare Board with the objective to protect and rehabilitate those women and girls who are facing any kind of problems, moral danger etc.

Family Counselling Centres: To provide preventive and rehabilitative services to women and children who are victims of atrocities and family mal-adjustments.

National Policy on Empowerment of Women: Launched on 20th March 2001 to bring about overall development of women and to eliminate all forms of discrimination against women.

Grant-in-aid for Research, Publication and Monitoring: To promote research studies for development of innovative programmes etc.

Organizations:

National Commission for Women: A statutory body constituted under the National Commission for Women Act, 1990-relating to safeguards for women under the Constitution as well as under other laws.

Rashtriya Mahila Kosh: Started on 30th March 1993 to facilitate credit support to poor women for their socio-economic upliftment.

National Institute of Public Co-operation and Child Development (NIPCCD): An autonomous organization under Department of Women and Child Development. The Institute is the apex body for training of functionaries of the ICDS programs.

Central Social Welfare Board: Set up in August 1953. The programmes of the Board include socio-economic programmes for needy/destitute women, vocational training courses for women/awareness generation, family counseling etc.
Source: India2006.

Welfare of Ex-Servicemen and War Widows

14.121 There are 1,49,946 Ex-Servicemen and 313 War Widows holding identity cards issued by Zila Sainik Welfare Offices upto 30th September 2007. An amount of Rs.400/- per month is provided as financial assistance to Second World War veterans who are in indigent circumstances. Re-employment opportunities of Ex-Servicemen and employment to Widows are limited to State service and Quasi Government Institutions. Hence new ventures and policies are required to absorb those seeking employment. The present numbers of Ex-Servicemen and widows in Kerala holding identity cards issued by Zilla Sainik Welfare Officers for the last six years are given in Table 14.25.

Table 14.25
Ex-Servicemen and War Widows in Kerala – 2000 to 2007

Year	Ex-Servicemen(nos)	War Widows (nos)
2000	129525	278
2001	134522	276
2002	138148	272
2003	142088	269
2004	145140	267
2005	146952	263
2006	147440	261
2007	149946	313

Source: Department of Sainik Welfare

14.122 Department of Sainik Welfare implements the welfare activities of Ex-Servicemen and War Widows mainly through funds from non-plan provision of state budget and interest accrued from two Welfare Funds viz. (i)State Military Benevolent Fund & Flag Day Fund and (ii) Amalgamated Fund for Reconstruction and Rehabilitation of Ex-Servicemen.

14.123 Major activities implemented through the Sainik Welfare Department and its achievements during 2007 are shown in Table 14.26.

Table 14.26
Major Welfare schemes/ achievements of Ex-Servicemen/War Widows during 2007

Sl.No.	Name of Scheme	Beneficiaries (Nos)	Amount spent during 2007 (Rs)
1	Financial assistance to Second World War Veterans who are in indigent circumstances @Rs. 400 p.m.	1677	46,95,600 (upto Sep 07)
2	Construction of houses for disabled Ex-Servicemen	16	3,60,000
3	Cash awards to recipients of Gallantry Decorations in the Defence Service and dependents of defence personnel	66	3,51,068
4	Financial help for children of Ex-service men	189	2,34,500

Source: Department of Sainik Welfare

Welfare of Prisoners

14.124 The Jail infrastructure in the state consists of 3 Central Prisons, 1 Open Prison, 3 District Jails, 5 Special Sub Jails, 26 Sub Jails, 1 Women prison and one Borstal School. In 2007, there were 6784 prisoners out of which 201 were women while in 2006 there are 7118 prisoners of which 177 are women. The details of district wise jail prisoners during 2007 are furnished in Table: 14.27

Table 14.27
Jails in Kerala and District-wise Prisoners - 2007

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	1587	25	271	0	87	2	324	0	63	63	0	0	2332	90
2	Kollam	0	0	176	17	128	0	0	0	0	0	0	0	304	17
3	Pathanamthitta	0	0	0	0	157	3	0	0	0	0	0	0	157	3
4	Alappuzha	0	0	0	0	86	0	0	0	0	0	82	4	168	4
5	Kottayam	0	0	0	0	35	0	0	0	0	0	97	9	132	9
6	Idukki	0	0	0	0	103	1	0	0	0	0	0	0	103	1
7	Ernakulam	0	0	0	0	368	19	0	0	0	0	0	0	368	19
8	Thrissur	518	10	0	0	94	0	0	0	0	0	166	0	778	10
9	Palakkad	0	0	0	0	103	0	0	0	0	0	145	2	248	2
10	Malappuram	0	0	0	0	159	3	0	0	0	0	0	0	159	3
11	Kozhikode	0	0	404	19	65	1	0	0	0	0	0	0	469	20
12	Wayanad	0	0	0	0	70	4	0	0	0	0	0	0	70	4
13	Kannur	1306	18	0	0	52	0	0	0	0	0	39	0	1397	18
14	Kasargod	0	0	0	0	99	1	0	0	0	0	0	0	99	1
15	Total	3411	53	851	36	1606	34	324	0	63	63	529	15	6784	201

Source: Department of Prisons

14.125 The modernization of Prisons is managed by 75% financial assistance from Government of India and 25% by the State Government. Installation of surveillance system in jails, video conferencing in jails, providing cell phone jammers, computerization of jails, installation of bio-gas and gas ovens, energy conservation programmes, etc. are the major components of this scheme. The Welfare of Prisoners consists of social gatherings and entertainment programmes, correctional seminars, training to prisoners in computer, bread making, soap making, book binding, beekeeping, organic manure, establishment of dairy farm, recreational facilities and educational programmes, etc.

Welfare under Juvenile Justice

Juvenile Homes

14.126 In Kerala, in 2006, there were 7 Juvenile Homes, 14 Observation Homes and one Balasadanam (certified as juvenile home). More than 7000 children in the age group of 5 to 18 years are accommodated in these homes. In 2007, it is reported that there are 6 Juvenile Homes, 13 Observation Homes and one Balasadanam functioning in the state where more than 600 children are accommodated. The Government of India gives maintenance grants @ Rs. 150 per month per inmate and bedding grant @ Rs. 50 per annum per inmate. The percapita maintenance charge per inmate is about Rs.750 per month for food, clothing, and bedding and for contingency charges.

During 2006-07, Rs.38.87 lakhs were allocated and Rs.38.85 lakhs expended.

Adoption

14.127 The state government have approved and declared the state policy, i.e., State Plan of Action for the Child in Kerala 2004 and reiterated its commitment to children. The major activities proposed are; (i)to establish baby cradle centres (Amma Thottils) in four district hospitals i.e., Kollam, Pathanamthitta, Idukki and Kottayam (2) strengthen/organize adoptive parents organization in all districts and organize district level and state level get-together conferences of adoptive parents, adoptive children and other stakeholders (iii) adoption awareness programme in each district by involving state departments such as Local Self Governments, Revenue, Police, Social Welfare, Health, NGOs and other stakeholders (iv) minimum standards of services and procedures for adoption placement agencies and minimum standards of services for all functionaries will be developed with the help of expert academic institutions. Details on adoption of children as in-country and inter-country under Juvenile Justice Law from 2002-03 to 2006-07 are given in Table 14.28 shown below:

Table 14.28
Adoption of Children in Kerala – 2002-2007

Year	In-country adoption			Inter-country adoption		
	Male	Female	Total	Male	Female	Total
2002-03	125	136	261	12	19	31
2003-04	134	152	286	10	10	20
2004-05	115	104	219	12	13	25
2005-06	119	147	266	15	16	31
2006-07	114	132	246	14	17	31

Source: Social Welfare Department

Social Security and Welfare to Unorganized Sectors

Welfare Fund Boards

14.128 In Kerala, there are 22 Welfare Fund Boards providing welfare assistance and income security and employment to workers in the unorganized sector. Details available for 22 Welfare Fund Boards show that the total numbers of members enrolled in these Boards are 52.33 lakhs which constitute 67.54% of the total number of estimated workers. Out of them, 16.27 lakhs are in agriculture sector and 11.58 lakhs are in construction sector. Female workers out numbered males in industries which primarly employ women like cashew, tailoring, coir, bamboo, beedi

industries and anganwadi workers. In the Cashew Workers Welfare Fund Board, 95.35% enrolled workers are female. Similarly in coir, 80% workers are female. In Boards like Toddy Workers, Head Load Workers and Abkari Workers, above 99% of the workers are male. Details regarding estimated workers, enrolled workers and male-female workers are shown in Table 14.29.

Table 14.29
Workers in the sector and workers enrolled as members in the Welfare Fund Boards – 2007

Sl. No	Name of the Board	Total workers in the sector (Nos)	Members enrolled in the Board (Nos)			Percentage of Members to total workers in the sector		
			Male	Female	Total	Male	Female	Total
1	Kerala Coir Workers WFB	387000	39762	159047	198809	10.27	41.10	51.37
2	Kerala Cashew Workers WFB	200000	7266	149143	156409	3.63	74.57	78.20
3	Kerala Toddy Workers WFB	39798	NA	NA	36253	NA	NA	91.09
4	Kerala Building and Other Construction Workers WFB(2006)	1500000	NA	NA	1158040	NA	NA	77.20
5	Kerala Tailoring Workers WFB	388760	15150	373610	388760	3.90	96.10	100
6	Kerala Bamboo, Kattuvalli and Pandanus Leaf Workers WFB(2006)	15006	757	14249	15006	5	95	100
7	Kerala Agriculture WorkersWFB	2100000	NA	NA	1898743	NA	NA	90.42
8	Kerala Head Load Workers WFB	300000	93625	389	94014	31.21	0.13	31.34
9	Kerala Artisans and Skilled Workers WFB	236577	90538	146039	236577	38.27	61.73	100
10	Kerala Hand Loom Workers WFB	100000	23450	26966	50416	23.45	26.97	50.42
11	Kerala Beedi and Cigar Workers WFB	110000	6170	34975	41145	5.61	31.80	37.41
12	Kerala Abkari Workers WFB	1817	1817	0	1817	100	0	100
13	Labour Welfare Fund Board(2006)	508454	NA	NA	489808	NA	NA	96.33

14	Kerala State Lottery WFB(2006)	32296	3850	171	4021	11.92	0.53	12.45
15	Traders Welfare FB	61375	NA	NA	20162	NA	NA	32.85
16	Kerala Motor Transport Workers WB	1088708	58315	2	58317	5.36	0.00	5.36
17	Kerala Anganwadi Workers & Helpers WF(2004)	50786	0	42074	42074	0	82.85	82.85
18	Kerala Autorickshaw Workers WFB	303092	19088	0	19088	6.30	0	6.30
19	Kerala Khadi Workers WFB	11000	55	10945	11000	0.5	99.5	100
20	Kerala Fishermen's WFB(2006)	277862	222611	55251	277862	80	20	100
21	Kerala Ration Dealers WFB(2006)	14363	11310	2348	13658	78.74	16.35	95.09
22	Kerala Co-operative Employees Board (2004)	20610	NA	NA	20610	NA	NA	100
	Total	**7747504**			**5232589**			

The expenditure on administration and for welfare measures by each Welfare Fund Board is given as Table 14.30.

Table 14.30

Expenditure on Administration and Welfare Measures in Welfare Fund Boards – 2007

(Rs. Lakhs)

Sl. No	Name of the Board	Administrative Expenditure		Expenditure on Welfare Measures		Total Expenditure	
		2005-06	2006-07	2005-06	2006-07	2005-06	2006-07
1	2	3	4	5	6	7	8
1	Kerala Coir Workers WFB	72.00	85.00	1337.00	1056.00	1409.00	1141.00
2	Kerala Cashew Workers WFB	69.04	84.20	562.84	1018.91	631.88	1103.11
3	Kerala Toddy Workers WFB	602.73	506.48	3699.16	3223.50	4301.89	3729.98
4	Kerala Building and other construction WWFB	198.53	NA	2620.98	NA	2819.51	NA
5	Kerala Tailoring Workers WFB	86.96	96.06	240.35	249.02	327.31	345.08

6	Kerala Bamboo, Kattuvalli and Pandanus Leaf WWFB	5.15	4.83	6.91	6.82	12.06	11.65
7	Kerala Agriculture WWFB	126.65	153.21	744.98	874.83	871.63	1028.04
8	Kerala Head Load Workers WFB	697.77	787.79	2498.60	2987.28	3196.37	3775.07
9	Kerala Artisans and Skilled W WFB	39.98	40.40	95.03	64.77	135.52	105.17
10	Kerala Hand Loom Workers WFB	27.56	27.07	54.90	115.74	82.46	142.81
11	Keala Beedi and Cigar WWFB	15.03	20.60	25.99	30.91	41.02	51.51
12	Kerala Abkari Workers WFB	38.36	49.27	95.11	85.84	133.47	135.11
13	Labour Welfare Fund Board	72.56	68.66	78.30	73.63	150.86	142.29
14	Kerala State Lottery WFB	18.98	19.36	2.12	2.86	21.10	22.22
15	Traders W.F.B.	7.71	11.25	20.40	45.85	28.11	57.10
16	Kerala Motor Transport Workers WB	171.35	178.41	3.86	3.24	175.21	181.65
17	Kerala Anganwadi Workers & Helpers WF	19.03	18.95	6.50	7.15	25.53	26.10
18	Kerala Autoickshaw Workers WFB	0.11	0.53	14.85	9.16	14.96	9.69
19	Kerala Khadi Workers WFB	23.67	26.38	24.49	31.58	48.16	57.96
20	Kerala Fishermen's WFB	160.25	167.34	740.15	1098.23	900.40	1265.57
21	Kerala Ration Dealers WFB	9.20	9.04	39.56	61.50	48.76	70.54
22	Kerala Co-operative Employees Board	NA	NA	NA	NA	NA	NA
	Total	**2462.62**	**2354.83**	**12912.59**	**11046.82**	**15375.21**	**13401.65**

Note WF - Welfare Fund, FB-Fund Board, WFB- Welfare fund Board, WWFB-Workers Welfare Fund Board

Welfare Measures of the Workers of Welfare Fund Board

14.129 General Welfare Measures implemented by the Workers Welfare Fund Boards are the following:

1. Pension benefits to the workers on their retirement or invalidity or family pension after their death.
2. Ex-gratia financial assistance to workers on prolonged illness/ permanent disability and death relief to the dependents for funeral and related functions.
3. Medical reimbursement for medical treatment of the workers or dependents.

4. Marriage assistance for daughter's marriage.
5. Educational assistance to members' children like scholarships, cash awards and lumpsum grants.
6. Long term housing loans at low interest rate.
7. Maternity benefits.
8. Funeral expenses.

The major welfare measures implemented by the Workers Welfare Fund Boards are given in Appendix.14.23.

Unemployment Assistance

14.130 Unemployment assistance scheme was introduced in the state in 1982 under non-plan and is being implemented through Local Governments. The present rate of assistance is Rs.120 per month. During 2007, there were 361930 beneficiaries under unemployment assistance and an amount of Rs.5005.76 lakh was disbursed. The details of unemployment assistance from 2002 to 2006 is given in Table 14.31

Table 14.31
Beneficiaries of Unemployment Assistance and Expenditure (2002-2006)

Year	Beneficiaries (Nos)	Amount disbursed (Rs. in lakh)
2002	332287	2,516.40
2003	348027	1423.10
2004	387370	7398.43
2005	344698	10243.38
2006	339879	3667.71
2007	361930	5005.76

Source: Directorate of Employment and Training

NUTRITION AND CHILD WELFARE

Integrated Child Development Services

14.131 The present statuses of ICDS functionaries based on category and post sanctioned are given below as Table 14.32:

Table 14.32

Sl.No.	Category	Posts sanctioned
1	C.D.P.O.	163
2	A.C.D.P.O.	25
3	Supervisor	1156
4	Anganwadi Worker	32268
5	Anganwadi Helper	32268

14.132 Kerala has around 40.37 lakh children, that is, 13% of Kerala's population, who are below the age of 6 years. A large number of them live in economic and social environment which impedes the child's physical and mental development. These conditions include poverty,

poor environmental sanitation, prone to disease, infection, inadequate access to primary health care, inappropriate child care and feeding practices. Government of India proclaimed a National Policy on Children in August 1974 declaring children as, "supremely important asset". The policy provided the required frame work for assigning priority to different needs of the child. The programme of the Integrated Child Development Services (ICDS) scheme was launched in 1975 seeking to provide an integrated package of services in a convergent manner for the holistic development of the child.

14.133 The scheme provides a package of services as indicated below to children below six years and pregnant women and nursing mothers;

1. Supplementary nutrition
2. Immunization
3. Health check-up
4. Referral services
5. Pre-school non-formal education
6. Nutrition and health education

14.134 The Integrated Child Development Services is a Centrally Sponsored Scheme wherein the State Government is responsible for programme implementation. The scheme is implemented all over Kerala through 163 projects (151 Rural, 11 Urban and 1 Tribal) There is one Anganwadi Centre for every 1000 population in rural and urban projects and one for every 700 population in Tribal area. There are 32268 sanctioned Anganwadi Centres of which all are functioning. District-wise ICDS beneficiaries in Kerala are given in Appendix-14.24 and Project wise details of ICDS are given in Appendix 14.25.

National Nutrition Mission

14.135 The Prime Minister announced the launching of this Mission with the objective of reduction of Malnutrition, elimination of micro-nutrient deficiencies relating to iron, iodine, Vitamin-A etc. The basic objective of the mission is to address the problem of malnutrition in a holistic manner and to accelerate reduction in various forms of malnutrition particularly among women and children. In Kerala, Palakkad and Malappuram districts have been selected to implement this programme for which Rs.469.96 lakh was provided. It includes 6453 Anganwadi Centres consisting of approximately 113850 beneficiaries.

Kishori Sakthi Yojana

14.136 This scheme is viewed as a holistic initiative for the development of adolescent girls which was launched in 2000-01 as part of the ICDS scheme. Kishori SakthiYojana is being implemented through Anganwadi Centres in both urban and rural areas. The main objective of the scheme is to improve the nutritional and health status of the girls in the age group of 11- 18 years

Balika Samridhi Yojana

14.137 Government of India started Balika Samridhi Yojana on 15th August, 1997 with the objective of changing the negative attitude towards the girl child at birth, to improve enrolment and retention of girls in schools, to raise the age of marriage, to assist the girls to undertake income generating activities etc. During the last two financial years Central assistance was not given.

Udisha Training Programme

14.138 Government of India has introduced this project for the provision of training of ICDS functionaries to provide better quality care for early childhood and development. It is carried out in all the 163 ICDS projects. The components of the scheme include job training, orientation training, IEC materials and other training. During 2007-08, job training course and refresher training are given to 140 and 7641 beneficiaries respectively.

Box 14.10
Child Development - Government of India Programs and Policies

Integrated Child Development Services (ICDS): Launched in 1975 to improve the nutritional and health status of children below six years, pregnant and lactating mothers adolescent girls, etc.

Creches/Day care Centers for Children of Working and Ailing Mothers: Launched for Children adopted in 1974. The scheme aims to provide day care services to children 0-5 years of parents whose monthly income does not exceed Rs 1800 per month.

National Creche Fund: Set-up in the year 1993-94 to meet the growing requirement for creches through voluntary organisations, mahila mandals to convert Anganwadi Centers into Anganwadi-cum-creche Centre.

National Charter for Children: A policy document adopted by the Government highlighting the roles and responsibilities of the Government and the community towards children

Co-operation with UNICEF: DWCD is the nodal department for coordinating the implementation of the Master Plan of operations so as to empower families and communities with knowledge and skills to care and protect children etc.

National Commission for Children: The National Commission for Children Bill 2003 was introduced in Parliament in December 2003 but got lapsed due to elections. It was considered with certain changes that include more power, constitution of State Commissions and Children's Courts in States.

Assistance of voluntary organizations for providing Social Defense Services: Assistance is given to voluntary organizations working in the field of child and women welfare.
Universal Children's Day: India observes Universal Children's Day on 14 November every year. National Child Awards for Exceptional Achievement will be presented.

Convention on the Rights of the Child: India ratified to the UN Convention on the Rights of the Child on 11 December 1992 for the cause of children. A National Coordinating Group has been constituted by the DWCD to monitor the implementation of the Convention on the Rights of the Child (CRC).

National Plan of Action for Children: The DWCD prepared the draft of the National Plan of Action for Children by considering the goals for children set in the UN General Assembly Special Session on Children held in May 2002.

National Child Award for Exceptional Achievement: Instituted in 1996 to give recognition to the children of 4 to 15 age group with exceptional abilities.

National Award for Child Welfare: Instituted in 1979 to honor five institutions and three individuals for their outstanding performance in the field of child welfare

Rajiv Gandhi Manav Seva Award: Instituted in 1994 to honor an individual who makes outstanding contribution towards service for children.

Source: India 2006.

Social Justice

14.139 A glance at the census figures of 2001 shows the comparative picture of some of the features of SC/ST population in Kerala and the nation as a whole. As compared to the percentage of SC/ST to the total populations in India it is less in Kerala. The percentage of SC &ST population to the total population in India are 16.23 & 8.15 respectively. But in Kerala these are 9.81 and 1.14 only. Some of the major indicators shown in Table 14.33 gives some interesting pictures. The decadal growth rates, child population and poverty figures are far less in the state than that of India. Similarly it is very encouraging to note that the literacy rates in general and the female. These are comparatively very high in Kerala than the national figures.

Table 14.33
Status of SC/ST (as per census 2001)

Sl. No	Item	SC		ST	
		Kerala	India	Kerala	India
1	Population (in lakh)	31.24	1666	3.64	836
2	Percentage to total Population	9.81	16.23	1.14	8.15
3	Decadal Growth Rate (%)	8.14	20.55	13.75	23.30
4	Child Population to the total population	11.65	17.42	13.7	18.43
5	Sex Ratio	1048	936	1027	978
6	Literacy rate - General	82.66	54.32	64.35	47.08
7	Literacy Rate-Female	77.56	41.31	58.11	34.75
8	Poverty(as per 55th Round)	14.6	36.2	24.2	45.8
9	Percentage of Population in Slum Areas	7.50	17.40	0.20	2.40

Source: Census 2001

14.140 Unlike other states, considering the settlement pattern in Kerala, a major portion of the Schedule Caste population live in the mainstream with other people and a small portion live in concentrated colonies. Many of the colonies are not very much isolated from the thickly populated areas. The highest distribution of Scheduled Castes is in Palakkad District (13.85 %)

followed by Thiruvananthapuram(11.87 %), Thrissur (11.34 %) and Kollam (10.34). Nearly half of SC population of the state is distributed in the above four districts. The Scheduled Tribes in Kerala are not only geographically concentrated, but are overwhelmingly rural. Highest concentration of Scheduled Tribes is seen in Wayanad district (37.36 %) followed by Idukki (14 %) and Palakkad (10.89 %) and the three districts together account for over 60 per cent of STs of the state. The coastal district of Alappuzha has the lowest percentage (.15%). Details are given in Table 14.34 District wise Scheduled Caste/Scheduled Tribe population details are given in Appendix. 14.26

Table 14.34
District-wise distribution of SC/ST Population in Kerala

Sl. No	District	Percentage Distribution		Percentage to Total Population	
		SC	ST	SC	ST
1	2	3	4	5	6
1	Kasargod	2.88	8.33	7.49	2.52
2	Kannur	3.17	5.48	4.11	0.83
3	Wayanad	1.07	37.36	4.27	17.43
4	Kozhikkode	6.43	1.63	6.98	0.21
5	Malappuram	9.14	3.36	7.87	0.34
6	Palakkad	13.85	10.89	16.53	1.52
7	Thrissur	11.34	1.33	11.91	0.16
8	Ernakulam	8.44	2.76	8.48	0.32
9	Idukki	5.1	14	14.11	4.51
10	Kottayam	4.81	5.04	7.69	0.94
11	Alappuzha	6.37	0.86	9.45	0.15
12	Pathanamthitta	5.19	1.8	13.13	0.53
13	Kollam	10.34	1.43	12.49	0.20
14	Thiruvananthapuram	11.87	5.74	11.47	0.65
	Total	**100**	**100**	**9.81**	**1.14**

Source Census 2001

Education and Enrolment

14.141 Education, being the key instrument not only for social empowerment but also provides the essential base for all development pursuits, should be thoughtfully promoted with needed strength and expansion for the benefit of SCs.

14.142 In the Eleventh Plan, steps will have to be taken to ensure provision of quality education so as to equip and enable them to enhance their employment prospects with competitive ability and thus address the problems of their marginalization and deprivation in the employment market. Along with the general mainstream education, vocational education shall be extended to the SCs so as to enable them to enhance their technical and productive capabilities in those vocation that have direct relevance to local demand, production and consumption. To this effect, the existing Industrial Training Centres under the SC Development Departments shall be modernized and supported to upgrade training and other inputs keeping in view the market demand and viability of trades. Thus in the Plan, the approach towards educational development among SCs will be addressing the question of not only quantitative terms but also in qualitative and functional terms i.e. how well and usefully are they educated

14.143 Similarly education being the most effective instrument for empowering the tribals, all effort will have to be made to improve the educational status of the tribals especially that of the tribal women and the tribal girl children. Though the enrolment in primary class is satisfactory, in upper classes, especially at higher secondary level, the proportion is getting lower and lower. The drop out ratio beyond high school is alarming. Enrolment of all tribal children and reduction of drop out rates with the intervention of LSGs, on a campaign mode, providing financial assistance for filling critical gaps felt by the tribal families may be resorted to. The existing Model Residential Schools are to be reorganized so as to ensure that the students coming out of the schools pursue higher studies. Vocationalisation of education at high school/higher secondary level will have to be given high priority so that the local youth would be gainfully engaged with in their own village with the added strength gained though advanced knowledge and technology. In view of the impediments faced in extending educational infrastructure and service, it is imperative to mobilize locally available resources especially that of human resources to participate actively in the educational uplift of the tribals. Special efforts for improving the educational status of Primitive Tribal Groups and those living in remote in accessible areas may be made through mobile schools, residential schools and community based educational programmes. Local Self Government Institutions and Oorukoottams may effectively be involved in the implementation of all educational activities.

14.144 The proportion of Scheduled Caste and Scheduled Tribe students in Lower Primary and Upper Primary Schools during 2007-08 are relatively higher than their population share as seen in Table 14. 35. In High School section the share of Scheduled Tribe students is a little less than their population share. It can be seen that while drop out ratio beyond class VIII is relatively considerable in the case of Scheduled Caste, the same is overwhelmingly serious for Scheduled Tribes. The standard wise and district wise details of the enrolment of SC/ST students at school levels are given in Appendix 14.27 & Appendix 14.28 respectively.

Table 14. 35

Enrolment of Scheduled Caste/Scheduled Tribe Students at School level as on 01.10.2007

Sl.No	Section	Total No of Students	Scheduled Caste		Scheduled Tribe	
			No. of Students	% to Total	No. of Students	% to total
1	2	3	4	5	6	7
1	Lower Primary Section	1717617	194417	11.32	33086	1.92
2	Upper Primary Section	1469268	163243	11.11	22479	1.53
3	High School Section	1439526	143914	10	15229	1.06
	Total	**4626411**	**501574**	**10.84**	**70794**	**1.53**

Source: Directorate of Public Instruction

14.145 Details of SC/ST Students in the Arts and Science Colleges during 2005-06 to 2006-07(Up to October 2007) are given in Appendix 14. 29. It shows that number of girl students is about twice the number of boys in both cases of SC & ST.

Performance in SSLC Examination

14.146 The percentage of pass in the SSLC examination is a good indicator of social and educational development among different social groups. In the regular SSLC examination of 2007, out of the 42664 students belonging to Scheduled Castes appeared 27803 have passed out. The corresponding figures for Scheduled Tribes are 4907 and 2977 respectively. The percentage of passed students from SC is 65.17 and that of ST is 60.67 which are against the total percentage of 82.23. A better improvement in the pass percentage of SC & ST students are observed in the SSLC examination March 2007.

14.147 A comparative study of performance of students in SSLC examination from 2001 onwards is given in Table 14.36

Table 14. 36
Performance of Students in SSLC Examination

(Percentage of Pass)

Year	Total Students	Sch.Caste Students	Sch.Tribe Students
1	2	3	4
2001	56.22	36.74	32.85
2002	60.62	39.32	39.69
2003	64.85	43.75	37.72
2004	70.06	48.14	45.95
2005	58.61	37.09	32.55
2006	69.33	48.58	41.18
2007	82.23	65.17	60.67

Source : Commissioner for Govt. Examinations

Occupational Pattern

14.148 The Table below shows that while just 25.87 per cent of total population were main workers as per 2001 Census, the corresponding figures for SC and ST population are 29.75 and 30.17 respectively indicating that a moderately higher proportion of the disadvantaged groups are workers. The ratio of female workers belonging to SCs and STs is almost double than that of other population. It is significant to note that the decline of workers among total population was marginal during the decade 2001 compared to 1991, it is substantial in case of SCs and the same is alarming for STs during the period. The decline in the proportion of main workers, both male and female, is not a welcome change as it is indicative of growing unemployment and dependency among the population

Table 14. 37
Distribution of Main Workers 1991-2001 (per cent)

Sl. No.	Category	Total		Scheduled Castes		Scheduled Tribes	
		1991	2001	1991	2001	1991	2001
1	Main Workers	28.55	25.87	36.82	29.75	40.28	30.17
2	Male Main Workers	44.82	41.77	47.22	41.54	51.11	40.66
3	Female Main Workers	12.81	10.85	26.72	18.51	29.42	19.90
4	Percentage of Cultivators to Main Workers	12.74	7.12	3.10	1.61	16.66	13.67
5	Percentage of Agricultural Labourers to Main Workers	25.54	12.40	53.79	29.48	55.47	41.12
6	Percentage of Main Workers engaged in Household Industry	2.58	3.35	2.44	2.60	0.47	2.57
7	Percentage of Main Workers engaged in Other Services	15.17	77.13	10.70	66.31	5.28	42.65
8	Marginal Workers	2.90	6.43	4.38	10.63	5.76	16.18
9	Work Participation Rate	31.43	32.30	41.21	40.38	46.04	46.35

Source: Scheduled Tribe Atlas of India

14.149 An analysis of the Table 14.37 indicates excessive dependence of STs on agriculture (54.79 %) for their livelihood as against just 19.52 per cent for the total population and for SCs the corresponding figure is 31.09 per cent. Other services is the source of income for 77.13 per cent of the total population, while the sector offers livelihood for two third of the SC population. The above analysis of the occupational pattern shows that the SC population is closely following the other population with regard the change in occupational structure that has been taking place in the Kerala economy while the ST population is far behind in this respect.

14.150 Total representation of SC/ST employees in Government services as on 1.1.06 was 11.55% (SC-10.07% & ST-1.48%). Details regarding this is given in Appendix 14.30. It shows that the number of SC employees in Gazetted posts and last grade are more than their population percentage where as in non-gazetted posts it is only 9.56%. As regards to STs, Government employees are less than their population percentage and in the remaining two categories it is more than their population percentage.

Poverty among SC/STs

14.151 Kerala has registered a remarkable improvement in poverty reduction over the years among all the social sections, including Scheduled Caste and Scheduled Tribes. Poverty level among the Scheduled Castes was reduced to 14.6 per cent in 1999-2000 from 62.3 per cent in 1983. The share of BPL population among Scheduled Tribes was declined to 24.2 per cent in 1999 2000 from 37.3 per cent in 1993-94. Details are given in Table 14.38

Table 14. 38
Percentage of population below poverty line
(Rural in 38th, 50th and 55th NSSO Rounds)

Sl No.	NSSO Rounds	India			Kerala		
		Country Total	SC	ST	State Total	SC	ST
1	2	3	4	5	6	7	8
1	38th Round(1983)	45.6	58.1	63.8	39 1	62.3	NA
2	50th Round (1993-94)	37.1	48.1	52.2	25.5	36.3	37 3
3	55th Round (1999-2000)	27.1	36.2	45.8	9.4	14.6	24.2

Source: NSSO

14.152 The incidence of poverty among Scheduled Castes and Scheduled Tribes in Kerala is only half that of the all India level. The decline in the incidence of poverty in the state may be broadly attributed to the land reform measures and the large number of anti-poverty programmes undertaken by both the Central and State Governments. Also the growth of the economy which in turn raised the level of income contributed to poverty eradication.

14.153 19 per cent of the BPL population in Kerala are Scheduled Castes, though Scheduled Castes constitute only 9.81 per cent of the total population of the State. It shows that the incidence of poverty among the Scheduled Caste people is about double than that of the population of the state. Scheduled Tribes constitute 3 per cent of the total BPL population while their proportion to total population is only 1.14 per cent. It implies that the incidence of poverty among the Scheduled Tribes is about three times than that of the total population of the state. Details are given in Table 14.39

Table 14. 39
Category-wise percentage of families Below Poverty Line

SL No	Category	Share of BPL	Percentage of Total Population
1	2	3	4
1	Scheduled Castes	19	9.81
2	Scheduled Tribes	3	1.14
3	Others	78	89.05

Generalised Deprivation

14.154 To assess disparity among districts in terms of the incidence of poverty, a more desirable approach would be to examine the incidence of deprivation instead of household consumer expenditure. The index of deprivation as resorted in Human Development Report 2005 (Kerala) is based on deprivation in four basic necessities for well being such as housing quality, access to drinking water, good sanitation and electricity lighting. The Table 14.40 given below shows the district wise index of deprivation and rank for Kerala in 2001.

Table 14. 40
Generalised Deprivation

SL No	District	SC	Rank	ST	Rank	All	Rank
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	54.4	13	60.1	10	39.5	11
2	Kollam	47.8	8	50.7	5	30.4	8
3	Pathanamthitta	50.3	10	54.6	7	31.1	9
4	Alappuzha	45.9	6	40.1	3	29 6	6
5	Kottayam	42.1	4	43.1	4	25.1	3
6	Idukki	40.8	2	65.3	13	42.7	13
7	Ernakulam	29.3	1	37.2	1	15.5	1
8	Thrissur	42.0	3	37.5	2	24.7	2
9	Palakkad	52.9	12	65.3	12	40.4	12
10	Malappuram	46.2	7	56.8	8	28.6	5
11	Kozhikkode	48.8	9	50.9	6	28.3	4
12	Wayanad	51.5	11	66.0	14	46.3	14
13	Kannur	43.8	5	57.7	9	29.7	7
14	Kasargod	62.7	14	61.3	11	37.6	10
	Total	45.5		57.9		29.5	

Source: Human Development Report 2005

14.155 The incidence of deprivation among SCs and STs is 45.5 and 57.9 respectively while that for total population is only 29.5. Kasargod, Trivandrum, Palakkad, and Wayanad districts have deprivation indices of above 50 percent regarding SC population. In 10 districts, the deprivation indices is above 50 in respect of ST population and the same is highest in the three ST population concentrated districts of Wayanad, Idukki and Palakkad.

Vulnerable SCs / Primitive Tribal Groups

14.156 Among the Scheduled Castes, Vedan, Nayadi, Kalladi and chakkilian are the most economically, socially and educationally backward castes. Majority among these are landless and living in built in huts in 'Purambock' and in the starving conditions. Special emphasis is needed for the development of these communities and providing homes and land.

14.157 The ST Communities with pre-agricultural stage of development with diminishing population and very low literacy rate are defined as Primitive Tribes. There are Five Primitive Tribal Groups (PTGs) in the State viz; Kattunaikan, Cholanaikan, Kurumpas, Kadars and Koragas. According to the Baseline Survey reports of the KIRTADS during 2006-07 the PTG population is 24,285 (6% of total ST population) and the number of households is 6523. Details are given in Table 14.41

Table 14.41
Details of Primitive Tribal Groups

Sl. No	Name of PTG	Area of habitation	Total Population	Male	Female	No. of families
1	Kattunaikan	Wayanadu, Nilambur Kozhikode & Palakkad	18576	9275	9301	5055
2	Cholanaikan	Nilambur	363	202	161	82
3	Kadar	Trissur & Palakkad	1695	800	895	486
4	Koragas	Kasargod	1572	800	772	422
5	Kurumbas	Palakkad	2079	1049	1030	478
		Total	**24285**	**12126**	**12159**	**6523**

Source: Baseline survey Report of KIRTADS 2006-07

14.158 Average decadal growth rate of Primitive Tribes is estimated at 18.17% considering the period from 1981 to 1996-97 This rate is also slightly less than the decadal growth rate for all tribals found during 2001 census (13.47%). The literacy rate of PTGs as per the Baseline Survey Report 2006-07 is 53.79%. Educational programmes like Ashram schools have good impact on improving the socio economic status of these groups.

14.159 Adiya, Paniya and Kattunaikan the three tribal communities in Wayanad district are still in a very underdeveloped stage compared to other tribal communities there. The Adiya and Paniya, who together form 53 per cent of the tribal population of Wayanad, are landless agricultural labourers and were bonded labourers by tradition and their rehabilitation are still underway. Kattunaikan families are primitive tribes and they have shown potential signs of quicker transition to the mainstream of development. Kurumbas, Mudugas, Kadars and Irulas are the four major tribal communities in Palakkad district of which Kurumbas and Kadars are primitive tribes. Even though a good proportion of the tribal families in Attappady area possess land, these land could not be utilised as a sustainable means of livelihood

14.160 The Attappady Block is the only tribal block in the State Muthuvan, Urali, Hill Pulaya, Mannan, Ulladan and Malayaraya are tribal communities in Idukki district. Among them a section of Malayaraya are better off than their counterparts socially and economically Nearly 90 per cent of the tribal workers in the district are still engaged in agricultural and allied sectors.

Development Programmes for Scheduled Caste and Scheduled Tribes

14.161 Notwithstanding the significant achievements registered so far, the present situation of Scheduled Castes explicitly manifest the existence of certain obstacles which continue to stand in the path of their advancement. Prominent among them is that over years of implementation, SCP has become exceedingly routinized and trivialized. Therefore the focus in the Eleventh Plan would not only be towards accentuating the strength and effectiveness of the programme contents but also to rectify the defects in their implementation process and monitoring arrangements by involving the very weaker sections at various levels. Thus, the approach in the Plan would lay greater emphasis to the implementation aspects of the continuing programme with accountability through effective and regular monitoring. There is a growing demand to strengthen and streamline the institutional mechanism at all levels of State and LSGs to function with exclusive mandate for according categorical and undivided attention to the welfare and development of this disadvantaged group. Special training programmes both pre-service and in-service should be undertaken from time to time to sensitize all those working for these groups so that they can work with right perspectives in handling the special needs and problems of these marginalized group and thus ensure social justice. Further concerted efforts shall be made so that the target groups become conscious of their own rights, privileges and the government support available to them. Besides, making them realize their own potentials to be self confident and self reliant is more important.

14.162 The agricultural labourers are the largest occupational segments amongst SCs (29.48 per cent as per Census 2001). It is therefore necessary that maximum attention be paid to the development of this group. Recognizing their traditional ability and skill in the agriculture production, efforts shall be made to maximize their productive capacity by providing them with land and other needed inputs and support. Therefore, the approach towards their economic upliftment in the Eleventh Plan would be insisting on activities that ensure income generation through employment avenues primarily in agriculture and allied sectors. These workers should be organized into Self Help Groups through a process of social mobilization with the initiative and active participation of LSGs and encouraged to take up additional income generating activities through micro enterprises. In this exercise, special emphasis should be given to SC women. These Self Help Groups should function on the pattern of Kudumbashree. Adequate training should also be provided to this Group to adopt modern methods to increase efficiency by availing the expertise of Agriculture Department as well as Kudumbashree Mission. It would be necessary that the farmers be given access to irrigation, and agricultural inputs like improved seeds, fertilizers, pesticides, etc. along with training in modern cultivation techniques. To encourage the SC farmers to take up agricultural activities in the initial years, the Government should provide crop insurance to the farmers and also marketing as well as input support and necessary training in scientific cultivation. Funds under SCA, Corpus Fund and loans from KSDC for SCs/STs and financial institutions as well as the resources of LSGs could be made available.

14.163 The process of development planning seems to have undermined the role of target people themselves and heavily relied up on the bureaucratic dealings. This has resulted in the development being centered around the administrative machinery, rather than the tribals for whom the programmes are meant for. With the land mark achievement brought through the People's Plan Campaign for decentralized planning during the IX th Plan period, there had been definite shift in the strategy of the Government to bring the tribal people in to the main arena of planning and implementation of various development programmes as the means for achieving social justice and empowerment. The Oorukoottams have been recognized as a democratic niche for tribal communities within the local government system during Xth Plan. It was stipulated that Oorukootttams would enjoy considerable autonomy in decision making on utilization of

resources earmarked for their development. But the system as visualized has not functioned so far. During the XIth Plan, it is envisaged to institutionalize the system, so as to empower the Gorukoottams to function as the vital agency for formulation and implementation of all programmes meant for them, not only the TSP projects of LSGIs but also the schemes and programmes of State, Central government and external agencies. Thus Gorukoottams shall be the convergence point for effectively integrating the Programme of various agencies.

14.164 Kerala Government earmarks funds for SCP and TSP from State Plan outlay in proportion of Scheduled Castes and Scheduled Tribes population to the total population of the State. Nearly two third of the Special Component Plan budget and one half of Tribal Sub Plan budget are earmarked to Local Self Government Institutions only. The balance amount is set apart to Scheduled Caste/Scheduled Tribe Development Departments and other Development Departments. The total plan provision set apart for the development of Scheduled Caste and Scheduled Tribes during 2007-08 was Rs.681.80crore and Rs.139 crore respectively.

14.165 A two pronged strategy is followed for development of Scheduled Castes and Scheduled Tribes in the state. Infrastructure facilities like roads, electricity and water supply are provided in habitats having more than 50 per cent SC/ST families. For implementing minor irrigation work, more than 50 per cent of the area should be owned by Scheduled Castes, Scheduled Tribes. Whereas, for projects benefiting individuals and families, 100 per cent of the beneficiaries should belong to SCs, STs.

Special Component Plan and Tribal Sub Plan through Local Governments

14.166 During the year 2006-07 a total of Rs 403 crore was given to Local Governments as plan grant under Special Component Plan and Rs. 60.50 crore as Tribal Sub Plan Local Government wise budget provision and expenditure during the year 2006-07is given in Table 14.42

Table 14.42
Sector-wise distributions & Expenditure of grant-in-aid to LSGIs during 2006-07

(Rs. in Lakhs)

Type of Local Body	General			SCP			TSP			Total		
	Budgeted Outlay	Formulation amount*	Expenditure	Budgeted Outlay	Formulation amount*	Expenditure	Budgeted Outlay	Formulation amount*	Expenditure	Budgeted Outlay	Formulation amount*	Expenditure
2	3	4	5	6	7	8	9	10	11	12	13	14
District Panchayath	11659.43	9996.6	9430.78	7129.07	7522.37	6957.86	1794.34	1877.13	1428.18	20582.84	19396.1	17816.82
Block Panchayath	11609.43	11060.03	10236.69	7129.07	7473.27	6538.36	1196.23	1166.49	1005.65	19934.73	19699.8	17780.7
Municipality	8820.42	8958.53	7403.29	2505.99	3003.33	2020.45	68.85	75.17	19.86	11395.26	11137	9443.6
Corporation	7050.08	6565.8	6042.93	2148.66	2390.44	1123.13	0	0	0	9198.74	8956.24	7166.06
Grama Panchayath	54175.64	51777.66	47397.73	21387.2	23146.27	18559.3	2990.58	3145.52	2529.99	78553.43	78069	68487.02
Total	**93315**	**87458.62**	**80511.42**	**40300**	**43535.68**	**35199.1**	**6050**	**6264.31**	**4983.68**	**139665****	**137258**	**120694.2**

Source . Information Kerala Mission

*Grant-in-Aid utilised for the formulation of plan

** Besides Rs 335 lakh was kept undistributed for giving awards to best local Governments

Budget provision of SCP/TSP through LSGIs during 2007-08 is given in Table 14.43

Table 14.43
Budget provision and Expenditure of SCP/TSP through Local Self Government Institutions – 2007-08

(Rs. lakh)

Sl. No	Local Self Government Institutions	Budget Provision			
		General	Special Component Plan	Tribal sub Plan	Total
1	2	3		4	5
1	Grama Panchayat	59851.71	23525.93	3289.64	86667.28
2	Block Panchayat	12825.37	7841.98	1315.85	21983.20
3	District Panchayat	12825.37	7841.98	1973.77	22641.12
4	Municipality	9757.46	2756.59	75.74	12589.79
5	Corporation	7755.09	2363.52	-	10118.61
	Total	**103015**	**44330**	**6655**	**154000**

Source : Information Kerala Mission

Percentage distribution of plan grant to Local Governments during 2007-08 is represented in Figure1 and 2.

Figure 1

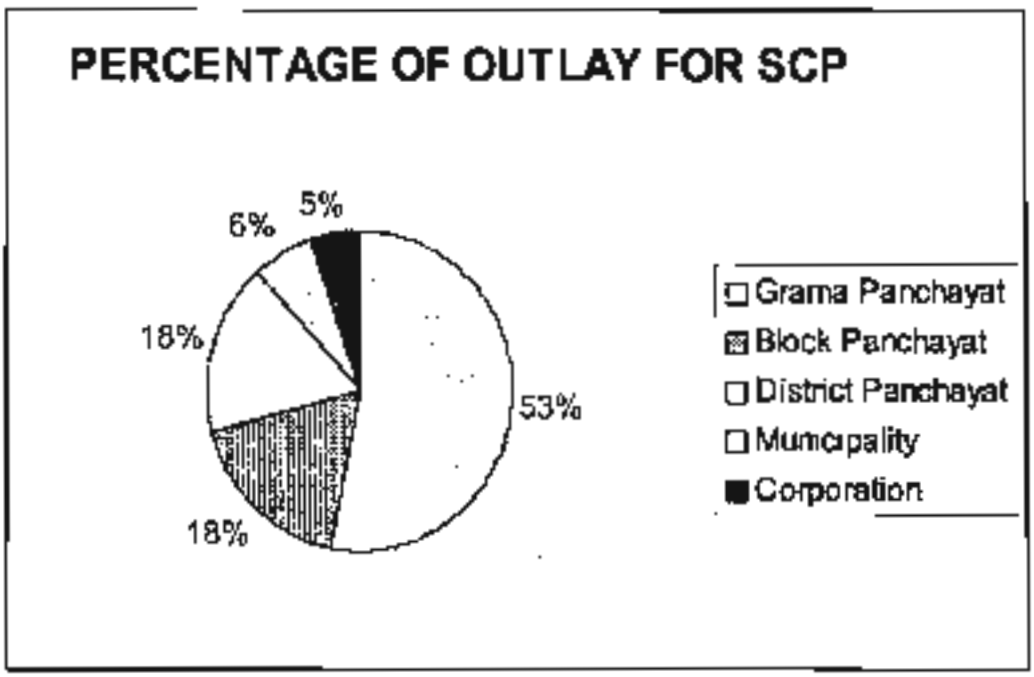
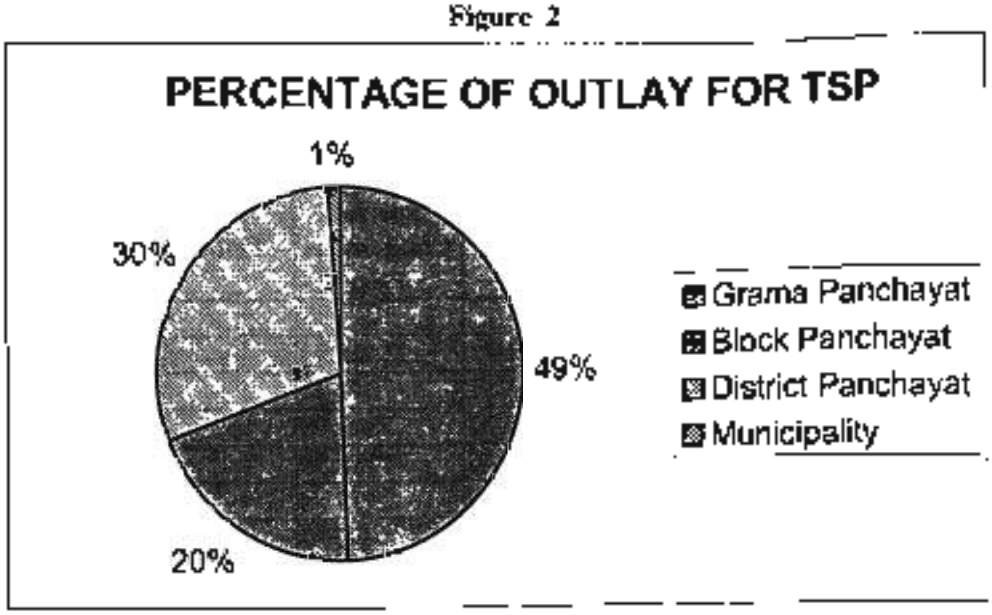


Figure 2



Physical achievements of Local Self Government Institutions for 2002-03 to 2006-07 is given in Appendix . 14.31(A)&31(B)

Programmes of Scheduled Caste Development Department

14.167 State schemes and Centrally Sponsored Schemes as well as the projects taken up under Corpus Fund are the programmes implemented by the Scheduled Caste Development Department for the welfare of Scheduled Castes. During the year 2007-08, the share earmarked for the State Plan Schemes, state share of Centrally Sponsored Schemes including state share of RD Scheme amounted to Rs. 143.09 crore, whereas the central share for the Centrally Sponsored Schemes is Rs. 86.48 crore. An amount of Rs.443.30 crore is provided as grant-in-aid to local bodies.

14.168 The schemes implemented by the Scheduled Caste Development Department cover a wide area comprising education, health, housing and so many other schemes which promote the economic and social welfare of scheduled castes and other backward classes.

14.169 Scheduled Caste Development Department implements 19 schemes for educational development. Programme for education includes boarding and lodging facilities at pre-metric and post-metric level, incentives and awards to talented students stipends, lump sum grant, pocket money to students, special coaching and tutorial facilities to improve results, supply of books and equipments etc. Eight Model Residential Schools run by the department provide residential school facilities. Information Cum-Guidance Centre, Pre-Examination Training Centres and Civil Service Examination Society etc are also run by the department for Scheduled Caste candidates to equip them to appear for various competitive examinations.

14.170 Pre-matric concessions have been extended to 3.40 lakh students during 2006-07. In addition to this 12170 medical and engineering students have also been given educational concession during 2006-07. Details of educational concession provided to SC students during 2006-07 is shown in Appendix 14.32

14.171 Cash awards were given to students who obtain first class in SSLC, Plus Two, Degree and post graduate courses 4336 students have been benefited under the scheme during 2006-07.

There are 90 Pre-matric hostels and 15 post-matric hostels for providing accommodation facilities to the students. 2379 and 982 students were admitted during 2006-07 in Pre-matric and post-matric hostels respectively.

14.172 An intensive drive for providing houses to the houseless people was taken up recently. Accordingly during 2006-07 and 2007-08 (up to October 31st) the Department constructed 2154 and 1136 houses. District wise details of houses constructed by SC Department is given in Appendix 14.33. In addition to this Local Bodies, KSHB, State Nirmiti Kendra, Rural Development Department etc. constructed houses for SC's during the above periods

14.173 Being the first year of Eleventh plan, the department had undertaken new schemes viz; Assistance to Co-operatives through Local Governments, Women enterprises through SHGs, financial assistance to Co-operatives for promoting Cluster Developments, Land to Agricultural labourers, Educational Assistance to students studying in Self Financing Colleges and Training to Officers of SC Development Department.

14.174 Scheme wise expenditure of welfare of SC Development and OBC from 2002-03 to 2006-07and 2007-08 (up to 31.10.07) is given in Appendix 14.34(A). The physical achievements of major schemes of SC Development Department is shown in Appendix 14.34(B).

Programmes of Scheduled Tribe Development Department

14.175 During 2007-08 the total State Plan provision set apart for the development of Scheduled Tribes is Rs. 139 crore. This is 2% of the total state plan outlay. Out of this Rs. 50 82 Crore is earmarked as state share for the development programmes of the ST Development Department including Rs. 3 60 crore for RD Schemes. An amount of Rs. 66.55 crore is provided as grant in aid to local bodies. For the 50% and 100% CSS Schemes Central Share includes Rs.5.76 crore and Rs.11.73 crore respectively. In addition to this Rs.3.50 crore is included as Special Central Assistance to TSP. Details of Financial and Physical achievements of schemes implemented by the department from 2002-03 to 2006-07 and 2007-08(up to 31.12.07) is given in Appendices 14.35(A) and 35(B) respectively.

14.176 The main objective of the development plan is to promote the socio-economic conditions of the Scheduled Tribes and to free them from exploitation To achieve this objective, top priority is given for the educational development of the Scheduled Tribes. Educational concessions, scholarships and other kinds of assistance are provided to tribal students from pre-primary level to post graduate level. Details showing the number of ST students benefitted and amount spend during 2006-07 is given in Appendix 14.36 Major portion of the non-plan outlay of Scheduled Tribe Development Department is for educational development activities. Rs 24.39 crore was expended for educational programmes both revenue and capital under Plan and Non plan during the year 2006-07 against the budget provision of Rs 27 85 crore. During the current year an amount of Rs 6.04 crore was expended towards educational assistance up to 31 10.2007.

14 177 For providing pre-primary education to the tribal students 13 Kindergartens and 22 Balawadies are functioning under Local Self Government and ST Department respectively. In order to provide residential education to tribal students from remote areas, the department runs 110 pre-metric hostels, 3 post matric hostels and for providing quality education 18 Model Residential/Ashram Schools are functioning under the department. In addition to the existing 40 single teacher schools for providing pre-primary education to tribal students living in very remote and inaccessible areas, 24 centres are functioning under the peripatetic education scheme for imparting primary education to primitive tribe children. For imparting job oriented technical training, 12 training centres are functioning under the department. The students who get

admission to professional courses are given one month residential course in personality development and spoken English.

14.178 The Department has to give tuition fee of ST students who get admitted to professional course in Self Financing colleges under Govt. Quota During 2007 the Dept has given entrance Examination coaching to 124 students and made good results.

Housing

14.179 During the tenth plan period the department provided assistance for the construction of more than 5000 houses. During 2006-07, 1111 houses were sanctioned to the primitive tribal families under Additional Central Assistance and also under State Plan Rs. 2 crore was sanctioned for the constructions of 250 houses. In the eleventh plan, it is proposed to construct houses to all houseless families in a time bound manner. During 2007-08 Rs. 200 lakh under general housing and Rs. 100 lakh under TSP Corpus fund were sanctioned and released for constructions of new houses to Scheduled Tribes.

14.180 The outlay and expenditure by the Department for Plan and Non Plan Housing schemes during the year 2002-03 to 2007-08 given in Table 14.44

Table 14.44
Details of Outlay and Expenditure of Housing Programmes undertaken by ST Development Department

(Rs. Lakh)

Year	Plan		Non plan	
	Outlay	Expenditure	Outlay	Expenditure
2002-03	311.68	308.01	22.35	22.11
2003-04	211.68	188.11	10.25	7.67
2004-05	-	-	-	-
2005-06	100.00	99.16	-	-
2006-07	1227.19	1194.36		
2007-08 (as on 31.10.2008)	300.00	76.38	-	-

Source. Directorate of Scheduled Tribe Development

14.181 Besides the ST Department, TRDM, Rural Development Department and the Local Bodies are also involved in providing houses to Scheduled Tribes.

Health

14.182 Various measures are taken for providing timely medical attention to STs. The health services Department run 63 PHCs in the tribal areas Besides the ST Development Department has 4 Midwifery centres, 17 Ayurveda Dispensaries, 6 Allopathy Dispensary/O P. Clinics, 1 Ayurveda Hospital, 2 Mobile Medical units and 1 Allopathy Hospital at Mananthavady. During 2007 the Nalloornad and Attappady hospitals under the ST Development Department were transferred to the DHS and now functioning well. Apart from the PHCs and Ayurveda Dispensaries, Homoeo Dispensaries are also functioning in tribal areas under TSP of the

respective Departments. The Health Department conducts Medical Camps in tribal areas to diagnose diseases. Serious diseases detected are referred to district hospitals and financial assistance given for treatment. Studies by the Health Department as well as AIIMS,New Delhi show that nearly 15 % of the tribal families in Wayanad and Palakkad Districts have been traits of the genetical problem Sickle Cell Anemia. In order to tackle the problem, kozhikode Medical College has set up a Sickle Cell Anaemia unit.

14.183 During 2006-07 an amount of Rs 230.84 lakh was expended by the ST Development Department for Health programmes under plan and Non Plan. In order to provide better facilities an amount of Rs. 389.09 lakh is set apart for health programme during 2007-08. In the Eleventh plan it is proposed to implement a new scheme "Complete Health Care Programme for the Tribals" by utilising the ACA of Rs.10 Crores received from Government of India .

14.184 Insurance coverage has been provided to 500 families of Primitive Tribal Groups for a period of 5 years beginning from 2004-05 The Primitive Tribal Groups of Koraga in Kasaragod district and Cholanaikan in Malappuram district are covered under the scheme. Government of India have sanctioned Rs. 5.00 lakh to the state for the coverage of 1000 families during 2006-07. This amount was released to LIC for the coverage of Kadar in Palakkad and Thrissur districts; Kattunaikans in Malappuram and Kozhikode districts and Kurumbas in Palakkad district. An amount of Rs 15.00 was also sanctioned during 2007-08, for the insurance coverage of another 3000 families.

Resettlement of Landless Tribes

14.185 A special scheme for providing land to the landless and houses to the houseless is being implemented in the state As part of the resettlement of landless, Tribal Development Mission has been formed to undertake rehabilitation activities based on a Master Plan. They have identified 22052 landless tribal families and 32131 families with less than one acre of land. The highest number of landless tribes are found in Wayanad District (60.32 %) followed by Palakkad (24.44%). So far a total of 6851.72 acres of land have been distributed to them benefiting 4696 landless tribal families. Procedures for distribution of land to another 3000 families will be completed and allotted land with in a short span. A Committee with Chief Secretary as Chairperson has been formed to identify more land for resettlement .

14.186 The Aralam Farm with an extent of 7612 acres, has been purchased by the State Government for resettlement and half the extend of the farm retained as farm itself and the remaining portion (about 3779 acres) distributed to 2557 families during the year 2006 & 2007. In addition to this Government of India has been approached for diversion of 12196 hectare of forest land for assignment to the landless families.

14.187 As on 31.10.2007 about 6713 acres of surplus land was distributed to 8394 ST beneficiaries. District-wise details of distribution of surplus land is given in Appendix 14.37.

14.188 Major projects such as Sugandhagiri Cardmom project, Priyadarshini Tea Estate, Pookot Dairy project, Attappady farming co-operative society (ACFS), Vattachera Tribal Collective Farm etc were started to promote socio-economic conditions of ST and to free them from exploitation These five projects could rehabilitate 1089 ST families in 3295 hectares of land. These families have been given housing and other amenities and employment in the farms of the project As a policy decision of the State Government to issue land to landless tribal families, the sugandhigiri Cardamom project, Pookot Dairy project and Vattachira Tribal Collecho Farm were distributed to the Tribal families within the project area Now two Group Farms were functioning viz ACFS and Priyadarshini Tea Estates, Mananthavady and the grant-in-aid to these two farms were given out of the Budget provision under "Support to Group Farms".

Corpus Fund

14.189 An amount of Rs. 649.09 lakh out of the Corpus Fund of Rs. 671.38 lakh was expended during 2006-07 for undertaking various development activities. The components of the Corpus fund includes self employments, skill development, water supply and sanitation, communication facilities, foot bridges, technology transfer, improvement of education and health

SCA to TSP

14.190 The Special Central Assistance to Tribal Sub Plan released by GOI as an additive 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% of the funds has been utilised for implementing primary schemes supporting family/SHG/Community based income generation activities and 30% used for critical infrastructure in the sectors of Drinking water, Watershed management etc. As part of the revised guidelines of GOI, during 2004-05 onwards, the programme has been implemented in the state on cluster basis approach and not less than 30% of the budget estimate was earmarked to women component programme viz employment and training, agriculture and hamlet development, diary and poultry programmes etc. The Department is also implementing a project for plantation based activities in association with Rubber board. So far 1217 ha. of land were planted with Rubber benefiting 3339 Tribal families. Expenditure details of SCA to TSP from 2002-03 onwards is given in Table 14.45

Table 14.45
Statement showing the Outlay and Expenditure under SCA to TSP during 2002-03 to 2007-08

(Rs. in lakh)

Year	Outlay	Expenditure	Physical Achievement (families)
2002-03	275.00	348.45	5499
2003-04	350.00	355.36	6098
2004-05	350.00	379.30	4667
2005-06	246.00	244.45	2764
2006-07	350.00	241.20	1444
2007-08 (31.10.2007)	350.00	97.55	833

Source: Scheduled Tribe Development Department

Co-operation

14.191 The SC/ST co-operative were formed aiming the overall development of the socio-economic conditions of SC and ST. Out of 863 primary co-operative societies (SC- 756, ST- 107) 516 SC Co-operatives and 63 ST Co-operatives are functioning. Through these societies loans are being issued and other activities are done. Minor forest produce procurement, sales other activities like Ayurdhara and Petrol pump are being undertaken by the Kerala State Federation of SC/ST Development Cooperative Limited.

KIRTADS

14.192 The Institute conducts research and intensive study on Scheduled Caste and Scheduled Tribe population of the state. During the year under review the Research wing conducts;

- Ethnographic studies on various communities, especially on the Scheduled Communities of the state.
- Screening Committee Cases
- Scrutiny Committee Cases.
- Studies conduct for the Kerala State Commission for Backward Classes
- Other studies - requested by Scheduled Tribe Development Department, Scheduled Caste Development Department. Revenue Divisional Officer, Tahsildars and District Collectors.

Development Studies Wing Submitted the following reports during the year 2007

1. The role of NGO's in Scheduled Tribes Development - A case study from Wayanad District.
2. Evaluation study on the socio cultural change among the Mavilan Tribal community of Wayanad District.
3. Draft on the Ethnographic Notes of the Scheduled Tribal Communities of Kerala (Malayalam).

Also Separate programmes were conducted by KIRTADS for officials and non-Officials. Conscientisation, Orientation, exposure programmes and general empowerment programmes were conducted for PTGs and remote isolated tribal youths.

Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes

14.193 The Corporation, with its Registered office at Thrissur, functions through 12 Regional Offices covering all the districts, is implementing various schemes to enable the SC/ST people to become self-reliant in all respects. The sources of finance for implementing various schemes are Corporation's own share capital and assistance from other national refinancing agencies like NSFDC, NSTFDC, NSKFDC and HUDCO. The Corporation is now concentrating more on self employment schemes to enable the target people to engage in some creative and most viable income generating activities and earn their livelihood and thereby improve their socio-economic status in the society.

14.194 The major schemes implemented by the Corporation include agricultural land purchase, micro-credit finance, mini-venture loans, small enterprise loans, housing, educational loan, marriage assistance etc. During 2006-07, a total of 895 families were assisted under various schemes incurring an expenditure of Rs 483.97 lakh. Under the Land Purchase Schemes there were 264 beneficiaries and the Micro credit finance schemes benefited 397 families in this period.

14.195 The Corporation also conducts a few training programmes for improving the workmanship, efficiency and vocational skills among SC/ST people. The refinancing agencies like NSFDC and NSTFDC are sponsoring the entire training cost. During the year 2007-08, training on mobile phone servicing and vermi composting were under taken with participation of

a total number of 50 trainees. In addition to this Entrepreneurship Development Programme' was conducted with the participation of 163 trainees from ST community.

14.196 The scheme wise details of physical and financial achievement of the Corporation are given in Appendix 14 38

Kerala State Backward Classes Development Corporation

14.197 The Corporation aims at the socio-economic upliftment of the backward classes and minorities in the state. The major objectives of the Corporation are,

1. To promote the comprehensive development of the Other Backward Classes and Minorities of Kerala by rendering assistance by way of loans and advance for establishing small income generating enterprises in various sectors.
2. To promote schemes, establish institutions for the socio, economic and educational upliftment of the target group.
3. To assist Other Backward Classes and Minorities for the upgradation of technical and entrepreneurial skills.

14.198 The Corporation mobilizes funds from the National Backward Classes Finance & Development Corporation (NBCFDC) and National Minorities Development & Finance Corporation (NMDFC) in addition to State Government support.

14.199 The source-wise expenditure and the physical achievements of the Corporation during 2006-07 and 2007-08 are given in the Appendix 14.39

Kerala State Development Corporation for Christian Converts from Scheduled Castes and the recommended Communities

14.200 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 under implementation by the Corporation are agricultural land purchase, foreign employment, housing, cash incentive to students, marriage loan, agriculture and allied sector assistance, small business, educational loan etc. The Corporation implements these schemes with the financial assistance received from state government and the loan assistance from NBCFDC. Details of scheme wise outlay and expenditure are given in Appendix 14.40.

INFORMATION AND PUBLICITY

14.201 The Information and Public Relations Department disseminate State's Public Relation activities and Information services with the objective of materializing various information services concerned with Government and its various Departments/Agencies. It maintains a significant relationship between the Government and the public as well. The department functions mainly through thirteen wings besides the district information offices and Kerala Information Centre in New Delhi. It involves Press Information Services, Field Publicity, Display Advertisement, Information Centres, Films and Publications, Maintenance of Government Website and setting up of Mail Server etc.

Functions of major sectors on dissemination are given below in Box No.14.11.

Box 14.11

Information and Public Relation Services - Major activities

Sl.No.	Major Sectors	Main Services
1	Press Release Wing	Feeds the print and electronic media by its daily press releases. Video news clips are also being released to the TV news media covering press meets and state level programmes
2	Editorial Wing	To bring out handouts for publicizing government policies and programmes, and social awareness campaigns. Two magazines (Janapadham and Kerala Calling), reference books on cultural heritage of Kerala are published
3	Planning and Development Wing	Maintenance of Government web portal, e-governance mechanism to Sutharya Keralam, production of video films
4	Field Publicity and Exhibition Wing	Special campaigns organized within and outside the state, exhibitions at national, state and district levels are arranged.
5	Advertisement Wing	Serves as professional advertisement agency for government and its various departments. Produces and markets audio/video spots.
6	Research and Reference Wing	Provides information to the public on governmental and other general matters. Registration of books/periodicals as per the Press Registration of Books Act
7	Scrutiny Wing	Watches reactions on Government policies and activities and provides feed back.

Reviews on major activities undertaken during the reporting year are given below:

Sutharya Keralam

14.202 Rs.20 lakhs had been already expended till 22nd October 2007 to implement this scheme. This prestigious programme was initiated by adopted by the Government of Kerala during 2005-06 in the structure of a phone-in-programme called "Sutharya Keralam" through Doordarshan and All India Radio. Presently, it is being recast in a new fashion. It seems to be one of the major programmes aimed at sorting out public grievances. Outlay and expenditure from 2005-06 to 2007-08 on this programme is shown below as Table –14.46.

Table 14.46

Outlay and Expenditure on Sutharya Keralam from 2005-06 to 2007-08

Sl.No.	Year	Budgeted Outlay(Rs.lakh)	Expenditure(Rs.lakh)
(1)	(2)	(3)	(4)
1	2005-06	81.00	79.78
2	2006-07	55.00	9.77
3	2007-08	20.00	20.00

Government on People's Response

14.203 The scrutiny wing of the I&PRD watches reactions on Government policies and activities and provides feed back to the Government on people's response and reactions reflected in the newspapers and electronic media. Since the electronic media has started 24 hours news channels in Malayalam, the department has also started recording news and news based programmes for analysis.

Press Release

14.204 During 2007, the Department has released 7574 press releases from headquarters and 27268 from the district information offices and 11 special features through the print and electronic media. Video news clips are also being released to the T.V. media covering press meets and state level programmes 1500 video news clips were released to 10 T.V.channels in the reporting year. Table – 14.47 shows the details of press releases undertaken during 2007.

Table 14.47
Details on Press Release activities during 2007

Sl.No,	Items	Total during 2007 (Nos)
1	2	3
1	Press Releases from H.Q.	7574
2	Special features	11
3	Video news clips released to 10 T.V.channels	1500
4	Press releases from 14 D.I.O.s	27268
5	Press notes by Information Office, New Delhi	167

Media Information and Monitoring

14.205 A new techno-based media information and monitoring system has been evolved to enable ministers to review their performance and peoples's response with online support. All editions of news papers and T.V. news reports will be scrutinised in the respective districts and will be sent to concerned ministers and authorities with remarks for follow-up, with facility for publication of rejoinders, if any.

Editorial and Publication

14.206 The Editorial Wing brought out 543500 copies of hand outs for publicizing Government policies and programmes and various social awareness campaigns. The two magazines, Janapadham and Kerala Calling published both in Malayalam and English have touched a level of professional elegance both in content and presentation They together have a circulation of nearly 4.20 lakhs. Reference books with 516500 copies were also published on the cultural heritage of Kerala. Details on the publication in the reporting year 2007 are shown as Table –14.48 given below:

Table 14.48
Details on Publications during 2007 through I&PRD

Sl.No.	Publications	Total during 2007 (Nos)
1	2	4
1	Two Magazines:	
	(a) Janapadham (Malayalam) 560000x12	240000
	(b) Kerala Calling (English) 35000x12	180000
2	Two News Letters:	
	(a) Vikasana Samawayam (Malayalam) 100000x12	204000
	(b) Kerala Interface (English) 50000x12	60000
3	Economic News Digest (English)	72000
4	Reference Books on Cultural Heritage of Kerala	516500
5	Handouts on Government policies and programmes	543500

Field Publicity and Exhibition

14.207 32 seminars, 14 exhibitions and 6 district level film shows were organized in 2007 during different occasions. Special field publicity campaigns were also organized within and outside the state. Exhibitions at National, State and District levels and in the rural areas were also conducted. Issue based campaigns were arranged in different parts of the State viz, Gandhi Jayanthi, Communal tension, Chikun Guniya and Golden Jubilee Celebrations etc. In the reporting year the Department was honoured with Gold Medal in the IITF at Delhi.

The major activities under field publicity and exhibitions are given below as

Table 14.49
Details on Field Publicity and Exhibitions during 2007

Sl.No.	Activities	Total functions during 2007
1	2	3
1	Seminars on various topics	32
2	Film shows at district level	6
3	Exhibitions on different occassions	14

Photo Division

14.208 A full fledged photo division to document all happenings that relates to Government is actively functioning in the Department. This year 539 photos from the Directorate and 2071 from the District Information Offices were released to the press. On different occasions 195500 copies of posters on various subjects were also circulated for field publicity.

Maintenance of Government Website

14.209 Planning and Development Wing is in charge of maintenance of Government web portal with the site of 27000 odd pages. Both www.kerala.gov.in and www.prdkerala.gov.in which are rated as best sites in India has an average monthly hit of 3.8 million. In November 2007 it was 7.8 million hits in the month. This wing is also doing production of video films and 17 documentaries has been under different stages of production in the reporting year. Of these, 10 films are on the making of modern Kerala State. E-Governance mechanism for grievance redressal namely "Sutharya Keralam" has also been evolved.

14.210 Salient features other than the above with regard to the Information and Public Relation during 2007 are shown below as Table-14.50: Study tours for journalists, awards to media persons, pension schemes to retired journalists, eminent journalists, and non-journalists, social awareness campaigns etc are the other programmes.

Table 14.50

Salient Features of the Information and Public Relation Activities - 2007

Sl.No.	Items	Total Nos.
1	2	3
1	Display Advertisements released to the print media	12
2	Production of video spots	13
3	Publishing of tenders and notifications of various departments in the print media activities.	6493
4	Documentation of all happenings relates to Government through photos which are released to the press (H.Q.)	539
5	--do-- (D.I.O.s)	2071
6	Posters circulated on different subjects	195500
7	Production of video film documentaries	17
8	Films on Modern Kerala Series	Nil

CENTRE FOR DEVELOPMENT OF IMAGING TECHNOLOGY (C-DIT)

14.211 Centre for Development of Imaging Technology is an organization established in 1988 by the Government of Kerala for advancement of research, development and training in imaging technology with an implied role in socially relevant science and development communication. C-DIT has taken up many prestigious projects of the Government of Kerala and Government of India. Information and Public Relations Department functions as the administrative department of C-DIT.

14.212 Currently C-DIT works as 11 financially independent and functionally focused teams with overlapping memberships. The services rendered by 11 teams during 2007 in brief are given below as Box No.14.12.

Box 14.12

Major services rendered by Centre for Development of Imaging Technology during 2007

Sl.No	Name of Teams	Major services
1	Optical Image Processing Team	Lays accent on production, research & development and training on photonics and allied branches of optics. Production of holograms and holographic imaging with production capacity of 20 million security holograms per day.
2	Visual Communication Team	Works in the spheres of development, health, education, science popularization etc. Production includes science & educational video films, documentaries, short films and corporate films. Serving as the visual solution provider for the GOK.
3	New Media Team	Involved in interactive multimedia CDs, games, knowledge resource CDs etc. Production of full length and short animation films. services include 2D and 3D animation for advertisements, game programming, digital knowledge documentation and animation film production.
4	Communication Training Team	Offers speciality training in Visual Media, Science & Development Communication, Photographic and Videographic techniques. Conducts courses like PG Diploma in Science and Development Communication, PG Diploma in Animation, PG Diploma in Multimedia, PG Diploma in Educational Informatics etc.

5	Web Services Team	Significant presence in the seemingly infinite cyberspace. The cyber world, which allows for limitless growth has been efficiently harnessed by this team, which runs as many as 200 websites. It also involves in web hosting, web designing, web content development, database support, training in web management and citizen utility webpages
6	Educational Informatics Team	Set up to fulfill the task of integrating information technology and education, e-Learning software and e-Books etc. PG Diploma in educational Informatics, making products like Chithrakudukka Vol.1,2 & 3, Chithraramayanam, Virtual Electrical Engineering Laboratory software, Nammude Malayalam CD, etc.
7	E-Governance Team	To establish in-house skills for supporting any initiative by the Government. This team has the largest pool of personnel. 'FRIENDS', a novel initiative of I.T. Department of Kerala, has been the major project in which the team has been involved from its inception. Major projects are computerization of Departments/Universities/etc, Installation of Touch screen information kiosks, vocational training program for students and IT at School etc.
8	Computational Linguistics Team	Designing Malayalam fonts for taking up Unicode issues, from standardization of 'Manglish' keyboard to implementation of Government policies, from creating consensus on Cyber malayala padavali to developing computational tools for Government applications in Malayalam, etc
9	Open Source Technology Team	Aims at keeping the source of the software open, thereby facilitating people to improve it, adapt it and fix bugs in it. This team acts as a dissemination agency of open source technology solutions. Major products include Linux version of "Webdarshini", Kairali Linux, Linux version of Akshaya CD and Malayalam book on free software.
10	Software Engineering Team	Total solutions provider in the implementation of IT schemes in the Kerala state. The team has a group of software developers with skills in using OOP, Java, C++, VB, VC,ASP, dot Net, Javascript, PHP etc.
11	Technology Extension Team	Technology Extension Team took shape to meet the necessity of extending technology to tap the vast human resources of the State and help them translate their potential to bring about larger benefits for the state. Courses like IBM Mainframe, AS/400, BPO, PG Diploma in Computer Applications, etc.

Table 14.51
Outlay and Expenditure from 2005-06 to 2007-08

Sl No.	Year	Budgetted Outlay(Rs. Lakhs)	Expenditure (RS. Lakhs)
1	2005-06	140.00	140.00
2	2006-07	125.00	125.00
3	2007-08	86.00	68.94 (up to 10/07)

PRICES & FOOD SECURITY

Prices

Consumer Price Index (CPI)

Consumer Price Index helps to measure the average percentage change of retail prices paid by the consumers for a fixed basket of goods and services. Consumer price Index is an appropriate measuring rod to determine the impact of price rise on the cost of living of the common man.

15.2 During 2007 (up to October) the Consumer Price Index of agricultural and industrial workers in the State went up by 5 points (base 1998-99=100), compared to the corresponding period in 2006 ie the index rose from 131 points in October 2006 to 136 points in October 2007 (Table 15.1) . The corresponding increase in 2006 was 7 points which shows that inflation in terms of Consumer Price Index was a bit lower in the State during the period under review, compared to the corresponding period during the previous year.

Table 15.1

Annual Average Consumer Price Indices of Selected Centres in Kerala - 2004 to 2007

(Base:1998-99=100)

Sl. No.	Centres	Year						% Variation over previous year			
		2004	2005*	2005	2006*	2006	2007*	2005	2006*	2006	2007*
1	Thiruvananthapuram	126	132	132	138	138	143	5	5	5	4
2	Kollam	126	129	130	137	138	142	3	6	6	4
3	Punalur	116	120	121	129	130	135	4	8	7	5
4	Pathanamthitta	121	125	125	133	133	141	3	6	6	6
5	Alappuzha	120	124	124	131	132	136	3	6	6	4
6	Kottayam	121	123	124	130	131	136	3	6	6	5
7	Mundakkayam	118	121	121	126	127	132	3	4	5	5
8	Munnar	118	121	121	125	125	128	3	3	3	2
9	Ernakulam	121	125	126	132	133	137	4	6	6	4
10	Chalakkudy	119	123	124	129	129	133	4	5	4	3
11	Thrissur	119	122	123	129	130	136	3	6	6	5
12	Palakkad	120	124	125	131	132	138	4	6	6	5
13	Malappuram	122	125	126	130	130	137	3	4	3	5
14	Kozhikode	120	123	123	129	129	132	3	5	5	2
15	Meppady	117	120	121	128	128	131	3	7	6	2
16	Kannur	124	126	126	130	130	132	2	3	3	2
17	Kasaragod	126	129	130	133	133	135	3	3	2	2
	State Average	**121**	**124**	**125**	**131**	**131**	**136**	**3**	**6**	**5**	**4**

Source - Directorate of Economics & Statistics

* up to October

15.3 When the indices of seventeen centres were subjected to review, Thiruvananthapuram recorded the highest index (143 points) followed by Kollam (142 points). This was the same

during the previous year also. The lowest position was recorded at Munnar (128 points). The Indices of 8 centres fall below the State average of 136 points and that for Alappuzha, Kottayam and Thrissur Centres stood at par with the State average of 136. The year to year variation of indices over previous year for the various centres ranged from 2 to 6 percent, with largest increase being at Pathanamthitta and the least at Munnar, Kozhikode, Meppady, Kannur and Kasaragod. Compared to Southern regions of the State, percentage change in Consumer Price Index of northern districts particularly Kannur, Kasargod, Meppady and Kozhikode are rather low.

15.4 The month-wise movements of Consumer Price Indices are shown in Appendix 15.1. The movement of indices during 2007 is within the range of 126 points to 144 points. The indices of Munnar registered the lowest index of 126 points in the beginning of 2007 and reached to 130 points at the end of September 2007. Thiruvananthapuram recorded the highest movement of Consumer Price Index of 144 points during June-July 2007 which is more or less constant through out the year

Retail Prices

15.5 The average Retail Prices of essential commodities from 2005 to 2007 (up to November) are shown in Table 15.2. On reviewing the prices of 18 essential commodities in 2007 (up to November), it was observed that the prices of Rice (Red O M.Matta), Redgram and Dhall under Cereal group increased by 7, 14 and 14 percent respectively. But there took place a decline in the prices of green gram and black gram by 5 and 11 percent respectively. Under other food items the prices of Sugar (OM) experienced a heavy downfall ie; by 25 percent. But that of milk and egg showed an upward trend with an increase of 7 and 13 percent respectively. The prices of Coconut Oil and Coconut (without husk) declined by 2 and 4 percent while that of Groundnut Oil and Refined Oil increased by 8 and 1 percent. The prices of Onion (small) declined by 6 percent and that of Coriander and Chillies (dry) rose up by 21 and 7 percent respectively. Under Tubers the prices of Tapioca remained the same and that of Potato increased by 15 percent. The prices of Banana also showed an upward trend with an increase of 21 percent compared to the corresponding period of 2006 (Table 15.2).

Table 15.2

Annual Average Retail Prices of Essential Commodities in Kerala 2005 to 2007.

Sl. No.	Commodities	Unit	Prices at the end of December (Rs)					% variation over previous year		
			2005*	2005	2006*	2006	2007*	2006*	2006	2007*
A	**Cereals**									
1	Rice (Red) OM Matta	Kg	13	13.50	14	14.03	15	8	3.93	7
2	Greengram	Kg	32	32.60	42	42.16	40	31	29.33	-5
3	Blackgram	Kg	34	34.60	55	55.38	49	62	60.06	-11
4	Redgram	Kg	22	21.60	29	29.6	33	32	37.04	14
5	Dhall	Kg	33	33	35	34.63	40	6	4.88	14
B	**Other Food Items**									
6	Milk(Cow's)	Ltr	15	14.60	15	14.93	16	-	2.26	7
7	Egg(Hen's Nadan)	Dozen	30	29.60	30	30.07	34	-	1.59	13
8	Sugar (OM)	Kg	19	18.70	20	19.72	15	5	5.45	-25
C	**Oil and Oil seeds**									
9	Coconut Oil	Kg	64	63.80	56	56.27	55	-13	-11.80	-2
10	Groundnut Oil	Kg	69	68.60	72	70.05	78	4	2.11	8

11	Refined Oil (Postman)	Kg	85	84.70	76	78.36	77	-11	-7.49	1
12	Coconut (without Husk)	100 Nos	628	625.8	555	557.13	532	-12	-10.97	-4
D	Spices & Condiments									
13	Coriander	Kg	30	30.4	38	38.65	46	27	27.14	21
14	Chillies (dry)	Kg	36	36.90	61	63.20	65	69	71.27	7
15	Onion (small)	Kg	13	13.80	16	16.31	15	23	18.19	-6
E	Tubers									
16	Tapioca	Kg	6	6.20	7	6.73	7	17	8.55	0
17	Potato	Kg	10	12.70	13	13.43	15	30	5.75	15
F	Fruits & Vegetables									
18	Banana	Kg	14	13.50	14	15.78	17	-	16.89	21

Source: Directorate of Economics & Statistics

*** up to Nov.**

15.6 The month-wise movement of retail prices is given in Appendix 15.2. Comparing to the beginning of 2007, by November there took place a fall in the prices of Greengram, Blackgram, Sugar, Coconut Oil, Coconut, Chillies (dry), Tamarind, Cucumber, Ladies finger, etc. The prices of Redgram, Refined Oil, Pumpkin, etc. remained more or less the same. Prices of all other items increased during the period under review. A significant point noted was that there was a constant upward trend in the prices of Rice (Matta OM), Milk and Ground nut Oil and constant downward trend in the prices of Coconut Oil, Coconut and Chillies (dry)

Consumption Expenditure

15.7 The report of 61st round of NSS Survey on "level and pattern of consumption expenditure 2004-05" of India carried out by National Sample Survey Organization (NSSO) relates to the period from July 2004 to June 2005.

15.8 The all India average MPCE for rural sector according to the latest NSS Report ie. NSS Report No. 508 (61st Round) is 559. As per this report the average MPCE for rural sector of Kerala stands at 1013. A state wise comparison reveals that Kerala had the highest MPCE ie. 1013 followed by Nagaland 1011 and Goa 985. In the states Assam, Bihar, Chattisgah, Jharkhand, Karnataka, Madyapradesh, Orrisa, Thripura and Utter Pradesh the average MPCE is below the national average of 559, the lowest being in Orissa (399). The concentration of persons to the higher expenditure class in rural sector (1155 and more) is the highest in Goa followed by Nagaland, Delhi and Kerala. In Delhi, Goa, Jammu & Kashmir, Manipur, Meghalaya, Mizoram and Nagaland the concentration of persons to be lowest expenditure class in rural sector (0-235) is zero, which in Kerala is 13. The all India average of this section is 48 (Appendix 15.3).

15.9 The MPCE with respect to the urban sector is given in Appendix 15.4. The all India average MPCE of urban sector as per the NSS report No. 508 (61st round) is Rs.1052. As per this report the average MPCE for Kerala is 1291. Nagaland, Goa, Himachal Pradesh, Punjab and Delhi stand above Kerala in this respect; Nagaland being the top. The concentration of persons to the highest expenditure class in urban sector (2540 and more) is the highest in Delhi (113) followed by Goa (89), Kerala (79) and Nagaland (74). The concentration of persons to the lowest expenditure class in urban sector (0-335) is zero in Meghalaya, Mozoram and Nagaland and one in Manipur while in Kerala it is 29. In this case the national average is 50. The average MPCE of Arunachal Pradesh, Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Manipur, Orissa, Rajasthan, Uttar Pradesh and Uttaranchal is below 1000, the lowest being Bihar (696) (Appendix 15.4).

15.10 The average consumer expenditure per person for a period of 30 days in various NSS rounds is given in Table 15.3. The average consumer expenditure in Kerala and all India were very close during the early 70's. However from the late 70's the average consumer expenditure of Kerala gradually surpassed the all India level both in urban and rural sectors. Rate of change in the rural sector was more pronounced than in the urban sector. The percentage variation while in the urban sector stood at 8.4 percent compared to all India level in 1983-84, it was 29.5 % in rural sector. The rising trend continued in all the following rounds and reached a peak level of 77 percent in the rural sector during 2003 (59th round) and 32 % in urban sector during 2000-01 (56th round). This trend continued and reached to 81.3% in rural sector and 22.7% in urban sector during 2004-05 (NSS report 61st round).

Table 15.3

Trends in Average Consumer Expenditure per person for the period of 30 days in various NSS rounds

Year & Round of NSS	Rural			Urban		
	Kerala	India	% variation over all - India	Kerala	India	% variation over all - India
1	2	3	4	5	6	7
1970-71 (25th)	36.12	35.31	2.3	47.63	52.85	(-)9.9
1972-73 (26th)	42.19	44.15	(-)4.4	58.27	63.33	(-)8
1977-78 (32nd)	74.76	68.89	8.5	84.10	96.15	(-)12.5
1983-84 (38th)	145.44	112.31	29.5	159.81	165.80	8.4
1987-88 (43rd)	211.47	158.10	33.8	266.81	249.93	6.8
1990-91 (46th)	261.85	202.12	29.5	369.36	317.75	16.2
1993-94 (50th)	390.40	281.60	38.6	493.50	457.70	7.8
1999-00 (55th)	765.71	486.00	57.5	932.00	855.00	9.0
2000-01 (56th)	841.31	494.91	70.0	1203.65	914.58	31.6
2002-03 (58th)	881.00	530.74	66.0	1266.64	1011.94	25.2
2003 January to December (59th)	981.00	554.0	77.0	1300.0	1022.00	27.2
January June 2004 60th round — Schedule Type - I	990.22	564.70	75.3	1371.51	1060.16	29.4
January June 2004 60th round — Schedule Type- II	1058.64	616.57	71.7	1403.89	1149.52	22.1
2004-05 (61st)	1013.15	558.78	81.3	1290.89	1052.36	22.7

Source: N.S.S.O

15.11 Table 15.4 presents the percentage distribution of expenditure on food and non-food items in various NSS rounds. The decline in the share of food in total expenditure seen over the past several rounds continued. The share of expenditure on food items exceeded non-food items in the rural sector of Kerala till 55th round. After that in all other rounds excepting the 58th round, non-food items has shown a higher share. In the urban sector, the share on non-food items exceeded food items much earlier than in the rural sector ie, from 46th round. At all India level, share of expenditure on food items exceeded non-food items in all rounds in the rural sector, but the trend in the urban sector was not same from 55th round onwards where from the expenditure on non-food items exceeded that on food items.

Table 15.4
Trends in percentage distribution of Food and Non-food Expenditure classification in various NSS rounds

Year & Round of NSS	Rural				Urban			
	Kerala		India		Kerala		India	
	Food	Nonfood	Food	Nonfood	Food	Nonfood	Food	Nonfood
1	2	3	4	5	6	7	8	9
1970-71 (25th)	70.21	29.79	73.58	26.42	63.34	36.66	64.41	35.59
1972-73(26th)	70.42	29.58	72.81	27.19	64.85	35.15	64.49	35.51
1977-78 (32nd)	60.75	39.25	64.35	36.65	60.61	39.39	59.98	40.02
1983-84 (38th)	61.56	38.44	65.56	34.44	58.24	41.76	58.69	41.31
1987-88 (43rd)	59.92	40.08	63.77	36.23	57.08	42.92	55.92	44.08
1990-91 (46th)	63.29	36.71	65.97	34.03	49.66	50.34	55.63	44.37
1993-94 (50th)	60.45	39.55	63.21	36.79	53.90	46.10	54.62	45.38
1999-00 (55th)	53.70	46.30	59.47	40.53	49.03	50.97	48.07	51.93
2000-01 (56th)	49.63	50.37	56.29	43.71	43.22	56.78	43.80	56.20
2002-03 (58th)	50.23	49.77	55.07	44.93	40.25	59.75	42.47	57.53
2003 (January to December) (59th)	44.92	55.08	53.88	46.12	38.36	61.64	41.98	58.02
January - June 2004 Sch. (Type I)	46.54	53.46	53.94	46.06	40.76	59.24	41.64	58.36
60th round Sch. (Type II)	50.23	49.77	57.96	42.04	40.92	59.08	46.00	54.00
2004-05 (61st)	44.97	55.03	55.05	44.95	39.97	60.03	42.51	57.49

Source: N.S.S.O.

15.12 As per the latest round (61st round) the percentage expenditure on food items in the rural sector of Kerala was 44.97 as against the all India figure on 55.05 and on non food items stood at 55.03 percent against the all India level of 44.95. This shows that the rural Kerala spends more on non food items than on food items. In the urban sector this is a bit more vivid where expenditure on food items in Kerala was 39.97 percent and on non food items 60.03 percent as against the all India standard of 42.51 and 57.49 respectively.

Box 15.1
Level of Consumption in 2004-05

- The Consumer Expenditure Survey of the 61st round of NSS carried out in 2004-05 estimated that in 2004-05, 5% of the Indian rural population belonged to households with monthly per capita consumer expenditure (MPCE) in the range "Rs.0-235" that is, spending less than Rs.8 per person per day on consumption.
- Another 5% of the Indian rural population belonged to households with monthly per capita expenditure in the range "Rs 235-270", that is, spending about Rs 8-9 per person per day on consumption
- The poorest 5% of the urban population of India (ranked by per capita spending levels) in 2004-05 belonged to households with monthly consumer expenditure per person in the range "Rs.0-335", that is, spending less than Rs 11 per person per day on consumption.
- Another 5% of the Indian urban population belonged to households with monthly per capita expenditure in the range "Rs.335-395", that is spending about Rs.11-13 per person per day on consumption.
- Average monthly per capita consumer expenditure (average MPCE) in 2004-05 was Rs.559 in rural India and Rs.1052 in urban India at 2004-05 prices
- About 5% of the rural population of India in 2004-05 had MPCE of Rs.1155 or more. Another 5% had MPCE between Rs.890 and Rs.1155.
- About 5% of the urban population of India in 2004-05 had MPCE of Rs 2540 or more. Another 5% had MPCE between Rs.1880 and Rs.2540.
- The Lorenz ratio for total consumer expenditure, indicating concentration in total consumption expenditure among the population, was 0.30 for rural India and 0.35 for urban India in 2004-05. In case of expenditure on cereals, for which the range of variation among the population is narrower, the specific concentration ratio was 0.08 for both rural and urban India.

Source : NSSO 61st round (Report No. 508)

Box 15.2
Broad Pattern of Consumption in 2004-05

- Out of every rupee spent in 2004-05 by the average rural Indian on consumption, 55 paise was spent on food. Of this, 18 paise was spent on cereals and cereal substitutes, 8 paise on milk and milk products, 6 paise on vegetables, 5 paise on edible oil, 5 paise on sugar, salt and spices, and 5 paise on beverages, refreshments and processed food.
- Out of every rupee spent in 2004-05 by the average urban Indian on consumption, 43 paise was spent on food. Of this, 10 paise was spent on cereals and cereal substitutes, 8 paise on milk and milk products, 6 paise on beverages, refreshments and processed food, and 4 paise on vegetables.
- In both rural and urban India, fuel and light took up 10% of total consumer expenditure while clothing, bedding and footwear took up 5%.
- Medical expenses formed 7% of total consumer expenditure in rural India and 5% in urban India
- Educational expenses formed 3% of total consumer expenditure in rural India and 5% in urban India.
- Conveyance expenses formed 4% of total consumer expenditure in rural India and 7% in urban India.

Source : NSSO 61st round (Report No. 508)

Box 15.3

Cereal Consumption in 2004-05

- Average quantity of cereals consumed per person per month in 2004-05 was 12.1 kg. in rural areas and 9.9 kg in urban areas.
- Average value of cereals consumed per person per month was Rs.101 in rural India and Rs.106 in urban India
- In rural areas of Haryana and Punjab, expenditure on cereals in 2004-05 formed only 9% of total consumer expenditure. But in rural areas of West Bengal and Assam cereals contributed 23% or more to total consumer expenditure, and in rural areas on Orissa, Chhattisgarh, Jharkhand and Bihar, they formed 27-28% of consumer expenditure.
- In urban areas of Punjab and Haryana cereals took up 6-7% of the household (consumption) budget in 2004-05, in urban areas of Bihar and Orissa they took up 17%.

Source : NSSO 61st round (Report No. 508)

Box 15.4

Trends in Consumption

- Between 1972-73 and 2004-05, the share of food in total consumer expenditure has fallen from 73% to 55% in rural areas and from 64% to 42% in urban areas.
- The share of cereals has fallen from 41% of consumer expenditure to 18% in rural India and from 23% to 10% in urban India over the same period.
- The share of fuel and light in total consumer expenditure has risen from under 6% to 10% in both rural and urban areas between 1972-73 and 2004-05.
- The share of clothing in total consumer expenditure over the last three decades has fallen from 7-8% to 4.5% in rural India and from 5-7 to 4% in urban India.
- Quantity of cereals consumed per person per month has declined between 1993-94 and 2004-05, that is, in the decade preceding the survey, from 13.4 kg to 12.1 kg in rural India and from 10.6 kg to 9.9 kg in urban India

Source : NSSO 61st round (Report No. 508)

Box 15.5

Consumption in Rupees and Increase at current prices 1999-2000

- The share in educational expenditure of "tuition and other fees", its major component, is on the rise. Between 1999-2000 and 2004-05, this share rose in urban India from 45% to 57% and from 29% in rural India, reached a level of 44%.
- Medicine (non-institutional) formed as much as 63-64% of total medical expenditure in rural India and 56-57% in urban India in both 1999-2000 and 2004-05.

- While the share of institutional medical expenditure (incurred in connection with hospitalisation) in total medical expenditure by households in urban India (28%) was a little higher than in rural India, the gap between the two has narrowed in 2004-05, the share for rural India having risen from 23% to 26%.
- Telephone expenditure per person per month, at current prices, has soared to six times its level in 1999-2000 (increase of 515%) in rural India and to 3.3 times its level (increase of 230%) in urban India. Total consumer expenditure levels per capita rose, by comparison, by 19% in rural India and by 29% in urban India. The proportion of households incurring expenditure on telephone has jumped from 5% to 32% for rural areas and from 25% to 63% for urban areas.
- Per capita expenditure on tuition and other educational fees has, at current prices, risen to nearly 3 times its 1999-2000 level (increase of 188%) in rural areas, and in urban areas reached two and a half times its earlier level.
- Tailoring expenses per person have registered a fall of 26% (at current prices) in the rural sector and 33% in the urban sector between 1999-2000 and 2004-05. At the same time, per capita expenditure on readymade garments has risen in both sectors by about 63% at current prices between these two years.

Source: NSSO 61st round (Report No. 508)

Wholesale Price Index

15.13 The wholesale Price Index is the most properly quoted inflation index in the country. The wholesale price index of agricultural commodities in Kerala in 2007 (up to July) went up by 155 points compared to the corresponding period of 2006, registering an increase of 5 percent (Table 15.5). The price hike was more serious with respect to condiments & spices and fruits & vegetables which registered an increase of 10 and 18 percent respectively. There took place a remarkable decline in the price of Molasses during the period under review ie. 20 percent.

Table 15.5

Wholesale Price Index of Agricultural Commodities In Kerala - 2005-07.

Base: 1952-53=100

Sl. No.	Crops	Weight	Year					% Variation over previous year			
			2005*	2005	2006*	2006	2007*	2005	2006*	2006	2007*
A	Food Crops	63.5	2825	2802	2920	2960	3145	-0.1	3	5.64	8
	Rice	40.4	2612	2614	2712	2748	2843	.5	4	5.13	5
	Condiments & Spices	10.4	2967	2748	2948	2954	3253	-4.	-0.6	7.50	10
	Fruits & Vegetables	10.7	3474	3522	3695	3763	4350	-0.1	6	6.84	18
	Molasses	2.0	2895	3005	2810	2792	2241	.9	-3	-7.09	-20
B	Non food Crops	36.5	3134	3036	2783	2893	2845	-8	-11	-4.71	2
	Oil & Oil Seeds	25.5	3771	3617	3162	3273	3153	-8	-16	-9.51	-0.3
	Plantation Crops	11.0	1662	1693	2004	2015	2133	-7	21	19.02	6
C	All Crops	100	2938	2887	2881	2932	3036	-3	-2	1.56	5

Source: Directorate of Economics & Statistics

* up to July

15.14 The month-wise wholesale price index, as given in Appendix 15.5 shows that the price of rice showed an increasing trend during the beginning of the period under review, but started declining from April 2007 onwards. In July 2007 it rose up again. Generally the prices of Molasses, Oil seeds, Non-food crops, etc registered a down ward trend during the period and that of all other items increased considerably.

Parity Index

15.15 Parity index is constructed to assess how the states' consumer price situation affects the farming community. It is a relative measure of prices received and paid by farmers. In 2007 (up to July), the parity index went up by 3 points from 50 points in 2006 to 53 points in 2007, as against the decrease of 3 points in 2006 from 53 points in 2005 to 50 points in 2006 (Table 15.6) The index of prices received by farmers over the pervious year increased by 354 points and the prices paid by farmers increased by 396 points signifies that the price situation is unfavourable to the farming community. The ratio of prices received and prices paid by farmers were well below 100 over the last several years reflecting the continuance of adverse terms of trade to the farming community.

Table 15.6

Index of Parity-Prices Received and Prices paid by Farmers from 1998-2007.

Base: 1952-53=100

Year	Prices received by farmers (Rs)	Growth Rate	Farm Cultivation Cost (Rs)	Growth Rate	Domestic Expenditure (Rs)	Growth Rate	Prices Paid by Farmers (Rs)	Growth rate	Parity Index Col.2 to 8
1	2	3	4	5	6	7	8	9	10
1998	2447	-1.57	4895	7.09	2107	6.47	3212	6.82	76
1999	2907	18.80	5556	13.50	2246	6.60	3532	9.96	82
2000	2492	-14.28	6173	11.11	2384	6.14	3836	8.61	66
2001	1927	-22.67	6584	6.66	2489	4.40	4048	5.53	48
2002	1999	3.74	6684	1.52	2542	2.13	4122	1.83	49
2003	2454	22.76	7056	5.57	2615	2.87	4295	4.20	57
2004	2651	8.03	7360	4.31	2705	3.44	4459	3.82	59
2005	2440	-7.96	7703	4.66	2795	3.3	4640	4.1	53
2006(P)	2397	-2	8025	4	2913	4	4834	4	50
2006	2474	1.39	8309	7.87	2947	5.44	4947	6.62	50
2007(P)	2751	14.77	8992	12.05	3042	4.43	5230	8.19	53
Annual Average Growth Rate		1.91		7.12		4.47		5.79	

Source: Directorate of Economics & Statistics

P-Provisional and up to July 2007

15.16 Farm cultivation cost and domestic expenditure, the two input components on the part of the farmers surpassed their receipts and apart from this, factors such as crop failure, occurrence of natural calamities, fall in prices of Agricultural crops especially commercial crops, agricultural related trade polices followed by Government of India adversely affected the farming community in general.

Wages

15.17 The average daily wage rates of skilled and unskilled workers in agricultural sector from 1996-97 to 2006-07 are given in Tables 15.7 & 15.8. The daily wage rates of carpenter in the Agricultural sector increased by Rs.18.45 (8.88 percent) in 2006-07 over 2005-06 while that of Mason increased by Rs.20.25 (9.82 Percent).

Table 15.7
Average Daily-wage Rates of Skilled Workers in the Agricultural Sector

(Rs)

Year	Average Daily Wage Rates		% Change Over Previous Year	
	Carpenter	Mason	Carpenter	Mason
1996-97	128.54	127.81	19.91	20.62
1997-98	145.94	144.04	13.54	12.70
1998-99	155.42	154.80	6.50	7.47
1999-00	165.35	164.70	6.39	6.40
2000-01	176.15	173.85	6.53	5.56
2001-02	182.42	180.06	3.56	3.57
2002-03	190.07	186.30	4.20	3.5
2003-04	192.00	188.00	1.02	0.9
2004-05	199.23	194.08	3.82	3.2
2005-06	207.88	206.25	4.34	6.27
2006-07	226.33	226.50	8.88	9.82

Source: Directorate of Economics & Statistics

15.18 In 2006-07, the daily wage rates of Male unskilled workers in Agricultural Sector showed an increase of Rs.12.62 (7.58 percent) over 2005-06. At the same time for the female workers it was Rs.15.77 (14.58 percent). There is a gap in the wage rates of male and female paddy field workers over the years. In 1995-96 it was 51 percent and in 2000-01 it came down to 50 percent and further to 44.41 percent in 2006-07.

Table 15.8
Average Daily-Wage Rates of Unskilled Workers in the Agricultural Sector

(Rs)

Year	Average Daily Wage Rates of Paddy Field Workers			
	Male	% Growth over previous year	Female	% Growth over previous year
1995-96	77.17	-	51.17	-
1996-97	92.18	19.5	60.52	18
1997-98	103.72	12.5	69.35	14.6
1998-99	111.76	7.8	71.42	3
1999-00	118.90	6.4	78.80	10
2000-01	123.15	3.6	82.38	4.5
2001-02	127.21	3	88.75	7.7
2002-03	144.90	13.9	99.73	12.4
2003-04	148.72	2.6	101.64	1.9
2004-05	165.58	11	115.75	13.9
2005-06	166.39	0.49	108.19	(-) 6.53
2006-07	179.01	7.58	123.96	14.58

Source: Directorate of Economics & Statistics

FOOD SECURITY

Public Distribution System (PDS)

15.19 The Public Distribution System is an instrument for ensuring the availability of certain essential commodities for consumption at subsidized rates to the people particularly the poor. The commodities distributed under PDS include rice, wheat, sugar edible oil and kerosene oil. The Government, through the Food Corporation of India (FCI) procures and stocks food grains and releases every month for distribution through the Public Distribution System network across the country. The Essential Supplies Programme gave way to Revamped Public Distribution System (RPDS) in 1992 with focus on disadvantageous areas Subsequently Government of India introduced Targeted Public Distribution System from (TPDS) 1st June 1997 in which allocation of foodgrains out of the central pool was made to the states at two sets of prices, at higher subsidized price for the poor and near open market price for others.

Table 15.9
Public Distribution System in Kerala – A profile (2002-03 to 2006-07)

(Nos.)

Sl. No	Items	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	4	5	6	7	8
1	a) Ration cards for families	62,60,966	64,46,957	66,11,298	67,77,075	69,86,017
	b) Ration Permits for institutions	16,183	15,878	15,215	14,187	14,101
2	FCI Sub Depots	23	22	22	21	20
3	Wholesale Shops a) Co-operative Sector	42	38	37	35	34
	b) Others	259	269	288	298	302
4	Ration shops a) Co-operative Sector	828	697	634	595	509
	b)Others	13249	13441	13513	13600	13702

Source: Directorate of Civil Supplies

Public Distribution System in Kerala- Salient features.

15.20 Kerala has a long history of public distribution system, dating back to the beginning of Second World War. Universal and Statutory rationing was introduced on 1-7-1966 with the implementation of Kerala Rationing Order 1966. The Targeted Public Distribution System in the State has been implemented with effect from 1.6 1997 as decided by Government of India. Accordingly families under Above Poverty Line (APL) and Below Poverty Line (BPL) categories have been identified and distinctive ration cards under each category have been issued and food grains are distributed to the families at different prices.

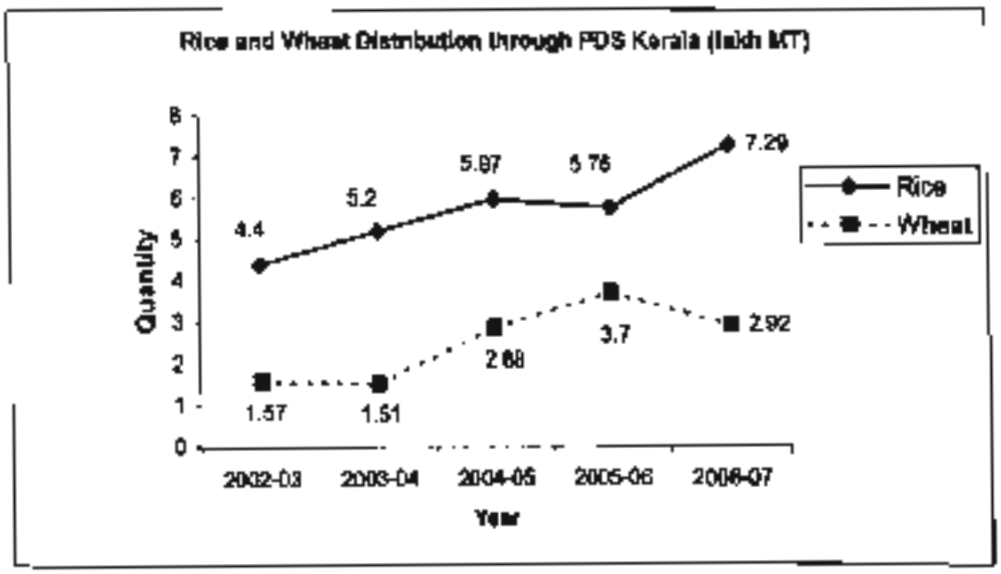
15.21 In Kerala, the coverage of ration cards is almost hundred percent. Ration cards are issued to all families including those who do not have house numbers The total number of ration cards in the state has increased from 67.77 lakhs as on 1st April 2006 to 69.86 lakhs as on 1st April 2007 showing an increase of 3.1 percent. As on October 2007 the number of cardholders rose upto 70.28 lakhs of which 49.43 lakh families are APL, 14.92 lakh are BPL and 5.93 lakhs are under (Antyodaya Anna Yojana) scheme. While the APL families increased by 3.6%, simultaneously the other two categories declined in percentage compare to previous year. The number of ration permits for institutions has come down from 14187 in 2006 to 14101 in 2007. Rationed articles at subsidised price are distributed to the cardholders through a network of 336 authorized wholesale dealers and 14211 authorized retail dealers including 509 in the co-operative sector. At present there are 20 FCI sub depots in the State. Table 15.9 describes the position of PDS in Kerala from 2002-03 to 2006-07.

Distribution of Rice and Wheat

15.22 Food grains are allotted by the Government of India for distribution to APL and AAY cardholders at the rate of 35 Kg per month and BPL cardholders @ 25Kg/month. During 2006-07, the allotment of rice and wheat in the country as a whole from the Central Pool was 576.56 lakh tonnes and the off take was 313.69 lakh tonnes. Appendix 15.6 represents the State wise allocation and off take of rice and wheat from the Central pool during 2006-07. During 2006-07 the total allotment of rice and wheat was 22.57 lakh tonnes to the State. There was no Wheat provision to AAY cardholders. However 2.48 lakh tonnes food grains were distributed under AAY scheme.

15.23 Distribution of rice and wheat through Public Distribution System in Kerala shows an increasing trend. In 2002-03 the off take of rice and wheat in the state was 4.40 lakh tonne and 1.57 lakh tonne respectively which increased to 7.29 lakh tonne rice and 2.92 lakh tonne wheat in 2006-07. The trend in the distribution of rice and wheat during the past five years shown in Fig.15.1.

Fig. 15.1



Source: Civil Supplies Department.

15.24 After the introduction of TPDS, there is sharp fall in APL families buying food grains from PDS shops. District wise distribution of rice and wheat to BPL and APL families during 2006-07 is given in Appendix-15.7. Retail prices of commodities as on April 2007 issued through ration shops are shown in Table 15.10

Table 15.10
Retail Price of Commodities issued through Ration Shops – 2007

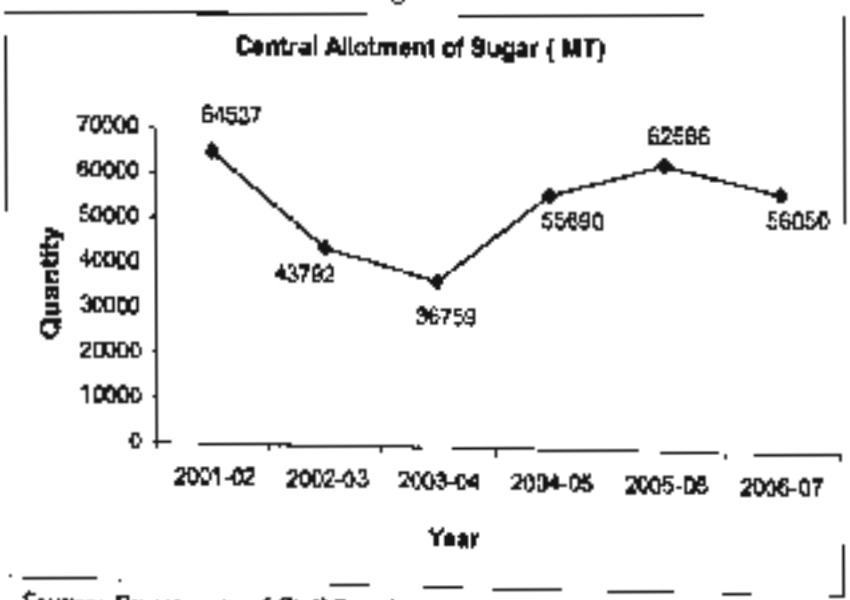
Sl.No.	Items	Price as on April 2007 (Rs. per Kg)
1	Rice - APL BPL	8.90 3.00
2	AAY	3.00
3	Annapoorna rice	Free of cost
4	Wheat - APL BPL	6.70 3.00
5	Sugar - BPL	13.50
6	Kerosene/Liter	9.30 to 9.70

Source: Directorate of Civil Supplies

Central Allotment of Sugar and Kerosene

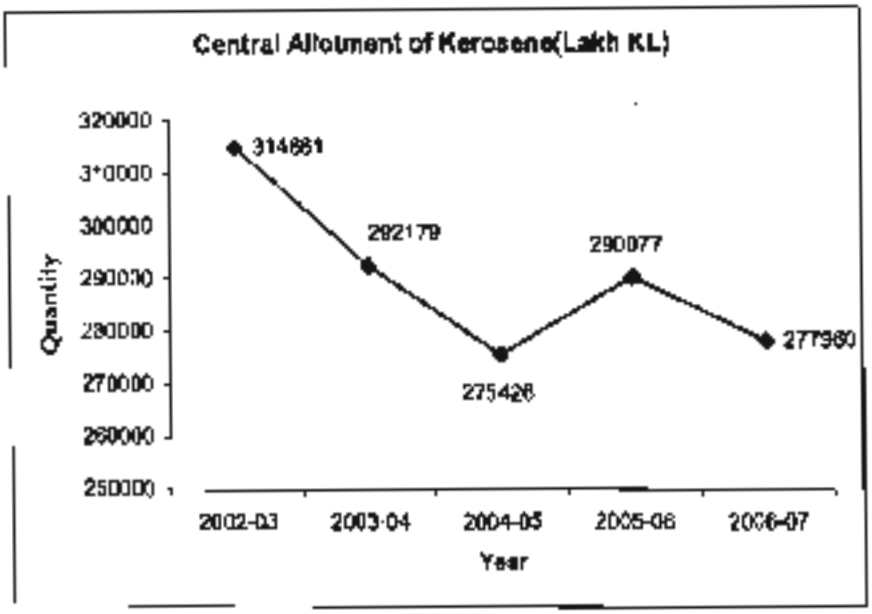
15.25 Central allotment of Sugar is restricted to BPL cardholders alone from February 2001 onwards. Thus central allotment sharply declined from 147517 MT in 2001 to 56050 MT in 2006-07. The central allocation of kerosene to the state also reduced year after year. Allotment of Kerosene to state was 314661 Kilo Litres in 2002 and it came down to 277960 Kilo Litres in 2006-07. Fig.15.2 and 15.3 shows the trend in allocation of sugar and kerosene from central pool from 2001-02 to 2006-07. Monthly distribution of sugar and kerosene from 2002-03 to March 2007 is given in Appendix 15.8.

Fig. 15.2



Source: Directorate of Civil Supplies

Fig. 15.3



Source: Civil Supplies Department

Special Schemes

(1) Antyodaya Anna Yojana Scheme (AAY)

15.26 This scheme which was implemented in Kerala since Feb. 2001 provides 35 kgs of foodgrains per month @ Rs 3per Kg to the poorest of the poor families Even though the Central Government have fixed the target of beneficiaries in the state initially at 2,38,200, as part of tribal welfare measures, all the eligible tribal facilities have been included under the scheme during 2003. The Government of India has decided to enhance the number of beneficiaries to 357400. As part of further expansion of the scheme the target further enhance to 595800 (114400 during 2nd phase and 124000 during 3rd phase expansion). The Government of India is allotting 20855 MT of rice per month at the cost of Rs. 3/Kg and the State Government is meeting the expenses towards transportation and handing charges due to the dealers. District wise food grain distribution under AAY Scheme and ANP scheme furnished in table 15.11.

(2) Annapoorna Scheme

15.27 Annapoorna scheme originally was a 100% centrally sponsored one and from 1-4-2001, it has been transferred to State. The Central Government provides fund under Additional Central Assistance for purchase of rice from Food Corporation of India and State will have to meet the expenses on transportation and handling charges due to the dealers through a mandatory provision. As per the Scheme, destitutes above the age of 65 years who are not receiving National Old Age Pension are eligible for 10 kgs of rice per month free of cost. Though the lifting of rice under Annapoorna scheme is 3409 tonnes, the off take goes up to 4620 touching more than 120 percent. The Central Government have identified 44980 beneficiaries in the state constituting 20% of the persons in the target group and the distribution of rice could not be

satisfactorily maintained as the actual beneficiaries come over one lakh in Kerala. The monthly allocation is 450 MT.

Table 15.11

District wise Distribution of Food grains under AAY and ANP Schemes 2006-07 (MT)

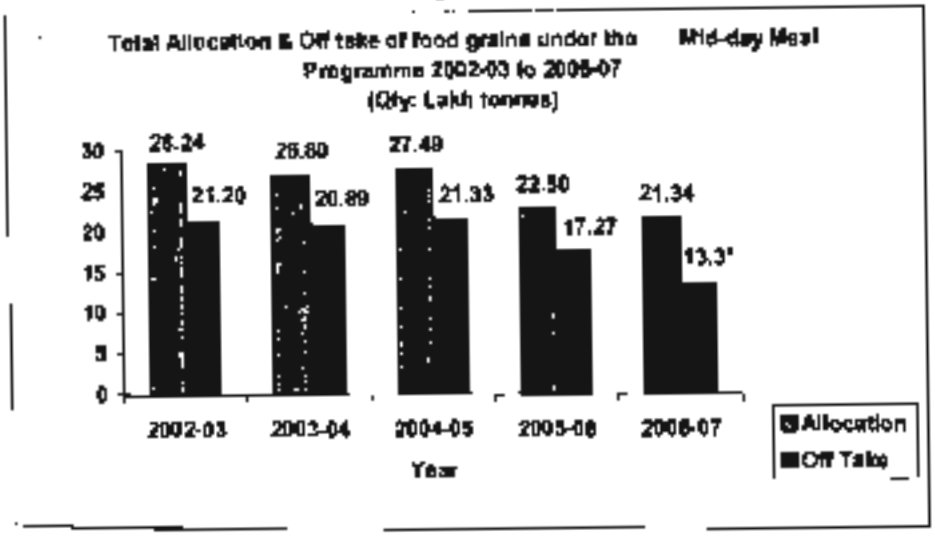
Sl. No.	Name of District	AAY Scheme			ANP Scheme		
		Lifting	% of off take against allotment	Off-take	Lifting	% of off take against allotment	Off-take
1	2	3	4	5	6	7	8
1	TVM	27712	97	26948	366		439
2	Kollam	21678	101	21886	258		414
3	PTA	10754	97	10683	201		203
4	Alappuzha	18277	97	17977	66		169
5	Kottayam	14504	97	14567	243		290
6	Idukki	11219	94	11572	101		177
7	Ernakulam	15208	96	15684	331		389
8	Thrissur	24934	98	24336	132		228
9	Palakkad	19623	96	18998	186		359
10	Malappuram	22857	97	22412	340		366
11	Kozhikode	18132	98	17710	270		420
12	Wayanad	14537	98	14212	323		418
13	Kannur	15272	98	14663	257		336
14	Kasargod	8578	98	8435	333		412
	KSCSC						
	TOTAL	**243285**	97	**240082**	**3409**	**124**	**4620**

Source: Directorate of Civil Supplies.

(3) Mid day Meal Programme

15.28 The Mid-day Meal Programme aimed at providing nutritional support to primary school-going children class I to V, was introduced in 1995 by the Ministry of Human Resources Development. Under this scheme, every child is entitled for 3 kg wheat or rice per month for 10 months a year where food grains are distributed in raw form and at the rate of about 100 gms per child per day where cooked meal is being served with a minimum content of 300 calories and 8-12 gms of protein each day of school for 200 days. The food grains are issued by the FCI to the nominees of the District Collectors without charging any price from them. However, a revolving fund of Rs.300 crore has been created by the Ministry of Human Resource Development to reimburse the cost of the food grains to FCI. Total allocation and off take of food grains from the Central pool in the country under the scheme from 2002-03 to 2006-07 is graphically depicted.

Fig: 15.4



Source: Department of Food & Public Distribution, Govt. of India.
** : - Up to 1/2007.*

Kerala State Civil Supplies Corporation

15.29 The Kerala State Civil Supplies Corporation was set up in the state in 1974 with the mission of "food security for Kerala." and acts as a second line of PDS in the State by distributing essential commodities at reduced prices through a network of 2813 outlets spread all over the State.

15.30 The Supply of Commodities to schools for Noon – Meal scheme in Kerala is entrusted to SUPPLY CO. The required quantity of rice has been taken from FCI and the pulses from their own stock. The cost of Food grains is met by Education Department During 2006-07 the Corporation supplied 227495 Qtls of rice and 110285 Qtls of pulses to 11480 schools and about 26.83 lakh children got the benefit of the scheme. The number of schools under this scheme remaining the same while the number of children benefited decreased. Due to reduction in the purchase price, through various measures, noon feeding issue price has been reduced up to 30%. Details of Mid day Meal Programme in the state during the last five years are given in the Table 15.12.

Table 15.12
Mid – day Meal Programme – 2002-03 to 2006-07

Sl.No.	Year	Schools (Nos.)	Children benefited (Lakhs)	Supply of food grains (Quintal)	
				Rice	Pulses
1	2	3	4	5	6
1	2002-03	11480	26.4	464778	95141
2	2003-04	11906	26.46	595327	98241
3	2004-05	11968	26.97	590269	96507
4	2005-06	11480	27.45	344929	105833
5	2006-07	11480	26.83	356626	110347

Source: Civil Supplies Corporation

15.31 At present Corporation has 874 Maveli Stores and 225 Labham Markets. In addition to these the Corporation has established some profit making ventures like Sabari super market which sell luxury items, Maveli Medical Stores, petrol bunks and LPG outlets. In maveli medical stores, the selling price is less by 10% to 30% of the market price. Over and above, the corporation is the wholesale distributor of levy sugar for the entire state. The Corperation is running 9 sub depots to distribute wholesale PDS items in 7 districts viz Thiruvananthapuram, Kollam, Alappuzha, Idukki, Ernakulam, Thrissur and Kozhikode. The Corporation has started selling essential commodities through a chain of 1659 Authorised Ration Dealer Sabari Stores. Details of outlets under the SUPPLYCO from 2002-03 to 2006-07 is given in Table 15.13

Table 15.13

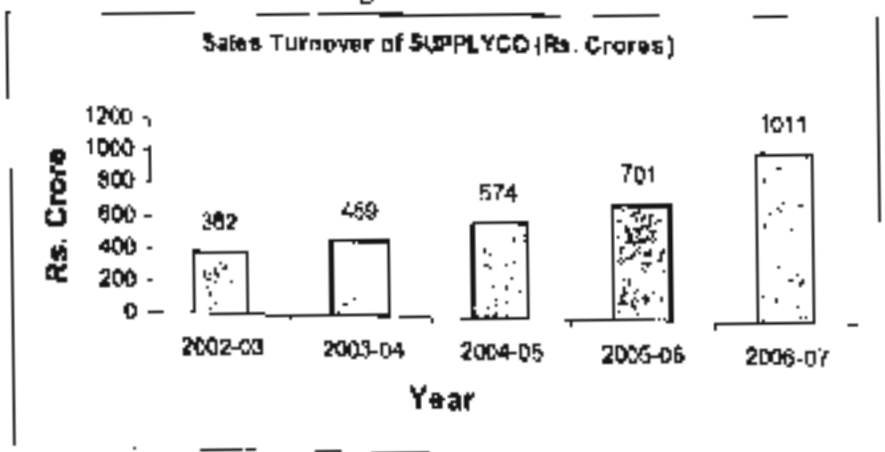
Outlets under Civil Supplies Corporation – 2002-03 to 2006-07

Sl.No	Name of Outlets	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7
1	Maveli Store	842	834	866	869	874
2	Labham/Sabari Super Market	77	102	158	208	225
3	Supply-co Super Market	10	10	10	10	11
4	Medical Stores	34	38	43	49	53
5	Petrol Bunk	9	10	10	10	11
6	LPG Outlet	4	4	4	3	3
7	ARD Sabari Stores	Nil	Nil	Nil	1240	1636
	Total	**976**	**998**	**1091**	**1154**	**2813**

Source: Civil Supplies Corporation

15.32 Another major activity of the Corporation is the organisation of fairs and markets in all parts of the state during the festival seasons so as to control price levels. During the period under review, the Corporation organised 5 onam metro fairs, 11 district fairs and 129 Onam markets in the District and Taluk Headquarters attached with Maveli stores through which a variety of consumer goods and vegetables were sold. The Corporation has also set up a hotel at Sannidhanam during Sabarimala season. The sales turn over of the Corporation crossed Rs.1000 crores during 2006-07 from Rs 701 crores of the previous year. Progress in turnover from 2002-03 to 2006-07 depicted in Fig.15.5.

Fig. 15.5



Source. SUPPLYCO

15.33 Apart from these, the Corporation has started paddy procurement scheme as a market intervention to protect the income of farmers and providing quality rice through PDS. Paddy procured through Agricultural Co-operative Societies and Padasekharam Committees at the price fixed by the Government is converted into rice and distributed by the Corporation for sales. The Corporation has also launched its own branded products viz; Sabari Tea, Coffee, Fortified Atta, Curry Powders, Salt, Matta Rice etc.

Table 15.14

Profit & Loss Account of Supply-co During the Year 2001-02 to 2004-05

(Rs. Crores)

Particulars	2001-02	2002-03	2003-04	2004-05
INCOME				
Sales	409.3	382.5	458.9	574.6
Government Grant for Market Intervention	33	50	30	30
Other Income	11.2	9.6	109	12.9
Increase/(Decrease) in Stock-in-trade	-5 02	8.1	-4.3	11.9
Total	**448.5**	**450.2**	**495.5**	**629.4**
EXPENDITURE				
Materials Consumed	12.3	13.5	16.4	22 3
Purchase of Trading Goods	374 3	365.9	428.8	540.5
Manufacturing & Other Expenses	49.2	49.5	54.4	66.5
Interest & Bank Charges	62.6	66.8	68.8	72.5
Depreciation	1.5	1.2	1.2	1.5
Total	**499.9**	**496.9**	**569.7**	**703.3**

Source SUPPLYCO.

15.34 Table 15 14 reveals the profit and loss account of the Corporation from 2001-02 to 2004-05. It has been observed that while the income accrued from various sources increased from Rs.495.5 crores in 2003-04 to 629.4 crores in 2004-05, the expenditure increased from 569.7 crores to 703 3 crores. Other than purchase of goods a major item of expenditure is the payment on bank charges which increased from 68.8 crores in 2003-04 to 72 5 crores during 2004-05.

CHAPTER 16

EXPORT AND IMPORT

World Trade

The Year 2006 witnessed robust growth in the World economy and vigorous trade expansion in real terms. The dollar value of world merchandise exports increased by 15% and commercial services up by 11%. China's trade growth continued to outstrip other major countries gaining 27% more in merchandise trade. Since 2000, China has more than doubled its share in World goods trade and ranks 3rd largest exporter and importer. Developing countries' share in world merchandise exports reached an all time record of 36%. Germany remains the world's largest goods exporter with US$1112 billion, followed by the United States with US$1037 billion, contributing 9.2% and 8.6% respectively to World Trade in goods. The real merchandise exports of the United States rose by 10.5% in 2006, which was the highest growth rate since 1997 and almost two times faster than its import growth. At 13.5%, Asia's real merchandise exports remained the most buoyant of all regions. Asia's imports rose faster than in the preceding year and faster than world trade but continued to lag behind its export growth. India is adorning the place of 10th biggest exporter of commercial services in 2006. The country has also emerged as the world's 12th largest importer of commercial services and 17th largest importer of goods. The country's trade position marginally varied during 2006. Goods export is just 1 percent and in goods import a mere 1.4 percent, in services, the country has 2.7 percent share in both exports and imports during 2006 in world trade. Share of goods and services of selected countries in the world trade during 2006 is given in Appendix 16.1.

BOX 16.1

The world economy and trade grew vigorously in 2006, the 8% expansion in merchandise trade being the second highest since 2000. Growth in gross domestic product (GDP) - a measure of the size of the economy- was stronger than expected in Europe and Japan. The Chinese and Indian economies continued to record high growth.

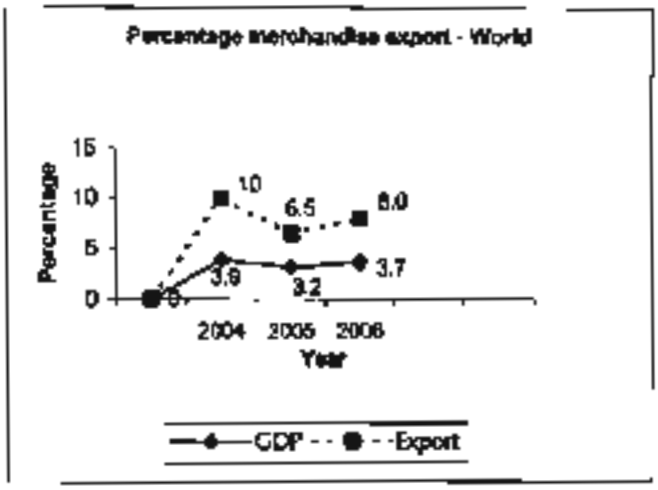
Table 16.1 express the GDP levels and trade levels of different World's regions. Fig. 16.1(A) and 16.1(B) represents the GDP level and Export position of World and India.

Table 16.1
Merchandise Trade by Region –2004-06 (%)

Countries	Exports			Imports		
	2004	2005	2006	2004	2005	2006
North America	8.0	6.0	8.5	10.5	6.5	6.5
United States	8.5	8.0	10.5	11.0	6.0	5.5
South & Central America	13.0	8.0	2.0	18.5	14.0	10.5
Europe	7.0	4.0	7.5	7.0	4.0	7.0
European Union (25)	7.0	4.0	7.5	6.5	3.5	6.5
Commonwealth of Independent States (CIS)	12.0	3.5	3.0	16.0	18.0	20.0
Africa and Middle East	8.0	5.0	1.0	14.0	13.0	8.5
Asia	15.5	11.5	13.5	14.5	8.0	8.5
China	24.0	25.0	22.0	21.5	11.5	16.5
Japan b	13.5	5.0	10.0	6.5	2.0	2.0
India	15.5	20.5	11.5	16	20.5	12.0
World	10 0	6.5	8.0	--	–	–

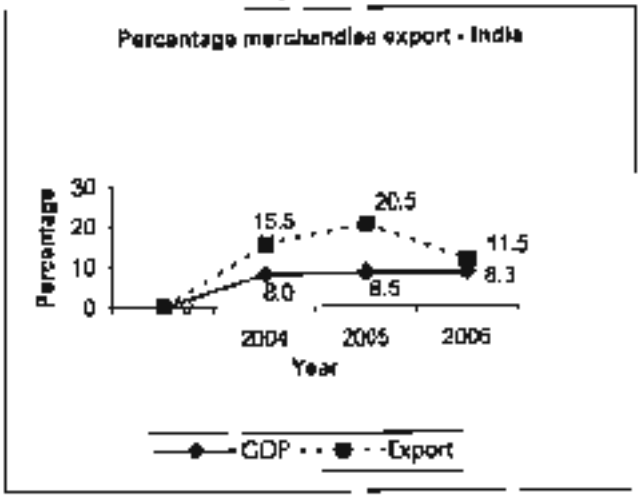
Source: WTO Report on world Export and Import 2006

Fig: 16.1(A)



Source: WTO Report-2006

Fig. 16.1(B)

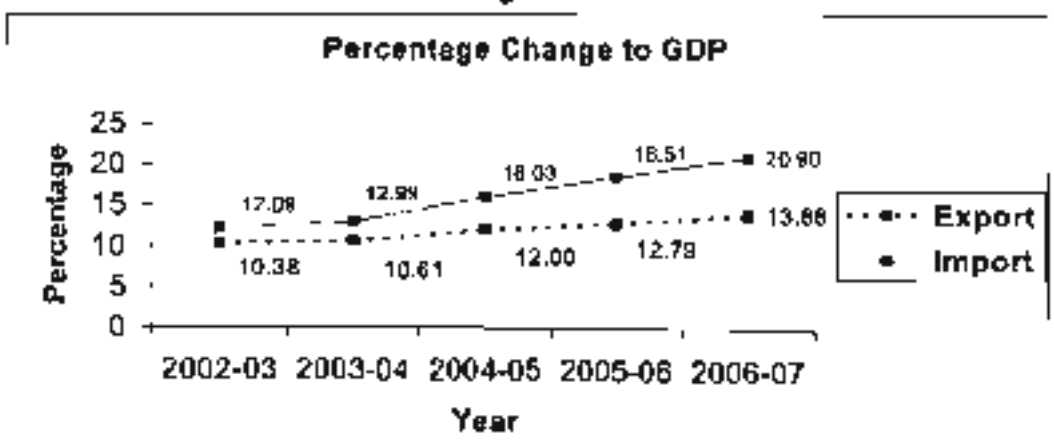


India's Foreign Trade

16.2 The Government of India announced a foreign trade policy for 2004-2009 on 31st August 2004 with two major objectives. (1) To double our percentage share of global merchandise trade within next five years (2) to act as an effective instrument of economic growth by giving a thrust to employment generation.

16.3 India's export as well as import have shown remarkable progress during 2006-07 showing 25.24% increase in export and 30.6% in imports in terms of rupee value compared to previous year. In dollar terms the achievement was 22.5% and 27.7% respectively. The export import performance of India in terms of rupee value for the last five years is revealed in Table 16.2 and percentage change to GDP depicted in the diagram 16.2.

Fig. 16.2



Source: CMIE

Table 16.2
Foreign Trade of India – 2002-03 to 2006-07

(Rs. Crores)

Sl.No.	Year	Export	% to GDP	Import	% to GDP	Trade Balance
1	2	3	4	5	6	7
1	2002-03	255137	10.38	297206	12.09	-42069
2	2003-04	293367	10.61	359108	12.99	-65741
3	2004-05	375340	12	501065	16.03	-125725
4	2005-06	456418	12.79	660409	18.51	-203991
5	2006-07	571642	13.86	862302	20.9	-290660

Source: CMIE

16.4 Major items of Indian exports are agriculture & allied products, gems and jewellery, ores and minerals, leather products, drugs and fine chemicals, electronic goods, machineries and instruments, yarns and fabrics, ready made garments etc. Export earnings of manufactured goods from the country alone constitute about 65.6% of the total followed by gems and Jewellery (12.3%). Among the manufactured items export of engineering goods shared 23% of the total export value. India's major import item petroleum products constitute 30% of the total import value in dollar terms. Other major items of import are capital goods, electronic goods, gold and non electrical machinery. Commodity wise export and import details from 2002-03 to 2006-07 are furnished in Appendix 16.2 and Appendix 16.3 respectively.

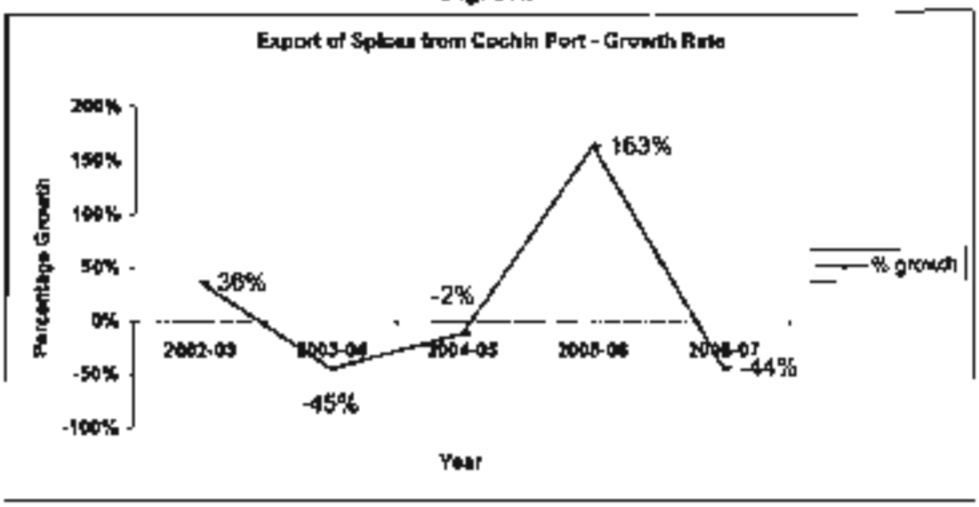
Export – Import Trade of Kerala through Cochin Port

16.5 A lion's share of Kerala's trade is being conducted through the port of Cochin. It is expected that the volume of export will be strengthened on completion of Vallarpadam container terminal and Vizhinjam Port. Important export items from Kerala are pepper, cashew, coir and coir products, tea, marine products and spice oils and oleoresins. Software export is also gaining momentum in recent years.

Commodity Composition of Exports though Cochin Port

16.6 Total value of foreign export through Kochi port increased from Rs. 10122.8 crores in 2005-06 to Rs. 10336.8 crores in 2006-07 and the quantity of export from 2919817 MT to 3474196 registering 18.99% increase compared to 2005-06. It shows that the increase in value of exports is not in relation to the increase in quantity. This is accounted by volatility of world commodity market particularly foreign exchange markets. All the items exported though Cochin Port except cashew kernels and spices registered an increase in quantity. The quantity of spices export sharply declined to 36732 MT from 65321 MT showing 43.77% decrease compared to previous year. The highest upward trend was seen in tea export with a growth rate of 177% in quantity. The export of seafoods, coir products and coffee, which experienced negative growth in export during 2006-07 shifted to positive trends during 2006-07. Details of commodity wise export though Kochi Port is furnished in Appendix – 16.4. Growth rate of spices export through Cochin port from 2002-03 is shown in Fig. 16.3

Fig. 16.3



Source Cochin Port trust

Commodity composition of Kerala's Imports through Kochi Port

16.7 During 2006-07 total import registered through Cochin Port was 11783372 MT which shows an increase of 7.43% compared to previous year. Petroleum products accounted for 86.6% of the total imports through Kochi port during 2006-07 showing an increase of 10.2% compared to previous year. Newsprint import after a great jump during 2005-06 has now with 81% less in quantity. Import of Iron, steel and machinery increased from 308468 tonnes during 2005-06 to 339674 tonnes in 2006-07. Commodity wise imports through Kochin port is given in Appendix. 16.5

Cargo handled by Kochi Port

16.8 The total export of Cargo (both coastal & foreign), from Kochi Port was 34.74 lakh MT during 2006-07 showing an increase of 18.93% compared to previous year. The foreign export from Kochi Port during 2006-07 was 19.05 lakh MT. The trend in total import slightly increased during 2006-07. While coastal import declined from 29.61 lakh tonne during 2005-06, to 28.72 lakh tonnes in 2006-07, foreign import increased from 80.06 lakh tonnes to 89.11 lakh MT registering an increase of 11.28%. Details given in table 16.3

Table 16.3
Cargo Handled at Cochin Port during 2002-03 to 2006-07

(In Lakh MT)

Traffic	Export					Import				
	2002-03	2003-04	2004-05	2005-06	2006-07	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11
Coastal	10.16	8.97	11.16	11.35	15.69	36.70	28.44	26.26	29.61	28.72
Foreign	11.09	16.59	20.27	17.86	19.05	72.29	81.73	83.24	80.06	89.11
Total	**21.25**	**25.56**	**31.43**	**29.21**	**34.74**	**108.99**	**110.17**	**109.5**	**109.67**	**117.83**

Source: Cochin Port Trust

Export of Marine Products - National Scenario

16.9 The export of marine products set an ever time record of 612641 tons valued Rs.8363.53 crores equivalent to US$ 1852.93 million during 2006-07. The quantity of export increased by 20% and value in rupee by 15% and about 13% in US dollar realization. The export details of marine products during the last two years from India is shown in Table 16.4

Table 16.4
Export of Marine Products 2005-06 & 2006-07
(Qty: in tons, Value: Rs.Crore, $: US $ Million)

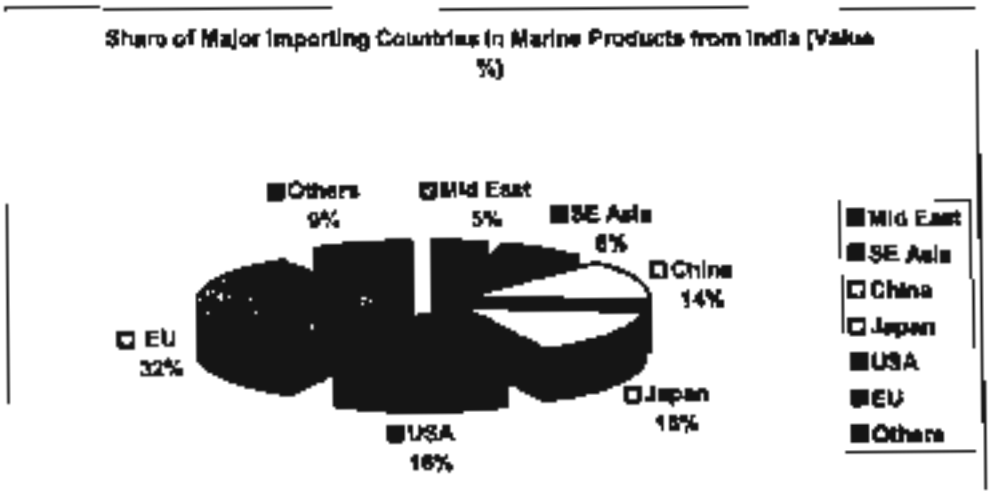
Year	Unit	Export	Variation to Previous year	Percentage variation
1	2	3	4	5
2005-06	Q:	512164	50835	11.02
	V:	7245.30	598.61	9.05
	$:	1644.21	165.74	11.21
2006-07	Q:	612641	100478	19.62
	V:	8363.53	118.23	15.43
	$:	1852.93	208.72	12.69

Source: MPEDA

16.10 Frozen shrimp continued to be the major item of marine products export sharing over 22% in quantity and 53% in value during 2006-07 though weak performance compared to previous year. The achievement observed in the export of frozen fish was 48.5% jump in quantity and 45.5% in rupee value. Export of dried items retained its glamourous achievement by contributing more than 70% hike in quantity compared to previous year. Details on item wise export of marine products from India for last 5 years are given in Appendix – 16.6.

16.11 The European Union emerged as the largest market for Indian marine products with a share of 33% in the total marine export earnings followed by Japan (16.18%) USA (16.11%). China is also playing a better role in marketing Indian marine products by contributing 13.83% in value. Major importers of marine products from India and their share in value furnished in the diagram 16.4.

Fig.16.4



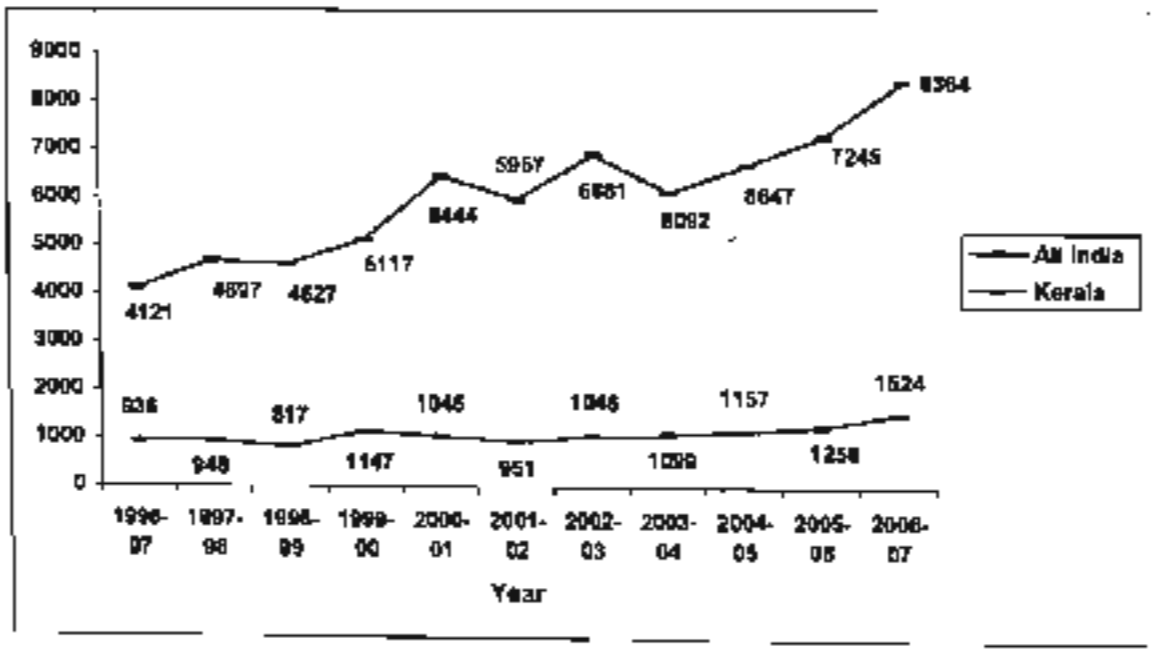
Source: MPEDA

16.12 Export of marine products from India to all-important markets except USA recorded an increase during 2006-07. While the export of marine products to China increased by 34% in volume, export to USA declined by 21.6% in volume. USA lost its position as the single largest market for Indian marine products, and now adorned by Japan. Details furnished in Appendix 16.7.

Export of Marine Products from Kerala

16.13 During 2006-07 the export of marine products from Kerala accounted for 108616 ton valued at Rs. 1524.12 crores sharing 17.7% in quantity and 18.2% in value of marine export from India. Kerala's contribution to Indian export of marine products shows a declining trend in quantity but increase in value. After a short stagnation period the export contribution of Kerala is improving for the last three years both in volume and value as revealed in appendix 16.8. The export trend compared to all India in value is diagrammatically represented below in Fig. 16.5.

Fig 16.5
EXPORT TREND OF MARINE PRODUCTS - KERALA & INDIA (Rs. Crore) - 1996-97 TO 2006-07



Source: MPEDA

16.14 Export of frozen fish attained 24.8% growth in quantity and 39.7% in value compared to the previous year. Export of Frozen Shrimp continued to be the main item of export sharing 27% of the total but a decline was observed in quantity exported. Details on item wise export of marine products from Kerala is given in Table 16.5.

Table 16.5
Item wise Exports of Marine Products from Kerala during 2005-06 and 2006-07

Sl.No	Item	2005-2006			2006-07		
		Qty	Val.Rs Crores)	US$ (Million)	Qty. (Tons)	Val.Rs. (Crores)	US$ (Million)
1	2	3	4	5	6	7	8
1	Frozen Shrimp	30012	597.63	135.76	29413	629.69	142.68
2	Frozen fish	22464	111.46	25.16	28036	155.76	34.38
3	Frozen Cuttle Fish	193116	251.85	57.38	21294	362.22	79.67
4	Frozen Squid	16068	190.07	43.32	16508	220.61	48.59
5	Dried Items	148	5.34	1.21	116	4.70	1.05
6	Live Items	235	15.60	3.54	177	11.52	2.55
7	Chilled Items	1291	22.11	4.96	2112	35.94	8.00
8	Others	7777	63.58	14.45	10960	103.64	23.00
	Total	**97311**	**1257.65**	**285.78**	**108617**	**1524.11**	**339.91**

Source: MPEDA

16.15 European Union accounted for the largest market by purchasing 50.2% of marine products from Kerala. China (9.4%) was the single largest market followed by USA (7.3%). Table 16.6 shows the market wise export of marine products from Kerala

Table 16.6
Export of Marine Products from Kerala to major markets-2005-06 and 2006-07

Sl.No	Country	2005-2006			2006-07		
		Qty (Tons)	Val.Rs (Crores)	US$ (Million)	Qty. (Tons)	Val (Rs. Crores)	US$ (Million)
1	2	3	4	5	6	7	8
1	European Union	46803	632.86	143.89	54503	862.07	190.57
2	Japan	6978	147.84	33.58	7363.9	152.94	33.983
3	USA	8445	145.37	32.99	7876	139.67	30.938
4	China	10977	100.30	22.86	10238	104.32	25.83
5	South East Asia	10846	69.52	15.74	13023	87.07	19.129
6	Middle East	3594	61.12	13.92	3350.2	50.54	11.248
7	Others	9667	100.63	22.80	12263	127.48	28.222
	Total	**97311**	**1257.65**	**285.78**	**108617**	**1524.11**	**339.91**

Source: MPEDA

Export performance of Indian spice industry

Box 16.2

China was reported to be the Worlds largest producer of Garlic. India is the Second largest producer – Spice Board.

16.16 The spices export have added more flavour during 2006-07 registering an increase of 36 1% in value and 6.68% in quantity. In dollar terms the growth in value was 33.7%. After the hard hit blow experienced during 2005-06, export of chilly regained its position by sharing 22.59% in the spices export basket in value and 39.7% in quantity during 2006-07. Export of mint products contributed 30.79% of the total spice export earnings by exporting 16250 tonnes and adorned the highest export earner. Export value of Pepper almost doubled compared to previous year. During 2006-07 the country exported 28750 tonne pepper valued at Rs.30620 lakhs as against Rs.15094.81 lakhs during 2005-06. Export value of Cumin went upto Rs.20150 lakhs from Rs.9819 lakhs of the previous year.

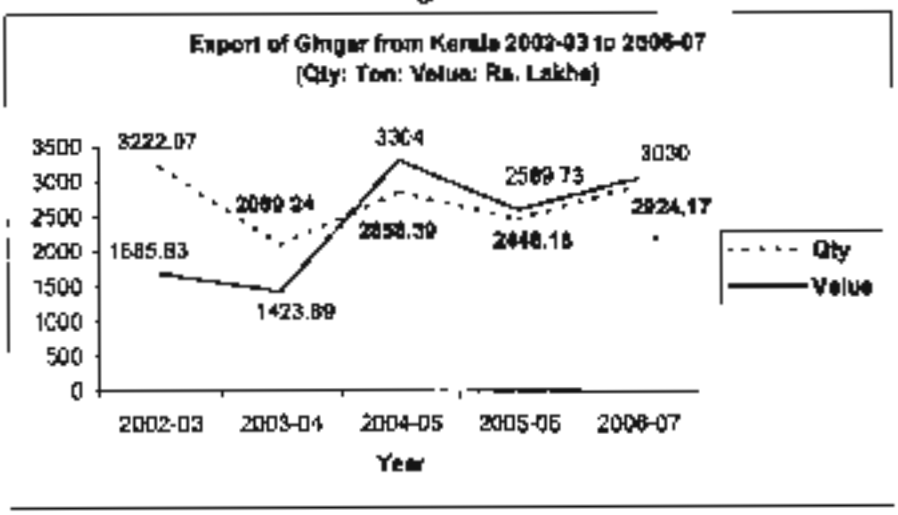
16.17 As regards vanilla, both value and quantity increased by 63.65%, and 73.6% respectively. India exported 125 tons of vanilla valued at Rs.1995.5 lakhs in 2006-07 as against 72 tons valued at Rs.1226.80 lakhs during 2005-06. Details of spice export of the country is given in appendix 16.9

Spices – Kerala Scenario

16.18 The export of spices from Kerala is mainly through Cochin and Trivandrum Ports. Major items of export are pepper, cardamom (s), ginger, turmeric, curry powder, spice oils and oleoresins, vanilla, nutmeg and mace. Kerala's share to total pepper export from India is above 88% both in quantity and value. During last year it was above 97%. Export earnings from spice oils and oleoresins registered a decline of 5 89% in value and 8 1% in quantity but contributed 42.9% of the total spice export earnings of Kerala.

16.19 The Export of Vanila from Kerala increased from 22.18 tonne to 56.75 tonnes and earned Rs.635.39 lakhs against Rs.405.35 lakhs in 2005-06 achieving 56.75% increase in value and 155.9% increase in quantity. Export value of Ginger continued in a bad position and the decline was 9.3% during 2006-07, though the quantity exported increased by 2446.16 tonnes to 2924.17 tonnes. The variation in export of Ginger from 2002-03 to 2006-07 is diagrammatically shown in Fig. 16 6. Details of export of spices products from Kerala through Cochin and Thiruvananthapuram ports from 2002-03 to 2006-07 are given in the Appendix 16.10.

Fig: 16.6



Source: Spices Board.

Cashew Trade

Box 16.3

The Share of agricultural products in the total export earnings of the country during 2006-07 is 4.93% and cashew kernels ranked third among them contributing 0.44% of the total foreign exchange earnings of the country through exports.

16.20 The total export of cashew kernels from India during 2006-07 was 118540 MT valued at Rs. 2455.15 crores (US$ 543 Mln). It showed an increase of 3.85% in quantity, 2.37% in rupee value and 4.47% in US$ terms compared to previous year Kerala also have the same downward trend as seen in Table 16.7. The average unit export price realised during 2006-07 was Rs. 207.12 per kg against Rs. 220.33 per kg during 2005-06, recording a decrease of 6% the decreasing production of cashew in Kerala reflected in the share of Indian Export also. Compared to 65.16% in 2005-06, the share of Kerala to Indian total export of cashew kernels decreased during 2006-07 both in quantity and value.

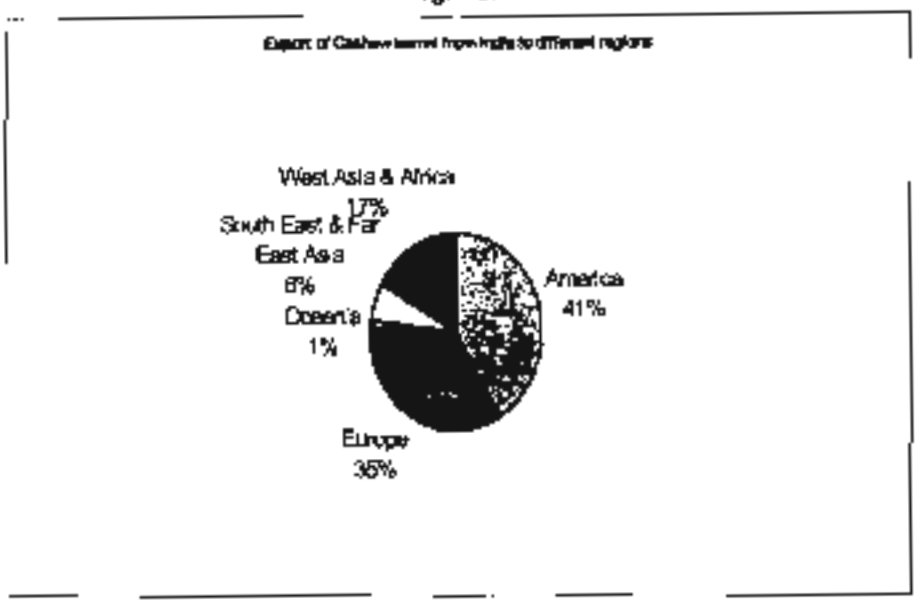
Table – 16.7
Export of Cashew Kernels: Kerala and India (2002-03 to 2006-07)
(Quantity in MT and Value Rs. Crore)

Year	Kerala*		India		Share of Kerala (%)	
	Quantity	Value	Quantity	Value	Quantity	Value
2002-03	66859	1216.96	104137	1933.02	64.20	62.96
2003-04	68119	1204.56	100828	1804.43	67.56	66.76
2004-05	79950	1715.94	126667	2709.24	63.12	63.34
2005-06	74376	1622.82	114143	2514.86	65.16	64.53
2006-07	72860	1504.87	118540	2455.5	61.46	61.29

Source: The Cashew Export Promotion Council of India
**Export through Cochin Port.*

16.21 By consuming 39% of total quantity of Cashew Kernels exported during 2006-07 USA continued to be the biggest market of Cashew kernels from India, followed by Netherlands (16.33%) and UAE (8.05%). While exports to USA, Netherlands, France, Saudi Arabia, Australia, Canada, Russia etc registered an increase, export to UK, UAE, Japan, Spain, Germany, Norway etc. decreased. Major export markets of cashew kernels from India is shown in Appendix- 16.11 Out of the total quantity of cashew kernels exported during 2006-07, 41% were to American Zone and European Zone accounted for 35%. While the export to American Zone increased by 6.72% in quantity, the export to European Zone decreased by 3.1%. Export of cashew kernels to different regions is diagrammatically represented in Figure 16.7

Fig. 16.7



Source: Cashew Export Promotion Council of India

16.22 A declining trend was observed in the export of cashew nut shell liquid from India during last three years. During 2006-07 the decrease was 5.01% in quantity but an increase of 42.72% in rupee value and 24.67% in US$ compared to previous year. USA is the prime market, which shared 77.87% in quantity and 71.47% in value during 2006-07. Country wise export is given in Table 16.8.

Table. 16.8

Country-wise Export of Cashew nut Shell Liquid from India 2004-05 to 2006-07

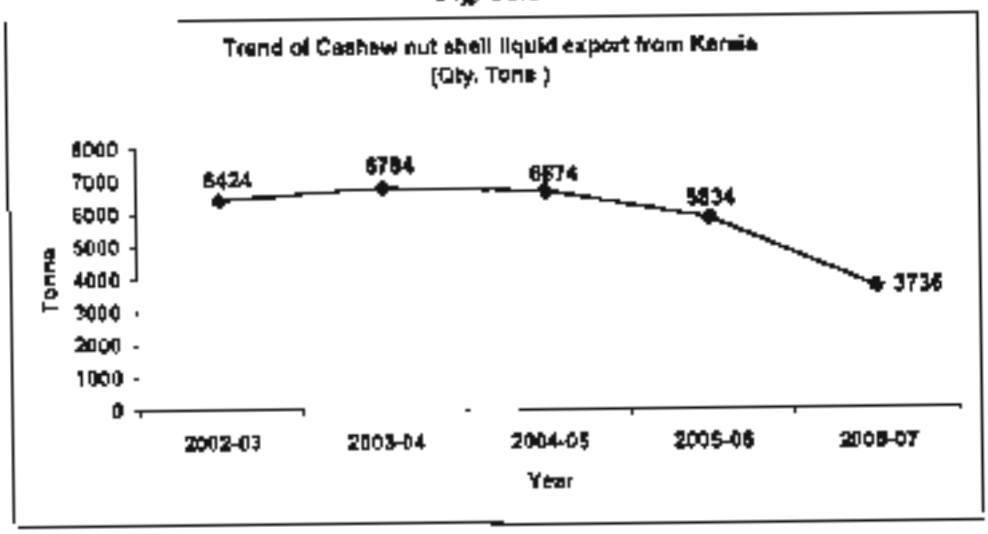
(Quantity: MT, Value: Rs. Crore)

Sl. No	Countries	2004-05		2005-06		2006-07	
		Qty (MT)	Value (Rs. Crs.)	Qty (MT)	Value (Rs. Crs.)	Qty (MT)	Value (Rs. Crs.)
1	USA	6550	6.45	5828	5.97	4780	7.35
2	Korea Rep.	125	0.31	588	1.13	1115	2.38
3	Japan	154	0.24	31	0.09	148	0.30
4	Zimbabwe	0	0.00	16	0.03	64	0.19
5	China	32	0.04	0	0.00	32	0.06
6	Bahrain	0	0.00	0	0.00	0.40	0.00
7	Indonesia	384	0.50	0	0.00	0	0.00
8	Spain	213	0.33	0	0.00	0	0.00
9	Mexico	16	0.03	0	0.00	0	0.00
	Total	7474	7.91	6463	7.21	6139	10.29

Source. Cashew Export Promotion Council

16.23 The share of Kerala to India's export of Cashew nut shell liquid sharply declined to 60.8% in quantity and 55% in value during 2006-07. The contribution was 91% in quantity and 84% in value during 2005-06. The details of export of cashew nut shell liquid from Kerala and India are furnished in the Table. 16.9 and the trend in the cashew nut shell liquid export from Kerala for the last five years furnished in Fig. 16.8.

Fig. 16.8



Source: Cashew Export Promotion Council.

Table. 16.9
Export of Cashew nut shell Liquid – Kerala & India (2002-03 to 2006-07)
(Quantity in MT and value in Rs. Crores)

Year	Kerala*		India**	
	Quantity	Value	Quantity	Value
1	2	3	4	5
2002-03	6424	7.55	7215	9.26
2003-04	6784	6.68	6926	7.03
2004-05	6674	6.58	7474	7.91
2005-06	5834	5.97	6405	7.09
2006-07	3736	5.7	6139	10.29

Source: The Cashew Export Promotion Council of India
**Export through Cochin Port, **Various Custom Houses*

16.24 The total raw nuts imported to India during 2006-07 increased by 3.65% in quantity and 16.24% in value compared to 2005-06. Kerala imported 322443 tonne raw cashew but valued at Rs.971.79 crores. The major portion of raw cashew nuts to India came from Ivory Coast (32%). More than 55 per cent of imported raw cashew was utilized by Kerala. Details of import of raw cashew nut by India and Kerala are furnished in Table 16.10.

Table 16.10
Import of Raw Cashew nuts: Kerala and India (2002-03 to 2006-07)
(Quantity in MT Value in Rs. Crores)

Year	Kerala*		India**	
	Quantity	Value	Quantity	Value
1	2	3	4	5
2002-03	249970	772.47	400659	1236.60
2003-04	294552	909.45	452398	1400.90
2004-05	283149	1055.08	578884	2183.26
2005-06	306765	1134.83	565400	2162.95
2006-07	322443	971.79	586044	1811.62

Source: The Cashew Export Promotion Council of India
**Import through Cochin Port, ** Various Custom Houses, Provisional*

Coffee

16.25 Export of Coffee from India in terms of quantity increased from 201555 MT in 2005-06 to 249030 MT during 2006-07 showing 23.6% hike in quantity and the value realized was Rs.2007-09 crores. The value realised increased by 32.9% compared to 23.3% of previous year. Major share of total coffee export from India was to Italy. During 2006-07 Italy imported 62786 tonnes of coffee followed by Russia and Germany. Details of coffee export to major countries from 2002-03 to 2006-07 given in Appendix 16.12 Export details of coffee from India during 2002-03 to 2006-2007 given in table 16.11.

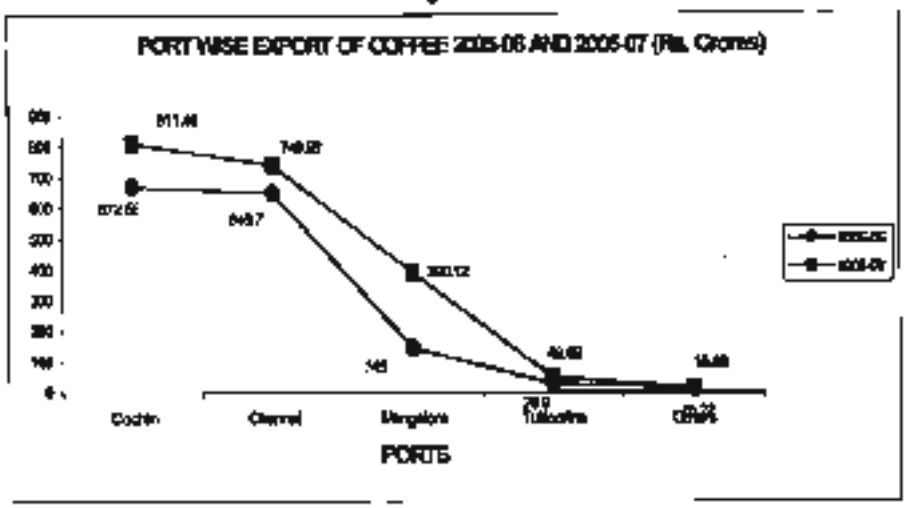
Table 16.11
Export of Coffee from India (2002-03 to 2006-07)

Year	Quantity MT	Value (Rs. Lakhs)	Value (US$ Million)	Unit Value (Rs./tonne)
1	2	3	4	5
2002-03	207333	1051.45	233.89	50713
2003-04	232684	1158.45	262.03	51846
2004-05	211765	1224.67	294.64	57831
2005-06	201555	1510.38	352.93	74936
2006-07	249030	2007.90	442.70	80628

Source: Coffee Board
**Provisional*

16.26 Out of the total coffee export from India the highest contribution is from Cochin port constituting 41.82% of the total export. An increase of 14.3% in quantity export was realised from Cochin Port compared to previous year. Details of port wise export value of coffee from India during 2005-06 and 2006-07 shown in Fig 16.9.

Fig.16.9

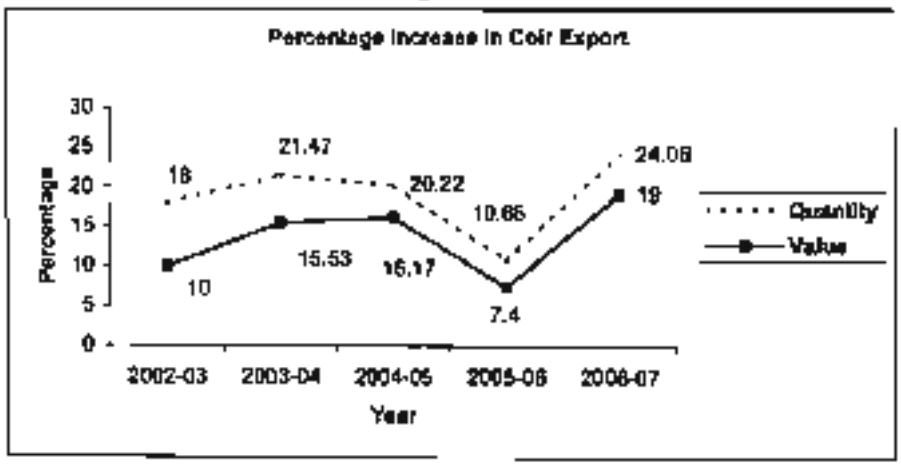


Source. Coffee Board.

Coir & Coir Products

16.27 Export of Coir and Coir products from India during the period 2006-07 recorded an all time high level with impressive increase in both quantity and value. In value terms, the coir exports stood at 605.17 crores attaining 19% growth in value by exporting 1.69 lakh tonne of Coir Products. The increase recorded in quantity is 32728 tonne and in value it is Rs.96.72 crores. The increasing export trend in value and quantity from 2002-03 to 2006-07 is furnished in Fig. 16.10. Quantity export recorded 24% increase compared to previous year. The export value surpassed the target set forth at Rs.572 crores achieving 6% increase over the target.

Fig.16.10



Source: Coir Board

16.28 During 2006-07 export of handloom mats, Tufted mats Power loom mat, coir fibre, coir pith, rubberized coir and coir geo textiles, handloom mattings and coir yarn have shown an increase both in terms of value and quantity compared to 2005-06. The item wise export of Coir Products from India during 2005-06 and 2006-07 is given below.

16.29 Handloom mat a major export item constitute 25.47% in quantity and 45.23% in value during the period under review The highest achievement in export was recorded for export of coir fibre with 502.49% growth in quantity and 448.73% in value followed by rubberised coir with 76 57% and 85 09% increase respectively. The greatest blow in unit item of export was observed for Powerloom mat. Export of this item fell down from 1609.94 tones to 1027.10 tones during 2006-07, showing 84.71% decrease in quantity and 83.56% in value. Details of export of coir and coir products from India for the last five years furnished in Appendix. 16.13.

16 30 The number of countries importing coir and coir products from India increased to 97 from 91 last year. US continues to be the single largest market accounting for 37% of the total export and European countries together imported more than 41% The US, UK, Germany, Netherlands, Italy and Belgium are the major markets for coir products. Among the countries, USA stands first with regard to import of major share of handloom mats, tufted mats, coir geo textiles and powerloom mat. The biggest market for coir yarn and coir pith is Netherlands and for coir handloom marketing UK stands first. Details of coir composition from India given in Appendix 16 14

CHAPTER 17

INSTITUTIONAL AND BANK FINANCE

Financial system in India comprises of a large number of institutions and financial markets for catering to the financing requirements of the various segments of the society. In order to develop a safe, sound and efficient financial system in India, best standards prevailing internationally are suitably adapted to the domestic condition. A vide variety of financial institutions exist in India Since scheduled commercial banks constitute systematically the most important segment of the financial system, focus of the financial reforms in early years was on strengthening commercial banks. With a view to promoting financial stability measures were initiated since early 1990s to strengthen the commercial banks. The commercial banking sector has emerged stronger over the years, at the same time some new challenges have occurred such as declining interest rate and reduced lending margins. With the growth of the idea of globalisation, India's financial markets have been closely integrated with the global financial markets. As such the volatality in the latter makes its impact on our domestic financial market. This is often found reflected in the crisis movements in the SENSEX. The expansion of mutual funds also has had its impact on the domestic banking system and to some extent on government finance. One example is that of decline registered in small savings collections and PF contributions.

Institutional Finance

17.2 The flow of credit by Financial Institutions during 2006-07 revealed that NABARD has disbursed an amount of Rs.8795 02 crore at all India level against Rs.8622 37 crore during 2005-06. The disbursement of credit by NABARD in Kerala during 2006-07 was Rs. 517.12 crore including the disbursement towards KSCARDB. Uttarpradesh received the highest assistance of Rs.1122.57 crore (12.76%) followed by Andhra Pradesh Rs.966.43 crore (11%). Commercial Banks accounted for the major share of refinance disbursed in the Kerala state during 2006-07.

17 3 The State wise disbursements by NABARD during 2006-07 and State-wise cumulative disbursement by NABARD (up to March 2007) are given in Appendix 17.1 and Appendix 17.2.

Bank Finance

17.4 The number of bank branches all over India steadily grew from 68681 of March 2006 to 70711 in March 2007, an increase of 2030 branches within one year. At the end of June 2007 there were 71781 bank branches. Of this 70711 branches, 30461 are rural branches, 16035 are semi urban branches, 12649 are urban branches and 11566 are metropolitan branches On a comparison with March 2006 the number of rural bank branches and metropolitan branches gradually decreased, but semi urban and urban branches increased. The 62202 branches are spread over 15 major states. This year also the largest number of bank branches are in Uttar Pradesh followed by Maharashtra and Andhra Pradesh The State wise distribution of commercial bank branches and population per bank office are given in Appendix 17.3.

17 5 At the end of March 2007, the total number of commercial bank branches in Kerala was 3673 Of this 321 are rural branches, 2478 are semi- urban branches and 874 are urban branches. Out of the total commercial banks in the state, public sector banks account for 67.25% of the branch net work in the state.

17.6 The state wise distribution of number of scheduled commercial Bank branches in rural, semi urban, urban and metropolitan areas and their percentage to all India total are furnished in Table 17.1

Table 17.1
State-wise distribution of Scheduled Commercial Bank Branches as on March 2007

Sl. No	State	Rural		Semi Urban		Urban		Metropolitan		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhrapradesh	2253	7.4	1336	8.3	1247	9.9	780	6.7	5616	7.9
2	Assam	778	2.6	273	1.7	211	1.7	--	—	1262	1.8
3	Bihar	2343	7.7	734	4.6	329	2.6	200	1.7	3606	5.1
4	Gujarath	1398	4.6	840	5.2	1484	11.7	104	0.9	3826	5.4
5	Haryana	642	2.1	366	2.3	715	5.7	94	0.8	1817	2.6
6	Karnataka	2102	6.9	1052	6.6	1071	8.3	940	8.1	5165	7.3
7	**Kerala**	**321**	**1.1**	**2478**	**15.5**	**874**	**6.9**	—	--	**3673**	**5.2**
8	Madhyapradesh	1714	5.6	819	5.1	596	4.7	406	3.5	3535	5
9	Maharashtra	2059	6.8	1223	7.6	900	7.1	2475	21.4	6657	9.4
10	Orissa	1597	5.2	369	2.3	410	3.2	—	—	2376	3.4
11	Panjab	1076	3.5	760	4.7	593	4.7	419	3.6	2848	4
12	Rajasthan	1722	5.7	838	5.2	665	5.3	312	2.7	3537	5
13	Tamil Nadu	1597	5.2	1464	9.1	1130	8.9	879	7.6	5070	7.2
14	Uttar Pradesh	4604	15.1	1484	9.3	1295	10.2	1182	10.2	8565	12.1
15	West Bengal	2260	7.4	524	3.3	735	5.8	1130	9.8	4649	6.6
	Total	**26466**	**86.9**	**14560**	**90.8**	**12259**	**96.9**	**8921**	**77.1**	**62202**	**88**
	All India	**30461**	**100**	**16035**	**100**	**12649**	**100**	**11566**	**100**	**70711**	**100**

Source. Quarterly Statistics by Reserve Bank of India, March 2007.

Advances by Scheduled Commercial Banks

17.7 During the current fiscal the total advances financed by scheduled commercial banks at all India level grew by 432070 crore to reach Rs.1949567 crore in March 2007 and as at the end of March 2006 the total advance disbursed was Rs.1517497 crore. According to the statistics of RBI, the major portion of this advance has gone to 15 major states. On a year on year basis there was a growth of 28.5% in advances. The highest amount of credit was received by Maharashtra Rs 642170 crore (32.9%) as on March 2007. The advance amount released to Tamil Nadu is Rs.183161 (9.4%) and to Karnataka Rs.133177 (6.83%). During the current year Kerala received Rs.60615 crore against Rs.49153 crore of 2006-07. The increase in advance by all commercial banks is Rs.11462 crore. Loans and advances of scheduled commercial banks registered a robust growth of 30.6% during 2006-07 at all India level.

17.8 State wise disbursement of advances by scheduled commercial banks as on March 2006 and March 2007 with their percentage to all India total are given in Table 17.2.

Table 17.2
State-wise Advances Financed by Scheduled Commercial Banks as on March 2006 and March 2007.

(Rs. crore)

Sl. No	State	Advances 2006		Advances 2007	
		Amount	Percentage	Amount	Percentage
1	2	3	4	5	6
1	Andhrapradesh	96371	6.35	124314	6.4
2	Assam	8763	0.58	11154	0.6
3	Bihar	14062	0.93	17156	0.9
4	Gujarath	59198	3.90	76916	3.9
5	Haryana	28331	1.87	34951	1.8
6	Karnataka	103455	6.82	133177	6.8
7	**Kerala**	**49153**	**3.24**	**60615**	**3.1**
8	Madhyapradesh	33315	2.20	40737	2.1
9	Maharashtra	496997	32.8	642170	32.9
10	Orissa	21011	1.38	26649	1.4
11	Panjab	41219	2.72	52812	2.7
12	Rajasthan	38304	2.52	48656	2.5
13	Tamul Nadu	141255	9.31	183161	9.4
14	Uttar Pradesh	63656	4.19	81699	4.2
15	West Bengal	72167	4.76	94142	4.8
	Total	**1267257**	**83.51**	**1628309**	**83.5**
	All India	**1517497**	**100**	**1949567**	**100**

Source: Quarterly Banking Statistics, March 2006 & 2007, RBI.

17.9 As per State Level Bankers Committee (SLBC) statistics 2007, the total advances disbursed by banks in Kerala as on March 2007 is Rs.68297 crore as against Rs.55314 crore of 2005-06 which shows an increase of Rs.12983 crore. The State Bank group disbursed an amount of Rs.20737 crore (30.36%) and private sector banks disbursed Rs.21351 crore (31.26%) including IDBI bank which is the highest share in the total advance outstanding in the state. The share of nationalised banks in the total advance is Rs.19013 crore (27.8%) and that of co-operative banks is Rs.4024 crore (5.9%)

17.10 Advances disbursed by scheduled commercial banks from 1985 to 2007 in Kerala as well as in India with percentage of annual growth and incremental advance in Kerala are furnished in Table 17.3.

Table 17.3
Advances by Commercial Banks in Kerala and India (From 1985 to 2007)

(Rs. crore)

Sl. No.	Year	Advance in Kerala		Incremental Advance in Kerala	Advance in India	
		Amount	% of growth		Amount	% of growth
1	2	3	4	5	6	7
1	1985	2181	-	-	48953	-
2	1986	2371	8.7	190	56067	14.4
3	1987	2769	16.8	585	63308	20.1
4	1988	3116	12.5	347	70536	11.4
5	1989	3701	18.8	585	83719	20.1
6	1990	4118	11.3	417	101453	19.8
7	1991	4638	12.6	520	116301	14.6
8	1992	5003	7.9	365	125592	8.0
9	1993	5818	16.3	815	151982	21.0
10	1994	6442	10.4	624	164418	8.2
11	1995	7797	21.0	1355	211560	28.7
12	1996	8961	14.9	1164	254015	20.1
13	1997	10482	17.0	1523	278401	9.6
14	1998	12274	17.1	1793	324079	16.4
15	1999	13577	10.6	1303	368837	13.8
16	2000	15941	17.4	2364	435958	18.2
17	2001	19180	20.3	3239	511434	17.3
18	2002	22062	15.0	2882	589723	15.3
19	2003	27007	22.4	4945	759210	28.7
20	2004	31548	16.8	4541	890866	17.3
21	2005	39351	23.5	7803	1157807	30.0
22	2006	49153	24.91	9802	1517497	31.1
23	2007	60615	23.32	114.62	1949567	28.50
Average						
24	1985-1990	3043	13.6	387	70839	15.7
25	1991-1995	5939	13.7	736	153971	16.1
26	1996-2000	12247	15.3	1629	332258	15.6
27	2001-2007	35559	20.9	6382	1053729	24.03

Source: Quarterly Banking Statistics by Reserve Bank of India.

Advances by Public Sector Banks.

17.11 Total advances by public sector banks in India amounted to Rs.1425655 crore during 2006-07 from which Kerala received a mere share of Rs.42724 crore. 15 major states received the major chunk of bank finance. The highest amount of credit was received by Maharashtra Rs.375804 crore, Tamil Nadu received Rs.123546 crore, Andhra Pradesh Rs.104451 crore and Karnataka Rs.103832 crore. The state wise deposits, credits and CD ratio of public sector banks in India are shown in Appendix 17.4.

Growth of Bank Deposit

17.12 As per RBI statistics, the total deposits by all scheduled commercial banks at all India level in March 2007 is Rs.2598823 crore showing an increase of Rs.505781 crore from the last

year. The corresponding figures with respect to Kerala during March 2007 is Rs.95282 crore with an increase of Rs.15617 crore. Aggregate deposits of scheduled commercial banks grew by 24.6% in 2006-07 as compared with 17.8% of last year. Maharashtra is far ahead among the states by mobilizing the largest amount of deposit of Rs 655402 crore (25.2%) in 2007 and Rs.489794 crore (23.4%) in 2006. Uttarpradesh to second with Rs.181006 crore in March 2007 against Rs.151462 crore in March 2006. The Reserve Bank of India's reports on Trend and Progress of Banking in India 2006-07, states that Indian Commercial Banking system has achieved remarkable soundness, dynamism and resilience. And that there is also a convergence in the levels of soundness of public sector banks and new private banks. However the RBI claim that the indicators of soundness for Indian banks compare well with international standards is not convincing. State wise deposits during 2006-07 and their percentages to all India total are furnished in Table 17.4.

Table 17.4
State-wise Deposits in Scheduled Commercial Banks as on March 2006 and March 2007.

(Rs. crore)

Sl. No	State	Deposits 2006		Deposits 2007	
		Amount	Percentage	Amount	Percentage
1	2	3	4	5	6
1	Andhrapradesh	117463	5.6	141966	5.5
2	Assam	20872	1.00	25757	1
3	Bihar	46543	2.22	56916	2.2
4	Gujarath	105047	5.02	119224	4.6
5	Haryana	49397	2.36	60669	2.3
6	Karnataka	134699	6.44	171898	6.6
7	**Kerala**	**79665**	**3.81**	**95282**	**3.7**
8	Madhyapradesh	55521	2.65	65498	2.5
9	Maharashtra	489794	23.4	655402	25.2
10	Orissa	32220	1.54	41638	1.6
11	Panjab	72808	3.48	84621	3.3
12	Rajasthan	48866	2.33	58973	2.3
13	Tamil Nadu	133418	6.37	163166	6.3
14	Uttar Pradesh	151462	7.24	181006	7
15	West Bengal	126100	6.02	150412	5.8
	Total	**1663875**	**79.50**	**2072428**	**79.7**
	All India	**2093042**	**100**	**2598823**	**100**

Source: Quarterly Banking Statistics, March 2006 & 2007, RBI

17.13 According to SLBC (Kerala) report, the total bank deposit in Kerala increased and reached Rs.94510 crore in March 2007 with an annual growth rate of 21.07%. The total deposit in March 2006 was Rs.77677 crore. That is an increase of Rs.16833 crore. This shows that state has poised for a higher growth rate in total deposit during 2006-07. The NRE deposits in Kerala increased to Rs.33304 crore as at March 2007. As compared to March 2006 the NRE deposits increased by Rs.2633 crore for the fiscal 2006-07, showing a growth of 8.58%. State Bank group holds the highest share of Rs.12509 crore (37.56%) in the NRE deposits followed by private sector bank with Rs.10599 crore (31.83%) and nationalised banks with Rs.9695 crore (29.11%). The domestic deposit is also gradually increasing in the state. The domestic deposit which was Rs.47006 crore in March 2006, grown by 24.22% and reached Rs.58393 crore in March 2007.

NRE Deposits

17.14 The NRE deposits constitute 36.32% of the total deposits of commercial banks in the state. There was a growth of Rs.2633 crore in NRE deposits from Rs.30671 crore in 2006 to Rs.33304 crore in 2007 in the state. Commercial banks of semi urban areas holds 69.61% of NRE deposits while urban areas accounted for 23.54% and rural areas 6.85%

17.15 Growth of bank deposits in Kerala from 1988 to 2007 are furnished in Table 17.5

Table 17.5
Growth of Bank Deposit in Kerala 1988 to 2007

(Rs. crore)

Year	Total Deposit		NRE Deposit		Domestic Deposit	
	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %
1	2	3	4	5	6	7
1988	4811	-	1369	-	3442	-
1989	5667	17.8	1584	15.7	4083	18.6
1990	6660	17.5	2012	27.0	4608	12.9
1991	7935	19.1	2304	14.5	5554	20.85
1992	9787	23.3	3039	31.9	6632	19.4
1993	12261	25.3	4499	48.0	7613	14.8
1994	15138	23.5	6015	33.7	8926	17.2
1995	17694	16.9	6886	14.5	10572	18.4
1996	20419	15.4	8103	17.7	12068	14.2
1997	23354	14.4	10178	25.6	13176	9.2
1998	27552	18.0	12735	25.1	14817	12.5
1999	31532	14.4	13329	4.7	18203	22.9
2000	38619	22.5	18724	40.5	19895	9.3
2001	44850	16.1	21431	14.5	23419	17.7
2002	51656	15.2	24534	14.5	27122	15.8
2003	59399	15.0	28696	17.0	30703	13.3
2004	65961	9.95	30100	4.89	35861	16.8
2005	69396	5.21	29121	-3.25	40276	12.3
2006	77677	11.93	30671	5.06	47006	16.7
2007	94510	21.07	33304	8.58	58393	24.22

Source: SLBC, Kerala.

Credit Deposit Ratio

17.16 As per RBI statistics, the credit-deposit ratio of all scheduled commercial banks as on March 2007 stood at 75 percent which was 72.5 percent during March 2006. The CD ratio at the end of March 2007 in the states of Tamil Nadu, Maharashtra, Andhra Pradesh, Karnataka and Rajasthan were higher than the all India level. As on March 2007 the highest CD ratio was observed in Tamil Nadu (112.3%) followed by Maharashtra (98%). At the bank group level the CD ratio was above the all India ratio in respect of foreign banks (87.5%), State Bank of India and its associates (78 2%) and was lower for other scheduled commercial banks (74.1%), Nationalised banks (73.5%) and Regional Rural Banks (58.7%). Considering the case of Kerala as on March 2007 the CD ratio is 63.6% which was 61.7% in March 2006. As per the RBI statistics on public sector banks alone, CD ratio at all India level is 74.31% in March 2007 against 70.58% in March 2006. Here also Tamil Nadu stands first with 108.15% in March 2007 against 102.44% in March 2006. Maharashtra is just behind with 100 27%. The CD ratio of Kerala is 68.02 in March 2007 against 65.7 in March 2006.

17.17 On analysing the SLBC report, it can be seen that CD ratio in the commercial banking sector of the state has increased by 3 25% points during the financial year to reach 70.09% in March 2007. When the CD ratio of major commercial banks operating in Kerala are compared, the Bank of India stands first with 103.95% and Syndicate Bank comes 2nd with a CD ratio of 78.03% in March 2007. The performance of other banks are Central Bank of India 73.47%, Union Bank of India 73.08%, State Bank of Travancore 68.65%, State Bank of India 68.4% and so on. CD ratios of selected major banks operating in Kerala from 1992 to 2007 are furnished in Table 17 6.

Table 17.6

Credit Deposit Ratios of Selected Major Banks operating in Kerala (as on March 2007)

Name of Bank	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
State Bank of India	59.90	54.20	45.30	44.70	47.00	48.00	47.53	41.95	39.80	46.68	42.64	42.32	45.59	56.45	67.19	68.4
State Bank of Travancore	50.60	49.50	44.50	48.00	43.50	45.20	44.82	44.93	45.97	46.00	46.13	48.06	50.89	56.67	62.74	68.65
Canara Bank	41.50	37.10	29.00	28.00	30.40	35.10	40.37	39.05	36.95	37.41	42.45	45.84	50.09	59.91	67.32	61.23
Indian Overseas Bank	28.00	25.20	21.80	24.00	25.80	25.00	25.22	26.03	26.25	28.00	33.14	32.33	35.68	39.01	43.08	45.88
Syndicate Bank	37.30	33.70	27.90	26.40	33.00	29.20	31.25	33.13	34.94	32.79	31.00	34.17	41.27	63.26	70.27	78.03
Indian Bank	72.00	69.70	61.00	51.50	61.30	47.50	41.13	34.21	32..59	35.53	29.80	31.78	33.61	35.59	43.67	51.03
Bank of India	36.00	39.30	37.30	35.90	39.20	34.00	34.21	28.80	32.83	34.08	31.20	59.31	62.48	80.61	96.64	103.95
Central Bank of India	58.00	58.80	46.00	53.00	50.30	44.00	42.38	42.84	35.48	37.03	35.00	35.26	53.79	63.70	66.95	73.47
Union Bank of India	57.00	47.60	44.50	45.00	45.70	47.30	47.30	51.47	51.36	45.00	49.97	53.54	61.33	81.57	90.80	73.08
Vijaya Bank	46.00	40.30	38.00	35.00	41.60	36.00	38.78	44.89	31.05	44.28	40.51	44.44	56.90	57.06	60.09	58.95
State Average	**51.00**	**48.00**	**43.10**	**44.70**	**44.40**	**45.50**	**44.88**	**43.06**	**41.28**	**42.77**	**42.71**	**45.47**	**48.31**	**61.39**	**68.70**	**70.09**

Source: SLBC, Kerala.

17.18 Share of NRE deposits (as percentage) and C.D ratios of major banks in Kerala as on March 2007 are furnished in Table.17.7.

Table 17.7
Share of NRE Deposit (percentage) and CD Ratio of some major Banks in Kerala (as on March 2007)

Sl. No.	Name of Bank	Share of NRE Deposit %	CD Ratio
1	2	3	4
1	State Bank of India	12.95	68.40
2	State Bank of Travancore	24.50	68.65
3	Bank of India	0.55	103.95
4	Canara Bank	10.58	61.23
5	Central Bank of India	1.28	73.47
6	Indian Bank	2.35	51.03
7	Indian Overseas Bank	4.32	45.88
8	Syndicate Bank	1.93	78.03
9	Union Bank of India	2.82	73.08
10	Vijaya Bank	0.70	58.95
	Total Nationalized Banks	**29.10**	**65.27**
11	Catholic Syrian Bank	2.93	42.18
12	Federal Bank	15.20	66.52
13	South Indian Bank	8.40	46.99
	Total Private Sector Banks	**31.80**	**72.51**
	Total Regional Rural Banks	**0.63**	**118.32**
	Total State	**100.00**	**72.26**

Source: SLBC, Kerala - March 2007.

17.19 Bank group wise total deposits, NRE deposits, advances and C.D ratios in Kerala from 1990 to 2007 are given in Appendix 17.5.

17.20 The District wise details of banking statistics in Kerala, shows that the largest number of bank branches are in Ernakulam (544 Nos.), followed by Thrissur (417 Nos.), and Thiruvananthapuram (383 Nos.). Ernakulam district continued to stand first in mobilisation of deposits and disbursement of advances with Rs.21852 crore and Rs.15891 crore respectively. Wayanad stands last with Rs.579 crore as deposits and Rs. 907 crore as advances. In the case of C.D. ratio Wayanad stands first with 156.6% and Idukki stands second with 128.5%. Pathanamthitta stands last with C.D ratio of 30%. C.D. ratio of Kozhikode is 84.3%, Kasaragode 79.7%, and Ernakulam 72.7%. District wise and bank group wise banking statistics as on March 2007 in Kerala is given in Appendix 17.6. Bank wise performance during 2006-07, in Kerala is given in Appendix 17.7.

Financial Inclusion

17.21 Financial inclusion refers to delivery of banking services at an affordable cost to the vast sections of disadvantaged and low income groups who tend to be excluded from the formal banking channel. Despite wide spread expansion of the banking sector during the last three decades, a substantial proportion of the house holds especially in rural areas is at present outside

the coverage of the formal banking system. The Reserve Bank's broad approach to financial inclusion aims at 'connecting people' with the banking system and the Reserve Bank has under on a number of measures in recent years for attracting the financially excluded population in to the formal financial systems.

17.22 Introduction of zero balance or no-frills accounts has enabled the common person to open bank account providing banking facilities closer to the customer, especially in remote and unbanked areas, which keeping transaction costs low, remains a challenge. The convener banks of SLBC were advised to identify at least one district in each state for achieving 100% financial inclusion by providing 'no-frills' account and issue of general purpose credit card. So far, 160 districts have been identified 100% financial inclusion has been achieved in 28 districts in eight states which includes Kerala also. All districts of Himachal Pradesh have achieved financial inclusion. In view of the special thrust on financial inclusion, co-operative banking has acquired renewed significance in the Indian Financial System.

Opening of No-frills Account.

17.23 In November 2005, banks were advised to make available basic banking 'no-frills' account with low or nil minimum stipulated balance as well as changes that would make such accounts accessible to vast section of the population with a view to achieving greater financial inclusion, all banks were urged to give wide publicity to the facility of such 'no-frills' account. According to SLBC report, as at March 2007, banks in the state have opened 933253 'no-frills' accounts. State Bank of Travancore has opened the highest number of 'no-frills' accounts (430846) followed by Canara Bank (187399) and Syndicate Bank (151839) during 2006-07. According to RBI statistics, between end of March 2006 and end of March 2007, about 6 million 'no-frills' bank accounts were opened all over India. Public sector banks accounted for a major share of these new accounts due to their vast branch net work in rural and semi urban areas. Financial inclusion is being viewed by these banks as a huge business opportunity in rural and semi urban areas in an environment of intense competition.

Housing Loans

17.24 During 2006-07, banks in Kerala issued an amount of Rs.12564.33 crore to 504405 beneficiaries as housing loan, corresponding figures for 2005-06 are 10073.83 crore to 473442 beneficiaries. During 2006-07, finance through direct housing was Rs. 12475.31 crore and that through indirect housing was Rs.89.01 crore. State Bank of Travancore alone issued Rs 2559.3 crore to 93474 beneficiaries, SBI disbursed Rs 2196.01 crore to 52640 beneficiaries. Among the Nationalised banks Canara Bank stands first with Rs.1008.9 crore to 31180 beneficiaries, Union Bank of India goes to second place with Rs.720 crore to 23996 beneficiaries. Federal Bank issued Rs.1312.53 crore to 42169 beneficiaries, South Indian Bank disbursed Rs 277.29 crore to 9226 beneficiaries. Taking Bank group wise disbursement of house loans for 2006-07, State Bank group disbursed Rs.4791.61 crore to 147101 beneficiaries of which State Bank of Travancore is far ahead of other banks. Nationalised banks disbursed Rs.4001.65 crore to 144993 beneficiaries, RRB disbursed Rs.304.67 crore to 21318 beneficiaries, private sector bank disbursed Rs 2713.89 crore to 84651 beneficiaries, foreign banks disbursed Rs 52.26 crore to 764 beneficiaries and co-operative bank disbursed Rs.700.23 crore to 105578 beneficiaries.

Educational Loans

17.25 As at the end of March 2007, Banking sector in Kerala disbursed an amount of Rs 1836.29 crore to 145947 beneficiaries as Educational Loans. State Bank group disbursed

Rs.889.01 crore to 69173 beneficiaries, Nationalised bank group disbursed Rs.754.8 crore to 59470 beneficiaries, RRB's disbursed Rs.39.82 crore to 5309 beneficiaries and private sector bank group disbursed Rs.143.95 crore to 11126 beneficiaries. Here also State Bank of Travancore issued Rs.698 crore to 59958 beneficiaries, Canara Bank disbursed Rs.276.57 crore to 22439 beneficiaries and Federal Bank disbursed Rs.96.91 crore to 7525 beneficiaries.

Advances to Weaker Section and SC/ST

17.26 During 2006-07 an amount of Rs.9255.68 crore has been disbursed to 2750797 beneficiaries of weaker sections in the state in which Rs.978.29 crore was to 350934 SC/ST beneficiaries. The corresponding advances during 2005-06 were Rs.7221.57 crore and Rs.734.53 crore respectively. Weaker sections advances grew by Rs.2034 crore during the last fiscal and year to year increase as at March 2007 was 28.17%. The State Bank Group disbursed Rs.2273.64 crore to 676985 beneficiaries, Nationalised bank group disbursed Rs.2993.2 crore to 759148 beneficiaries, RRB's issued Rs.1974.55 crore to 774688 beneficiaries and Private Sector Bank disbursed Rs. 1119.48 crore to 255941 weaker beneficiaries in 2006-07. SBT alone disbursed Rs.1754.95 crore to 568138 beneficiaries and in SC/ST loan also SBT comes first among all banks which is Rs.219.62 crore to 69542 beneficiaries. The advances to SC/ST grew by Rs.244 crore during 2006-07. Public sector banks including RRB's disbursed almost 93.13% of the SC/ST advance of the state and the share of private sector banks is about 3.15%.

Micro Finance

17.27 In the post nationalisation era the banking system in India witnessed unprecedented growth and achieved phenomenal outreach. Notwithstanding this, empirical studies in the 1980's revealed that a very large number of the poorest of the poor continue to remain out side the reach of the formal banking system. It was realised that the existing banking policies, systems and procedures and deposits and loan products were not well suited to meet the credit needs of the poor. Apart from the existing banking network, with a view to developing a supplementary credit delivery systems that is cost effective and user friendly for both banks and the poor, micro finance initiatives encouraged in India. These initiatives have been centered around two models (1) the SHG Bank Linkage Programme and (2) the Micro Finance Institutions.

17.28 The SHG Linkage Programme launched by NABARD in 1992 continued to be the predominant Micro-Finance model in the country. It is a proven method of financial inclusion, providing unbanked rural clientele with access to formal financial services from the existing banking infrastructure. During the year 2006-07, 686408 new SHGs were credit linked with banks at all India level as against 620109 during 2005-06. At all India level the cumulative number of SHGs, credit linked with banks up to March 2007 was 2.92 million. With a view to providing holistic support to the Micro Finance sector and recognising the important role played by Micro Finance Institutions working in remote unbanked areas of the country, NABARD provided grant and loan based assistance to these institutions.

17.29 According to SLBC report during 2006-07 about 1.69 lakh SHGs have been linked in the state under the SHG bank linkage programme of which 1.36 lakh SHG's are exclusive women SHG's (80.93%). During 2005-06 it was 1.38 lakh and 1.11 lakh respectively. As per RBI statistics during 2006-07, 4.57 existing SHG's received repeat finance as against 3.45 SHGs in the previous year. The total bank loan disbursed to SHG's during 2006-07 was Rs.6643.19 crore as against Rs.4499 crore during the previous year. The cumulative bank loan disbursed to SHGs up to March 2007 was Rs.18041 crore. As on March 2007 about 1.75 lakh SHGs maintain savings account having Rs.97.27 crore with commercial banks. The state bank group which disbursed

Rs.44.75 crore to 81689 SHGs comes first in the state. About 81.12% of the SHGs are exclusive women SHGs.

Box 17.1
Kerala to Become Total Banking State

Kerala is set to achieve the status of a total banking state. The SLBC committee prepared an action plan to reach the milestone within the targeted time frame. Total banking state means every house hold in the state would have at least one bank account and would be eligible for a general purpose loan up to Rs.25000.

Source : Economic & News Digest

Box 17.2
Multi Application Smart Cards and their Potential in Banking

As a part of technological developments in Banks, multi application smart cards which are heralding a new vista in banking.

A smart card is a card which is similar to a credit/debit/ATM card The distinguishing feature lies in the presence of a chip in the card which can store information. The stored information in the chip could either be permanent in nature or may be subject to change. Because of its additional feature, smart cards find usage not only for financial transaction processing but in a number of other areas as well. One of the greatest advantage of the smart card technology is its ability to consolidate multiple applications in a single, dynamic card. This card simplify life for end users. This card can function as an identity card, as a driving license, as a health card and also for other funds related purpose.

With Indian banking having embraced IT in a large way, the potential for usage of multi-application smart cards is high. Smart card based electronic purse system, in which value is stored on the card chip and not in an externally recorded account so that machines accepting the card need no network connectivity. Thus, the multi-application cards are beneficial for issuers as well, especially because they provide the prospect to create unique marketing opportunities They are particularly suitable for financial inclusion in remote parts of the country.

Source: Report on trend and progress of Banking in India 2006-07, RBI

CHAPTER 18

GENDER AND DEVELOPMENT

The progress which women have attained over all these years in terms of conventional indicators like health status, literacy, education and life expectancy has not been accompanied by a commensurate measure of social and economic progress. Hence the XIth plan approach of the Government has been to economically empower the literate/educated unemployed women of Kerala and to address gender inequities.

Box 18.1

Some specific suggestions for addressing women's issues as given in the XIth plan document, GOI

- The plan must examine everything from generic problems like freedom from patriarchy, to specific issues such as clean cooking fuels.
- Check violence against women through effective policies and legislation and provide physical and social security to women.
- Alcoholism is a leading cause of both physical and economic violence against women and the 11th plan must explore ways of checking it.
- It must address problems emerging from feminization of agriculture and other forms of menial employment like domestic work.
- Training to women for enabling them to enter all sectors of the economy on an equal footing with men.
- Special attention will be paid to the economic empowerment of women from the marginalised groups.
- Women's political participation will be strengthened through legislation and training.
- Special focus to be on reducing incidence of anemia and malnutrition among adolescent girls to break the cycle of ill health.

Source XI th plan document, Planning Commission, GOI

Women in the Economy

18.2 Women constituting 51.4% of the total population of Kerala (2001) have a favourable sex ratio (1058 compared to 933 for the country as a whole). The life expectancy at birth (76 years for women in Kerala while it is 61.8 years at the all India level), and Infant mortality rate (14 per thousand for Kerala while it is 58 at the all India level) is also favourable to women. Despite these achievements the system of patriarchy has conditioned the majority women of Kerala to play a secondary role to men in social, economic and political activities. As a result they lag behind in empowerment despite their achievements in education and health. Therefore Government has been pursuing empowerment of women through the poverty alleviation programme of Kudumbashree, agencies for women development like Kerala State Women Development Corporation (KSWDC) and by adopting the strategy of women component plan at the panchayat level. Two flagship programmes one for promoting gender awareness and the other for strengthening the economic position of women have also been initiated during this year as part of efforts to engender state plans.

Box 18.2

Many Common wealth governments are seeking to move away from the heritage of inefficient bureaucracies, inequities in social service delivery, and ever increasing gender disparities, and at the same time change technicist planning processes towards more participatory and engendered ones.

Source: Gender mainstreaming in Development Planning, Vivene Taylor (Common wealth Secretariat)

18.3 This chapter is a data based review of the position of women in terms of conventional and non-conventional developmental indicators to bring forth gender disparities, assess the progress attained through the empowerment programmes of women developmental agencies, and the measures adopted by the government like implementing provisions of Domestic Violence Act for protecting women from violence. Such a review, it is hoped will help in addressing gender issues more effectively in future.

Health

18.4 The conventional indicators which are favourable for women of Kerala (see Table 12.1 in Chapter on Health) do not reveal the challenges in the Health sector because new concerns have emerged like occupational health problems, psychic problems, violence related health problems and health problems of poor, aged women. Institutional care is inadequate for the aged women.

18.5 Research studies indicate that mental stress is particularly high among women who continue to be primarily responsible for household work and child care even when they engage in productive activities. An important consequence of combining the tasks of production and reproduction is that it affects the well being of women through strenuous, long hours of work with very short breaks and irregular meals. The problem is not easily recognised or addressed among the poor women, even more so since the paid work they do like transplanting of paddy, cashew shelling /peeling, fish processing, coir spinning, collecting waste and so on, is prone to occupational hazards. Occupational health problems need to be treated as an area of concern.

18.6 Women do not have access to clean toilets in public places and many Government girls schools do not have enough water and girl friendly toilet facilities. This is not a problem to be trivialised, because of the adverse health impact it causes on girls. The Education sector may probably have to address this issue by making special provisions for such facilities. Violence against women also causes health problems including mental illness. Health care providers are ideally placed to recognize victims of violence and help them for which they need special sensitisation and training programmes.

Literacy

18.7 Kerala is the most literate state in the country. The state has the distinction of having the highest male and female literacy rates which continue in the 2001 Census, according to which, 94.2 percent of the males and 87.7 percent of the females are literate in the state. The gap

between male and female literacy is low at 6.5 percentage points against the 21.6 percent point gap at the national level (see table 18.1below).

Table 18.1
Male Female Literacy Gap: India and Kerala

Years	India			Kerala		
	Male	Female	Gap	Male	Female	Gap
1951	27.16	8.86	18.30	49.79	31.41	18.38
2001	75.85	54.16	21.69	94.20	87.86	6.5

Source: Census documents

18.8 The lowest female literacy rate is in Palakkad district (79.31%) and Ernakulam district (90.96%) has the highest literacy rate. (See Appendix. 11.1)

18.9 As per later estimates of the Kerala State Literacy Mission, females account for nearly 63% of the total (3.53 million) illiterates in the State. Female illiteracy is highest in Malappuram district and lowest in Kollam district. Wayanad has the highest number of female 'new literates' (see Appendix 11.2).

Education

18.10 As in the previous years the gender gap in school enrolment in Kerala is very low unlike in other states. Girls constituted 49.19% of the total enrolment in school education in Kerala(see Table 18.2)

Table 18.2
Enrolment of students in Government Schools(2007-08)

	LPS(I-IV)	UPS (V-VII)	H.S(VIII-X)	Grand total
Boys	273101	212202	232947	718250
Girls	267774	203056	224688	695518
Total	540875	415258	457635	1413768

Source: Directorate of Public Instruction 2007

18.11 Out of the total 5.40 lakh students enrolled in LPS 2.67 lakh are girls (49.4%), in UPS the number of girls is 2.03 lakh (48.9%) and in High School 2.24 lakh students are girls(49%).

18.12 In plus two courses out of the total 3.33 lakh students,1.79 lakh are girls (53.75%).On the other hand, Gender disparity is visible in the enrolment in technical schools Enrolment of girls is fairly low in the 43 Government and 6 Private aided Polytechnics in the State. While in the Government polytechnics, girls strength for the year 2007-08 is 10.06% in the private Aided Polytechnic it is 10.03%(Directorate of Technical Education, Thiruvananthapuram, 2007).

18.13 At the graduate and post graduate levels girl students out number boy students, 67.47% are girls enrolled at graduate level and 78.20% of the students enrolled for Post Graduate Courses are girls (Table 11.9 chapter -Education)

Employment

18.14 According to the 2001 census the male work participation rate has increased to 50.2 percent (it was 47.6%, in 1991 census) while the female work participation has declined slightly to 15.4 percent (it was 15.8% as per the 1991 census)
(Source census 2001, Kerala)

18.15 Female WPR is 15.9% in rural and 13.5% in the urban area. Of the total 102.91 lakh workers (main and marginal) only 25 lakh are women, according to census 2001, of which 1.18lakh are female cultivators and 5.50 lakhs are agricultural laborers. Of the total 3.65lakh workers in household industry female form only 1.83 lakhs and 16.50 lakh women belong to other category of workers (Census 2001, Kerala). It is well known that Census underestimates work participation rates (WPRs), in particular of women, while the methodology and concepts used by the National Sample Survey Organisation (NSSO) ensures a better enumeration of the work force. However, these data are not given at the district level The latest NSSO Round data for the year 2004-05 reveals much higher WPRs for men and women compared to the Census (see Table 18.3). However, unlike at the all-India level where WPRs have increased among men and women, in rural and urban areas, for Kerala the increase is muted; rural WPRs show some increase while the estimates for urban areas have stagnated; since the early 90s, 20 percent of urban women are working in the principal and subsidiary status

Table 18.3
Work Participation Rates (WPRs) by Usual Principal and Subsidiary Status (UPSS) in Kerala and all-India (in percent)

	Kerala			All-India		
	1993-94	1999-00	2004-05	1993-94	1999-00	2004-05
Rmale	53.7	55.3	55.9	55.3	53.1	54.6
Rfemale	23.8	23.8	25.6	32.8	29.9	32.7
Umale	55.9	55.8	54.7	52.1	51.8	54.9
Ufemale	20.3	20.3	20.0	15.5	13.9	16.6

Source Various Rounds of the NSSO

18.16 The inferior economic position of women is also reflected in wage disparities Despite the Equal Remuneration Act 1936 it is generally observed that women get low wages particularly in casual work, construction work etc. The Act ensures equal wage for equal work and it is illegal to pay a lower wage to a female worker doing hard manual labour like agricultural works. According to NSSO, 1999-2000, rural agricultural wage for women was Rs. 62.2 and for men it was Rs. 94.5. The wage for non-agricultural unskilled women workers was Rs. 94.1 and for men it was Rs. 131.9.

18.17 However, under the National Rural Employment Guarantee Scheme, Panchayats ensure that a woman gets 125 Rs for 8 hours work equal to that of a male worker for casual labour activities (Labour Commissionerate, 2007, Thiruvananthapuram).

18.18 Female educated unemployment is a crucial problem in Kerala particularly among those with secondary school level education. Table (18.4) below shows that out of the total number of

38.99 lakh registered job seekers in 2007, (including professional and general work seekers, 25.59 lakh are female job seekers (58%)

Table 18.4
District wise distribution of work seekers as on 31-3-2007

Sl. No	District	General work seekers	Professional Technical work seekers	Total	Women	Male
1	Thiruvananthapuram	531109	21436	552545	337835	214710
2	Kollam	386198	17572	403770	236484	167286
3	Pathanamthitta	149426	6748	156174	94731	61443
4	Alappuzha	354065	12653	366718	206861	159857
5	Kottayam	224266	7306	231572	134110	97462
6	Idukki	114185	2910	117095	67907	49188
7	Ernakulam	359786	21001	380787	213966	166821
8	Thrissur	317985	9828	327813	206341	121472
9	Palakkad	289640	9774	299414	161233	138181
10	Malappuram	268887	5311	274198	146344	127854
11	Kozhikode	372501	12737	385238	222904	162334
12	Wayanad	81203	1211	82414	44803	37611
13	Kannur	216682	7021	223703	131753	91950
14	Kasargode	95417	2538	97955	53851	44104
	Total	3761350	138046	3899396	2259123	1640273

Source: Director of Employment, TVM

Political Participation of women

18.19 Although many women actively participate in women's organisations, trade unions, group activities etc. they are not very visible in higher levels of political leadership. A review of the past State Assembly elections reveals that the women representation was very low (13,8,7 etc) which is very small for a house of 140 legislators (Chief election officer Election(Gen.)Department, Govt. of Kerala and Economic Review 2006).
Politically women became visible in the state primarily at the local level with the enactment of the 73rd and 74th Constitutional Amendments which mandated a 33 percent representation of women at all three levels of the Local self government institutions(LSGIs). This enabled women to assume leadership. It is interesting to note that in the Panchayat elections held in November 2005, under the various political parties and also as independents about 3000 women from the Kudumbasree CBOs, contested the elections;1408 women emerged victorious from various constituencies covering 449 Local Self Government Institutions(LSGIs); 14 women were elected to Corporation; 92 to Municipalities; 1212 to Grama panchayats; 83 to Block panchayats and 7 to District Panchayats. At least 70 women have been elected as leaders (Panchayat Presidents and Chairpersons) of the LSGIs (Source. Kudumbashree Report, 2006)

18.20 Various capacity building programmes have also helped in building the capacities, capabilities and competencies of the elected women representatives in terms of. decision making and confidence building.

Women's priorities in the Budget

18.21 It is a challenging task for the women to get their priorities into the budget. Public policies mainly remain at the level of rhetoric and neglect the needs of women as workers or head of a household. The XIth Plan formulation is a departure from seeing women as mere beneficiaries of welfare measures and support of some sort to being economic agents. In this Plan the broader approach has been to make gender visible in every sector of the economy to ensure recognition of women's roles and activities which would help in framing of sectoral/sub-sectoral programmes addressing their needs. However, there are difficulties in doing this across sectors and there will be gaps. Based on the understanding of core gender concerns in Kerala the state plan also targeted women specifically through two flagship schemes one to overcome gender discrimination and ensure a more gender sensitive social environment and the other to strengthen women economically through Finishing Schools for women. The attempt at mainstreaming gender into the planning process in fact began at the level of Local Self Governments in the Ninth Plan period when LSGIS were instructed to make an overall Gender impact assessment of projects as well as mandated to set apart 10% of the total plan funds specifically for addressing women's needs, the Women Component Plan (WCP)

Box 18.3

"A women's budget or a gender-sensitive budget is not a separate budget for women. Rather , it is an analysis of the government budget to establish the budget's differential impact on women and men and on different groups of women and men. A gender-sensitive budget is about taking government's gender commitments and translating them in to budgetary commitments".

[Source "How to do a gender-sensitive budget analysis". Contemporary research and practice, Debbie Budlender & Rhonda Sharp with Kerri Allen]

The sector-wise fund allocation for women component plan by the LSGIs, the number of projects implemented and the expenditure details are given in the following Table 18.5.

Table 18.5
Sector-wise Plan Grant-Expenditure in Women Component Programmes of the LSGIS during 2006-07

Sector Type	Formulation		Expenditure	
	No. of projects	Plan Fund(lakh)	No. of Projects	Plan Fund (lakh)
Productive	2607	4005.45	1851	2500.04
Service	3458	6679.79	2727	5039.38
Infrastructure	51	61.30	24	27.51
Others	63	330.93	62	329.63
Total	**6179**	**11077.47**	**4664**	**7896.56**

Source: IKM(2007)

18.22 LSGIS spent 71% of the funds allocated for WCP during this year. Altogether 4664 projects were implemented. Highest number of projects were implemented in the service sector

2727 (58%)followed by 1851 projects (40%) in the productive sector few projects 24 (0.5%)in the infrastructure sector and 62 (1.3%) were miscellaneous projects.

18.23 Gender budgeting/auditing was initiated with the formulation of the state Budget (2006-07) in a preliminary way. Its methodology includes a variety of tools for disaggregating mainstream policies and allocations of the budget to understand their gendered impact. Despite this comprehensive framework, the most commonly used tools of gender sensitive budget audits in practice have been the gender aware policy appraisal and a gender aware budget statement focusing on the expenditure side. Three categories of expenditures are identified: (i) the women specific programmes (100 percent targeted for women); (ii) the quota beneficiary schemes, that is schemes with a percentage for women (generally 30 percent); and (iii) the estimated potential for women beneficiaries in the 'general' expenditure stream. Hence GB/A has got identified generally with an analysis of allocations of Government funds. But here too, in practice, the exercise is confined to the first two categories of expenditure which as most studies have shown account for less than 10 percent of the total budgetary allocations. Unravelling the 'general' expenditures for their gendered impact is the major task which needs to be done. A similar attempt capturing the first two categories of expenditure was done for the (revised) Kerala Budget 2006-07 (Gender Sensitive Budget Auditing: A Study of the Revised Kerala State Budget 2006-07, Mridul Eapen). The 2006-07 budget did make an attempt to make women more visible in the Budget document with a special section on Welfare of Women in which the need for gender auditing has been explicitly recognized. The study brought out the fact that if we add up all the women specific schemes (100 percent and partial), the *total* comes to just about 2 percent of total allocations (plan and non-plan); however, the *plan* allocations account for almost 8 percent, a considerable increase compared to last year's budget allocation, indicating a positive directional change in favour of women

18.24 In this year the exercise needs to address the issue of dismantling 'general' expenditures and also to assess the implementation of policies, strategies and programmes not only in 'financial' terms but also in terms of structural biases in the functioning of public institutions via their assumptions, working procedures and activities that prevent gender equality objectives being taken forward. Recognition of importance of gender auditing has been derived from a growing awareness of the central role of organizational structure and culture in the design and delivery of gender sensitive programmes and projects.

Women Development Agencies- Evaluation of Programmes

Kudumbashree

18.25 Kudumbashree is an innovative poverty reduction programme implemented exclusively for women with the support of State Government and agencies like NABARD, Welfare Boards, Financial institutions and other autonomous agencies since 1999 The organisation functions through out the State with the help of approximately 1,83,741 Neighbourhood groups. The activities are solid waste collection, power laundry, bio-fertilizer units, tissue culture labs, direct marketing, data entry , hardware units, small manufacturing units, canteen/catering units, food product units etc. Group farming is also encouraged with the help of lease land farming.

18.26 As earning members and with the external inducement factors like capacity building programmes and performance improvement programmes (PIP) these women have been empowered in taking up new responsibilities. A special feature of Kudumbashree has been that it has reached out to primitive tribal groups in Kasargod, Wayanad, Malappuram, Trichur and Palakkad districts.

18.27 The focus of Kudumbashree so far has been in areas like housing, safe drinking water, sanitation and entrepreneurship development. Kudumbashree has also gained reputation in the management of thrift and credit despite the weak accounting system making auditing a difficult process. There are also issues in marketing, access to support mechanism etc. Therefore the unit has been adopting new strategies for improving performance at all levels. The vast network of women force also serve as a target group for the empowerment programmes initiated at all levels. The group also serve as a supportive target for the Flagship Programmes envisaged for awareness creation and skill development during the XI th Plan period The achievements of Kudumbashree programmes is given in detail in the chapter on "Poverty and special programmes for weaker sections"

Kerala State Women Development Corporation (KSWDC)

18.28 KSWDC functioning primarily as a loan lending unit assisting BPL women in self employment has launched many job oriented skill upgradation training programmes. The corporation has channelised the loan fund for women belonging to backward minority communities and scheduled caste classes from NBCFDC, NMDFC and NSFDC receptively, whereas funds for the general category are met from the budgetary provisions of state government. Beneficiary contribution forms 5% of the loan assistance. The total loan assistance provided up to March 2007 is Rs. 326.41 lakh. The number of women beneficiaries was 656. Details on scheme wise loan lending is given in Table18 6 below.

Table 18.6

Details of Physical and financial coverage (2006-07) as on 31-3-07

Particulars of schemes	WomenWomen Beneficiaries (Nos)	Loan assistance provided (Rs. lakhs)
Loan schemes of NBCFDC, GOI	279	112.30
Loan schemes of NMDFC, GOI	190	126 91
NSFDC	128	41.99
State Govt. Plan fund to economically marginalised women	59	45.21
Total	656	326.41

Source: KSFDC Ltd 2007.

* NBCFDC : National Backward Caste Finance Development Corporation
* NMFDC : National Minorities Development Finance Development Corpn.
* NSFDC : National Scheduled Caste Finance Developmental Corpn

18 29 The corporation is the nodal agency for various central government schemes of the ministry of women and child development such as grant-in aid schemes for working women's hostels, Swadhar Short stay homes and support for Training and Employment programmes (STEP). The project proposals submitted to GOI seeking grant-in aid for these schemes in the year 2007, are as follows:

STEP- 16 projects
Working Womens Hostels -6 projects
Swadhar Short Stay homes- 5 projects

18.30 There are 7 working women's hostels functioning under the administration of Kerala State Women Development Corporation. Training in computerised office management was conducted for 100 women Another 50 women were trained in garment designing and pattern making. Flagship projects on finishing schools and gender awareness have been formulated during this year.

Kerala Women's Commission

18.31 Kerala Women's Commission functions in a unique manner in solving petitions of women. With limited infrastructural facilities, the commission has challenging tasks to fulfill like conducting enquiry into unfair practices against women, settling disputes, conducting DNA Tests, Adalaths, counselling, organizing legal awareness classes, seminars, workshops , publishing of a newsletter, Administering of short-stay homes etc. commission adopt settlement and counseling methods for the redressal of petitions and conducts Forums and Adalaths in every district for speedy redressal of petitions . Some of the petitions are referred to Police, KELSA, protection officers etc according to the gravity of cases. Section 18 of the Women's Commission Act, empowers the commission to prosecute a person committing offence against a woman. During 2006-07, 38 adalaths and 5 DNA Tests were conducted. The commission received 5171 petitions this year. Action has been completed in 3669 cases.
(Source: Women's commission, TVM)

18.32 Out of the complaints received (January 2006 to December 2007) Harassment by Women stood first (1600), followed by Harassment by husband (574), property related (373), cheating (243) Abusive language (159), and anti social nuisance (152). This appears to suggest that women harass women more than men. However, what should be noted is that such 'facts' hide the husband's role as a willing perpetrator. There were 107 employment related cases during this year showing the extent of harassment at work place for women and indicating the need for addressing this issue. Subject-wise categorization of petitions is given below (Table 18.7)

Table 18.7

Subject-wise details of petitions received January 2006-December 2007

Sl. No.	Category	Number of petitions filed
1	Harassment of women	1600 (1st)
2	Dowry harassment	119
3	Harassment by husband	574 (2nd)
4	Cheating	243
5	Divorce	89
6	Suspicious death	69
7	Property related	373 (3rd)
8	employment related	107
9	Threatening to life	113
10	Sexual harassment	100
11	Abusive language	159 (4th)
12	Neighbour's nuisance	133
13	Atrocities	142
14	Against Police	37
15	Theft	7
16	Beating	88
17	Anti-social nuisance	152 (5th)
18	To get divorce	17
19	Nuisance after drinking	32
20	To get alimony	87
21	To get economic help	16
22	Path problems	42
23	Doctor's negligence	6
24	Child marriage	1
25	Miscellaneous	865
	Total	5171

Source: Women's commission, 2007, Kerala

18.33 In the year 2006, 240 petitions were sent to Police Department and 73 to KELSA. In 2007, 376 petitions were sent to Police Department 139 were sent to KELSA and 196 were sent to Protection officers. Counselling was given in 180 complaints in 2006 and 240 complaints in 2007. Altogether 17 seminars were held on a variety of subjects like social problems of widows, problems of entrepreneurs, unemployment problems of Adivasi women etc Seminars were also conducted for strengthening the activities of Jagratha Samithis. It is necessary that pamphlets are produced giving a write-up on the proceedings and discussions in these seminars for wider dissemination . There is a Short Stay Home of the commission which is functioning in a rented building in a panchayat area of Thiruvananthapuram. In the year 2006, 14 women were accommodated and in 2007, 17 women were accommodated; 24 inmates were sent back home, after the cases were settled.

18.34 The facilities are very poor in this short stay home. There is not even a single cot for the inmates. The nutrient/calorie content of food given is below the minimum requirement. Kitchen facilities are inadequate. The inmates and the children wear old donated clothes. Supportive measures are needed for improving efficiency of service delivery.

Women's Cell

18.35 Women find it easier to enter a women's cell for disclosing their grief. Women's Cell in the Police department deals with cases of atrocities against women including action against police in case of any laxity in handling cases. The Cell also maintains liason with women's forums and voluntary organisations and organises sensitisation programmes for Police men and women. There are altogether 17 district women's cell in addition to the state Women's Cell. Approximately 800 cases are filed, of which 95% are settled immediately. Only less than 5% of the cases are referred to police stations or courts. An Advisory Board is constituted for monitoring and assisting the activities of the cell. Adalaths and awareness programmes are conducted. Adalaths conducted are to be notified in newspapers one month prior to the date of commencement of Adalaths.

18.36 Altogether 7928 petitions were received during the period from 1/1/2007 to 30/9/07. 5837 cases were disposed. Rest of the cases are pending. 5772 cases were on atrocities against women; 164 cases were forwarded for registration as crimes

Violence Against Women

18.37 "Violence Against Women is included in the focus on Women's Rights as human rights".(Amnesty international 1995: The worlds women notes.) as quoted in the manual on "Using Gender Sensitive Indicators" by Tony Beck, Common Wealth Secretariat. Hence any act of violence against women is a human rights violation It is also a manifestation of women's inequality. The crime profile of the state as recorded in the State Crime Records Bureau, Women's Commission and those filed in the Police Stations indicates women's subordination and victimisation in Kerala.

18.38 The number of atrocities against women has increased from 8087 in 2005 to 9034 in 2006. In the nature of offences the number of complaints on cruelty by husband or relatives stood first.(3708) as given in Table 18.8..

Table 18.8

Number of Cases Reported Under Atrocities Against Women During 2006

Sl No	Name of District	Rape	Kidnapping	Dowry Death	Molestation	Sexual harassment	Cruelty by husband of relatives	Other offences	Total IPC crimes against women
1	Trivandrum	59	61	2	526	29	390	158	1225
2	Kollam	75	28	1	351	10	445	229	1139
3	Pathanamthitta	24	9	0	145	9	129	78	394
4	Alappuzha	15	14	1	177	14	227	108	556
5	Kottayam	30	19	2	196	29	186	99	561
6	Idukki	30	11	2	133	12	131	68	387
7	Ernakulam	39	17	1	152	25	211	105	550
8	Trissur	55	6	3	220	22	302	152	760
9	Palakkad	59	2	4	52	17	363	149	646
10	Malappuram	45	5	1	145	12	458	219	885
11	Kozhikkode	59	16	7	179	19	368	119	767
12	Wayanadu	36	2	1	70	8	122	80	319
13	Kannur	37	8	0	116	12	227	109	509
14	Kasargod	27	4	0	81	4	149	71	336
	Total	**590**	**202**	**25**	**2543**	**222**	**3708**	**1744**	**9034**

Source SCRB, 2007

18.39 In the District-wise analysis Trivandrum District stood first with a total of 1225 complaints followed by Kollam (1139), Malappuram (885), Kozhikode (767) and Trissur(760).

18.40 Kerala is one of the States with the highest suicide rate in the country. The numbers reported have slightly decreased from 9244 cases in 2005 to 8720 cases in 2006. The reported female suicide rate has increased from 2414 in 2005 to 2437 in 2006. Highest number of female suicides were reported from Trivandrum district (327) followed by Trissur (297) and Palakkad (288), Kollam (243). See Table 18.9.

Table 18.9

District-wise Suicide in Kerala

District	2004			2005			2006		
	M	F	T	M	F	T	M	F	T
Trivandrum	857	340	1197	956	301	1257	962	327	1289
Kollam	841	244	1085	894	234	1128	864	243	1107
Pathanamthitta	345	65	410	308	85	393	257	77	334
Alappuzha	360	122	482	397	106	503	359	109	468
Kottayam	323	126	119	353	109	462	337	112	449
Idukki	352	136	488	336	131	467	330	121	451
Ernakulam	522	209	732	519	220	739	538	210	748
Thrissur	675	272	947	697	275	972	646	297	943
Palakkad	645	243	888	712	260	973	662	288	950
Malappuram	348	140	488	325	145	470	330	117	447
Kozhikkode	445	188	633	450	218	668	459	206	665
Wyanadu	222	80	302	236	84	320	257	87	344
Kannur	457	211	668	447	178	625	415	171	286
Kasargod	208	76	284	199	68	267	167	72	239
Total	6295	2452	8723	6500	2414	8944	6283	2437	8720

Source: SCRB, 2007, TVM

18.41 In this background Government of Kerala has initiated the implementation of provisions of 'Domestic Violence Act' 2005 and has been seriously pursuing it during this year. Social Welfare Department is the nodal agency for implementing the provisions of DV Act 2005. The action taken so far by the Department is given in Box (18.4) below.

Box 18.4
The Protection of Women from Domestic Violence Act. 2005
Quarterly Progress Report on implementation
Year 2007(January -September)

1	Number of protection Officers appointed Government Servants female----18....Male 13	31
	Members of NGO's male.....female	
2	Number of Service Provider registered	45
3	Number of Medical facility notified	
4	Number of shelter Homes notified	24
5	Number of complaints of domestic violence Received by Protection Officers:	617
	Received by Service Providers	6
	Received by Police	14
	Received by Magistrate	468
6	Number of Domestic Incident Reports(DIR) Recorded by Service providers	710
7	Number of DIR forwarded to Magistrate Forwarded by protection Officers	628
	Forwarded by Service Providers	---
8	Number of aggrieved persons provided medical aid by Medical Facility	--
9	Number of Aggrieved Persons Provided Shelter by Shelter home:	4
10	Number of Aggrieved Person provided legal aid under Legal Services Authorities Act, 1987	25
11	Number of cases of emergency in which action taken by Protection officers with assistance of the Police:	6
12	Number of cases in which Safety Plan prepared by Protection Officers:	23
13	Number of cases in which counselling proceedings conducted by Counsellor:	15
14	Number of cases in which Settlement arrived at by Counselor	2
15	Number of applications heard by Magistrate: Heard within 3 days of receipt of application	254
	Heard in 4 to 7 days	153
	Heard after 7 days	27
16	Number of applications disposed of by magistrate Disposed of within 60 days from date of 1st hearing	37
	Disposed of after 60 days from date of 1st hearing	45
17	Counselling: Number of Respondents ordered by Magistrate to undergo counselling	28
	Number of aggrieved Persons ordered by Magistrate to undergo counselling	6
	Number of cases in which Respondent and aggrieved Persons ordered to undergo counselling jointly	14

18	Number of cases in which assistance of welfare expert taken by magistrate:	32
19	Number of cases in which proceeding conducted by magistrate in camera	9
20	Number of cases in which expatriate order granted by Magistrate	5
21	Number of cases in which Interim Order granted by Magistrate	81
22	Number of protection Orders granted by Magistrate	90
23	Number of Residence orders granted by Magistrate	72
24	Number of Custody orders granted by Magistrate:	6
25	Number of compensation orders granted by Magistrate:	19
26	Number of cases in which Monetary Relief granted by Magistrate	35
27	Number of cases in which assistance of the police taken by protection officers in enforcing orders of Magistrate	11
28	Appeals: Number of appeals made to court of Session by Aggrieved Persons:	4
	Number of appeals made to court of session by Respondents	9
29	Number of cases of breach of protection orders or interim Protection order brought up before magistrate:	15
30	Number of cases of breach of protection order or interim protection order tried by magistrate	8
31	Number of Protection officers reported as refusing or failing to discharge as directed by Magistrate:	..
33	Imprisonment and fine Number of Respondents imprisoned for breach of protection order or interim Protection order Imprisoned for 1-3 months Imprisoned for 4-6 months Imprisoned for 6-12 months	1

Directorate of Social Welfare, TVM 2007)

Flagship Programme on Gender Awareness

18.42 This programme aims at overcoming gender based discrimination through several measures As a first step in implementing this programme, action has been taken for implementing provisions of Domestic Violence Act 2005. Funds have been channeled through Social Welfare Department and to other Women Development Agencies Social Welfare Department is the nodal agency for coordinating the activities. Social Welfare Department, Women's Commission and Women's Police Cell have launched the Programme.

Flagship Programme on Finishing School for Women

18.43 This programme proposes to equip women job seekers in upgrading their skill through additional training. It is envisaged to utilise the services of institutions like ITI's, Engineering Colleges etc, Social Welfare Department and Kerala State Women Development Corporation are the agencies for implementing this training programme. These agencies have formulated projects for implementation.

CHAPTER 19

LABOUR AND EMPLOYMENT

Foundation of any economy is its labourers and redressal of their grievances is essential for ensuring a decent livelihood to them, social harmony, industrial prosperity and the growth of the economy. Kerala is generally known as a labour-friendly State. There is genuine concern and commitment to the protection of the interests of labour and promotion of its welfare. However, some still continue to hold the view that labour in Kerala is an irritant factor posing a constraint on investment. But this view is totally baseless since it is based on clear class bias and misinformation. This is well proved by the data on industrial peace and the spurt in investment in the industry sector in the state.

19.2 As per 2001 Population Census, the State's population was 3.18 crore and 63.4 per cent of the population was in the age group of 15-59 who constitute the labour force. Projected labour force for 2011 is 237.30 lakh. Out of India's total main workers, 2.6 per cent are Keralites. Kerala has 102.91 lakh workers (main and marginal) of whom 16.54 lakh are agricultural labourers and 3.65 lakh in household industries. Net out-migration of labour to other parts of India and abroad and the resulting inflow of remittances into the state is an outstanding phenomenon. Some studies by researchers at the Centre for Development Studies, Thiruvananthapuram and IIM, Kozhikode have put the amount of remittances from the Gulf region alone as high as 22% of the state's NDP.

Composition of Workers

19.3 Composition of workers implies the amount of labour force engaged in different sectors of the economy. 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 etc), traditional industries (coir, cashew, handloom, beedi etc), manufacturing sector (small, medium and large industries), IT industry, units in export promotion zones and those who are seasonally employed. The work participation rate (WPR) for men and women as per 2001 Census was 50.40 and 15.30 respectively. Also mention is to be made about child and migrant labour.

Child Labour

19.4 One social hazard, contributed by present day life is child labour. During the last five years much involvement in rehabilitation and other programmes have been made to eradicate child labour. Child labour in homes, hotels are banned with effect from 10th Oct 2006. Violators will be charged a fine up to Rs 20000 and an imprisonment of 2 year term. Children below age of 14 years are banned from working as domestic servants or at hotels, tea shops, restaurants and resorts. Children working in lower - end restaurants and high way food stalls and motor workshops are however a common sight in many parts of the country.

Migrant Labour

19.5 Another social hazard is migrant labour. During the last five years much has been done in improving the life situation, education, health etc of the migrant workers. Migrant workers, seeking employment in Kerala from other states like West Bengal, Bihar, Orissa, Chandigarh apart from the workers already present in this State from Tamil Nadu, are increasing. These workers, many of them being contract labour, are exploited by paying them wages at minimum or

below subsistence level and forcing them to work under shabby conditions at work place. At the same time the women workers recruited from Kerala for working in the fish processing centers in the North Indian States particularly in Gujarat and Maharashtra are also being exposed to miserable conditions at their work place. The contract system of employment is also increasing in our State. But as against the migrant workers, the local workers are well organised and succeed in getting decent wages and working conditions. Awareness programmes are being conducted by the State for the migrant workers. The relatively higher wages and the general atmosphere of better respect, status and protection given to labour in Kerala as compared to that in their home states have attracted migrant labour to the state. Further, the reluctance of Kerala workers to take up certain types of work has created demand for migrant labour to fill the gaps.

Industrial Relations

19.6 The labour department is a statutory agency to bring about and keep up harmonious relations in industrial establishments. For the maintenance of harmonious relations and creation of a conducive climate for sustained investments, effective enforcement of labour laws and labour welfare schemes is a prerequisite. The Labour Commissionerate provides this required support to the state government in framing appropriate labour and industrial relation policies, programmes of timely state interventions in the labour sector, updating labour laws and expediting their implementation to the satisfaction of both workers and employers. There are 30 labour laws administered by the Labour Department. 75 categories of employments have also been covered by the Minimum Wages Act 1948.

19.7 Generally, industrial relations in the state in 2007 has been peaceful. However, the working class has come forward to register protests against the anti-labour policies of the GOI, but they need not be counted as real 'industrial disputes between labour and employers on terms and conditions of employment'. Details on strikes, lockouts and layoffs for the last 6 years are given in the following Tables:

Table 19.1
Strikes

(Numbers)

Items	2002	2003	2004	2005	2006	Up to 30.09.07
Pending	0	0	1	1	0	6
Arose	5	19	12	10	7	2
Total	**5**	**19**	**13**	**11**	**7**	**8**
Man-day lost	6456489*	72160	143387	3250553*	86977	395564

Source: Labour Commissionerate

Table 19.2
Lockouts

(Numbers)

Items	2002	2003	2004	2005	2006	Up to 30.09.07
Pending	25	24	20	27	23	27
Arose	20	17	23	4	6	0
Total	**45**	**41**	**43**	**31**	**29**	**27**
Man-day lost	1627147	1932456	1881349	1855429	1811755	1289048

Source: Labour Commissionerate

Table 19.3
Layoffs

(Numbers)

Items	2002	2003	2004	2005	2006	Up to 30.09.07
Pending	9	12	10	9	8	6
Arose	19	23	9	10	3	2
Total	**28**	**35**	**19**	**19**	**11**	**8**
Man-day lost	729717	888840	11452578	583771	564669	395564

Source: Labour Commissionerate

Conciliation Machinery

19.8 One of the prime functions of Labour Department is to act effectively as conciliation machinery to redress the grievances of employers and employees. This arrangement is now available in all 14 district head quarters. Three Regional Joint Labour Commissionerates and the Commissionerate provide good support to the conciliation process. The conciliation officer is vested with the power to intervene in industrial disputes, existing or even apprehended with a view to bring about amicable settlements.

Labour Courts and Tribunals

19.9 The adjudication process has become time-consuming and burdensome. The Labour Courts and Tribunals are over-burdened with very large number of cases. On an average, it takes about 3 to 5 years for getting a judgment or an award.

Arbitration

19.10 Between adjudication and arbitration, the latter is considered to be more effective for the reasons that the procedures are simple, the proceedings will not be tardy, and the decision is rendered by a person in whom both parties have confidence. In the report of the National Labour Commission (2002), it is stated that, "We would like the system of arbitration to spread and over time, become the accepted mode of determining disputes which are not settled by the parties themselves."

Industrial Relations Committees (IRCs)

19.11 The IRCs functioning in the state as Joint Consultative bodies have been considered by the First and the Second National Commissions on Labour as outstanding contribution of Kerala to the country. The origin of the IRCs goes to the one started in the Coir Industry in the early 1940s based on the GEORGE Committee Report (*Report of the Board of Conciliation of Trade Disputes in the Mats and Matting Industry,1939, Government of Travancore*) and modelled on the Whitley Councils in Great Britain. Since then the idea of IRC has deeply rooted in Kerala. There are now about 14 such IRCs to prevent or resolve disputes in the traditional sector including plantations These were very active and result-oriented during the initial stage. The Plantation Labour Committee is considered as a model Committee, One unique feature of the IRCs in the state has been the formulation of mutually and amicably agreed formulae to settle industrial disputes on issues like Bonus. Kerala also has the record of a settlement of 'minimum bonus', irrespective of profit or loss, in the Plantations industry, as early as 1944. Even the idea of

minimum bonus became accepted in India only after the Bonus Commission suggested it in the late 1970s and the Bonus Act was passed.

Safety of Workers

19.12 The Department of Factories & Boilers is the Statutory Authority to ensure safety, health and welfare of factory workers and the general public living in the vicinity of factories through implementing various laws. Inspection of major accident hazard (MAH) factories, air monitoring studies in hazardous factories, workshop/training programmes for workers and managers, medical examination of factory workers are the major activities of the department. The department is in the pursuit of prevention of industrial accidents and creation of an environment conductive to industrial hygiene as well as prevention of occupational diseases by inspection and advisory service. The department has neither any externally aided activities nor any schemes to be implemented under Local Self Government's Plan

19.13 There are 16397 establishments in the year 2007 which came under Factories and Boilers Act as against 16532 in 2006, indicating a decrease to the extent of 135. Details are given in the following Table:

Table 19.4
Establishments and workers coming under the purview of various Acts enforced by Factories and Boilers Department

(Numbers)

Year	Establishment	Workers
2005	16243	442460
2006(revised)	16532	450479
2007(up to 30.09.07)	16397	448524

Source: Factories and Boilers Dept

19.14 There is a sharp decline in various programmes conducted by Factories and Boilers Department in 2007. A total of only 311 programmes so far conducted in 2007 as against 740 in 2006. More details are furnished in the following Table:

Table 19.5
Programmes conducted by Factories and Boilers Department

(Numbers)

Sl.No.	Programmes	2006-07	2007-08 up to 30-09-07
1	Priority inspection at MAH factories	19	6
2	Air monitoring studies in hazardous factories	24	14
3	Workshop/training programmes for workers/managers	12	2
4	Inspection at hazardous factories by specialist inspectors	399	199
5	Medical examination of factory workers	286	90
	Total	**740**	**311**

Source: Factories and Boilers Dept

Kerala Institute of Labour and Employment

19.15 The Kerala Institute of Labour and Employment, an autonomous body constituted by the Government of Kerala for the purpose of training and research in Labour and Employment, started functioning on 4.2.1978 as a registered society under Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act 1955. The institute is performing a prominent role in promoting programmes relating to labour and employment. KILE is conducting training programmes, workshops and seminars on labour related subjects, and training to the departmental officers and other stake holders of industry

19.16 The Institute had conducted training program on Right to Information Act 2005 and on Building Functional Competence during 2007. Total number of participants and number of programmes conducted by Kerala Institute of Labour and Employment during 2007 is given in the following Table:

Table 19.6
Programmes conducted by
Kerala Institute of Labour and Employment during 2007

Sl. No	Programmes	Numbers	Participants
1	Training Programmes	6	306
2	Workshop	1	
3	Seminars	0	
4	Talks/Other programmes	1	
	Total	**8**	

Source: KILE

Social Protection Measures

19.17 From ancient times till recent years, the Indian society had a traditional care system where the members were taken care of by their families, kin, castes and community. Now this system has virtually disintegrated with the emergence of nuclear family, urbanization, modern education, migration and transformation of the world in to a global village by the dynamic forces of globalisation. The major and tragic outcome of this is the ever-growing insensitivity of people to fellow creatures.

19.18 The Directive Principles of State Policy in the Indian Constitution, among other things, expressly entrust the State 'to make provision for securing the right to work, to education and to public assistance in case of unemployment, old age, sickness and disablement' (Article 38), 'just conditions of work and maternity benefit' (Article 42), and, 'social security, social insurance and unemployment relief' (Article 83). However, after launching the package of New Economic Reforms consisting of Liberalisation, Privatisation and Globalisation (LPG), the Government of India has started relinquishing its constitutional obligations making a mockery of the Directive principles of State Policy. This is done under the pressure of Global as well as national Corporate Capitalism.

19.19 There is nothing wrong in viewing the society as consisting of two basic classes, namely, Labour and Capital. The process of globalisation has been very rapid with Capital and Commodities and Services, including their markets. The process has been very selective in the case of Technology and Information. However, Labour has been victimised by the process of globalisation. Capital has been globalised, but labour is yet to be globalised. Capital can freely

move about, but labour cannot. The WTO is insisting on social clauses and labour standards to be linked with trade in goods. There is an open conflict between the IMF, World Bank and the WTO on the one side and the ILO on the other.

19.20 The composition of the working class and the nature of the proletariat have undergone big changes on account of causualisation, tertiarisation, feminisation, and, informalisation. The strength of blue-collar workers is declining and that of knowledge workers is increasing. Part-time and temporary workers are engaged in low paying jobs. Trade unions are losing their leverage and control over members. Union membership is declining fast. In certain sectors with rising wages, workers do not identify themselves as belonging to the class of the proletariat. The material living standards and life styles of workers have dramatically improved. Central Government and some state governments have shown enthusiasm in implementing globalising policy shifts, privatisation, deregulation, decontrol, restructuring, de-indexing wage growth, cutting back or closing down public sector, downsizing and then calling it 'right-sizing' to justify it, scrapping social protection measures and framing new labour laws for ensuring labour market flexibility to please Capital. Governments and nation states are, voluntarily or under pressure, giving up discretionary and regulatory prerogatives amounting to virtual surrender to global capitalism. In this context, Kerala has taken a different stand as it has always been a pro-labour one.

19.21 Today, workers and their trade unions in India are under attack. It takes the following forms: **escalating unemployment, casualization, informalization, wage and staff cuts, destruction of entire industries, declining health and safety standards, union busting and quite often, the co-option of union leaders, erosion of basic labour rights, militancy from aggressive employers, imposition of unfair labour practices, loss of social protection and safety nets, etc.** Labour is thus far perhaps the major loser from the on-going capitalist globalism and its progress in coping with it has been limited and slow.

19.22 JEAN DREZE and AMARTYA SEN have said:
"The chiefest enemy that the majority of humanity face is the almost total absence of security in their fragile and precarious existence... The lives of billions of people are not merely nasty, brutish and short, they are full of uncertain horrors. An epidemic can decimate a nation. Unemployment can plunge masses in to extreme deprivation and insecurity in general plagues a large part of mankind with savage persistence. It is this general fragility on top of chronic and unpredictable deprivations that makes the need for social security so strong and palpable" ["Public Action for Social Security: Foundations and Strategy".]

19.23 The ILO is very much concerned with blatant violation of labour rights. It has taken up the issue of countering Social Exclusion, Global Deficit of Decent Work and fast vanishing Social Policy resulting from the sad demise of Nation State. The ILO Conventions provide for social protection for Labour. Most comprehensive is the Convention No.102 of 1952 on medical care, sickness, unemployment, old age, employment injury, family maternity, invalidity and survivor's benefits. India had committed to respect this Convention, but with the launching of Economic Reforms, it has virtually withdrawn this commitment.

19.24 In India's work force, the organised sector covers only 28 million persons. They enjoy some limited social protection under labour laws. But these laws are being amended or scrapped as demanded by the country's monopoly capital. The unorganised sector employs around 362 million persons. This sector is characterised by absence of any labour law, seasonal, temporary and erratic employment, high mobility, dispersed activity, low wages and subjected to severe and inhuman exploitation in the absence of trade unions.

19.25 The 90th Conference of the ILO held in June 3-20, 2002 registered its protest and condemned the emerging global economic order which is creating " *filthy inequality, deeper poverty, and, social exclusion* " The International Institute of Labour Studies (IILS) in 2000 had focused on *Social Policy, Social Justice and Decent Work* It drew attention to three critical shortfalls emerging from globalisation They are in the field of opportunities being created for productive work, not only work, but of work that is considered decent by ordinary people and Social Protection.

19.26 PADMANABHA GOPINATH, Director of IILS in his Preface to the ILO Social Policy Lecture "Social Justice in the Global Economy" delivered by PRANAB BARDHAN at the University of Western Cape, South Africa during September 6-9, 2000 said:
"Globalisation has generated new economic opportunities and prosperity…At the same time it has seen an increase in inequalities Unemployment and underemployment are growing in magnitude, polarising societies and disrupting the lives of individuals and families. Employment grows increasingly precarious These trends threaten social cohesion and undermine the foundation of the world of work. There is today a global deficit of decent work. Unless this gap is filled, there will be deepening misery and insecurity"

19.27 ILO's Socio-Economic Security Survey (SES) covering 48000 in 15 countries and 10000 in 11 countries conducted as a People's Survey (2002) identified seven forms of labour related insecurities in the areas of Income, Labour Market, Employment, Work, Skills, Job, and, Voice Representation. Some instances of such insecurities are mentioned here.
Non-payment or delayed payment of wages, unauthorised deductions, denial of statutory benefits, conversion of full time jobs in to part-time, permanent job to casual job, skilled job in to semi-skilled and then to unskilled so as to reduce wages, contracting out and outsourcing work, informalisation, lack of protection on occupational hazards, injury and accidents at workplace, harassment at workplace, raising workload and working hours, encouraging trade union busting. The Survey has prepared score values and classified countries as Pace Setters, Pragmatists, Conventionals and Much-to-be done groups. It is found that India came under the last category.

19.28 India's Economic Reforms contains among other things a component on Labour Law Reform. This is reflected in the Report of the Second National Commission on Labour (2002) headed by Ravindra Varma The leaders of monopoly capital in the country has been forcibly demanding flexible labour laws so that they can continue with their indulgence in labour market abuses with out fear of law. According to them, flexibility means right of managements to '*adjust*' their labour force from time to time according to their whims and fancies in the name of '*changing needs of the industry*' or '*to meet the exigencies caused by genuine economic reasons*' or '*in the best interest of the undertaking*' etc Indian industry and monopoly capital now want to shift their failure in facing global competition to the shoulders of workers and trade unions. They also accuse Indian labour laws as a serious stumbling block in the creation of more employment and closure of units The Second National Commission on Labour has recommended, among other things, such retrograde steps like removal of protection of 48 hour work week, legitimisation of contract labour and leaving out Unfair Labour Practices from the statute books.

19.29 Kerala has established a network of social protection measures not only covering labour but also other sections of society which needed them Here we discuss only measures directed at labour. The measures directed at other sections are covered under the chapter on Social Security and Welfare.

19.30 Labour being a concurrent subject, both the Central and State Governments have enacted several laws on social protection measures for labour. Kerala has good track record in the field of social protection measures, particularly the ones directed at the working class. Eradication of child labour, awareness programme on iterstate migrant workers, survey of interstate migrant workers and unorganised daily waged employees, distress relief fund are few important measures taken up recently. The most important statutory measures undertaken in Kerala for industrial workers are ESI, EPF, gratuity, maternity benefit, workmen compensation and special protection for women, children and old.

Employees' State Insurance Scheme

19.31 This is the most comprehensive welfare measure directly administered by the Central Government through the ESI Corporation.

Workmen's Compensation Scheme

19.32 The Labour Department is administering this scheme more or less satisfactorily except for the delay in taking decisions in some complicated cases. The following Table pertaining to details of industrial accidents from 2002 to 2007:

Table 19.7
Industrial Accidents 2002-2007

(Numbers)

Year	Accident	
	Fatal	Non-fatal
2002	18	654
2003	18	393
2004	9	254
2005	18	931
2006	62	355
Up to 30.09.07	58	210

Source: Labour Commissionerate

19.33 The Factories and Boilers Department coming under the Labour Department ensure safety, health and welfare of factory workers and the general public living in the vicinity of factories. The number of fatal accidents is very low in the State. But, the frequency of non-fatal accidents reported needs the attention of the officers in charge of safety measures in the various establishments. There is no co-ordination between the Department of Labour and the Directorate of Factories & Boilers in handling accidents cases and monitoring the relief and compensation given to the victims. The same can be said about the incidence of occupational diseases and the care support given to the affected employees.

19.34 The Factories Act stipulates that all cases of occupational diseases detected by general medical practitioners should be reported to the Chief Inspector of Factories. It also provides for periodic medical examination of workers especially in hazardous industries.

Labour Welfare Funds

19.35 At present, there are 14 Welfare Fund Boards functioning in the State under Labour Department to provide welfare amenities to the concerned sector of labour. There are 18 welfare schemes implemented by the Labour Department in 2007. They are Kerala Beedi & Cigar Worker's Welfare Scheme, Kerala Handloom Worker's Welfare Scheme, Kerala Agricultural Worker's Welfare Scheme, Kerala Bamboo, Kattuvalli, Thazha Worker's Welfare Scheme, Kerala Head Load Worker's Welfare Scheme, Kerala Motor transport Worker's Welfare Scheme, Kerala Auto rickshaw Worker's Welfare Scheme, Kerala Automobile Worker's Welfare Scheme, Kerala Cashew Worker's Relief & Welfare Scheme, Kerala Labour Welfare Scheme, Kerala Artisans & Skilled Worker's Benefit Scheme, Kerala Laundry Worker's Welfare Scheme, Kerala Barber & Beautician Worker's Welfare Scheme, Kerala Toddy Worker's Welfare Scheme, Kerala Abkari Worker's Welfare Scheme, Kerala Tailoring Worker's Welfare Scheme, The Building & Other Construction Worker's Welfare Scheme, Kerala Shops & Establishment Workers Welfare Scheme. In majority of welfare funds there is government contribution.

19.36 Among the schemes the Kerala Head Load Workers Welfare Fund Scheme appears to be unique since the Head Load Workers Welfare Board has the status of a deemed employer. The Kerala Building and Other Construction Workers Welfare Board is also distinct as its functioning is regulated by a central statute viz, the Building and Other Construction Workers Act 1996 Under this Act, a Welfare Fund Cess is levied on construction works. The range of benefits granted to the registered members of these Welfare Funds/ Schemes include pension, PF,gratuity, medical benefits, educational scholarships to children of workers, grant for marriage of daughters, maternity benefits etc

UNEMPLOYMENT

19.37 Today the problem of unemployment is the single largest puzzle of Kerala economy. Unemployment is said to prevail when supply of labour exceeds its demand. That is unemployment exist, if all able bodied men are not able to work at the existing wage rate. Growth of supply of labour is determined by population growth and participation of population on the total workforce. In Kerala from the decade of 1970's onwards there has been a rapid rise in the labour supply because an increasing number of women seeking wage employment has been rising Thus though the supply of work seekers increased, the demand for them did not increase. As a consequence there was an alarming increase in unemployment rate from time to time.

19.38 The unemployment problem in Kerala is not only about educational unemployment but also simple unemployment of semi skilled and unskilled workers. This is the highest in the country and on the rise, too. One important feature of Kerala Economy, which makes it different from the rest of the country, is net out migration of labour force particularly to Gulf region and inflow of huge remittances into the State. Huge out migration, as has been rightly pointed out, happens mainly because of lack of employment opportunity

19.39 The worsening unemployment situation is obviously related to the inability of the economy of the State to generate any fresh employment during the last decade. While this phenomenon of "Jobless Growth" is observable in all the States in the country, the situation in Kerala appears to be particularly distressing because most of the labour intensive/labour absorbing traditional industries depending on exports, are facing a survival crisis in the liberalised trade environment..

19.40 It is clear that the problem of unemployment is not just one of unemployment among the educated youth, unemployment and under employment among workers in traditional sectors like

agriculture and household industries are indeed major concerns. One of the most important groups of such workers is the traditional agricultural workers. According to the 2001 Census, the number of agricultural workers in Kerala was around 16.20 lakh and this is more than twice the number of cultivators (7.20 lakh) and more than four times the number in the household industry (3.70 lakh). Close to three- fourth of workers in the household industry is in rural areas and nearly half of them are female workers. Both rural and urban female unemployment rate increased dramatically during the last five years.

19.41 Now let us look at the data provided by the Employment Exchanges in the state. All categories of employment seekers above the age of 14 are allowed to register in the Employment Exchanges. 40.87 lakh of employment seekers are there in the Live Register of Employment Exchanges as on 31.08.2007, of which 23.74 lakh are females. Details are given in the following table:

Table 19.8
Registered job seekers in Employment Exchanges (Aug 2007)

Sl. No.	Category	Numbers
1	Illiterate	226
2	Below Matric	649293
3	Matric	2423219
4	Pre-degree	721377
5	Graduates a. Doctors b. Engineers c. Others	 2416 7622 229459
6	Post Graduates	53566
	Total	**4087178**

Source: Employment Directorate

19.42 The Employment Department operates about 96 institutions and they provide placement service, vocational guidance, employment market information, self-employment guidance, unemployment assistance and self-employment schemes for the registered unemployed. But more and more educated and skilled unemployed people are added to the stream everyday so that these services have been considered inadequate to tackle the problem of unemployment in the State. Also most of the unemployed do not possess marketable skills and this reduces their employability. A temporary relief to the problem of growing unemployment can only be sorted by providing speedy and accurate list of qualified persons to the prospective employers. This would call for convergent action by the Employment Department and Industrial Training Department.

Work force in Public & Private Sector

19.43 Total number of work force in different sectors of the economy as on March 2007 amounts to 1110980. Out of this 603893 (54.36 %) was in public and the remaining 507087

(45.64%) was in private sector. In public sector, largest number was engaged in community, social and personal services sector (53.70%), second in manufacturing sector (8.74%) and least in mining and quarrying (0.42 %) while in public sector largest number engaged in manufacturing sector (37.87%), second in community, social and personal services (37.51%) and least in mining and quarrying (0.09 %). The details of the work force in different sectors under public and private sectors are furnished below.

Table 19.9
Work force in public and private sector (March 2007)

(Numbers)

SL No.	Sector	Public Sector			Private Sector		
		Estt	Women	Total	Estt	Women	Total
1	Agriculture, Forestry and Fishing	455	6748	18197	286	27594	63666
2	Mining and Quarrying	8	332	2543	23	251	439
3	Manufacturing	210	19398	52756	3702	95445	192040
4	Electricity, Gas and Water	542	3571	25140	11	25	583
5	Construction	584	4878	20062	31	242	1100
6	Wholesale & Retail Trade, Hostels and Restaurants	130	904	7545	1002	4560	24378
7	Transport, Storage and Communication	217	14280	96910	129	738	4150
8	Financing, Insurance, Real Estate and Business Services	2740	16650	56423	1170	9260	30478
9	Community, Social and Personal Services	6586	119740	324317	3570	112251	190253
	Total	**11472**	**186501**	**603893**	**9924**	**250366**	**507087**

Source: Employment Directorate

NOTE: As on 2007, 603893 persons were employed in the public sector as against just 507087 in the private sector showing that in Kerala public sector continues to be the largest employment provider.

19.44. As on December 2004, the number of employment seekers in the live register of employment exchanges in India was 405 lakh. This number decreased to 394 lakh in December 2005 and increased to 407 lakhs in June 2006. Of the total of 407 lakh job seekers, 294 are men and 113 are women

BOX 19.1

In India as on 30th June 2006 maximum number of jobseekers (74 6 lakh) awaiting employment were in West Bengal while minimum (0 06 lakh) were in Dadra and Nagar Haveli – Ministry of Labour and Employment Annual Report 2006-07.

19.45 According to the live register of employment exchanges, the total number of work seekers in 2005 was 36.7 lakhs. This number increased to 38.6 lakhs in 2006 registering an increase of 5.2 per cent. The total number in September 2007 is 40.5 lakhs of which 38.9 lakhs are general work seekers and 1.6 lakhs professional / technical work seekers. Details of work seekers from 1999 to 2007 is given in Appendix 19.1

19.46 The number of work seekers below SSLC increased from 6.29 lakhs in 2005 to 6.40 lakhs in 2006 and again to 6.45 lakhs in September 2007. The total number of work seekers who possess SSLC and above increased from 30.41 lakhs in 2005 to 32.19 lakhs in 2006 and to 34.10 lakhs upto September 2007. The percentage of work seekers below SSLC to the total work seekers is decreasing since 1999 and the percentage of work seekers who possess SSLC and above is increasing (Table 19.10). The trend of work seekers in Kerala since 2001 is shown below. (Fig 19.1).

Fig: 19.1
Trends of Workseekers in Kerala

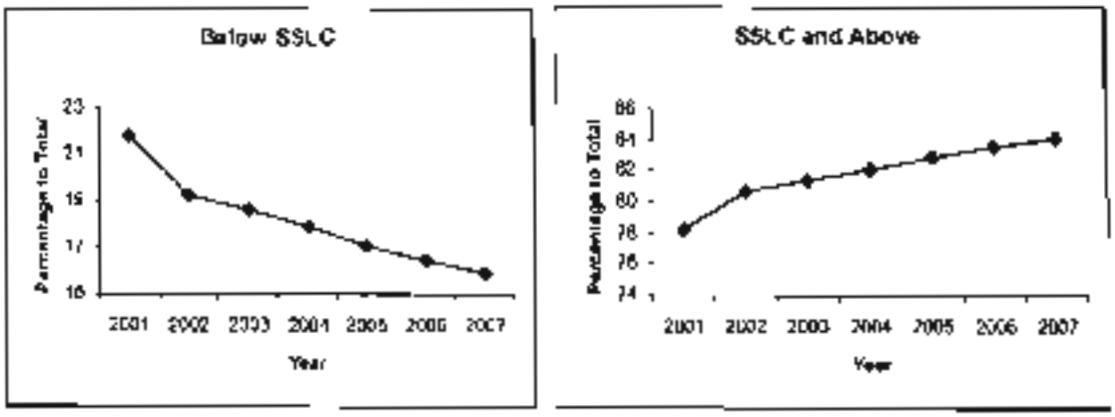


Table. 19.10
Number of Work Seekers in Kerala (in lakhs)

Year (at the end of the December)	Below SSLC		SSLC & above		Total Work Seekers
	Persons	Percentage to Total	Persons	Percentage to Total	
2001	9.67	21.8	34.64	78.2	44.31
2002	7.12	19.3	29.68	80.7	36.80
2003	7.46	18.6	32.58	81.4	40.05
2004	6.73	17.9	30.83	82.1	37.56
2005	6.29	17.1	30.41	82.9	36.70
2006	6.37	16.5	32.19	83.5	38.57
September-2007	6.45	15.9	34.10	84.1	40.55

Source. Directorate of Employment

19.47 The number of work seekers with PDC or HSC increased from 5.75 lakh in 2005 to 6.17 lakh in 2006 and again to 6.57 lakh in September 2007. The number of graduates registered in employment exchanges stood at 2.30 lakhs in 2005. It increased to 2.33 lakhs in 2006 and again to 2.38 lakhs in September 2007. The number of job seekers with Postgraduate degree decreased from 0.55 lakh in 2005 to 0.54 lakh in 2006 and to 0.53 lakh in September 2007.

Table 19.11
Share of Employment Seekers according to level of Education –Kerala (1996, 2001 and 2006)

Sl. No	Level of Education	Share (Percent)		
		1996	2001	2006
1	Below SSLC	25.0	21.8	16.5
2	SSLC	60.4	58.1	60.1
3	PDC or HSC	8.7	12.3	16.0
4	Degree	4.9	6.3	6.0
5	Post Graduate	1.0	1.5	1.4
	Total Work Seekers	**100**	**100**	**100**

Source: Directorate of Employment

19.48 The share of work seekers in various levels of education is given in Table 19.11. Of the total employment seekers in 2006, 16.5 percent are below SSLC, 60.1 percent SSLC, 16 percent PDC or equivalent, 6 percent graduates and 1.4 percent postgraduates. The distribution of work seekers according to level of education for the period from 1999 to 2007 is given in Appendix 19.2.

19.49 The number of professional and technical work seekers in 2005 was 1.77 lakhs. This number decreased to 1.64 lakhs in 2006 and again to 1.57 lakhs in September 2007. The share of employment seekers with various professional and technical qualifications is given in Table. 19.12. It is seen that more than 93 percent of the technical and professional employment seekers are ITI and Diploma holders in engineering.

Table 19.12
Share of Professional and Technical work seekers in Kerala

SL No	Educational Qualification	Share (Percent)		
		1996	2001	2006
1	Medical Graduates	1.53	1.52	1.78
2	Engineering Graduates	5.64	5.85	5.16
3	Diploma holders in Engineering	22.15	26.19	25.40
4	ITI Certificate holders (NTC)	69.67	65.38	66.88
5	Agricultural Graduates	0.98	0.85	0.46
6	Veterinary Graduates	0.03	0.21	0.32
	Total	**100**	**100**	**100**

Source: Directorate of Employment

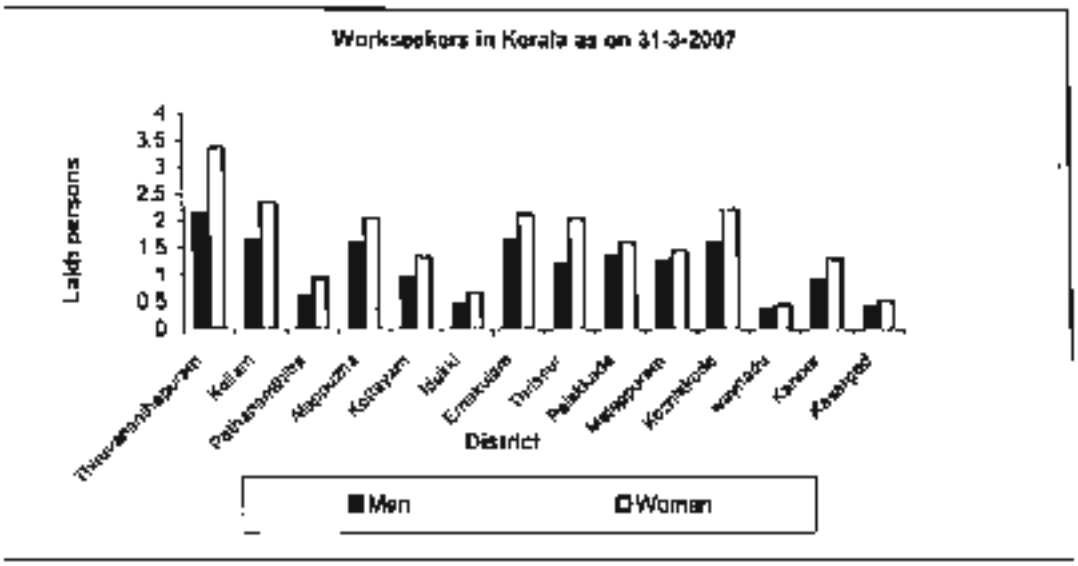
19.50 The job seekers with engineering degree increased from 6389 in 2005 to 8466 in 2006 and decreased to 7431 in September 2007. Engineering diploma holders who had registered their names in employment exchanges increased from 41345 in 2005 to 41700 in 2006 and again to

42053 in September 2007. The ITI/ NTC Certificate holders seeking employment decreased from 1.24 lakhs in 2005 to 1.10 lakh in 2006 and again to 1.04 lakh in September 2007.

19.51 The number of medical graduates who had registered their name in the employment exchanges decreased from 3428 in 2005 to 2925 in 2006 and again to 2418 in September 2007. The number of veterinary graduate work seekers has decreased from 547 in 2005 to 522 in 2006 and increased to 602 in September 2007. The number of job seeking agricultural graduates has decreased from 803 in 2005 to 762 in 2006 and again to 728 in September 2007. (Appendix 19.3)

19.52 A peculiar feature of Kerala's unemployment situation is that women outnumber men seeking employment through employment exchanges This position is reflected in all the 14 districts of Kerala. Out of the total number of 38.99 lakh job seekers in March 2007, women number 22.59 lakh (58%). The district-wise unemployment of women and men in 14 districts of Kerala as on 31.03.07 is shown in following graph (Fig 19 2).

Fig. 19.2



Source: Directorate of Employment

19.53 Thiruvananthapuram District ranks first in the number of work seekers in both general and professional categories As on 31.3.2007, the total number of work seekers in Thiruvananthapuram District is 5.53 lakh of which 3.38 lakh are women and 2.15 lakh are men. The second largest number of work seekers is from Kollam district. There are 4.04 lakh job seekers in Kollam District in March 2007, out of which 2 37 lakhs are women and 1 67 lakhs men. The lowest number of work seekers is in Wayanad preceded by Kasargod District. In Wayanad, there are 0.82 lakh work seekers, whereas in Kasargod the number is 0.98 lakhs in March 2007. Details of district wise distribution of work seekers is given in Appendix 19.4

Unemployment Allowance Scheme (UAS)

19 54 Government of Kerala has introduced an unemployment assistance scheme in 1982 for the unemployment through the Department of National Employment Service. As per the Kerala Panchayat Raj & Municipalities Act 1994, the scheme of unemployment assistance was transferred to the local bodies and the powers for inviting applications for unemployment allowance, processing of applications after the scrutiny of employment officers, sanctioning and the distribution of unemployment allowance are vested with the local bodies. The amount of

unemployment allowance provided in the budget is allotted to the Employment Department and the department distributes the amount to local bodies as per their requirements. The annual family income of the applicant should not be above Rs. 12,000 (per annum) and personal income should not be above Rs. 100 per month. The candidates should have passed SSLC and possess three years registration seniority after attaining 18 years of age. The candidates belonging to SC/ST and PH should have appeared the SSLC examination through proper schools. The Physically Handicapped candidates need a registration seniority of two years after attaining 18 years of age. The upper age limit is 35 years. Students are not eligible for applying for unemployment scheme. There are 361930 beneficiaries in the State under the scheme The monthly rate of unemployment allowance is Rs. 120 w.e.f. 01.04.2000. During 2006 an amount of Rs.3667.71 lakhs was disbursed to 3.40 lakh persons and during 2007 Rs. 5005.76 lakhs to 3.62 lakh persons.

Kerala State Self Employment Scheme for Registered Unemployed (KESRU)

19.55 Self-employment scheme called KESRU (Kerala State Self Employment Scheme for the Registered Unemployed) is being implemented since March 1999. All literates and registered unemployed candidates within the age group of 21 to 40, other than students are eligible to apply under the scheme if their annual family income is below Rs. 24,000 and individual income is below Rs. 500 per month. But those who are undergoing part time courses and courses of less than 6 months duration are exempted from the definition of student. The maximum loan amount admissible is Rs. 100000 depending upon the requirement of the project. But four or five members can start joint ventures and they will be provided a maximum of Rs 5 lakhs. Twenty per cent of the loan amount is given as subsidy by the State Government. During 2006 an amount of Rs.124.44 lakh was disbursed to 1040 persons and during 2007, Rs 102.04 lakh to 2110 beneficiaries. (Appendix- 19.5)

Multipurpose Job Clubs

19.56 During the Annual Plan 2007-08, the state government has started implementing a Flagship Scheme called Multipurpose Job Club exclusively meant for unemployed persons who are willing to take up employment by entering in to partnership with similar other persons by joining a multipurpose job club being organised by the Employment and Training Department. Those who join the club will get financial assistance in the form of loan from banks. The Department will act as a promoter bringing the banks and the work seekers together and the Department will also provide help to the work seekers with training and preparation of viable projects. All round enthusiasm has been reported from almost all districts in the state.

Employment in the Organised Sector

19.57 In India, the number of persons employed in the organised sector during 1994 was 273.7 lakhs out of the total of 3744.5 lakh persons employed. In 2000, it increased to 281.1 lakh persons constituting 7 per cent of the total 3970 lakh persons employed. In March 2004, the number of persons employed in the organised sector was 264.43 lakh and it increased to 264.6 lakh in March 2005. The details of organised sector employment are given in Appendix -19.6. Employment of women in the organized sector (both public and private) as on March 2003 was 49.68 lakhs constituting 18.4 per cent of the total organised sector employment in the country Their number decreased to 49.34 lakhs in March 2004 and increased to 50.2 lakhs in March 2005 . (19% of the organised sector employment).

Box 19.2

Growth rate of employment is less than the growth rate of the labour force indicating an increase in the unemployment rate.

19.58 The organised public and private sector together employ 11.46 lakh employees in Kerala, which constitute 4.3 per cent of the total employees in the organised sector in India in 2004. The private sector accounts for 46.3 percent of the employment in the organised sector in Kerala but this figure is 31.2 per cent for India. Details are given in Table 19.13.

Table 19.13
Employment in Organised (Public & Private) Sector – India & Kerala- 2004

(Lakh persons)

Particulars		India	Kerala	Share of Kerala (Per cent)
Public Sector	Male	153.07	4.23	2.8
	Female	28.9	1.87	6.5
	Total	181.97	6.10	3.4
Private Sector	Male	62.02	2.49	4.0
	Female	20.44	2.43	11.9
	Total	82.46	4.93	6.0
Total	Male	215.09	6.72	3.1
	Female	49.34	4.30	8.7
	Total	264.43	11.02	4.2

Source: Directorate of Employment

19.59 The share of female employees in the organised sector in Kerala is about 40 per cent and for India it is 19 per cent. In the private sector, share of female workers is 50 per cent in Kerala but less than 25 per cent in India. A comparative situation of female employment in India and Kerala is shown through following graph Fig.19.3.

Fig: 19.3
Female Employment in the Organised Sector

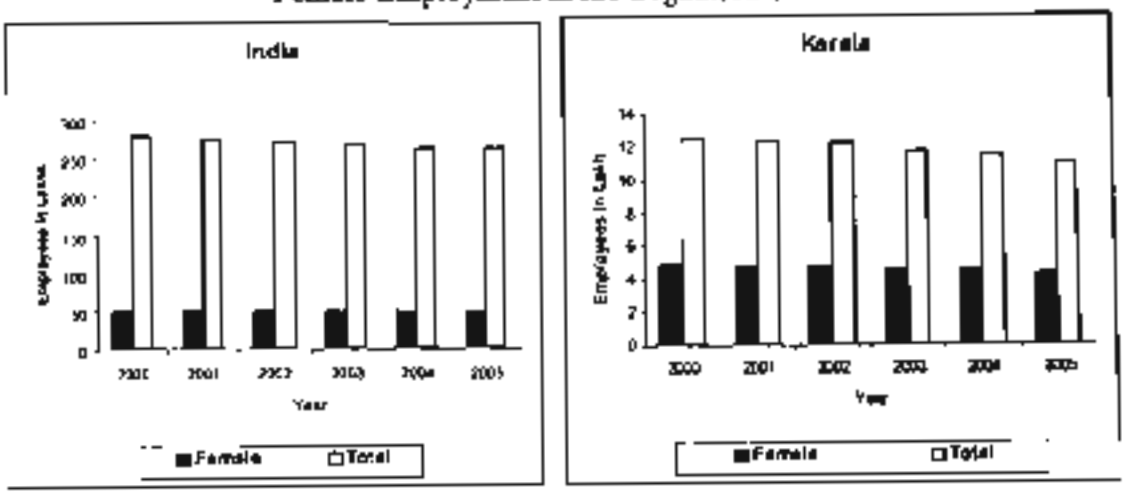


Table 19.14
Share of female employees in the organized sector – India & Kerala (2004)

Sl. No.	Sector	Percentage of Female Employees	
		India	Kerala
1	2	3	4
1	Public Sector	15.88	30.55
2	Private Sector	24.79	50.00
	Total	**18.66**	**39.56**

Source: Directorate of Employment

19.60 In Kerala, the total employment in the organized sector, which had been increasing marginally since 1996, started declining from 2000 onwards. (Appendix 19.7) Total number of persons employed in the organized sector in December 1996 was 11.76 lakh persons. The total number grew to 12.51 lakh persons in December 2000. During 2005 total number of employees in the organized sector came down to 11.02 lakh persons (4.30 lakh women & 6.72 lakh men) of which 6.10 lakh persons (4.23 lakh men and 1.87 lakh women) were in public sector and 4.92 lakh persons (2.49 lakh men & 2.43 lakh women) in private sector. It increased to 11.11 lakh persons (4.36 lakh women & 6.75 lakh men) in December 2006 of which 6.07 lakh persons (1.86 lakh women and 4 21 lakh men) are in public sector and 5.04 lakh persons (2.50 lakh women & 2.54 lakh men) are in private sector. Of the total of 6.07 lakh employed in the public sector during December 2006, 0.77 lakh were Central Government employees, 2.77 lakh. State Government employees, 2.27 lakh Quasi Government employees and 0.26 lakh Local government employees. Details on public sector employment are given in Table 19.15. District-wise employment in public and private sectors in Kerala as on 31st March of every year from 2003 to 2007 are included in the Appendix 19.8.

Fig.19.4

Source: Directorate of Employment

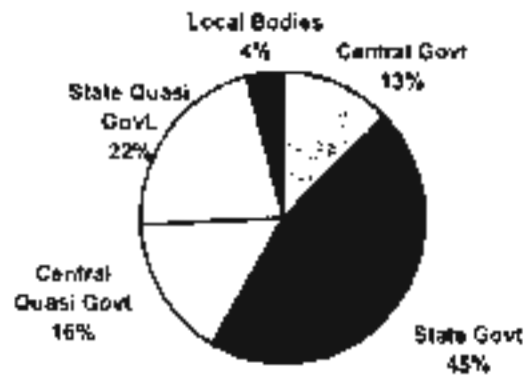
Table 19.15
Employment in Public Sector in Kerala

Year (at the end of December)	Central Govt.	State Govt.	Quasi Govt	Local Bodies	Total
1	2	3	4	5	6
2000	101908	292950	231363	25020	651241
2001	97115	294469	227745	26341	645670
2002	83496	289473	238242	26785	637996
2003	80979	272483	238568	27233	619263
2004	78348	279595	230794	26464	615201
2005	76789	279914	231326	26833	614862
2006	76526	277408	226898	26078	606910

Source: Directorate of Employment

19.61 Branch-wise analysis of the public sector employment data in Kerala revealed that Local Bodies registered highest negative growth of 2.8 per cent in 2006 followed by Quasi Government, State Government and Central Government recording a negative growth of 1.9 per cent, 0.8 per cent and 0.3 per cent respectively. The percentage distribution of employment in public sector is shown in following graph Fig.19.5

Fig.19.5
Distribution of Employment in Public Sector – March 2007



Source Directorate of Employment

19.62 District-wise employment in public sector as on 31st March 2007 revealed that out of the total 6.04 lakh employees, 1.39 lakh belongs to Thiruvananthapuram district, of which 0.39 lakh are women. The lowest number of 10649 public sector employees is in Wayanad district, of which 2173 are women. Branch-wise and district-wise details of public sector employment in Kerala as on 31st March 2007 is given in Appendix 19.9.

19.63 The EMI data in Table 19.16 gives the sector-wise distribution of employment over the last three decades in Kerala and the All India figures are given in Appendix. 19.10.

Table 19.16
Employment in Public and Private Establishments in Kerala as on 31st March

Sl. No	Industry	Number of Persons Employed						
		1971	1981	1991	2001	2005	2006	2007
1	2	3	4	5	6	7	8	9
1	Agriculture and allied Industries	92055	103145	104727	108966	85178	83203	81863
2	Mining and Quarrying	610	1340	3548	3571	11645	21138	2982
3	Manufacturing	188924	323359	307038	321903	254498	213661	244796
4	Construction	23562	25170	19327	25242	26081	27366	21162
5	Electricity, Gas Water & Sanitary Services	11850	16349	26642	26526	22148	21490	25723
6	Trade, Restaurants & Hotels	23083	13676	21946	25580	31263	27452	31923
7	Transport, Storage & Communication	54212	74422	97299	104596	102584	101644	101060
8	Financing, Insurance, Real Estate & Business Services		47779	78739	86320	96531	82201	86901
9	Community, Social & Personal Services	307470	409358	488598	538990	509845	523375	514570
	Total	701766	1017298	1147864	1241694	1139773	1101530	1110980

Source: Directorate of Employment and Training

19.64 Analysis of the growth of employment in public and private establishments in Kerala in 2007 revealed that Mining and Quarrying registered highest decrease of 85.9 per cent followed by 22.7 per cent in Construction, 1.7 per cent in Community, Social and Personal Services, 1.6 per cent in agriculture and allied industries and 0.6 per cent in Transport, Storage & Communication. Among other Industry Divisions, Electricity, Gas, Water and Sanitary Services registered highest increase of 19.7 per cent followed by 16.3 per cent in Trade, Restaurants and Hotels, 14.6 per cent in Manufacturing and 5.7 per cent in Financing, Insurance, Real Estate and Business Services.

Placement through Employment Exchanges

19.65 In India there are 947 Employment Exchanges which include 82 University Employment Information and Guidance Bureau, 43 Special Employment Exchanges for Physically Handicapped, 15 Professional and Executive Employment Exchanges and one Special Employment Exchange for Plantation Labour. Year-wise registration, placement, vacancies notified, submission made and live Register for the period 2001 to 2006 are given in Table 19.17.

Table 19.17
Employment Exchange Details – All India

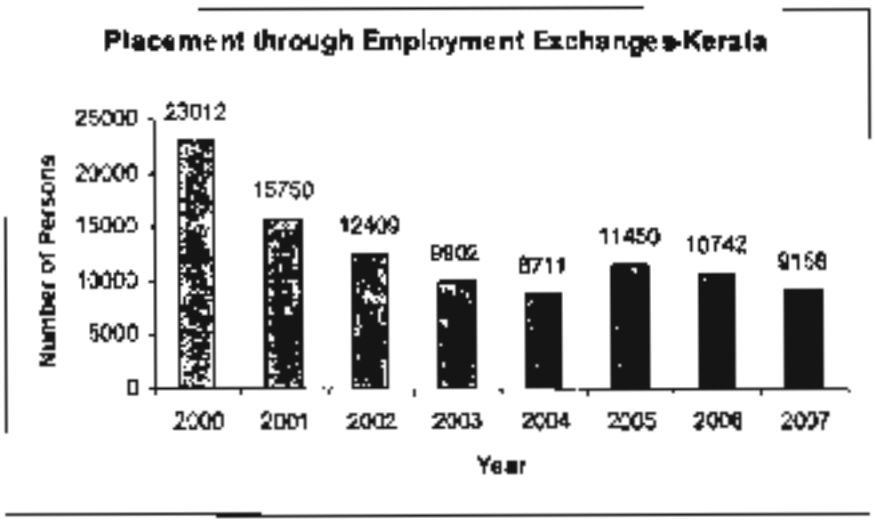
(In Thousands)

Year (at the end of the year)	Employment Exchanges	Registration	Placement	Vacancies Notified	Submission Made	Live Register
1	2	3	4	5	6	7
2000	958	6041.9	177.7	284.5	2322.8	41343.6
2001	938	5552.6	169.2	304.1	1908.8	41995.9
2002	939	5064.0	142.6	220.3	1748.8	41171.2
2003	945	5462.9	154.9	256.1	1917.3	41388.7
2004	947	5373.0	137.7	274.61	1801.4	40457.6
2005	947	5437.1	173.2	349.2	2402.0	39347.8
2006 (Jan-June)	947	3621.0	104.9	158.2	1102.3	40675.7

Source: Ministry of Labour and Employment.

19.66 In Kerala total placement through Employment Exchanges had been declining from 2000 to 2004. Total placement in 2000 was 23012. It declined to 8711 in 2004 and increased to 11450 in 2005. In 2006 it declined to 10742 and again to 9158 in September 2007. The number of placements through employment exchanges and the average number of employers using employment exchanges are given in Appendix. 19.11. The placement through employment exchanges since 2000 is illustrated through following graph Fig.19.6.

Fig. 19.6



Migration

19.67 Emigration of Keralites remains strong, with a study conducted by CDS in 2004 showing that the number of emigrants went up by 35 percent in last five years from 13.6 lakhs in 1999 to 18.4 lakhs in 2004. According to the latest study by CDS, international migration has remained absolutely stationary during 2003-07 and it was 18.5 lakh in 2007. The number of return emigrants had been 8.9 lakh in 2003 and it was 8.9 lakh in 2007 also

BOX 19.3

People living outside their countries of birth numbered an estimated 191 million in 2005. 115.4 million (60%) of whom lived in developed countries and 75.2 million in developing countries. The United States accounted for one in every five migrants in the world. (Population Newsletter by United Nations Department of Economic and Social Affairs.)

19.68 According to the study, labourers in non-agricultural sectors constituted the largest proportion of emigrants from Kerala, 27.4 per cent of the total. Unemployed persons were the second largest group (24.3 per cent). Workers from the private sector (16.0 per cent), and from self-employment sector (12.5 per cent) also emigrated in large numbers.

19.69 The unemployment rate among emigrants was as high as 29.1 per cent, prior to emigration, but it is only 6.9 per cent among emigrants who have returned to Kerala. Emigration has thus had a significant salutary impact on the unemployment situation.

19.70 The study further shows that out-migration (OMI) from Kerala to other states in India has registered a significant decline, not only in terms of the rate as in the case of external migration, but also in absolute numbers. OMI declined from 11.2 lakh in 2003 to 8.7 lakh in 2007. OMI per 100 households declined from 16.2 in 2003 to 11.5 in 2007.

BOX 19.4

Female migrants constitute nearly half of all migrants worldwide and they are more numerous than male migrants in developed countries. (Population Newsletter by United Nations Development of Economic and Social Affairs).

19.71 Unemployed persons have been the largest group (26.9 per cent) among out-migrants. The unemployment rate among out-migrants has been as high as 56.6 per cent, but it is only 8.4 per cent among returned out-migrants. As with external migration, internal migration also has had a significant salutary effect on the unemployment situation.

19.72 In the past, Gulf countries used to be the principal destination of Kerala emigrants. In 1998, 95 per cent of Kerala emigrants went to one of the Gulf countries. By 2003 the corresponding percentage declined to 91 per cent. In 2007 the proportion of Kerala emigrants who went to the Gulf region has come down further to 89 per cent.

19.73 However significant changes are observed in the distribution of emigrants within the Gulf region. Saudi Arabia had been the principal destination country in 1998. By 2003, it yielded its first rank to the United Arab Emirates, which at that time received 37 per cent of the total emigrants from Kerala compared to 27 per cent in Saudi Arabia. The UAE continued its dominance and by 2007 it has received 42 per cent of the Kerala emigrants. In the mean time, Saudi Arabia's share declined further to 24 per cent. Apart from the UAE, Kuwait also continues to attract an increasing share of Kerala emigrants.

19.74 Outside the Gulf region, the United States of America is a major destination country. It received 5.7 per cent of the total number of emigrants from the state. Its share had been only 2.2 per cent in 1998.

19.75 Malappuram district had the distinction of sending out the largest number of emigrants from Kerala in 1998 and in 2003. It has retained the distinction in 2007 also. In fact in 2007, Malappuram district was the place of origin of 336,000 emigrants or about 18.2 per cent of the total number of emigrants from Kerala. The district next in importance with respect to emigration from the state has been Kannur, with 254,000 emigrants. In 1998 only 6.5 per cent of Kerala emigrants, had originated from Kannur, but by 2007 its share increase to 13.8 per cent.

19.76 The other districts with relatively large number of emigrants have been Thiruvananthapuram with 189,000 emigrants (10.2 per cent), Thrissur with 170,000 emigrants (9.2 per cent) Kollam with 147,000 emigrants (7.9 per cent), Ernakulam with 143,000 emigrants (7.7 per cent) and Alappuzha with 114,000 emigrants (6.2 per cent). The districts with the smallest number of emigrants have been Idukki (0.1 per cent) and Wayanad (0.8 per cent).

19.77 The total number of emigrants have been 18.48 lakh in 2007. Among them 8.83 lakh (48.2 per cent) were Muslims, 6.17 lakh Hindus (33.3 per cent) and the balance 3.47 lakh (18.5 per cent) Christians. Thus Muslims who constitute less than a quarter of the total population has almost double that proportion among the emigrants.

19.78 In 2007, the average age of male emigrants has been 26.8 years and that of females 22.7 years. Also the largest number of emigrants has been in the age group of 25-29 years. These have been very few emigrants older than 50 years.

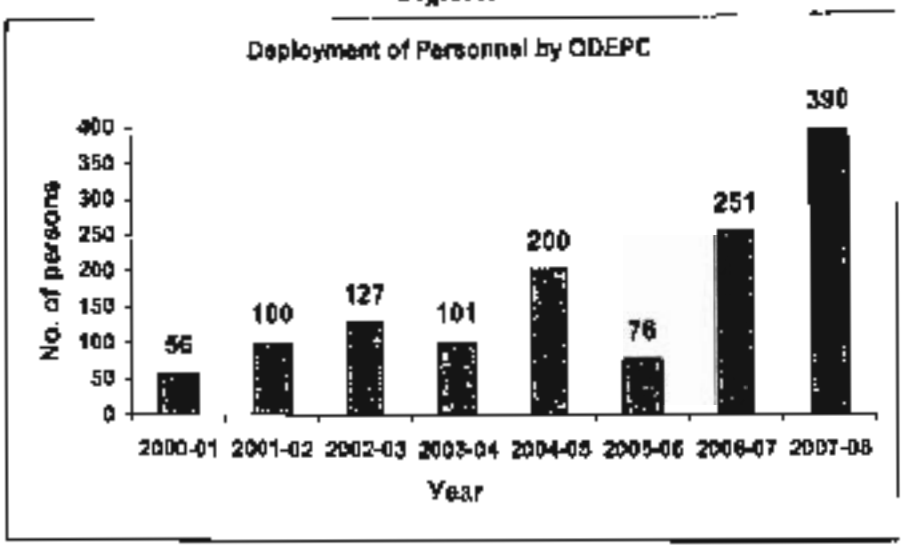
19.79 During 2005, 1.25 lakh workers from Kerala went abroad in search of job, constituting 22.8 per cent of the 5.49 lakh emigrants from the country. The other leading states are Tamil Nadu (21.3 per cent), Karnataka (13.7 per cent), Andhra Pradesh (8.8 per cent), Gujarat (9.1 per cent), Maharashtra (5.3 per cent), Punjab (4.4 per cent) and Rajasthan (3.9 per cent). More than 80 per cent of the emigrants went to West Asia of which 35.4 per cent went to UAE and 18.2 per cent to Saudi Arabia.

Placement through ODEPC

19.80 The Overseas Development and Employment Promotion Consultants Ltd. (ODEPC) started functioning in 1977 with the main objective of promoting employment in foreign countries. As part of diversification, ODEPC started travel agency business also. The authorized share capital of the Company is Rs. 1 crore and paid up capital is Rs.65.79 lakhs. The sale of air tickets during 2006-07 showed remarkable improvement in that the turnover was Rs.283.5 lakhs.

19.81 ODEPC is the first and the only recruiting agency in the Govt. sector deploying Indian manpower to foreign countries. ODEPC has deployed 251 candidates for various jobs to foreign countries like Saudi Arabia, UAE, Sultanate of Oman, Qatar, Sri Lanka, Malaysia, Republic of Maldives etc. during the year 2006-07. For the first time the Southern Province Cement Company based in Saudi Arabia has recruited 102 candidates for different posts. The deployment of personnel by ODEPC since 2000-01 is illustrated through the following graph Fig.19.7

Fig.19.7



19.82 During the year 2007 (upto 19.11.2007) 458 persons deployed, of them 226 to Saudi Arabia, 203 to Mali, 12 to UAE, 11 to Oman and 6 to Qatar. Of the persons deployed, 333 were Staff Nurses, 81 Technicians, 12 Doctors, 12 Administrative Staff, 8 Engineers, 6 Firemen, 2 Catering Staff, 2 Sales Executives and 2 Drivers.

CHAPTER 20

HUMAN DEVELOPMENT AND SOCIO-ECONOMIC WELL BEING IN KERALA

It is now widely accepted that conventional measures of well-being such as per capita gross domestic product or consumption expenditure or poverty ratios do not capture the broader aspects of human capabilities. Important as it is, high economic growth does not automatically translate into betterment of the lives of all people, especially if the benefits of that growth are not accessible to large sections of the population. The experience of certain countries and states in India reveal that despite significant achievement in economic development, the proportion of people below poverty line can actually increase instead of dwindling as envisaged, or there might only be a small modicum of improvement in their status

Box 20.1

Human Progress is neither automatic nor inevitable. We are faced now with the fact that tomorrow is to day. We are confronted with the fierce urgency of now. In this unfolding conundrum of life and history there is such a thing as being too late..... We may cry out desperately for time to pause in her passage, but time is deaf to every plea and rushes on. Over the bleached bones and jumbled residues of numerous civilizations are written the pathetic words: Too late

Source. HDR, 2007/08, UNDP

20.2 UNDP in its first Human Development Report pointed out that people, not things, are the wealth of nations and it is they who should be the focus of a development directed to 'expanding their choices'. The report has identified three basic capabilities as prerequisites to a life. They are, the capacity to lead long and healthy lives, access to knowledge and the limitless vistas that it opens to the seeking mind, and the ability to ensure for oneself a reasonably good standard of living. Without these resources, people's choices are restricted and life's opportunities are out of reach. Human Development is the process of building these capabilities to enable people to lead productive lives Once these capabilities are assured, then other opportunities in life will follow.

Box 20.2

Difference between the HD approach and the non-HD approach

Issues	HD approach	Non-HD approach
Development for what?	Well-being, dignity, freedom, addressing, inequalities, exclusion and poverty.	National income, economic and social growth which trickles down.
Development for whom?	For people,	For people and things.
Who is the agent of development?	People	People and things: human capital + physical capital + natural resources.
How?	No recipes but elements of good policies such as: Economic growth, pro-poor, pro-employment; Equity of choices: equitable distribution of assets; Good social policies; Interventions to serve needs of vulnerable sub- populations; Political democracy; Civil participation	Structural adjustment "recipes" Do not raise industrial wages Hand out contraceptives. Sow improved seeds; Investment in housing; Spend on basic needs; Send the right signals.

Source: UNDP, 2004

20.3 With the help of four indices such as Human Development Index (HDI), Gender related Development Index (GDI), Gender Empowerment Measure (GEM) and Human Poverty Index (HPI), UNDP measures Human Development .

Human Development Index

20.4 The Human Development Index is computed every year by UNDP. This measures average achievements in basic human development and assigns ranking to countries. The HDI is a composite index, comprising longevity, educational attainment as well as command over resources. The Human Development Report 2007 published by UNDP, ranked India in the 128th place with HDI value 0.619 in 2005 and is grouped among the medium human development countries. The global position on human development index of certain countries is given in Table 20. 1.

Table 20.1
India's Global Position on Human Development Index

Sl. No	Name of Country	Human Development Index Value		HDI Rank	
		2004	2005	2004	2005
1	Norway	0 965	0 968	1	2
2	Australia	0 957	0 962	3	3
3	Sri Lanka	0 755	0 743	85	99
4	China	0 768	0.777	81	81
5	Indonesia	0.711	0.728	108	107
6	**India**	**0.611**	**0.619**	**126**	**128**
7	Pakistan	0.539	0.551	134	136
8	Bangladesh	0.530	0.547	137	140
9	Nepal	0.527	0.534	138	142
10	Mozambique	0.390	0.384	168	172
11	Niger	0.311	0.374	177	174

Source: Human Development Report, UNDP, 2007

20.5 HDI of India for different years is given in Table 20 2. The table shows the performance of India in a span of 30 years from 1975 to 2005, yielding an almost 50% increase in human development.

Table 20.2
Human Development Index of India (1975-2005)

Years	1975	1980	1985	1990	1995	2000	2005
Index	0.413	0.439	0.477	0.515	0.548	0.577	0.619

Source: HDR.2007, UNDP

Gender Related Development Index

20.6 Compared to women, men have greater access to better education, nutrition and medical care given the different social and economic roles assigned to women and men in society, reflected in the norming of the male working subject and the domestic woman. As a result a certain type of social order is produced and specific perceptions about gender are translated into particular social, political and economic arrangements in which women tend to be in a

disadvantaged position. Men are more gainfully employed for they have greater access to productive opportunities. Further, very often women get paid less for the same work than men. In order to assess gender differences, UNDP has also generated a gender sensitised development index, called the gender related development index. The gender related development index measures the levels of women's human development relative to men. The Gender related Development Index of certain countries is given in Table 20.3. From the table it can be seen that India is ranked 113 with index value 0.600.

Table 20.3
Gender Related Development Index

Sl. No	Name of Country	Rank	Index
1	Iceland	1	0.982
2	Australia	2	0.960
3	Norway	3	0.957
4	China	73	0.776
5	Sri Lanka	89	0.735
6	Indonesia	94	0.721
7	India	113	0.600
8	Pakistan	125	0.525
9	Nepal	128	0.520
10	Bangladesh	121	0.539

Source: HDR, 2007, UNDP.

The Gender Empowerment Measure (GEM)

20.7 Focusing on women's opportunities, the gender empowerment measure captures gender inequality in three key areas, namely political participation and decision making power, Economic participation and decision - making power and power over economic resources

The Human Poverty Index (HPI)

20.8 UNDP split the human poverty index into two types. One is HPI-I which is relevant to the developing countries like India. While HDI measures average achievement, the HPI-I measures deprivation in three basic dimensions of human development, namely a long and healthy life, knowledge and a decent standard of living. The human poverty index (HPI-I) of certain countries is given in Table 20.4.

Table - 20.4
Human Poverty Index (HPI-I)

Sl. No	Country	Rank	Index (%)
1	Barbados	1	3.0
2	Uruguay	2	3.5
3	China	29	11.7
4	Iran	30	12.9
5	Sri Lanka	44	17.8
6	Indonesia	47	18.2
7	Egypt	48	20
8	India	62	31.3
9	Pakistan	77	36.2
10	Nepal	84	38.1

Source: HDR, 2007, UNDP.

20.9 From the UNDP report it can be seen that India is ranked 62 with percentage value 31.3 in respect of Human Poverty Index.

Prosperous States

20.10 Taking eight parameters such as law and order, agriculture, primary education, primary health, infrastructure, consumer market, investment environment and prosperity, a study was conducted by *India Today* among the states of India. As per the study Kerala stood in the second place just behind Punjab as the best state in India. The score and rank of the big and small states of India are given in Table 20.5. As far as the small states are concerned, Pondichery is at the top followed by Goa.

Table 20.5
Score and Rank of States in India

Sl. No.	States	2006		2007	
		Score	Rank	Score	Rank
	Big States				
1	Punjab	2.65	1	2.72	1
2	Kerala	2.50	2	2.52	2
3	Himachal Pradesh	2.47	3	2.38	3
4	Tamil Nadu	2.27	4	2.36	4
5	Haryana	2.06	5	1.89	8
6	Maharashtra	1.99	6	2.07	6
7	Gujarat	1.95	7	2.11	5
8	Karnataka	1.93	8	2.02	7
9	Utharanchal	1.84	9	1.84	9
10	Andhra Pradesh	1.73	10	1.77	10
11	Jammu & Kashmir	1.55	11	1.66	11
12	Rajasthan	1.37	12	1.38	12
13	West Bengal	1.32	13	1.29	15
14	Madhya Pradesh	1.30	14	1.33	13
15	Chhattisgarh	1.16	15	1.17	16
16	Assam	1.08	16	1.29	14
17	Uttar Pradesh	1.02	17	0.98	17
18	Orissa	0.96	18	0.98	18
19	Jharkhand	0.82	19	0.88	19
20	Bihar	0.58	20	0.60	20
	Small States				
1	Pondicherry	3.84	1	4.02	1
2	Goa	3.45	2	3.67	2
3	Delhi	3.32	3	3.38	3
4	Sikkim	2.57	4	2.73	4
5	Mizoram	2.43	5	2.51	5
6	Nagaland	1.99	6	2.03	6
7	Manipur	1.75	7	1.50	9
8	Arunachal Pradesh	1.74	8	1.82	7
9	Thripura	1.64	9	1.56	8
10	Meghalaya	1.40	10	1.46	10

Source: India Today Special Issue, 2007

20.11 Estimates of HDI for the Indian states place Kerala at the top; Index of Human Development and rank for Kerala in 2001 is 0.638 and 1 respectively. Latest estimates for Kerala reveal a further enhancement in the HDI to 0.773 (Human Development Report, Kerala, 2005). In terms of GDI (or Gender Equality Index) Kerala was ranked first in 1981 with an index of 0.750+ (for all India it was 0.620) and in the nineties, the GEI/GDI was again in the range 0.750+; however, Himachal Pradesh had taken the first rank. The latest estimates from the Kerala Human Development Report place it at 0.746. While in terms of Educational attainment and longevity, Kerala ranks very high, work participation rates have been lower than in other states in particular the rural female work participation rate which has been much lower when compared to the all India level. In rural areas of Kerala the female work participation rate has declined from 16.9 percent in 1991 to 15.9 percent in 2001. In the urban areas it has remained more or less the same, around 13 percent. As per census 2001 the highest female work participation rate is in Idukki (28.8%) and the lowest in Malappuram district (6.6%). In urban areas, the female work participation rate is highest in Wayanad district (24.1%) and lowest in Malappuram district (6.5%) (see Chapter 18 on Gender and Development)

20.12 We now examine in greater detail certain social and economic aspects of well being in Kerala.

Disabilities

20.13 A picture of disabled persons in Kerala can be obtained from the census report of 2001. There are 8.61 lakh people who are suffering from some kind of disability. Of the total disabled persons in Kerala, 5.77 lakh persons are literate and 2.84 lakh illiterate. This comes to about 67.04 percent and 22.96 percent respectively of the total disabled persons. At all India level the corresponding figures are 49.3 percent and 50.69 percent respectively suggesting a higher level of capability for even the disabled in Kerala.. District-wise details are given in Table 20.7.

Table 20.7
District-wise details of Disabilities

Name of District	Total Disabled Persons	Literate		Illiterate	
		Disabled persons	% to total	Disabled persons	% to total
Thiruvananthapuram	92963	63038	67.81	29925	32.19
Kollam	82922	56143	67.71	26779	32.29
Pathanamthitta	35280	26551	75.26	8729	24.24
Alappuzha	63539	46364	72.97	17175	27.03
Kottayam	55732	42246	75.80	13486	24.20
Idukki	36143	25305	70.01	10838	29.99
Ernakulam	79234	56336	71.10	22898	28.90
Thrissur	74615	51756	69.36	22859	30.64
Palakkad	65329	36749	56.25	28580	43.75
Malappuram	88430	52254	59.09	36176	40.91
Kozhikode	81853	54751	66.89	27102	33.11
Wayanad	18401	11485	62.42	6916	37.58
Kannur	57931	38243	66.01	19688	33.99
Kasaragod	28422	15824	55.68	12598	44.32
Kerala	860794	577045	67.04	283749	32.96

Source: Census - 2001, Disabled Population, Kerala

20.14 From the table it can be seen that in terms of disabled who are literate Kottayam stood in the first place (75 80%) and Kasaragod (55.68%) was last

Poverty

Box 20.3

Like slavery and apartheid, poverty is not natural. It is man-made and it can be overcome and eradicated by the actions of human beings

Source. HDR, 2007/08, UNDP.

20.15 Poverty estimates by the Planning Commission show that the percentage of population below the poverty line in India has fallen from 55 percent in 1973-74 to 36 percent in 1993-94 and further to 27 5 percent in 2004-05 for rural and urban areas taken together The poverty ratios of 15 major states of India for the period 1993-94 and 2004-05 are given in Table 20 8. Poverty ratios in the table reveal substantial variation across the states in India. Among the major states, Orissa, Bihar and Madhya Pradesh have substantially higher rates than all India, while Punjab has a single digit ratio Kerala is in the 3rd place having Head Count Ratio of 15 percent. There is disparity in HCR across the Rural and Urban areas of Kerala As is well known, the methodology and estimates of official poverty ratios have been subject to considerable controversy, a discussion of which has been taken up in chapter 14.

Table 20.8
HCR of Poverty for Major Indian States.

Sl. No	States	1993-94			2004-05		
		Rural	Urban	Total	Rural	Urban	Total
1	Andhra Pradesh	15.9	38.3	22.2	11.2	28.0	15.8
2	Assam	45.0	7.7	40.9	22.3	3.3	19.7
3	Bihar	58 2	34.5	55.0	43.0	28.7	41.1
4	Gujarat	22.2	27.9	24.2	19.1	13.0	16.8
5	Haryana	28.0	16 4	25.1	13.6	15.1	14.0
6	Karnataka	29.9	40 1	33.2	20.8	32.6	25.0
7	**Kerala**	**25.8**	**24.6**	**25.4**	**13.2**	**20.2**	**15.0**
8	Madhya Pradesh	40.6	48.4	42.5	37.9	41 9	39.0
9	Maharashtra	37.9	35.2	36.9	29 6	32 2	30 7
10	Orissa	49.7	41.6	48.6	46.8	44 3	46 4
11	Punjab	12 0	11 4	11.8	9.1	7.1	8.4
12	Rajasthan	26.5	30 5	27 4	18.7	32.9	22.1
13	Tamil Nadu	32.5	39.8	35.0	22.8	39.8	22.5
14	Uttar Pradesh	42.3	35.4	40.9	33.7	31.0	33.1
15	West Bengal	40.8	22.4	35.7	28 6	14.8	24.7
	India	**37.3**	**32.4**	**36.0**	**28.3**	**25.7**	**27.5**

Source: India Development Report 2008

Children's living arrangements and orphanhood

20.16 Table 20.9 presents the per cent distribution of children under age 18 years by children's living arrangements and the survival status of their biological parents. It also presents percentage of children with one or both parents dead, by state In Kerala 72.8% of children under age 18 years live with their parents which is lower than the national average of 82.7%. At the same time in Kerala 22 per cent of children are living with mother while their father is living elsewhere

This percentage is high among the states of India and is also above the national average. The proportion of children who have experienced the death of one or both parents in Kerala is 2.2 percent which is lowest among the Indian States

Table 20.9

Children's living arrangements and orphanhood by State

Sl. No	State	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parents				% with one or both parents dead
			Father alone	Father dead	Mother alone	Mother dead	Both alone	only mother alone	only father alone	Both dead	
1	2	3	4	5	6	7	8	9	10	11	12
1	Delhi	90.0	1.6	2.9	0.5	1.2	3.1	0.1	0.2	0.4	4.8
2	Haryana	89.9	4.2	3.5	0.1	0.9	2.7	0	0.3	0.3	5.0
3	Himachal Pradesh	80.4	13.1	2.1	0.7	0.6	2.8	0.1	0.1	0.1	3.0
4	Jammu & Kashmir	86.6	5.9	2.4	0.4	1.6	2.6	0.1	0.1	0.3	4.5
5	Punjab	87.1	5.2	2.8	0.6	0.9	2.8	0.2	0.2	0.2	4.3
6	Rajasthan	85.6	5.9	2.7	0.4	1.1	3.7	0.1	0.3	0.2	4.4
7	Uttaranchal	84.0	8.1	3.1	0.6	1.8	1.8	0.1	0.3	0.2	5.6
8	Chattisgarh	86.6	2.2	3.2	0.6	1.7	4.9	0.3	0.3	0.2	5.7
9	Madhya Pradesh	90.3	1.9	2.8	0.4	1.5	2.4	0.2	0.3	0.2	5.0
10	Uttar Pradesh	80.3	11.5	2.8	0.4	1.7	2.5	0.1	0.4	0.3	5.3
11	Bihar	70.0	21.2	2.8	0.3	1.6	3.4	0.1	0.4	0.2	5.1
12	Jharkhand	80.9	8.0	4.1	0.3	1.6	3.8	0.3	0.5	0.6	7.0
13	Orissa	82.0	6.8	3.1	0.5	2.2	4.3	0.2	0.4	0.4	6.4
14	West Bengal	83.1	7.6	3.0	0.5	0.9	4.3	0.3	0.2	0.1	4.6
15	Arunachal Pradesh	77.1	4.2	3.8	1.3	2.1	8.1	1.4	1.0	1.0	9.4
16	Assam	82.3	6.4	4.3	0.3	1.3	3.8	0.5	0.5	0.7	7.2
17	Manipur	82.7	7.5	3.4	1.1	0.6	4.1	0.2	0.1	0.2	4.6
18	Meghalaya	77.4	7.9	5.1	0.8	1.3	5.7	0.1	0.8	0.9	8.3
19	Mizoram	78.6	9.0	1.8	3.1	0.9	5.7	0.6	0.2	0.1	3.6
20	Nagaland	77.5	5.5	2.7	1.7	1.6	9.6	0.5	0.4	0.5	5.7
21	Sikkim	74.5	4.9	2.4	2.6	2.0	11.9	0.7	0.4	0.5	6.1
22	Tripura	86.3	4.4	3.1	0.3	1.6	3.6	0.3	0.2	0.2	5.5
23	Goa	81.5	9.5	3.5	1.1	0.2	3.6	0.1	0	0	3.9
24	Gujarat	91.0	2.6	1.9	0.7	0.4	3.0	0.1	0.1	0.2	2.7
25	Maharashtra	87.6	3.8	2.9	0.7	0.7	3.8	0.2	0.1	0.1	4.0
26	Andhra Pradesh	83.9	5.9	2.8	1.3	1.0	4.4	0.2	0.2	0.4	4.5
27	Karnataka	84.7	5.4	3.8	0.5	0.7	4.2	0.1	0.2	0.4	5.3
28	Kerala	72.8	22.0	1.5	0.7	0.1	2.3	0.1	0.3	0.1	2.2
29	Tamil Nadu	81.8	9.5	2.9	0.5	0.9	3.6	0.2	0.3	0.2	4.5
	India	**82.7**	**8.5**	**2.9**	**0.5**	**1.2**	**3.4**	**0.2**	**0.3**	**0.3**	**4.9**

Source: National Family Health Survey (NFHS-3), 2005-06.

Health

20.17 Good health is an invaluable asset for better economic productivity both at the individual and national level. Above all it is valued by those who own it as prerequisite for a better quality of life and better standards of living. Hence health is considered as one of the indicators of Human Development.

Box 20.4

One generation plants a tree, the next generation gets the shade.

Source: HDR 2007, UNDP

20.18 According to a study conducted by India Today on primary health, by taking parameters such as inverse of infant mortality ratio, male IMR/female IMR, percentage of births assisted by trained personnel, percentage of households with access to tap water, registered doctors/ lakh population, sex ratio, state government expenditure on public health and family welfare/ population, Kerala stands at the top among the big states of India. As far as the small states are concerned, Goa is at the top. The score and rank of the big and small states in India is given in Table 20.10.

Table 20.10
Primary Health (Score and Rank)

St. No	States	Score - 2007	Rank - 2007
	Big States		
1	**Kerala**	2.44	1
2	Himachal Pradesh	2.05	2
3	Tamil Nadu	2.05	3
4	Karnataka	1.81	4
5	Punjab	1.80	5
6	Maharashtra	1.74	6
7	Jammu & Kashmir	1.60	7
8	Gujarat	1.53	8
9	Andhra Pradesh	1.41	9
10	Uttaranchal	1.36	10
11	West Bengal	1.19	11
12	Rajasthan	0.89	12
13	Assam	0.80	13
14	Madhya Pradesh	0.72	14
15	Orissa	0.68	15

16	Haryana	0.64	16
17	Uttar Pradesh	0.51	17
18	Bihar	0.43	18
19	Chhattishgarh	0.42	19
20	Jharkhand	0.30	20
	Small States		
1	Goa	3.67	1
2	Sikkim	3.06	2
3	Delhi	2.82	3
4	Pondichery	2.54	4
5	Mizoram	2.45	5
6	Manipur	2.27	6
7	Nagaland	1.90	7
8	Arunachal Pradesh	1.76	8
9	Thripura	1.34	9
10	Meghalaya	1.24	10

Source. India Today, 2007

Birth Rate

20.19 The birth rate of Kerala during 2007 was 15 per 1000 population. The national average in this period was 23.80.

Maternal Mortality Rate

20.20 The maternal mortality rate (MMR) is defined as the number of maternal deaths occurred per lakh/ live births. In Kerala the MMR during the period 2001-03 was 110 as against the national average of 300. This however, is much higher than in advanced countries with which other health related indicators compare well, despite almost 100 percent institutional deliveries.

Death Rate

20.21 Death rate is defined as the number of deaths occurred per 1000 population in an year. During 2007 the death rate in Kerala was 6.4 against the national average of 7.60.

Life Expectancy at Birth

20.22 Life expectancy at birth is considered as one of the aspects of human development. In Kerala during 2007 the life expectancy at birth was 73.45 years against the national average of 62.70 years In this period life expectancy of males was 70.90 years against the national average of 61.80 years. At the same time life expectancy at birth of females in Kerala is 76 years against the national average of 63.50 years.

Couple Protection Rate

20.23 Couple Protection Rate is defined as the percentage of currently married women in the age 15 - 49 using family planning methods. During 2007 the rate was 72.10% as against the national average of 52%.

20.24 Some of the health indicators of Kerala and India is given in Table 20.11.

Table 20.11
Health Indicators - Kerala & India 2007

Health Indicator	Kerala	India
Birth Rate (per 1000 population)	15.00	23.80
Death Rate (per 1000 population)	6.40	7.60
Infant Mortality Rate (per 1000 population)	14.00	58.00
Child Mortality Rate (per 1000 population)	3.40	17.30
Maternal Mortality Rate (per lakh/live birth)*	110	300
Total Fertility Rate	1.70	2.90
Couple Protection Rate (%)	72.10	52.00
Life at Birth		
Male	70.90	61.80
Female	76.00	63.50
Total	73.45	62.70

Source: Directorate of Health Services
** Refers to the period 2001-03.*

Infant Mortality Rate

20.25 Infant Mortality Rate is defined as the number of infants who die per 1000 live birth before attaining the first birthday. Infant and Child Mortality rates reflect a country's level of socio-economic development and quality of life, and are used for monitoring and evaluating health programmes and policies. During 2007 the IMR of Kerala was 14 (see Table 20.11) and the national average was 58. However according to National Family Health Survey (NFHS-3) IMR of Kerala during 2005-06 was 15.3; all India average during the period was 57. IMR of certain states and national average for the year 2005-06 are given in Table 20.12.

Table 20.12
Infant Mortality Rate (2005-06) of 20 Big States

Sl. No	Name of States	IMR
1	Kerala	15.3
2	Karnataka	43.2
3	Andhra Pradesh	53.5
4	Tamil Nadu	30.4
5	Gujarat	49.7
6	Maharashtra	37.5
7	Assam	66.1
8	Manipur	29.7
9	Chhattisgarh	70.8
10	Madhya Pradesh	69.5
11	Utter Pradesh	72.7
12	Haryana	41.7
13	Himachal Pradesh	36.1
14	Punjab	41.7

15	Rajasthan	65.3
16	Uttaranchal	41.9
17	Bihar	61.7
18	Jharkhand	68.7
19	Orissa	64.7
20	West Bengal	48.0
	India	57.0

Source: National Family Health Survey (NFHS-3)

Total Fertility Rate (TFR)

20.26 The Total Fertility Rate is defined as the number of children born to a woman if she follows the current fertility pattern in her reproductive life. During 2007 TFR of Kerala was 1.70 against the national average of 2.90 (See Table 20.11). According to NFHS-3, the TFR of Kerala during 2005-06 was 1.9 which is less than the national average of 2.7.

Education

20.27 Education is recognised as a fundamental human right, along with other necessities, such as food, shelter and water. Education empowers people to make informed choices about their lives and about their rights as citizens in a democracy. The positive association of literacy with improved socio-economic development indicators, underlines its crucial role in the process of human development. The literacy rates of the major states in India from 1951 to 2001 is depicted in Table - 20.13. The Table shows that Kerala's literacy rate which was 47.18 percent in 1951 has grown to 90.86 per cent in 2001. Kerala's literacy rate has been consistently higher than the all India rate in all census years.

Table 20.13
State-wise literacy Rates (1951 - 2001)

(in percent)

Sl.No	States	1951	1961	1971	1981	1991	2001
	Big States						
1	Punjab	..	--	34.12	43.37	58.51	69.65
2	Kerala	47.18	55.08	69.75	78.85	89.81	90.86
3	Himachal Pradesh	--	--	--	..	63.86	76.48
4	Tamil Nadu	--	36.39	45.40	54.39	62.66	73.45
5	Haryana	-	.	25.71	37.13	55.85	67.91
6	Maharashtra	27.91	35.08	45.77	57.24	64.87	76.88
7	Gujarat	21.82	31.47	36.95	44.92	61.29	69.14
8	Karnataka	-	29.80	36.83	46.21	56.04	66.64
9	Utharanchal	18.93	18.05	33.26	46.06	57.75	71.62
10	Andhra Pradesh	-	21.19	24.57	35.66	44.08	60.47
11	Jammu and Kashmir	-	12.95	21.71	30.64	-	55.52
12	Rajasthan	8.5	18.12	22.57	30.11	38.55	60.41
13	West Bengal	24.61	34.46	38.86	48.65	57.70	68.64
14	Madhya Pradesh	13.16	21.41	27.27	38.63	44.67	63.74
15	Chhattisgarh	9.41	18.14	24.08	32.63	42.91	64.66
16	Assam	18.53	32.95	33.94	-	52.89	63.25
17	Uttar Pradesh	12.02	20.87	23.99	32.65	40.71	56.27
18	Orissa	15.80	21.66	26.18	33.62	49.09	63.08
19	Jharkand	12.93	21.14	23.87	35.03	41.39	53.56
20	Bihar	13.49	21.95	23.17	32.32	37.49	47.00
	All India	18.33	28.30	34.45	43.57	52.21	64.84

Source: Office of the Registrar General, India.

20.28 Taking the parameters such as literacy rate, proportion of 10+ children having completed primary education, ratio of girls to boys enrolled in primary and middle school, teacher - pupil ratio, total expenditure of education department on primary plus middle school population with in the age group 6-14 years, India Today conducted a study among the states of India. In the study it was revealed that Kerala stood in the first place during the year 2007, with Himachal Pradesh in the second place, among the major states in India. As far as the small states are concerned, Mizoram picked up the first place from Goa during the year 2007. Mizoram also has the best score among all big and small states in India. The score and rank of the big and small states in India are given in Table 20.14.

Table 20.14

Primary Education - Score and Rank (2006 and 2007)

SL No.	States	2006		2007	
		Score	Rank	Score	Rank
	Big States				
1	Punjab	2.72	6	2.91	7
2	**Kerala**	**4.25**	**2**	**4.19**	**1**
3	Himachal Pradesh	4.34	1	4.09	2
4	Tamil Nadu	3.06	4	2.98	6
5	Haryana	2.34	11	2.34	11
6	Maharashtra	3.02	5	3.17	4
7	Gujarat	1.94	13	2.45	10
8	Karnataka	2.61	7	2.77	9
9	Uttaranchal	3.41	3	3.70	3
10	Andhra Pradesh	2.42	9	2.29	12
11	Jammu and Kashmir	2.36	10	2.89	8
12	Rajasthan	1.33	17	1.67	17
13	West Bengal	2.13	12	2.27	13
14	Madhya Pradesh	1.72	16	1.72	16
15	Chhattisgarh	1.77	15	1.84	14
16	Assam	2.59	8	3.11	5
17	Uttar Pradesh	1.28	18	1.35	18
18	Orissa	1.83	14	1.81	15
19	Jharkhand	1.03	19	1.27	19
20	Bihar	0.68	20	0.72	20
	Small States				
1	Pondichery	4.94	3	4.96	4
2	Goa	5.42	1	6.03	2
3	Delhi	3.04	8	3.73	7
4	Sikkim	4.75	4	5.37	3
5	Mizoram	5.03	2	6.20	1
6	Nagaland	3.60	6	4.19	5
7	Manipur	3.87	5	4.09	6
8	Arunachal Pradesh	2.18	10	2.90	10
9	Tripura	3.23	7	3.48	9
10	Meghalaya	2.81	9	3.49	8

Source: India Today Special Issue, 2007

Enrolment Rate

20.29 Enrolment is a flow variable. Enrolment of students in schools (see Table 20.15) depicts the current picture.

Table 20.15
Enrolment of Boys and Girls in Schools (Std. 1 to 10)

Year	Total	Boys	Boys (%)	Girls	Girls (%)
1980-81	5602953	2896774	51.70	2706179	48.30
1990-91	5901101	3012308	51.05	2888793	48.95
2000-01	5219052	2660898	50.98	2558154	49.02
2003-04	4894005	2493124	50.94	2400881	49.06
2004-05	4842015	2466408	50.94	2375607	49.06
2005-06	4776306	2433275	50.94	2343031	49.06
2006-07	4719476	2401513	50.89	2317963	49.11
2007-08	4626411	2348962	50.77	227749	49.23

Source: Directorate of Public Instruction.

20.30 From the table it can be seen that enrolment of students in schools for different years shows a decreasing trend. The total number of students enrolled in different classes during 2007-08 is 46.26 lakh as against 56.03 lakh is 1980-81. There is a decline of 17.44 percent over the year 1980-81. The percentage share of girls in total enrolment is showing an increasing trend. The gross enrolment of students in different states of India is given in Appendix 20.2.

Teacher Pupil Ratio

20.31 This is a better indicator for showing the quality of education. The teacher pupil ratio in Kerala during 2006-07 was 26.95 as against 27.19 in 2005-06. The total number of teachers in the state from lower primary to high school during 2006-07 was 175147 of which 123337 (70.42%) are female teachers showing that females form the major proportion of teacher strength in the state.

Drop Out

20.32 Drop out is the percentage of students who dropped out from the schools before completing the school life. The drop out of students from LP, UP and HS during 2005-06 in the state are respectively 0.59%, 0.52% and 1.29%. The over all drop out of students in the state during 2005-06 is 0.79% as against 0.94% in 2004-05. The district wise drop out is depicted in the Table 20.16.

Table 20.16
District-wise / Stage-wise Drop out ratio in schools 2005-06

Dist.	L.P Stage			U.P Stage			High School			Total Drop out (%)
	Enrolment	Drop out	% Drop out	Enrolment	Drop out	% Drop out	Enrolment	Drop out	% Drop out	
TVPM	169948	848	0.50	133666	716	0.54	139884	797	0.57	0.53
KLM	122809	510	0.42	106523	609	0.57	110371	1251	1.13	0.70
PTA	51083	131	0.26	44096	134	0.30	50629	154	0.30	0.29
ALP	94206	463	0.49	79969	246	0.31	88079	699	0.79	0.54
KTM	96474	334	0.35	76023	209	0.27	80111	746	0.93	0.51
IDK	54462	495	0.91	42664	411	0.96	41771	1040	2.49	1.40

EKM	144384	973	0.67	118238	403	0.34	123408	1379	1.12	0.71
TSR	175032	496	0.28	137149	432	0.31	134539	1789	1.33	0.61
PKD	170194	1499	0.88	133170	985	0.74	132773	2169	1.63	1.07
MPM	298482	1435	0.48	234107	1083	0.46	232107	3837	1.65	0.83
KKD	176563	930	0.53	140449	553	0.39	145050	1884	1.30	0.73
WYD	52933	875	1.65	36723	414	1.13	36647	62	0.17	1.07
KNR	138540	811	0.59	113723	628	0.55	118132	1771	1.50	0.87
KSG	80343	892	1.11	60065	788	1.31	60787	1637	2.69	1.65
TOTAL	**1825453**	**10692**	**0.59**	**1456565**	**7611**	**0.52**	**1494288**	**19215**	**1.29**	**0.79**

Source: Directorate of Public Instruction

20.33 From the table it can be seen that the over all drop out is high in Kasaragode district and low in Pathanamthitta district during the year 2005-06.

Crime

Box 20.4

If you are neutral in a situation of injustice, you have chosen the side of the oppressor.

Source: HDR, 2007/08, UNDP.

20.34 The total crime under Indian Penal Code (IPC) and Special Local Laws (SLL) during 2005 and 2006 are respectively 162171 and 159431 registering a decrease of 1.69% over the previous year. The number of crimes under IPC and SLL from the year 1997 to 2006 are shown in Table 20.17

Table 20.17
Details of Cases under IPC and SLL in Kerala

Year	IPC	SLL	Total	Percentage change over previous year
1997	92523	13507	106030	-
1998	93020	15782	108802	2.61
1999	94448	17825	112273	3.19
2000	99033	23529	122562	9.16
2001	103847	31598	135445	10.51
2002	104200	34954	139154	2.74
2003	98824	41055	139879	0.52
2004	104025	52110	156135	11.62
2005	104350	57821	162171	3.87
2006	105255	54176	159431	(-) 1.69

Source. State Crime Records Bureau, Tvpm.

20.35 The district-wise details of crimes under IPC and SLL are given in Table 20.18.

Table 20.18
Details of Cases under IPC and SLL in Kerala - District wise

Sl. No	Name of District	2005			2006			
		IPC	SLL	Total	IPC	SLL	Total	% variation
1	Thiruvananthapuram	14672	10203	24875	14270	6942	21212	-14.73
2	Kollam	10019	4269	14288	10414	5622	16036	12.23
3	Pathanamthitta	4394	1038	5432	4437	1323	5760	6.04
4	Alappuzha	7624	1724	9348	7714	917	8631	-7.67
5	Kottayam	7949	1340	9289	8212	1826	10038	8.06
6	Idukki	4504	994	5498	4802	711	5513	0.27
7	Ernakulam	14643	9050	23693	14292	14522	28814	21.61
8	Thrissur	9674	11399	21073	9806	5925	15731	-25.35
9	Palakkad	5542	4197	9739	5639	4453	10092	3.62
10	Malappuram	6866	4981	11847	6536	4598	11134	-6.02
11	Kozhikode	8063	3481	11544	8254	3450	11704	1.39
12	Wayanad	2166	1189	3355	2323	1042	3365	0.30
13	Kannur	5216	2085	7301	5483	1651	7134	-2.29
14	Kasaragod	3018	1871	4889	3073	1194	4267	-12.72
	Total	**104350**	**57821**	**162171**	**105255**	**54176**	**159431**	**-1.69**

Source: State Crime Records Bureau Trivandrum.

20.36 From the table it can be seen that Ernakulam district registered an increases of 21.61% in the case of total crimes committed during the year 2006 over the year 2005. In Thiruvananthapuram district the number of crimes decreased by 14.73 percent in 2006 over the previous year. At the same time Ernakulam district stood at the top in the case of total crimes committed in the state during the year 2006. Least number of crimes were reported from Wayanad district during this period.

Crime Rate

20.37 The crime rate under IPC, SLL and the percentage increases in the total crime rate in the state of Kerala from 1997 to 2006 are given in table 20.19. The total crime rate that is per lakh population during 2005 and 2006 are 491.3 and 478.7 percent respectively. This shows that during 2006 the crime rate has decreased by 2.57 percent over the previous year.

Table 20.19
Crime Rate under IPC and SLL in Kerala

Year	Estimated Mid-year Population (Lakh)	Crime Rate			% change over the previous year
		IPC	SLL	Total	
1997	307.13	301.3	44.0	345.3	—
1998	309.91	300.2	50.9	351.1	1.69
1999	312.71	302.0	57.0	359.0	2.27
2000	315.54	313.9	74.6	388.5	8.19
2001	318.39	326.2	99.2	425.4	9.52
2002	321.27	324.3	108.8	433.1	1.82
2003	324.17	304.9	126.6	431.5	(-)0.38
2004	327.10	318.0	159.3	477.3	10.62
2005	330.06	316.2	175.1	491.3	2.93
2006	333.04	316.0	162.7	478.7	(-) 2.57

Source: State Crime Records Bureau, Trivandrum

EKM	144384	973	0.67	118238	403	0.34	123408	1379	1.12	0.71
TSR	175032	496	0.28	137149	432	0.31	134539	1789	1.33	0.61
PKD	170194	1499	0.88	133170	985	0.74	132773	2169	1.63	1.07
MPM	298482	1435	0.48	234107	1083	0.46	232107	3837	1.65	0.83
KKD	176563	930	0.53	140449	553	0.39	145050	1884	1.30	0.73
WYD	52933	875	1.65	36723	414	1.13	36647	62	0.17	1.07
KNR	138540	811	0.59	113723	628	0.55	118132	1771	1.50	0.87
KSG	80343	892	1.11	60065	788	1.31	60787	1637	2.69	1.65
TOTAL	**1825453**	**10692**	**0.59**	**1456565**	**7611**	**0.52**	**1494288**	**19215**	**1.29**	**0.79**

Source: Directorate of Public Instruction

20.33 From the table it can be seen that the over all drop out is high in Kasaragode district and low in Pathanamthitta district during the year 2005-06.

Crime

Box 20.4

If you are neutral in a situation of injustice, you have chosen the side of the oppressor.

Source: HDR, 2007/08, UNDP.

20.34 The total crime under Indian Penal Code (IPC) and Special Local Laws (SLL) during 2005 and 2006 are respectively 162171 and 159431 registering a decrease of 1.69% over the previous year. The number of crimes under IPC and SLL from the year 1997 to 2006 are shown in Table 20.17.

Table 20.17

Details of Cases under IPC and SLL in Kerala

Year	IPC	SLL	Total	Percentage change over previous year
1997	92523	13507	106030	-
1998	93020	15782	108802	2.61
1999	94448	17825	112273	3.19
2000	99033	23529	122562	9.16
2001	103847	31598	135445	10.51
2002	104200	34954	139154	2.74
2003	98824	41055	139879	0.52
2004	104025	52110	156135	11.62
2005	104350	57821	162171	3.87
2006	105255	54176	159431	(-) 1.69

Source: State Crime Records Bureau, Tvpm.

20.35 The district-wise details of crimes under IPC and SLL are given in Table 20.18.

Table 20.18
Details of Cases under IPC and SLL in Kerala - District wise

Sl. No	Name of District	2005			2006			
		IPC	SLL	Total	IPC	SLL	Total	% variation
1	Thiruvananthapuram	14672	10203	24875	14270	6942	21212	-14.73
2	Kollam	10019	4269	14288	10414	5622	16036	12.23
3	Pathanamthitta	4394	1038	5432	4437	1323	5760	6.04
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	Total	**104350**	**57821**	**162171**	**105255**	**54176**	**159431**	**-1.69**

Source: State Crime Records Bureau, Tvpm.

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2004	327.10	318.0	159.3	477.3	10.62
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2006	333.04	316.0	162.7	478.7	(-) 2.57

Source: State Crime Records Bureau, Tvpm.

Atrocities Committed against Women in Kerala

20.38 The total atrocities committed against women under various offences show an increasing trend. The total crimes against women during 2005 and 2006 are 8087 and 9110 respectively. In 15 years period from 1992 to 2006 the crimes against women have increased by 338.4 per cent. The number of rape cases during the years 2005 and 2006 are respectively 478 and 601. This shows an increase of 25.73 percent. Molestation during this period is 2339 and 2543 numbers registering an increase of 8.72 percent. In the case of dowry death, the number of cases reported during the years 2005 and 2006 are 21 and 25 respectively showing an increase of 19.05 percent over the previous year. Number of cases reported under cruelty by husband or relations during 2006 is 3708 as against 3283 numbers in 2005 registering an increase of 12.95 percent over the previous year. The details are given in Table 20.20.

Table - 20.20

Atrocities committed against Women in Kerala (1992 - 2006)

Offences	1992	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	% changes over previous year
Rape (376 IPC)	227	588	589	423	552	562	459	394	480	478	601	25.73
Molestation (354 IPC)	523	1561	1773	1643	1695	1942	2123	1947	2260	2339	2543	8.72
Kidnapping and Abduction (363 to 369, 371 to 373 IPC)	86	160	130	123	89	97	91	102	142	175	202	15.43
Eve teasing (509 IPC)	1	70	96	50	69	81	102	68	133	129	222	72.09
Dowry Death (304-B IPC)	12	25	21	31	25	27	17	33	31	21	25	19.05
Cruelty by husband or relatives (498-A IPC)	290	1675	2125	2488	2418	2561	2836	2930	3222	3283	3708	12.95
Other IPC cases against women	939	3227	2739	2985	2773	2171	1833	1754	1413	1662	1809	8.84
State Total	2078	7306	7473	7743	7621	7441	7501	7228	7681	8087	9110	12.65

Source: State Crime Records Bureau, Trivandrum

Crime against Children

20.39 The total number of crimes against children during the year 2006 is 553 as against 386 numbers in the year 2005. This is showing an increase of 43.26 percent over the previous year. Total number of murder during 2006 is 51 as against 45 in 2005. In the case of rape, there are 219 number of cases reported in 2006 as against 140 numbers in 2005. This registered 56.43 percent increase over the previous year. Kidnapping and abduction of children has increased from 45 in 2005 to 73 in 2006. Procurement of minor girls also increased from 21 in 2005 to 35 in 2006. This comes to 66.67 percent increase over the previous year. Other crimes against children also increased from 129 number in 2005 to 170 numbers in 2006, showing an increase of 31.78 percent. The details are given in Table 20.21.

Table 20.21
Crime Against Children

SL No	Nature of Crime	2003	2004	2005	2006
1	Murder				
	(a) Infanticide	-	2	-	1
	(b) Other Murder	31	49	45	50
	Total Murder	31	51	45	51
2	Rape	148	159	140	219
3	Kidnapping and Abduction	91	74	45	73
4	Exposure and Abandonment	1	-	3	4
5	Procuration of minor girls	7	20	21	35
6	Child Marriage Restriction Act	-	1	3	1
7	Other Crimes against Children	48	56	129	170
	Total Crime	**326**	**361**	**386**	**553**

Source: State Crime Records Bureau, Tvpm

Suicides by Causes in Kerala

20.40 The total number of suicides reported during 2006 was 9026 as against 9244 in 2005. This registered 2.36 percent decrease over the previous year. There is a remarkable decrease in suicide due to bankruptcy or sudden change in economic status during the year 2006. The number of such cases reported in 2006 was 746 as against 831 in 2005. The number of suicides due to illness of various types was 2874 during 2006 as against 2741 in 2005. Number of suicides due to dowry dispute and divorce during 2006 is 43 as against 31 2005. There is an increase in number of suicides due to drug abuse / addiction in 2006 over 2005. The number of such cases during 2005 was 63 and 117 in 2006, registering an increase of 85.7 per cent .

20.41 It is to be noted that there is no poverty based suicides reported during the year 2006. The number of suicides due to unemployment decreased from 136 in 2005 to 98 in 2006. The number of suicides due to unknown causes and others decreased from 2263 in 2005 to 1331 in 2006. The details are given in Table 20.22.

Table 20.22
Suicides by Causes in Kerala during 2005 and 2006.

Sl. No	Causes	2005	2006
1	Bankruptcy or sudden change in Economic status	831	746
2	Suspected/ illicit relation	14	18
3	Cancellation/non-settlement of marriage	45	31
4	Not having children (Barrenness/impotency)	43	30
5	Suicide due to illness		
	a) Aids/STD	3	2
	b) Cancer	85	65
	c) Paralysis	35	11
	d) Insanity/Mental illness	1395	1511
	e) Other prolonged illness	1223	1285
6	Death of dear person	94	73
7	Dowry Dispute	17	19
8	Divorce	14	24

9	Drug abuse/addition	63	117
10	Failure in Examination	70	60
11	Fall in social reputation	11	79
12	Family problems	2649	3418
13	Ideological causes/hero-worshipping	112	1
14	Illegitimate Pregnancy	1	2
15	Love affairs	81	70
16	Physical abuse (Rape, incest etc.)	1	11
17	Poverty	10	0
18	Professional/career problems	24	19
19	Property dispute	14	5
20	Unemployment	136	98
21	Causes not known	852	612
22	Other Causes	1411	719
	State Total	**9244**	9026

Source: State Crime Records Bureau, Tvpm

Infrastructure

20.42 Infrastructure facilities will help the health and education status of people and hence it is one of the main indicators of human development. According to a study conducted by India Today across the states of India, by considering variables such as percentage of households with electricity, percentage of villages connected with pucca roads, road length / population, number of bank branches / population, number of domestic LPG consumers / total households, number of post offices / population, number of telephone connections / population, still Kerala stands in the 3rd place with a score of 3.14. Score and rank of big states in India are given in Table 20.23.

Table 20.23

Infrastructure - Score and Rank of 20 big states of India.

Sl. No.	Name of State	Score	Rank
1	Punjab	3.40	1
2	Himachal Pradesh	3.40	2
3	Kerala	3.14	3
4	Haryana	2.76	4
5	Uttaranchal	2.69	5
6	Maharashtra	2.69	6
7	Tamil Nadu	2.68	7
8	Karnataka	2.67	8
9	Gujarat	2.65	9
10	Andhra Pradesh	2.58	10
11	Jammu & Kashmir	2.44	11
12	Madhyapradesh	2.08	12
13	Rajasthan	2.06	13
14	Chhattisgarh	1.79	14
15	West Bengal	1.77	15
16	Orissa	1.77	16
17	Assam	1.71	17
18	Uttar Pradesh	1.68	18
19	Jharkhand	1.52	19
20	Bihar	1.29	20

Source: India Today Special Issue - 2007

Box 20.5

Speed is irrelevant if you are going in the wrong direction.

Source: HDR, 2007/08, UNDP.

Road and Motor Vehicles

20.43 Total road length in Kerala during 2006-07 was 162149 km as against 160944 km in 2005-06 This registered in an increase of 0.75% over the previous year. Road density in Kerala during 2006-07 is 417 km /100 sq.km, as against 414.13 km / 100 sq. km in 2005-06. Road length per lakh population has increased from 505.55 km in 2005-06 to 509.23 km in 2006-07.

20.44 Number of motor vehicles with valid registration as on 31 3.2007 was 40.25 lakhs against 35.60 lakh in 2005-06 This registered an increase of 13.06 percentage over the previous year. Number of vehicles per lakh population during the year 2006-07 was 12641 as against 11179 vehicles during 2005-06. In this period there were 10358 vehicles per 100 sq. km. as against 9159 vehicles per 100 sq. km.

20.45 Number of road accidents occurred during 2006-07 was 80.32 as against 116 number in 2005-06 registering a decrease of 30.76% over the previous year. The number of persons died/injured daily during 2006-07 is 101.23 as against 149 numbers in 2005-06. This shows a decrease of 32.06 percentage over the previous years.

Consumption of Electricity

20.46 Some form of energy is essential for the daily life of human beings and electricity is the major source in Kerala. During the year 2006-07 the total installed capacity of energy in Kerala is 2657.25 MW as against 2644 MW in 2005-06 registering a small addition of capacity over the previous year. The per capita consumption of electricity during these periods are 465 kwh and 427 kwh respectively.

CHAPTER 21

INFORMATION & COMMUNICATION TECHNOLOGY

The enviable growth of the services sector has been primarily driven by the exponential growth witnessed during the past 10 years in the IT/ITES industry. The Indian IT/ITES industry has been growing at a very healthy rate of 30% per annum. The industry has helped in creating large scale employment opportunities not only for technically qualified professionals in the software sector but also for large number of non technical personnel in low end activities like back office operations, call centres, transcription services etc. This industry is able to generate jobs with relatively low investment and also to achieve the goal without causing any environmental degradation. Today this industry is providing employment to over 1.6 million people across the country, grossing total revenue of over Rs. 160,000 crores per year, from exports and domestic sales put together

21.2 Government of Kerala is keen to play a catalytic role for the development of IT/ITES industry within the State, as it is ideally suited for such a densely populated State, having vast multitude of highly qualified and experienced human resources, uniformly spread across the State. Unlike the rest of the country, the State is also blessed with quality social infrastructure and excellent physical connectivity, evenly distributed across the fourteen districts of the State from Thiruvananthapuram in the south to Kasaragod in the north. Due to certain inherent strengths of the State, Kerala is uniquely placed to emerge as a major IT destination in the country, though it has had a late start. With the industry galloping at a healthy CAGR of about 25% there is enough opportunity available for the State to capture a fair share of the growing IT/ ITES business

21.3 The IT Policy 2007 of the Government of Kerala provides a frame work in evolving the State into a knowledge society with sustainable economic growth with equity, social harmony and high quality of life. The document identifies the increased usage of free software as one of the vehicles for realizing this goal. Other major objectives of the new IT policy are setting up of finishing schools to increase the quality of HR, bridging the digital divide, strengthening of e-governance, increased handholding to small and medium IT units, promotion of R&D and prevention of cyber crimes

21.4 With a view to facilitate the spread of the IT industry across the fourteen districts of the State, Government is taking quick steps for setting up quality IT parks in all the districts on the basis of a Hub & Spoke model. It is expected that the three major cities of Thiruvananthapuram, Kochi and Kozhikode would emerge as major IT hubs with spokes spilling over to the districts neighbouring these cities. Such a distributed growth would ease the pressure on the urban infrastructure and prevent the recurrence of the pit falls being faced by the Metros like Bangalore and Chennai.

Box 21.1
Destination Kerala

Kerala Wired for the future

- 100% of Kerala's 988 Telephone exchanges are digital
- 100% of Kerala's telephone exchanges are connected by OFC to the National Internet Backbone (NIB). All 1468 village Panchayaths within 3 kms of a digital telephone exchanges connected to NIB over OFC
- All 14 district HQs, 63 Taluk HQs covered.
- Reliance, Bharathi, Asianet laying own OFC backbone which will significantly further enhance communication service within Kerala

Advantages – Kerala

- Highest telephone density
- Highest rural telephone density
- Higher literacy and socio economic development indices

The Kochi – Gateway

- SEA - ME - WE – 3 'FLAG and SAFE FLAG' submarine cable landings
- 15 GBPS bandwidth support
- VSNL's primary international gateway in India

Bottom-line

- State level Information Infrastructure in place to deploy G2C, C2G, G2B, B2B and B2C applications. Significant and unique opportunity for industry
- Uniquely high telecom penetration allows the full benefit (cost, access, quality) of the NIB and Kochi Gateway to be leveraged by Industry, Government, local bodies, citizens and academic institutions.
- Kerala with its unique social fabric and enabling communication infrastructure is poised to evolve into an information enabled and powered state

21.5 Smart city has become a reality with the unveiling of the foundation stone of the project. Land acquisition of Technocity on the outskirts of Thiruvananthapuram city is in progress. Technopark and Infopark are being expanded significantly to cater to the ever increasing demand for space by IT companies.

Box 21.2
Smart City

Smart City Kochi is a joint venture between the Government of Kerala and Dubai Technology, Electronic Commerce & Media Free Zone Authority (TECOM). Covering 246 acres of land and an estimated built-up space of 88 lakh sq ft, Smart City Kochi will be one of India's largest business parks. The project, when completed, will feature an architecture that is an assorted blend of modern and local traditional styles amidst an exquisitely designed landscape, Smart City Kochi will create an infrastructure and environment for knowledge-

industry companies to grow and flourish. 70% of the built-up space would be devoted exclusively for IT related activities. Kochi will join Malta as the first two members of a global network of knowledge-based industry townships that Smart City seeks to create. The Kochi project with Rs.1700 crore budget would generate 90,000 jobs and is expected to catapult Kerala to become one of the leading IT destinations in the country.

Development of ICT Sector in Kerala

21.6 KSITM has undertaken a robust promotional campaign to hard sell Kerala as the emerging IT/ ITES destination in the country. As a result of concerted efforts to promote Kerala as a premier investment destination, major IT companies, STPI – T, Kinfra IT parks, SEZ are being strengthened and an integrated IT complex is to be established as part of a growth strategy for the ICT industry in Kerala. Investment Promotion and Management Cell in KSITM registers and administers the incentive scheme for IT units under the IT Policy of Government of Kerala. This will put in place a package of incentives which will make Kerala one of the most attractive destinations in IT in the country.

State Information Infrastructure (SII)

21.7 It acts as the State Network backbone connecting Thiruvananthapuram, Kochi and Kozhikode. It aims to use the free bandwidth by Asianet, Reliance, Bharathi and Other Service Providers. The Data Center attached with the project will act as common server yard to all Government institutions for safeguarding the data, cost savings and consolidation of IT activities in the state.

Technopark

21.8 Technopark is the first electronics technology park of its kind in the world, the first technology park initiated with 100% Government equity, the first park that bagged CMMI Level 4 certification with ISO 9001:2000 in the world and the first park to start Business Incubation Centre in the country, the first industrial park to start Technology Business Incubation in the country, and first park for developing in-house entrepreneurship talents and training activities by initiating the National Centre for Innovation Incubation and Entrepreneurship.

21.9 Technopark is the home to 120 IT and ITES Companies including 32 start up companies in the incubation centres, employing about 15000 IT professionals. The total investment in the campus including that of the companies comes to about Rs. 1000 crores in the years together and the annual turnover crossed Rs. 800 crores in the year 2006-07.

21.10 Spread over 285.64 acres of land and three million sq. ft. of built up space, Technopark includes the big names of IT & ITES majors like Infosys, TCS, US Technology, IBS Software Services, Mckinsey, Allianz Cornhill, Ernst &Young, Tata Elxsi, RMESI, Toonz Animation, NeST , Sherston Educational Software, Alamy Seaview Support System, Geosoft Technologies, Torpid India Ltd. etc.

21.11 Unique business enabling factors at Technopark include Technopark Business Incubation Centre (T – BIC), Technopark Technology Business Incubation (T - TBI) and National Centre for

Innovation, Incubation and Entrepreneurship (NCIIE) IT productivity Centre (ITPC) and International Centre for Information and Communication Technology (ICICT).

21.12 Technopark has created 20, 62,000 sq. ft area for industrial modules. An area of 146.07 acres of land has been given on long lease to the companies and most of these have constructed own buildings in the campus to the extent of 49, 61,700 sq. ft area .Apart from the industrial buildings, Technopark created 1,41,500 sq. ft built up space for other purposes. Details of industrial modules created by Technopark are given in the following Table.

Table 21.1
Industrial Modules Created by Technopark

Sl. No.	Building Name	Area in Sq. ft	Year of Completion
1	Pamba	36,000	1994
2	Periyar	36,000	1994
3	Nila	4,50,000	1997
4	Chandragiri	60,000	2000
5	Gayathri	1,50,000	2002
6	Bhavani	4,80,000	2002
7	Thejaswini	8,50,000	2007
8	New Building	4,12,000	Under construction

Source: Technopark

21.13 Other infrastructure facilities available in Technopark are

- Electricity distribution license for the supply of power to various establishments within the campus
- Water Supply Infrastructure
- Waste Water Treatment Plant
- Telecom / Datacom Infrastructure
- Satellite Earth Station of STPI in the campus
- Major Internet service providers – STPI, VSNL, BSNL, BPL, Asianet, Bharathi, Idea and Reliance provide internet connectivity to the companies in the campus.

21.14 Of the total companies, 30 % are US based, 40 % from Europe, 5 % from Middle East, 20% from within Kerala and the rest 5% from outside Kerala. A wide range of activities are undertaken in these companies like High Speed Scientific Embedded Software, Smart Card, Telecom, e-governance, networking, computer aided design, engineering software, business application software, ERP software, ITES, BPO, Back office facilities etc.

21.15 Government have accorded sanction for the acquisition of 507 acres of land as phase iv development of Technopark (Technocity) by acquiring land at Pallippuram, Vailoor, Andoorkonam and Melthonnakkal villages and the acquisition process is in progress. Technopark in association with Tourism Department is planning to create an International Convention Centre Complex at Aakkulam and the equity participation of Technopark to the project is limited to transferring the available land (46 acres) at Aakkulam. Infosys has taken 50

acres of land and US Technology 36 acres in the new campus and the acquisition of 100 acres of land for further expansion is going on.

21.16 Government of India has declared the Phase II expansion of Technopark as a Special Economic Zone (SEZ) entailing investors in the phase to all the various privileges and concession granted in similar zones in the country. The SEZ status is granted to the IT sector for the creation of IT Park in the 86 acres of land acquired for the phase II expansion and the same status will be given to 100 acres of land also once the acquisition process is completed.

21.17 Technopark also provides business value added services like convention centre with auditorium, conference halls, Technopark centre, open air auditorium, club house, guest house, restaurant, techno mall, business centre etc

Infopark

21.18 Infopark located at Kochi is the IT Park being developed by Government of Kerala. To set up this project, Government transferred 100 acres of land. It has been growing fast ever since its inception in 2004 and within a short period it has attracted investments from 29 companies which includes IT majors like TCS, Wipro, Affiliated Computer Services, OPI Global, IBS Software Services and US Technologies. Infopark campus is divided into SEZ facility zone with 75 acres of land and non – SEZ facility zones. Infopark is the IT landmark in Kochi – Queen of the Arabian sea and commercial hub of Kerala. Its close proximity to the SAFE and SEA-ME – WE- 3 cables dropping zone in Kochi make it one of the best connected yet the most economical IT park in the country.

21.19 L & T Tech Park has taken 4 acres of land on lease from Infopark with co-developer status to develop and construct state- of- the-art facilities for IT/ITES companies from India and abroad. Smart Business Centre (SBC) a true plug and play incubation facility is provided at Infopark. Low rentals clubbed with high quality furnishing make the SBC an ideal choice for start up enterprises. Bandwidth providers in Infopark are VSNL, BSNL, Sify, Bharati, Reliance and STPI.

21.20 A recent NASSCOM study in nine Indian ITES destinations, covering a range of parameters including land cost, power, communication infrastructure and manpower available ranked Kochi as the second IT/ITES destination above metros like Bangalore, Mumbai and New Delhi in India. 100% literacy and a very high level e- literacy aided by Government led projects such as Akshaya guarantee a ready manpower resource for ITES/BPO sector.

Software Industry

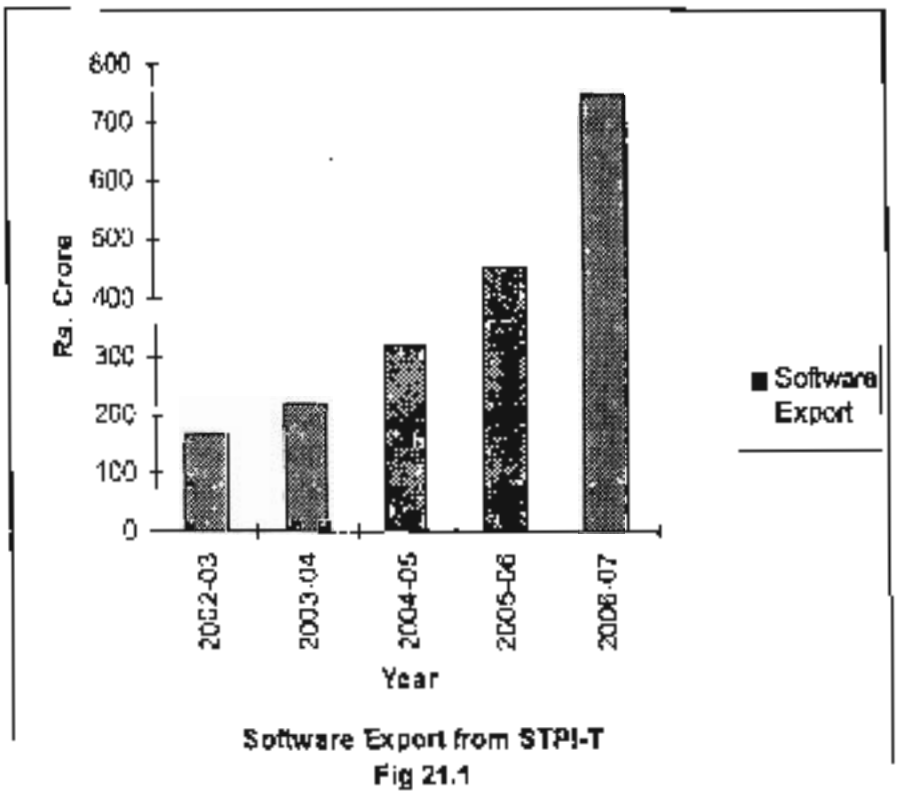
21.21 The total number of companies registered under Software Technology Park of India-Thiruvananthapuram is 419 in which 160 companies are exporting software regularly.The total software export during 2006-07 is Rs. 750 crores which is 66% higher than the previous year and above the national average. There is a steady growth in software exports from Kerala for the past years. Most of the units registered with STPI –T are SME's only. The incubation facility provided at the centre attracted a large number of small and medium level export oriented units and have grown to larger size within 12 to 24 months

21.22 Details on software export from STPI – T and number of units registered are given in Table 21.2 & Figure 21.1.

Table 21.2
STPI-T - Software Export & Number of Units Registered

Sl. No	Year	Software export (Rs. crore)	Growth Rate %	No. of Units Registered (as on March)
1	2002-03	165.00	...	277
2	2003-04	218.00	32	300
3	2004-05	317.00	45	346
4	2005 06	452.00	43	387
5	2006 07	750.00	66	419

Source STPI - Thiruvananthapuram



Software Export from STPI-T
Fig 21.1

Human Resources Development for IT / ITES

21.23 Till now the job opportunities in IT / ITES were mostly available outside the State. Now the scenario has drastically changed and the State has become a home to the large number of employees in IT/ITES. With the setting up of the Smart City and other IT parks in the State, earlier trend will be reversed. IT employment opportunities in the State will prosper with expansion of training of skilled manpower. The ITES Habitat at Kochi and world class training facilities in IIITM K offer variety of quality training programmes to the students,

Communication skill enhancement training started in 19 Polytechnic colleges in which 2500 students are undergoing this training. Training of master trainers in connection with the deployment of FOSS in the State, English training for the trainers of District Centre of English and setting up of Finishing Schools at Thiruvananthapuram using the infrastructure available at IHRD are the Human Resource Development Programmes of KSITM.

Indian Institute of Information Technology and Management - Kerala (IIITM –K)

21.24 IIITM –K is being positioned as an advanced IT and Management Institute that is situated in the median of Academic, Government and Industry. Besides PG programmes in different areas related to IT and Management in diverse disciplines they are running other major services of great importance for industrial growth, development of ITES in areas such as education, health care, e-governance, different area specific information services and community development. The Institute has highly qualified faculty covering rich diversity of subject areas balanced in the disciplines ranging from theoretical computer science, IT, scientific computing, computational science, computational chemistry, geo-informatics, grid security, data grids, community e-governance concepts, enterprise systems of different kinds and a few others Following are the major activities of the Institute.

- Academic Schools and PG programmes
- Media and Informative Centre for Education
- Technology and Business Incubation Services (TABIS)

E-Governance Initiatives

Akshaya e-pay

21.25 Akshaya-e-pay is a browser based web enabled system for collection of utility bills. This is a project implemented by Kerala State IT Mission on August 2004 at Akshaya Centres in Malappuram district on pilot basis as an extension of FRIENDS which is a single window utility bill payment centre set up in all district headquarters. Akshaya e pay has become successful as Akshaya Centres are easily accessible and work in flexible timings easing out the hardships faced by citizens for payment of utility bills even in rural area. Internet banking facility of State Bank of India is used for transferring funds. The following services pertaining to various departments / agencies are offered through Akshaya e-pay.

- Electricity bill
- Water Authority bill
- BSNL land line and mobile bill
- University fees

21.26 Akshaya e-pay roll out is complete in the districts of Kollam, Pathanamthitta, Ernakulam, Thrissur, Kozhikode, Kannur and Kasaragod. Akshaya e-pay is offered through 145 centres in the above districts. The collection has crossed 55 lakhs from nearly 15000 transactions in a short span. In Malappuram around 200 centres are offering Akshaya e-pay service and there is a collection of Rs. 17 69 crores from 5.31 lakhs transactions till date. Akshaya e- pay will be extended to Akshaya Centres being set up in the six districts on completion of e-literacy programme.

FRIENDS

21.27 FRIENDS Jana Sevana Kendram is already functioning at all the District headquarters of the state. E-pay has been introduced in the eight districts where Akshaya centres have been set up, viz. Kollam, Pathanamthitta, Ernakulam, Thrissur, Malappuram, Kozhikode, Kannur & Kasaragod through FRIENDS

Citizen Call Centre

21.28 Now, Citizen Call Centre is also used to receive complaints regarding Commercial Tax Check Posts, on a 24 hour basis. Complaints from citizens to the Hon. Chief Minister's Sutharya Keralam Programme are also recorded in the Citizen Call Centre.

Kerala State Wide Area Network

21.29 This project aims to extend the present backbone between Thiruvananthapuram – Kochi – Kozhikode upto the entire block headquarters in the state. The work of providing connectivity to ten State Government offices each from the district headquarters as well as from the Block headquarters is getting carried out presently.

Secretariat Wide Area Network (Sec WAN)

21.30 Digitization of Secretariat & Directorate level activities by connecting the Secretariat, Public office and Vikas Bhavan under a WAN is the prime aim of the project. Secretariat being the Main Administrative Centre, its computerization is the basic need for the State level e-governance activities. So it is selected for pilot implementation.

21.31 The functioning of the application software through the networked computer system will enable the electronic file flow. Majority of the activities and communications could be thus digitized. The digitized records can be stored and various reports be generated from the data. The pilot project in Secretariat is expected to finish in 2007-08 and roll out in others could be made in next 3 years.

Knowledge Archive Project (K-Base)

21.32 K-base is the project intended to upload Government Orders in website and make it accessible to all, including citizen. Anybody can view the GOs or take printout. Since linked with Government site, the uploaded GOs can be accessed by logging in www.kerala.gov.in under "More GOs". Government orders, being the most important reference & supporting document to guide for claim of the grievances of citizen/activities of Institution/ Departments, its availability on finger tip will be a real help. This is a service delivery project.The project is expected to finish in 2007-08.

Video Conferencing (VC)

21.33 The Video Conferencing project is envisaged for connecting all District Collectorates, Kerala House New Delhi, Secretariat, Public Office, Vikas Bhavan, Advocate General Office and IT Mission. It equips all the centres with video conferencing facility to organize immediate online

conferences and discussions, minimizing strains to participants, saving time and expenses, recording the conference etc.

Integrated Government Service Gateway (IGSG)

21.34 IGSG is a service delivery project envisaged to deliver pin pointed information about any Government office, its hierarchy, location, services available, and others the citizen need to know. Downloading provision of various forms of Government are also made

Service and Payroll Administrative Repository for Kerala (SPARK)

21.35 SPARK a project under Kerala State IT Mission, has the aim to have an up to - date details of staff and their salary The salary bill preparation, service book maintenance etc are made simple through SPARK It is a web based solution for service and payroll management, which can process and generate pay bills/reports/orders etc. Ultimately it can facilitate online data transfer between Government Departments, Treasuries and Accountant General's Office. Digitized Service Books of all the Government employees in the State will be captured into the system and Permanent Employee Numbers (PEN) will be allotted. This PEN will be the important code to identify the employees in the SPARK database.

21.36 SPARK is online in 10 Departments like government Secretariat, Chief Electrical Inspectorate, Land Revenue, Commercial Taxes, Treasury, General Education, Police Department and Collectorates covering 33 offices and is in good progress in 35 Departments. Service Books of over 95000 Government employees are already digitized. Works to implement SPARK in remaining offices has attained very good speed and expected to cover all the Government offices within the next four years.

Mission Mode Projects

21.37 Government of Kerala is initiating major computerization projects under NeGP in nearly twenty important departments. The DPRs of Mission Mode Projects are submitted to Department of Information Technology (DIT) for approval. DIT is under the process of considering the DPR for according formal approval and it is proposing a total amount of Rs.1977.57 crore for funding.

21.38 Government of Kerala has already invested substantial amount of money and other resources for computerization of various Government departments as well as PSUs. In the next two to three years the State and Central Government plan to spend nearly Rs.1500 crores under the National e-Governance plan for computerization of various Government functions. At present the computerization process in various departments is taking place in a disorganized manner. The basic reason for this is the lack of well defined procedures and guidelines for creation of Information System Assets in state.

e-Procurement

21.39 This is a Mission mode project under NeGP. The procurement action and work contracts of the State Government and public sectors are to be brought under the e-Procurement Project. Transparency, time saving and easiness in use are the main advantages of this programme.

Kerala Innovation Foundation

21.40 For the first of its kind in India, the government has launched the project entitled 'Kerala Innovation Foundation' through Kerala State IT Mission for documentation and digitization of traditional knowledge, local innovation and student innovations. The aim of the project is to build a state register of innovation and traditional knowledge practiced by various individuals and communities in the unorganized sector.

21.41 The pilot project started at Malappuram is presently supported by Local Self Governments, NGOs, Educational Institutions and local people and in certain Pachayaths, it became a mass campaign. NIC is developing a portal for making a register of traditional knowledge and innovations. This year the project is extended to Wayanad and Idukki. The Project will be extending to all other districts in the next financial year.

ICT for Development Programmes

21.42 Information and Communications Technology (ICT) is an increasingly powerful tool for participating in global markets, promoting political accountability, improving the delivery of basic services, and enhancing local development opportunities. But without innovative ICT policies, many people in developing countries – especially the poor – will be left behind. Through out the world, governments are formulating strategies and policies to expand access to ICT and harness it for various development activities.

Applications of ICT for Development

- Establishing systems, tools and applications for process re-engineering, information dissemination to public, enabling transactions, etc
- Providing access points to enable the rural population to take the benefits of ICT revolution
- Connectivity infrastructure, including rural connectivity and cost effective internet access services
- Providing access even to the remote places through Mobile, Internet and Satellite for e-learning, e-commerce etc
- Mass level capacity building and skill development programmes to citizens
- Development of tools and applications for the physically handicapped, mentally challenged people aiming at the e-inclusion of marginalized sectors
- Generation of data bases, information repositories, and knowledge management systems

21.43 Kerala state IT Mission started many initiatives in this sector, which include projects like Akshaya, Content Generation, Rural Connectivity Deployment etc. to develop access points, tools and applications that would help the common man to leverage the strengths of ICT applications.

ICT for Under Privileged Sections

21.44 Further expansion and development of ICT centre for the visually challenged and also to address the ICT requirements of the other under privileged sections of the society such as

physically challenged, mentally retarded people and others with disabilities etc are also in progress.

Development of Local Language

21.45 Development of content packages / portals in Malayalam, development of tools and applications required for effective deployment and to enable citizen interactions, publicity, promotions and conducting training programmes for these packages are in progress.

Akshaya Project

21.46 The Government of Kerala acknowledges the critical importance of Information & Communication Technology (ICT) as an instrument for the State's overall development and remains deeply committed to its dissemination to reach all segments of people and makes it beneficial as a vehicle for improved quality of life, accessibility to information, transparency in governance and overall socio- economic growth. Under this backdrop, the Government considers Akshaya as a flagship project in the sector of IT development.

21.47 The scope and scale of operation of Akshaya is multifaceted which involves coordination of project activities in 1223 local bodies in fourteen districts, dealing with 3000 + Akshaya e-centres and 64 lakh trainees in the State etc. Akshaya also ensures high level involvement of the local bodies at the grass root level.

21.48 The pilot project rolled out in Malappuram is in the initial service delivery phase while e-literacy training is being implemented in seven districts as second phase and identification of locations, selection of entrepreneurs, earmarking of e-literacy fund etc. are being carried out in other six districts.

21.49 The Akshaya e- centres envisage to deliver several value-added G2C, B2C, C2B, C2G etc services to the people. E-payment, e-learning and e-business etc are the priority sectors of services through Akshaya e-centres and are being implemented in Malappuram district. Reckoning on the power of ICT based governance and its ability to integrate across departments and offices and its potential to provide a level of convenience, accessibility, transparency, Akshaya committed to implement citizen and service oriented e-governance projects in the State. Akshaya e- centres would be the dissemination points of such services to public.

21.50 On completion of the third phase rollout, the project will provide direct self – employment to around 3000 persons and employment to about three to five persons in each of the 3000 e – centres and would bring in an investment to the tune of around Rs. 90.00 Crores in the State. Out of this 87.50% will be in rural sector. In short, Akshaya will act as an instrument in rural empowerment.

E – Governance in Kerala

21.51 For achieving better governance, computerization is underway in a majority of State Government departments as detailed below

- Agriculture
- Motor Vehicles

- Legal Metrology
- Rural Development
- Revenue including Taluk Offices
- Employment Exchanges
- Finance – Budget – Treasury
- Civil Supplies
- Kerala Water Authority
- Registration
- Education

IT@ School

21.52 The project aims at imparting computer education to the high school students for qualitative improvement learning systems and also equipping teachers to use computers as an educational aid

Box 21.3
IT@ School –At a Glance

- Stakeholders are the school managements, teachers, students and the local community
- Currently being implemented in all high schools (916 Government+ 1412 Aided+ 338 unaided schools – total 2666) of the State
- 2650 modern computer labs in high schools, 99% of the State High Schools have a computer lab of their own
- Over 25000 computers in high schools as against 2074 before the commencement of the project
- 86 private training institutions through out the 36 educational districts to provide continuous training to teachers
- 30573 high schools teachers out of the total 53369 have already been give a basic training
- Over 16 lakh students have been covered
- Web based applications for updating school details
- Supply chain management for managing the text book inventory, updating of SSLC data base and managing system between 51 offices

CHAPTER 22

LOCAL GOVERNMENTS AND DECENTRALISED PLANNING IN KERALA

The experiment of decentralised planning process with the institutional frame work of Local Self Governments in Kerala has now passed a decade. The 'Kerala Model' democratic decentralisation focusing on people's participation has been appreciated worldwide and national and international organizations applauded unique and remarkable achievements during the decadal journey. In India, Kerala is a model to other states in devolution of power, functions and resources to the local self governments. Through decentralisation, the state was able to build up a decentralised system of development administration, fiscal decentralisation, local governance system and above all it is a leap towards self reliant panchayat raj facilitating local economic development with people's participation. Commitment of government to operationalise constitutional obligation in eliciting people's participation in their development programme has materialized. An attempt in this direction started in the IX th Five Year Plan of the state.

22.2 Decentralisation in Kerala with its commendable salient features is a source of inspiration to similar agencies and the outstanding experience and success of LSGs in the sphere of local economic development through people's participation is an epitome to the promotion of planning and development administration. Some of the major landmarks identified in Kerala's decentralisation are;

- Enabled the state to structure a systematic participatory planning methodology at various stages of developmental process planning, implementation and monitoring etc.
- Initiated the transfer of around one third of the annual plan allocation in the state budget to the LSGs in the form of untied plan grant for preparing projects according to the wishes of the people for local development.
- Enabled to transfer powers, functions, institutions and staff to LSGs
- Improved not only the capacity of the local public but also capability of the elected representatives in understanding and identifying local level planning.
- Introduced a transparent method in the selection of individual beneficiaries of the schemes based on some specific criteria.
- Laid foundations for wide ranging reforms like right to information, a good practice in giving benefits, enhanced accountability mechanisms, outsourcing of technical supports, improved management system and simplified planning process.
- Motivated to improve accountability and introduced good governance features in the administrative set up.
- Made local governance more practical, responsive and transparent.
- Created a positive effect on reducing poverty to some extent by providing provisions to the basic needs of the weaker sections of the society especially the Ashraya concept was evolved.

IX th Five Year Plan and People's Plan Campaign (PPC)

22.3 At the beginning, in order to operationalise decentralisation in Kerala, a methodology of participatory local level planning was chosen. It being a new concept giving importance to awareness creation, a campaign approach was followed to introduce the system of participatory planning for decentralisation known as "People's Plan Campaign". The people's plan campaign launched on the Gandhi Jayanthi day of 1996 at the beginning of the IXth five year plan, which successfully emerged as an alternative development model and it laid an established platform for democratic decentralisation in Kerala. With the launching of the people's plan campaign, the state introduced a new development culture and a working

methodology for participatory planning at the grassroot level through LSGs, which was new in the development history of the nation. During the campaign, a number of planning processes were initiated and experimented to incorporate participatory inputs into the planning process of LSGs.

Box 22.1
Methodology in Participatory Planning under PPC

The various steps adopted in the methodology of participatory planning under PPC were,

Needs identification
Situation analysis
Strategy setting
Projectization
Plan finalisation
Plan vetting
Plan approval,
Implementation

22.4 **The core objectives and major achievements identified under PPC are listed below,**

Objectives :-

- To build up a new socio-politico-development culture in the state.
- To enable radical changes in the planning process with emphasis on decentralisation and people's participation.
- To equip the LSGs to prepare their plans on a priority basis following participatory and time bound approach.
- To empower the LSGs to become more self reliant institutions for discharging their powers and functions efficiently.

Achievements :-

- Helped to contribute people's unity in development action and generated a new development consciousness in the state.
- Facilitated to transfer more than a 3rd of the state plan outlay to LSGs for local development.
- Ensured maximum participation of the rural people at every phase of the planning process.
- Created a system of transparency among decentralisation for sustainable development.
- Motivated the LSGs to organise appropriate and strategic plan for local economic development.
- Enhanced the LSGs. to mobilise both human and material resources in the rural and urban areas and at integrating the various local development plans into district plan.
- Facilitated a marked change in the attitude of the people towards the planning process.
- Helped to bring the government officials, non-officials, volunteers and the elected representatives under one platform to empower the local bodies in the planning process.
- Empowered the LSGs to handle independently and efficiently the various problems faced locally on different subjects.

Major constitutional Achievements:-

- Setting up of state level co-ordination committee under the chairmanship of the Minister for LSG to point out issues and strengthen decentralisation in the state.
- Restructuring of Kerala Panchayat Raj and Kerala Municipality Act .
- Preparation of District Plan as envisaged in the constitution.
- Constitution of Ombudsman for LSGs.

X th Plan and Kerala Development Plan (KDP)

22.5 In 2002-03, under the Xth Plan the decentralised programme in Kerala was restructured and named "Kerala Development Plan" after analyzing the experience of PPC and in keeping with the objectives of the constitutional amendments and Kerala Panchayat Raj and Municipality Act. A number of innovative steps were taken under KDP to strengthen and institutionalise decentralisation in the state.

22.6 **The three main thrusts of the KDP were,**

- Institutionalise and build sustainable capacity in LSGs.
- Catalyze local economic development through LSGs
- Improve the quality of service sector particularly health and education.

Box 22. 2
Nedumbasseri - The First Children's Panchayath

Nedumbasseri Grama Panchayath of Ernakulam district has been declared on 23rd July, 2006 as the "First Children's Panchayath" of the state for being the forerunner in organizing Children's Clubs in all wards of the panchayath. The concept of Children's Club which was introduced in 2003-04 with the focus on integrated development of children has six major objectives. The Children's Club meticulously planned diversified programmes as a part of preventing poverty from the future generation. Children's Club has developed programmes to detect and enrich the inborn talents of children and make use of their skills and abilities for income generating activities inorder to inculcate saving habits among them. The activities of the Club focus special attention on the development of children in various fields like education, art and culture and entrust volunteers in each region to meticulously promote the talents. Moreover, it has designed some specific programmes to nurture and provide the spirit of nationalism in the minds of children transcending parochialism, the boundaries of castiesm, creed and religion. This programme of Children's Club has covered all wards of Nedumbasseri Panchayath. The Panchayath as a whole is acting in unison to combine the programmes of Children's Club.

22.7 **The core objectives of the Xth Plan were,**

- Make government policy commitments to decentralisation unambiguously.
- Take decentralisation to a phase of institutionalisation to make it sustainable.
- Focus attention on the needs, opportunities and concerns arising out of past experience and devise clear strategies and action plan to address them.
- Motivate and guide local governments to concrete on local development and to improve service delivery system, governance, transparency, people's participation and management.
- Bring about an organic relationship between transferred departments and local governments and bring in role clarity.
- Launch a comprehensive capacity building programme going beyond plan formulation and implementation and stressing management, governance, and long term development issues.

Box 22. 3

100 Days of Employment-A Support to People in Wayanad

To address the problems faced by people in Wayanad price-crash of agricultural products, farmers suicide, plights of agricultural labours etc, Wayanad was selected for the Employment Guarantee Programme of the Central Government, which initially covered 100 most backward districts in India. There were concerns regarding the efficacy of the programme which had been designed to the context of North Indian situations in solving the specific problems of Wayanad particularly the problems of marginal farmers. Initially each programme was implemented in selected Grama Panchayaths on a piolet basis. The programme was introduced on experiment basis for understanding the problems and issues involved in the implementation of new projects. In the backdrop of this, the project extended to all grama panchayaths. At the beginning of the programme, all those who were willing to do work under this project were registered. About 95896 households were registered, of which 61325 households received employment cards Only the students and those who aspire to do white collar jobs have yet to receive the cards. Extensive advertisement and propaganda programmes of the project enabled 1/10th of the total population being registered. 24855 Scheduled Caste and Scheduled Tribe households were also registered.

The major achievement of the project was the complete elimination of contract lobbies from the implementation of construction works. A novel way of implementing programmes by appointing the authorities of Kudumbasree and Neighbourhood Groups as supervisors was the unique feature of National Employment Guarantee Programme. One supervisor was selected for 50 labourers. The Supervisor was entrusted with the responsibilities of keeping the employment cards of labourers, obtaining signatures of labourers in musterroll, ensuring the execution of works as per the estimates, making available medicines and first-aid for the needy etc. In the district itself 639 neighbourhood authorities are now bearing the responsibility as supervisors in most sincere manner. Distribution of wages through banks is another feature of the project. It was adopted for avoiding rolls by binami contractors. After every 14 days, musterrolls are scrutinized and the wages due to each labourer are calculated on the basis of completed work. The amount was credited to the account of each labourer. Labourers can withdraw the amount as and when they need money. 33079 accounts were started in the district. The main advantage of the programme is that it promote savings of the labourers after meeting their urgent needs. Majority of the job seekers are women. Most of the women labourers do not withdraw the whole amount deposited in their account. The project opens new vistas for women empowerment, people's participation and involvement in development process.

22.8 **The general priorities given under the X th Plan were,**

- Promote local economic development with special emphasis on productive sector for generating employment opportunities and poverty reduction
- Upgradation of traditional industries and promotion of micro-enterprises.
- Focus on Natural Resource Management and Integrated Area Development through spatial planning.
- Upgradation of the quality of basic service provided by the LSGs with special emphasis on health, education, water supply, sanitation including waste management and care of disabled section.

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- Upgradation of the quality of basic service provided by the LSGs with special emphasis on health, education, water supply, sanitation including waste management and care of disabled section.

Box 22. 4
Kuthali Grama Pt - "Ayurdalam"
A Comprehensive Health Project-

The Kuthali Grama Panchayat of Kozhikode district has launched "Ayurdalam", a comprehensive health project to prevent transmission of communicable diseases, particularly AIDS. The project was taken up on an experimental basis in December 2006 with the help of the Kerala State AIDS Control Society. The main thrust of the programme is to create awareness among village people about sexually transmitted diseases (STD).

For the implementation of the programme, Panchayath engaged 60 active volunteers in 12 wards, who were given adequate training with the help of Primary Health Centres. As many as 25 groups with 15 members each were formed in each ward. These groups conduct ward-level public campaign programmes. Two persons from each of the 150 Kudumbasree units existing in the Panchayat were also trained. The public campaign methods include seminars and group discussion. Talks by HIV infected persons, health check-up camps and street play are the other methods adopted to educate general public and promote social awareness on the subject. Art and cultural festivals were also organized to achieve the goal. Twenty-seven other grama panchayats across the state are conducting similar campaigns with the help of the Kerala State AIDS Control Society. Terms like 'safe sex', 'abstinence' and 'monogamous relationships' have become common in the vocabulary of many community leaders, who have been educating their fellow villagers about HIV/AIDS.

22.9 **The Key features identified in the of X th Plan are mentioned below,**

- Five-year plans for LSGs were introduced for long-term development.
- Introduced Reform Plan for institutional development consisting of updating various records and registers maintained, preparation of road and benefit registers, increasing resource mobilization through taxes, user charges etc. and developing innovative means of financing through taxes.
- Special Component Plan for SC/ST, destitute, handicapped, aged and children were introduced.
- Independent monitoring and social audit of plan implementation were set up
- Measures were taken to strengthen the administrative capacity and accountability system of LSGs.
- Anti- poverty sub plan was introduced on part of LSGs plan.
- Kudumbashree programme was strengthened with co-operation of LSGs
- Ashraya project was introduced for targeting destitute for poverty alleviation.
- Modernization of Government Programme was introduced to strengthen LSGs to improve their quality of service delivered.
- Watershed Management based agriculture plans were taken for increasing the production and productivity of agriculture and allied sectors.
- Constitution of Appellate Tribunal.
- Maintenance grant and general purpose grant were given to LSGs based on the recommendation of 2nd State Finance Commission.
- Constitution of 3rd State Finance Commission.

Box 22. 5
Solid Waste Treatment Plant - A Reality In Kottayam City

As a part of Kottayam-Kumarakam Eco-city project, an integrated scientific solid waste treatment plant - a joint venture of Kottayam Municipality and Ramki Energy and Environment Limited, Hydrabad - was ingurated on 21st July at Vadavathoor. The company made an investment of Rs. 5 crore for completing the project. The company will directly operate the plant for the coming 15 years and then it will be handed over to the Municipality along with the technology and training for equipping the employees of municipality to operate the plant.

The company will take over the solid wastes collected by the municipality after assessing the weight and then sorting out the wastes into re-usables, metals, plastics etc. The remaining bio-wastes will be converted into bio-fertilisers with the help of Wind Row Composting system. Considering the high rainfall in Kerala, Wind Row Composting will be conducted under a spacious and roofed hall. The wastes will be put together with enough air circulation and which will be shuffled with machines once in a week of every month to produce aerobic composting. The remaining solid and other non-biodegradable wastes will be separated with the help of Machine Rotary. Then the product compost will be packed with the help of machines. Only 50% of the wastes can be converted into bio- fertilizers. The residue in the form of stones, soil and other inert materials will be scientifically treated and buried in sanitary land fill system inorder to avoid environment pollution. It is the first venture in Kerala with sanitary land fill system observing the rules of municipal solid waste management and handling. Measures have been taken to appropriate 2 acres of land to be transferred to the company for the above purpose.

To prevent the leakage of polluted water to ground water, sanitary land filling system is arranged with two layers, one layer of clay lining and above which another layer of high density polyethylene (HDPE) sheet lining. HDPE lining sheets must be joined carefully and scientifically to avoid the possibility of leakage through joints. Arrangement of Land Filling System itself will have an expense of Rs. 1 5 crore In designing the project as a part of Kottayam-Kumarakam Eco-city programme preparing and inviting tender documents at national level, and for other followup activities. A committee under the chairmanship of District Collector with representatives of State Pollution Control Board, Clean Kerala Mission and Town and Country Planning Department examined the tender documents and selected Ramki Infrastructure Ltd (Now it is named as Ramki Energy and Environment Ltd) for the approval of the council Along with this the municipality has approved a project to collect wastes from their sources directly with stress being laid to creation of employment opportunities for low income category women.

An Overview of the Financial & Physical Performance of LSGs under IXth and Xth Plan Periods

Allocation of Plan Funds to LSGs:

22 10 Local Self Governments are provided plan allocation in two different streams viz;

1. for Centrally Sponsored and State Sponsored Schemes.
2. for Local Development

22.11 All the schemes included in the first stream have been transferred to LSGs for implementation. The scheme guidelines under this stream are formulated by the Central/State Government and the role of LSGs to act as an agency for executing the scheme after deciding the location or beneficiary of the scheme. For the second stream, the LSGs have full freedom in deciding their priorities, formulating and implementing schemes subject to a general overall framework. The plan fund given to LSGs for the second stream is in the form of untied plan grant (grant-in-aid) for preparation of local level projects On every financial year, this provision of grant-in-aid to LSGs is included in the Appendix-IV of the state budget. The budgetary provision of grant-in-aid has three components viz; General Sector, Special Component Plan (SCP) and Tribal Sub Plan (TSP). Within the different tiers of local bodies the distribution of grant-in-aid during 1997-98 was made using population criteria. From the next year onwards, a major change was introduced with respect to the intra-tier distribution instead of mere population criteria. A composite index of entitlement was then evolved taking into consideration of geographical area, area under paddy, backwardness based on houses without latrine and houses without electricity in addition to population. The inter-se distribution of general sector fund was done as per the weightage indicated below.

Sl No	Indicators	Weightage (Percentage)			
		Grama Panchayath	Block Panchayath	District Panchayath	Municipality/ Corporation
1	Population (excluding SC/ST)	60	60	50	70
2	Tribal Population	5	5	5	5
3	Geographical area excluding area under forests	5	10	15	5
4	Area under Paddy	5	-	-	-
5	Own income of Grama Panchayath	10	-	-	-
6	Composite index of Agricultural Labourers, Persons engaged in Livestock, Fisheries etc and Marginal Workers	15	25	20	-
7	Composite index of backwardness: houses without latrine and houses without electricity etc.	-	-	10	20
	Total	**100**	**100**	**100**	**100**

22.12 The general sector fund was divided among rural and urban local governments according to the ratio (83:17) of non-SC/ST population. As for the rural local bodies, the total general sector allocation was again apportioned among the grama, block and district panchayath in the ratio 70:15:15 The inter-se distribution of SCP/TSP funds was done based on the scheduled caste /scheduled tribe population in the respective local body and distributed among the rural and urban local bodies in the ratio 88.45:11.55 and 97.20:2.80 respectively. The total share of SCP/TSP funds for the rural local bodies was further apportioned among grama, block and district Panchyath in the ratio 60:20:20 and 50:20:30 respectively.

Grant-in-Aid to LSGs:

22.13 The grant-in-aid given to LSGs during the five year plan periods (IXth & Xth) are given in Table 22.1

Table 22.1
Grant-in-Aid under IXth and Xth plan periods (1997-07) & Share of LSGs in the state plan

Rs. Crore

Year	State Plan Outlay	Grant-in-Aid outlay to LSGs	%
IXth Plan			
1997-98	2855.00	749.00	26.23
1998-99	3100.00 (8.58)	950.00 (26.84)	30.65
1999-00	3250.00 (4.84)	1020.00 (7.37)	31.38
2000-01	3535.00 (8.77)	1045.00 (2.45)	29.56
2001-02	3015.00 (-14.71)	850.00 (-18.66)	28.19
Total	**15755.00**	**4614.00**	**29.29**
Xth Plan			
2002-03	4026.00 (33.53)	1342.00 (57.88)	33.33
2003-04	4430.25 (10.03)	1317.00 (-1.86)	29.73
2004-05	4800.00 (8.35)	1350.00 (2.51)	28.13
2005-06	5369.81 (11.85)	1375.00 (1.85)	25.61
2006-07	6680.62 (24.42)	1400.00 (1.82)	20.96
Total	**25306.68** (60.62)	**6784.00** (47.03)	**26.81**
IXth & Xth Plan Total	**41061.68**	**11398.00**	**27.76**

Source: Budget document
Bracketed figure shows the percentage annual growth rate

22.14 A noted feature of the plan fund devolution in the decadal period of decentralization in the state was the significant increase in the grant-in-aid given to LSGs in absolute amount ie, from Rs. 4614 crore in the IXth plan to Rs. 6784 crore in the Xth plan. However, grant-in-aid as a percentage of state plan outlay shows remarkable variations year after year in IXth and Xth plan periods The aggregate grant-in-aid received by LSGs as a percentage of state plan outlay declined from 29.29% in IXth plan to 26.81% in the Xth plan period. There was 60.62% growth in the state plan outlay in the Xth plan compared to that in the IXth plan, but

the corresponding growth in grant-in-aid to LSGs was only 47.03% in the respective plan periods.

22.15 The sector wise allocation of grant-in-aid under IXth and Xth Plan period is shown in table 22.2

Table 22.2
Sector-wise allocation of Grant-in-Aid undert IXth & Xth plan periods (1997-07)

Rs Crore

Year	General	SCP	TSP	Total
Ixth plan				
1997-98	516.00	194.00	39.00	749.00
1998-99	716.00	195.00	39.00	950.00
	(38.76)	(0.52)	(0.00)	(26.83)
1999-00	780.00	200.00	40.00	1020.00
	(8.94)	(2.56)	(2.56)	(7.37)
2000-01	785.00	217.00	43.00	1045.00
	(0.64)	(8.50)	(7.50)	(2.45)
2001-02	668.00	182.00	*	850.00
	(-14.90)	(-16.13)		(-18.66)
Total	**3465.00**	**988.00**	**161.00**	**4614.00**
Xth Plan				
2002-03	1073.50	268.50	*	1342.00
	(60.70)	(47.53)		(57.88)
2003-04	1009.23	263.33	44.44	1317.00
	(-5.99)	(-1.93)		(-1.86)
2004-05	1016.67	285.20	48.13	1350.00
	(0.74)	(8.31)	(8.30)	(2.50)
2005-06	990.36	334.47	50.17	1375.00
	(-2.59)	(17.28)	(4.24)	(1.85)
2006-07	936.51	403.00	60.49	1400.00
	(-5.4)	(20.49)	(20.57)	(1.81)
Total	**5026.27**	**1554.50**	**203.23**	**6784.00**
	(45.06)	**(57.34)**	**(26.23)**	**(47.03)**
IXth & Xth plan Total	**8491.27**	**2542.50**	**364.23**	**11398.00**

Source. Budget documents

Bracketed figure shows the percentage annual growth rate

** No TSP Fund provided to local bodies during the year*

22.16 From the table it is clear that grant-in-aid given to the three components ie, General, SCP and TSP has remarkably increased in the Xth plan compared to that in the IXth plan ie, 45.06% increase for general category, 57.34% for SCP and 26.23% for TSP. The highest growth rate is noticed in the case of SCP ie, 57.34%. An year-wise analysis reveals that there

have been years of negative growth in the case of grant-in-aid given to general sector in the Xth plan period.

22.17 The tier-wise and sector-wise allocation of grant-in-aid under IXth and Xth plan periods, is shown in table 22.3

Table 22.3
Tier-wise & Sector-wise allocation of Grant-in-Aid under IXth & Xth plan periods (1997-07)

Rs Crore

Tier	IXth plan				Xth Plan			
	General	SCP	TSP	Total	General	SCP	TSP	Total
Grama Panchayaths	2049.06	544.44	64.18	2657.68	2902.96	823.13	100.56	3826.65
					(41.67)	(51.18)	(56.68)	(43.98)
Block Panchayaths	439.08	181.38	31.78	652.24	622.06	274.38	40.22	936.66
					(41.67)	(51.27)	(26.56)	(43.61)
District Panchayaths	439.08	181.38	62.93	683.39	626.07	274.38	60.33	960.78
					(42.59)	(81.33)	(-4.13)	(40.59)
Municipality	341.08	53.52	1.69	396.29	488.86	98.53	2.12	589.51
					(43.33)	(84.09)	(25.44)	(48.76)
Corporation	196.70	27.28	0.42	224.40	386.32	84.08		470.40
					(96.40)	(20.82)		(109.62)
Total	**3465.00**	**988.00**	**161.00**	**4614.00**	**5026.27**	**1554.50**	**203.23**	**6784.00**
					(45.06)	(57.34)	(26.23)	(47.03)

Source: Budget documents
Bracketed figure shows the percentage annual growth rate

22.18 The significant feature seen in the table is, more than cent percentage increase in the allocation of grant-in-aid given to corporations in the state ie, 109.62%, followed by that to municipalities, ie, 48.76%. This shows the top priority accorded by the government for the development of infrastructure in urban areas for accelerating the pace of development in the state. At the same time satisfactory growth is seen in the allocation to grama panchayath and block panchayath ie, 43.98% and 43.61% respectively. Year-wise, tier-wise and sector-wise allocation of grant-in-aid under IXth and Xth plan period are given in appendix 22.1

22.19 Grant-in-Aid and expenditure pattern of LSGs in the IXth and Xth plan periods are given in table 22.4.

Table 22.4
Grant-in-Aid-Outlay and Expenditure under IXth & Xth Plan periods (1997-07)

(Rs. Crore)

Year	Grant-in-Aid outlay	Expenditure	%
IXth Plan			
1997-98	749.00	702.31	93.77
1998-99	950.00 (26.84)	589.15 (-16.11)	62.02
1999-00	1020.00 (7.37)	941.06 (59.73)	92.26
2000-01	1045.00 (2.45)	732.28 (-22.18)	70.07
2001-02	850.00 (-18.66)	486.97 (-33.50)	57.29
Total	**4614.00**	**3451.77**	**74.81**
Xth Plan			
2002-03	1342.00 (57.88)	602.26 (23.67)	44.87
2003-04	1317.00 (-1.86)	1350.34 (124.21)	102.53
2004-05	1350.00 (2.51)	923.09 (-31.64)	68.37
2005-06	1375.00 (1.85)	986.21 (6.83)	71.72
2006-07	1400.00 (1.82)	1209.83 (22.67)	86.41
Total	6784.00 (47.03)	5071.73 (46.93)	74.76
IXth & Xth Plan Total	**11398.00**	**8523.50**	74.78

Rs. 1438.15 Crore released during 2003-04 which includes Rs.335 crore re-allocated to LSGs consequent to the closure of the PD Account on 09.07.2003.

Source: Budget documents & IKM

Bracketed figure shows the percentage annual growth rate

22.20 From the table it is clear that the expenditure of LSGs as a percentage of grant-in-aid has been stagnating at a level of about 74% during the two plan periods. The average expenditure of the LSGs in the Xth plan increased by 46.93% compared to that in the IXth plan. However, the average growth in expenditure of the local bodies in the last 10 years (ie 46.93%) is found to be lower than the grant-in-aid allotted to them in the corresponding period (47.03%). It is a proof that local bodies are not fully committed to spent the amount allotted to them.

Table 22.5

Tier-wise Grant-in-Aid - Outlay and Expenditure under IXth & Xth plan periods (1997-07)

(Rs. Crore)

Tier	IXth plan			Xth plan		
	Outlay	Expenditure	%	Outlay	Expenditure	%
Grama Panchayaths	2657.68	1938.75	72.95	3826.65 (43.98)	2952.96 (52.31)	77.17
Block Panchayaths	652.24	496.55	76.13	936.66 (43.61)	714.52 (43.89)	76.28
District Panchayaths	683.39	505.52	73.97	960.78 (40.59)	661.84 (30.92)	68.89
Municipality	396.29	302.78	76.40	589.51 (48.76)	438.17 (44.72)	74.33
Corporation	224.40	208.17	92.77	470.40 (109.62)	304.24 (46.14)	64.68
Total	**4614.00**	**3451.77**	**74.81**	**6784.00** (47.03)	**5071.73** (46.93)	**74.76**

Source: Budget documents & IKM

Bracketed figure shows the percentage annual growth rate

22.21 The tier-wise grant-in-aid and expenditure in the IXth and Xth plans are given above in Table 22.5. The very interesting feature noticed from the table is the impressive performance of grama panchayaths in spending grant-in-aid. Their expenditure as a percentage grant-in-aid allotted to them increased from 72.95% to 77.17% between the two plan periods. Similarly there is marginal improvement in the spending of block panchayaths from 76.13% to 76.28% during the corresponding plan periods. The remaining LSGs (district panchayaths, municipality and corporations) exhibited a poor performance in this respect. The highest decline is noticed in the case of corporation from 92.77% to 64.68% despite the fact that they have been allotted the highest amount as grant-in-aid. The detailed figures of expenditure (tier-wise and sector-wise) of LSGs during the two plan periods are given in appendix 22.2.

22.22 The tier-wise and category-wise grant-in-aid formulated and expended in the Xth plan period by different LSGs are shown below in table 22.6

Table 22.6
Tier-wise, category-wise Grant-in-Aid Formulated and Expended during Xth plan period (2002-07)

(Rs. Crore)

Tier	Productive			Service			Infrastructure			Not in sector			Total		
	Formulated	Exp	%	Formulated	Exp	%	Formulated	Exp	%	Formulated	Exp	%	Formulated	Exp	%
Grama Pts	969.99	609.96	62.88	1948.48	1493.09	76.63	831.22	633.78	76.25	227.62	216.13	94.95	3977.31	2952.96	74.25
Block Pts	197.57	113.94	57.63	470.95	360.61	76.57	208.23	169.96	81.62	69.09	70.01	101.33	945.84	714.52	75.54
District Pts	208.97	116.34	55.67	475.61	384.37	80.82	218.86	151.61	69.27	10.56	9.52	90.15	914.00	661.84	72.41
Municipality	65.29	40.53	62.08	281.61	209.97	74.56	194.42	164.11	84.41	23.81	23.56	98.95	565.13	438.17	77.53
Corporation	44.13	18.8	42.60	222.77	141.28	63.42	162.96	126.79	77.80	17.73	17.37	97.97	447.59	304.24	67.97
Total	1485.95	899.57	60.53	3399.42	2589.32	76.17	1615.69	1246.25	77.13	348.81	336.59	96.50	6849.87	5071.73	74.04

Source. IKM

22.23 The table reveals that the LSGs spent proportionately more amounts for infrastructure development ie, 77.13% of the earmarked amount and less amount for productive sector ie, 60.53%. This is because both block panchayath and municipality gave priority to infrastructure development, district panchayath and grama panchayath gave priorities to service sector and none of them gave importance for the development of productive sector This might have adversely affected the performance of agriculture and allied sectors and industry in generating income and employment

Table 22.7

Source-wise Expenditure during IXth & Xth plan Periods (1997-07)

(RS Crore)

Period	Grant -in-aid	Own fund	State Sponsered	Centrally Sponsered	Loan from co-operative	Externally Aided	Institutional Finance	Voluntary Contribution	Beneficiary Contribution	Others	Total
IXth Plan	3451.77	611.30	459.05	638.17	124.26	-	200.79	79.84	240.06	129.97	5336.06
Xth Plan	5071.73	511.05	160.84	525.24	13.15	18.40	103.50	16.18	290.40	184.94	6895.43
Total	8523.50	1122.15	619.89	1163.41	127.41	18.40	304.29	96.02	630.46	314.91	12231.49

Source. IKM and Economic Review 2002

22.24 The expenditure of LSGs met from different sources of revenue of LSGs during the two plan periods is shown above in table 22.7. The table reveals that the LSGs are heavily depending on grant-in-aid for meeting their expenditure requirement. The expenditure of the LSGs, met with other sources has been experiencing negative growth in the Xth Plan when compared to that in the IXth plan.

22.25 Selected physical achievements of LSGs in IXth and Xth plan periods are given in tables 22.8 & 22.9

Table 22.8

Selected Physical Achievements of Local Governments during the IXth Plan period (1997 - 2002)

Sl. No	Item	Units	General	SCP	TSP	Total
1	2	3	4	5	6	7
1	Area under cultivation	Acre	508265	30341	13993	552599
2	Beneficiaries of vegitable cultivation	No.	4863669	439088	53723	5356480
3	Tillers/Tractors supplied	No.	73971	951	226	75148
4	Cattles distributed	No.	215976	96303	11487	323766
5	Poultry distributed	No	1788426	339826	24932	2153184
6	Construction of Cattlesheds	No.	87472	17415	1394	106281
7	Sewing Machines	No.	42676	17639	915	61230
8	Skill development persons trained	No.	127520	43578	3300	174398
9	Distribution of house plots	No.	9828	20435	1584	31847

10	Houses constructed	No.	373157	175533	21892	570582
11	Renovation of houses	No.	93058	84226	9120	186404
12	Construction of sanitary units	No.	449532	109635	11978	571145
13	Electric wiring of houses	No.	94894	59116	7595	161605
14	New wells	No.	97808	28640	2427	128875
15	Water taps installed	No.	81115	14864	1914	97893
16	Ponds desilted	No.	33020	947	303	34270
17	Pump-sets supplied	No.	76104	7979	1318	85401
18	Roads Constructed	No.	40894	6679	1162	48735
19	Length of Roads	KM	164224	17244	3645	185113
20	New Culverts constructed	No.	11502	540	229	12271
21	New Bridges constructed	No.	4030	269	84	4383
22	Co-operative formed	No.	5815	1033	468	7316
23	New schools built (area)	M.sq	173923	2208	4549	180680
24	Hospital building (area)	M.sq	133575	2893	4203	140671
25	Offices built (area)	M.sq	243282	4114	1759	249155
26	Marketing complexes built (area)	M sq	125131	8317	31	133479

Source. IKM

Table 22.9

Selected Physical Achievements of Local Governments during the Xth Plan period (2002-07)

Sl. No	Item	Units	General	SCP	TSP	Total
1	2	3	4	5	6	7
1	Area under cultivation	Ha	66560.87	6185.22	572	73318.09
2	Beneficiaries of vegetable cultivation	No.	936241	40870	1984	979095
3	Poultry-egg rearing units	No.	65757	7666	599	74022
4	Construction of Cattlesheds	No.	50101	3557	174	53832
5	Skill development (persons trained)	No.	95174	17609	1307	114090
6	Micro enterprises started	No.	14291	1366	140	15797
7	Self employment units started	No.	17039	1941	146	19126
8	Self employed persons	No.	82662	9786	1330	93778
9	Computer training(persons trained)	No.	525924	54735	2075	582734
10	Houses constructed	No.	139139	59523	7979	206641
11	Distribution of house plots (No. of beneficiaries)	No.	12537	11903	773	25213
12	Renovation of houses	No	80545	72548	7291	160384
13	Shelter upgradation	No	20745	7419	586	28750
14	Construction of sanitary units	No.	386792	55063	7229	449084
15	Electric wiring of houses	No.	37724	17917	4713	60354

16	New wells	No.	45101	13914	872	59887
17	Pump sets	No.	12059	1111	67	13237
18	New culverts	No.	2663	202	25	2890
19	New bridges	No.	1832	125	18	1975
20	Anganwadi buildings constructed	No.	3873	116	31	4020

Source: IKM

22.26 There were physical achievements in the Xth plan in various spheres. However, compared to the IXth plan, the physical achievements in spheres listed in the two tables during the Xth plan was not very satisfactory.

XI th Five Year Plan - People's Plan second phase

22.27 Kerala's decentralized planning now gearing up for the execution of the XI th five year plan. Many of the issues and challenges faced during the past one decade of decentralisation still remain unaddressed. Keeping in view the past experience on decentralisation and realizing the positive impact of the people's plan campaign introduced in the IXth five year plan period, government have decided to launch the 2nd phase of People's Plan Programme in the state for proper institusionalisation of decentralisation during the XIth five year plan.

22.28 **The core objectives under people's plan 2nd phase are,**

- Sustainable institutionalisation of decentralisation in the state.
- Improve the quality of local level planning with active participation of people.
- Revival of agriculture and promoting local economic development with special emphasis on improvement of public service by targeting the weaker sections of the society.
- Increasing the production and productivity of agriculture and other allied sectors by preparing Integrated Watershed Management Plans
- Generating additional income and job opportunities by promoting primary sectors supplemented by strengthening of micro-enterprises, small and medium enterprises and traditional industry

Strategies and Priorities of XI th plan

1. Local Economic Development :

22.29 Top priority is given to local economic development by generating additional income facilities and job opportunities with special attention to weaker sections of the society. For achieving this, special priority are given to;

- Revive agriculture especially food crops.
- Eco-restoration with farm level plans as basic units prepared and integrated on the basis of a holistic assessment of a natural region.
- Group farming will be encouraged.
- Primary sectors will be enriched by supplementing micro enterprises, small and medium enterprises and traditional industry.

2. Social justice :

22.30 For maintaining social justice in the distribution of fruits of local economic development, special care is given to reduction of poverty by targeting socially and economically marginalized and excluded groups.

- Anti- poverty sub plan will be taken, as a mandatory item for LSGs plans
- Ashraya project will be universalized in both rural and urban area.
- Special component plan, Tribal Sub Plan and plans for women, children, aged and disabled would be implemented efficiently within an overall framework.

3 **Enhancing the Quality of Public Services-**

22.31 The key priorities included for achieving the goal are,

- Improving the quality of education through an integrated planning process.
- Improving public health and delivery of health services.
- Upgrading the quality of services provided through anganwadi network with special emphasis on health, nutrition, pre-primary education.
- Total sanitation with priority for solid waste management in all village panchayat and urban local bodies.
- Provision of quality of drinking water through community managed water supply scheme.
- Providing shelter to every poor family under an integrated housing programme called EMS Housing Programme.
- Implementing energy security through integrated energy plans.

4. **Good Governance:**

22.32 During the XI th plan, LSGs should prepare 'Good Governance Plan' for ensuring quality oriented services to the public with following aspects;

- Increasing people's participation in planning, implementation and monitoring.
- Ensuring proper upkeep of accounts
- Creation of an integrated beneficiary database covering all benefits
- Revamping office systems in tune with the right to information to ensure maximum transparency and proactive disclosure.
- Introducing e-governance applications for all public services.
- Universalizing registration of birth and death and marriage..
- Improving performance of civic duties in respect of Village Panchayats, Municipalities and Corporations.
- Opertionalising accountability features like citizen scorecards and social audit and eliminating corruption.
- Preparation of detailed service delivery plans as part of citizen charters.
- Inculcation of the culture of reaching out to the needy through proper extension systems.
- Introduction of a public grievance redressal system
- Improving efficiency of officials including punctuality through training and performance assessment.
- Introduction of a community based monitoring system through the Kudumbashree network.

Box 22. 6
Thazhekkodu - The First Grama Panchayath
Set Up Hospital Kiosk

Thazhekkodu Grama Panchayath in Malappuram District made a break through in the instant registration of eventing births and deaths in hospitals on Ist November 2006 establishing Hospital Kiosk as a beginning for celebrating the golden jubilee of the formation of Kerala State.

The concept of Hospital Kiosk is an electronic network established jointly by the Grama Panchayath and hospitals with the technical assistance of Information Kerala Mission Under this network births and deaths in hospitals are instantly registered and certificates are issued to the concerned within 24 hours as per the section 12 of Birth and Death Registration Act The relatives have to submit the relevant information to the hospital authority regarding birth or death in a prescribed form issued by the hospital authority After scrutiny, it is submitted to the hospital kiosk. Making the entry in the computer, the data entry operator gives a copy of the same to the concerned for verification. On examining the copy and ensuring that there is no error, the person concerned has to re-submit it to the kiosk counter If there are any errors, this will be corrected by the operator and the report will be sent to the officer concerned in Grama Panchayath through electronic media The Registrar in grama panchayath verifies the report in computer and then prepares the certificate as per section 12 to be sent to the kiosk in hospital within 24 hours It is immediately transferred from the kiosk to the person concerned by charging the service fee of Rs. 15. The main advantage is, if birth or death takes place in hospitals, the people can obtain the certificate under section 12 from the hospital concerned itself within 24 hours. This process has transpreancy, accuracy and quality of service.

Distinct features of people's plan 2nd phase

22.33 Some of the features of people's plan - 2nd phase are given below,

- ASHRAYA project will be universalised in both rural and urban areas from 2007-08 on wards.
- Anti- poverty sub-plan will be mandatorily included in the plans of LSGs.
- An integrated housing programme "EMS housing Programme" will be implemented in a phased manner for providing shelter to every poor family.
- Good governance plan will be introduced to improve the development functioning of LSGs
- Integrated energy plan will be prepared in each village panchayat, municipality and corporation in a pooled manner
- Separate Technical Advisory Group will be introduced at the Municipal / Corporation level for vetting plans of municipality and corporation.
- Special methodologies will be introduced at the preparation of plans at the district level for certain sectors like watershed management, health, education. total sanitation, water supply, connectivity, sports etc.
- 40 % general sector fund will be earmarked for productive sector in rural areas.
- 3 % of individual beneficiaries will be from the disabled.

- Steps will be taken at the district level for the preparation of special sector plans and also to integrate them into state plan with the coordination of District Planning Committee.

Box 22. 7

Malinnya Muktha Keralam

A Scheme "Malinnya Muktha Keralam" is for the development of Health and Tourism sectors in Kerala, was inaugurated by the President of India on 1st November 2007 in Trivandrum. The scheme to be implemented in two phases is expected to be completed in 3 years. The project is envisaged to safeguard the densely populated state against the challenges in health sector. Effective and time bound garbage treatment programmes only can prevent the return of contagious diseases adversely affecting the health of the public and the economic condition of the state. It not only fosters the health condition of the public but also enhances their standard of living. The project in the first phase aims at providing ready latrines in all houses and public places; ensuring a standard hygiene in all aganwadies, hospitals, and schools, the markets and business centres freeing, roads and public places from sweepings and plastics Those local bodies which achieve the target before 31st May 2008, will be honoured.

In the second phase more advanced measures like gathering the garbage, segregation, setting up of integrated waste treatment plant in a decentralised manner, scientific project for wiping out contaminated water, hygienic colonies, legislation for garbage-free Kerala, public sanitary system in towns and religious centres etc, are envisaged. Second phase will be implemented before 1st November 2010. The campaign activities of the programme was started in 2006.

Grant -In - Aid to LSGs in XI th plan period.

22.34 The proposed state plan outlay for the XI th plan period (2007 -12) is Rs 40,422 crore. Out of this, Rs 10 889 crore has been earmarked for local bodies. The grant-in aid earmarked for the first year (2007-08) of the XIth plan to local bodies as budget provision of Rs. 1540 crore registers an increase of 10 % in the outlay of 2006-07 crore (1400 crore). The tier-wise and sector-wise allocation of grant-in aid are given below;

(Rs lakh)

Tier	General	SCP	TSP	Total
Grama Panchayths	59851 71	23525.93	3289.64	86667 28
Block Panchayaths	12825 37	7841.98	1315.85	21983.20
District Panchayaths	12825.37	7841.98	1973.77	22641.12
Municipality	9757.46	2756.59	75.74	12589.79
Corporation	7755.09	2363.52	-	10118.61
Total	**103015.00**	**44330.00**	**6655.00**	**154000.00**

Note: Rs335 lakh has been set apart as undistributed amount in the budget provision of Rs 1540 crore for giving incentives to outstanding local bodies during 2007-08

Box 22. 8
A Model Project To Improve Mental Health In Muhamma Panchayath

Kerala, a show piece states in various fronts, has been losing its advantages in certain areas. There has been considerable increase in the incidence of suicide and mental diseases in Kerala. Hence, Kerala is urgently in need of a health policy to address these problems. Muhamma Panchayath has made some humble initiatives in this respect. Comparatively the panchayath stands forefront in literacy and education. The Panchayath has 21 Aganwadies, 5 L.P Schools, 1 U.P. School and 1 Higher Secondary School, 2 High Schools, 1 Special School for training the mentally challenged children and many Nursery Schools and Computer Education Centres. It has also five recognized libraries and a few Extension Education Centres.

While proud of being educated and civilized it is said that a good number of people in the Panchayath are victims of superstitions. Many of them are not willing to reveal their mental stress and agony to others. Instead of that they act upon the advice of local astrologers and other practitioners.

The issue was brought to the attention of the Panchayath and the Panchayath started a councilling centre in 1998 as remedial measure to address this menace. Patients coming to P.H. Centres having mental stress and problems are directed to the councilling centre. Some others are reaching the centre with the help of volunteers. **The significance of the project is that Muhamma is the first Panchayath in Kerala which started a councilling centre along with P.H.C.**

Now Muhamma P.H.C is developed into a Community Health Centre and hence patients from nearer panchayaths are also able to make use of its facilities. It is only a humble step to reorient people from the clutches of superstitions to scientific outlook. A lot has to be done to expand the scope of the councilling as followup action. The Panchayath also started a pre-marital councilling programme as a part of the councilling centre in 2006-07. Pre-marital councilling equips the youngsters who are going to get married with awareness to overcome the crises that may surface in their family life. This enables them to lead a peaceful life by facing the realities of life. This also prevents the immature decisions of the newly wedded failed couples to report to the drastic steps like divorce.

The panchayath evolved the project with the help of health workers of C.H.C, Muhamma. Councilling is conducted in every saturday and second tuesday beginning at 10 am in the Community Health Centre. Councilling and pre-marital councilling are of course helpful to a large extent in reducing the rate of suicide. How ever, the major limitation is that it is confined to C.H.C only. To analyse the causes of suicide, the Panchayath also arranged a workshop by using the service of experts. It was found that various factors including financial problems were responsible for committing suicide and a sound mind to overcome the crises was the only anti-dote to this problem. The workshop called for the participants to propagate the programmes for enriching the mental health of the people to every nook and corner of the panchayath.

Decentralized Planning in Kerala - Major Challenges

22.35 Decentralized planning process in Kerala has opened up a new era in local level planning for economic development. A feed back of the process throws light on some unaddressed issues and challenges. Some of them are mentioned below;

1. Vision on Local Development:

22.36 During the IX th Five Year Plan under People's Campaign Programme, the LSGs prepared their plan through grama sabha /ward sabha based on priorities of local needs . But from the Xth Plan onwards, the LSGs have failed to arrive at best course of development priorities, which are locally most essential for achieving the local economic development. Planning will be sustainable and effective only when it is local resource and need based. A quantum jump in this respect is highly essential The project prepared by LSGs has not reflected the local needs. There is lack of perspective vision among the local leaders regarding the development of the area.

2. Participatory Planning:

22.37 The grama sabha / ward sabha is the most important institutional mechanism for people's participation in decentralisation. Today, people's participation has substantially declined when compared to that in IX th plan period. The average attendance estimated in grama shabha / ward sabha is only 12% and the focus has been on selection of beneficiaries rather than on evolving development consensus or increasing social control. A reasonably knowledge oriented participatory methodology of planning from the grassroot level has not been developed so far. Consequently, the LSGs comes backward in prioritizing and suggesting the optimal solution for the local issues. Conscious efforts have to be made to ensure the quality of participation of people in the entire planning process.

Box 22. 9

Kerala – Major Challenges Before Panchayath
(A study Report of SDC CapDeck, Centres for Socio-Economic and Environment studies and the Centre for Rural Management)

The study sheds light on the limitations and flaws in the Panchayati Raj system to enable meaningful interventions for rectifying the lapses:

- The players of the decentralization process do not appear to have clarity about the concept or scope of Local Self-Government Institutions. As local planning is perceived as the instrument for development, the thrust is on short -term development projects with more tangible results than comprehensive and sustainable long-term ones,
- Local bodies are considered as another department or arm of the state government.
- While public participation is confined to planning, implementation and monitoring of plan projects, non-plan expenditure, which covers the creation and maintenance of capital assets, never gets due attention. Hence, the need for a community-based monitoring system to cover all activities of the local bodies.

- The poor participation in grama sabhas and its failure to play a creative role is a matter of concern. Attending grama sabhas has never been a priority of the middle and upper classes, the younger generation and the intelligentsia. Grama sabhas are being treated as a forum for wresting benefits. Such meetings have become ritualistic. Many elected representatives tend to ignore the suggestions evolved there and in development seminars and try to enforce their own decisions. Some of them even think that decentralization of powers means 'power up to elected representatives' only. The grama sabhas have to ensure transparency in the functioning of the Panchayath and facilitate continuous social audit.

- The Kerala Panchayath Raj Act envisages the need to prepare a citizen's charter and its annual revision. Many panchayaths do not attempt to frame a charter and even where it has been prepared, services delivered to villagers do not measure up to the standards mentioned in it.

- Though the steering and standing committees in local bodies have well defined rules, majority of them have failed to perform their assigned rules. The functioning of the committees demands greater attention.

In spite of such problems, the local bodies can be further strengthened as organs of good governance at the grassroots by taking effective remedial measures. Streamlining the accounting system, merger of the District Rural Development Agencies with the District Panchayath are some of the laudable efforts made by the government for improving the functioning of the local bodies.

3. Resource Planning:

22.38 In the IXth plan period, need based planning methodology was chosen for local level planning. But in the Xth plan onwards, the local level planning was made resource based so as to achieve stability and sustainable development. Initial steps were taken during the Xth plan period to make LSGs plan resource based. But still it has not been fully materalised. There is a tendency on the part of the LSGs to thinly spread the resources in all the wards to satisfy the constituency based demands of every elected member. There is a need to enable local governments to develop a strategic vision and prepare an action plan over a longer range of time to realize the vision. The LSGs should avoid small and wasteful projects with lesser objectives. But they should always take programmes and projects having significant development impacts on a large scale. Right from the inception of People's Plan, it was expected that local bodies would mobilise some local resources by way of local credit, beneficiaries share, voluntary contribution and service for accelerating the local development. However, little progress we achieved in that area.

4. Integrated Approach of Planning:

22.39 From IXth Plan onwards, conscious efforts were made for integrating the development plans of different tiers of LSGs at different levels. But little has been done so far for integrating the plans of the three tier local bodies. The plan preparation is not sequenced and spaced to ensure inter-tier complementarity. This is one of the reasons behind the sudden decline of productive sector. A careful planning process should be initiated by integrating all the funds and schemes implemented through LSGs, including centrally and stately sponsored schemes. Similarly, ranking of local government plans in the state plans has not been attempted so far. The plan of individual LSG should organically be merged into a District Plan emanating from a shared vision of development.

Box 22. 10

National Literacy Award- Satyan Maithra Award to Kasargod District

Kasargode district was accorded the National Literacy Award - 'Satyan Maithra Award' - for its excellent work in literacy and extension education programme. The award consists of Rs. 10 lakhs, certificate and memento. The award was named after Satyan Maithra who did valuable contribution to literacy and informal education in West Bengal. Kasargod district was selected after making an evaluation study in the respective fields of 300 districts in the country by the representatives of National Literacy Mission. The evaluation of the district was done by a 3 member Committee. The district received more than 80% marks especially on account of the enthusiastic effort of Local Governments in the districts. Efficient working of Literacy Mission under the leadership of district panchayath president as well as the collective efforts of the staff in Literacy Mission, in fact made the district to receive this honour. The district gave equal priority to blocks which use Malayalam and Kannada as linguistics. The district published 1000 set copies of books which were on par with the standard of 7th class. Of the 150 centres of continuing education, 100 centres were given basic facilities through local bodies. Two Model Education Centres were opened by making use of the plan fund of the District Panchayath. Steps were also taken to provide computer and other ancillary tools under the programme.

Along with the activities in extension - education in the district, the following are the other activities which caught the attention of the evaluation team.

- The district accorded the highest priority to awareness programmes relating to Information Act and the district topped first in arranging such programmes.
- The district promptly completed the survey suggested by the National Manuscript Mission.
- The district firstly summoned a grama-block-municipal level art festival for the participants and volunteers in extension - education programme.
- The district conducted the highest number of programmes in a model way with the help of Government and other agencies in extension education and training for self employment.
- It constituted about 152 self - help groups by giving priority to the widows and physically challenged.
- Helpful measures were started for the victims of endosalphan.
- The district has made 505 learners capable of 10th standard equivalent examination
- Literacy percentage increased from 82.5% to 86.8%.
- Started counselling and information centres.
- Constitution of "Akshara Swathana Sena" and science examinations for children

By considering the above activities, the district was honoured with the award under national recognition.

5. Productive Sector :

22.40 The LSGs, are able to provide the minimum needs of the local people like shelter, water supply, sanitation, electricity and connectivity. But their performance in sectors boosting local production and employment paving the way for economic development has been rather limited during the IXth and Xth plan periods. It is estimated that about 60% of LSGs investment is on public works. One of the most significant findings of the assessment is the poor performance of the LSGs in the productive sector particularly in agriculture. Poverty alleviation has not been taken up by the LSGs on their own. Despite the instruction by the government that administrative institutions at every level should set aside a fixed amount for production sector, it is not fully observed by the local bodies. It is undoubtedly

proved that eradication of poverty can be achieved only through a regional approach giving stress to the enhancement of employment opportunities, production and income at local level. Through the minimum needs assets have benefited the poor, the assets for self employment as well as improving production have not yielded the optimal results as clear integrated plans could not be prepared.

6. Plan Formulation Process:

22.41 A systematic participatory approach was followed during the IX th plan period to prepare LSGs plan. IX th plan was formulated and implemented by the local bodies under the support of an institution of people's plan. Involvement of the mass and volunteers in various forms on a large scale was sought by organizing development seminars, technical committees etc in grama sabha / ward sabhas. It was intended to collect and compile the suggestions of people regarding development and to have an understanding about geography, history and environment of the locality. But the role of working groups, grama sabha / ward sabha participation, technical supporting system has not been improved to a satisfactory level now a days.

7. Maintenance and Upkeeping of Assets:

22.42 There is a common tendency to concentrate in creation of new infrastructure without taking care to ensure that the existing facilities are properly maintained. Proper upkeep / upgradation of existing assets is very essential. Most of the created assets during the last two five year plans have not been fully utilized and kept idle.

Box 22. 11
New Venture For Integrated Waste
Treatement By Kadakkal Pt

Today the priority is accorded to the timely treatment of bio-wastes without creating any environmental pollution. For realizing the objective, Kadakkal grama panchayath has implemented 'bio-tech', an integrated waste treatment project. An integrated waste treatment plant for producing bio-fertilisers and electricity was established by Kadakkal grama panchayath in Kollam district with the technical assistance of bio-tech. It is a pioneering attempt in Kerala. Filth and wastes were produced on a large scale in the panchayath by the markets and butcher's shops. At this juncture, the panchayath decided to implement integrated waste treatment project as a remedy to the problem. Consequent on the implementation of the project the panchayath is now able to treatment market wastes daily generated in the panchayath. Bio-methanysation technique is used for the treatment of wastes.

The wastes expelled from the bio-gas plant connected to the waste treatment plant and the contaminated waste from butcher's shops are subjected to purification and treatment and which is then used for the cleanliness and daily use of butcher's shops and the treatment plant. Biocynerator is used for the treatment of bio-degradable wastes like dry leaves, sweepings etc. Bio-gas is used as the fuel in biocynerator. Leaching facilities are set up with the plant for properly treating and segregating fibers and residues of vegetables. Final residues of the plant are used for preparing earth-worm compost The main output of the plant- bio-gass is passed through filters for purification and with the help of generators it is used for the generation of electricity Daily 3 KW of electricity is produced from the treatment of 1 tone of wastes. The produced electricity is used to light up 120 bulbs in nearby park. The Panchayath is now a model in treating market waste and conserving energy. The technology is user and environmental - friendly.

8. Accounting and Audit System:

22.43 Lack of proper accounts in time is one of the major issue in the administrative set up. A clear system of accountability to public needs to be developed through consultative process. Lack of systematic accounting and auditing is found to be a serious shortcoming in local bodies. The performance auditing implemented, as a part of decentralisation has to be made more effective. Measures for reforming auditing of three tier panchayaths are in the half way. Accountability will be enhanced by grater transparency through better communication of information to the public about the activities of LSGs, funds received or raised by them and their audited accounts.

9. Transparency in Administration:

22.44 Ensuring efficient transparency and social justice in local self governance creating confidence in the minds of the public regarding the administrators and administrative system and strengthening the democracy were the objectives of decentralisation The establishment of a clear administrative framework for LSGs is not so far achieved in IXth and Xth plan period Steps should be taken to measure, monitor and improve administrative efficiency commensurate with strengthening capacity and staff resources. The administrative operating systems need restructuring to make it appropriate for decentralised governance.

10. Governance Issue:

22.45 As most of the developmental functions of the Government and a good portion of regulatory functions living interface with the citizen have been transferred to LSGs. Special attention needs to be paid to the manner in which the services to the citizen are rendered and the method by which his grievances are redressed. As the cornerstone of Kerala's decentralisation is people's participation, it is necessary to make office procedure and behavior people friendly.

11. Capacity Building

22.46 Inadequate capacity is one of the most important challenges facing LSGs A comprehensive and systematic training strategy should be developed with clear goals and objectives and performance benchmarks. A major impediment to effective utilization of funds by LSGs is poor capacity to prepare, implement and monitor projects A detailed strategy needs to be developed to strengthen the internal capacity of LSGs to develop and manage projects efficiently.

12. Service Delivery :

22.47 In Kerala most of the human resource development functions have been transferred to local government health, education, nutrition etc. Experience shows that through the infrastructure of institutions transferred to LSGs has been improved substantially along with their proper keep up, the quality of service achieved through improved planning and management of service delivery has not been attained as expected.

13. Protection to Special Category:

22.48 An objective assessment has to be made why there is no marked improvement in the social status and economic condition of SCs and STs despite the fact that government earmark funds every year for their upliftment. Women component plan-a novel attempt- for the development of women was put forward. Then it was made compulsory in the Xth plan to apportion 10 % of the plan fund exclusively for the promotion for women. In this context an evaluation about our attempts in rising the status of women and preventing the exploitation

and crimes against them through these programmes has to be made. Programmes and funding were there for addressing the problems of the poor, deprived, aged, infants, mentally and physically challenged etc. Now time is ripe to look into whether these programmes were effective in realizing the goal of re-habitation of these classes.

Box 22. 12
Nirmal Gram Puraskar Awards To 205 Grama Panchayats

205 Grama Panchayaths in Kerala have been honoured with the National Nirmal Village Award of 2006-07 by the Central Government. 4925 grama panchayaths and 14 block panchayaths from 22 states achieved Nirmal Puraskar Award during 2006-07 for achieving the total sanitation. As part of the Total Sanitation Campaign (TSC), the Nirmal Gram Puraskar (NGP) was announced on 2nd October 2003. This puraskar has been instituted to honour, felicitate and encourage those Panchayath Raj Institutions which have attained total sanitation in their respective areas. A Nirmal Gram is an "open defecation free" village with all houses, schools and anganawadies having sanitary facilities and where the community is aware of the importance of maintaining hygiene, good sanitaries and clean environment With government - people partnership, 3.19 crore house hold toilets, 9997 community sanitary complexes, 3.57 lakh school toilets and 1.10 lakh aganwadi toilets have been constructed and 6856 production centres / rural sanitary marts have been set up in grama panchayaths under TSC till March 2007. The target under this scheme, is to provide all households access to sanitary toilets by 2012. Government of India have committed itself to achieve 55% coverage of rural house holds under this scheme by 2015 as per the Millennium Development Goals. It is, however, estimated that the target will be achieved earlier. In Kerala, 210 local bodies achieved this award and Trissur District ranked first with 62 local bodies. Rs. 5 lakh and Rs. 20 lakh would be given to each selected grama panchayath and block panchayath respectively. The selected local bodies were supposed to maintain a stipulated standard in solid waste management, construction of latrines and environmental hygiene. The list of award winning local bodies is given in Appendix 22.5

CHAPTER 23

SCIENTIFIC SERVICES AND RESEARCH

The setting up of the State Council for Science, Technology and environment is a significant pro-active step taken by the Government to revamp and streamline the science and technology programmes to make them more responsive to the development needs of the State, in the context of emerging new world order. The Kerala State Council for Science, Technology and Environment (KSCSTE) was constituted as an autonomous body of the Govt. of Kerala by restructuring the erstwhile State Committee on Science, Technology and Environment. The Council became administratively and financially operational since April 2003. The primary objective of the Council is to implement Science and Technology Programmes to enhance the socio- economic development as well as quality of life and environment of the State .

23.2 There are seven R&D Centres functioning under the umbrella of the Council viz., Centre for Earth Science studies (CESS), Centre for Water Resource Management and Development (CWRDM), Kerala Forest Research Institute (KFRI), National Transportation Planning and Research Centre (NATPAC), Tropical Botanic Garden and Research Institute (TBGRI), Kerala School of Mathematics (KSM), and Rajiv Gandhi Centre for Biotechnology(RGCB).

I. Achievements of KSCSTE Headquarters :

1.1 Environment and Ecology Programmes (E&E)

23.3 Financial assistance was provided for taking up the following nine new R&D projects during the year 2007.

- Environmental resource assessment for evolving sustainable development models in selected ecosystems of Kerala.
- Water quality monitoring programme for the state.
- Cadastral scale maps for urban areas in Kerala: Phase I
- Protection of coastal ecosystem in Kasaragod district by planting mangroves
- Padiramanal (Munro Island) biodiversity conservation and biopark project
- Development of a depository of resource planning and management capacity building spatial and non- spatial digital data
- Development of drought indices for Kerala
- Study on coastal green belting and ecosystem reconstruction in the Tsunami affected areas of Kerala
- Tectonic and hydrolic control on late Pleistocene-Holocene landforms, paleoforest and non-forest vegetation: Southern Kerala

1.2 Engineering & Technology Programmes (ETP)

23.4 Engineering and Technology Programme is envisaged to encourage talents in the field of engineering and technology in Kerala. It mainly aims to promote highly qualitative research projects in the emerging areas of engineering and technology. The maximum duration of the project shall be three years and the financial grant is upto Rs. 10 lakhs.

Achievements

23.5 Two meetings of Research Council for Engineering and Technology Programmes(RCETP) were convened during the period. Sanction was accorded for funding four projects out of eight proposals received and nine proposals are provisionally approved for funding out of 24 new proposals received.

1.3 Grass root Innovations Augmentation Network (GIAN)

23.6 With a view to promote grass root level innovations and to provide a helping hand to grass root innovators so as to perfect the technology and to convert their innovations to enterprise level, Grass Root Innovation Augmentation Networking (GIAN) was established. Rural Technology Programmes (RTP) are also implemented to promote and support the traditional rural technologies and upgrade them, so that it could be perfected for wider applications and employment generations and to reduce the drudgery of the rural households.

23.7 The major achievements under this programme are given below.

- A Technical Committee for Rural Technology Programmes (TC-RTP) was constituted in 2006 to oversee the proposals under GIAN/RTP.
- Financial grant was released to three projects and three proposals were provisionaly approved.
- Ex-gratia was released to two grass root innovators with a view to promote individual innovations.
- Thirty two new proposals were received under this scheme and technical committee recommended to support nine out of these proposals. Financial grant was released to three projects under RTP.

1.4 Science Popularization Programmes (SPP)

23.8 The Scheme is launched with the objective to provide technical and financial support for the implementation of project/ programmes which are focused to popularize the principles and practices of Science and Technology. Financial grant was released to 115 proposals for various activities.

23.9 The activities under Science Popularization are as follows:

- National Technology Day Celebrations-2006 & 2007
- National Science Day Celebrations 2007
- Science Literature Award
- Scheme of Promotion of Young Talents in Science (SPYTiS)
- Scheme for Promoting S&T Seminar/Symposia/Workshop
- Science Popularization Project /proposals

1.5 Patent Information Centre- Kerala (PIC)

23.10 KSCSTE has established Patent Information Centre, Kerala functioning as the Satellite Centre for Patent Facilitating Centre for Technology Information Forecasting and Assessment Council (TIFAC), Government of India. It aims to promote the Intellectual property output and to protect the traditional knowledge output of the State.

23.11 Following are the major activities done under this programme.

- Organized 14 Workshops/Seminars/Exhibition on IPR, in different parts of the State.
- Received 10 applications for patent filing.

- Answered 200 queries related to Intellectual Property Rights from Public.
- Printed and published Two books in association with Kerala Agricultural University.
- Organized an Interactive IPR awareness workshop through EDUSAT in which nearly 18 Engineering Colleges across the State participated simultaneously.
- Organized Interactive Phone in programme on IPR through All India Radio.
- Conducted three workshops on Geographical Indications at Ernakulam and Idukki, targeting the farmers, grass root innovators, etc.
- Organized three workshops on IPR awareness focusing the students, faculty, scientists, entrepreneurs, etc.

1.6 Sastraposhini

23.12 Sastraposhini is a programme aimed at strengthening the science education in the schools of Kerala. The programme envisages setting up of model laboratories for conducting science experiments in the selected schools in the State in a pilot project mode. Teachers will be encouraged to carry out innovative projects in science education for children. Students from different schools could come together and engage in problem solving experiments and critical discussions. This would provide necessary excitement and fun in doing science and thus induce a progressive trend in science learning and a career orientation in science.

23.13 A total of 108 Sastraposhini model laboratories were established in the selected Government High Schools of the State including the entire Government High Schools of Palakkad district.

Achievements

23.14 Sastraposhini laboratory manuals were prepared and distributed to the 108 Sastraposhini schools . It is highly useful to the teachers as well as students for doing science experiments.

23.15 Under the Sastraposhini follow up programme financial assistance was given to the Centre for Science in Society (C-SiS), CUSAT, Cochin to a scheme for enabling poor children from Govt. Schools to participate in Science education and science popularisation programmes.

23.16 A teachers training programme was conducted during November 2007 at C-SiS to science teachers working in the Sastraposhini schools for the successful continuation of the programme

1.7 Science Research Scheme (SRS)

23.17 In tune with Science and Engineering Research Council of Department of Science and Technology (SCRC of DST), council has implemented Science Research scheme for promotion of R&D activities in the State both in fundamental and applied research. Under the scheme, research projects in science and engineering are supported by providing financial support for implementation. Research projects are supported in university departments, colleges and R&D institutions. An expert committee called 'Research Council for Science and Engineering' (RCSE) has been constituted to review and recommend projects for funding. The maximum grant for each project has been raised to Rs. 11.0 lakh for three years, with the host institution eligible for overhead expenses up to 10 % of the total project cost

23.18 Major achievements are given below.

- Thirty five new projects were sanctioned.
- Fund to 115 projects including 1st, 2nd and 3rd year were released.

- Fund to 57 projects including 1st, 2nd and 3rd year grants were released.
- Forty new projects were processed

1.8 Selective Augmentation of R & D activities (SARD)

23.19 In tune with the Fund for Improvement of Science and Technology (FIST) programme of DST, council has implemented a Selective Augmentation of R & D activities (SARD) to strengthen S&T infrastructure primarily in the university departments, colleges and R&D institutions. SARD envisages modernization of laboratories by way of acquisition of essential equipments and the upgrading of existing facilities for teaching as well as R&D activities. Altogether 32 laboratories / departments were augmented under this scheme so far.

23.20 Following are the major achievements during the period.

- Six new projects started and funds were released
- Funds were released for eight ongoing projects.
- Three new projects were started.
- Funds were released for four ongoing projects
- Monitoring activities, including necessary instructions, guidelines and review programmes were conducted.

1.9 KSCSTE Research Fellowship

23.21 KSCSTE had started Research Fellowship Programme in the year 2002, to do research work leading to Ph.D. in the eleven disciplines – Agricultural Science, Biotechnology, Chemical Sciences, Earth System Sciences, Engineering Sciences, Environmental Sciences, Life Sciences, Mathematical Sciences, Physical Sciences, Taxonomy - Botany and Taxonomy – Zoology The first five rank holders in M.Sc./M.Tech programme alone are eligible to apply for a total of 24 fellowships available every year The fellowship amount is in par with that of the national agencies.

1.10 Ozone Day – 2007

23.22 KSCSTE had observed Ozone day on September 16th in association with C-SIS, CUSAT & Government College, Kasaragod. Seminars and competitions were conducted during the observation of the day.

1.11 World Environment Day 2006

23.23 Kerala State Council for Science, Technology and Environment has organized World Environment Day on 5th June 2006 The 'Impact of Tsunami in the Kerala Coast' was released during the inaugural function. Financial assistance was provided to five agencies for conducting World Environment Day.

1.12 National Environmental Awareness Campaign (NEAC) 2006

23.24 Two hundred and sixty nine agencies were selected for conducting the programme in the state The scheme is implemented through Centre for Environment and Development. Financial assistance was provided to all agencies, for conducting programmes. The focal theme was 'Solid Waste Management'.

1.13 National Green Corps (NGC)

23.25 Co-ordinated disbursement of first instalment of grant received from the Ministry of Environment and Forests through World Wild Life Fund(WWF) was made in all districts. Fifteen training programmes were held for the teacher-in-charge of eco clubs. The programme

was launched in 50 new schools in each district in addition to 100 schools at present in each district.

1.14 Environment Information System (ENVIS) Centre

23.26 Tsunami Report – The Impact of Tsunami in Kerala Coast is prepared by collecting details from different R&D institutions and released on June 5th 2006. Data collected from various sources was utilized for the preparation of an ENVIS Newsletter.

1.15 State of Environment Report

23.27 SoE Report 2006 is being prepared in four volumes. They are listed below.

Volume 1.	Land Environment, Wetlands of Kerala and Environmental Health
Volume 2.	Natural Hazards
Volume 3.	Corporate Environment Management
Volume 4.	Environmental Indicators (Biodiversity, Water and Coastal and Marine)

2. Research and Development Institutions

2.1 Centre for Earth Science Studies(CESS)

23.28 CESS has been instituted as Centre of Excellence in Earth Sciences by the Government of Kerala in 1978 and amalgamated under Kerala State Council for Science, Technology and Environment with the objective to promote modern scientific and technological research and development studies in the domain of Earth Sciences. CESS pursues multidisciplinary approach in problems related to land, sea and atmosphere, Research & Development activities in basic and applied fields, user training and academic programs, consultancy, science popularization etc. CESS is mandated to apply earth sciences for the improved knowledge of earth's processes and for the utilization of earth resources in a sustainable manner and for the mitigation of natural hazards. CESS is striving to provide necessary balancing mechanisms between developmental activities, resource utilization environmental conservation. Major programmes / projects undertaken by CESS are in the following area.

- Natural Hazards Management
- Natural Resources Management
- Environmental Management
- Coastal Zone Management
- Earth system studies

23.29 The following are some other activities and achievements during the period.

- A National training-cum-field workshop on 'Geo-information for landslide hazard and risk assessment' was held at CESS.
- A training programme on 'Integrated Coastal Zone Management' for the Coastal Zone Management Authority members from the west coast was conducted.
- The National Science Day 2007 was observed with various programmes .
- Earth Day was celebrated with various programmes including an open house in CESS.

- CESS conducted a training programme on "Coastal Zone Management" to the members and officials of the Coastal Zone Management Authorities from the West Coast of India

2.2 Centres for Water Resources Development and Management (CWRDM)

23.30 Centre for Water Resources Development and Management, functions with eight divisions and six units/sections and four sub centres carrying out research, development and extension activities on various aspects of water resources, development and management. The projects of CWRDM are mainly concerned with Surface Water Hydrology, Land and Water Management and Environment and Water.

23.31 CWRDM also conducted Seminars / Workshops / Trainings during the period.

- Seminar on Rejuvenation of Drylands at CWRDM Kozhikode.
- Workshop on Computer Applications in Hydrology at CWRDM Kozhikode
- National training programme on Isotope Tracer Techniques to Water Resources Development and Management.
- WRMTP training on Environmental Impact Assessment (EIA) of Water Resources Project.
- Workshop on Bacterial contamination of dug wells in rural Kerala at CWRDM.
- Training Courses on Water Quality Monitoring techniques and Environmental Monitoring
- Training course on Introduction to Coastal Erosion Problems and Protection Measures in Kerala.
- Seminar on Deserts and Desertification, at Thiruvananthapuram sponsored by KSCSTE.
- Seminar on Coping with Water Scarcity, Thiruvananthapuram, March 2007.
- National programme on Sustainability of Water Users Associations under PIM, January 2007, Thiruvananthapuram.
- Introduction to Application of Remote Sensing and GIS in water resources, September 2006,Kozhikode.
- WRMTP Training on Design of Minor Irrigation Systems, August 2007,Ernakulam.
- Integrated watershed management, September, 2007.
- National Level training programme on farm development and Agricultural water Management ,February, 2007
- Training course on Micro Irrigation and Fertigation. Sponsored by Department of Horticulture, Hariyana, April, 2007

23.32 The centre has six consultancy projects completed and four ongoing. Also the centre has 49 published research papers and 30 reports.

23.33 The following laboratories were developed and facilities augmented during the period.

- Isotope Hydrology Laboratory
- Central Water Analysis Laboratory
- Biochemistry laboratory
- Biotechnology laboratory
- Remote Sensing /GIS Laboratory

2.3 Kerala Forest Research Institute (KFRI)

23.34 The Kerala Forest Research Institute is established under the Science and Technology Policy adopted by the Government of Kerala as an autonomous institution to undertake research in areas like forestry, biodiversity etc., that are vital to the development of the Kerala State. The institution fulfills a number of economic, social and environmental objectives set by the Government and is currently amalgamated with the Kerala State Council for Science, Technology and Environment. All the research activities and programmes are undertaken by KFRI related to the following areas.

- Sustainable Natural And Plantation Forest Management Division
- Forest Protection
- Forest Ecology & Biodiversity Conservation
- Forestry and Human Dimensions
- Forest Information Management System

2.4 National Transportation Planning and Research Centre(NATPAC)

23.35 NATPAC undertakes Research & Development, Project Planning and Extension activities in the area of Traffic and Transportation. It has the unique distinction of working in multi-modal system of transportation covering road, rail, water, seaport and airport. It offers technical advice and implementable solutions to traffic and transportation problems of different regions. It has a Regional Centre at Kozhikode, which undertakes R&D programmes and extension activities in the northern parts of Kerala.

23.36 Broad area of activities of NATPAC include: Rural and Regional Transportation, Transportation Planning and Road Safety, Highway Engineering, Traffic Engineering and Management, Inland Water Transport, Project Planning, Training and Extension programmes. The priority areas of research at the centre are :

- Road Safety
- Transport Infrastructure Planning
- New materials for Road construction
- Public Transportation System
- Inland Water Transport System

23.37 Seventeen plan programmes and five sponsored projects have been completed during the year 2006-2007

2.5. Tropical Botanic Garden and Research Centre (TBGRI)

23.38 TBGRI is the only organization in India, which maintains a 300 acre conservatory garden for the wild tropical plant genetic resources of the country, besides a well integrated multidisciplinary R & D system dealing with conservation, management and sustainable utilization of tropical plant resources. TBGRI is identified as the National Centre of Excellence.

It also functions as the National Gene Bank for medicinal and aromatic plants of peninsular India.

23.39 The achievements of TBGRI during the period are based on the following themes.

- Plant exploration missions
- Plant taxonomical and palynological studies
- Garden developmental activities
- Conservation biotechnology, Sustainable utilization and Value addition of plant wealth
- Traditional knowledge documentation
- Bioinformatics Centre
- Interactions with other Institutes

23.40 The following patents were awarded during the period.

- A Patent was awarded for the process for preparation of a novel herbal medicinal composition for cancer treatment
- A patent application has been accepted by the Indian Patent Office, Chennai.

Research Publications

23.41 A total of 140 research papers were published in National and International Journals during the period.

2.6 Rajiv Gandhi Centre For Biotechnology (RGCB)

23.42 RGCB is undoubtedly Kerala's flagship for Biotechnology Research & Development. Its vision is to translate biotechnology to deliver improvement in human health and well being, safer and more globally competitive spices, industrial growth through biotechnology and human resource development. RGCB is being transferred to Government of India.

2.7 Kerala School of Mathematics (KSM)

23.43 The Kerala School of Mathematics has been setup as a joint venture of KSCSTE and National Board of Higher Mathematics (NBHM), under the Department of Atomic Energy, Government of India. The main objective of the institute is to promote Mathematical research in the country and in particular Kerala. The School will be the meeting ground for Mathematicians from home and abroad with a core group specializing in select areas. The main activities will be focusing on Research leading to doctoral and post doctoral degrees in Mathematics with advanced level thematic workshops. The first phase of the construction work is over. The Academic programmes are expected to commence soon.

3. Kerala State Pollution Control Board

23.44 Kerala State Pollution Control Board was established in 1974 and is the statutory authority for planning, supervising and implementing a comprehensive programme for the prevention and control of pollution in the State of Kerala. The policy of the bodies to ensure sustainable development of the State through judicious implementation of the statutes which envisage control and minimize pollution from activities, industrial and otherwise, which are all earned to make our lives more comfortable. The objective of the board is to strengthen all its offices and to bring all hospitals, industries and municipalities in Kerala under the consent regime

23.45 The main achievements of the Kerala State Pollution Control Board during the reporting period are as follows:

- Special thrust was given to modernize the head office and sub offices of the board by purchasing computers, office equipments, laboratory equipments and consumables and purchase of books.
- Amount has been spent for pending construction work of the District Office at Palakkad.
- Investigation and survey of water and air quality apart from the regular monitoring was conducted
- The board conducted public hearing
- For creating public awareness the board organized and co-sponsored seminars and trainings and also released advertisements, news letters and brochures.
- State Pollution Control Awards were distributed.
- Project on development of standards for colour was conducted as a part of research on pollution control technologies.

4.Regional Cancer Centre, Thiruvananthapuram

23.46 Regional Cancer Centre, Thiruvananthapuram was established in the year 1981 and is now rated amongst the top three of the 26 Regional Cancer Centres in the country. It is the only comprehensive, dedicated centre for diagnosis, treatment and control of cancer in Kerala. In average 32,000 new patients are coming every year for treatment here. Patients from all over the State and from adjoining areas are referred to regional cancer centre for treatment.

23.47 Major Achievements of RCC during the period are given below.

- An MRI Scanner is purchased as a part of infrastructure up gradation of the centre.
- New services initiated were Bone Marrow Transplant Unit and Telemedicine network service.
- Continuing PG Programmes in all oncology specialties, new PG course in MSC Radiation Physics, International Conferences on Breast Cancer and Liver Cancer and expanded information services by providing digital on line service are academic level Programmes in the year.
- District Cancer Control Programmes, Tobacco Cessation Clinic and training Programmes for doctors and nurses in Palliative Care are the community oriented Programmes.

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Appendix 3.1

Gross Domestic Product (GDP) at Factor Cost - All India

Year	At Current Prices			At Constant (1999-2000) Prices		
	GDP (Rs. Crore)	% change	Per Capita GDP (Rs)	GDP (Rs. Crore)	% change	Per Capita GDP (Rs)
1999-2000	1792292		17905	1792292		17905
2000-01	1930184	7.7	18942	1870387	4.4	18355
2001-02	2097446	8.7	20207	1978055	5.8	19056
2002-03	2255574	7.5	21380	2052586	3.8	19456
2003-04	2543396	12.8	23704	2226041	8.5	20746
2004-05	2855933	12.3	26201	2389660	7.4	21923
2005-06*	3250932	13.8	29367	2604532	9.0	23528
2006-07**	3743472	15.2	33364	2848157	9.4	25385

*- *Quick Estimates*

** - *Revised Estimate*

Source: - Central Statistical Organisation

Appendix 3.2

Net Domestic Product (NDP) at Factor Cost - All India

Year	At Current Prices			At Constant (1999-2000) Prices		
	NDP (Rs. Crore)	% change	Per Capita NDP (Rs)	NDP (Rs. Crore)	% change	Per Capita NDP (Rs)
1999-2000	1605643		16040	1675643		16040
2000-01	1727452	7.6	16952	1675632	4.4	16444
2001-02	1876285	8.6	18076	1775951	6.0	17109
2002-03	2019972	7.7	19147	1841931	3.7	17459
2003-04	2286826	13.2	21312	2004703	8.8	18683
2004-05	2523442	10.4	23151	2125299	6.0	19498
2005-06*	2871731	13.8	25942	2319014	9.1	20949
2006-07**	3317442	15.5	29567	2541384	9.6	22650

*- *Quick Estimates*

** - *Revised Estimate*

Source: - Central Statistical Organisation

Appendix 3.3

Gross National Product (GNP) at Factor Cost - All India

Year	At Current Prices			At Constant (1999-2000) Prices		
	GNP (Rs.Crore)	% change	Per Capita GNP (Rs.)	GNP (Rs. Crore)	% Change	Per Capita GNP (Rs.)
1999-2000	1776861		17751	1776861		17751
2000-01	1907451	7.3	18718	1847842	4.1	18134
2001-02	2077378	8.9	20014	1957384	5.9	18857
2002-03	2238884	7.8	21221	2033781	3.9	19278
2003-04	2525146	12.8	23533	2208196	8.6	20580
2004-05	2833558	12.2	25996	2367711	7.2	21722
2005-06*	3225963	13.8	29141	2580761	9.0	23313
2006-07**	3722669	15.4	33179	2829349	9.6	25217

* *Quick Estimate*

** *Revised Estimate*

Source: Central Statistical Organisation

Appendix 3.4

Net National Product (NNP) at Factor Cost - All India

Year	At Current Prices			At Constant (1999-2000) Prices		
	NNP (Rs.Crore)	% change	Per Capita NNP (Rs.)	NNP (Rs. Crore)	% Change	Per Capita NNP (Rs.)
1999-2000	1590212		15886	1590212		15886
2000-01	1704719	7.2	16729	1653087	4.0	16223
2001-02	1856217	8.9	17883	1755280	6.2	16910
2002-03	2003282	7.9	18988	1823126	3.9	17281
2003-04	2268576	13.2	21142	1986858	9.0	18517
2004-05	2501067	10.2	22946	2103350	5.9	19297
2005-06*	2846762	13.8	25716	2295243	9.1	20734
2006-07**	3296639	15.8	29382	2522576	9.9	22483

* *Quick Estimate*

** *Revised Estimate*

Source: Central Statistical Organisation

Appendix 3.6

Gross State Domestic Product (Kerala) at Factor Cost by Industry of Origin from 1999-00 to 2006-07
(At Current Prices)

(Rs. Lakh)

Sl. No	Industry of Origin/Year	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 Provisional	2006-07 Quick
1	2	3	4	5	6	7	8	9	10
1	Agriculture & Allied Activities	1242163	1107629	1101054	1265881	1366516	1401360	1626570	1767947
2	Forestry and Logging	122646	124163	135883	129467	144239	126700	126700	124967
3	Fishing	152848	155234	161838	148596	149056	181422	248198	284409
4	Mining and Quarrying	14293	19851	19191	19972	20748	20316	20316	20105
	Sub Total: Primary	**1531550**	**1407097**	**1478564**	**1562116**	**1680559**	**1809798**	**2021782**	**2197428**
5	Manufacturing	666759	703504	683278	734189	816580	912523	1019910	1142836
5.1	Registered	397044	406700	384372	408867	453488	471687	506791	535382
5.2	Unregistered	269755	296804	298906	325332	365114	440836	513209	607446
6	Electricity, Gas & Water Supply	113329	167411	167197	164717	219881	218496	236465	247022
6.1	Electricity	102959	155153	172864	187030	197050	198820	217709	228520
6.2	Gas	1251	1322	1542	1888	2238	3505	4824	6839
6.3	Water Supply	8079	10938	12791	15799	19793	14173	13952	11663
7	Construction	653393	703020	785287	801624	1035195	1184114	1356844	1553400
	Sub total : Secondary	**1433521**	**1573935**	**1655742**	**1820740**	**2071656**	**2313135**	**2613239**	**2943263**
8	Transport Storage & Communication	593684	662235	757939	830141	958355	1173961	1359032	1620836
8.1	Railways	38271	34579	36016	45243	49046	58782	86697	91891
8.2	Transport by other means	433770	502489	532849	581370	654503	816023	927779	1123846
8.3	Communication	118754	133950	181838	198270	249516	288375	346096	405759
8.4	Storage	4888	5297	5175	5252	5289	6481	7620	8882
9	Trade, Hotel & Restaurants	1492638	1546354	1640610	1889404	2132499	2241556	2397580	2542488
10	Banking and Insurance	319746	348730	428254	550743	594672	603276	687008	740639
11	Real estate ownership, Business, legal	514968	632775	722903	818558	828066	1068150	1202094	1366167
12	Public Administration	343608	346900	345008	407126	430965	574345	621524	750440
13	Other Services	831767	676316	697516	746690	802432	821146	998202	1110578
	Sub Total:Tertiary	**3896831**	**4233310**	**4604230**	**5224860**	**5846001**	**6582434**	**7264798**	**8133162**
	Gross State Domestic Product	**6861702**	**7214342**	**7738536**	**8627518**	**9601206**	**10705367**	**11899619**	**13273853**
	Mid Year Population('000)	31432	31699	31956	32357	32711	33072	33425	33783
	Per capita Income (Rs.)	**21830**	**22758**	**24207**	**26664**	**29352**	**32370**	**35602**	**39315**

Subject to the change on receipt of final results *Population figures are provided by RGI through CSO*

Source: Department of Economics and Statistics.

Appendix 3.8

Gross State Domestic Product (Kerala) at Factor Cost by Industry of Origin for the Years From 1999-00 to 2006-07 (At Constant Prices)

Base year 1999-00 — Rs. In Lakhs

Sl.No	Industry of Origin/Year	1999-2000	2000-01	2001-02	2002-2003	2003-04	2004-05	2005-06 Provisional	2006-07 Quick
1	2	3	4	5	6	7	8	9	10
1	Agriculture	1242183	1284896	1295510	1313190	1281944	1378212	1487325	1555872
2	Forestry and Logging	122448	118340	124750	133592	146851	1693[illegible]8	169316	182996
3	Fishing	152648	149748	154723	153429	154532	153553	146902	154930
4	Mining and Quarrying	14283	13025	12555	12884	13297	12548	12548	12195
	Sub Total: Primary	**1531550**	**1566006**	**1587538**	**1613005**	**1596464**	**1711629**	**1796091**	**1903993**
5	Manufacturing	666799	680170	649990	689869	718735	753168	794588	838670
5.1	Registered	397044	393035	367529	372159	357779	389323	394788	393409
5.2	Un-registered	269755	287135	282422	301701	321017	363840	399810	445261
6	Electricity, Gas & Water Supply	113329	161984	178058	171289	192835	178698	164100	181089
6.1	Electricity	103899	150097	164433	154837	173527	164100	160462	167469
6.2	Gas	1251	1285	1465	1750	1961	2694	3757	4877
6.3	Water Supply	8079	10587	12159	14042	17347	11704	10881	8729
7	Construction	653393	639143	714771	898142	922889	1022428	1150145	1284113
	Sub total : Secondary Sector	**1433521**	**1481277**	**1542779**	**1660306**	**1834259**	**1954290**	**2128843**	**2304902**
8	Transport,Storage & Communication	593684	669350	742399	817355	930244	1096177	1259032	1467124
8.1	Railways	35271	35470	37157	42484	44748	52139	56179	62995
8.2	Transport by other means	433770	480165	500069	532284	573688	679993	750445	858888
8.3	Communication	115764	148740	184344	237867	307329	327530	448994	537761
8.4	Storage	4899	4975	4979	4690	4499	5509	6324	7502
9	Trade, Hotel & Restaurants	1492838	1477374	1554431	1689706	1813901	1860388	1920224	1975710
10	Banking and Insurance	319746	341860	387224	476846	475783	520741	575575	633073
11	Real estate ownership, Business, Legal	514988	604823	684701	741778	802097	817478	907238	965741
12	Public Administration	343606	331644	328850	353408	396311	476908	512367	609762
13	Other Services	631767	652287	653453	663141	706223	770867	782342	823968
	Sub Total:Tertiary	**3898631**	**4076938**	**4351058**	**4754034**	**5094559**	**5541579**	**5956774**	**6474379**
	Gross State Domestic Product	**6863702**	**7124221**	**7481375**	**8027339**	**8525282**	**9207486**	**9881708**	**10683273**
	Population('000)	31432	31899	31968	32357	32711	33072	31432	33763
	Per capita Income (Rs.)	21830	22475	23434	24809	26062	27841	31438	31642

Subject to the change on receipt of final results.

Source. Department of Economics and Statistics.

Population figures are provided by RGI through CSO.

Appendix 3.7

Net State Domestic Product (Kerala) at Factor Cost by Industry of Origin for the Years from 1999-2000 to 2006-07 (At Current Prices)

Rs.Lakhs

Sl.No	Industry of Origin/Year	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 Provisional	2006-07 Quick
1	2	3	4	5	6	7	8	9	10
1	Agriculture & Allied Activities	1003522	986450	912347	1031363	1104780	1204437	1322502	1457934
2	Forestry and Logging	117757	119545	130851	124437	138672	121014	121014	119140
3	Fishing	137346	138434	141247	126951	126831	163992	210870	224432
4	Mining and Quarrying	11314	15807	15298	16611	17154	17850	17850	18212
	Sub Total: Primary	1271939	1140316	1200301	1299362	1387237	1497293	1672236	1819718
5	Manufacturing	553677	575071	540182	579637	642553	703458	788739	882346
5.1	Registered	332842	333741	304721	320609	353922	338119	384885	408477
5.2	Unregistered	220835	241330	235761	267943	288631	365340	402044	473869
6	Electricity, Gas & Water Supply	62687	91061	83659	101428	116780	105481	98862	81609
6.1	Electricity	57535	84421	80673	91717	105078	98850	90578	74310
6.2	Gas	692	719	773	1037	1169	1707	2349	3233
6.3	Water Supply	4470	5663	6412	6675	10512	6904	5936	4066
7	Construction	637083	684426	782583	874683	1003632	1146292	1312271	1500543
	Sub total: Secondary	1253437	1350558	1386904	1554729	1762965	1955212	2197902	2464498
8	Transport, Storage & Communication	472465	538161	592775	631980	748620	896054	1039028	1224629
8.1	Railways	27779	29879	24899	30244	31266	37917	43707	51799
8.2	Transport by other means*	363519	402192	418527	443561	514544	628545	717130	847020
8.3	Communication	81339	111166	144966	153355	187900	220474	270972	317002
8.4	Storage	4306	4625	4760	4900	4628	5658	7159	6718
9	Trade, Hotel & Restaurants	1466663	1664205	1802235	1819257	2080072	2177010	2328638	2463993
10	Banking and Insurance	310476	337238	414793	534954	577694	584260	665932	716261
11	Real estate ownership, Business, legal	406190	504561	553697	633574	712439	807512	941456	1082354
12	Public Administration	285074	284722	268793	315903	363537	417920	455000	509218
13	Other Services	610070	852484	668988	719174	758256	879137	950827	1066843
	Sub Total: Tertiary	3538938	3922451	4131255	4654882	5238610	5762883	6360881	7063298
	Net State Domestic Product	6064334	6313355	6718460	7508973	8388820	9215198	10250819	11347514
	Population('000)	31492	31699	31968	32357	32711	33072	33425	33783
	Per capita Income (Rs.)	19264	19917	21047	23207	25645	27884	30666	33609

Subject to the change on receipt of final results.

Population figures are provided by RGI through CSO

Source: Department of Economics and Statistics.

Appendix 3.8

Net State Domestic Product (Kerala) at Factor Cost by Industry of Origin for the years from 1999-2000 to 2006-07 (At Constant Prices)

Base year 1999-2000 *(Rs.in lakh)*

Sl. No	Industry of Origin/Year	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 Provisional	2006-07 Quick
1	2	3	4	5	6	7	8	9	10
1	Agriculture & Allied Activities	1005522	1045264	1055974	1078371	1046982	1141547	1217124	1291691
2	Forestry and Logging	117757	113761	120004	128897	141738	164852	184852	178458
3	Fishing	137348	133000	136085	135290	134806	130957	125285	132131
4	Mining and Quarrying	11214	9152	8853	9907	10205	10587	10587	10765
	Sub Total. Primary	1271939	1301185	1321016	1350458	1333741	1447743	1517549	1613045
5	Manufacturing	553577	557933	520804	542998	588890	508623	621614	857783
5.1	Registered	332842	323840	293637	330524	313139	297071	301241	300189
5.2	Un-registered	220835	234093	227267	242475	255854	291552	320373	357594
6	Electricity, Gas & Water Supply	82697	88150	92783	97212	104119	90281	80268	63271
6.1	Electricity	57535	61731	65683	67909	63894	62906	73517	57620
6.2	Gas	662	697	764	893	1059	1482	1896	2464
6.3	Water Supply	4470	5793	8336	9310	9368	5913	4851	3171
7	Construction	637283	621521	894101	783754	894927	991198	1115018	1244922
	Sub total : Secondary	1253457	1267614	1307848	1423868	1688039	1670102	1816896	1965976
8	Transport,Storage & Communication	472165	532768	590092	637575	744916	885951	999338	1159919
8.1	Railways	22779	22171	24212	28671	30864	37798	40725	47088
8.2	Transport by other means*	353819	386148	430910	406856	447154	514732	588924	640350
8.3	Communication	91329	120932	130488	197953	287084	308476	384818	485722
8.4	Storage	4538	4815	4604	4205	4114	5227	5771	8839
9	Trade, Hotels & Restaurants	1455863	1437550	1512380	1624800	1788775	1808921	1868988	1918157
10	Banking and Insurance	310478	330754	375035	481581	481148	505454	558678	614930
11	Real estate ownership, Business, legal	405190	491299	542540	581458	622778	622307	690635	726289
12	Public Administration	265074	271300	273047	281441	307517	350620	376689	417092
13	Other Services	610070	629470	637444	656838	687027	738091	749047	794519
	Sub Total:Tertiary	3532838	3682839	3930538	4246694	4572142	4891234	5241385	5832938
	Net State Domestic Product	6058334	6252268	6559402	7021117	7473822	8009079	8575829	9211977
	Population('000)	31432	31699	31968	32357	32711	33072	33425	33783
	Per capita Income (Rs.)	19294	19724	20519	21699	22848	24217	25667	27264

Subject to the change on receipt of final results.

Source: Department of Economics and Statistics.

Population figures are provided by RGI through CSO

Appendix- 3.9

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2004-2005 [at Current Prices]

(Rs. in Lakhs)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	TOTAL
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	13'918	'08297	78368	68737	142062	137322	10562'	89178	114065	152978	93822	102066	1'7027	905'1	1481360
2	Forestry and Logging	5841	9541	18183	0	954	30588	952	17139	15363	12115	4848	9230	5709	659	128700
3	Fishing	12065	35831	435	34579	1324	62	22660	22714	7567	9038	39769	15	8'46	818	181477
4	Mining and Quarrying	1093	1012	435	679	731	242	7058	1477	1172	2231	3635	798	3974	1280	203'6
	Sub Total. Primary	120916	154671	87121	83994	145072	168181	131290	128608	133967	178560	132574	111609	134866	93268	1609798
5	Manufacturing	114646	61830	10845	54225	40281	21690	294362	86759	115195	40281	44929	7748	35633	3039	9'2523
5.1	Registered	58767	21523	5606	26030	20822	112'2	152160	44847	80093	20822	23224	4004	18418	1837	471697
5.2	Unregistered	55384	20208	5239	26195	19459	10476	'42202	41912	56132	19459	21705	3742	'7214	'497	440626
6	Electricity, Gas & Water supply	36347	20803	10564	18117	1945'	17813	2561'	19885	13859	7587	'5624	1485	6876	3092	216498
6.1	Electricity	30917	19783	9981	18860	18252	'7417	23242	18431	13261	6641	14057	1332	5965	2884	198820
6.2	Gas	361	302	152	257	234	134	348	338	281	331	309	76	266	1'7	3506
6.3	Water Supply	5070	518	421	1001	905	62	2020	918	316	611	'259	77	645	291	14173
7	Construction	'27055	75665	361'5	71047	87376	22380	722737	'25753	65383	92391	131437	13736	97689	35405	1184114
	Sub total : Secondary	278049	138098	57515	143389	127108	61892	542705	232197	195416	140224	191980	22967	140190	41595	2313135
8	Transport,Storage & Communication.	'52116	87728	54206	74490	93522	18403	188763	122098	95681	92056	92185	13530	65646	31908	1173981
8.1	Railways	5488	5237	448	4089	3841	0	5739	6245	8931	6140	5309	0	5189	5297	58782
8.2	Transport by other means	'10199	60976	37197	61260	63907	12208	130468	94800	71609	60958	64317	9914	40968	'7452	8'9323
8.3	Communication	35845	20965	'6495	18398	24743	7065	48649	32788	14822	14561	22484	3634	15948	6997	288375
8.4	Storage	583	846	65	713	1231	130	907	266	516	396	65	253	544	162	6451
9	Trade, Hotel & Restaurants	210482	184306	64902	157581	151877	52677	264902	249261	171927	18022'	235398	354'7	'97033	80472	224'556
10	Banking and Insurance	67077	37644	34507	41807	47659	20089	674'5	6451'	668'4	37403	47478	13393	41204	21175	803278
11	Real estate ownership, business & legal	119633	84852	60098	76509	70177	45183	'07776	101154	66200	82395	88550	26170	74886	35669	1068150
12	Public Administration	130484	48847	25443	38598	42329	9534	61972	44589	37649	3'129	45144	8720	37160	8365	574345
13	Other Services	8'833	88278	42450	57714	57547	39707	87713	87347	67557	107603	84653	22215	83327	34862	921148
	Sub Total-Tertiary	763805	498453	272604	448099	463212	188692	818541	669041	506528	530607	587447	117714	490288	212372	6583434
	GSDP	1161570	792221	427240	878482	735391	418469	1492538	1028748	835812	847692	922311	252290	771311	347235	10705367
	Mid year Population(1000)	3361	2884	1278	2487	2029	1172	3218	3091	2718	3770	2990	617	2506	1280	33072
	Per capita Income (Rs.)	34580	28516	33404	30932	36244	35535	46381	33217	30751	22483	30847	30630	30779	27779	32370

Population are based on CSO.

Source: Department of Economics and Statistics.

Appendix 3.10

District wise Distribution of Gross StateDomestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2004-2005 (at Constant Prices)

Base Year 1999-00 (Rs. lakhs)

Sl No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Services	94883	100601	72826	45277	131879	127575	58124	82849	106988	142023	86977	94571	108721	84387	1378212
2	Forestry and Logging	7806	12750	24300	0	1275	40846	1272	16222	21232	16150	8478	12535	7630	551	169319
3	Fishing	13711	30327	389	79967	1121	52	19179	13225	2257	7502	26043	12	6896	693	193553
4	Mining and Quarrying	676	825	269	415	482	149	1271	912	724	1278	2246	164	2404	791	12540
	Sub Total: Primary	113376	144303	97464	74563	134827	168822	119846	118207	130291	157498	121744	107332	125700	88452	1711629
5	Manufacturing	94625	34525	8951	44755	33217	17802	242957	71608	35904	33247	37003	6354	29411	2567	753166
5.1	Registered	40913	17847	4527	22135	17185	9254	125556	37015	49574	17186	19169	3306	15203	1332	368323
5.2	Unregistered	45712	16679	4324	21621	16061	8548	117369	34593	46330	16061	17914	3048	14208	1236	363843
6	Electricity, Gas & Water Supply	30002	11005	8711	14054	16054	14537	21138	10240	11439	6258	12898	1228	5675	2567	178698
6.1	Electricity	25518	10328	5238	13915	15084	14375	19163	10212	10946	5481	11802	1099	4823	2215	164100
6.2	Gas	298	240	129	212	133	110	288	977	232	273	265	63	923	87	2694
6.3	Water Supply	4187	428	348	826	737	51	1688	756	261	504	1039	63	535	240	11704
7	Construction	109706	65333	31184	61346	59176	19324	102318	108552	68438	79749	113489	11960	84350	30671	1022428
	Sub total : Secondary	234333	110864	48846	121055	107447	51763	466414	188435	183781	119255	163409	19489	119436	35805	1854200
8	Transport,Storage & Communication	141182	81835	51769	68551	87938	19002	175864	114819	88039	74938	85943	12948	62478	30356	1095177
8.1	Railways	4706	4557	391	3566	3175	0	5006	3702	7790	5955	4658	0	4520	4620	52139
8.2	Transport by other means	91480	50324	30972	47588	63040	10132	110772	70380	59432	50692	53380	8225	34000	14484	679809
8.3	Communication	44441	25932	20457	22810	30676	8759	60315	40651	18377	18055	27952	4505	23490	11156	357530
8.4	Storage	456	551	55	608	1047	110	771	226	441	238	55	215	463	138	5509
9	Trade, Hotel & Restaurants	174580	138386	54695	130793	120184	43719	236455	206970	142892	149575	198608	25394	163526	68789	1888368
10	Banking and Insurance	53584	32494	28706	36087	41139	17341	75455	55771	40410	30986	40982	11580	35567	10279	520741
11	Real estate ownership, business & legal	91550	72532	30340	60385	63708	34579	82404	77416	66970	70712	81769	20028	55018	27222	817478
12	Public Administration	113313	40394	21127	32362	30148	7917	51458	37000	31428	25848	37466	6680	30856	6983	476908
13	Other Services	68484	58466	35528	45299	48160	33230	73406	73099	58788	90057	73975	10581	69736	23176	770967
	Sub Total.Tertiary	642813	418948	231243	377169	392227	165787	696121	656128	423327	442810	501744	88102	417189	178824	5341278
	GSDP	990522	680114	377462	573208	634530	376173	1272381	660772	717989	728561	756888	224933	662315	300963	9267498
	Mid year Population('000)	3381	2684	1279	2187	2029	1172	3218	3091	2718	3770	2990	817	2508	1750	33072
	Per capita Income (Rs.)	28471	25340	29518	26210	31270	32097	39540	29495	26394	19352	28220	27532	26429	24078	27841

Population are based on CSO

Source: Department of Economics and Statistics.

Appendix 3.11

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2005-06 (at Current Prices) (Provisional)

(Rs. in lacks)

Sl No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	111908	110832	85720	53514	155998	150783	115374	97020	125246	167862	102799	112071	128458	98583	1626619
2	Forestry and Logging	9841	9541	15783	0	354	30560	952	12139	15362	32115	4845	9230	5709	659	126700
3	Fishing	16505	48019	856	47306	1512	84	31000	31074	3648	13775	42084	20	11144	1113	248195
4	Mining and Quarrying	1093	1012	435	579	701	242	2056	1477	1172	2221	3635	290	3974	1290	20316
	Sub Total : Primary	139347	178479	104934	101498	158486	181079	149884	142710	146029	194983	153370	121612	149936	102442	2021782
5	Manufacturing	128138	46753	12121	63606	46021	24242	329002	30663	129870	45021	50216	8658	38027	3453	1019910
5.1	Registered	83900	25027	8022	30156	22387	12044	163482	85175	64621	22967	24946	4301	19786	1721	506701
5.2	Unregistered	54478	23525	8099	30498	22634	12198	165651	44794	85349	23554	25295	4357	20040	1743	513209
6	Electricity, Gas & Water Supply	39341	22595	11513	19800	21258	19316	37513	21545	15220	8528	17054	1639	7532	3328	235485
6.1	Electricity	33854	21562	10929	18462	19386	19071	35453	20182	14521	7271	15392	1459	6931	2939	217709
6.2	Gas	496	415	210	354	322	154	680	482	287	455	425	108	366	181	4924
6.3	Water Supply	4991	517	414	985	950	61	1858	904	211	601	1239	73	635	208	13962
7	Construction	145589	86702	41384	81411	77204	25644	255222	144097	74898	105834	153610	15739	111963	40570	1356844
	Sub total - Secondary	313068	158043	66018	164817	143483	69203	642114	202304	219987	158184	217882	26037	155298	47419	2613239
8	Transport, Storage & Communication	179151	103182	66603	91554	110233	22772	221696	144123	35806	57949	110477	16279	78079	37889	1359632
8.1	Railways	8375	6036	517	4712	4190	0	6614	4892	10293	3076	6153	0	5980	8134	68597
8.2	Transport by other means	129226	71271	40231	53657	74829	14160	135765	69898	57205	73885	77367	14722	48766	25531	937779
8.3	Communication	42556	25884	13736	22013	29504	8453	58208	35231	17725	17424	28676	4347	22669	10785	345038
8.4	Storage	710	792	79	871	1506	158	1109	326	634	463	78	309	665	198	7920
9	Trade, Hotel & Restaurants	225142	175750	70462	168557	162860	56345	304745	286522	164602	192773	256072	37883	210785	85077	2397680
10	Banking and Insurance	70765	42907	30391	47651	54021	22697	99834	73843	51359	42632	54112	15265	46963	24135	687606
11	Real estate ownership business & legal	134635	108746	56378	88354	739[illegible]	50649	121281	113638	67309	103357	98054	25451	60907	40030	1202094
12	Public Administration	147874	52641	27534	42201	45806	10317	67082	46230	40953	39537	48852	7272	40213	8074	625524
13	Other Services	88508	71682	45812	82420	82240	42945	84866	84470	73390	116378	91589	24027	90122	37735	998282
	Sub Total. Tertiary Sector	846663	552811	300208	500737	514140	203125	966204	748836	534484	587298	680788	130377	547034	224770	7284788
	GSDP	1284276	887427	470201	764053	817108	457803	1671422	1148160	800800	861488	1032027	277632	850658	384690	11388816
	Mid year Population (000)	3387	2713	1283	2210	2550	1185	3254	3120	2767	3810	3022	828	2832	1263	33425
	Per capita income (Rs.)	38101	32710	36386	34573	32080	38680	51356	36801	32781	24710	34150	33448	33794	30450	35802

Populations are based on CSO

Source: Department of Economics and Statistics

Appendix 3.12

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2005-06 (at Constant Prices)(Provisional)

Base Year 1999-00 (Rs.in Lakh)

SI.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	120997	107281	77328	48275	140716	138021	104630	38533	172884	151425	92735	101085	115918	64654	1487329
2	Forestry and Logging	7805	12750	24100	0	*275	40646	1272	18222	21032	16760	3476	12335	7630	581	148310
3	Fishing	9768	28013	353	28000	1072	50	15946	15382	2139	756'	24815	12	8598	685	148702
4	Mining and Quarrying	575	825	269	418	432	140	1271	212	724	1378	2245	184	2454	781	*2548
	Sub Total: Primary	118202	148649	102249	76694	143595	177057	125511	123358	137159	175557	126374	113828	132599	81987	1798881
5	Manufacturing	68531	38425	9443	47217	35075	18657	258322	75546	101180	35075	38123	8745	31028	2688	784508
5.1	Registered	49800	18087	4682	23459	17427	8394	127351	37525	50979	17427	18438	3351	15410	1347	394785
5.2	Unregistered	50231	15327	4752	23758	17648	8503	128871	38012	50810	17648	19585	3394	15662	1358	390810
6	Electricity, Gas & Water Supply	30830	17562	8984	15414	16546	15036	21735	18774	11847	6444	13279	1275	5884	2538	184100
6.1	Electricity	26351	16881	8507	14370	15557	14645	19810	15729	11920	6850	1*661	*135	5064	2269	140462
6.2	Gas	387	322	163	275	251	143	374	380	302	365	337	82	265	125	3757
6.3	Water Supply	3892	398	323	766	741	46	1551	705	243	488	968	58	485	223	*3881
7	Construction	123417	73494	35079	88008	85445	21738	2*6342	122145	83446	88771	127688	*3542	94887	34389	1150145
	Sub total : Secondary	223871	127582	53518	131644	117067	55661	484388	214467	176543	131271	180087	21363	131780	39724	2126943
8	Transport, Storage & Communication	184686	85915	38196	64179	102857	22387	206182	134740	77805	66092	101742	15248	73738	35563	1258032
8.1	Railways	5157	4921	421	3143	342*	0	5283	3868	8363	5170	5017	0	4476	4977	56170
8.2	Transport by other means	103411	57034	32194	51100	58861	11332	124649	79772	45177	56310	81812	638*	39023	18510	750445
8.3	Communication	55448	32430	25578	28460	38974	10829	75254	50740	22928	22527	34750	582*	28308	13915	448084
8.4	Storage	568	622	63	566	1202	126	895	256	506	268	63	247	531	158	6024
9	Trade, Hotel & Restaurants	180309	140752	58455	134902	130121	45125	244080	213529	147261	154386	205080	30340	168788	66036	1920224
10	Banking and Insurance	56227	35913	32923	39667	45470	18167	83401	81644	44865	39686	45288	12773	38312	20203	575575
11	Real estate ownership, business & legal	101670	80563	42549	68882	68803	38376	81540	65915	73214	76476	75210	22297	81067	30211	807238
12	Public Administration	121738	43397	27898	34790	37761	8305	60284	38760	33765	27770	40272	5895	33150	7481	5*2307
13	Other Services	68602	36280	39053	49017	48575	32723	74496	74185	57631	61369	71931	16884	70771	26609	782340
	Sub Total: Tertiary	898972	451937	248973	404546	424161	187284	754963	608773	634181	474496	538532	106456	449916	192003	5896774
	GSDP	1070046	729868	404658	617883	685443	460411	1374973	946100	747876	782527	843973	240447	711184	323713	8817108
	Mid year Population('000)	3367	2713	1293	2210	3640	1785	3294	3723	2747	3810	3022	828	2532	1243	31425
	Per capita income (Rs.)	31500	26874	31294	27858	33431	33759	42352	25359	27225	20539	27894	29*0	28088	25831	28584

Population are based on CSO

Source, Department of Economics and Statistics.

Appendix 3.13

District-wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the Year 2006-07 at Current Prices (Quick Estimate)

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSKD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	123011	133599	94225	58823	171494	165743	127481	107034	137072	184516	112998	129190	143248	109244	1787947
2	Forestry and Logging	5761	9410	17035	0	941	30147	939	11973	15744	11953	4782	9104	5831	653	124967
3	Fishing	17583	52221	635	50396	1930	90	33025	33104	3887	13639	44844	21	11972	1132	264409
4	Mining and Quarrying	1082	1091	430	672	724	239	2037	1482	1160	2208	3597	256	3930	1267	20105
	Sub Total: Primary	147437	193331	113224	109921	175089	196219	163481	154173	158483	212282	155221	132510	162883	112353	2197426
5	Manufacturing	143582	52388	13582	67911	30448	27164	366657	108657	145523	50148	56269	9702	44627	3881	1142838
5.1	Registered	67765	24543	6383	31814	23634	12725	172707	50903	68174	23634	26167	4545	20907	1818	535302
5.2	Unregistered	75817	27846	7215	36096	26814	14639	193950	57754	77349	26814	29908	5157	23720	2063	607446
6	Electricity, Gas & Water Supply	40461	23744	12113	23733	22229	20323	29066	22589	16040	8771	17195	1740	7899	3560	247022
6.1	Electricity	35535	22739	11472	19376	20976	20018	26714	21184	15242	7632	15156	1531	6856	3085	228520
6.2	Gas	683	572	289	457	443	253	661	636	533	627	586	145	504	222	5639
6.3	Water Supply	4243	434	352	838	808	52	1690	769	265	511	1053	54	540	243	11863
7	Construction	166880	99062	47379	93204	88389	29050	292185	164871	85748	121185	172428	16019	128156	48447	1553403
	Sub total: Secondary	350724	175394	73074	191817	161066	70647	658918	298217	247310	180384	246402	29461	180662	53977	2943263
8	Transport Storage & Communication	213651	123024	72126	100177	131413	27103	264295	141781	102381	115781	131705	19537	92998	44811	1620630
8.1	Railways	7489	7156	693	5588	4975	0	7942	5800	12205	9330	7295	0	7081	7238	81591
8.2	Transport by other means	154828	86307	48204	75633	97779	16987	183638	119414	63543	87207	92701	14086	58630	24720	1173648
8.3	Communication	50441	29502	22212	25890	34618	9642	65458	46138	20858	20463	31612	5413	25861	12861	435769
8.4	Storage	872	969	91	1066	1841	454	1057	284	775	591	57	378	614	242	9682
9	Trade, Hotel & Restaurants	238740	188364	76749	179721	172381	59748	323150	262725	195009	204416	271538	40171	223485	91275	2542488
10	Banking and Insurance	76212	45218	62355	51325	53519	24663	107319	79322	57474	65920	58289	16442	50596	25895	740639
11	Real estate ownership business & legal	153237	121482	64156	100562	89890	57874	139356	129567	110412	116348	113423	33521	82079	46561	1368187
12	Public Administration	178305	63562	33244	50855	55307	12457	80972	58734	49454	40674	58085	8790	46553	10968	790440
13	Other Services	98662	79908	51180	69582	69361	47872	105761	106310	81811	129732	102110	29794	100454	42032	1110578
	Sub Total: Tertiary	958908	620588	337832	560339	576663	229119	1019538	820839	596541	655871	738049	145235	604182	280882	9133162
	GSDP	1456967	989204	524130	862646	913007	502788	1972837	1273329	1002314	1048537	1148769	307305	951327	426812	13273853
	Mid year population (2001)	3431	2741	1308	2233	2071	1198	3265	3158	2778	3849	3052	934	2558	1276	33763
	Per capita income (Rs.)	42485	36092	40132	38157	44085	42005	57015	40473	36108	27242	37540	33947	37198	33457	39315

Estimated Population are provisional

Source: Department of Economics and Statistics

Appendix 3.14

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the Year 2006-07 (at constant prices)
(Quick Estimate)

Base Year 1999-00 [Rs. In lakhs]

Sl. No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activites	108908	113588	81889	51122	149018	144044	110791	93543	119648	160380	98206	107062	122758	94942	1563672
2	Forestry and Logging	8437	13780	26283	0	1377	44147	1374	17533	23055	17498	7003	13331	8248	952	182998
3	Fishing	10303	30539	372	29530	1131	53	1835	18397	2277	7974	26278	12	8958	699	164930
4	Mining and Quarrying	656	607	261	407	439	145	1235	887	704	1339	2182	179	2385	768	12195
	Sub Total: Primary	126302	158574	108765	81059	151964	188388	132752	131360	145685	187171	133665	120585	140344	97360	1903993
5	Manufacturing	105493	38491	9979	49898	37065	16958	270861	79833	108918	37085	41342	7128	32788	2861	839570
5.1	Registered	49427	18034	4675	23377	17388	9351	126906	37404	50095	17388	18370	3340	16382	1336	393409
5.2	Unregistered	56067	20457	5304	26518	19899	10607	143955	42429	58824	19699	21972	3788	17426	1515	446161
6	Electricity, Gas & Water Supply	29868	17404	8879	15178	18295	14896	21308	16559	11757	6431	13048	1278	5782	2603	181089
6.1	Electricity	28044	16865	8408	14203	15375	14572	19573	15526	11171	5594	11841	1122	5024	2261	167483
6.2	Gas	502	420	212	357	325	188	488	447	392	460	430	106	370	163	4877
6.3	Water Supply	3122	319	259	616	594	38	1244	586	195	378	775	47	387	179	8729
7	Construction	137789	82057	30166	77049	73068	24270	241547	136376	70885	100183	142540	14898	105942	38396	1284143
	Sub total : Secondary	272960	137952	58025	142120	128428	59124	533717	232767	188561	143659	196928	23300	144522	43859	2304902
8	Transport, Storage & Communication	191654	110638	68163	98018	120025	28294	240476	167221	90043	100818	118448	17804	88090	41442	1467124
8.1	Railways	5783	5518	472	4309	3836	0	8048	4473	9411	6470	5625	0	5488	5681	62995
8.2	Transport by other means	116362	65274	35845	58575	68623	12969	142658	91287	52391	55734	70856	10738	44661	18895	858886
8.3	Communication	65844	39095	30760	34309	46140	13176	90720	61143	27641	27157	41892	6776	35331	16778	537761
8.4	Storage	675	750	75	825	1425	150	1050	308	800	458	75	293	630	188	7502
9	Trade, Hotel & Restaurants	165519	144820	68086	138892	133953	48428	251113	219689	151537	158847	211006	31218	173165	70928	1976710
10	Banking & Insurance	65143	39504	36212	43872	50013	21081	81732	67802	49126	39251	49823	14054	43239	22721	683073
11	Real estate ownership, business & legal	109163	88768	45293	70982	63449	40851	97443	91458	77935	83537	80080	23861	64994	32158	965741
12	Public Administration	144842	61662	28968	41335	44886	10105	65685	47240	40117	32995	47849	7129	39387	6888	608762
13	Other Services	73200	69286	37872	51675	51476	35518	78460	78132	60898	96251	75758	19872	74537	31185	823968
	Sub Total:Tertiary	766321	481586	272883	444724	463782	180279	624909	661550	469457	511699	582944	113729	481912	236823	6474378
	GSDP	1167573	766082	439493	687804	742173	427791	1491378	1025677	804703	842529	913537	257813	766777	346833	10863273
	Mid yearPopulation('000)	3431	2741	1308	2233	2071	1195	3285	3156	2776	3849	3052	834	2656	1278	33783
	Per capita Income(Rs.)	34030	28752	33652	28911	35838	35768	45406	32492	28988	21890	29932	30889	28978	27275	31642

Estimated Populations are provisional.

Source: Department of Economics and Statistics

Appendix 3.15

Population of States/Union Territories by sex and percentage share of population in total population - 2001

Sl.No.	India/State/Union Territory	Total population			Percentage share in total population	Population density (per sq.km.)
		Persons	Males	Females		
1	2	3	4	5	6	7
	INDIA	1027015247	531277078	495738169	100	324
1	Andaman & Nicobar Islands	356,265	192,985	163,280	0.03	43
2	Andhra Pradesh	75,727,541	38,286,811	37,440,730	7.37	275
3	Arunachal Pradesh	1,091,117	573,951	517,168	0.11	13
4	Assam	26,638,407	13,787,799	12,850,608	2.59	340
5	Bihar	82,878,796	43,153,964	39,724,832	8.07	880
6	Chandigarh	900,914	508,224	392,690	0.09	7903
7	Chatisgarh	20,795,956	10,452,426	10,343,530	2.03	154
8	Dadra & Nagar Haveli	220,451	121,731	98,720	0.02	449
9	Daman & Diu	158,059	92,478	65,581	0.02	1411
10	Delhi	13,782,976	7,570,890	6,212,086	1.34	9294
11	Goa	1,343,998	685,617	658,381	0.13	383
12	Gujarat	50,596,992	26,344,053	24,252,939	4.93	258
13	Haryana	21,082,989	11,327,658	9,755,331	2.05	477
14	Himachal Pradesh	6,077,248	3,085,256	2,991,992	0.59	109
15	Jammu & Kashmir	10,069,917	5,300,574	4,769,343	0.98	99
16	Jharkhand	26,909,428	13,861,277	13,048,151	2.62	338
17	Karnataka	52,733,958	26,856,343	25,877,815	5.14	275
18	**Kerala**	**31,838,619**	**15,468,664**	**16,369,955**	**3.1**	**819**
19	Lakshadweep	60,595	31,118	29,477	0.01	1894
20	Madhya Pradesh	60,385,118	31,456,873	28,928,245	5.88	196
21	Maharashtra	96,752,247	50,334,270	46,417,977	9.42	314
22	Manipur	2,388,634	1,207,338	1,181,296	0.23	107
23	Meghalaya	2,306,069	1,167,840	1,138,229	0.22	103
24	Mizoram	891,058	459,783	431,275	0.09	42
25	Naagaland	1,988,636	1,041,686	946,950	0.19	120
26	Orissa	36,706,920	18,812,340	18,094,580	3.57	236
27	Pondicherry	973,829	486,705	487,124	0.09	2029
28	Punjab	24,289,296	12,963,382	11,325,934	2.37	482
29	Rajasthan	56,473,122	29,381,657	27,091,465	5.5	165
30	Sikkim	540,493	288,217	252,276	0.05	76
31	Tamil Nadu	62,110,839	31,268,654	30,842,185	6.05	478
32	Tripura	3,191,168	1,636,138	1,555,030	0.31	304
33	Uttar Pradesh	1,66,052,859	87,466,301	78,586,558	16.17	689
34	Uttaranchal	8,479,562	4,316,401	4,163,161	0.83	159
35	West Bengal	80,221,171	41,487,694	38,733,477	7.81	904

Source: Census of India - 2001

4/197/2008—40A

Appendix 3.16

District-wise Population, Decadal Growth Rate, Sex-ratio and Population Density

Sl. No.	State/District	Population 2001			Percentage decadal growth rete		Sex-retio (No.of femeles per 1000 meles)		Population density per sq.km.	
		Persons	Males	Females	1981-91	1991-01	1991	2001	1991	2001
1	2	3	4	5	6	7	8	9	10	11
	Kerala	**31838619**	**15468664**	**16367955**	**14.32**	**9.42**	**1036**	**1058**	**749**	**819**
1	Kasaragod	1203342	587763	615579	22.78	12.3	1026	1047	538	604
2	Kannur	2412365	1154144	1258221	16.63	7.13	1049	1090	759	813
3	Wayanad	786627	393397	393230	21.32	17.04	966	1000	315	369
4	Kozhikode	2878498	1398674	1479824	16.69	9.87	1027	1058	1118	1228
5	Malappuram	3629640	1759479	1870101	28.87	17.22	1053	1063	872	1022
8	Palakkad	2617072	1265794	1351278	16.52	9.86	1061	1068	532	584
7	Thrissur	2975440	1422047	1553393	12.2	8.7	1085	1092	903	981
8	Ernakulam	3098378	1535881	1562497	11.42	9.09	1000	1017	963	1050
9	Idukki	1128605	566405	562200	10.45	6.96	975	999	236	252
10	Kottayam	1952901	964433	988468	7.71	6.76	1003	1025	828	884
11	Alappuzha	2105349	1012572	1092777	7.28	5.21	1051	1079	1415	1489
12	Pathanamthitta	1231577	588035	643542	5.6	3.72	1062	1094	450	467
13	Kollam	2584118	1248616	1335502	10.68	7.33	1035	1070	967	1038
14	Thiruvananthapuram	3234707	1571424	1663283	13.5	9.78	1036	1058	1344	1476

Source: Census of India - 2001

Appendix 3.17

Age Group Population of Kerala 2001.

Sl. No.	Age Group	Population (In Lakhs)			Percentage			All India Percent age
		Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9
1	0-4	27.65	14.09	13.56	8.7	9.1	8.3	12.2
2	5-9	25.44	12.96	12.49	8	8.4	7.6	13.3
3	10-14	29.87	15.24	14.63	9.4	0.9	8.9	11.8
4	15-19	29.85	14.85	14.99	9.4	9.6	9.2	9.4
5	20-24	29.84	14.4	15.44	9.4	9.3	9.4	8.9
6	25-29	27.86	12.97	14.89	8.7	8.4	9.1	8.3
7	30-34	25.16	11.86	13.31	7.9	7.7	8.1	7
8	35-39	24.66	11.55	13.12	7.7	7.5	8	6.2
9	40-44	19.51	9.6	9.9	6.1	6.2	6	5.1
10	45-49	19.26	9.52	9.74	6.1	6.1	5.9	4.3
11	50-54	14.38	7.25	7.13	4.5	4.7	4.4	3.7
12	55-59	11.3	5.42	5.8	3.6	3.5	3.6	2.7
13	60-64	10.32	4.8	5.52	3.2	3.1	3.4	2.6
14	65-69	9.02	3.99	5.02	2.8	2.6	3.1	1.5
15	70-74	6.13	2.73	3.4	1.9	1.7	2.1	1.3
16	75-79	3.99	1.74	2.26	1.3	1.1	1.4	0.5
17	80+	3.89	1.57	232	1.2	1	1.4	0.8
18	Age not stated	0.26	0.14	0.12	0.1	0.1	0.1	0.4
	All Ages	**318.41**	**154.68**	**163.73**	**100**	**100**	**100**	**100**

Sources : Senses of India 2001

Appendix 4.1

Number of Operational Holdings and Area Operated by Size Class in Kerala (2000-01)

Sl. No.	Size of Holding (ha)	Number	Area (ha)	Average Size (ha)
1	2	3	4	5
1	Below 1.00	6335428	882502	0.14
2	1.00-1.99	226810	299767	1.32
3	2.00-3.99	75651	190527	2.52
4	4.00-9.99	16008	84759	5.29
5	10.00 and above	2735	111933	40.93
	Total	6658632	1569488	0.24

Source. Directorate of Economics and Statistics

Appendix 4.2

District wise Number & Area of Individual operational holdings (2000-01)

Sl. No.	District	Number	Area (ha)	Area per holding
1	Thiruvananthapuram	792116	87616	0.11
2	Kollam	587430	87468	0.15
3	Pathanamthitta	301521	71390	0.24
4	Alappuzha	469850	71511	0.15
5	Kottayam	426577	129111	0.30
6	Idukki	285771	160199	0.56
7	Eranakulam	645429	117278	0.18
8	Thrissur	623463	114818	0.18
9	Palakkad	515823	158029	0.31
10	Malappuram	604186	135088	0.22
11	Kozhikode	569034	106214	0.19
12	Wayanad	156923	92925	0.58
13	Kannur	459212	146630	0.32
14	Kasaragod	217297	91311	0.42
	State	6658632	1569488	0.24

Source DES

Appendix 4.3

Percentage Distribution of Main Workers in Kerala (1991and 2001)

Sl.No.	Item	1991	2001
1	2	3	4
1	Cultivators	12.24	7.20
2	Agricultural labourers	25.65	18.07
3	Household industry workers	2.58	3.54
4	Livestock, Forestry, Fishing, Plantation, Mining, Quarrying and allied sectors	10.23	73.19
5	Other workers	49.40	

Source. Census Reports.

Appendix 4.4

District wise Actual and Normal Rainfall (mm) with Percentage Departure from Normal rainfall for 2007

DISTRICT	SouthWest Monsoon			NorthEast Monsoon		
	Actual Rainfall (mm)	Normal Rainfall (mm)	Percentage Departure (%)	Actual Rainfall (mm)	Normal Rainfall (mm)	Percentage Departure (%)
ALAPPUZHA	2159.7	1836.0	18	491.7	586.8	-16
KANNUR	3444.4	2713.2	27	387.6	325.2	19
ERNAKULAM	3095.4	2348.1	32	598.3	622.1	-4
IDUKKI	3434.5	2584.5	33	603.6	637.5	-5
KASARAGODE	3405.6	2990.8	14	209.0	321.1	-35
KOLLAM	1754.3	1379.2	27	599.8	561.7	7
KOTTAYAM	2397.9	1967.9	22	529.7	626.9	-15
KOZHIKODE	3581.6	2775.5	29	545.7	472.8	15
MALAPPURAM	2917.0	2033.4	43	356.6	453.3	-21
PALAKKAD	2638.6	1687.1	56	364.3	446.9	-19
PATHANAMTHITTA	2165.0	1662.3	30	640.8	580.4	10
THIRUVANANTHAPURAM	1111.8	969.9	15	554.2	513.3	7
THRISSUR	3146.7	2196.7	43	466.4	442.5	5
WAYANAD	2616.9	2756.0	-5	208.2	334.7	-38

Source : IMD website

Appendix 4.5

Area, Production and Productivity of Principal Crops

SL No.	Crops	Area (Ha)			Production (MT)			Productivity (Kg/ha)		
		2004-05	2005-06	2006-07#	2004-05	2005-06	2006-07#	2004-05	2005-06	2006-07#
1	Rice	288874	275742	263529	667106	629987	641577	2301	2285	2435
2	Jowar	2566	2450	1877	*309	1248	930	510	508	509
3	Ragi	1383	414	516	1119	336	417	809	809	808
4	Other Cereals	955	11	825	746	21	489	781	1908	782
5	Pulses	8428	10582	6870	8390	7940	6211	995	752	759
6	Sugarcane	1921	1222	1161	15430	9165	8682	8032	7500	5669
7	Pepper	237869	237998	226094	74980	87805	64264	315	368	284
8	Chilies	823	1231	1415	775	1192	1383	942	968	983
9	Ginger	9991	12226	11082	45305	58288	42497	4535	4804	3835
10	Turmeric	2681	3384	3917	6244	8237	8978	2167	2434	2547
11	Cardamom	41378	41367	41362	8616	9765	8545	208	236	207
12	Arecanut	107572	108590	102078	110340	119309	109968	1028	1099	1077
13	Banana	58386	61400	69143	475371	491823	463788	8075	8010	7841
14	Other Plantains	54812	55222	53080	416115	445333	436835	7619	8064	8210
15	Cashewnut	81547	78285	70461	60584	68262	61880	743	872	875
16	Tapioca	88486	90539	87128	2400043	2568284	2518999	27123	28367	28911
17	Sweet Potato	838	711	505	10013	9013	6405	11977	12677	12683
18	Groundnut	1348	3299	2813	996	2441	2081	740	740	740
19	Sesamum	883	600	732	260	210	294	294	350	402
20	Coconut *	899287	897833	870938	6001	6326	6054	6673	7046	6951
21	Cotton **	1472	2655	1300	2370	3452	1690	1610	1300	1300
22	Tobacco	40	43	31	223	69	50	5575	1605	1613
23	Coffee	84844	84644	84671	54300	60175	59475	642	711	703
24	Tea	35040	35043	35384	49508	58384	53659	1413	1669	1517
25	Rubber	480881	494400	502240	590778	739225	780405	1437	1496	1554

#Area Production and Productivity for 2006-07 are provisional except Paddy, Cardamom, Coffee, Tea and Rubber

** Production of Coconut in million nuts and productivity in nuts/ha*

*** Production of Cotton in No. of bales of 170 kg.*

Source: Directorate of Economics and Statistics

Appendix: 4.6

Index of Area, Production and Productivity of Crops in Kerala
Base - Average of Triennium ending 1993-94

Sl.No.		Crops	2004-05	2005-06	2006-07
1		2	4	5	
		AREA			
A		All Crops	93.17	91.33	92.76
B		Food Grains (1+2)	54.08	51.57	48.75
	1	Cereals	54.76	51.74	49.49
	2	Pulses	37 78	47.35	30.80
C		Non-Food Grains (3to8)	103.82	102.18	104.76
	3	Oil Seeds	100.20	100.16	97.12
	4	Fibres	11,64	20.10	10.28
	5	Plantation Crops	108 42	110.90	112.36
	6	Condiments & Spices	127 80	129.23	123.21
	7	Fruits and Vegetables	84.77	105.35	99.51
	8	Other Crops	30 77	19.85	18.70
		PRODUCTION			
A		All Crops	96.84	117.52	114.42
B		Food Grains(1+2)	63.48	59.67	60.76
	1	Cereals	63.49	59 67	60.77
	2	Pulses	51.82	49.04	32.18
C		Non-Food Grains	100.59	115.48	120.46
	3	Oil Seeds	118.29	128.67	121 41
	4	Fibres	11 59	16,92	8.28
	5	Plantation Crops	169.72	195.13	205 66
	6	Condiments & spices	151,53	161 69	136.31
	7	Fruits & Vegetables	97.71	98.45	96.47
	8	Other Crops	32 47	21,41	15 37
		PRODUCTIVITY			
A		All Crops	103.93	128.67	123.35
B		Food Grains (1+2)	117.38	115.71	124 84
	1	Cereals	115.94	115.33	122 79
	2	Pulses	137.16	103 57	104.48
C		Non-Food Grains (3to8)	96.89	113.02	114.99
	3	Oil Seeds	118.05	128.67	125.01
	4	Fibres	99 67	84.16	80.54
	5	Plantation Crops	156.54	176.95	183.04
	6	Condiments & spices	118.49	126.27	110.83
	7	Fruits and Vegetables	115.26	93.45	96 95
	8	Other Crops	105.52	107.85	82.19

Source: Directorate of Economics and Statistics

Appendix 4.7

Season-wise Area, Production and productivity of Rice in Kerala (2004-05 to 2006-07)

Season	Area (Ha)			Production (MT)			Productivity (Kg/ha)		
	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10
Virippu	105349	98256	83859	241824	212520	191241	2296	2163	2281
Mundakan	148893	155629	143724	335529	357734	346763	2253	2299	2413
Puncha	35732	21857	35946	89752	59733	103572	2512	2733	2881
All Seasons	269974	275742	263529	667105	629987	641576	2301	2285	2435

Source : DES

Appendix 4.8

Season-wise Coverage of HYV of Rice in Kerala

Year	Coverage of HYV (Ha.)				Total Area under Rice (Ha)				% of HYV over Total Area under Rice			
	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1995-98	71027	51602	41247	163876	186676	224843	59631	471150	38.05	22.97	68.94	34.78
1996-97	81632	54725	37072	153329	183893	210309	56624	430626	37.54	26.02	65.47	35.59
1997-98	69308	50693	48680	168679	144743	180701	61678	387122	47.88	28.05	78.93	43.57
1998-99	62348	66338	48414	177098	120217	174714	67700	352631	51.88	37.97	83.91	50.22
1999-00	70948	86936	54106	210990	121525	170228	58021	349774	58.38	50.48	93.25	60.32
2000-01	63868	89927	52892	226687	129752	162445	55258	347455	64.64	55.36	95.72	65.24
2001-02	76753	102714	40621	222088	110656'	161978	43850	316384	71.23	63.41	92.64	70.20
2002-03	98381	112271	40162	250804	112438	157004	41079	310521	87.50	71.51	97.74	80.77
2003-04	92867	109316	36663	238546	102770	147384	37186	287340	90.20	74.20	98.30	83.00
2004-05	97569	116630	35306	248495	105349	148893	35732	269974	92.60	77.70	98.80	85.70
2005-06	91000	110952	21862	223814	98256	155629	21857	275742	93.00	71.00	99.00	81.00
2006-07	76103	112575	35530	224206	83859	143724	35946	263529	91	78	99	65

Source : DES

Appendix 4.9

District wise Area , Production and Productivity of Rice in Kerala

Sl. No.	District	Area (Ha)			Production (MT)			Productivity (kg/ha)		
		2004-05	2005-06	2006-07	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	5198	4705	3849	12358	11034	10077	2378	2345	2618
2	Kollam	8949	7218	5497	20646	16063	12580	2307	2225	2289
3	Pathanamthitta	4339	3291	2616	10784	7518	7101	2485	2284	2714
4	Alappuzha	32158	28768	31080	78491	71748	90161	2441	2494	2903
5	Kottayam	13161	12557	13814	32789	31261	35550	2491	2490	2574
6	Idukki	3186	2932	2878	7782	7500	7508	2458	2558	2609
7	Ernakulam	28145	24934	21895	54501	48033	44007	1936	1928	2010
8	Thrissur	36351	31073	27311	87463	72951	65036	2406	2348	2381
9	Palakkad	111029	113919	109208	260118	266634	270103	2343	2341	2473
10	Malappuram	16749	14885	15109	36539	31377	33123	2182	2108	2192
11	Kozhikode	4623	4703	4295	6727	6314	6092	1455	1343	1418
12	Wayanad	11331	11503	11833	29208	28365	30722	2578	2466	2596
13	Kannur	9102	9223	8842	17098	17383	17375	1878	1885	1965
14	Kasaragod	5675	6030	5323	12605	13786	12142	2221	2286	2281
	State	289974	275741	263530	667105	629987	641577	2301	2285	2435

Source : DES

Appendix 4.10

District-wise and Season-wise Area, Production and Productivity of Rice for 2006-07

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	1403	3602	2567	2373	6288	2650	72.6	187	2576	3848.6	10077	2618
Kollam	1615	3904	2417	3879	8672	2236	2.6	4	1538	5496.6	12580	2289
Pathanamthitta	230	550	2391	1434	3423	2387	952.3	3128	3285	2616.3	7101	2714
Alappuzha	7594	22287	2935	13696	40111	2929	9770	27763	2842	31060	90161	2903
Kottayam	4149	10767	2595	4192	9896	2361	5473	14887	2720	13814	35550	2574
Idukki	851	2345	2756	1810	4593	2538	216.6	570	2632	2877.6	7508	2609
Ernakulam	5740	11034	1922	13700	28541	2083	2455	4432	1805	21895	44007	2010
Thrissur	5389	9847	1827	16028	34788	2170	5894	20401	3461	27311	65036	2381
Palakkad	44443	100689	2265	56875	151829	2668	6090	17605	2891	109208	270103	2473
Malappuram	4782	10514	2199	8732	17094	1958	1595	5515	3457	15109	33123	2192
Kozhikode	295	397	1346	3429	4745	1384	571.4	950	1663	4295.4	6092	1418
Wayanad	0	0	0	9265	23115	2495	2568	7607	2963	11833	30722	2596
Kannur	4802	8733	1898	4142	8522	2057	98.4	120	1220	8842.4	17375	1965
Kasaragode	2786	6592	2383	2369	5148	2172	188.3	404	2148	5323.3	12142	2281
STATE	**83859**	**191241**	**2281**	**143724**	**346763**	**2413**	**35947**	**103573**	**2881**	**263529**	**641577**	**2435**

Source : DES

Appendix 4.11

Area, Production and Productivity of HYV of Rice (2004-05 to 2006-07)

District	Area (Ha)			Production (MT)			Productivity (Kg/Ha)		
	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10
Thiruvananthapuram	4715	4121	3743	11361	9667	9894	2410	2349	2643
Kollam	5917	4172	3608	14142	9293	8553	2390	2227	2375
Pathanamthitta	3776	2793	2089	8547	6517	5877	2528	2333	2813
Alappuzha	31464	27956	30428	77584	71019	89724	2466	2540	2949
Kottayam	13040	12391	137[illegible]8	32604	30874	35407	2500	2500	2581
Idukki	2941	2448	2431	7201	6[illegible]80	6320	2448	2527	2600
Ernakulam	25781	22898	20537	51065	44406	42057	1982	1939	2038
Thrissur	26175	24921	21330	70862	61999	54583	2516	2488	2559
Palakkad	100971	90412	95738	243401	219498	249293	2410	2428	2577
Malappuram	11860	10161	8808	27717	23584	21939	2397	2316	2491
Kozhikode	1454	1436	1404	2636	2599	2448	1850	1810	1744
Wayanad	6703	9117	9048	23557	23870	26460	2707	2596	2743
Kannur	6560	7172	62[illegible]4	13182	14200	12994	2003	1980	2091
Kasaragode	3336	3592	3418	8251	9140	8503	2473	2545	2489
STATE	248493	223611	224208	583280	532736	574062	2388	2382	2560

Source : DES

Appendix 4.12

Plantation Crops - Area, Production and Productivity(2002-03 to 2006-07)

	2002-03		2003-04		2004-05		2005-06		*2006-07	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India	Kerala	India
1	2	3	4	5	6	7	8	9	10	11
AREA (Ha.)										
Tea	37068	511940	38327	512000	35040	519977	35043	521825	35364	-
Coffee	83113	355102	84884	327941	84844	327941	84644	379709	8457[illegible]	381558
Rubber	476047	569687	478402	573960	480543	578000	494400	597810	602240	615200
Cardamom	41412	73125	41332	73207	4[illegible]378	73725	41367	73795	41362	73228
PRODUCTION (MT)										
Tea	55348	837802	57553	850490	49508	908840	56384	930849	53659	
Coffee	63322	275276	63850	270600	54900	275600	60175	274000	59475	268000
Rubber	594917	649435	855134	711650	690711	749865	739225	802625	780405	852906
Cardamom	8880	11920	8875	11580	8616	11415	9765	12540	8545	11238
PRODUCTIVITY (kg/ha)										
Tea	1493	1638	1502	1661	1413	1744	1609	1785	1517	-
Coffee	762	775	754	825	842	840	7109	722	703	755
Rubber	1250	1140	1389	1240	1437	1287	1495	1796	1664	1678
Cardamom	210	163	216	158	208	155	236	170	207	208

Source : DES, UPASI

*Provisional

Appendix 4.13

Import of Rubber (1990-91 to 2006-07)

Year	Import (MT)		
	Natural Rubber	Synthetic Rubber	Total
1	2	3	4
1990-91	49013	51715	100728
1991-92	15070	39210	54280
1992-93	17884	47362	65246
1993-94	19940	64338	84278
1994-95	8093	73860	81953
1995-96	51635	71735	123370
1996-97	19770	91850	110620
1997-98	32070	86389	118459
1998-99	29534	97548	127082
1999-00	20213	104842	125055
2000-01	8970	108923	116893
2001-02	46590	111323	160913
2002-03	26229	124475	150704
2003-04	44199	173784	217883
2004-05	68718	113095	181813
2005-06	45285	132118	177403
2006-07	89699	171998	261697

Source: Rubber Board, Kottayam

Appendix 4.14

Consumption of Rubber in Kerala & India (1994-95 to 2006-07)

(in MT)

Sl.No	Year	Kerala			India		
		N.R	S.R	R.R	N.R	S.R	R.R
1	2	3	4	5	6	7	8
1	1994-95	64660	16084	6100	237440	70035	36715
2	1995-96	75200	22727	6232	525485	134085	65775
3	1996-97	67144	24575	5988	561765	142810	66586
4	1997-98	68542	27825	6270	571820	160915	70085
5	1998-99	77583	29074	6245	591645	158395	63085
6	1999-00	86849	31088	6820	628110	187220	63450
7	2000-01	88221	32978	8773	631475	170670	82260
8	2001-02	100163	32114	6583	638210	174630	63875
9	2002-03	126100	38438	6861	695125	194850	67320
10	2003-04	124630	46921	7367	719600	210200	70480
11	2004-05	124654	49748	7895	765400	224650	72908
12	2005-06	135792	48559	6986	801110	237486	78535
13	2006-07	-	-	-	820905	270830	78435

N.R- Natural Rubber S.R-Synthetic Rubber R.R- Reclaimed Rubber

Source: Rubber Board, Kottayam

Appendix 4.15

Production, Consumption, Export and Auction Price of Tea

Year	Production India ('000 MT)	Production Kerala ('000 MT)	% of Kerala	Consumption ('000 MT)	Exports India ('000 MT)	Exports Percentage of Production	Cochin Auction Price (Rs/kg)
1	2	3	4	5	6	7	8
1980	569.00	54.00	9.49	346.00	224.00	39.37	13.14
1981-85	600.00	50.00	8.33	387.00	214.00	35.67	20.50
1986-90	679.00	57.00	8.39	484.00	204.00	30.04	27.54
1991-95	740.00	65.00	8.78	567.00	174.00	23.51	38.14
1996	780.10	61.80	7.90	618.00	162.00	20.77	44.42
1997	810.00	69.80	8.62	633.00	203.00	25.06	61.57
1998	874.10	65.90	7.54	684.00	210.00	24.02	73.39
1999	824.40	67.80	8.22	650.00	192.00	23.28	62.04
2000	846.50	69.30	8.20	653.00	207.00	24.46	51.34
2001	853.70	66.10	7.70	673.00	183.00	21.44	52.21
2002	826.20	59.70	7.20	693.00	198.00	23.98	47.21
2003	857.10	56.60	6.60	714.00	173.70	20.27	45.78
2004	820.20	49.70	6.06	725.00	197.80	24.09	52.14
2005	928.00	67.00	7.22	-	198.10	21.46	49.68
2006	955.90	68.80	7.20	-	203.8	21.32	54.40

Source : Association of Planters of Kerala

Appendix 4.16

Average Market Price of Natural Rubber in Domestic (Kottayam) and International (Bangok) markets

Year	Kottayam (RSS - 4)	Bangok (RSS - 3)
1	2	3
1992-93	2550	2608
1993-94	2669	2510
1994-95	3638	4171
1995-96	5204	5016
1996-97	4901	4509
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*	8838	9246

Source: Rubber Board, Kottayam

* upto December 2007

Appendix 4.17

Price Trend of Rubber

Month & Year		India (Rs. per 100 kg. of RSS 4) (Kottayam)	World (Rs. per 100 kg. of RSS 3) (Bangok)
1		2	3
2006	April	8634	9695
	May	9641	10998
	June	10692	12484
	July	9821	11710
	August	9182	10303
	September	8169	8480
	October	8709	8483
	November	8260	7428
		8809	7811
2007	January	9716	9319
	February	9757	10605
	March	9057	10050
	Average 2006-07	9204	9779
	April	8979	9870
	May	8685	9638
	June	8083	9226
	July	7943	8420
	August	8742	8690
	September	8858	8737
	October	9424	9130
	November	9603	9868
	December	9221	9834
	Average 2007-08*	8838	9246

Source: Rubber Board, Kottayam

** Up to December 2007*

Appendix 4. 18

Monthly Average Farm Price of Important Agricultural Commodities

Commodities	Unit	2006						2007					
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Paddy	Qtl.	632.69	641.88	659.71	678.72	682.33	694.08	695.29	695.90	707.72	706.22	701.05	685.08
Coconut with husk	100 Nos.	437.02	446.39	459.27	481.70	496.94	507.56	514.77	499.32	478.24	459.53	454.23	446.32
Arecanut	100 Nos.	65.99	59.71	53.12	47.66	44.21	44.01	42.83	45.47	49.46	53.97	58.88	60.79
Pepper	Qtl.	7836.32	9143.87	10935.85	10289.90	9518.27	8942.16	10461.27	10866.83	11171.57	13285.20	13154.00	13082.18
Tapioca	Qtl	444.02	450.86	455.74	463.59	469.51	474.88	471.97	476.07	479.69	483.79	485.99	478.32
Ginger - dry	Qtl.	4037.50	4400.00	4828.33	4785.77	4713.75	4428.85	3919.12	3706.82	3642.25	4048.32	3852.94	3536.54
Banana	Qtl.	1582.54	1619.79	1317.50	1229.38	1165.00	1187.68	1276.88	1283.98	1269.25	1291.57	1342.93	1457.02
Cashewnut	Qtl.	1733.33	1750.00	-	-	-	-	3275.00	3355.17	3287.81	2932.50	2120.11	1277.50

Source : Directorate of Economics and Statistics

Appendix 4.19

Index Number of Prices Received and Price Paid by Farmers

Year	Prices received by Farmers	Farm Cultivation Cost	Domestic Expenditure	Price Paid by Farmers	Parityse Col.2 to 5
2002	1999	6884	2542	4122	48
2003	2464	7058	2815	4295	57
2004	2851	7360	2705	4459	69
2005	2440	7703	2795	4640	53
2006	2474	8309	2947	4947	50
2007*	2751	8992	3042	5230	53

** Upto July 2007*

Source : Directorate of Economics and statistics

Appendix 4.20

Consumption of Fertilizers/Ha. of gross cropped area in Kerala

(1995-96 to 2006-07)

(in Kg.)

Year	N	P	K	Total (N+P+K)		N+P+K)% (Kerala)
				Kerala	India	
1	2	3	4	5	6	7
1995-96	28.62	14.15	24.11	66.88	74.38	75
1996-97	28.33	13.69	19.80	61.52	75.49	85
1997-98	29.29	15.23	29.40	73.92	84.98	85
1998-99	29.80	14.58	18.14	62.22	87.08	90
1999-00	29.85	15.08	27.54	72.47	93.81	70
2000-01	28.43	12.66	20.82	58.32	88.34	65
2001-02	25.54	12.44	21.21	59.19	90.12	76
2002-03	29.18	13.63	26.19	68.90	88.00	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	108.72	70
2006-07	31.00	18.00	43.00	89.00	-	53

Source: Directorate of Agriculture and CMIE.

Appendix 4.21

Selected Indicators of Agricultural Development in Kerala (2005-06 & 2006-07)

Sl.No	Particulars	Unit	2005-06	2006-07
1	2	3	4	5
1	Fertilizer consumption			
	a) Nitrogen	MT	82485	88880
	b) Phosphorus	MT	44243	45807
	c) Potash	MT	75728	74850
	Total	MT	202456	208917
2	Plant protection measures			
	a) Fungicide (Liquid& Solid) in terms of technical grade	MT	481.238	380.1014
	b) Insecticides (Liquid& Solid) in terms of technical grade	MT	140628	130.3077
	c) Weedicide (in terms of technical grade)	MT	34.561	32.813
	d) Rodenticides(in terms of technical grade)	MT	0.0698	0.1357
	e) Area under Plant Protection coverage	Lakh Ha.	25.36	20.8
	f) Rodent control operation	Lakh Ha.	0.00098	0.00191
	g) Biological control of Nephantic Seriropa-parasites liberated	Lakh No	40.66	52.48123
	h) Weed control	Lakh Ha	0.88	0.845
3	High Yeilding Varieties of paddy seeds	MT	3858.83	2882.63
4	Quality planting materials distributed			
	a) Coconut seedings	Lakh No.	4.23981	4.04464
	b) Rooted pepper cuttings	Lakh No.	107.17148	51.6883
	c) Cashew grafts	Lakh No.	4.2446	2.49514
5	Soil testing			
	Soil samples analysed	No.	203641	218994

Source: Directorate of Agriculture

Appendix 4.22

Average Price of Agricultural Inputs (2005-06 & 2006-07)

Sl No	Item	2005-06	2006-07
1	2	3	4
I	Fertilizer (Price/MT)		
a	Urea	5023.00	5023.00
b	Ammonium sulphate	6673.00	7488.00
c	Super Phosphate	3545.00	3545.00
d	Muriate of Potash	4455.00	4455.00
II	Paddy Seed		
a	Average NSC Price (per Qtl)	1500.00	1500.00
b	State Seed Farm Price (per Qtl)	1200.00	1200.00
III	Green manure seed(per Kg.)		
a	Daincha		
b	Sannhemp		
IV	Coconut Seedlings (Per seedling)		
a	WCT	25.00	30.00
b	Hybrids	30.00	35.00
V	Cashew grafts	20.00	20.00
VI	Rooted pepper cuttings(price per cuttings)	1.50	1.50
VII	Pesticides (price per litre/kg)		
a	Phosphamadon (per lt)	-	-
b	Quinal phos (per lt)	280.00	285.00
c	Monocrotophos (per lt)	278.00	280.00
d	Copper sulphate (per kg)	100.00	140.00

Source: Directorate of Agriculture

Appendix 4.23

Composition of Cattle Population (1977 to 2003)

(No.in 000's)

Year	Composition		Male		Female		Total	
			Nos.	%	Nos.	%	Nos.	%
1	2	3	4	5	6	7	8	9
1977	Crossbred	No	217	16.01	1138	83.99	1355	100
		%	28.82	-	50.51	-	46.08	-
	Indegenous	No	536	32.47	1115	67.53	1651	100
		%	71.18	-	49.49	-	54.92	-
	Total	**No**	**753**	**25.05**	**2253**	**74.95**	**3006**	**100**
		%	**100**	-	**100**	-	**100**	-
1982	Crossbred	No	217	14.93	1236	85.07	1453	100
		%	32.93	-	50.70	-	46.92	-
	Indegenous	No	442	26.89	1202	73.11	1644	100
		%	67.07	-	49.30	-	53.08	-
	Total	**No**	**659**	**21.28**	**2438**	**78.72**	**3097**	**100**
		%	**100**	-	**100**	-	**100**	-
1987	Crossbred	No	199	11.69	1503	88.31	1702	100
		%	39.17	-	51.54	-	49.71	-
	Indegenous	No	309	17.94	1413	82.06	1722	100
		%	60.83	-	48.46	-	50.29	-
	Total	**No**	**508**	**14.84**	**2916**	**85.16**	**3424**	**100**
		%	**100**	-	**100**	-	**100**	-
1996	Crossbred	No	232	10.14	2055	89.86	2287	100
		%	60.42		68.23	-	67.34	-
	Indegenous	No	152	13.73	957	86.27	1109	100
		%	39.58	-	31.77	-	32.66	-
	Total	**No**	**384**	**11.31**	**3012**	**88.69**	**3396**	**100**
		%	**100**	-	**100**	-	**100**	-
2000	Crossbred	No	144	7.36	1813	92.64	1957	100
		%	66.98	-	79.69	-	78.59	-
	Indegenous	No	71	13.32	462	86.68	533	100
		%	33.02	-	20.31	-	21.41	-
	Total	**No**	**215**	**8.63**	**2275**	**91.37**	**2490**	**100**
		%	**100**	-	**100**	-	**100**	-
2003	Crossbred	No	135	8.00	1600	92.00	1735	100
		%	74	-	82	-	82	-
	Indegenous	No	47	12.00	340	88.00	387	100
		%	26	-	18	-	18	-
	Total	**No**	**182**	**9.00**	**1940**	**91.00**	**2122**	-
		%	**100**	-	**100**	-	**100**	-

Source : Livestock Census Report

Appendix 4.24

Livestock and Poultry Population in India and Kerala - a Comparison

Species	1987			1996			2000			2003		
	India	Kerala	% share of Kerala	India (1992)	Kerala	% share of Kerala	India (1997)	Kerala	% share of Kerala	India *	Kerala	% share of Kerala
Cattle	1958.70	34.24	1.75	2045.16	33.96	1.61	1988.82	24.91	1.25	1873.80	21.22	1.13
Buffalo	769.70	3.29	0.43	842.39	1.65	0.20	899.18	1.11	0.12	955.20	0.65	0.07
Goats	994.10	16.81	1.69	1162.01	18.61	1.61	1227.2*	15.98	1.30	1201.00	12.13	1.01
pigs	107.60	1.37	1.27	127.88	1.43	1.12	132.91	0.88	0.66	14* 40	0.76	0.54
Poultry	2593.40	170.92	6.62	2640.25	258.46	9.03	3478.11	149.13	4.59	NA	109.92	
Ducks	234.90	8.46	3.60	220.86	11.87	5.37		10.43			6.61	

Source: Livestock Census -All India and Livestock Census-Kerala
Conference of State Minister of AH and DD, December 2004
*Provisional

Appendix 4.25

Trend in Livestock Population of Kerala, Over the Census Periods 1966 to 2003

(No. in lakhs)

Year of Census	Cattle		Buffaloes		Goats		Pigs		Poultry		Duck		Livestock	
	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1966	28.57	0	4.71	0	11.89	0	1.12	0	95.87	0	3.19	0	46.41	0
1972	28.56	-0.04	4.72	0.21	14.88	23.47	1.29	15.18	118.44	23.54	3.62	13.48	49.36	6.36
1977	30.06	5.25	4.54	-3.81	16.83	14.65	1.72	33.33	129.56	9.39	4.3	18.78	53.19	7.78
1982	30.97	3.03	4.09	-9.91	20.04	19.07	1.27	-26.16	145.19	12.08	5.3	23.26	58.45	6.13
1987	34.24	-10.66	3.29	-19.56	16.81	-21.11	1.37	7.87	170.92	17.72	8.46	59.62	56.01	-2.55
1996	33.96	-0.82	1.65	-49.85	18.6	17.85	1.43	4.38	259.46	67.85	11.87	40.31	55.77	1.38
2000	24.91	-26.95	1.11	-32.73	16.98	-14.09	0.88	-38.46	149.13	-44.66	10.43	-12.13	42.94	-23.01
2003*	21.22	-14.81	0.65	-41.44	12.13	-24.09	0.76	-13.64	122.18	-18.08	6.61	-36.63	34.81	-18.93

*Provisional
** Excluding Broiler and Rearing chicks etc.
Source: Livestock Census report 1966, 1972, 1977, 1982, 1987, 1996, 2000 & 2003

Appendix 4.26

Sex-wise Classification of Bovine Population and Trend over the previous Census (1958 to 2003)

(Nos. in '000s)

Year		Cattle Population			Buffalo Population			Total Bovine Population		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1956	No.	954	1558	2510	302	185	487	1256	1741	2997
1961	No.	973	1713	2686	320	165	485	1293	1878	3171
Variation	%	1.99	10.09	7.01	5.96	(-)10.81	(-)0.41	2.95	7.87	5.81
1966	No.	910	1943	2853	295	177	472	1208	2120	3328
Variation	%	(-)6.17	13.43	6.33	(-)7.81	7.27	2.68	(-)6.57	12.89	4.95
1972	No.	780	2075	2855	269	203	472	1049	2278	3327
Variation	%	(-)14.57	6.79	(-)0.04	(-)8.81	14.69	..	(-)13.18	7.45	(-)0.03
1977	No	753	2253	3006	254	200	454	1007	2453	3460
Variation	%	(-)3.46	8.6	5.29	(-)5.58	(-)1.48	(-)3.81	(-)4.00	7.68	4
1982	No.	659	2438	3097	217	192	409	876	2630	3506
Variation	%	(-)12.48	8.21	3.03	(-)14.57	(-)4.00	(-)9.91	(-)13.01	7.22	1.33
1987	No.	508	2916	3424	131	198	329	639	3114	3753
Variation	%	(-)22.91	19.61	10.58	(-)39.63	3.13	(-)19.56	(-)27.05	18.4	7.05
1996	No.	384	3012	3396	67	99	166	451	3110	3561
Variation	%	(-)24.41	3.29	(-)0.82	(-)48.85	(-)50.51	(-)49.85	(-)29.42	(-)0.13	(-)5.12
2000	No.	215	2275	2490	57	54	111	272	2329	2601
Variation	%	(-)44.01	(-)24.47	(-)26.55	(-)14.93	(-)44.99	(-)32.73	(-)39.89	(-)25.11	(-)26.96
2003	No	182	1940	2122	24	40	64	206	1980	2186
Variation	%	(-)15.34	(-)14.73	(-)14.78	(-)14.93	(-)25.93	(-)42.34	(-)24.26	(-)14.96	(-)15.96

Source : AH. Department - Livestock Census Reports of Various Years.

Appendix 4.27

Trend in Poultry Population over Census Periods from 1982 to 2003

(No. in Lakhs)

Category	1982	1987		1996		2000		2003	
	No	No	% variation	No	% variation	No	% variation	No	% variation
1	2	3	4	5	6	7	8	9	10
Broiler Fowls	1.11	4.63	317.09	36.79	738	34.71	(-)10.52	21.97	(-)38.70
Desi Fowls	65.65	153.35	134	134.93	(-)12.01	110.24	(-)18.28	77.38	(-)29.83
Improved Fowls	79.53	17.57	(-)77.91	121.53	592	24.13	(-)80.14	32.56	34.94
Total Fowls	**145.2**	**170.92**	17.12	**256.46**	50.05	**134.37**	(-)34.07	109.92	(-)18.20
Ducks	5.30	8.46	59.53	11.87	40.35	10.43	(-)12.13	6.61	(-)36.83
Other Poultry (Turkey)	0.22	0.58	167.43	1.12	93.89	4.33	286.61	5.63	30.32
Total Poultry	**151.8**	**184.59**	21.59	**309.24**	68.98	**183.84**	(-)31.77	**144.13**	(-)21.60

Source: Livestock Census Reports

Appendix 4.28

Distribution of Working Bullocks* and Male calves over the Five Census Periods and Percentage Variation over Previous Census from 1982 to 2003

(In '000 Nos.)

Category	1982	% variation	1987	% variation	1996	% variation	2000	% variation	2003	% variation
1	2	3	4	5	6	7	8	9	10	11
Working Bullocks Indegenous	240.94	-29.96	120.68	-49.92	57.50	-52.35	17.46	-69.83	11.14	(-) 36.20
Cross bred	14.33	-26.89	18.70	30.50	63.88	241.60	17.13	-73.18	7.64	(-) 55.98
Total	255.27	-29.79	139.38	-45.41	121.38	-12.90	34.59	-71.50	18.88	(-) 46.00
Male calves Indegenous	135.30	8.04	112.14	-17.12	52.35	-53.31	29.63	-43.41	17.91	(-) 39.55
Cross bred	165.55	21.26	132.78	-19.81	111.30	-16.10	89.99	-19.15	92.79	3.11
Total	300.85	14.93	244.90	-18.60	163.86	-33.17	119.62	-26.91	110.70	7.46

Source: Livestock Census Report -1996 & 2000

* Includes bullocks used for work & those used for work and breeding

Appendix 4.29

Trend in Distribution of Adult Female Cattle over the Census Periods from 1982 to 2003, their Percentage Distribution and Percentage Variation over the Previous Census

(In '000 numbers)

Category	1982		1987			1996			2000			2003 (provisional)		
	No.	% distri-bution	No.	% distri-bution	% variation	No.	% distri-bution	% variation	No	% distribution	% variation	No	% distri-bution	% variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cattle in Milk Indegenous	392.79	46.45	451.80	44.51	15.02	329.66	29.57	-27.03	195.85	20.56	-40.64	106.84	14.94	(-) 45.49
Cross bred	471.48	54.55	563.17	55.49	19.46	785.38	70.43	39.46	756.01	79.44	-3.74	607.37	85.06	(-) 19.66
Adult Female Cattle Indegenous	785.71	51.94	812	47.73	3.35	569.53	31.71	-29.86	340.56	22.36	40.2	173.29	16.57	(-) 49.12
Cross bred	726.81	48.06	889.33	52.27	22.34	1226.36	68.29	37.89	1181.98	77.63	-3.62	872.54	83.43	(-) 26.18

Source: Livestock Census Report - 1996

Appendix 4.30

Production of Milk (2003-04 to 2005-06) and Egg (2003-04 to 2004-05) in the Major States of India

State	Milk					Egg		
	Production(000 MT)			% Increase over 2003-04		Production(Million Nos)		% Increase over 2003-04
	2003-04	2004-05	2005-06	2004-05	2005-06	2003-04	2004-05	2004-05
Andhra Pradesh	6958	7257	7624	4.28	9.56	14993	15804	5.41
Assam	727	739	747	1.85	2.75	514	522	2.35
Bihar	3180	4743	5080	49.15	59.12	740	799	7.96
Gujarat	6421	6746	6980	5.05	8.39	444	503	30.65
Haryana	5221	5222	5299	0.02	1.49	1280	1482	18.47
Jammu &Kashmir	1414	1422	1400	0.57	-0.99	637	611	-1.77
Karnataka	3857	3917	4022	1.56	4.26	1728	1772	-11.09
Kerala	2111	2025	2063	-4.07	-2.27	1278	1137	-11.14
Madhya Pradesh	5388	5508	6283	2.19	16.61	898	902	15.05
Maharashtra	6379	6567	6769	2.95	6.11	3376	3436	4.28
Orissa	997	1263	1342	26.69	34.60	931	1216	33.63
Punjab	8391	8554	8909	1.94	6.17	3068	3680	17.63
Rajastan	8054	8310	8713	3.18	8.16	672	693	8.96
Tamil Nadu	4752	4784	5474	0.67	15.19	3784	6395	76.56
Uttar Pradesh	15943	18512	17356	3.57	8.85	874	902	20.59
West Bengal	3685	3790	3891	2.82	6.56	2820	2888	6.06
All India	88082	92484	97066	5.00	10.20	40403	45200	13.50

Source: Animal Husbandry Department of States

Appendix 4.31

Per Capita Availability of Milk in Major States of India (gm/day) (1996-97 -2005-06)

State	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Andhra Pradesh	169	167	165	192	194	209	231	238	250	260
Assam	79	78	79	71	69	70	71	71	72	72
Bihar	100	98	121	119	80	88	92	100	147	154
Gujarat	289	290	290	297	280	317	321	330	344	348
Haryana	617	630	623	631	614	645	847	643	631	628
Jammu & Kashmir	302	345	353	382	346	367	365	363	364	353
Karnataka	191	216	233	241	233	249	229	190	194	197
Kerala	199	204	221	227	219	234	203	173	169	171
Madhya Pradesh	192	194	282	261	211	240	238	233	233	262
Maharashtra	181	181	168	168	162	172	172	172	176	178
Orissa	54	53	58	66	64	69	66	71	92	95
Punjab	823	861	883	902	854	892	895	898	917	943
Rajasthan	322	348	356	367	353	378	388	371	376	387
Tamil Nadu	183	185	199	210	211	219	198	198	204	231
Uttar Pradesh	215	221	238	243	223	241	245	250	254	282
West Bengal	123	123	125	123	116	120	120	120	124	126
All India	202	207	213	217	220	225	230	231	233	241

Source: National Statistics, NDDB

Appendix 4. 32

Details of milk production in the state - Results of Integrated Sample Survey (1997-98 to 2006-07)

Particulars		1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
	1	2	3	4	5	7	8	9	10	11	12
Estimated no. of animals in milk (lakh)	ND*	3.105	2.927	2.498	2.132	1.898	1.892	1.428	1.159	1.122	1.024
	CB*	8.346	8.557	8.942	9.297	9.488	8.293	7.236	7.052	7.034	6.950
	Total	11.451	11.484	11.438	11.429	11.386	10.185	8.664	8.211	8.156	7.974
Estimated no. of milch animals (lakh)	ND	5.057	3.995	3.365	2.841	2.216	2.455	1.885	1.544	1.491	1.41
	CB	11.877	12.241	11.793	12.388	12.698	10.778	9.769	9.359	9.295	9.707
	Total	16.934	16.236	15.178	15.229	14.914	13.233	11.654	10.903	10.785	11.117
Average milk yield/animal in milk (kg.)	ND	2.282	2.552	2.502	2.506	2.527	2.547	2.608	2.573	2.641	2.627
	CB	6.201	6.234	6.433	6.556	6.733	6.901	7.007	7.007	7.164	7.508
	Total	5.138	5.295	5.576	5.800	6.106	6.092	6.300	6.379	6.540	10.135
Average milk yield of milch animal/day (kg.)	ND	1.401	1.889	1.845	1.879	1.938	1.963	1.976	1.932	1.988	1.909
	CB	4.357	4.358	4.878	4.920	5.137	5.310	5.190	5.28	5.422	5.365
	Total	3.474	3.746	4.201	4.353	4.662	4.683	4.683	4.805	4.948	7.294
Annual milk production in the State (lakh tonnes)	ND	2.588	2.726	2.280	1.950	1.566	1.759	1.363	1.088	1.087	0.983
	CB	18.889	19.471	20.996	22.247	23.810	20.889	18.557	18.036	18.39	19.047
	Total	21.475	22.197	23.276	24.197	25.378	22.648	19.920	19.124	19.477	20.030
	Buff.	0.7405	0.7481	0.7003	0.635	0.630	0.480	0.398	0.379	0.36	0.288
	Goat	1.2140	1.2557	1.2772	1.221	1.173	1.082	0.788	0.749	0.79	0.661
	Grand Total	23.430	24.200	25.253	26.053	27.179	24.200	21.106	20.252	20.627	21.189
Per capita per day availability of milk (gm)		209	214	214	220	234	203	173	169	170	173

* ND - Non-descript, CB - Cross bred

Source: Animal Husbandry Department (Sample Survey Report)

Appendix 4.33

Index of Milk and Egg production in Kerala & India
(1984-85 to 2006-07)
(Base Year 1984-85)

Year	Index of Milk Production		Index of Egg Production	
	Kerala	India	Kerala	India
1	2	3	4	5
1984-85	100.00	100.00	100.00	100.00
1985-86	105.16	106.02	103.88	113.15
1986-87	109.34	111.08	106.48	121.46
1987-88	116.89	112.53	109.76	124.86
1988-89	124.02	116.83	111.89	133.17
1989-90	131.15	123.85	114.41	141.75
1990-91	138.52	129.88	118.14	146.06
1991-92	146.31	134.22	130.34	154.24
1992-93	154.84	141.20	135.21	160.88
1993-94	164.02	146.02	140.55	169.56
1994-95	173.51	153.73	146.04	182.25
1995-96	179.67	159.76	151.45	19[illegible].44
1996-97	186.08	164.58	154.27	192.90
1997-98	192.05	169.68	154.95	199.27
1998-99	198.06	181.20	155.79	206.82
1999-00	205.97	189.19	158.56	213.84
2000-01	213.52	193.75	155.08	257.04
2001-02	222.79	202.88	152.59	271.74
2002-03	198.36	208.41	102.67	279.42
2003-04	173.03	211.78	97.33	283.49
2004-05	184.34	222.36	91.23	317.18
2005-06	187.42	233.41	91.16	323.79
2006-07	171.96	242.66	91.39	355.48

Source: Animal Husbandry Department & Economic Survey

Appendix 4.34

Activities in the Animal Husbandry Sector (2002-03 to 2006- 2007)

Sl.No	Activities	Unit ('000)	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8
1	Cases treated	Nos.	4825	4629	4879	5029	5260
2	Operations Performed	Nos.	145	138	138	125	129
3	Castration done	Nos.	6	6	8	5	5
4	Vaccination done						
	1 Livestock	Nos.	1211	4414	1334	3440	2723
	2.Poultry	Nos.	3194	4554	8170	9603	8752
5	Anti Rabies Vaccinations done in Dogs	Nos.	116	132	113	101	197
6	Artificial Inseminations done	Nos.	1369	1231	1176	[illegible]160	1204
7	Calvings recorded	Nos.	402	354	358	356	383
8	Chicks hatched out in Department Poultry Farms	Nos.	707	977	747	515	859
9	Vaccines produced in Veterinary Biologicals						
	1. Poultry	Doses	8318	[illegible]7887	13480	10946	20092
	2. Livestock	Doses	203	534	329	184	439

Source: Animal Husbandry Department.

Appendix 4.35

Production and Distribution of Frozen Semen in Kerala (1994-95 to 2006-2007)

(In lakh doses)

Year	Production of Frozen Semen	Distribution Inside the State	Distribution Outside the State	Total Distribution
1	2	3	4	5
1994-95	24.85	15.36	10.97	26.33
1995-96	14.93	16.27	6.61	22.88
1996-97	24.76	15.39	7.83	23.22
1997-98	24.49	15.04	7.95	22.99
1998-99	25.57	15.75	7.70	23.45
1999-00	26.17	15.74	6.80	22.54
2000-01	20.13	15.63	7.80	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	14.98	4.2	19.21
2005-06	27.10	15.89	15.14	31.03
2006-07	32.54	15.88	11.28	27.16

Source: KLD Board

Appendix 4.36

Artificial Insemination Centres in the State, as on 31.03.2007

Sl.No	Department/ Institutions	No of A.I Centres
1	2	3
1	Department of Animal Husbandry/Both ICDP	2469
2	Department of Dairy Development	10
3	Other Voluntary Organisations	272
4	APCOS	273
5	Tata Tea	26
	Total:	3050

Source: Animal Husbandry Department & KLD Board

Appendix 4.37

Other Important Activities of KLD Board During 2005-06 and 2006-07

Sl.No	Name of Programme	Achievement	
		2005-06	2006-07
1	2	3	4
1	Liquid Nitrogen (Lakh litres)	1.19	1.18
2	Quantity of basic fodder seeds produced (kg.)	592.30	910.30
3	Quantity of fodder seed supplied (MT)	24.383	15.518
4	No. of kids produced		
	(i) Malabari	165	305
	(ii) Beer	185	66
5	No. of Malabari kids distributed:	93	104
6	No. of personnel trained	1099	494
7	No. of embryos collected	128	164
8	Premium bull semen distributed (No. of doses)	16463	42233
9	No. of pigs distributed:		
	For breeding and rearing	7056	3787
	For meat	375	122

KLD Board is now arranging purchase of LN from agencies outside State. The figure shown is the production from LN plant at Pookkaudy only

Source: KLD Board

Appendix 4.38

Average Price of Livestock Products and Feeds in the State (2002-03 to 2006-2007)

Item	Unit	2002-03	2003-04	2004-05	2005-06	Percentage increase over 2004-05	2006-07	Percentage increase over 2005-06
1	2	3	4	5	6	6	7	8
Meat								
Chicken (Broiler)	Kg.	55.25	55.04	58.63	60.50	3.19	60.34	-0.26
Chicken (Desi)	Kg	71.03	74.59	84.64	88.52	4.70	92.45	4.32
Mutton	Kg.	113.06	126.82	137.54	145.86	5.90	156.75	7.61
Beef	Kg.	61.31	55.37	56.18	69.98	20.28	83.02	18.63
Pork	Kg.	62.58	64.34	66.70	73.86	10.42	78.38	6.40
Egg								
Fowl (White)	100Nos.	137	146	155.00	143.00	-7.74	160	11.89
Fowl (Brown)	100Nos.	207	224	242.00	232.00	-4.13	241	3.88
Duck	100Nos.	266	295	310.00	297.00	-4.19	305	2.69
Milk								
Cow	Litre	12.84	13.13	13.81	14.71	6.52	15.05	2.31
Buffalo	Litre	16.31	18.73	17.80	19.03	6.91	19.6	3.00
Feeds (price)								
Groundnut cake	Kg.	11.11	12.49	13.29	12.62	-5.04	13.37	5.94
Coconut cake	Kg.	10.16	12.57	11.76	11.08	-5.95	11.05	-0.08
Gingely oil cake	Kg.	12.43	13.56	12.53	11.63	-7.18	12.23	5.16
Straw	Kg	3.49	3.54	3.81	4.66	22.31	4.8	3.00
Grass	Kg.	2.18	2.52	2.32	3.26	40.52	3.66	12.27

Source: Animal Husbandry Department

Appendix 4.39

Dairy Cooperatives of India at a Glance

(in number*)

State	1980-81	1990-91	2002-03	2003-04*	2004-05*
North					
Haryana	505	3,229	3,963	4,219	5172
Himachal Pradesh		210	235	283	387
Jammu & Kashmir		105	**	**	**
Punjab	490	5,726	7,108	6,892	6893
Rajasthan	1,433	4,976	8,364	9,643	10662
Uttar Pradesh	248	7,880	17,429	18,104	18272
Sub Total	**2676**	**22126**	**37099**	**39141**	**41576**
East					
Assam		117	54	65	66
Bihar	118	2,050	4,008	4,657	5023
Jharkhand				80	80
Nagaland		21	77	76	78
Orissa		736	1,483	1,654	1896
Sikkim		134	186	189	194
Tripura		73	84	84	84
West Bengal	584	1,223	2,012	2,287	2367
Sub Total	**702**	**4364**	**7903**	**9092**	**9786**
West					
Chhattisgarh				424	445
Gujarat	4,798	10,056	11,112	11,400	11615
Goa		124	164	169	174
Madhya Pradesh	441	3,865	4,911	4,899	4815
Maharashtra	718	4,535	17,376	18,349	19192
Sub Total	**6957**	**18580**	**33563**	**35041**	**36241**
South					
Andhra Pradesh	298	4,768	5,007	5,072	4561
Karnataka	1,267	6,821	9,050	9,293	9619
Kerala		1,016	3,114	3,208	3238
Tamil Nadu	2,384	6,871	7,462	7,831	8031
Pondicherry		71	83	96	100
Sub Total	**3949**	**18345**	**24716**	**25300**	**25549**
All India	**13284**	**63415**	**103281**	**108574**	**113152**

= Organised (Cumulative)

** Provisional, includes conventional societies and Taluka unions formed earlier*

Chhattisgarh and Jharkhand reported separately from 2003-04

*** Not reported*

Source: NDDB Annual Reports

Appendix 4.40

Performance of Kerala Co-operative Milk Marketing Federation (2001 to 2007)

Sl. No	Particulars	2001	2002	2003	2004	2005	2006	2007*
1	2	3	4	5	6	7	8	9
1	No. of Apcos registered (Cumulative)	2424	2464	2535	2590	2648	2686	2723
2	No. of Apcos functional (Cumulative)	2130	2250	2305	2354	2399	2428	2500
3	No of members in apcos (Cumulative) (lakh Nos)	6.53	6.79	6.97	7.32	7.45	7.71	7.77
4	No.of Women in Apcos (Lakh Nos)	1.03	1.09	1.15	1.25	1.31	1.44	1.48
5	No of SC/ST members in Apcos (Lakh Nos)	0.42	0.40	0.40	0.44	0.44	0.445	0.45
6	Average milk marketed/day by KCMMF (MT)	659	689	737	774	839	915	947
7	Average milk procured per day (MT) - Apcos	714	708	8.72	7.33	8.4	918	905
8	Direct employment generated (No. of persons)	7060	7210	7484	7586	7807	7833	7981
9	No of Veterinary routes	18	13	13	10	14	12	10
10	No.of cases treated (Lakh Nos)	0.05	0.04	0.03	0.03	0.03	0.03	0.02
11	No.of emergency veterinary routes	20	38	39	37	38	32	32
12	No.of cases treated(Lakh Nos)	0.31	0.40	0.42	0.47	0.5	0.48	0.3
13	Cattle feed sold (Lakh MT)	1.17	1.03	1.04	1.12	1.13	1.21	0.75
14	Quantity of ghee produced (MT)	1709	1832	2299	2606	2673	3111	1744
15	Quantity of ghee sold (MT)	1786	1934	2258	2438	2605	3217	1678

Source: KCMMF

* as on 2007 Aug.

Appendix 4.41

Performance of the Dairies under Kerala Co-operative Milk Marketing Federation (2003 to 2007)

Sl.No	Dairy	Capacity lakh ltr./day	Procurement (Lakh Ltrs)					Sales (Lakh Ltrs)				
			2003	2004	2005	2006	2007*	2003	2004	2005	2006	2007*
1	2	3	4	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	2.00	356.54	371.04	377.04	408.37	256.11	551.31	595.07	640.79	682.14	473.83
2	Kollam	1.00	281.83	209.49	253.62	296.13	147.11	407.19	432.22	474.72	624.85	344.53
3	Alappuzha	0.60	68.33	61.81	74.95	83.28	50.92	206.15	226.93	245.37	261.64	156.72
4	Kottayam	0.40	67.38	79.88	102.41	118.83	84.11	124.22	136.70	151.72	168.98	108.22
5	Ernakulam	1.50	353.34	413.43	517.55	582.55	352.38	401.10	452.13	506.38	566.73	382.31
6	Thrissur	0.60	137.68	109.90	93.18	103.53	65.16	122.15	120.50	121.66	132.98	95.85
7	Palakkad	1.00	331.80	386.98	396.1	397.13	243.67	185.00	237.35	193.60	214.03	188.19
8	Kannur	1.00	343.66	384.94	446.33	503.45	322.2	238.85	254.75	271.98	282.83	214.81
9	Kozhikode	1.50	156.40	170.81	201.82	238.54	161.98	331.81	325.32	330.07	362.86	257.94
10	Kasaragod	0.30	23.81	29.77	45.43	55.93	44.84	192.71	107.53	110.53	55.93	84.61
	Total	9.90	2120.58	2218.18	2508.43	2787.84	1698.49	2850.49	2888.50	3047.00	3269.86	2297.01

Source : KCMMF

* as on August 2007

Appendix 4.42
Average Quantity of Milk Procured per day by APCOS (1994 to 2007)

Year	No. of Societies (Functional)	Total Procurement/ day (ltr.)	Procurement per Society/day (ltr.)
1	2	3	4
1997	1826	484998	255
1998	1985	566247	285
1999	2040	629114	308
2000	2092	688864	329
2001	2130	71430*	335
2002	2250	708137	315
2003	2308	671720	291
2004	2354	732615	311
2005	2399	839977	350
2006	2428	917546	378
2007*	2500	905229	362

Source: KCMMF *As on August 2007

Appendix 4.43
Price Revision Details of Milk (2000-01 onwards)

Date of Revision/Region	FAT(Rs./Kg)	SNF(Rs/Kg)	Purchase Price(Rs./kg) (Average rate)	Sales price(Rs/ltr) Toned Milk
1	2	3	4	5
TRCMPU				
01/04/01	95.70	78.30	9.73	13.00
01/07/01	91.30	74.70	9.09	13.00
11/08/01	95.70	78.30	9.73	13.00
01/11/01	95.70	79.55	9.71	13.00
21/11/03	103.34	85.90	10.40	14.00
21/04/05	110.21	91.61	11.09	15.00
ERCMPU				
11/05/00	95.70	78.3	9.23	13
11/07/01	91.30	74.7	9.09	13
21/11/03	98.99	80.99	9.85	14
21/04/05	107.97	88.34	10.75	15
MRCMPU				
21/05/00	95.7	78.3	9.23	13
11/10/00	95.7	78.3	9.23	12.5
21/05/01	95.7	78.3	6.63	12.5
01/10/01	95.7	79.55	9.21	12.5
21/11/03	103.34	85.9	10.4	14
21/04/05	110.21	91.61	11.09	15
KCMMF				
11/2/2007	110.21	91.61	11.84	16
13/11/2007	124.16	101.56	12.45	17

Source: KCMMF

Appendix 4.44

Price Spread of Milk (1993-94 to 2007-08)

(Average price per lit.in Rs.)

Year	Producer/ society	Consumer	Difference in price between producer & consumer
1	2	3	4
1993-94	6.14	9	2.86
1994-95	7.44	10	2.56
1995-96	8.31	11	2.69
1996-97	9.42	12	2.58
1997-98	9.22	12	2.78
1999-2000	9.93	13	3.07
2000-01	9.93	13	3.07
2002-03			
TRCMPU&MRCMPU	10.71	14	3.29
ERCMPU	10.15	14	3.85
2005-06			
TRCMPU &MRCMPU	11.42	15	3.58
ERCMPU	11.07	15	3.93
KCMMF			
2006-07	12.2	16	3.8
2007-08	12.82	17	4.18

Source: KCMMF

Appendix.4.45

Sale of Milk and Milk Products by KCMMF (2004-05 to 2006-07)

Sl No	Product	2004-05	2005-06	% change over 2004-05	2006-07	% change over 2005-06
1	2	4	5	6	7	8
1	Milk(Lakh Ltr)	2913	3100	6.42	3379	9.00
2	Ghee (MT)	2459	2628	6.87	3080	17.20
3	Butter (MT)	295	222	-24.75	318	43.24
4	Ice-cream (Lakh Ltrs)	2.37	3.26	37.55	5.73	75.77
5	Peda (000 Kg)	65.36	66.00	0.98	240.33	264.14
6	Refresh/Trays	15839	39474	149.22	58422	48.00
7	Sambharam (lakh PKts)	13.50	78.35	480.37	89.70	14.49
8	Curd (lakh ltr.)	132.07	150.01	13.58	175.33	16.88
9	Sip up (lakh nos.)	23.36	25.79	10.40	29.03	12.56
10	Cream (lakh Kg.)	1.59	4.30	170.44	1.48	-65.58
11	Dairy Whitener (MT)	19	16.11	-15.21	16.77	4.10
12	Parada (Kg)	1411	1330	-5.74	1343	0.98
13	Milma Plus (Bot.) (Lakh Nos)	8.89	9.92	11.59	7.86	-20.77
14	Chocolik (Lakh No.)	1.66	2.88	61.45	5.91	120.52
15	Water Sip up (Lakh No)	0	7.15		15.14	111.76
16	Packed Drinking Water	0	0		0.052	

Source. KCMMF – Annual Reports

Appendix 4.46

Outbreaks, Attacks and Deaths due to Major Contagious Diseases

(unit in Nos)

Sl.No.	Disease	2001	2002	2003	2004	2005	2006	2007
1	*Anthrax*							
	Outbreaks	2	3	2	4	9	8	8
	Attacks	8	4	4	7	8	8	8
	Deaths	5	4	4	7	10	10	9
2	*Black Quarter*							
	Outbreaks	1	1	1	0	0	1	0
	Attacks	1	1	1	0	0	160	0
	Deaths	1	1	0	0	0	3	0
3	*Haemorrhagic Septicemia*							
	Outbreaks	4	8	4	2	8	6	10
	Attacks	170	23	17	41	79	132	24
	Deaths	31	12	0	0	4	6	10
4	*Foot & Mouth Disease*							
	Outbreaks	49	473	2383	132	19	94	53
	Attacks	1028	9918	19207	1890	446	772	553
	Deaths	344	814	1302	92	66	48	80
5	*Rinderpest*							
	No outbreak reported after 1994							

Source: A H Dept

Appendix 4.47

District-wise Distribution of Fishermen Population in Kerala (2006-07)

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	67978	60060	53397	181435	487	564	482	1633	182968
2	Kollam	42400	35859	21017	99276	14664	13804	8864	37322	136598
3	Pathanamthitta					1013	879	409	2301	2301
4	Alappuzha	48998	42898	28065	118960	27176	26045	14011	67232	186192
5	Kottayam					10666	10124	6309	27098	27098
6	Idukki					290	293	184	767	767
7	Ernakulam	31210	29258	18268	78736	25808	25241	18229	69278	148014
8	Thrissur	30504	30734	17498	78736	8621	7883	4970	21474	100210
9	Palakkad					940	924	949	2813	2813
10	Malappuram	33814	27495	25131	86440	1965	1711	925	4601	91041
11	Kozhikode	41440	36148	27679	105267	4539	4781	3718	13037	118304
12	Wayanad					87	89	85	258	258
13	Kannur	22308	20272	17327	59907	2629	2780	1494	6903	66810
14	Kasaragod	18821	17581	10869	47071	429	408	189	1024	48095
	State	335271	300305	220252	855828	99307	95524	60808	255639	1111467

Source: Directorate of Fisheries

Appendix 4.48

Species wise composition of Marine fish landings in Kerala

(2004-2005 to 2006-07)

(tonnes)

Sl. No	Species	2004-05	2005-06	2006-07
1	Elasmobranchs	3044	3159	3074
2	Eels	148	168	
3	Cat Fish	154	168	142
4	Chirocentrus	268	265	
5(a)	Oil Sardine	172754	149949	
(b)	Lesser Sardine	98303	65268	214773
(c)	Anchovies	35312	30167	33853
(d)	Trissocles	2308	3175	
(e)	Other Clupeids	12791	15533	
6	Saurida & Saurus	6916	5551	6158
7	Hemiramphus & Belone	642	691	
8	Perches	30437	30400	32871
9	Red Mullets	1616	1676	
10	Polynemidae	21	67	
11	Sciaenidae	8992	9867	8232
12	Ribbon fish	18857	15679	18000
13(a)	Caranx	25419	28987	26258
(b)	Chorinemus	1049	985	
(c)	Other Carangids	24171	20786	
14	Leiognathus	5136	5306	
15	Lactarius	3907	3525	
16	Pomfrets	1393	1501	
17	Mackerel	43017	44202	45804
18	Seerfish	2371	2475	2646
19	Tunnies	11208	11923	12248
20	Sphyraena	1582	2094	
21	Mugil	29	42	
22	Soles	8061	13951	
23(a)	Penaeid Prawn	53402	46008	
(b)	Non Penaeid Prawn	3315	1738	56779
(c)	Lobsters	0	398	
(d)	Crabs	3418	4515	
(e)	Stomatopods	332	9547	
24	Cephalopods	15939	14203	
25	Miscellaneous	6761	14948	100988
	TOTAL	801883	668913	561028

Source: Directorate of Fisheries

Appendix 4.49

Species-wise Inland Fish Production in Kerala (2003-04 to 2006-07)

(In MT)

Sl. No	Species	2003-04		2004-05		2005-06		2006-07	
		Production	%	Production	%	Production	%	Production	%
1	2	3	4	5	6	7	8	9	10
1	Prawns	16136	21	16334	21	14812	19	16229	20
2	Etroplus	4510	6	4456	6	4626	6	4452	6
3	Murrels	3657	5	4133	5	4267	6	4081	5
4	Tilapia	7739	10	7490	10	7965	10	7555	10
5	Catfish	4359	6	4740	6	4922	6	4464	6
6	Jew Fish	2795	4	2765	4	2871	4	2745	3
7	Others	37063	48	36531	48	38497	49	39564	50
	Total	76279	100	76451	100	77980	100	79110	100

Source: Directorate of Fisheries

Appendix 4.50

District wise Fishing Crafts

Sl. No.	Districts	Trawlers	Purse-seiners	Gill-netters	Liners	Ring seiners	Others	Total Mechanised	Motorised	Non-motorised	Total
1	Trivandrum	0	0	41	6	0	6	55	3,063	5,005	8,123
2	Kollam	1,259	0	0	2	11	0	1,272	605	425	2,302
3	Alappuzha	0	0	1	0	62	73	136	3,947	1,010	5,093
4	Ernakulam	1,403	50	320	0	67	58	1,898	1,104	1,190	4,192
5	Thrissur	47	0	2	0	92	116	258	456	306	1,021
6	Malappuram	218	0	16	1	105	100	441	1,607	361	2,409
7	Kozhikode	663	4	46	1	101	219	1,034	1,976	641	3,651
8	Kannur	208	0	2	0	5	11	226	503	290	1,019
9	Kasaragod	183	0	0	0	0	0	183	890	294	1,367
	Total	3,982	54	429	10	443	587	5,504	14,151	9,522	29,177

Source. Marine Fisheries Census 2005, CMFRI

Appendix 4.51

Details on Fishery Harbours in Kerala

(Amount in Lakh Rs.)

Sl.No.	Name of Fishing Harbour	Total Estimated Cost		Year of Starting	Year of Completion targeted	Expenditure up to March 2006 - Progressive Total	Expenditure up to March 2007	Amount Released by GOI	Amount sanctioned by GOI
		Original	Revised						
1	2	3	4	5	6	7	8	9	10
1	Vizhinjam	704.00	1563.00 *	1987 - stage II	2004	1538.81	1538.97	590.50	704.00
2	Muthalapozhi	1366.00	-	2000	2005	904.26	1006.47	683.00	1366.00
3	Thangassery	1980.50	4365.50 *	1991	Commissioned in 2001	4123.59	4104.35	350.25	1980.50
4	Neendakara	565.00	622	1982	Commissioned in 1988	848.95	854.04	311.00	622.00
5	Kayamkulam	624.80	1970.32	1994	2005	1280.84	1335.98	300.00	624.80
6	Munambam	1167.20	1952	1998	Commissioned in 2000	1792.94	1792.94	883.60	1167.20
7	Puthiyappa	527.00	982.5	1988	Commissioned in 1996	1161.29	1161.29	481.25	982.50
8	Chombal	556.00	975.00 *	1992	Commissioned in 1999	902.66	902.66	370.00	556.00
9	Mopla bay	584.00	816	1992	Commissioned in 1999	1070.50	1070.50	400.00	816.00
10	Ponnani	2759.40	-	2001	2006	712.620	1179.04	655.00	2759.40
11	Thalai	1370.00	1970*	-	-	69.48	69.48	150.00	1925.74
12	Thottappally	1458.30		2004	2009		577.46	400.00	1458.30
13	Kayilandi	3345.00		2008	2009		2.66	200.00	3345.00

* Revised Estimate submitted to Government for sanction

Source : Harbour Engineering Department

Appendix 4.52

Details of Revenue Collection in various Fishing Harbours/Fish Landing Centres

(Rs. in lakhs)

Sl.No.	Name of Harbour or Landing Centre	2005-06	2006-07
1	2	3	4
I	FISHING HARBOURS		
1	Neendakara	102.96	100.70
2	Puthiyappa	52.92	16.66
3	Munambam	16.42	1.79
4	Mopla Bay	6.01	11.25
5	Chombal	9.30	8.32
6	Azheekal	0.15	2.22
7	Beypore	5.29	5.72
8	Thangassery	18.59	22.82
9	Vizhinjam	8.29	24.78
II	FISH LANDING CENTRES		
1	Munakkakadavu	0.71	0.44
2	Thottappally	1.54	-
3	Neeleswaram	0.1	0.03
4	Dharmadam	0.69	0.64
5	New Mahe	0.96	0.8[illegible]
6	Vellayil Beach	0.46	1.17
7	Cheruvathoor	1.05	0.88
8	Chalingopalapettah	0.05	0.[illegible]3
9	Quilandy	0.35	0.15
10	Chettuva	2.28	1.33
11	Palacode	0.62	0.55
12	Arthungal	0.06	0.02
13	Punnapra		0.39
14	Ponnani	0.01	1.15
15	Kattoor	0.35	0.02
16	Ettikkulam	0.17	-
17	Thikkodi	0.07	-
	TOTAL	229.40	201.97

Source: Harbour Engineering Department

Appendix 4.53

Welfare Activities of Fisheries Department (2003-04 to 2006-07)

Sl.No	Particulars	2004-05		2005-06		2006-07	
		Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)
1	2	5	6	7	8	9	10
1	NFWF Housing	600	1500	600	1500	600	1500
2	Group Accident Insurance Scheme for fishermen	69.39	220592	75.00	226647	80	227815
3	Group Accident Insurance Scheme for allied workers	8.50	45000	8.00	45000	[illegible]0	51477
4	Fisherman Oldage Pension	462.03	27979	655.25	25468	321.65	26383
5	Pension for wives of deceased fishermen	22.23	3274	78.93	3125	46.70	3857

Source: Fisheries Directorate

Appendix 4.54

Details of Welfare Relief Schemes implemented by The Kerala Fishermen's Welfare Fund Board, 2006-07

(Amount in Rs.)

Sl. No	Details of Schemes	No of beneficiaries	Amount spent
1	2	3	4
1	Group Insurance Scheme	98	9645000.00
a)	Accident Death (started on 10.09.1986)		
b)	Permanent total disability		
c)	Permanent partial disability		
d)	Medical Expenses (Hospitalisation)		
2	Death while fishing or immediately there after not due to accident	32	605000.00
3	Financial assistance for the marriage of daughters of fishermen	7667	11500500.00
4	Financial assistance for the death of dependents	751	456600.00
5	Old age pension	26383	32185166.00
6	Temporary disability	903	402560.00
7	Financial assistance to the dependents for the death of fishermen	1019	5087000.00
8	SSLC cash award to the students who score highest marks		41266.00
9	Family welfare schemes	535	267600.00
10 a)	Financial assistance for treatment of fatal diseases	464	4441845.00
b)	Inward pension		11700.00
11	Widow pension	3657	4669752.00
12	Chairman's Relief Fund	48	31000.00
13	Maternity benefit scheme	1061	795750.00
14	Cash award for Higher Education		60454.00
	Total	***42619***	***69881313.00***
	Allied Workers Welfare Scheme		
1	Financial assistance to the dependents for the death of allied workers	53	261000.00
2	Maternity benefit scheme	49	36000.00
3	Old age pension	1874	1318422.00
4	SSLC cash award to the students who score highest marks		32745.00
5	Special cases sanctioned by the Board		
6	Fatal disease	85	533854.00
7	Marriage assistance	380	570000.00
8	Sterilisation Operation	11	5500.00
9	Insurance Premium	5	500000.00
	Total	***2257***	***3257521.00***
	GRAND TOTAL	***44876***	**73138834.00**

Source : National Fishermen's Welfare Fund Board

Appendix 4.55

Activity-wise Cumulative Sanction/Release of Funds to Kerala by NCDC

(Rs. in Crore)

SLN o	Scheme	Total Release from 1983-84 to 2000-01	% to Total release	Total Release from during 2001-02	% to Total release	Total release 2002-03	% to Total Release	Total release during 2003-04	% to Total release	Total release during 2004-05	% to Total release	Total release during 2005-06	% to Total release	Total release during 2006-07	% to Total release
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Mktg. & Input Distribution	40.67	9.17	4.70	16.45	14.84	28.65	7.06	7.16	87.20	53.04	52.23	27.05	308.20	38.69
2	Agro- Processing														-
	a) Sugar	1.30	0.31	-	-	-	-	-						-	-
	b) Spinning Mills	10.05	2.27				-	8.04	8.33	13.77	12.80	23.52	13.32	4.36	1.4
	c) Oil Processing	74.25	16.78	-	-	-	-	-	-	-	-			-	-
	d) Powerloms	15.53	4.18	0.65	1.05	2.46	4.0	-				5.45	0.25	-	-
	e) Rubberloom	34.30	7.75	0.55	1.07	1.67	3.13	8.8	8.09	7.08	6.48	2.63	1.46	2.21	0.8
3	Storage	13.54	3.06	0.61	1.57	2.41	4.6	0.07	0.02	0.31	0.3	5.91	0.11	-	-
4	Plant component / Studied items	20.88	4.67	1.98	3.60	10.67	21.26	1.69	1.76	1.11	1.02	0.81	0.55	0.36	0.12
5	NCDP	66.19	14.95	20.96	40.54	7.83	15.21	16.1	18.67	10.77	9.63	2.07	1.68	3.2	1.04
6	Weaker Section														-
	a) Fisheries	58.87	20.09	16.59	32.15	5.53	11.22	16.21	15.75	16.27	14.69	5.49	3.88	0.05	0.02
	b) Handloom	15.77	3.35	0.72	1.39	1.11	2.21	-	-	0.05	0.05			-	-
	c) DBF	48.75	11.0	0.59	0.18	1.23	2.45			1.87	1.44			-	-
	d) SC-ST Co-ope.	2.16	0.49	-	-	0.09	0.18	-	-	0.18	0.15	0.12	0.38	0.05	0.02
	e) Poultry	0.10	0.02		-	-	-	-	-	-	-			-	-
	f) Dairy	0.03	0.01	-	-	-	-	-	-	-	-				-
7	Promotional/Development Projects	4.70	1.06		-	-	-	-	-	-	-	2.03	0.59	-	-
8	Credit to Co-operative Development	-	-	-	-	-	-	46.35	46.20	0.02	0.02	103.34	52.90		
10	Computerisation	2.71	0.61	0.24	0.48	2.4	4.78	1.05	1.12	0.61	0.10		1.05	0.03	0.01
	Total	497.97	100	52	100	50.98	100	98.57	100	193.24	188.03	198.94	100	319.39	100

Source: NCDC

Appendix 4.56

NCDC Release of Fund for Kerala (2000-01 to 2006-2007)

(In Lakh Rs.)

Sl.No.	Name of Schemes	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9
1	Marketing Co-operatives							
	(a) Margin Money to Federation	-	300.000	1090.000	-	700.00	50.00	32.5
	(b) Share Capital to PACS	53,630	413,130	260.000	140.000	61.29	144.00	-
	(c) Agro Custom Hiring-cum-service Centre of RAIDCO (Margin Money)	-	-	-		-		
	(d) Farmers Service Centre	544,400	161.850	99.400	58.530		20.00	-
	(e) Agricultural implements/ Organic manure	-	-	49.080	8.840	17.88	8.93	-
	(f) Working Capital					5000.00	5000.00	30000
2	Processing Unit							
	(a) Rubber	1987.06	55.145	158.530	580.300	380.00		84.34
	(b) Spices Powdering Unit	40.055	-	-	-	-		
	(c) Fruit and Vegetables					280.00	283.32	137.08
	(d) Cattlefeed					30.00		
3	Storage	38.407	81,276	241.071	2.175	33.270	20.61	-
4	Credit to Co-operative Development	-	-	-	4855.325		10338.31	-
5	Fisheries							
	(a) Marine	1143.72	1659.38	582.500	1521.430	1619.83	546.37	-
	(b) Inland	-	-	-	-	-		
	(c) Fish marketing cell	-	-	-	-	6.60	2.8	4.94
6	Coir Co-operatives	1057.087	9.320	123.049	-	166.69		-
7	Handloom Co-operatives	74.140	71.583	111.250	-	5.41		-
	(a) Spinning Mills SC	187.590	-	-	604.020	1377.00	2352.59	436.50
	(b) Powerloom	551.555	95.620	245.630	-	-	45.61	-
8	SC/ST Co-operatives	88.310	-	8.850	-	15.75	11.91	5.50
9	Sugar Factory	-	-	-	-	-		-
10	Compensation	270.520	23.730	240.130	107.588	13.75		-
11	Tech/Promo Cell	-	-	-	-	-		-
12	Project Reports, Study etc. Others	-	-	-	-	-		-
13	EEC Coconut Development Project (KERAFED Project)		-	-	-	0.34	-	-
14	INTER-Co-operative Development Project (I.C.D.P)	773.652	2094.527	763.063	1610.198	1077.64	207.28	328.265
15	Consumer Schemes	235.050	168.800	1060.980	169.390	110.77	86.46	35.83
16	Student Stores	1.500	7.130	0.060	-	-		
17	Animal Husbandry Department	-	-	-	-	-		
	Poultry Co-operatives	-		-	-	-		
18	Goatweb dairy	-	-	-	-	-		
19	Industrial Co-operatives	-	-	-	-	2.44	2.88	2.70
	Total:	6904.066	5161.487	5016.183	9657.897	10926.33	19099.80	31060

Source NCDC

Appendix 4. 57

Selected Indicators of Performance of the Primary Agricultural Credit Societies

Sl.No.	Indicators	Unit	2004	2005	2006	2007
1	2	3	4	5	6	7
1	Average membership per society	No.	14430	16966.7	17149	19756
2	Average Share Capital per Society	Lakh Rs.	24	29.59	49.56	35.60
3	Average deposit per society	Lakh Rs.	579	771.68	968.66	878.69
4	Average deposit per member	Rs	4012.27	4634.3	5648.179	4951.44
5	Average working capital per society	Lakh Rs.	772.5	1039.19	1418.4	1272.90
6	Average loan per member	Rs	3798.38	4181.3	5301.5	5076.13
7	Percentage of borrowing members to total	%	40.15	40.16	63.54	49.93
8	Average loan advanced per advancing society	Lakh Rs.	546.28	667.62	908.21	1603.74
9	Average loan advanced per borrowing members	Rs	9037.1	7943.07	8342.94	10179.45
10	Percentage of overdue to demand	%	34.8	19.78	38.45	38.01
11	Percentage of overdue to outstanding	%	28.73	23.74	25.52	22

Source: Registrar of Co-operative Societies, Kerala.

Appendix 4.58

Selected Indicators of the Credit Operations of the Primary Agricultural Credit Societies

Sl.No.	Indicators	Unit	2005	2006	2007
1	2	3	4	5	6
1	No.of Societies	Nos.	1594	1587	1602
2	No.of Members	No. in crores	2.54	2.72	3.17
	(i) of which SC	No. in lakhs	17.95	12.35	17.18
	(ii) of which ST	No. in lakhs	2.51	1.69	1.51
3	Paid up share capital	Rs. in crores	471.1	785.98	568.79
4	Reserves	Rs. in crores	720.8	1023.81	966.97
5	Deposits	Rs. in crores	12288	15372.65	15678.88
6	Working Capital	Rs. in crores	16544	22510.58	20591.91
7	Loans Issued	Rs. in crores	10828	14429.11	16079.84
	(i) Short-term	Rs. in crores	7012	10244.91	10780.87
	(ii) Medium-term	Rs. in crores	3183	3455.55	4551.68
	(iii) Long - term	Rs. in crores	433.2	728.84	747.29
8	Loan Outstanding	Rs. in crores	9919	15360.01	14851.66
9	Loan Overdue	Rs. in crores	2354	3822.78	3287.88
10	S.T Loan for agricultural purpose alone	Rs. in crores	1912	2797.91	2112.02
11	S.T Loan for non-agricultural purpose	Rs. in crores	5100	7447.01	8128.38
12	M.T loan for Agricultural purpose	Rs. in crores	881.8	948.80	1376.05
13	M.T loan for non-Agricultural purpose	Rs. in crores	2302	2608.75	3396.55
14	L.T. Loan for Agricultural purpose alone	Rs. in crores	231.9	188.71	181.79
15	L.T. Loan for non-agricultural purpose alone	Rs. in crores	201.3	559.93	565.08
16	Value of Fertilizers Sold	Rs. in crores	270.8	312.85	786.06
17	Value of Agricultural Produce Marketed	Rs. in crores	118.2	458.63	230.51
18	Dormant Societies	No.	24	22	28
19	Societies on Profit	No.	722	721	724
20	Profit Amount	Rs. in crores	235.9	247.20	384.78
21	Societies on loss	Nos.	828	828	803
22	Loss Amount	Rs. in crores	338.2	428.27	587.34
23	Societies without profit or loss (U/L)*	No.	20	16	17
24	Societies having paid Secretaries	No.	1539	1550	1543
25	Societies having own Godowns	No.	1288	1243	1223
26	Societies having Hired Godowns	No.	147	188	128
27	Viable Societies	No.	1421	1425	1476
28	Computerised societies	No.	717	785	887
29	Self Help Group Formed by PACS	No.	18188	11845	19587
30	State Contribution to SHGs through PACS	Rs. in Lakhs	238.4	222.31	351.38
31	State Contribution to agri Credit		558	258.39	-
32	Assistance for insurance	Rs.in Lakhs	1	21	-

*U/L: Under Liquidation

Source: Registrar of Co-operative Societies, Kerala

Appendix 4.59

Important Activities of Major Co-operatives (2005-06 to 2006-07)

Co-operatives	Unit	2005-06	2006-07
(I) SC/ST Federation			
a) Ayurvedric Medicine (Sales turn over)	Lakh	215.69	220.54
b) Minor Forest produce	"	340.25	369.2
c) Petroleum Products	"	688.25	682.46
d) Cane Furniture	"	-	0.43
(II) Rubber Mark			
a) Rubber Exported	Crore	106.8	65.4
(III) Consumer Fed			
a) Total Sales turn over	crore	359.64	445.7
b) Trivemi Super Market	"	–	5.13
c) Neethi Schemes	"	–	39.63
d) Foreign Liquir	"	–	44.85
(IV) CAMPCO			
a) Areacanut (Procurement)	MT	–	38766
Procurement value	Crore	–	398.2
Sales	MT	–	3502
Sales value	Crore	–	373.95
b) Chocolate			
Production	MT	–	1873
Sales value	Lakh	–	1700
c) Nestle			
Sales	MT	–	2602
d) Cadburys			
Sales	MT	--	197.51
e) Product Exported	MT	–	326.35
Export value	Lakh	--	217.4

Source : Annual Reports of Major Co-operatives

Appendix 4.60

DISTRICT WISE FLOW OF CREDIT (2003-04 to 2006-07 March)

(Rs. in lakhs)

DISTRICT	Agriculture Advances				Total Advances to Priority Sector			
	2003-04	2004-05	2005-06	2006-07	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9
Thiruvananthapuram	36334	56666	85498	113067	121738	103869	284877	229503
Kollam	22013	30466	42030	56050	175378	224750	256433	329423
Pathanamthitta	10450	30717	43958	83165	52984	77011	102146	122504
Alappuzha	25198	43181	48645	66965	80038	115152	147679	187746
Kottayam	60568	56240	83756	108026	109217	147280	207364	248155
Idukki	24807	30644	45252	51465	60248	71463	89213	100023
Ernakulam	33063	59002	71811	95558	160205	187262	221099	268830
Thrissur	44726	82966	77569	109488	162111	184566	230759	267396
Palakkad	34868	62889	93980	186740	78265	121775	178328	264788
Malappuram	46890	62499	84174	106930	68233	140521	138823	145788
Kozhikode	41669	58144	101839	172135	67041	110372	165225	213145
Wayanad	30002	45863	52400	63239	40273	56244	65332	75662
Kannur	29325	41756	47208	80332	115724	148345	173830	232275
Kasaragod	23099	29112	39502	50443	41127	55112	68230	80012
STATE TOTAL	454912	693438	815161	1190613	1358597	1838720	2330344	2772379

Source: SLBC

Appendix 4.61

Operations of the Kerala State Co-operative Bank Limited (1997-98 to 2006-07)

(Rs. in Lakhs)

Sl.No	Particulars	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11	12
1	Share Capital	2073.53	2073.53	2127.85	2195	2266	2299	2289	2258	2259	2269
2	Reserves	2846.01	3061.50	3833.25	4174	5101	6984	7230	8384	11140	8985
3	Deposits	77527.97	123616.97	153977.09	168724	191501	232878	242747	240734	288404	260136
4	Borrowings	19884.82	9051.17	8440.35	14598	20573	8778	18430	37588	42468	34077
5	Working Capital	101857.58	137566.39	160870.00	165174	210173	230179	267134	266207	347827	346641
6	Loans & Advances	51809.69	46851.19	107906.04	117931	122843	123713	111750	137215	188819	219843
7	Investments	23549.84	41738.70	45561.24	52031	54081	71233	110353	107623	78392	112477
8	Net Profits	81.38	129.13	250.6	30	71	612	535	418	-859	-2895
9	Total Assets	.	.	.	206894	235400	263421	281071	302282	345457	372278
10	Own fund	.	.	.	6365	7400	8263	9469	10653	13481	17058
11	Interest spread	.	.	.	0.88%	1.22%	1.46%	0.97		4018	2586
12	Operational expenses	.	.	.	1158	1222	1438	1192	1287	9751	2707

Source: Kerala State Co-operative Bank Ltd

Appendix 4.62

Purpose - wise Disbursed Loans in the Kerala State Co-operative Bank Limited (1998-99 to 2006-07)

(Rs. in Crores)

Sl.No.	Purpose	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11
1	Agriculture	156.36	175.72	120.89	79.88	114.39	113.86	219.57	374.14	573.94
2	Procurements/Marketing/ Distribution	96.59	103.71	176.47	84.89	82.74	178.91	192.12	404.43	322.58
3	Cottage and Small Scale Industries	70.65	53.01	56.85	66.22	58.17	60.17	82.34	112.68	139.59
4	Other Industries	15.87	11.49	30.11	33.95	40.70	68.55	68.61	11.62	129.29
5	Consumer Activities	6.43	1.02	0.12	2.92	13.96	5.70	13.72	15.44	50.25
6	Consumption Purpose	28.69	42.00	110.45	116.74	136.92	184.14	240.16	102.68	73.72
7	Housing	55.83	23.58	113.99	128.82	140.21	192.32	253.87	182.29	134.24
8	Other Purposes	35.89	808.52	560.03	714.00	650.09	315.92	301.9	443.85	360.7
	Total	468.11	1019.05	1179.31	1226.42	1237.13	1117.51	1372.28	1846.93	1791.31

Source: Kerala State Co-operative Bank Ltd.

Appendix 4.63

Operational Indicators of District Co-operative Banks during 2006-07

(Rs. in lakhs)

District	Paid of Share Capital	Reserves and Other Funds	Deposits	Borrowings	Working Capital	Investments in Govt. & Other Securities	Investments in Share of Other Institutions	Loan & Advances	Total NPA	Net Profit
1	2	3	4	5	6	7	8	9	10	11
Thiruvananthapuram	1712.10	11835.15	113386.68	25175.79	141967.31	28331.71	209.64	115840.41	9548.37	112.71
Kollam	675.93	8909.73	68850.34	17784.46	87917.45	16052.10	186.54	73219.33	18863.42	-
Alappuzha	729.53	2310.53	51709.47	8162.13	65832.35	14572.88	65.80	42561.07	6379.17	-
Pathanamthitta	317.67	1788.16	39762.06	254.79	41674.79	510.94	40.59	25804.24	3489.79	21.68
Kottayam	677.98	2855.25	71478.98	2252.39	74745.40	23685.68	129.86	50019.10	11262.33	
Idukki	964.06	3543.57	35152.57	13514.15	55961.66	7383.73	292.33	42003.54	4820.89	28.20
Ernakulam	1936.17	12228.94	152436.55	372.95	161916.42	84544.28	51.32	96303.13	9199.55	3515.98
Thrissur	587.77	5758.58	87872.95	8124.68	106097.04	4459.47	59.35	55419.10	8745.77	-
Palakkad	811.33	5409.04	49050.41	7469.58	57110.80	23959.01	108.51	38170.07	7707.98	136.43
Malappuram	551.81	7563.64	73152.33	1055.84	75722.50	23971.99	107.42	51740.45	8435.61	176.07
Kozhikod	454.40	4101.95	60851.35	12883.25	74274.82	14235.38	130.82	59845.31	7648.05	102.04
Wayanad	476.95	1186.08	13386.13	8054.55	22005.71	4251.01	44.43	17986.25	2041.87	13.38
Kannur	1176.10	6782.71	75295.42	15913.65	94848.65	405.10	381.44	69922.23	8468.13	130.63
Kasargod	502.56	1472.69	22764.07	9840.69	34580.01	3330.29	141.88	28402.44	1127.13	35.02

Source: Kerala State Co-operative Bank Ltd

Appendix 4.64

Annual Long Term Loan Disbursement and Debentures floated by Kerala State Co-operative Agricultural and Rural Development Bank Ltd

(Rs. in Crores)

Year	Loan advanced								Debenture Floated				
	Ordinary	Scheme	NFS*	Rural Housing	Gold Loan	KCC NABARD	NCDC Loans	Total	Ordinary	Scheme	NFS	Rural Housing	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1993-94	1[illegible].80	31.75	27.64	13.71	-	-	-	84.9[illegible]	11.50	30.65	26.92	24.32	93.39
1994-95	10.63	45.60	30.77	24.31	-	-	-	111.31	10.00	30.46	25.07	14.86	80.39
1995-96	10.44	67.54	40.53	35.49	-	-	-	154.00	11.00	45.78	37.65	40.63	134.96
1996-97	17.88	80.93	61.51	47.08	-	-	-	207.46	12.00	90.19	51.09	24.32	177.80
1997-98	10.84	79.38	81.01	95.07	-	-	-	236.30	17.25	102.82	61.33	60.98	242.38
1998-99	4.84	94.75	45.85	86.70	-	-	-	231.93	4.10	80.28	37.22	69.07	190.67
1999-2000	4.44	100.97	72.84	123.03	-	-	-	301.28	4.24	95.69	66.61	88.88	255.11
2000-01	6.85	121.61	81.37	123.79	-	-	-	333.32	3.25	104.31	77	88.18	270.74
2001-02	7.66	117.4	74.2	119.81	-	-	-	319.07	9.85	146.89	86.83	133.64	377.21
2002-03	7.67	98.77	85.72	121.16	-	-	-	293.31	2.40	104.89	68.76	187.76	364.81
2003-04	6.56	86.06	49	126.95	-	-	-	268.56	-	82.72	48.88	118.72	250.30
2004-05	5.40	98.06	73.62	141.62	-	-	-	332.66	-	72.87	37.19	114.29	224.36
2005-06	3.96	99.66	68.13	180.85	20.23	17.68	60.46	430.70	-	74.17	85.18	92.07	245.67
2006-07	2.9	87.6	66.73	173.49	30.42	42.45	117.14	610.73	-	88.22	36.38	96.32	199.92

*NFS - Non Farm Sector

Source: Kerala State Co-Operative Agricultural and Rural Development Bank Ltd.

Appendix - 4.65

Purpose-wise Classification of Long Term Loans Issued by Primary Co-operative Agricultural & Rural Development Banks (1999-2000 to 2006-07)

(Rs. in lakhs)

Sl.No	PURPOSE	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 (Tentative)	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10
I	**Ordinary Loan**								
1	Construction of Wells/Tanks	20.63	55.34	149.91	17.33	20.12	33.24	28.77	13.55
2	Renovation of Wells/Tanks	1.10	9.31	2.34	4.71	0.37	1.91	2.10	0.45
3	Pumpsets	1.98	9.71	8.79	2.10	-	-	0.45	0.25
4	Plantation & Horticulture	141.33	217.05	114.44	166.22	163.66	136.18	68.24	72.77
5	Agricultural Machinery	-	-	-	-	0.45		-	
6	Animal Husbandary	46.12	74.92	48.09	80.93	57.27	36.95	20.80	15.68
7	Land Development	105.26	107.48	160.30	231.61	120.46	105.24	120.45	140.49
8	Construction of Godowns/Cattle	57.65	92.63	178.49	110.63	157.33	151.71	174.93	120.90
9	Barbed wire or stonefencing	16.26	36.51	42.36	61.84	33.21	29.74	7.26	-
10	Construction of drainage channels	0.15	3.62	3.63	-	5.01		-	
11	Loans for Redemption of prior debts		-	-	-	-	-		-
12	Others	70.84	46.06	83.70	66.61	53.34	70.11	5.72	63.80
	Total	463.55	652.84	792.25	761.88	611.44	565.08	416.74	447.89
II	**Scheme Loan**								
1	Minor Irrigation	1572.75	1800.84	2086.31	2094.05	1314.021	1303.75	1527.59	1333.02
2	Plantation & Horticulture	4276.50	4637.57	5187.60	3186.15	2242.39	3046.06	3165.08	3449.45
3	Agricultural Machinery	890.04	1258.50	337.74	653.93	76.54		83.09	69.63
4	Dairy & Animal Husbandry	23.14	24.70	12.50	15.40	850.27	826.15	506.13	603.77
5	Land Development	1471.79	2308.23	2360.40	2204.50	2478.27	2421.17	3107.50	2505.81
6	Poultry	1504.53	1585.21	1298.97	1042.31	-		304.86	297.51
7	Fisheries	200.32	229.85	375.44	178.15	172.25	118.1	65.23	80.01
8	Others	235.49	194.41	160.02	522.40	1518.26	2066.21	1411.32	2075.10
	Total	10224.56	12148.41	11758.93	9894.89	8654.00	9503.44	10185.81	10416.20

Source: *Kerala State Co-operative Agricultural & Rural Development Bank Ltd.*

Appendix A.66

Agency-wise Disbursement of Refinance Assistance by NABARD in Kerala 2001-2002 to 2006-07

Rs. In crore

Sl. No	Agency	2001-02		2002-03		2003-04		2004-05		2005-06		2006-07	
		Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	KSCARD Bank	303.36	81.30	264.88	86.00	325.90	96.00	305.99	46	240.00	58.00	158.69	33.00
2	Commercial Banks	22.60	6.10	6.03	3.00	27.40	8.00	29.88	7	19	5	265.02	55
3	State Co-op Banks	24.28	6.50	12.10	4.00	67.18	20.00	145.10	32	87.00	21.00	-	-
4	Regional Rural Banks	22.08	6.10	21.41	7.00	21.57	6.00	67.04	15	65	16	59.94	12
	Total	373.29	100.00	307.70	100.00	342.05	100.00	448.01	100.00	416.00	100.00	482.44	100.00

Source: NABARD

Appendix 4.67

Purpose-wise Refinance by NABARD (2001-02 to 2006-07)

Sl. No.	Purpose	2001-2002		2002-03		2003-04		2004-05		2005-06		2006-07	
		Refinance	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Minor Irrigation Land	28.89	7.80	19.40	6.30	13.59	4.00	11.18	2.50	11.00	2.70	37.36	8.00
2	Development	27.18	7.30	28.57	9.60	28.80	8.00	26.80	5.70	31.23	7.60	62.56	13.00
3	Farm Mechanisation	1.09	0.40	1.22	0.50	0.65	0.20	0.26	0.08	0.61	0.15	1.46	0.30
4	Plantation & Horticulture	53.64	14.30	30.88	10.00	19.01	8.00	17.15	3.83	17.28	4.12	30.87	8.40
5	Dairy Development	14.49	3.90	8.04	2.60	4.87	1.40	9.79	2.19	9.73	2.34	14.68	2.40
6	Fisheries	2.55	0.70	2.47	0.90	1.81	0.50	0.79	0.18	1.26	0.31	8.05	1.30
7	Poultry	7.12	1.70	3.80	1.00	2.18	0.60	1.73	0.39	283.87	68.40	2.92	0.60
8	Bio-gas	0.71	0.20	0.40	0.30	0.29	0.10	0	0	5.09	1.23		
9	PMRY											20.81	4
10	Non Farm Sector	210.57	68.40	187.78	61.00	229.95	66.40	343.01	76.56	55.18	13.30	238.84	49.00
11	Sheep,Goat, Piggery											2.94	0.5
12	SGSY	7.40	2.00	2.87	0.80	0.64	0.30	1.37	0.31			3.07	0.6
13	Self Help groups	8.58	1.70	11.27	4.00	9.07	3.00	20.02	4.67			-	
14	Agro Processing	-	-	-		-	-	-	-				
15	Others	12.51	3.40	10.27	3.00	32.47	9.00	18.23	3.02			68.95	14
	Total	373.29	100.00	307.70	100.00	342.02	100.00	448.01	100.00	415.00	100.00	482.44	100.00

Source: NABARD

Appendix 5.1

Water Resources Potential of the River Basins of India

Sl No.	Name of the River Basin	Average annual potential in river (BCM)	Utilisable Surface flow (BCM)	Replenishable Ground flow (BCM)
1	Indus (up to border)	73.31	46.0	26.49
2	a) Ganga	525.02	250.0	170.99
	b) Bhramaputra Barak & Others	585.60	24.0	26.55
3	Godavari	110.54	76.3	40.65
4	Krishna	78.12	58.0	26.41
5	Cauvery	21.36	6.8	12.30
6	Pennar	6.32	6.9	4.93
7	East Flowing Rivers Between Mahanadi & Pennar	22.52	13.1	18.84
8	East Flowing Rivers Between Pennar and Kanyakumari	16.46	16.7	18.22
9	Mahanadi	66.88	50.0	16.46
10	Brahmani & Baitarni	28.48	18.3	4.05
11	Subernarekha	12.37	6.8	1.82
12	Sabarmati	3.81	1.9	.
13	Mahi	11.02	3.1	8.52
14	West Flowing Rivers of Kutch, Sabarmati including Luni	15.10	15.0	11.23
15	Narmada	45.64	34.5	10.83
16	Tapi	14.88	14.5	8.27
17	West Flowing Rivers from Tapi to Tadri	87.41	11.9	
18	West Flowing Rivers from Tadri to Kanyakumari	113.53	24.3	17.69
19	Minor River Basin Drainage into Bangladesh & Burma	31.00	..	..
	TOTAL	**1869.37**	**690.3**	**431.42**

Source: Ministry of Water Resources

Appendix.5.2

Central Loan Assistance Released under AIBP to States from 1996-97 to 2006-07

(Rs. Crores)

Sl No.	State	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	Total
1	Andhra Pradesh	35.25	74	79.67	65.015	85.02	281.66	33.188	205.53	87.54	311.3815	843.422	2111.67
2	Arunachal Pradesh	0	0	0	7.5	7.5	15	1.5	20	10	18	27	106.50
3	Assam	5.23	12.4	13.95	14.54	24.077	14.521	16.274	19.2015	16.93	34.9332	30.2686	202.33
4	Bihar	13.5	5.15	36.185	129.695	148.44	3.42	14.481	74.844	37.21	15.238	3.23	482.19
5	Chhattisgarh	0	4.6	9.5	10.52	13.93	48.2	104	74.63	2.93	7.8646	10.705	286.58
6	Goa	0	5.25	0	3.5	61.85	58	0	2	0.65		1.91	132.96
7	Gujarat	74.773	198.9	423.82	272.7	421.86	581.69	1000.33	850.369	530.6	339.6	121.8885	4814.41
8	Haryana	32.5	12	0	0	0	0	18	7.735	11.13	8	3.17	90.54
9	Himachal Pradesh	0	6.5	5	11.047	18.016	3.244	8.15	14.682	3.88	30.0786	3.93	104.35
10	Jammu & Kashmir	1.3	0	0	4.68	10.46	11.07	34.889	21.545	12.71	36.6878	37.7715	171.22
11	Jharkhand	0	8.89	11.64	14.346	9.05	10.82	9.67	1.833	21.29	5.037	1.29	93.87
12	Karnataka	61.25	90.5	84.6	157.14	171	492.5	620.85	286.478	396.29	140.7759	180.3729	2851.88
13	Kerala	3.76	15	0	0	22.4	11.275	5.665	31	49.44	8.3591	18.6488	184.54
14	Madhya Pradesh	83.25	110	81.25	95.325	151.328	215.41	220	588.44	516.7	188.0966	48.31	2238.11
15	Maharashtra	14	65	50.86	49.875	97.02	39.1	133.134	164.395	528.28	187.3822	485.6213	1765.58
16	Manipur	4.3	28	10.78	21.81	1.5	8.36	18.5	15.5	13	75.7035	156.3042	353.78
17	Meghalaya	0	0	0	2.694	5.512	4.47	1.5	1.088	1.74	1.576	0.76	19.33
18	Mizoram	0	0	0	1.433	1.433	2	0.75	9.3	5	8.315	14.2354	43.47
19	Nagaland	0	0	0	2.73	5	5	2.659	6	4	7.9987	10.5985	45.99
20	Orissa	48.45	85	71.5	90.25	100.32	188.475	179.57	164.686	24.23	151.3742	133.8848	1207.74
21	Punjab	87.5	100	0	42	55.62	113.88	38.66	0	0	26.3166		441.79
22	Rajasthan	2.875	42	140.05	106.885	78.487	96.315	174.385	499.837	352.8	90.2952	11.8	1595.19
23	Tripura	3.773	5.1	3.975	34.653	13.883	21.063	13.395	13.377	11	31.995	22.5131	174.73
24	Tamilnadu	20	0	0	0	0	0	0	0	0			20.00
25	Uttar Pradesh	43.5	78	76.5	286	315.9	354.69	358	274.765	175.92	133.128	61.8954	2179.32
26	Uttaranchal	0	0	0	0	0	0	25.163	25.5525	38.99	80.4387	84.7298	254.87
27	West Bengal	5	20	10	25	26.825	38.808	28.133	3.144	13.46	0.0287	8.7	176.90
28	Sikkim	0	0	0	1.38	0	2.4	0.75	0.75	0.76	0.8113	3.3236	10.25
	Total	500.001	952.19	1119.18	1450.477	1856.2	2601.981	3061.704	3128.501	2887.3	1900.314	2301.972	21739.82

Appendix 5.3

Physical Achievements under Minor Irrigation Schemes

(Area in Ha.)

Sl.No	Name of Schemes	Physical Achievement (net area)			
		2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6
1	Minor Irrigation - class -I	2947	2808	2778	1792.86
2	Minor Irrigation - class -II	1758	353	566	1281.2
3	Lift Irrigation	181	95	261	114.59
4	Jaladhara Pachathy	–	–	–	-
5	Repairs to MI Structures	--	16	18	13.4
	Total	4886	3073	3611	3182.05

Source : Department of Water Resources

Appendix 5. 4

Ground Water Resources of Kerala as on 31.03.2004 (GEC-1997 Methodology)

(Figures in MCM)

Sl No.	District	Total Annual Ground Water Recharge	Natural Discharge during Non-Monsoon Season	Net Annual Ground Water Availability	Gross Ground Water draft for Irrigation	Gross Ground Water for Domestic and Industrial uses	Gross Ground Water draft for all uses	Allocation for domestic and industrial water supply for next 25 years	Net Ground Water Availability for future irrigation development	Stage of Ground Water Development (%)
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	308.51	30.48	278.03	84.20	94.59	185.77	111.58	82.25	66.82
2	Kollam	495.61	47.36	448.25	114.03	88.75	205.40	111.94	222.28	45.82
3	Pathanamthitta	347.00	30.44	316.56	49.66	42.03	100.50	58.05	208.84	31.75
4	Alappuzha	466.08	46.62	419.46	81.06	87.46	128.64	92.37	256.03	30.67
5	Kottayam	521.06	50.20	470.83	62.89	67.43	133.80	92.52	315.42	28.37
6	Idukki	269.04	22.72	246.32	41.77	41.64	92.32	57.08	147.47	37.18
7	Ernakulam	618.43	50.59	567.83	197.59	96.44	293.80	112.21	258.03	51.74
8	Thrissur	774.93	72.18	702.75	228.27	101.36	328.44	130.24	344.24	46.45
9	Palakkad	823.92	73.55	750.33	140.47	159.85	327.75	191.81	418.05	43.67
10	Malappuram	557.29	49.88	507.84	165.45	115.23	307.86	156.50	185.69	60.65
11	Kozhikod	365.41	21.60	344.81	104.86	86.80	213.38	112.63	127.32	61.88
12	Wayanad	325.03	32.44	292.59	34.40	38.67	71.93	40.40	217.79	24.58
13	Kannur	591.88	51.27	540.62	107.29	73.52	261.18	101.38	331.95	48.31
14	Kasargod	376.18	32.84	343.53	204.08	40.59	271.64	43.08	96.37	79.07
	TOTAL	6641.33	611.76	6228.64	1886.02	1097.36	2920.20	1411.79	3221.73	46.88

Source: [illegible]

Appendix 5.5

Physical Achievements under Ground water development Schemes

Sl.No	Items	Unit	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7
1	Detailed hydrological survey(Site selection)	No.	5423	..	3560	4210
2	Siting and providing technical assistance for open wells	No.	882	9049	488	528
3	Siting and construction of different types of drilled wells	No.	534	1119	999	653
4	Creation of additional irrigation facilities	ha.	2637	2000	530	1372.4
5	Training of personnel	No.	41	71	45	57
6	Water sample analysis	No.	2545	2848	3443	27[illegible]9

Source: Water Resources Department (GWD)

Appendix 5.6

Physical Achievements Under Command Area Development Programme (2003-04 to 2006-07)

Sl No.	Item	Achievement				
		Unit	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7
1	Construction of field channels	ha	2170.85	1886	1614	1344
2	Construction of field drain	ha	6368.34	6156	3275	1652
3	Warabandi works	ha	-	-	-	
4	Training Programme for farmers	No	64	83	117	71
5	Adaptive Trials	ha.	122	10	8.8	50.84
6	Large scale demonstration	ha.	1994	-	11.6	71.2
7	Subsidy to small & marginal farmers	No.	-		-	
8	Beneficiary farmers associations organised and registered	No.	84	30	64	11
9	Detailed Soil survey conducted	ha	-	-	-	
10	Land levelling & shapping	ha	23	-	-	
11	Bench mark arc Evaluation Survey conducted	ha.	1793.15	2306	1741.28	1782.04
12	Crop Estimation Survey	ha.	-	-	-	
13	Yield Estimator survey on Principal Crops	No.	778	651	505	578
14	Evaluation Reports published	No.	2	3	1	
15	Reclamation of water logged areas	ha.	4439.2	1133	258.09	128

Source : CADA

Appendix 5.7

Major Physical Cumulative Achievements under CAD Programme as on March 2007

(in Ha.)

Sl No	Name of Project	Total CCA	Physical Achievements			
			Field Channel	Field drain	Warabandhi	Reclamation
1	2	3	4	5	6	7
1	Mangalpu	3639.000	3639.000	3490.000	3639.000	378.670
2	Peecha	18623.000	18623.000	18623.000	18623.000	3001.890
3	Vazhani	5182.000	5182.000	5182.000	5182.000	281.700
4	Cheeramuthy	1819.000	1349.800	1188.000	1819.000	
5	Chalakudy	19896.000	19896.000	14610.000	19896.000	1045.820
6	Nayyar	12012.750	12013.000	7853.000	11655.000	2085.180
7	Chittumpuzha	15700.000	15700.000	15698.000	13975.000	1388.260
8	Kallayada	14570.000	15249.400	14214.000	12778.000	2460.000
9	Periyar Valley	32800.000	32830.000	24159.000	32800.000	1295.000
10	Pamba	21135.000	8504.330	145.000	13348.000	864.000
11	Meenpuzha	21732.000	21732.000	18969.000	21732.000	2215.580
12	Walayar	4177.500	4122.000	2387.000		506.000
13	Pothundy	5466.000	5466.000	5185.000	5488.000	381.810
14	Gayathri	5466.000	5466.000	4902.000	5466.000	431.860
15	Karthikapuzha	8467.000	5831.430	5760.000		1216.000
16	Pazhassi	11530.000	10767.50	9029.000		494.000
17	Kallada	52514.000				
	Total	255274.250	174249.810	148636.630	162977.000	18039.090

Source CADA

Appendix 5.8

Storage levels in reservoirs of completed projects in Kerala

Storage (Mm³)

Sl.No	Name of Reservoir	01.06.2006	01.10.2006	01.01.2007	01.06.2007	01.10.2007	01.01.2008
1	Malampuzha	75.599	216.01	148.617	54.740	218.010	138.876
2	Neyyar	57.107	103.9	94.401	80.450	99.590	99.158
3	Kallada	163.2	447	410.03	84.960	507.000	452.78
4	Kanhirapuzha	48.801	59.1	83.008	18.990	60.770	62.189
5	Kuttiyadi	89.764	25.42	104.223	87.790	75.620	103.636
6	Pothundy	12.707	43.41	25.938	2.669	43.410	23.667
7	Mangalam	10.897	25.14	12.452	4.930	23.400	11.107
8	Valiyani	2.01	16.5	10.95	1.480	16.550	10.74
9	Peechi	10.803	78.14	65.587	9.710	78.630	54.98
10	Walayar	8.371	18.3	12.68	5.910	16.040	15.514
11	Meenkara	6.994	10.46	8.54	1.610	10.570	9.515
12	Chulliyar	5.918	13.7	6.311	1.290	13.060	9.069
13	Chimoni	50.36	144.82	125.6	57.400	136.300	109.95
14	Malankara	24.2	28.08	32.8	32.16	30.100	32.36
	Total	566.551	1301.86	1143.317	405.290	1329.450	1133.761

Source : Water Resource Department

Appendix 5.9

District-wise population covered by Water Supply Schemes as on 1/4/2007

Sl.No	District	Rural Population covered	% to Total Rural population	Urban population covered	% to Total Urban Population	Total Population covered	% to Total population
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	1571473	73.34	958817	67.61	2530290	70.23
2	Kollam	1142932	53.69	453761	97.36	1595813	61.73
3	Pathanamthitta	758108	82.92	107700	67.00	865808	70.18
4	Alappuzha	1162805	79.00	521654	63.97	1704459	60.62
5	Kottayam	964556	57.09	292663	97.62	1257221	64.35
6	Idukki	597705	54.33	55262	95.95	652967	57.82
7	Ernakulam	1535700	91.32	1393990	94.37	2929690	94.33
8	Thrissur	1756000	82.28	785367	93.56	2541367	85.46
9	Palakkad	1421521	82.87	340964	95.62	1762485	67.34
10	Malappuram	1735063	53.07	353880	99.35	2088943	57.82
11	Kozhikode	845443	36.3	630762	75.44	1476205	51.27
12	Wayanad	858847	87.46	14835	50.10	873682	86.04
13	Kannur	873600	58.32	708332	56.40	1581932	57.37
14	Kasaragod	662167	70.3	143298	61.32	805465	68.98
	Total	15323048	65	6961395	64.21	22284345	60.86

Source: Kerala Water Authority

Appendix-5.10

Coverage of Habitations under Rural Water Supply(as on April 1, 2006)

State/UT	Status of habitations			
	NC	PC	FC	Total
Andhra Pradesh	0	0	69,732	69,732
Arunachal Pradesh	34	309	3,955	4,298
Assam	144	4,803	65,608	70,555
Bihar	0	0	105,340	105,340
Chattisgarh	0	0	50,379	50,379
Goa	0	5	390	395
Gujarat	0	0	30,269	30,269
Haryana	0	0	6,745	6,745
Himachal Pradesh	0	4,941	40,426	45,367
Jammu & Kashmir	606	2,210	8,368	11,184
Jharkhand	0	0	100,096	100,096
Karnataka	0	3,494	53,188	56,682
Kerala	0	5,871	3,892	9,763
MadhyaPradesh	0	0	109,469	109,469
Maharashtra	240	15,598	70,092	85,930
Manipur	0	0	2,791	2,791
Meghalaya	7	127	8,502	8,636
Mizoram	0	26	781	807
Nagaland	16	609	900	1,525
Orissa	0	0	114,099	114,099
Punjab	97	593	12,759	13,449
Rajasthan	1,877	0	92,069	93,946
Sikkim	0	0	1,679	1,679
Tamil Nadu	0	0	66,631	66,631
Tripura	0	0	7,412	7,412
Uttar Pradesh	0	0	243,506	243,506
Uttarakhand	26	203	30,745	30,974
West Bengal	0	0	79,036	79,036
Andaman & Nicobar islands	0	39	465	504
Dadra & Nagar Haveli	5	19	492	516
Daman&Diu	0	0	32	32
Delhi	0	0	219	219
Lakshdweep	0	10	0	10
Pondichery	0	37	230	267
Chandigarh	0	0	18	18
Total	3,052	38,894	1,380,337	1,422,283
Number that are uninhabited/ unpopulated/migrated/urbanised				381
Grand total				1,422,664

NC: Not covered PC: Partially covered
FC: Fully covered

Source: Economic survey 2006-07

Appendix 5.11

District - wise and Category-wise Number of Water Supply Schemes in Operation as on 1/4/2007

Sl. No.	Name of District	No. of Urban Water Supply Schemes	Rural Water Supply Schemes		Total
			Multi Panchayat	Single panchayat	
1	2	3	4	5	6
1	Thiruvananthapuram	6	43	90	139
2	Kollam	3	35	57	95
3	Pathanamthitta	3	18	42	63
4	Alappuzha	6	1	77	84
5	Kottayam	5	55	97	157
6	Idukki	1	103	87	191
7	Ernakulam	13	57	85	155
8	Thrissur	9	143	102	254
9	Palakkad	4	132	46	182
10	Malappuram	5	109	26	140
11	Kozhikode	2	118	98	218
12	Wayanad	0	30	29	59
13	Kannur	8	51	109	166
14	Kasaragod	2	63	69	134
	Total	65	958	1014	2037

Source: Kerala Water Authority.

Appendix 5.12

District-wise details of service connections and street taps as on 1/4/2007

Sl.No	Name of District	Water Supply Connections				Street taps		
		Domestic	Non-Domestic	Industrial	Total	Panchayat	Cor'/Mun'	Total
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	209998	25140	67	235205	11603	4396	15999
2	Kollam	81339	4590	167	86096	15021	3427	18448
3	Pathanamthitta	23129	2478	14	25621	5834	509	6343
4	Alappuzha	73429	3214	77	76720	20837	4957	25794
5	Kottayam	70474	5365	43	75902	13247	2047	15294
6	Idukki	14511	1914	4	16429	4641	536	5177
7	Ernakulam	257926	18578	299	276803	28630	8783	37401
8	Thrissur	90198	3726	37	93961	20478	4030	24508
9	Palakkad	62569	4410	94	67073	12514	3253	15767
10	Malappuram	39286	2705	9	42000	7962	3118	11080
11	Kozhikode	45750	3435	39	49224	4976	2894	7870
12	Wayanad	6749	946	2	7697	4177	247	4424
13	Kannur	27559	3799	50	31408	4185	1626	5811
14	Kasaragod	12987	730	9	13726	2983	323	3308
	Total	1015904	81060	911	1097865	157088	41146	198234

Source: Kerala Water Authority

Appendix 5.13
Water Tariff

CONSUMPTION PER MONTH	TARIFF FROM 01/04/1999
A. DOMESTIC CATEGORY	
Upto 10,000 litres	Rs. 20.00 per month Minimum charge
10,000 to 30,000 litres	Rs.20.00 plus Rs.3.00 per 1,000 litres in excess of 10,000 litres
30,000 to 50,000 litres	Rs.80.00 plus Rs.5.30 per 1,000 litres in excess of 30,000 liters
Above 50,000 litres	Rs.160.00 plus Rs.7.35 per 1000 litres in excess of 50,000 litres
B.NON-DOMESTIC CATEGORY	
Up to 50,000 litres	Rs.7.35 per 1,000 litres Minimum charge Rs.100
Above 50,000 litres	Rs.368.00 plus Rs.10.80 per 1,000 litres in excess of 50,000 litres
C.INDUSTRIAL CATEGORY	
For entire consumption	Rs.10.80 per 1,000 litres Minimum Charge Rs.200
D.LOCAL BODIES	
Panchayat	Rs. 1750 per tap per year
Municipality	Rs.2628 per tap per year

Source: Kerala Water Authority

Appendix 5.14
Details of Income from Water Charges (2000-01 to 2006-07)

(Rs. Lakh)

Year	Urban Schemes			Rural Comprehensive Schemes			Rural Single Panchayat Schemes			
	Domestic, Non-domestic & Industrial	Street Taps	Total	Domestic, Non-domestic & Industrial	Street Taps	Total	Domestic, Non-domestic & Industrial	Street Taps	Total	Grand Total
1	2	3	4	5	6	7	8	9	10	11
2000-01	4389	1393	5782 (61.83)	1097	1030	2127 (22.74)	549	894	1443 (15.43)	9352 (100)
2001-02	5184	1011	6195 (64.96)	1296	748	2044 (21.44)	648	649	1297 (13.60)	9536 (100)
2002-03	5633	1190	6823 (64.50)	1408	880	2288 (21.60)	704	763	1467 (13.90)	10578 (100)
2003-04	6030	1370	7400 (63.97)	1520	1012	2532 (21.89)	759	877	1636 (14.14)	11568 (100)
2004-05	8132	133	8625 (71.73)	2051	98	2149 (18.66)	1023	86	1109 (9.62)	11523 (100)
2005-06	7695	986	8681 (52.12)	1930	4052	5982 (35.91)	979	1015	1994 (11.97)	16657 (100)
2006-07	8733	311	9044 (65.27)	2183	1123	3306 (23.86)	1213	293	1506 (10.87)	13856 (100)

Source:- Kerala Water Authority.

Note:- Figures in brackets denote percentage to total

Appendix 5.15

Receipts of Kerala Water Authority from various sources from 1999-00 to 2006-07

(Rs. Lakh)

Year	Revenue from Water/ Sewerage rates	State Govt		Govt. of India	Loan from LIC/ HUDCO	Others	Total
		Plan	Non-Plan				
1	2	3	4	5	6	7	8
1999-00	7794	15181	5513	3868	3621	313	36090
2000-01	9354	11480	4780	3846	2777	304	32521
2001-02	8537	9699	6186	5895	100	298	31516
2002-03	10480	10400	6188	6204	3029	307	36701
2003-04	11568	9736	6124	4341	1000	375	33146
2004-05	11523	7621	9626	5885	300	385	35340
2005-06	16857	17499	8080	6170	4251	395	52972
2006-07	13856	23782	8860	6627	3045	1113	57183

Source: Kerala Water Authority

Appendix-5.16

Plan & Non Plan Expenditure of Kerala Water Authority from 1997-98 to 2006-07

(Rs. Lakh)

Items	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11
I. Plan Expenditure										
State Plan Schemes	12138	12140	5381	5748	3985	5105.87	5162.58	9589.63	5458.59	8524.03
ARP Schemes	3916	3533	4228	4383	4233	4331.71	4197.43	4157	6887.55	6312.81
LIC/HUDCO	673	2930	6437	3346	4140	3706.07	3360.84	1500	2634.98	2223.1
Others	171	132	0	0	0	1416.21	1337.04	2060.82	1486.30	2509.11
Externally Aided Project										19321.16
Sub Total	16898 (53.63%)	18735 (52.88%)	16046 (40.53%)	13477 (35.22%)	12358 (31.69%)	14559.86 (37.38%)	14057.69 (31.81%)	17307.45 (35.7%)	16249.42 (33.4%)	38890.21 (52.8%)
II. Non Plan Expenditure										
Salary & Establishment	5153	5850	9520	10069	9581	9373	10699	11371	12076	12698
Power	2900	3664	5451	5491	7438	6941	9927	10300	10800	10800
Operation and Maintenance	2329	2439	3015	3068	3107	3190	3489	3573	3665	3849
Interest on Loans (excluding GOK)	2515	2859	3309	3422	3587	3336	3322	3277	3223	4327
Repayment of Loans (Excluding GOK)	1172	1267	1680	2177	2026	929	1858	1926	1907	2318
Others	542	517	588	558	649	645	898	720	730	749
Sub-Total	14611 (46.37%)	16596 (47.12%)	23543 (59.47%)	24785 (64.78%)	26348 (68.11%)	24414 (62.64%)	30093 (68.09%)	31187 (64.3%)	32401 (66.6%)	34742 (47.2%)
Grand Total	31509	35431	39589	38262	38666	38973.88	44090.69	48474.45	48648.42	73837.21

Source:- Kerala Water Authority

Note: Figures in brackets denote percentage to total

Appendix 5.17

District wise & category wise number of water supply schemes under implementation as on 1/4/2007

Sl No	Name of District	Rural Water Supply Schemes						Urban Water Supply Schemes					
		ARWSP	TM	State Plan	LIC	NABARD	JBIC	AUWSP	State Plan	JBIC	LIC/ HUDCO	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	8			12					1	3		24
2	Kollam	3	2	1	3		1				1		11
3	Pathanamthitta	6	1	1	2						1		11
4	Alappuzha	6	1	0	1		1				0		9
5	Kottayam	8		1	3						2		14
6	Idukki	6		1	2	1					0		10
7	Eranakulam	3		1	4	2		1	1		1	1	14
8	Thrissur	6	2	3	4			5	2		5		27
9	Palakkad	5	4	0	6						2		17
10	Malappuram	12		0	7	1					2		22
11	Kozhikode	6	1	0	3					1	2		13
12	Wayanad	1		0	0	1					1		3
13	Kannur	3		0	0	3	1	1	1		6		17
14	Kasaragod	1	3	0	5			1	1		0		11
	Total	74	14	6	52	8	3	8	5	2	28	1	203

Source: Kerala Water Authority.

Appendix 5.18

District-wise distribution of KWA Water Supply Schemes Transferred to Local Bodies

Sl.No	Name of District	Rural from 1058 schemes	Other then 1058 schemes	Total	Population Coverage
1	Thiruvananthapuram	2	0	2	33667
2	Kollam	2	0	2	3960
3	Pathanamthitta	0	0	0	0
4	Alappuzha	0	0	0	0
5	Kottayam	5	0	5	16500
6	Idukki	3	1	4	2710
7	Eranakulam	0	0	0	0
8	Thrissur	17	10	27	50640
9	Palakkad	59	32	91	388300
10	Malappuram	42	53	95	280143
11	Kozhikode	48	49	97	141815
12	Wayanad	4	1	5	35350
13	Kannur	5	1	6	2500
14	Kasaragod	12	25	37	27860
	Total	199	172	371	982725

Source: Kerala Water Authority.

Appendix 5.19

District-wise Population Covered by Water Supply Schemes Implemented by KRWSA as on 01-04-07

Sl. No	Name of District	No.of Schemes in	No. of Water Supply Connections			Population Covered
			Domestic	Non Domestic	Street Tape	
1	2	3	4	5	6	7
1	Thiruvananthapuram	40	1487	0	0	7776
2	Kollam	18	518	0	0	2745
3	Pathanamthitta	42	1542	0	0	8173
4	Alappuzha	0	0	0	0	0
5	Kottayam	73	2040	1	0	10876
6	Idukki	58	1536	3	0	8797
7	Eranakulam	42	1284	2	0	7992
8	Thrissur	510	24881	75	42	136010
9	Palakkad	853	31789	28	309	192727
10	Malappuram	749	40001	82	0	284992
11	Kozhikode	838	24346	17	0	137873
12	Wayanad	108	4574	0	80	24642
13	Kannur	105	2981	3	0	18285
14	Kasaragod	122	3487	3	0	19890
	Total	3159	140185	214	411	838477

Source: KRWSA

Appendix 6.1
Notified Wetlands in India

Name of Wetland	State	Water Spread (Post Monsoon) Ha.
1	2	3
Bhoj	Madhya Pradesh	32.29
Harike	Punjab	8,280
Kanjli	-do-	3,79
Ropar	-do-	220,60
Wular	Jammu & Kashmir	11562.5
Tso Morari	-do-	12,838
Pichola	Rajsthan	604
Sambhar	-do-	2,270
Chilika	Orissa	9,400
Ujini	Maharashtra	27,935
Ashtamudi	Kerala	5071.07
Sasthamkotta	-do-	354.69
Kolleru	Andhra Pradesh	28,375
Loktak	Manipur	1,166
Sukhna	Chandigarh	153
Renuka and Pong dam (combined)	Himachal Pradesh	27,678
Chandratal	-do-	
Kabar	Bihar	82
Nalsarovar	Gujarat	14816.75
East Calcutta	West Bengal	11087.6

Source. Quoted in Parish and Dalya, 2003.

Appendix 6.2
Area under Mangroves 2001

(In Sq. Km.)

State	Area
Andhra Pradesh	333
Goa	5
Gujarat	911
Karnataka	2
Maharashtra	118
Orissa	219
Tamil Nadu	23
West Bengal	2081
Andaman and Nicobar	789
Pondicheri	1
Total	4482

Source: Forest Survey of India, 2002

Appendix 6.3

Salient features of the Floristic 'Hot Spots' of Kerala

Agasthyamala	Anamali – High ranges	Silent Valley - Wayanad
1. Highest peak – Agastyakoodam (1868 M)	1. Highest peak – Anamudi (2694 M)	1. Wet evergreen, moist deciduous, shola, and grasslands forests. the main types of vegetation.
2. Rainfall on the windward side – 3000 to 5000 mm/annum	2. Rainfall on the windward side – 3000 to 7000 mm/annum	2 Five endemic genera – *Chandrashekharania, Baeolepis, Kanjarum,, Meteromyrtus, and Silent Valleya*
3 *Aeridenya*, an endemic orchid genus – exclusively occurring in the region	3. Endemic genera – *Haplothismia, Pseudoglochidon and Utleria.*	3. Major centres of genetic resources of Turmeric, Pepper, Canes and Aroids
4. About 189 endemic species, occur in small population over narrow ranges	4. Mountain folds form a mosaic of microclimatic islands due to unique physiography, high latitude, heavy rainfall and diurnal temperature	4. Area comprises of Palakkad gap, Silent Valley, Wayanad and adjacent forests of Kannore district.
5. Recent surveys have discovered 35 new species.	5. Plantation of Tea, Cardamom and Rubber, have destroyed major components of wet evergreen and deciduous forests.	5. About 40,000 Ha, of contiguous forests and one of few area in India with out human habitation and large-scale intervention.
6. 5 wild life sanctuaries in the region	6 Eravikulam National Park and 7 Wild Life Sanctuaries in the region.	6. Wild life which has almost eliminated from other parts of the country such as the *Nilgiri Languor, Giant Squirrel* and *Lion tailed Macaque* being survived here.
7. Serious human interference due to poaching, smuggling and pilgrim influx.		

Source. STEC, 1997

Appendix 6.4

Details of River Sand Mining from Various River Basins of Greater Kochi Region

River Basin	River Length (Km.)	Drainage Area (Km.^{2})	Estimated Sand reserve (10^6 m^3)	Panchayats involved in Sand mining	Volume of Sand extracted (10^6 m^3/ year)	Sustainable yield (M^3/year)	No. of labourers
1	2	3	4	5	6	7	8
Periyar	244	5398	26.7	15	3.11	50708	7000
Pamba	176	2235	10.02	14	0.40	17883	995
Muvattupuzha	121	1556	7.36	12	0.33	41827	1147
Manimala	90	847	3.18	10	0.47	14200	1300
Chalakkudi	130	1704	4.91	5	0.15	7810	1200
Meenachil	78	1272	3.12	-	-	-	-
Achankoil	128	1484	5.8	-	-	-	-

Source: Quoted by NEERI 2002

Appendix – 6.5

Estimated greenhouse gas emissions from major sources in Kerala

Gas	Source	Emission (Gg/year)	Total (Gg/year)	CO_2 equivalent (Tg/year)	Percentage of total
Carbon dioxide	Petroleum products	10,020			
	Firewood	9,200	19,320	19.32	80.47
	Petroleum products	1			
	Firewood	49			
	Wetlands	22			
Methane	Agricultural soils	20			
	Rice paddy	2			
	Coconut husk retting	12			
	Ruminant animals	97	203	4.22	17.58
	Petroleum Products	0.0002			
Nitrous oxide	Agricultural soils	0.0013	1.5	0.47	1.95
Total from all above				24.01	100.00

Methane emission from firewood was computed based on conversion to charcoal.
Source: SOE, 2003

Appendix 6.6

Details of industries in Periyar River Basin

Industry/location	Type/products	Wastewater generated
1	2	3
Travancore Rayons Ltd Perumbavur	Cellulose yarn & film	46,000 m^3/d
Periyar Chemicals Ltd, Edayar	Formic acid, sodium sulphate	330 m^3/d
Binani Zinc Ltd, Edayar,	Zinc, Cadmium, Sulphuric acid	550m^3/d
FACT Ltd, Eloor	Nitrogen & Phosphorus Fertilisers, Oleum & Ammonium Sulphate	25,400 m^3/d
FACT, Petrochemical	Caprolactam, Nitric acid, Ammonium sulphate, Soda ash	5,040 m^3/d
Trancore Cochin Chemicles	Hydrochloric acid	6,660 m^3/d
Indian Aluminium Company, Eloor	Aluminium products,	2,700 m^3/d
Travo Chemical & Mfg Kalamassery	Copper products	720 m^3/d
United Catalysts Ltd, Edayar	Chemicals, Catalyusts	537 m^3/d
Hindustan Insecticides, Eloor	DDT, BHC, Endosulfan, Difocol	1,000 m^3/d
Indian Rare Earths, Eloor	Rare earths, Tri sodium phosphate	3,000 m^3/d

Source: Draft Status of the Environment in Kerala, KSPCB, 2000

Appendix – 6.7

Districtwise details of health care institution, beds and waste generation

District	No. of Health Care Institutions	Number of beds	Waste generated kg/day
Alappuzha	343	8835	11486
Ernakulam	546	15819	20565
Idukki	194	4096	5325
Kannur	392	5149	6694
Kasaragod	209	2107	2739
Kollam	704	7530	9789
Kottayam	440	9323	121209
Kozhikode	342	9034	11744
Malappuram	327	5030	6539
Palakkad	316	4925	6403
Pathanamthitta	310	5096	6625
Thiruvananthapuram	411	12910	16783
Thrissur	434	12991	16888
Wayanad	127	2307	2999
Total	5095	105152	136699

Source: SOE, 2005

Appendix 6.8

Wastelands in Kerala

(in Ha.)

Sl. No.	District	Wasteland Area	% Total
1	Thiruvananthapuram	6658	4.6
2	Kollam	8072	5.57
3	Alappuzha	1550	1.07
4	Pathanamthitta	7731	5.34
5	Kottayam	4880	3.37
6	Idukki	34813	24.44
7	Ernakulam	8454	5.84
8	Thrissur	7198	4.97
9	Palakkad	28356	19.58
10	Malappuram	12367	8.54
11	Wayanad	5184	3.58
12	Kozhikode	2761	1.91
13	Kannur	6980	4.82
14	Kasaragod	9814	6.78
	KERALA	**144818**	**100**

Source: Land Use Board & KSREC

All India Total -	638.52 lakh ha
Kerala -	1.45 lakh ha.
% to All India	0.23%

Appendix-6.9
State-wise Wastelands of India

(Area in Sq.Kms.)

Sl. No	State	No. of Districts Covered	Total Geog. Area of districts Covered	Total Wasteland area in districts Covered	% of Wastelands to total geog. Area
1.	Andhra Pradesh	23	275068.00	51750.19	18.81
2	Arunachal Pradesh	13	83743.00	18326.25	21.88
3	Assam	23	78438.00	20019.17	25.52
4	Bihar	55	173877.00	20997.55	12.08
5	Goa	02	3702.00	613.27.00	16.57
6	Gujarat	25	196024.00	43021.28	21.95
7	Haryana	19	44212.00	3733.98	8.45
8	Himachal Pradesh	12	55673.00	31659.00	56.87
9	Jammu & Kashmir *	14	101387.00	65444.24	64.55
10	Karnataka	27	191791.00	20839.28	10.87
11	Kerala	14	38863.00	1448.18	3.73
12	Madhya Pradesh	62	443446.00	69713.75	15.72
13	Maharashtra	32	307690.00	53489.08	17.38
14	Manipur	09	22327.00	12948.62	58.00
15	Meghalaya	07	22429.00	9904.38	44.16
16	Mizoram	03	21081.00	4071.68	19.31
17	Nagaland	07	16579.00	8404.10	50.69
18	Orissa	30	155707.00	21341.71	13.71
19	Punjab	17	50362.00	2228.40	4.42
20	Rajasthan	32	342239.00	105639.11	30.87
21	Sikkim	04	7096.00	3569.58	50.30
22	Tripura	04	10486.00	1276.03	12.17
23	Tamil Nadu	29	130058.00	23013.90	17.70
24	Uttar Pradesh	83	294411.00	38772.80	13.17
25	West Bengal	18	88752.00	5718.48	6.44
26	Union territories	20	10973.00	574.30	5.23
	TOTAL	**584**	**3166414.00**	**638518.31**	**20.17**

- *Un-surveyed area (J&K)* *120849.00*
- *Total geographical area* *3287263.00*

Source: 1:50,000 scale wasteland maps prepared from Landsat Thematic Mapper/IRS LISS II/III Data

10,000 sq.kms = 1 Million Ha.

Appendix 6.10
Central Rural Sanitation Programme: TSC

Sl. No	Name of district	Date of sanction	Project cost (Rs lakhs)	Approved State (Rs. lakhs)				Components Sanctioned (Units)						
				Central	State	Beneficiary	Individual Latrines				Space for Complex	School Toilets	Bathing cum latrine	RSM
							BPL	APL	Total					
1.	Alappuzha	29.1.02	1656.13	1100.25	322.2	233.68	161871	5115	167044	125	577	0	10
2	Ernakulam	12.3.03	1058.43	5[illegible]4.16	276.1	250.11	54585	16069	70654	100	450	565	9
3	Idukki	12.3.03	622.19	286.75	167.2	188.04	44896	5619	45515	16	103	0	4
4	Kannur	12.3.03	864.18	349.09	219.29	235.8	55914	0	55914	14	123	0	5
5	Kasaragod	15.1.01	1111.86	429.16	261.98	420.62	82230	6099	88299	100	181	0	6
6	Kollam	10.1.01	855.00	5[illegible]	178.55	122.35	85000	7250	92250	400	225	0	10
7	Kottayam	21.11.05	446.17	255.72	119.17	170.18	28118	1646	29764	10	182	133	5
8	Kozhikkode	12.3.03	825.86	374.81	225.67	233.38	54024	2140	56164	28	444	0	7
9	Malappuram	25.1.07	1194.86	510.98	152.36	96.37	69715	0	69715	80	350	0	10
10.	Palakad	12.3.03	1377.85	493.85	525.42	357.62	85059	16292	101351	49	289	0	7
11	Pathanamthitta	12.3.03	773.98	336.29	268.53	225.14	53799	1200	54999	25	172	100	5
12	Thiruvananthapuram	29.1.02	746.08	506.30	144.78	93.95	67120	23479	90599	60	150	0	10
13	Thrissur	12.3.03	546.46	258.45	144.83	143.18	33216	0	33216	10	388	0	9
14	Wayanad	29.1.02	531.19	335.52	103.23	70.02	34927	0	34927	46	71	0	5
			11969.79	6334.84	3843.46	2821.45	938146	84917	1023063	2050	3916	198	90

Source: Kerala State Sanitation and Health Mission, Thiruvananthapuram

Abbreviations: RSM - Rural Sanitary Mart
BPL - Below Poverty Line
APL - Above Poverty Line

Appendix 6.11

Capital Cost for Introduction of MSW System

SL No.	Item	Number	Amount Rs. in lakhs
01.	House hold bins @ Rs. 50	60,000	30.00
02.	Hand cart of 300 lit. capacity @ Rs. 0.15 lakhs	60	9.00
03.	Tricycle for house to house collection @ Rs. 0.20 lakhs	40	8.00
04.	Community bin		
	i) Dumper container of 25000 lit. @ Rs. 0.01 lakhs	85	0.85
	ii) Containers 2.5 m3 @ Rs. 0.30 lakh	24	7.20
	iii) Litter bins @ Rs. 0.01 lakhs	50	0.50
05	Cost of sweeping tools		
	i) Containerised cart @ Rs 3000	75	2.25
06.	Transportation		
	Dumper placer @ Rs 10 lakhs	2	20.00
	Dual loader @ Rs 8 Lakhs	1	8.00
07.	Home Vermi Composting for a family of five members @ Rs. 600/pit (90cm dia of 45 cm deep, 1:2:4 concrete 2 pits)	20,000 x 2	24.00
08	Aerobic Composting 50 tonnes/day Processing area 100 x 90m 21 windrows each of 50 tonnes and maturity yard of 800 m2 for storing raw compost (30 days storage) capital cost	-	60.00
09.	Sanitary land fill	-	20.00
10.	Bio medical waste treatment common facility	1	
	i) Incinerator of double chamber of capacity 30 Kg/hr, 3 shifts		15.00
	ii) Autoclave of capacity 30 Kg/hr, 2 shifts		15.00
	iii) Shredder, 3000 Kg/hr		3.00
	iv) Land development and civil works		15.00
	v) Sundries		2.00
11.	Civil work - flooring container stations, bin locations; Processing/Disposal plant accessories		5.00
	1. Site development		
	Weigh Bridge		15.00
	Compost Plant		8.00
	Vermi Compost Unit		4.00
	Support to home composting - vermi kits		2.00
			3.00
12.	Setting up basic tools for vehicle repair		3.00
13.	Community awareness/ Training for staff		3.00
14.	Sundries		1.20
	Sub Total		284.00
	Less Cost of home composting unit/ household bins and bio-medical waste		104.00
	Total		180.00

(Abstract of cost excluding land cost)

Appendix 6.12
Operation and Maintenance
(Cost per annum)

Sl. No.	Item	Amount Rs. in lakhs
i)	House to house collection @ Rs. 20 per month in 20,000 households	48.00
ii)	Street Sweeping – 152 labour @ Rs. 4,000 per month	72.90
	i) Containerised cart 6 bins, 50 ltr. = 75 No. @ Rs.3000	2.25
	ii) Long handle broom 100 nos. @ Rs. 75 each	0.075
	iii) Metal tray, fork and metal plate 100 nos @ Rs. 200/set	0.05
	iv) Shovel for drain cleaning, wheel barrow @ Rs. 400/100 nos	0.10
	v) Protective gear such as gloves, boots etc 16 nos. @ Rs. 500 per set	0.8
iii)	Transportation @ Rs 1000 per day/ vehicle	7.20
iv)	Aerobic Composting	
	a) Labour	
	i) Turning, breaking windrows, sorting 30 men @ 50,000/year/head	15.00
	ii) Plant operation, 7 men @ 50,000/year/head	3.50
	iii) Driver/@ 80,000/year	
	b) Tools and equipment	0.80
	i) Maintenance replacement	
	ii) Fuel, power	1.00
	iii) Packing, marketing	1.50
	iv) Management supervision	3.00
	c) Amortisation @ 20% of capital cost	5.00
		12.00
v)	**Sanitary Landfill**	
	i) Cell formation - internal road	2.00
	ii) Cover material	3.25
	iii) Labour for leveling, covering	3.50
	iv) Hiring of dozer for immediate compaction intermediate cover – twice annually	3.00
	Leachate control monitoring - cut off drains	2.25
vi)	Bio-medical Waste treatment at common facility center	30.00
vii)	Sundries	6.90
	Sub Total	**221.00**
	Less House to house collection and biomedical waste management	78.00
	Total	**143.00**

Source: S.W.M: Reading Material: 2002 KTSHM

Appendix 6.13

Per capita Consumption of Plastic in some selected Countries of World during 1996

(in kg.)

Sl. No.	Country	Per capita Consumption
1	India	1.60
2	Vietnam	1.50
3	China	6.00
4	Indonesia	6.00
5	Mexico	13.00
6	Thailand	18.00
7	Malaysia	22.00
8	Western Europe	60.00
9	Japan	70.00
10	North America	78.00

Source: Central Pollution Control Board

Appendix 6.14
ACCESS TO SAFE DRINKING WATER IN HOUSEHOLDS IN INDIA

Sl. No	States/Union Territories	Tap/Handpump/Tubewell								
		1981			1991			2001		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Jammu & Kashmir	40.5	28.0	86.7	NA	NA	NA	65.2	54.9	95.7
2	Himachal Pradesh	44.5	39.6	89.6	77.3	75.5	91.9	88.6	87.5	97.0
3	Punjab	84.6	81.8	91.1	92.7	92.1	94.2	97.6	96.9	98.9
4	Chandigarh	99.1	94.4	99.4	97.7	98.1	97.7	99.8	99.9	99.8
5	Uttranchal							86.7	83.0	97.8
6	Haryana	55.1	42.9	90.7	74.3	67.1	93.2	86.1	81.1	97.3
7	Delhi	93.0	62.3	94.9	95.8	91.0	96.2	97.2	90.1	97.7
8	Rajasthan	27.1	13.0	78.7	59.0	50.5	86.5	68.2	60.4	93.5
9	Uttar Pradesh	33.8	25.3	73.2	62.2	56.6	85.8	87.8	85.5	97.2
10	Bihar	37.6	33.8	65.4	58.8	56.5	73.4	86.6	86.1	91.2
11	Sikkim	30.3	21.7	71.5	73.1	70.8	92.8	70.7	67.0	97.1
12	Arunachal Pradesh	43.9	40.2	87.9	70.0	66.9	88.2	77.5	73.7	90.7
13	Nagaland	45.6	43.4	57.2	53.4	55.6	45.5	46.5	47.5	42.3
14	Manipur	19.5	12.9	38.7	38.7	33.7	52.1	37.0	29.3	59.4
15	Mizoram	4.9	3.6	8.8	16.2	12.9	19.9	36.0	23.8	47.8
16	Tripura	27.3	22.2	67.9	37.2	30.6	71.1	52.5	45.0	85.8
17	Meghalaya	25.1	14.3	74.4	36.2	26.8	75.4	39.0	29.5	73.5
18	Assam	NA	NA	NA	45.9	43.3	64.1	58.8	56.8	70.4
19	West Bengal	69.7	65.8	79.8	82.0	80.3	86.2	88.5	87.0	92.3
20	Jharkhand							42.6	35.5	68.2
21	Orissa	14.6	9.5	51.3	39.1	35.3	62.8	64.2	62.9	72.3
22	Chhattisgarh							70.5	66.2	88.8
23	Madhya Pradesh	20.2	8.1	66.7	53.4	45.6	79.4	68.4	61.5	88.6
24	Gujarat	52.4	36.2	86.8	69.8	60.0	87.2	84.1	76.9	95.4
25	Daman & Diu	54.5	46.4	67.0	71.4	56.9	86.8	96.3	94.9	98.9
26	Dadra & Nagar Haveli	19.4	16.8	54.3	45.6	41.2	91.0	77.0	70.5	96.1
27	Maharashtra	42.3	18.3	85.6	68.5	54.0	90.5	79.8	68.4	95.4
28	Andhra Pradesh	25.9	15.1	63.3	55.1	49.0	73.8	80.1	76.9	90.2
29	Karnataka	33.9	17.6	74.4	71.7	67.3	81.4	84.6	80.5	92.1
30	Goa	22.5	8.6	52.3	43.4	30.5	61.7	70.1	58.3	82.1
31	Lakshadweep	2.2	1.0	3.7	11.9	3.4	18.8	4.6	4.6	4.6
32	Kerala	12.2	6.3	39.7	18.9	12.2	38.7	23.4	16.9	42.8
33	Tamil Nadu	43.1	31.0	69.4	67.4	64.3	74.2	85.6	85.3	85.9
34	Pondicherry	80.6	76.9	84.2	88.8	92.9	86.1	95.9	96.6	95.5
35	Andaman & Nicobar Islands	51.6	36.3	92.0	67.9	59.4	90.9	76.7	66.8	97.8
	ALL INDIA	**38.2**	**26.5**	**75.1**	**62.3**	**55.5**	**81.4**	**77.9**	**73.2**	**90.0**

N.A. – Not available as no census was carried out in Assam during 1981 and in Jammu & Kashmir during 1991

* *Created in 2001. Uttaranchal Pradesh, Jharkhand and Chattisgarh for 1981 and 1991 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively*

Source. Economic Survey 2005-2006

Appendix 6.15

State-wise extent of various kinds of Land Degradation in India (Area in Thousand Ha)

S. N.	Name of the States	Water Erosion	Wind Erosion	Water Logging	Salinity/ Alkalinity	Soil Acidity	Complex Problem	Degraded Area	Geogra-phical Area	Degraded Area (%)
1.	Andhra Pradesh	11518	0	1896	517	905	156	14992	27405	54.5
2.	Arunachal Pradesh	2372	0	176	0	1955	0	4503	8379	53.8
3.	Assam	688	0	37	0	612	876	2213	7844	28.2
4.	Bihar + Jharkhand	2024	0	2001	229	1029	0	6283	17387	36.1
5.	Goa	60	0	76	0	2	24	162	370	43.9
6.	Gujarat	5207	443	523	294	0	1656	8133	19602	41.5
7.	Haryana	315	336	146	256	0	214	1467	4421	33.2
8.	Himachal Pradesh	2718	0	1325	0	157	0	4178	5567	75.0
9.	Jammu & Kashmir	5460	1360	200	0	0	0	7020	22224	31.6
10.	Karnataka	5810	0	941	110	58	712	7631	19179	39.8
11.	Kerala	76	0	2098	0	138	296	2608	3886	67.1
12.	MP & Chhattisgarh	17883	0	359	46	6796	1126	26210	44345	59.1
13.	Maharashtra	11179	0	0	1058	517	303	13055	30771	42.4
14.	Manipur	133	0	111	0	481	227	952	2235	42.6
15.	Mizoram	137	0	0	0	1050	594	1881	2108	89.2
16.	Meghalaya	137	0	7	0	1030	34	1208	2243	53.9
17.	Nagaland	390	0	0	0	127	478	995	1658	60.0
18.	Orissa	5028	0	681	75	203	75	6122	15571	39.3
19.	Punjab	372	292	338	288	0	0	1290	5036	25.4
20.	Rajasthan	3137	6650	53	1418	0	110	11368	34224	33.2
21.	Sikkim	158	0	0	0	76	0	234	710	33.0
22.	Tamil Nadu	4926	0	96	96	78	138	5334	13006	41.0
23.	Tripura	121	0	191	0	203	113	628	1049	59.9
24.	UP & Uttaranchal	11392	212	2350	1370	0	0	15324	29441	52.0
25.	West Bengal	1197	0	710	170	556	119	2752	8875	31.0
26.	Delhi	55	0	6	10	0	11	82	148	55.4
27.	A & N Islands	187	0	0	9	0	9	205	825	24.8
28.	Chandigarh	0	0	0	0	0	0	0	0	0.00
29.	D & N Haveli	0	0	0	0	0	0	0	0	0.00
30.	Daman & Diu	0	0	0	0	0	0	0	0	0.00
31.	Lakshadweep	0	0	0	0	0	0	0	0	0.00
32.	Pondicherry	0	0	0	0	0	0	0	0	0.00
Grand Total		93680	9483	14299	5944	16033	7381	146820	328602	
Grand Total (Million ha)		93.68	9.48	14.30	5.94	16.03	7.38	146.82	328.60	

Source: Report of the sub group on Land Degradation, XIth Five year Plan, Planning Commission, GOI, 2007

Appendix 6.15

Western Ghat Development Programme for Natural Resource Management (Physicial and Financial Achievements, 2006-07)

I Financial Achievement

Sl. No.	Component	Expenditure (in lakh Rs.)
1	Watershed projects	1637.87
2	Forestry Schemes	199.30
3	Foot Bridges	108.54
4	Others	
	TOTAL	1945.71

II. Major Physical Achievements

Sl. No	Component	Unit	Achievement
1	Soil Conservation	Ha	3991
2	Distribution of Milk Cows	Nos	526
3	Fodder Development	Ha.	535
4	Construction of Wells/Ponds	Nos	173
5	Check Dams/Cross Bars/ Weirs/Foot slaps	Nos	2890
6	Foot Bridges	Nos	63

Source: Western Ghat Development Cell

Appendix - 6.17

Division-wise Area of Forest in Kerala (as on 31-03-2007) - Provisional

(Area in Sq kms)

Sl No	Division	Reserve Forest	Proposed for Reserve Forest	Vested Forest	Total
1	2	3	4	5	6
1	Thiruvananthapuram	359.1240	5.8253	3.6510	368.6003
2	Thenmala	123.4320		7.7350	131.1670
3	Achenkovil	266.7940		3.2060	269.0000
4	Ranni	1050.3380	7.1600	1.5660	1058.3640
5	Punalur	280.0510		0.1690	280.2200
6	Konni	320.6430	11.0210		331.6640
7	Kothamangalam	316.8451		0.1576	317.0027
8	Munnar	639.5012		5.0224	644.5236
9	Kottayam	655.4880	5.2570	31.4090	692.1520
10	Vazhachal	413.9440			413.9440
11	Chalakkudy	279.7098			279.7098
12	Malayattoor	617.2411	0.5248		617.7659
13	Thrissur	293.7431		5.7149	299.4580
14	Mannarkkad	209.3822		319.5777	529.5599
15	Nilambur North	57.9196	0.0171	340.7032	398.6399
16	Nilambur south	267.3894		97.7633	365.1527
17	Palakkad	73.4100		161.7851	235.1951
18	Nenmara	205.5173		150.3678	355.8851
19	Kozhikode	24.1642	22.9669	243.0856	290.2156
20	Wayanad North	134.0240	15.0840	65.8527	214.9407
21	Wayanad South	67.5180	6.8448	273.1400	347.5028
22	Kannur	207.3923	5.1931	90.1963	302.7817
23	Mankulam		90.0600		90.0600
24	Thiruvananthapuram WL	181.0000			181.0000
25	Idukki	130.5240			130.5240
26	Periyar East	618.0000			618.0000
27	Periyar West	157.0000			157.0000
28	Agasthyavanam	31.0000			31.0000
29	Paramikulam	274.1408			274.1408
30	Wayanad	344.4400			344.4400
31	Silent Valley	89.5185			89.5185
32	Sanduney	166.4200		4.5800	171.0000
33	Eravikulam	209.0774			209.0774
34	Peechi	122.0370			122.0370
35	Aralam	22.3572		32.6428	55.0000
36	Marayoor	13.9720	47.2560	0.0800	61.3080
	Total:	**9225.8522**	**217.1891**	**1835.4074**	**11278.2487**

Source : Forest Department

Appendix 6.18

Species-wise Area Under Forest Plantation

Sl.No.	Name of Species	2005-06	2006-07	% to total (2006-07)
1	2	3	4	5
1	Teak	75898	75767	
2	Rosewood	793	801	
3	Mahagani	97	97	
4	Sandalwood	101	101	
5	Mangium	1151	1160	
6	Others	787	802	
	Sub Total	**78625**	**78729**	**45.54**
II	**SOFT WOOD**			
1	Eucalyptus	14275	14275	
2	Grevillia Robusta	745	745	
3	Pine	590	590	
4	Albizzia	192	192	
5	Rubber	200	200	
6	Balsa	62	62	
7	Wattle	4244	4244	
8	Murukku	48	48	
9	Matti	405	405	
10	Others	8066	8071	
	Sub total	**28827**	**28832**	**16.68**
III	**BAMBOO & REEDS**			
1	Bamboo	2916	2930	
2	Reeds	714	714	
3	Cane	2221	2268	
	Sub Total	**5851**	**5912**	**3.42**
IV	**PLANTATION CROPS**			
1	Coffee	31	31	
2	Pepper	320	320	
3	Cinnamon	4	4	
4	Medicinal Plants	1249	1358	
	Sub Total	**1603**	**1712**	**0.99**
V	**MIXED PLANTATIONS**			
1	Cashew	6502	6502	
2	Fuel wood	446	446	
3	Agavu	47	47	
4	Alnus	76	76	
5	Accacia	6601	6601	
6	Sesbania	21	21	
7	Casurina	121	121	
8	Kongograss	140	140	
9	Malbury	2	2	
10	Palm Trees	14	14	
11	Others	43711	43711	
	Sub Total	57682	57682	33.37
	GRAND TOTAL	**172789**	**172887**	**100.00**

Source : Forest Department

Appendix 5.19

Production of Major Forest Produce (1998-99 to 2006-07)

Sl. No.	Item	Unit	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07*
1	2	3	4	5	6	7	8	9	10	11	
1	Timber(round logs)	Cum.	26554	44519	31299	34915	62591	116240.850	45012.198	42705.69	32058.8
2	Timber(round poles)	No.	275050	455389	129349	245264	433670	753025	438611	377953	388640
3	Timber(Sawn & Squard)	Cum.	10	7	3	9	11	126.310	45.085	603.029	543.297
4	Fire wood	MT.	18424	14191	8105	11182	19086	31575	10638	13955	13438
5	Cardamom	Kg	2758	4249	4887	2911	3739	1145	11018	1808	2050
6	Honey	Kg	21376	41734	47976	57069	35310	40051	59464	56283	23369
7	Reeds	No.	62708610	39576143	49047940	32610487	33076299	42945235	34190635	22901309	21388180
8	Bamboo	No.	2088407	627805	1390456	1305620	151722	948626	1272444	1821586	1291550
9	Jungle Wood Poles	No.	670	.	212	2397	7695	10464	14196	21131	19623
10	Sandal wood	Kg.	17762	97028	405	23988	10099	88817.238	54622.300	78565	30231

Source : Forest Department

* Provisional

Appendix 6.20

Sanfuaries, 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
1	Periyar Wildlife Sanctuary	777	1950
2	Neyyar Wildlife Sanctuary	128	1958
3	Peechi-Vazhani Wildlife Sanctuary	125	1958
4	Parambikulam Wildlife Sanctuary	285	1973
5	Wayanad Wildlife Sanctuary	344.44	1973
6	Eravikulam Wildlife Sanctuary	97	1978
7	Idukki Wildlife Sanctuary	70	1976
8	Thattekkad Bird Sanctuary	25	1983
9	Peppara Wildlife Sanctuary	53	1983
10	Chimmony Wildlife Sanctuary	85	1984
11	Chinnar Wildlife Sanctuary	90.44	1984
12	Shendurney Wildlife Sanctuary	171	1984
13	Aralam Wildlife Sanctuary	55	1984
14	Silent Valley National Park	89.52	1984
15	Anamudi Shola National Park	7.5	2003
16	Mathikettan Shola National Park	12.82	2003
17	Pambadum Shola National Park	1.32	2003
18	Mangalavanam Bird Sanctuary	0.0274	2004
19	Kurinjimala Wildlife Sanctuary	32	2006
20	Choolannur Pea Fowl Sanctuary	3.42	2007
	Total (Sanctuaries and National Parks)	2452.48	
21	Biosphere Reserve		
i	Nilgiri Biosphere Reserve	1455.4	1986
ii	Agasthyavanam Biosphere Reserve	1701	2002

Source : Forest Department

Appendix 7.1

GROWTH OF KERALA POWER SYSTEM AT A GLANCE - 2006 AND 2007

Sl No	Particulars/Year	POSITION AS ON	
		31-03-2006	31-03-2007
1	Installed Capacity -MW	2644.24	2657.24
2	Maximum Demand(System)-MW	2578	2742
3	Generation Per Annum-MU	7600.78	7745.78
4	Import Per Annum- MU	6700.50	8149.84
5	Export Per Annum-MU	635.90	1046.89
6	Energy Sales Per Annum-MU	10269.80	11331.00
7	Percentage of energy losses to energy available for sales	24.59	23.43
8	Per Capita Consumption - kWh*	427	465
9	220 kV Lines - CT Kms	2641	2642
10	110 kV Lines - CT Kms	3874	3919
11	66 kV Lines - CT Kms	2997	3008
12	33 kV Lines - CT Kms	623	673
13	22 kV Lines - CT Kms	157	157
14	11 kV Lines - CT Kms	34596	36415
15	LT Lines - CT Kms	217899	226128
16	Step Up Transformer capacity -MVA	2389	2389
17	No of EHT Substations		
a	400 kV	2	2
b	220 kV	14	14
c	110 kV	109	111
d	66 kV	83	86
e	33 kV	48	58
18	Step down transformer capacity - MVA	13231	13325
19	Distribution Transformers		
a	Numbers	37724	39872
b	Capacity -MVA	5033.40	5241.26
20	No of villages electrified	1384	1384
21	No of consumers (Lakhs)	82.95	87.14
22	Connected Load-MW	10907.2	11465.69
23	No of Street Lights	972900	999599
24	No of irrigation pumps	423571	435673
25	Total revenue Per Annum (Rs Lakhs)	383731.69	455840.28
26	Revenue from Sale of Power Per Annum(Rs Lakhs)	336730.34	400970.76

*Population based on 2001 Census

Source: KSEB

Appendix 7.2

PROFILE OF ONGOING POWER PROJECTS IN THE STATE

Sl. No	Name of Schemes	District	Energy Potential (MU)	Projects sanctioned on	Major works commenced on	Orginal estimated cost(Rs in lakhs)	Lateat estimated cost (Rs in lakhs)	Expenditure upto 3/07(Rs in lakhs)	Outlay for 2007-08 (Rs in lakhs)	Expected year of commissioning
1	2	3	4	5	6	7	8	9	10	11
1	Kuttiyadi Tail Race-3.75MW	Kozhikode	15.00	1989	19-01-2001	397.00	982.00	948.37	220.00	31-12-2007
2	Kuttiyar Diversion	Idukki	37.00	18-08-90	May-03	561.00	880.00	2338.38	100.00	31-3-2008
3	Kuttiyadi Addl.Extension (100 MW)	Kozhikode	240.50	1998	Dec 2003	6200.00	16828.00	9098.90	4400.00	31-05-2008
4	Neriamangalam Extension Scheme(25MW)	Idukki	58.27	04-01-00	03-07-2003	3506.18	3506.18	3747.93	600.00	31-12-2007
5	Pallivasal Extension (60MW)	Idukki	153.90	30-09-2006	9/3/2007	17586.00	17586.00	3238.79	5500.00	30-01-2011
6	Adyanpara(3.5 MW)	Malappuram	9.01	30-05-2007	10/10/2007	2132.00	2132.00	11.68	250.00	30-09-2009

Source:KSEB

Appendix 7.3
POWER PROJECTS AND POWER GENERATION AS ON 31-03-2007

Sl No	Name of Projects and District	Installed Capacity MW	Firm Power MW	Power Generated during 2006-07(MU)
1	Pallivasal- Idukki	37.50	32.50	241.70
2	Sengulam-Idukki	48.00	20.80	178.22
3	Neriamangalam-Idukki	54.00	27.00	277.84
4	Panniyar-Idukki	30.00	18.00	168.35
5	Poringalkuthu-Thrissur	32.00	19.60	184.57
	Poringalkuthu LBE-Thrissur	16.00	9.80	107.81
6	Sabarigiri-Pathanamthitta	320.00	153.00	1560.53
7	Sholayar-Thrissur	54.00	20.60	265.90
8	Kuttiady-Kozhikode	75.00	30.60	361.22
	Kuttiady Extension-Kozhikode	50.00	8.56	284.80
9	Idukki-Idukki	780.00	280.20	2429.04
10	Idamalayar-Ernakulam	75.00	43.30	388.18
11	Kallada-Mini-Kollam	15.00	6.05	78.07
12	Kanjikode Wind Farm-Palakkad	2.03	0.40	2.14
13	Peppara-TVPM	3.00	1.30	8.19
14	Lower Periyar-Idukki	180.00	56.30	645.04
15	Brahmapuram-Ernakulam	106.60	73.00	85.06
16	Madupetty-Idukki	2.00	0.70	5.57
17	Kakkad - Pathanamthitta	50.00	30.00	248.57
18	Kayamkulam(NTPC) - Alapuzha	359.58	0.00	1137.27
19	(KDPP) - Kozhikkode	128.00	102.40	181.96
20	KPCL.(IPP) -Kasargode	20.44	0.00	24.29
21	Maniyar(Private) - Pathanamthitta	12.00	3.70	43.02
22	Kuthungal (Hydro-Captive) -Idukki	21.00	9.02	47.52
23	BSES(IPP) - Ernakulam	157.00	0.00	182.76
24	Malampuzha - Palakkad	2.50	0.64	2.27
25	Urumi I&II - Kozhikode	6.15		14.55
26	Chempukadavu I&II - Kozhikode	6.45		12.21
27	Malankara	10.50		32.33
28	Lower Meenmutty	3.50		5.66
	Grand Total	**2657.25**	**947.47**	**9180.64**

Source: KSEB

Appendix 7.4
AVERAGE REALISATION RATE FROM TARIFF

Sl. No.	Consumer Category	Average Realisation (in Paise/Unit)	
		2005-06	2006-07
1	Domestic	171	167
2	Commercial	663	681
3	Public Lighting	183	187
4	Irrigation & Dewatering	100	102
5	Industry(LT)	415	415
6	Industry(HT & EHT)	391	394
7	Railway Traction	340	335
8	Bulk Supply	273	276
	Average	309	307
9	Sale to NVVN/PTC	309	499
10	Inter State TNEB	0	564
	Overall Average	309	324

Source:KSEB

Appendix 7.5
AVERAGE REALISATION FROM SALE OF POWER

Sl No	Consumer Category	Average Realisation (in Paise/Unit) (including Electricity Duty)	
		2005-06	2006-07
1	Domestic	188	181
2	Commercial	717	715
3	Public Lighting	183	187
4	Irrigation & Dewatering	109	111
5	Industry(LT)	445	445
6	Industry(HT & EHT)	401	403
7	Railway Traction	340	335
8	Bulk Supply	273	276
9	Sale to NVVN/PTC	309	499
10	Inter State TNEB	0	564
11	**Overall Average**	326	340

Source: KSEB

Appendix 7.6

PATTERN OF POWER CONSUMPTION AND REVENUE COLLECTED DURING 2006-07

Sl. No	Category	No of Consumers as on 31-03-2007	Connected Load (MW) as on 31-03-2007	Energy Sold(MU)	Consumption as % to Total	Revenue Collected (Rs Lakhs)	Revenue percentage to Total
1	Domestic						
	a Paying Group	6834990	7000.04	5205.97	42.06%	85917.56	21.58
	b Non paying Group	49510	14.03	7.10	0.05%		
2	Commercial(LT & HT)	1270832	1397.55	1246.80	10.08%	82007.50	20.59
3	Industrial						
	a Low & Medium	122308	1284.95	933.93	7.55%	38733.01	9.68
	b HT&Extra high voltage	2115	847.02	3081.53	24.90%	121458.33	30.29
4	Public Lighting	2325	88.81	228.74	1.85%	4281.10	1.07
5	Railway Traction	6	38.22	72.16	0.58%	2415.44	0.60
6	Agricultural Pumping	435673	740.49	220.24	1.78%	2253.59	0.56
7	Licensees (Bulk Supply)	11	54.58	336.35	2.72%	9267.40	2.31
8	Outside Supply			1046.89	8.46%	53336.93	13.30
	Total	5713870	11465.89	12377.89	100.00%	400970.77	100.00

Source: KSEB

Appendix 7.7

Sources of funding of the Power Programmes of KSEB for the year 2006-07

No.	Particulars	Rs in lakhs 2005-06	2006-07
1	Loan from REC	9072.05	3572.30
2	Borrowing under Section 55		
a)	Loan from LIC of India	0.00	0.00
b)	Assistance from IDBI	0.00	0.00
c)	Loan from PFC	0.00	0.00
d)	Loans from Banks through REC	20000.00	0.00
e)	Loan from SIDBI	0.00	0.00
f)	Foreign Currency Loan	0.00	537.13
g)	OECF	0.00	0.00
3)	Non-SLR Bonds	0.00	0.00
4)	Receipts under OYEC Scheme/Service Connections Charges/Contribution fromPanchyats	20583.69	21614.01
5)	Medium Term Loan	0.00	0.00
6)	Borrowing and Reserves		
a)	Pension Fund / Provident Fund	6745.43	1114.30
b)	Deposit and Other Debt Heads	0.00	0.00
7)	Other Internal Resources	89712.78	236953.16
8)	Loan from Kerala PFC	2070.65	0.00
9)	EDC Kuttyadi	58.39	0.00
10)	EDC-PSP	156.51	0.00
11)	Loan from State Govt. for APDRP	5626.00	0.00
12)	Loan from State Govt forPMGY(RE)	0.00	0.00
	Total	163985.60	263790.90

Source: KSEB

Appendix 8.1

Index of Industrial Production 2004-05, 2005-06 & 2006-07

Base Year 1993-94

Sl. No.	Item	Weight	Index for		
			2004-05	2005-06	2006-07
1	2	3	4	5	6
1	Mining & Quarrying	0.51	169.13	168.129	168 129
2	Manufacture of food products	20 09	161 985	158.411	183 310
3	Manufacture of beverages, tobacco etc	2.27	338 177	363,816	393 608
4	Manufacture of cotton textiles	5.88	125.581	135.251	189.025
5	Manufacture of wool, silk etc.	0 09	272.333	272.333	272 333
6	Manufacture of jute & other vegetable fibre textiles	0 62	103.91	110.056	74.437
7	Manufacture of textile products & fibres	0.18	230.945	249.521	383.553
8	Manufacture of wood and wood products	1.26	74.223	73.82	84.497
9	Manufacture of paper and paper products	5.6	234.584	235.172	253.274
10	Manufacture of basic chemicals and chemical products	17.9	257.735	248.655	302.235
11	Manufacture of rubber, plastic, petroleum etc.	27.86	211.798	215.13	317.273
12	Manufacture of non-metallic mineral products	3	257.055	259.533	308.425
13	Basic metals and alloys	2.47	194.868	212 206	300.236
14	Manufacture of metal products and parts	0.55	182.92	184.139	217.409
15	Manufacture of machinery and equipments	4 74	200.653	292.608	340.118
16	Other manufacturing industries	0.15	214.778	254.804	288.454
17	Electricity generation, transmission and distribution	6.85	165.022	172.966	172 987
	General Index	**100.00**	**206.812**	**208.31**	**262.370**

Source Directorate of Economics & Statistics, Trivm

Appendix 8.2

Growth of Working Factories and Average Daily Employment in Kerala 2001 - 2006

Year	No. of Factories			No. of Employment		
	Private	Public	Total	Private	Public	Total
1	2	3	4	5	6	7
2001	18001	553	18554	329230	107180	436410
2002	17727	535	18262	313260	95553	408813
2003	17711	528	18239	309938	94319	404257
2004	17790	529	18319	311147	94367	405514
2005*	17837	528	18365	313994	94352	408346
2006(p)	17863	528	18411	315448	94352	409800

* Revised (p) provisional

Source : Directorate of Economics and Statistics , Thiruvananthapuram

Appendix 8.3

District - wise Distribution of Registered Working Factories in Kerala 2001 to 2006

Sl. No.	District	2001	2002	2003	2004	2005*	2006 (p)
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	897	890	892	898	893	898
2	Kollam	1905	1899	1895	1903	1940	1930
3	Pathanamthitta	532	504	505	509	525	528
4	Alappuzha	1213	1214	1241	1247	1254	1260
5	Kottayam	1297	1258	1255	1262	1262	1265
6	Idukki	326	332	333	335	333	338
7	Ernakulam	2937	2928	2930	2938	2939	2957
8	Thrissur	2559	2519	2516	2522	2529	2529
9	Palakkad	1975	1893	1887	1873	1870	1875
10	Malappuram	1003	1014	1014	1020	1018	1022
11	Wayanad	141	134	133	135	135	135
12	Kozhikode	1768	1723	1707	1714	1718	1720
13	Kannur	1729	1694	1686	1705	1694	1699
14	Kasaragod	272	260	255	258	255	255
	Total	18554	18282	18239	18319	18365	18411

* Revised (p) Provisional

Source: Directorate of Economics & Statistics, Thiruvananthapuram

Appendix 8.4

District - wise Distribution of Employment in Kerala 2001 to 2006

Sl.No.	District	Employment (Nos)					
		2001	2002	2003	2004	2005*	2006(p)
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	29188	30129	30024	30118	29884	30217
2	Kollam	135518	128322	128773	128898	132702	132490
3	Pathanamthitta	12660	9429	9447	9510	11260	11467
4	Alappuzha	26218	25432	26814	26708	27204	27319
5	Kottayam	17508	16674	16505	16615	16699	16791
6	Idukki	7842	8343	8358	8389	7611	7842
7	Ernakulam	64102	64315	62854	62779	62654	62654
8	Thrissur	36213	35287	34957	35052	35137	35156
9	Palakkad	24337	24811	23336	23430	23215	23752
10	Malappuram	13409	9881	9196	9290	9090	9170
11	Kozhikode	17004	21902	20141	20252	19015	19047
12	Wayanad	25722	6548	6526	6561	6589	6589
13	Kannur	23484	24656	24604	24945	24389	24409
14	Kasaragod	3207	3104	2920	2967	2897	2897
	Total	436410	408813	404257	405514	408346	409800

* Revised (P) Provisional

Source:- Directorate of Economics and Statistics, Thiruvananthapuram

Appendix 8.5

Industrial Disputes Arose, Handled, Settled etc. in Kerala

Sl.No.	Particulars	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8
1	No. of disputes pending at the beginning of the year	2241	2253	2768	2987	2656	2749
2	No. of disputes that arose during the year	3356	4005	4555	4019	3405	3462
3	No. of disputes handled during the year (1+ 2)	5597	6268	7323	6686	8063	6211
4	No. of disputes settled during the year						
	a By voluntary negotiation between parties	578	866	883	810	374	341
	b By conciliation	922	1391	1875	1606	1128	1431
	c By withdrawal	1428	1230	1375	1176	1290	1066
	d Referred for Adjudication	406	392	521	432	526	469
	e Referred for Arbitration	0	0	0	0	0	0
	f Total number of disputes settled (a to e)	3334	3879	4658	4028	3314	3307
5	Number of disputes pending at the end of the year (3-4)	2263	2389	2667	2658	2749	2904
6	Number of disputes led to						
	a Strike (including pending previously)	9	7	22	14	7	6
	b Lockout including pending previously	38	49	35	30	29	28
	c Total (a + b)	47	56	57	44	36	34
7	No. of workers affected due to						
	a Strike	29827	403510	47887	15202	446144	25926
	b Lockout	6700	12412	8858	82175	7301	6868
	c Total (a + b)	36527	415922	56745	97377	453445	32794
8	Man-days lost						
	a Strike	992172	6404348	93864	150134	3224163	172163
	b Lockout	1405805	1772811	1799224	1979708	1807511	1847144
	c Total (a + b)	1797977	8177159	1893078	2129842	5031674	2019307

Source: Office of the Labour Commissioner, Thiruvananthapuram

Appendix 8.6

Central Sector Investment in Kerala

(Rs. crore)

Years as on 31st March	Investment in Gross Block		Percentage of column[3] to column[2]
	All India	Kerala	
1	2	3	4
2001	411865	9893	2.40
2002	490397	13504	2.75
2003	525301	14550	2.77
2004	596725	15301	2.56
2005*	649245	16872	2.60
2006	712819	17848	2.50

* Revised

Source: *Public Enterprises Survey 2005-06, GoI*

Appendix 8.7

Central Sector Investment in Selected States as on 31-03-2006

Rank No.	Name of State	Gross Block (Rs. Crores)	Employment (Lakh Nos)
1	2	3	4
1	Maharashtra	125642	1.95
2	Uttarpradesh	53222	0.66
3	Gujarat	52058	0.48
4	Andhra Pradesh	46016	0.96
5	Tamilnadu	40423	1.06
6	Assam	38968	0.51
7	Orissa	34289	0.66
8	Madhya Pradesh	33093	1.06
9	West Bengal	31909	2.00
10	Karnataka	31301	0.79
17	Kerala	17848	0.42
	All India	712819	18.49

Source: *Public Enterprises Survey 2005-06, GoI*

Appendix 8.8

Capital Investment and Employment in respect of Government of India Companies Functioning in Kerala

Sl. No	Name of Company	Capital Investment (Rs. Lakh) as on		Employment (Nos) as on	
		31-3-2006	31-3-2007	31-3-2006	31-3-2007
1	2	3	4	5	6
1	Hindustan Organic Chemicals Ltd	3342.00	3342.00	440	433
2	Hindustan Newsprint Ltd	8254.00	8254.00	1039	1000
3	Cochin Refineries Ltd.**	44367.00	...	1988	1887
4	Hindustan Latex Ltd.	3015.02	4403.06	1801	1920
5	Hindustan Machine Tools Ltd.	6756.01	902.91	763	731
6	Fertilizers and Chemicals Travancore Ltd	132861.05	NA	4030	NA
7	Instrumentation Ltd	4101.17	4376.15	323	313
8	Cannanore Spinning & Weaving Mills	454.24	620.69	348	342
9	Indian Rare Earths Limited	28561.81	NA	1016	NA
10	Hindustan Insecticides Ltd	6351.29*	7775.36	447	431
11	Cochin Shipyard Ltd	45252.22	NA	2075	NA
12	Kerala Lekshmi Mills	2559.98*	3869.20	478	457
13	Parvathy Mills	729.41	784.98	608*	608

* Revised

Source : *Reports of Companies Concerned*

Appendix 8.9

Performance of Government of India Companies in Kerala in terms of Value of Production and Sales Turnover

(Rs Lakh)

Sl. No	Name of Company	Value of Production		Total Sales Turnover	
		2005-06	2006-07	2005-06	2006-07
1	2	3	4	5	6
1	Hindustan Organic Chemicals Ltd	23800.00	39916.00	24898.00	41200.00
2	Hindustan Newsprint Ltd.	30296.00	31519.00	113050.00*	115000.00
3	Cochin Refineries Ltd.	1490209.00	2113920.00	1791151.00	...
4	Hindustan Latex Ltd.	18022.72	18995.52	18557.92*	17581.27
5	Hindustan Machine Tools Ltd	4908.00	4290.00	5052.00	4828.00
6	Fertilizers and Chemicals Travancore Ltd	139231.00	NA	141399.75	NA
7	Instrumentation Ltd.	5201.00	5700.33	5975.00	6564.97
8	Cannanore Spinning & Weaving Mills	1931.00	1867.65	1632.00	1406.08
9	Indian Rare Earths Limited	8307.37	NA	10560.50	NA
10	Hindustan Insecticides Ltd.	3262.95	6105.16	2880.47*	5352.16
11	Cochin Shipyard Ltd	40776.00	NA	37353.00	NA
12	Kerala Lekshmi Mills	2368.02	2816.63	2330.97	2505.26
13	Parvathy Mills	859.16	1250.36	1082.73	2507.47

* Revised

** Consequent to the merger of Cochin Refineries Ltd (KRL) with Bharat Petroleum Corporation Ltd during 2006-07, KRL ceased to exist and became a Strategic Business Unit (SBU) and the sales are recorded at corporate level.

Source: *Reports of Companies Concerned*

Appendix 5.10

Production and Capacity Utilisation in Government of India Companies Functioning in Kerala

Sl. No.	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2006	31-03-2007	31-03-2006	31-03-2007	31-03-2006	31-03-2007
1	2	3	4	5	6	7	8	9	10
1	Hindustan Organic Chemicals Ltd.	Phenol	M T	40000	40000	28754.00	40733.00	71.89	101.83
		Acetone	M.T.	24640	24640	18253.00	25483.00	74.08	103.34
		H2O2(100%)	M.T.	5225	5225	3686.00	4411.00	70.18	84.42
		Propylene	MT	..	..	18896.00	25587.00	..	..
		Cumene	MT	54000	.	40546.00	54329.00	75.09	.
2	Hindustan News Print Ltd.	Newsprint	MT	100000	100000	113050.00	112565.00	113.05	112.57
3	Cochin Refineries Ltd.	Petroleum/Petrochemical Products- Crude, Thruput (MMT)	Million MT	7.5	7.5	7.85	7.75	104.67	103.33
4	Hindustan Latex Ltd	1.Condom	MPcs	1001	1034	990.00	1088.52	98.90	105.27
		2.B.Bags	MPcs	5	5	4.62	5.51	92.40	110.20
		3.Sahali(Non Steroidal OCP)	M.Tab	30	30	.	18.19	.	60.63
		4.Mala-D/N (Steroidal OCP)	M.cycles	98.67	98.66	74.30	57.58	75.30	58.38
		5.CU.T	MPcs	5.5	5.5	3.41	2.78	62.00	50.55
5	HMT Ltd.	Machine Tools.Printing and cutting machines. accessories and spares	Nos.	273	408	269.00	208.00	98.53	50.49
6	Fertilizers & Chemicals Travancore Ltd.	Udyogamandal division							--
		1. Amonium Sulphate	MT.	225000		172986		76.88	..
		2.Factamfos	MT	148500		143502		96.63	.
		3. Nitric Acid	MT	9800		4345		114.34	..
		4 Soda Ash	MT	4750		4275		90.00	.
		Cochin division							
		5 Factumfose	MT	485000		602400		124.21	.
		Petrochemical division							
		6.Caprolactam	MT	50000		38666		77.33	..
7	Instrumentation Ltd	1.Process control valves	Nos						
		2.Saftey relief valves & Pr.Reducing Valves	Nos	10000	10000	4346	4051	43.46	40.51
		3.Orifice plates & Flow measuring Devices	Nos						

Contd....

Sl. No.	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2006	31-03-2007	31-03-2006	31-03-2007	31-03-2006	31-03-2007
1	2	3	4	5	6	7	8	9	10
8	Cannanore Spinning & Weaving mills	Yarn in different counts	Kgs(Lakhs)	24800 (spindles)	24800 (spindles)	13.64	14.13	.	.
9	Indian Rare Earths Limited	Ilmanite	MT	154440		106419		68.91	..
		Zircon	MT	11220		8287		73.86	..
		Rutile	MT	9900		4701		47.48	..
		Sillimonite	MT	7080		10715		151.34	..
		Leucoxene	MT	1440		119		8.26	
		Zirflor	MT	5000		6301		126.02	.
		Rare Earth Flouride	MT	120		46.4		38.67	.
		Cerium Oxide	MT	.		38.64		..	..
		NIGADU	MT	.		29.22		..	..
		Cerium Hydrate (Wet)	MT	400.00		5.87		1.47	..
		Magnesium Dioxide	MT	.		1.42			..
		Cerium Hydrate (Dry)	MT	200.00		2.30		1.15	..
		Flouride	MT	..		5.71		.	..
		Carbonate (Dry)	MT	..		8.45		.	.
		Cerium Nitrate	MT	..		1.13		.	.
10	Hindustan Insecticides Ltd.	Tech. DDT	MT	..		444.38	757.05	.	..
		Form DDT	MT	..		1053.9	1419	.	.
		Tech. Endosulphan	MT	..		285.38	1213.38	..	..
		Form Endosulphan	KL	..		384.37	367.6	..	.
		Dicofol Tech.	MT	..		37.52	49.20	..	..
		Dicofol Form	MT	.		14.09	66.08	..	..
		Hilban	MT	..		105.40	184.35	..	.
		Mancozeb	MT	..		501.38	458.93	.	..
11	CochinShipyard Ltd.	Ship (Building)	DWT	150000		110205		73.47	..
12	Kerala Lakshmi Mills	Yarn in different counts	KGs	41328	41328	1949212	2082014.7	..	..
13	Parvathy Mills	Yarn	Spindles	25400	25400	538510 Kgs.	883206	..	.
		Cloth	Loom	37	37	1213982 Kgs	718455	..	..

*Revised

Source: Reports from Companies concerned

Appendix 8.11

District-wise break up of Medium and Large Scale Industries in Kerala as on 31-03-2007

Sl.No.	Districts	Central Sector	State Sector	Co-Operative Sector	Joint Sector	Private Sector	Total
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	2	14	2	4	68	90
2	Kollam	2	7	2	...	20	31
3	Pathanamthitta	...	1	1	1	5	8
4	Alappuzha	...	7	...	3	28	38
5	Kottayam	1	2	2	...	29	34
6	Idukki	...	...	1	1	15	17
7	Ernakulam	12	8	2	4	229	255
8	Thrissur	2	8	1	7	49	67
9	Palakkad	2	2	2	6	78	90
10	Malappuram	..	5	1	2	22	30
11	Kozhikode	...	3	1	1	24	29
12	Wayanad	..	...	...	...	7	7
13	Kannur	1	7	5	...	16	29
14	Kasaragod	...	1	1	...	2	4
	Total	22	65	21	29	592	729

Source : Kerala State Industrial Development Corporation (KSIDC), Thiruvananthapuram

Appendix 8.12

Units Assisted by KSIDC as on 31-3-2007

Sl.No.	Districts	No. of Units		Project Cost (Rs. Lakh)	
		Public Sector	Private Sector	Public Sector	Private Sector
1	2	3	4	5	6
1	Thiruvananthapuram	9	40	14762	30917
2	Kollam	4	10	3069	2521
3	Pathanamthitta	...	6	...	975
4	Alappuzha	3	29	2168	28536
5	Kottayam	1	19	644	20832
6	Idukki	...	14	...	6697
7	Ernakulam	4	162	20918	210202
8	Thrissur	4	40	2006	31636
9	Palakkad	1	80	1373	108960
10	Malappuram	...	21	...	6315
11	Kozhikode	3	16	1528	5362
12	Wayanad	...	5	...	1227
13	Kannur	1	9	148	17891
14	Kasaragod	1	1	87	178
	Total	31	453	46801	472449

Source : KSIDC, Thiruvananthapuram

Appendix 8.13

Capital Invested and Employment in Respect of Govt. Owned Companies in Kerala

Sl. No.	Name of Company	Capital Invested (Rs.lakh) as on 31-3-2006	Capital Invested (Rs.lakh) as on 31-3-2007	Employment (Nos.) as on 31-3-2006	Employment (Nos.) as on 31-3-2007
1	2	3	4	5	6
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	9730.93	10151.85	1010	1022
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	34673.25*	33752.08	1473	1426
3	Malabar Cements Ltd, Palakkad	6321.78	4954.36	960	1033
4	Kerala Clays & Ceramics Products Ltd. Kannur	131.82	131.82	321	328
5	Sitaram Textiles Ltd, Thrissur	3727.08*	3727.08	238*	237
6	Kerala Hilech Industries Ltd, Thiruvananthapuram	3665.57	NA	225	224
7	Kerala Automobiles Ltd, Thiruvananthapuram	1873.42*	1878.38	342	319
8	Steel Industrials Kerala Ltd, Thrissur	8681.5	8946.5	306	225
9	Kerala State Textile Corporation Ltd. Thiruvananthapuram	5884.00*	6359	745*	746
10	Kerala Minerals and Metals Ltd. Kollam	3382.1	3276.02	1937	1844
11	Steel and Industrial Forgings Ltd, Thrissur	1822.26	1654.46	257	259
12	Foam Mattings India Ltd Alappuzha	515.23	515.23	170	168
13	Kerala Garments Limited	235.51	235.51	118	...
14	Kerala Agro Machinery Corporation Limited	161.46	161.46	534	537
15	Kerala State Cashew Development Corporation	37181.00*	38876	14036*	14702
16	Kerala State Bamboo Corporation	1187.83	...	239	
17	Artisans Development Corporation	467.58*	480.49	25	24
18	Kerala State Coir Corporation	1204.12*	1222.66	179	88
19	Meat Products of India	247.34	250.08	105	106
20	Autocast Limited	10468.16	6791.81	326	326

* Revised

Source:- Reports of Companies Concerned

Appendix 8.14

Performance of Govt. Owned Companies in Kerala in Terms of Value of Production and Sales Turnover

(Rs. Lakh)

Sl No.	Name of Company	Value of Production 2005-06	Value of Production 2006-07	Sales Turnover 2005-06	Sales Turnover 2006-07
1	2	3	4	5	6
1	Kerala Electrical and Allied Engineering Co. Ltd. Kochi	6347.93	7806.68	5996.31	8575.46
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	5820.91	6521.41	10291.68*	13080.97
3	Malabar Cements Ltd, Palakkad	22782.85	22597.50	22780.37	23969.71
4	Kerala Clays & Ceramics Products Ltd, Kannur	303.06*	348.73	427.86	476.88
5	Sitaram Textiles Ltd, Thrissur	651.61	706.97	636.70	672.53
6	Kerala Hilech Industries Ltd, Thiruvananthapuram	1480.00	1523.00	1573.66*	1715.15
7	Kerala Automobiles Ltd, Thiruvananthapuram	4415.08*	4123.67	5086.00*	5129.00
8	Steel Industrials Kerala Ltd, Thrissur	31.29*	127.30	1283.90	1012.64
9	Kerala State Textile Corporation Ltd, Thiruvananthapuram	3709.00	3756.00	3545.00	3695.00
10	Kerala Minerals and Metals Ltd, Kollam	31134.32	32734.05	26987.07	29574.49
11	Steel and Industrial Forgings Ltd, Thrissur	3726.00	4071.00	3338.00	4085.00
12	Foam Mattings India Ltd, Alappuzha	259.86*	217.01	458.42	419.00
13	Kerala Garments Limited	24.00	23.00	7.11	7.54
14	Kerala Agro Machinery Corporation Limited	7379.23	7629.87	8003.69	8121.74
15	Kerala State Cashew Development Corporation	6900.00*	6200.00	9084.92*	6364.14
16	Kerala State Bamboo Corporation	..	..	921.28	...
17	Artisans Development Corporation	.	..	1.38	...
18	Kerala State Coir Corporation	...	...	341.26*	293.52
19	Meat Products of India	423.61	431.17	478.41	438.59
20	Autocast Limited	1108.25	1057.45	1382.43	1310.64

* Revised

Source:- Reports of Companies Concerned

Appendix 8.15

Production and Capacity Utilisation of Government Owned Companies in Kerala during 2005-06 and 2006-07

Sl. No.	Name of Company	Name of products	Unit	Installed Capacity as on		Production During		Capacity Utilization (%)	
				31-3-2006	31-3-2007	31-3-2006	31-3-2007	31-3-2006	31-3-2007
1	2	3	4	5	6	7	8	9	10
1	Kerala Electrical and Allied Engineering Co Ltd, Kochi	Distribution of Transformers	KVA	500000	500000	327175	239858	65.44	47.97
		Steel Structures	Tonnes	1200	1200	324	320	27.00	26.67
		HRC Fuses	Nos	120000	..	.	..	..	.
		Cast Iron Specials	Tonnes	1500	..	.	..	..	..
		Alternators (TL)	Nos	1500	1500	868	859	57.87	57.27
		Electrical & Wiring Accessories	Nos	133000	133000	42546	26701	31.99	20.08
		Alternators(G.P) & D G Sets	Nos	3000	3000	858	858	28.60	28.60
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	Various Electronic Products	Production is reported in terms of value and not in terms of quantity						
3	Malabar Cements Ltd, Palakkad	Portland Cement	M Ts	620000	620000	682916	621144	110.15	100.18
4	Kerala Clays and Ceramic Products Ltd, Kannur	ChinaClay	M Ts	N A	N.A	10815	11090	.	.
		Fire Bricks	Nos	N A	N.A	130310	123510	.	..
		Laterite	M Ts	N A	N.A	23492	31172	..	..
		Wirecut Bricks	Nos	N A	N A	144400	109600	.	..
5	Sitaram Textiles Ltd, Thrissur	Cotton Yarn	M.Ts	12064 (spindles)	14800	495	494	..	14800
6	Kerala Hitech Industries Ltd, Thiruvananthapuram (KEL TEC)		Not available						
7	Kerala Automobiles Ltd, Thiruvananthapuram	Auto rickshaw	Nos	7200	7200	5481	5420	76.13	75.28
8	Steel Industrials Kerala Ltd. Thrissur	Structural Steel Fabrication	M.Ts	3000.00	3000.00	66.43	147.00	2.21	4.90
		Cast Iron	M Ts	1200.00	1200.00	375.48	318.20	31.29	26.52
9	Kerala State Textile Corporation Ltd. Thiruvananthapuram	Cotton/Blended Yarn	Spindles	88236	88236	2248 MT	2490 MT	..	
10	Kerala Minerals & Metals Ltd, Kollam	Titanium Dioxide Pigment	M.Ts	40000.00	40000.00	33191.00	34373.00	82.98	85.93
		Ilmenite	M.Ts	51600.00	51600.00	51430.00	52500.00	99.67	101.74
		Rutile	M.Ts	2400.00	2400.00	2789.00	2676.00	116.21	111.50
		Zircon	M.Ts	1500.00	1500.00	1864.00	1764.00	124.27	117.60

Contd...

Sl. No.	Name of Company	Name of products	Unit	Installed Capacity as on		Production During		Capacity Utilization (%)	
				31-3-2006	31-3-2007	31-3-2006	31-3-2007	31-3-2006	31-3-2007
1	2	3	4	5	6	7	8	9	10
11	Steel and Industrial Forgings Ltd, Thrissur	Steel Forgings	M.Ts	5040.00	5040.00	2922.00	3158.00	57.96	62.66
12	Foam Mattings (India) Ltd, Alappuzha	Mattings plant	M2	523000	523000	120904	103000	23.12	19.69
		Latex backing plant	M2	1200000	1200000	361736	300000	30.14	25.00
		Dyeing Plant	M.Ts	840	840	10004.25	7069	1190.98	841.55
		Powerloom Plant	M2(Lac)	190000	190000	38000.00*	47000	20.00	21.00
13	Kerala Garments Limited	Readymade Garments	Nos	120000	120000	34000	33000	28.33	27.50
14	KAMCO	Power Tiller	Nos	6000	6000	7811	7786	130.18	129.77
		Power Reapers	Nos	..	..	841	1001	..	.
15	Kerala State Cashew Development Corporation	Kernals	MTs / day	210	210	18728.00*	14462.00	..	..
16	Kerala State Bamboo Corporation	Bamboo Ply	Sq M 4mm	6.06		3.54		58.42	
		Reech	Nos						
17	Artisans Development Corporation			Trading Activities					
18	Kerala State Coir Corporation								
19	Meat Products of India	Meat	M.Ts	300	300	294.39	243.21	98.13	81.07
		Feed	M.Ts	7200	7200	1171.61	1088.69	16.27	15.12
20	Autocast Limited	GI/SGI Castings	M.Ts	23000	23000	1425	1631	6.20	7.09
		SG Wind Mill Castings	M.Ts	..	..	934	647	..	.

* Revised

Source: Reports of the Companies Concerned

Appendix 8.16

Capital Invested and Employment in respect of Govt. Majority Companies in Kerala

Sl. No	Name of Company	Capital Invested (Rs. Lakh) as on		Employment (Nos.) as on	
		2005-06	2006-07	2005-06	2006-07
1	2	3	4	5	6
1	Traco Cable Company Ltd, Kochi	4702.72*	4537.05	650	618
2	Travancore Titanium Products Ltd, Thiruvananthapuram	267.65	1531.14	1143	1067
3	The Travancore Cochin Chemicals Ltd, Kochi	7518.66	8358.89	783	755
4	Keltron Electroceramics Ltd, Malappuram	489.29	515.67	88	87
5	The Travancore Cements Ltd, Kottayam	176.00	426.00	585	558
6	The Metal Industries Ltd, Shoranur	147.95	NA	89	NA
7	The Travancore Sugars and Chemicals Ltd.	173.97*	166.12	118	118
8	Forest Industries (Travancore) Ltd, Aluva	394.24	438.44	115	108
9	Keltron Magnetics Ltd, Kannur	458.61	444.00	25	24
10	Transformers and Electricals Kerala Ltd	7601.49*	8619.40	1046	951
11	Keltron Resistors Ltd. Cannanore	308.12	327.58	46	42
12	Keltron Component Complex Ltd.	1617.31	1618.97	298	295
13	Keltron Crystals Ltd.	1653.64*	1671.87	102	98
14	Kerala State Handloom Development Corporation	2739.75	2783.75	379	381.00
15	United Electrical Industries Ltd	399.00*	399.00	149	142

* Revised

Source: Reports of the Companies Concerned

Appendix 8.17

Performance of Government Majority Companies in Kerala in Terms of Value of Production and Sales Turnover

(Rs.Lakh)

Sl. No.	Name of Company	Value of Production		Sales Turnover	
		2005-06	2005-07	2005-06	2006-07
1	2	3	4	5	6
1	Traco Cable Company Ltd, Kochi	3848.08	5443.15	3684.38	5159.22
2	Travancore Titanium Products Ltd, Thiruvananthapuram	11293.26*	11071.90	13888.24*	11988.16
3	The Travancore Cochin Chemicals Ltd, Kochi	6589.00*	9030.00	12742.00	14467.00
4	Keltron Electroceramics Ltd, Malappuram	178.97	288.59	362.77	505.99
5	The Travancore Cements Ltd, Kottayam	1900.00*	2730.00	1929.00*	2748.00
6	The Metal Industries Ltd, Shoranur	111.75	NA	166.77	NA
7	The Travancore Sugars and Chemicals Ltd.	609.48*	645.06	655.23	717.51
8	Forest Industries (Travancore) Ltd, Aluva	727.00	734.00	727.00	734.00
9	Keltron Magnetics Ltd, Kannur	288.00	337.45	398.24	460.82
10	Transformers and Electricals Kerala Ltd.	10583.00	14581.71	11002.00*	14897.88
11	Keltron Resistors Ltd., Cannanore	87.22	113.51	151.11	182.53
12	Keltron Component Complex Ltd.	2181.75*	2170.12	2455.20	NA
13	Keltron Crystals Ltd.	93.54	73.79	104.88	85.64
14	Kerala State Handloom Development Corporation	686.58*	493.32	1491.50	1500.98
15	United Electrical Industries Ltd	484.12*	4686.00	497.24	3310.50

* Revised

Source: Reports of companies concerned

Appendix 8.18

Production and Capacity Utilisation of Government Majority Companies in Kerala during 2005-06 and 2006-07

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2006	31-3-2007	31-3-2006	31-3-2007	31-3-2006	31-3-2007
1	2	3	4	5	6	7	8	9	10
1	Traco Cable Company Ltd, Kochi	1.AAC / ACSR	MT	1500.00	1500.00	1974.15	2588.00	131.61	172.53
		2.PVC Covered Conductors	MCM	32.92	32.92	1.91	0.11	5.80	0.33
		3.JFTC (IBM)	LCKM	2.50	2.50	0.004*	0.001	0.16	0.04
		4.JFTC (TVLA)	LCKM	15.00	15.00	0.01	0.004	0.06	0.03
2	Travancore Titanium Products Ltd. Thiruvananthapuram	Titanium Dioxide	MT	24500.00*	24500.00	17111.00	15817.00	69.84	64.56
3	The Travancore Cochin Chemicals Ltd, Kochi	1.Caustic Soda Lye	MT	48370.00	55520.00	51004.00	57487.00	105.45	103.54
		2.Chlorine Products	MT	42857.00	48190.00	45190.00	50933.00	105.44	103.54
4	Keltron Electroceramics Ltd, Malappuram	1.Ceramic Capacitors	Lakh Nos	1100.00	1100.00	476.02	397.42	43.27	36.13
		2.N.T.C.Thermistors	Lakh Nos	10.00	10.00	4.72	5.70	47.20	57.00
		3.Buzzers/Ringers/ Flasher	Lakh Nos	5.00	5.00	0.22	0.29	4.40	5.80
		4.Metaloxide varistors	Lakh Nos	20.00	20.00	6.66	0.12	33.30	0.60
		5. Transducers	Lakh Nos	..	..	0.02	...	...	...
5	The Travancore Cements Ltd	1.White Cement	M T	30000.00	30000.00	15134.00	21474.00	50.45	71.58
		2 Cement Paint	M T	1050.00	1349.00	1345.00	1130.00	128.10	83.77
6	The Metal Industries Ltd. Shoranur	1.Mammatties	MT	272.00		125.00		45.96	...
		2.All Axes	MT						
		3.Pick Axes	MT						
		4.Crow Bar	MT						
		5 Sledge Hammer	MT						
		6.Others	MT						
7	Travancore Sugars & Chemicals Ltd	1.Spirit	B L	...		21000.00*	24000.00	...	...
		2 I.M.F.L (lakh)	B.L.	1600000.00	1600000.00	1754687.00*	1901868.00	109.67	118.87
8	Forest Industries (Travancore) Ltd. Akva	Wooden Furniture and Joineries	m^3	1500.00	1500.00	493.48	670.27	32.90	44.68

Contd .

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2006	31-3-2007	31-3-2006	31-3-2007	31-3-2006	31-3-2007
1	2	3	4	5	6	7	8	9	10
9	Keltron Magnetics Ltd., Kannur	1.MPPCAPS	'000 Nos.	1140.00	1140.00	1739.00	2068.00	152.54	181.40
10	Transformers and Electricals Kerala Ltd, Ernakulam	1.Power Transformer	MVA	4500.00	4500.00	3477.00*	3648.00	77.27	81.07
		2.Current and Potential Transformers	No	1000.00	1000.00	260.00	261.00	26.00	26.10
11	Keltron Resistors Ltd., Cannanore	Carbon & Metal Film Resistors	M.Nos	217.00	217.00	87.50	87.22	40.32	40.18
12	Keltron Component Complex Ltd.	Alu. Electrical Capacitors	M.Nos.	150.00	150.00	168.11	171.66	112.07	114.43
13	Keltron Crystals Ltd., Cannanore	1.Piezo Electric Quartz Crystals	Nos (000)	2084.00	2084.00	727.00	705.00	34.88	33.83
		2.Lead Taps for aliminium electrolitic capacitors	M.Nos	240.00	240.00	188.00	135.00	77.50	56.25
14	Kerala State Handloom Development Corporation	Handloom Fabrics	Lakh Metres	2600 (looms)	1600 (looms)	16.88	13.20	..	..
15	United Electrical Industries Ltd.	1. S.P.Static Metre	Nos	600000.00	1100000.00	226483.00*	1175763.00	37.58	106.89
		2. Starters	Nos	400.00	400.00	671.00*	942.00	167.75	235.50
		3. Cross Arms	Nos	11270.00	15000.00	11270.00*	4755.00	100.00	31.70
		4. P.P Metre	Nos	..	.	65.00	.	..	..
		5. FFATS	Nos	.	.	29.00	..	..	–

* Revised

Source: Reports of the companies concerned

Appendix 8.19

Details of Joint Stock Companies Working in Kerala

Sl.No	Particulars	Private Limited	Public Limited	Total
1	2	3	4	5
1	Number of Joint Stock Companies in Kerala as on 31.3.2006	14057	1453	15510
2	Number of Companies newly registered during 2006-07	1203	44	1247
3	Number of Companies transferred from other States during 2006-07	2	0	2
4	Number of Companies wound up dissolved / struck off/amalgamated during 2006-07	1124	79	1203
5	Number of Companies transferred to other States during 2006-07	6	1	7
6	Net addition to the total No.of Joint Stock Companies in Kerala during 2006-07 [(2+3)-(4+5)]	75	-36	39
A	No.of companies converted from public to private	...	...	0
B	No.of companies converted from private to public	...	5	5
7	Total No.of Joint Stock Companies in Kerala as on 31.3.2007 (Item 1+6)	14127	1422	15549
8	Total No.of Government Companies registered in Kerala as on 31-3-2006	58	51	109
9	Total No.of Government Companies registered in Kerala during 2006-07	...	...	...
10	No.of government Companies wound up during 2006-07	...	...	...
11	Net addition to the total No.of Government Companies in Kerala during 2006-07 (Item 9-10)	...	...	...
12	Total No.of Government Companies in Kerala as on 31.3.2007 (Item 8+11)	58	51	109
13	Name of Government Companies, newly registered in Kerala during 2006-07	NA	NA	NA
14	Name of Government Companies, wound up during 2006-07	NA	NA	NA
15	No of other major companies wound up during 2006-07	NA	NA	NA

Source : Registrar of Joint Stock Companies, Kochi.

Appendix 8.20

District-wise Details of Small Scale Industrial Units Registered in Kerala During the Year 2006-07 (01.04.2006 to 01.10.2006)*

Sl. No	District	Number of SSI units promoted by					Investment (Rs. lakh)	production (Rs lakh)	Employment (Nos)
		SC	ST	Women	Others	Total			
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	..	...	9	268	277	758	6724	1432
2	Kollam	...	...	202	159	361	616	1515	1470
3	Pathanamthitta	...	...	1	59	60	199	583	234
4	Alapuzha	5	...	176	226	407	454	3171	1355
5	Kottayam	...	...	32	127	159	364	1977	760
6	Idukki	6	1	53	44	104	211	1047	357
7	Ernakulam	*	...	84	217	302	2437	11877	1659
8	Thrissur	14	..	137	247	396	1249	3745	1880
9	Palakkad	...	...	69	107	176	550	1524	839
10	Malappuram	*	...	16	88	105	813	2367	692
11	Kozhikode	1	1	20	91	113	341	1763	527
12	Wayanad	..	...	5	19	24	189	290	154
13	Kannur	1	...	6	125	132	367	2034	662
14	Kasaragod	...	..	...	41	41	267	934	331
	Total	29	2	610	1618	2659	8815	39871	12352

*Remark, SSI registration in DICs has been discontinued from 02.10.2006

Source : Directorate of Industries & Commerce

Appendix 8.21

District-wise Details of Working Small Scale Industrial Units Registered in Kerala as on 31st March 2007

Sl. No	District	Number of SSI units promoted by					Investment (Rs. lakh)	production (Rs lakh)	Employment (Nos)
		SC	ST	Women	Others	Total			
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	781	159	5191	15655	21786	49894.94	106990.86	84494
2	Kollam	964	55	4447	10662	16128	34000.81	65811.77	72087
3	Pathanamthitta	482	37	2532	6119	9170	15914.49	18626.28	23486
4	Alapuzha	392	79	4225	13457	18153	49886.78	107744.89	70617
5	Kottayam	381	170	5244	14085	19880	61053.26	104334.51	57593
6	Idukki	321	155	1671	2935	5082	21584.53	25086.69	15877
7	Ernakulam	376	157	4813	19570	24716	106570.76	388212.01	104502
8	Thrissur	912	88	4033	17435	22488	72199.05	122283.60	84597
9	Palakkad	1142	105	2593	10768	14608	48726.55	65430.90	46825
10	Malappuram	356	76	1355	8332	10119	34890.66	66905.02	34404
11	Kozhikode	430	76	2313	13181	16000	55570.82	87023.04	58298
12	Wayanad	45	114	954	1759	2872	7440.29	8112.58	10030
13	Kannur	135	57	1346	8427	9959	28988.51	59693.97	36030
14	Kasaragod	117	86	788	4028	5019	13533.17	21483.18	24219
	Total	8834	1414	41305	146407	195980	600254.85	1257699.30	722860

Revised after the 3rd All India Census of SSIs

Source : Directorate of Industries & Commerce

Appendix 8.22

Working Status of Small Scale Units as on 31st March 2007

Sl. No.	District	Total No. of Units	Number of Units Identified as Sick	Sick Units Registered for Revival	No. of Units Revived	No. of Units Revived by DIC during 2006-07
1	2	3	4	5	6	7
1	Thiruvananthapuram	21786	643	279	125	0
2	Kollam	16128	539	299	145	8
3	Pathanamthitta	9170	277	65	62	0
4	Alappuzha	18153	531	238	199	0
5	Kottayam	19880	670	327	261	0
6	Idukki	5082	245	57	30	0
7	Ernakulam	24716	2136	295	125	0
8	Thrissur	22488	644	154	70	1
9	Palakkad	14608	553	130	70	0
10	Malappuram	10119	324	69	11	0
11	Kozhikode	16000	510	259	109	0
12	Wayanad	2872	101	58	24	4
13	Kannur	9959	290	147	44	2
14	Kasaragod	5019	123	6	5	0
	Total	195960	7586	2376	1280	15

Source : Directorate of Industries & Commerce

Appendix 8.23

Achievement under Self Employment Programme during 2006-07 (PMRY)

Sl. No.	District	Target	Applications sanctioned and amount disbursed during 2006-07			
			Sanctioned		Disbursed	
			Number	Amount (Rs.lakh)	Number	Amount (Rs. lakh)
1	2	3	4	5	6	7
1	Thiruvananthapuram	2550	2580	1169.50	2167	921.38
2	Kollam	2550	2741	1385.0[illegible]	2221	915.21
3	Pathanamthitta	1175	1042	593.47	616	420.27
4	Alappuzha	1975	2025	1038.90	[illegible]727	847.90
5	Kottayam	2510	2834	1172.29	2302	993.83
6	Idukki	980	1143	573.53	985	472.54
7	Ernakulam	2900	3001	1639.30	2263	1263.15
8	Trissur	2760	2899	1245.60	2413	97[illegible].52
9	Palakkad	2930	3022	1231.06	2582	1028.09
10	Malappuram	2250	2274	1458.54	1640	1391.11
11	Kozhikode	2400	2462	1297.57	1875	946.65
12	Wayanad	700	731	316.00	555	[illegible]99.76
13	Kannur	1500	1698	898.65	1205	583.22
14	Kasaragod	720	636	398.36	495	306.79
	Total	28000	29066	14219.78	23248	11261.42

Source : Directorate of Industries & Commerce

Appendix 8.24

Working Industrial Co-operative Societies in Kerala as on 30.6.2007

Sl. No.	District	Industrial Co-operative societies registered during 2006-07 (7/06 to 6/07)	Total Number of Industrial Co-operative Societies as on 30-6-2007				
			SC	ST	Women	Others	Total number of societies
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	2	35	1	35	32	103
2	Kollam	2	32	2	42	67	143
3	Pathanamthitta	0	8	0	24	8	40
4	Alappuzha	0	7	0	28	30	65
5	Kottayam	1	5	0	25	26	56
6	Idukki	0	5	0	14	16	35
7	Ernakulam	3	16	0	13	36	65
8	Trissur	1	7	0	18	23	48
9	Palakkad	0	18	0	40	14	72
10	Malappuram	0	13	0	12	17	42
11	Kozhikode	1	5	0	9	19	33
12	Wayanad	0	12	0	4	10	26
13	Kannur	4	26	0	62	44	132
14	Kasaragod	0	4	0	10	18	32
	Total	14	183	3	335	360	892

Source : Directorate of Industries & Commerce

Appendix 8.25

Outstanding Advances to Various Sectors by Commercial Banks in Kerala

(Rs. Crore)

Sl. No.	Year (as at March)	Priority Sector				Non Priority Sector Advances	Total Advances
		Total	Agri culture	SSI	Other Priority Sector		
1	2	3	4	5	6	7	8
1	2001	8894	2747	2262	3885	10296	19190
2	2002	10132	3035	2540	4557	11930	22062
3	2003	11867	3507	2562	5798	15140	27007
4	2004	15725	4502	2618	8605	18142	31867
5	2005	20903	5803	3128	11972	20045	40948
6	2006	27763	8259	3708	15796	24156	51919
7	2007	35683	11377	4391	19915	28590	64273

Source : State Level Bankers' Committee

Appendix 8.26

District-wise Number of Handloom Co-operative Societies in the State

No. of societies

Sl. No	District	2005-06							2006-07						
		SC		ST		Others			SC		ST		Others		
		Women	General	Women	General	Women	General	Total	Women	General	Women	General	Women	General	Total
1	Thiruvananthapuram	5	14	1	7	46	290	363	5	14	1	7	46	290	363
2	Kollam		7		1	1	70	79		7		1	1	70	79
3	Pathanamthitta		3				6	9		3				6	9
4	Alappuzha	2	1			2	21	26	2	1			2	21	26
5	Kottayam		2			2	12	16		2			2	12	18
6	Idukki	1			4		7	12	1			4		7	12
7	Ernakulam		2	1			29	32		2	1			29	32
8	Thrissur	1	5				25	31	1	5				25	31
9	Palakkad		8		4	1	35	48		8		4	1	35	48
10	Malappuram	1	2				10	13	1	2				10	13
11	Kozhikode		2				41	43		2				41	43
12	Wayanad		2		2			4		2		2			4
13	Kannur		2				71	73		2				71	73
14	Kasaragod						11	11						11	11
	Total	10	48	2	18	52	628	758	10	48	2	18	52	628	758

Source: Directorate of Handloom & Textiles

Appendix 8.27

Production and Productivity under Handloom Industry in Kerala

Sl.No	Item	2005-06	2006-07
1	2	3	4
1	**Co-operative Sector**		
	i Number of looms	47235	47280
	ii Production of Handloom cloth (M.M)	59.98	60.05
	iii Value of Production (Rs. crores)	269.82	270.22
	iv Productivity (M/L/A)	1269.40	1270.08
	v No. of weavers	129470	129510
	vi Employment generated (mandays in lakhs)	457	457
	vii No. of women employed	27645	27658
2	**Corporate /unorganised/private sector**		
	i Number of looms	3020	3035
	ii Production of Handloom cloth (M.M)	2.42	2.43
	iii Value of production (Rs. crores)	10.90	10.94
	iv Productivity (M/L/A)	801.32	800.66
	v No. of weavers	6225	6240
	vi Employment generated (mandays in Lakhs)	28.12	28
	vii No. of women employed	1210	1215
3	**Total: Co-operative, corporate and unorganised sector**		
	i Number of looms	50255	50315
	ii Production of Handloom cloth (M.M)	62.38	62.48
	iii Value of Production (Rs. crores)	280.72	281.16
	iv Productivity (M/L/A)	1245.48	1241.76
	v No. of weavers	135695	135750
	vi Employment generated (mandays in Lakhs)	485.12	485
	vii No. of women employed	28855	28874
4	Assistance extended by way of loan and grant for the development of handloom industry (Rs. lakh)		
a	Loan		
	i State Government	90	100
	ii Central Government		
	iii N.C.D.C, NABARD, HUDCO	0	0
	Total (a)	90	100
b	Grant		
	i State Government	1056.86	978.54
	ii Central Government	341.38	238.04
	iii N.C.D.C, NABARD, HUDCO		
	Total (b)	1398.24	1216.58
c	**Amount spent as Rebate on the sale of Handloom cloth:**		
	i State Government	300.00	300.00
	ii Central Government (MDA - 50%CSS)	0.89	343.51
	Total (c)	300.89	643.51

Contd...

Sl.No	Item	2005-06	2006-07
5	**Value of unsold stock (Rs. crores)**		
	a In the Co-operative Sector	13.06	35.07
	b In the Corporate Sector	26	11
	c Unorganised/ private sector	NA	NA
6	**Number of Co-operative Societies**		
	a Factory type:		
1	working	112	112
2	Dormant	28	26
3	under liquidation	11	11
4	Not started working	6	6
	Total (a)	155	155
	b Cottage type:		
1	Working	440	440
2	Dormant	60	60
3	under liquidation	81	81
4	Not started working	22	22
	Total (b)	603	603
	Total 6 (a+b)	758	758

Source: Directorate of Handlooms & Textiles

Appendix 8.28

Working Results of Handloom Apex Society (Hantex)

Sl.No	Particulars	2005-06*	2006-07
1	2	3	4
1	Sales turnover (Rs.lakh)	1016.5	1319.06
2	Value of cloth produced (Rs.lakh)	710.54	639.33
3	Value of yarn purchased (Rs.lakh)	655.64	539.12
4	Value of yarn distributed (Rs lakh)	675	531.66
5	No. of exhibitions conducted	26	15
6	No. of primary societies registered as members (cumulative)	466	466
7	Paid up share capital (Rs. in lakhs)	1367.55	1423.55

* Revised

Source: Hantex

Appendix 8.29

Working Results of Kerala State Handloom Development Corporation (HANVEEV)

(Rs lakh)

Sl.No	Particulars	2005-06*	2006-07
1	2	3	4
1	Paid up capital (as at the end of the year)	1362.28	1422.28
2	Total Borrowing (as at the end of the year including interest)	3060.14	3267.16
3	Gross Block (as at the end of the year)	422.67	434.73
4	Value of production through clusters and sponsored societies (as at the end of the year)	688.56	493.32
5	Income through sales of products (as at the end of the year)	1488.65	1500.96
6	Other Income:-		
a	Export of handloom cloth by K S H D C	...	...
b	Grants, MDA, Interest, Processing charges etc.	118.82	84.67
7	Expenditure on Raw Materials		
a	Yarn	334.53	266.06
b	Dyes and Chemicals	23.20	20.96
c	Fabrics	689.84	493.32
8	Expenditure on personal payments	473.23	457.95
9	Provision of Depreciation	11.27	10.25
10	Expenditure towards interest and bank charges	191.07	194.07
11	Other Expenses	15.5	16.3
a	Trading expenses	152.84	123.80
b	Administration and selling expenses	161.05	177.55
12	Stock differential	(+) 43.71	(-) 204.51
13	Net Profit (+), Net loss(-)	(-) 377.09	(-) 379.07
14	Accumulated loss at the end of the year	2753.42	3132.49

* Revised

Source: Hanveev

Appendix 8.30

Production and Productivity under Powerloom Industry

Sl.No	Items	2006-07
1	2	3
1	Total No. of Powerlooms in the state	3800
2	No of looms in the cooperative sector	1381
3	percentage of 2 to 1	36.34
4	No. of Powerloom cooperative societies in the state	33
5	No. of members in the cooperative sector	6600
6	No. of women employed in Powerloom sector	1223
7	Co-operative sector	
a	Production of cloth (lakh metres)	74.00
b	Value of production (Rs. Lakh)	932.40
c	Productivity(Metre/loom)	5358.44
8	Un organised/private sector	
9	Total (Cooperative and Unorganised/private sectors)	
a	Production of cloth (lakh metres)	74.00
b	Value of Production (Rs. Lakh)	932.40
c	Productivity (Meter/loom)	1947.37

Source: Directorate of Handlooms & textiles, Trivpm

Appendix 8.31

Coir Co-operative Societies in Kerala

Sl.No	Type of Society	No. of Societies as on 31-3-2006	No.of Societies as on 31-3-2007
1	2	4	3
1	**Primary Coir Co-operative Societies**		
	a) Working	362	342
	b) New Societies which have not started working	6	9
	c) Dormant societies	105	124
	Total (1)	**473**	**475**
2	**Manufacturing Societies**		
	a) Working (Started production)	34	33
	b) New Societies which have not started working	18	14
	c) Dormant societies	6	9
	Total (2)	**58**	**56**
3	**Small Scale Producars Co-operative Societies**		
	a) Working	13	15
	b) New Societies which have not started working	7	10
	c) Dormant societies	4	3
	Total (3)	**24**	**28**
4	**Husk Procurement and Distribution Societies**		
	a) Working	1	1
	b) New Societies which have not started working	2	0
	c) Dormant societies	0	1
	Total (4)	**3**	**2**
5	**Fibre Societies (Defibering Mill Societies)**		
	a) Working	28	18
	b) New Societies which have not started working	26	23
	c) Dormant societies	19	31
	Total (5)	**73**	**72**
6	Co-operative Coir Marketing Federation	1	1
7	**Total number of coir co-operative societies including Marketing Federation**		
	a) Working	439	410
	b) New Societies which have not started production	59	56
	c) Dormant societies	134	168
	d) Societies under liquidation	170	170
	Grand Total	**802**	**804**

Source : Directorate of Coir Development, Trivm.

Appendix 8.32

Activities of Coir Co-operative Societies

a.Yarn Sector

Year	No.of working Societies	No.of Workers (1000)	Husk purchased		Fibre purchased		Yarn produced		Wages paid (Rs. lakh)
			Lakh Nos.	Value (Rs.lakh)	Qty (Tonnes)	Value (Rs.lakh)	Qty (Tonnes)	Value (Rs.lakh)	
2003-04	362	152.00	288.37	113.90	1300.50	412.95	3389.00	4179.76	591.06
2004-05	376	51.93	228.088	189.30	4436.84	769.75	4838.38	1427.76	593.08
2005-06	391	52.18	239.50	195.68	4706.37	846.92	5192.10	1592.62	734.49
2006-07	361	47.88	213.01	184.22	2536.25	348.31	5368.72	1645.32	758.59

b.Product Sector

Year	No.of working Societies	No.of Workers	Value of Production (Rs. lakh)	Wages paid (Rs. lakh)
2003-04	89	2113	534.48	469.85
2004-05	56	5310	1985.04	256.97
2005-06	47	4104	2281.04	329.75
2006-07	48	3292	1392.38	283.88

Source : Directorate of Coir Development, Trivandrum

Appendix 8.33

District-wise Details of Coir Co-operative Societies

Sl. No	District	Project Offices	No. of Coir Societies as on 31-3-2007			
			Working & New	Dormant	Under liquidation	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	Chirayinkil	49	13	28	90
2	Kollam	Kollam	52	47	21	120
3	Alappuzha	Kayamkulam	54	27	10	91
		Alappuzha	121	28	27	176
4	Kottayam / Idukki	Vaikkom	28	1	6	35
5	Ernakulam	North Paravoor	22	2	44	68
6	Thrissur	Thrissur	18	9	20	45
7	Malappuram/ Palakkad	Ponnani	21	8	2	31
8	Kozhikode	Kozhikode	64	17	9	90
9	Kannur/ Kasaragod	Kannur	39	18	3	58
	Total		468	168	170	804

Source : Directorate of Coir Development, Trivandrum

Appendix 8.34

Export of Coir and Coir Products from India during 2005-06 & 2006-07

Sl. No	Items	2005-06		2006-07	
		Qty (Tonnes)	Value (Rs.Lakh)	Qty (Tonnes)	Value (Rs.Lakh)
1	Curled Coir	0.00	0.00	1804.03	206.34
2	Coir Fibre	1552.98	195.05	9356.54	1075.80
3	Coir Rugs & Carpets	1242.70	730.38	488.31	328.55
4	Coir Pith	53444.48	3872.80	67152.99	5382.07
5	Coir Rope	182.73	70.41	154.25	68.87
6	Coir (other source)	123.03	74.65	119.31	66.04
7	Coir Yarn	9582.52	3019.00	9691.17	3161.57
8	Coir Geo-textiles	2512.32	1140.56	3044.51	1335.22
9	Handloom Mat	42516.42	28698.73	47986.07	27370.87
10	Powerloom Mat	1609.94	1077.10	248.21	168.84
11	Tufted Mat	19671.49	11805.96	29017.02	16213.02
12	Handloom Matting	2915.91	1913.38	3642.27	2354.63
13	Powerloom Matting	155.95	118.89	104.75	85.11
14	Rubberised Coir	536.50	377.05	947.31	697.88
	Total	136028.97	50844.76	168754.74	60516.59

Source : Overbrate of Coir Development, Tvpm

Appendix 8.35

Foreign Exchange Earnings of India from Cashew Industry

(Rs. Crore)

Year	Export Value		Total	Import Value of Cashewnuts	Net Foreign Exchange Earned
	Cashew Kernels	Cashewnut shell liquid			
2001-2002	1788.68	5.93	1794.61	949.25	844.60
2002-2003	1933.02	9.26	1942.28	1236.60	705.68
2003-2004	1804.43	7.03	1811.46	1400.90	410.56
2004-2005	2709.24	7.91	2717.15	2190.94	526.21
2005-2006	2514.86	7.21	2522.07	2162.95	359.00
2006-2007	2455.15	10.29	2465.44	1811.62	2465.44

Source: Cashew Export Promotion Council, Kochi

Appendix 8.36

Import of Raw Cashewnuts

Year	Kerala*		India	
	Quantity (MT)	Value (Rs.crore)	Quantity (MT)	Value (Rs.crore)
2001-02	191579	502.46	355443	949.25
2002-03	249970	772.47	400659	1236.60
2003-04	294552	909.45	457398	1400.90
2004-05	283149	1055.08	578884	2190.94
2005-06	306786	1134.83	565400	2162.95
2006-07	NA	NA	586044	1811.62

*Import through Cochin Port

Source: Cashew Export Promotion Council, Kochi.

Appendix 8.37

Kerala Khadi & Village Industries Board

Production, Sales, Employment, and Wages paid during 2005-06 & 2006-07

(Rs. Lakh)

Sl. No.	Name of Industry	Value of production		Value of sales		Employment (Nos)		Wages paid	
		2005-06	2006-07	2005-06	2006-07	2005-06	2006-07	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10
I	Khadi	493.58	529.81	1331.96	2384.17	4587	4148	294.40	362.95
II	Polyvastra	39.70	33.50	82.81	115.25	530	431	31.38	41.48
III	Village Industries								
1	Cottage Match	809.70	785.00	805.30	796.40	6270	6228	405.60	426.10
2	Agarbathy	202.40	195.00	203.30	195.00	1279	1230	85.35	112.40
3	Village Leather	1421.00	1402.00	1459.00	1447.00	1280	1265	214.50	212.50
4	Fibre & Screwpine	503.50	499.00	481.60	487.50	53411	53158	443.80	437.50
5	Rubber based Industry	1509.00	1490.00	1839.00	1805.00	1311	1289	237.90	235.00
6	Handmade paper	292.00	290.00	305.00	303.30	427	443	86.10	88.50
7	Village pottery	1916.00	1925.00	2301.30	2302.00	19981	19925	935.00	939.00
8	Gurkhandasari	112.00	100.00	115.00	90.00	1490	1441	159.00	145.00
9	Service Industry	411.00	394.00	411.00	394.00	783	780	414.00	416.00
10	Non-edible oil & Soap	515.00	505.00	762.00	743.00	934.00	908.00	133.60	134.00
11	Village oil	1168.00	1184.00	1494.00	1482.00	907	916	187.20	186.00
12	Textile	782.30	750.00	817.00	773.00	6025	5820	550.00	439.00
13	Palmgur	128.30	110.00	132.00	126.00	7003	6390	625.00	631.00
14	Bee-keeping	181.20	173.80	171.38	168.20	15887	15850	159.70	155.00
15	Processing of cereals & pulses	530.00	525.00	669.00	685.30	13385	13314	687.70	685.00
16	Ayurvedic medicines	145.00	144.00	151.00	181.30	1041	1022	85.70	85.00
17	Fruits & Vegetable Preservation	480.00	479.00	468.00	468.30	2650	2659	279.00	289.00
18	Lime	1586.00	1575.00	1609.50	1608.00	8718	8655	1007.00	1008.00
19	Cane & Bamboo	202.20	205.00	236.70	237.00	2958	2905	158.00	158.00
20	Carpentry & Blacksmithy	1499.00	1460.00	1700.00	1635.00	6030	5912	1093.00	1090.00
21	Aluminium Industry	601.30	594.30	587.00	588.00	749	709	142.70	140.00
22	Electronics	317.30	307.30	340.00	328.00	770	758	114.00	115.30
23	PVC	128.30	130.00	149.00	135.00	227	185	32.20	33.80
	Total III	15438.00	15221.80	17224.78	18953.10	153597	151763	8238.05	8160.80
	Grand Total	16072.28	16785.90	18639.55	19452.52	158594	156310	8563.83	8565.23

Source: Kerala Khadi & Village Industries Board, Thiruvananthapuram.

Appendix 8.38

District-wise Number of Sales Outlets & Sales under KVIB during 2006-07

Sl. No.	Name of project	No. of sales outlets	Sales during 2006-07 (Rs. Lakh)
1	Thiruvananthapuram	19	93.6
2	Kollam	18	74.39
3	Pathanamthitta	10	31.45
4	Alappuzha	18	52.2
5	Kottayam	17	63.38
6	Idukki	4	21.94
7	Ernakulam	10	158.53
8	Thrissur	18	51.63
9	Palakkad	17	68.04
10	Malappuram	12	22.17
11	Kozhikkodu	30	115.85
12	Payyannur Khadi Centre	45	464.13
	Total	218	1217.31

Source. Khadi & Village Industries Board, Thiruvananthapuram

Appendix 8.39

Physical Achievement under Sericulture for the year 2005-06 & 2006-07

Sl. No	District	Mulberry Cultivation (acres) (Cumulative)		No. of farmers (Cumulative)		DFLs supplied (Nos.)		Cocoon Production (Kg)		Silk production (Kg)	
		2005-06	2006-07	2005-06	2006-07	2005-06	2006-07	2005-06	2006-07	2005-06	2006-07*
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	126.23	156.03	217	260	1750	710	392.05	184.34		
2	Kollam	192.84	214.89	331	380	5695	5275	2132.30	1749.50		
3	Pathanamthitta	138.47	158.67	222	260	4670	4220	1906.60	1630.30	1304.51	1259.21
4	Alappuzha	191.65	233.89	374	431	6865	6167	2634.10	2691.14		
5	Kottayam	158.50	203.25	288	326	4925	3795	1619.85	1363.20		
7	Idukki	518.51	589.76	717	770	11375	9465	4269.45	3328.10	693.34	
6	Ernakulam	132.95	175.10	257	275	13755	13540	4654.70	4578.60		
8	Thrissur	178.27	213.77	313	362	29180	40660	15322.22	17800.20	396.15	89.50
9	Palakkad	318.55	419.55	374	462	45125	72325	19970.70	29648.70		
10	Malappuram	217.15	259.05	368	427	32505	36090	14858.30	15090.40		
11	Kozhikkode	128.30	161.30	248	291	7905	7435	2634.20	2657.40		
13	Wayanad	239.00	312.60	336	427	20350	17920	10000.15	10665.10		
12	Kannur	158.40	163.35	317	332	15725	11305	6908.00	5778.10		
14	Kasaragod	107.15	121.90	159	172	9830	11555	4780.95	4128.15	1368.86	1421.94
	Total	**2803.97**	**3393.11**	**4521**	**5175**	**210055**	**240462**	**92083.57**	**101294.23**	**3760.85**	**2770.65**

* *Raw silk production reduced during 2006-07 due to the functioning of open cocoon market*

Source: *SERIFED, Thiruvananthapuram*

Appendix 8.40
Kerala State Industrial Development Corporation
Physical & Financial Performance 2006-07

(Rs. Crore)

Sl. No.	Particulars	2006-07
A	Physical	
1	Projects Completed	
a.	No. of projects	8
b.	Aggregate cost	47
c	Employment (Nos.)	308
2	Projects under Implementation (31.03.2007)	
a.	No. of projects	35
b	Aggregate cost	518
c.	Employment (Nos.)	6178
3	Projects cleared by KSIDC Board	
a	No. of projects	18
b.	Aggregate cost	21
c	Employment (Nos.)	1010
4	MOU signed with private parties	
a.	No. of projects	Nil
b.	Estimated aggregate cost	...
B	Financial	
a	Gross sanction	112
b	Disbursement	103
c	Recovery	48
d	Operating profit	42

Source : *Kerala State Industrial Development Corporation Thiruvanan*

Appendix 8.41
Kerala Financial Corporation: Loan Operations during 2006-2007

(Rs. Lakh)

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 1.4.2006	9	256.23	15	1908.79	24	2165.02
2	Application Received during 2006-07	261	8597.40	256	13644.27	517	20241.67
3	Total application for consideration	270	8853.63	271	15553.06	541	22406.69
4	Application withdrawn/ rejected or otherwise disposed off	13	1029.70	18	3783.88	31	4813.58
5	Application Sanctioned (Gross)	241	5164.25	225	8632.18	466	13796.43
6	A. Application cancelled/reduced out of current year's sanction	2	133.37	3	79.65	5	213.02
	B. Application cancelled/reduced out of previous year's sanction	11	1737.65	10	1466.68	21	3204.33
	C. Total cancellation/ reduction (6A+B)	13	1871.02	13	1546.33	26	3417.35
7	Application sanctioned effectively (5-6A)	239	5030.88	222	8552.53	461	13583.41
8	Net Sanctions (5-6C)	228	3293.23	212	7085.85	440	10379.08
9	Amount disbursed along with number of newly assisted units	188	3726.52	176	5998.76	364	9725.28
10	Application pending sanction as on at the end of the period	18	659.68	26	3137.00	44	3796.68

Source : *Kerala Financial Corporation, Tvpm*

Appendix 8.42

District-wise details of Disbursement of Loan by KFC during 2006-07

(Rs. lakh)

Particulars		Effective Sanction		Disbursement					
				SSI		Others		Total	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10
Backward Districts									
Category - A									
	Idukki	11	254.25	2	77.96	7	204.56	9	282.52
	Wayanad	20	304.28	9	51.61	9	215.78	18	267.39
Category - B									
	Alappuzha	20	785.68	6	49.45	13	374.26	19	423.71
	Malappuram	37	1187.15	10	64.17	14	568.99	24	633.16
	Kannur	24	332.08	7	88.78	10	105.16	17	193.94
	Kasaragod	24	342.85	10	86.63	8	162.99	18	249.52
Category - C									
	Thiruvananthapuram	31	1392.77	9	342.83	17	1010.85	26	1353.68
	Thrissur	60	1963.40	27	509.14	13	502.41	40	1011.55
	Total	**227**	**6562.46**	**80**	**1270.47**	**91**	**3145.00**	**171**	**4415.47**
Non Backward Districts									
	Pathanamthitta	10	355.00	6	87.21	1	30.00	7	117.21
	Kollam	37	634.13	16	261.71	16	306.26	32	567.97
	Kottayam	14	315.89	5	75.59	5	122.81	10	198.4
	Ernakulam	56	2504.49	30	972.04	27	1172.43	57	2144.47
	Perumbavoor	34	1368.82	22	589.73	4	257.15	26	846.88
	Palakkad	19	478.56	5	61.12	9	408.69	14	469.81
	Kozhikode	50	1038.21	23	403.25	14	321.77	37	725.02
	Thodupuzha	14	325.85	1	5.40	9	234.65	10	240.05
	Total	234	7020.95	108	2456.05	85	2853.76	193	5309.81
Grand Total		**461**	**13583.41**	**188**	**3726.52**	**176**	**5998.76**	**364**	**9725.28**

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.43

Industry-wise Classification of Loan Sanctioned and Disbursed by the Kerala Financial Corporation as on 31-3-2007

(Rs. Lakh)

Sl. No	Type of Industry	Amount Sanctioned	% of total loans sanctioned	Amount disbursed	% of total loan Disbursed
1	2	3	4	5	6
1	Mining	10604.87	3.57	8854.00	3.79
2	Crude Petroleum	264.39	0.09	119.73	0.05
3	Petroleum Refining	13.37	0.005	11.31	0.005
4	Other Food Products	23733.64	8.00	21835.22	9.25
5	Textiles	9418.91	3.17	5344.88	2.26
6	Paper & Paper Products	6380.07	2.15	5420.18	2.29
7	Leather & Leather Products	566.33	0.19	544.40	0.23
8	Rubber Products	19882.04	6.70	16451.22	6.97
9	Chemical & Chemical Products	7108.07	2.40	5849.72	2.48
10	Cement	110.20	0.04	84.07	0.04
11	Basic Metals				
	a) Iron & Steel	4854.96	1.64	2481.82	1.05
	b) Non-Ferrous	773.11	0.26	603.58	0.26
12	Metal Products	6110.63	2.06	4037.79	1.71
13	Capital Goods		0.00		0.00
	a) Non-Electrical Machinery	2055.97	0.69	1794.60	0.76
	b) Electrical Machinery	2525.86	0.85	2084.85	0.88
	c) Transport Equipment	1629.72	0.55	1076.42	0.46
14	Electricity Generation	114.04	0.04	35.24	0.01
15	Services				
	a) Motels & Shopping Complex	74704.26	25.18	56935.41	24.11
	b) Hospitals	13312.95	4.48	10126.23	4.29
	c) Others	44754.99	15.08	44180.40	18.70
16	Others	67790.43	22.85	48234.38	20.42
	Total	**296708.41**	**100.00**	**236175.43**	**100.00**

Source : *Kerala Financial Corporation, Trivm.*

Appendix 8.44

Progress of the Working of Kerala Financial Corporation at a Glance

(Rs.lakh)

Year	Loans sanctioned cumulative	Loans disbursed cumulative	Loans outstanding	Profit before taxation	Profit after taxation
1	2	3	4	5	6
2001-02	227734	186918	120306	(-)2860	(-)2883
2002-03	243283	196149	113738	(-)604	(-)630
2003-04	260077	210051	113071	391	181
2004-05	271028	218599	61462*	283*	(-)249
2005-06	283125	226450	54811*	961*	177*
2006-07	296708	236175	50958	1210	44

* Revised

Source : *Kerala Financial Corporation, Trivm.*

Appendix 8.45

Selected Indicators of the Activities of SIDCO

Sl. No.	Activities	Unit	2005-06	2006-07
1	2	3	4	5
1	**Raw Material Distribution**			
1.1	SSI units assisted for procurement of raw materials	Nos	132	120
1.2	Quantity of Raw Materials Distributed			
a	Iron and Steel including pig iron	M.T	7379.83	6258.94
b	Cement	M.T	535.60	367.60
c	Paraffin wax	M.T	298.10	100.70
d	Titanium Dioxide	M.T	23.38	11.18
e	Others			
i)	Paint	Ltr.	..	3004.00
ii)	Pipe	Mtrs	303.58	17992.00
iii)	IPCL	M.T	498.57	427.21
iv)	Aluminum sheet	M.T	...	549.45
v)	IOC products		...	...
a	Lubricants	Ltr.	16231.00	10378.50
b	Bitumen	M.T	3665.55	3967.42
2	**Over dues**		Nil	Nil
3	**Marketing of SSI products**			
3.1	SSI Units assisted in marketing of products	Nos	108	100
3.2	Value of SSI products marketed through SIDCO			
a	Domestic	Rs. Lakhs	1919.00	1820.80
b	Export	Rs. Lakhs		..
c	Total	Rs. Lakhs	1919.00	1820.80
4	**Industrial Estates & Infrastructure Development**			
a	Major Estates	Nos	17	17
b	Sheds available	Nos	540	540
c	Sheds occupied	Nos	377	436
d	SSI Units	Nos	768	694
i)	Working	Nos	696	573
ii)	Defunct, Idle or closed	Nos	72	121

Source: SIDCO, Thiruvananthapuram

Appendix 8.46

Micro, Small & Medium Enterprises Development Institute, Thrissur
(Formerly Small Industries Service Institute)
Achievements during 2006-07

Sl. No	Name of Activity	Unit	Achievement
1	2	3	4
1	Units visited for providing technical assistance	Nos	403
2	Visitors rendered assistance at SISI premises	Nos	3817
a.	Assistance to prospective entrepreneurs	Nos	2103
b.	Assistance to existing entrepreneurs	Nos	1714
3	Preparation of Industrial Potential Survey Report for Kerala	No. of Districts	3
4	Project Profiles	Nos	21
5	Product Directory Prepared	Nos	1
6	Status Reports Prepared	Nos	3
7	Awareness Programme on Energy Conservation	Nos	1
8	Awareness Programme on IPR	Nos	1
9	Motivation campaigns	Nos	18
10	EDPs - 4/8 weeks duration		
	i Courses undertaken	Nos	18
	ii Persons trained	Nos	403
11	Management Development Programmes		
	i Courses undertaken	Nos	11
	ii Persons trained	Nos	267
12	Common Facility Workshop / Lab performance		
	i Training (including skill development programme)	Nos	2
	ii Persons trained	Nos	22
13	Export Packaging Training		
	a Courses undertaken	Nos	2
	b Persons trained	Nos	53
14	Training Prog. Organised under PD Act		
	a Courses undertaken	Nos	23
	b Persons trained	Nos	413

Source : MSME Development Institute, Thissur.

Appendix 8.47

Small Industries Development Bank of India's Assistance to Small Scale Industries

(Rs. Crore)

year	Sanction and Disbursement				Performance of Kerala as % of All India	
	All India		Kerala			
	Sanction	Disbursement	Sanction	Disbursement	Sanction	Disbursement
1	2	3	4	5	6	7
2001-2002	9026	5919	535	396	5.93	6.69
2002-2003	10904	6789	614	214	5.63	3.15
2003-2004	8246	4414	162	133	1.96	3.01
2004-2005	9091	6*88	221	142	2.43	2.29
2005-2006*	11192	10181	773	738	6.91	7.25
2006-2007	11872	8922	497	457	4.26	5.12

** Revised*

Source . SIDBI Ernakulam

Appendix 6.46

DA/DP under DIC as on 31st March 2007

District	Name of DA/DP	Total area acquired (acres)	Allotable area (acres)	Area allotted (acres)	No. of working units	No. of closed units	Total no. of units
2	3	4	5	6	7	8	9
Thiruvananthapuram	DA, IREP	109.830	89.290	89,280	94	16	109
	DP, Nemom	27.530	22.690	22.690	48	9	57
Kollam	DP, Mundakkal	20.667	18.099	18.099	43	10	53
Alappuzha	DA, Kottukkadavu	16.220	15.470	15.470	35	6	41
	DP, Changanur	5.510	4.290	4.290	19	4	23
	DP, Punnapra	57.290	53.000	53.000	53	4	57
	Coir Park-I, Cherthala	23.400	21.200	21.200	11	1	12
	Coir Park-II, Cherthala	17.080	16.540	16.540			
	CIE, Arpor	15.090	12.330	12.330	19	1	19
	DA, Arpor	47.170	41.790	41.790	44	3	47
Kottayam	DP, Poovanthuruth	41.250	37.320	37.320	183	27	210
	DP, Ettumanoor	1.300	0.960	0.960	10		10
	DP, Vaikom	3.750	3.250	3.250	11	3	14
Pathanamthitta	DP, Kunnanthanam	20.950	17.320	14.250	14		14
Idukki	DP, Muttom	5.300	4.580	4.479	10	4	14
	DP, Thodupuzha	17.500	17.500	5.000			
Ernakulam	DA, Aluva	57.920	54.910	54.910	72	12	84
	DA, Angamaly	219.520	214.520	214.520	37	10	47
	DA, Edayar	435.240	379.700	376.700	269	50	319
	DA, Vazhakkulam	15.290	12.160	12.160	35	8	43
	DP, Angamaly	31.810	28.620	28.820	51	9	60
	DP, Kalamassery	78.120	64.740	64.740	153	26	179
Thrissur	DP, Athani	48.290	43.296	43.296	71	10	81
	DP, Kunnamkulam	3.035	2.100	2.100	19	4	23
	DP, Ayyankunnu	24.070	20.970	19.873		...	...
	DP, Vettikad	24.066	21.639	20.130	...	...	...
Palakkad	IDA, Pudussery	134.150	129.990	129.990	42	16	58
	NIDA, Kanjikod	532.900	510.440	512.750	264	24	288
	DP, Ummerkulam	90.960	90.990	3.000			
	DP, Kappoor	19.290	17.810	6.330			
Malappuram	FIE, Payyanadu	16.180	6.660	6.660	12		12
Kozhikkode	DP, West Hill	12.830	10.330	10.330	31	3	34
Kannur	DP, Andoor	59.310	48.810	48.810	158	8	167
Kasargod	DA, Ananthapuram	108.000	103.990	20.333		2	2
	DP, Ananthapuram	104.500	97.890	25.250	3	26	29
	DP, Chattanchal	29.600	23.270	19.700	9		9
Total		2471.634	2264.050	1975.575	1919	196	2115

Source : Directorate of Economics & Statistics, Trivandrum

Appendix 8.49

Mini Industrial Estates under DIC as on 31st March 2007

Sl. No.	District	No. of MIEs	Total No. of SSI units	No. of working units	No. of employees	No. of sheds allotted to working units	Total No. of sheds
1	Thiruvananthapuram	6	40	34	180	53	60
2	Kollam	5	32	24	149	47	50
3	Pathanamthitta	2	15	14	55	14	20
4	Alappuzha	6	44	35	80	57	60
5	Kottayam	10	96	95	510	100	100
6	Idukki	4	36	26	123	27	40
7	Ernakulam	15	117	100	503	121	152
8	Thrissur	11	142	105	530	133	149
9	Palakkad	6	40	36	207	53	60
10	Malappuram	4	46	40	145	42	46
11	Kozhikode	8	68	57	317	80	84
12	Kannur	28	42	22	62	38	40
13	Kasaragod	6	34	31	111	54	57
	Total	110	742	619	2969	817	917

Source: Directorate of Industries and Commerce, Trivandrum

Appendix 8.50

Major Industrial Estates under SIDCO as on 31st March 2007

Sl. No.	District	Name of Industrial Estate	Total area acquired (Acres)	Allotable area (acres)	Total area allotted (acres)	No. of working Units	No. of employees in working units	No. of closed units	Total No. of units	No. of sheds allotted to working units	Total No. of sheds
1	Thiruvananthapuram	Peppanamcode	18.5327	18.5327	18.3027	88	186	7	75	41	43
2	Kollam	Umayanellur	28.0400	28.0400	26.0400	85	192	4	69	46	46
		Karunagappally	8.6300	8.6300	7.2700	13	64	0	13	18	19
3	Alappuzha	Kolakadavu	19.1535	19.1535	16.4100	35	30	7	42	32	38
		Cherthala	8.9400	8.9400	8.9400	19	84	0	19	18	19
4	Kottayam	Changanacherry	14.2246	14.2246	14.1546	72	142	1	73	31	31
		Ettumanoor	30.3100	30.3100	30.1500	69	328	3	72	57	57
5	Ernakulam	Pallurutty	1.8800	1.8800	1.8800	6	28	2	8	7	7
		Mulakkal	4.6215	4.6215	4.6215	11	32	0	11	21	21
6	Thrissur	Ollur	29.5625	29.5625	29.5625	84	176	8	100	50	51
		Kollathumkara	5.0000	5.0000	4.9000	14	270	1	15	22	22
7	Palakkad	Karakkad	10.9800	10.9800	10.9100	38	266	0	38	22	22
		Olavakkod	21.9300	21.9300	19.2000	25	236	12	37	48	49
8	Malappuram	Manjeri	4.9900	4.9900	4.9900	20	108	0	20	21	21
9	Kozhikode	Wyat Hill	12.4400	12.4400	12.4400	66	350	7	73	43	43
10	Kannur	Pattiyad	8.4200	8.4200	8.4200	26	55	4	32	11	11
11	Kasaragod	Kalanjigod	16.5400	16.5400	16.1800	39	216	0	39	39	40
		Total	241.4647	241.4647	233.5312	669	2752	64	733	525	540

Source: SIDCO, Trivandrum

Appendix 8.51

Mini Industrial Estates under SIDCO as on 31st March 2007

Sl. No	District	Name of Industrial Estate	Total area of IE (Acres)	Total area allotted (Cents)	No of working units	No of employees in working units	No of closed units	Total No. of units	No. of sheds allotted to working units	Total No. of sheds
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	Ullora	1.00	95.00	7	45	5	12	7	12
2		Anad	1.00	90.00	4	19	3	7	9	12
3		Vellanad	1.00	80.00	4	15	2	6	4	12
4		Vamanapuram	1.00	45.00	3	12	6	9	3	12
5	Kollam	Chadayamangalam	1.00	95.00	8	50	0	8	10	10
6		Thirikovilvattom	1.00	90.00	8	20	1	7	10	10
7		Chithara	1.00	85.00	8	25	1	4	6	12
8	Pathanamthitta	Pundalam	1.00	55.00	11	6	8	8	0	12
9	Alappuzha	Mannanam	1.00	95.00	7	84	2	8	10	10
10		Kaluvanpally	1.00	90.00	10	24	3	12	12	12
11	Kottayam	Nattakom	1.00	98.00	8	26	3	8	12	12
12		Pampady	1.00	90.00	9	30	3	9	12	12
13		Ayarkunnam	1.00	65.00	6	24	3	9	10	12
14	Idukki	Adimali	1.00	74.00	5	25	0	5	12	12
15		Kodikulam	1.00	70.00	3	5	1	4	11	12
16		Cheruthoni	1.00	95.00	7	15	0	7	12	12
17	Ernakulam	Rayamangalam	1.00	93.00	9	21	0	9	12	12
18		Piravom	1.00	95.00	10	20	0	10	12	12
19		Vadakkulam	1.00	95.00	10	24	0	10	12	12
20		Eganoor	1.00	95.00	9	30	0	9	10	10
21		Kothamangalam	1.00	95.00	9	20	0	9	11	11
22	Thrissur	Nelli	1.00	55.00	10	15	0	10	12	12
23		Kattoor	1.00	95.00	8	15	0	8	11	12
24		Arimbur	1.00	100.00	9	19	0	9	11	12
25	Palakkad	Ottapalam	1.00	100.00	9	19	2	10	10	12
26		Vaniyamkulam	1.00	100.00	12	24	0	12	12	12
27		Pattambi	1.00	100.00	10	15	0	10	12	12
28	Malappuram	Cherukara	1.00	100.00	9	15	0	9	12	12
29		Kakkur	1.00	95.00	9	12	3	9	11	12
30		Edavanna	1.00	90.00	11	10	3	11	12	12
31	Kozhikode	Perambra	1.00	95.00	10	12	1	11	11	12
32		Kadalundi	1.00	85.00	10	14	1	11	11	12
33	Kannur	Thaliparamba	1.00	80.00	8	15	3	8	10	10
34		Valapattanam	1.00	93.00	7	10	1	8	9	10
35	Kasargod	Kanhangad	1.00	80.00	8	15	4	12	9	12
36	Wayanad	Sulthan Bathery	1.00	90.00	8	20	3	8	12	12
	Total		36.00	3208.00	277	899	40	317	361	421

Source: SIDCO, Thiruvananthapuram

Appendix 6.52

Total Area Covered by Mining Leases

Sl. No.	Minerals	Area in Hectares
1	Clay	89.6901
2	Silica Sand	28.7217
3	Bauxite	1.3737
4	Limeshell	1014
5	Limestone	245.69
6	Mineral Sand	109.77
7	Quartz	2.511
8	Laterite	24.5848
	Total	1578.4413

Source : Directorate of Mining & Geology

Appendix 6.53

Production and Sale of Major Minerals other than Mineral Sand in Kerala during 2006-07

(In Tonnes)

Sl. No.	Mineral	Production		Sales	
		Raw	Processed	Raw	Processed
1	2	3	4	5	6
1	China Clay	445270	17450	445270	17450
2	Silica Sand	119980		119980	
3	Bauxite	12650		12650	
4	Limeshell	33219		33219	
5	Limestone	517086		517086	Consumption
6	Quartz	1200		1600	

Source : Directorate of Mining & Geology

Appendix 6.54

Production and Sale of Mineral Sand in Kerala 2006-07

Sl. No.	Mineral	Production (Tonnes)	Sales (Tonnes)
1	2	3	4
1	Zircon	7000	7000
2	Rutile	5405	5405
3	Ilmenite	169197	169197
4	Sillimanite	6841	6841

Source : Directorate of Mining & Geology

Appendix 9.1

Growth of Foreign Tourist Arrivals in Kerala (2002-2006)

Year	India (Nos.)	Percentage Change	Kerala (Nos.)	Percentage change	Kerala's share(%)in Country's Tourism
1	2	3	4	5	6
2002	2384364	6.03	232,564	11.37	9.75
2003	2726214	14.34	294,621	26.68	10.81
2004	3457477	26.82	345,546	17.28	9.99
2005	3915324	13.24	346,499	0.28	8.85
2006	4429915	13.14	428,534	23.68	9.67

Source: Department of Tourism

APPENDIX-9.2

Flow of Domestic Tourist to Kerala (2002-2006)

Year	Number of Tourists	Percentage variation over the previous year
1	2	3
2002	5,568,256	6.27
2003	5,871,228	5.44
2004	5,972,182	1.72
2005	5,946,423	-0.43
2006	6,271,724	5.47

Source: Department of Tourism

Appendix 9.3

District Wise Foreign and Domestic Tourist Arrivals during 2005&2006

District	No. of Foreign Tourists		No. of Domestic Tourists	
	2005	2006	2005	2006
1	2	3	4	5
Thiruvananthapuram	119,940	151,578	837,211	866,712
Kollam	6,813	7,918	98,277	122,998
Pathanamthitta	349	346	59,328	57,032
Alappuzha	30,274	36,407	173,626	179,115
Kottayam	20,017	26,543	164,909	196,284
Idukki	39,378	44,583	473,772	515,182
Ernakulam	108,773	131,767	1,025,944	1,080,591
Thrissur	2,421	4,142	1,327,856	1,398,014
Palakkad	801	809	266,837	300,674
Malappuram	5,115	7,109	306,431	303,844
Kozhikode	8,420	11,154	553,363	550,694
Wayanad	942	2,611	191,184	225,923
Kannur	2,090	2,730	333,855	351,309
Kasaragod	1,166	837	133,880	123,352
	346,499	428,534	5,946,473	6,271,724

Source : Department of Tourism

Appendix 9.4

Earnings from Tourism (2002-2006)

(Rs in Crores)

Year	Foreign Exchange Earnings	Earnings From Domestic Tourists	Total Revenue Generated from Tourism (Direct & Indirect)
2002	705.67	3011.31	4931.00
2003	983.37	3492.68	5938.00
2004	1266.77	3881.92	6829.00
2005	1552.31	4281.42	7738.00
2006	1989.40	4891.94	9126.00

Source: Department of Tourism

Appendix 9.5

State Plan allocation for Tourism (2003-2008)

Year	Allocation(Rs.in Crores)
2003-04	61.35
2004-05	69.29
2005-06	88.02
2006-07	81.57
2007-08	83.18

Source : Department of Tourism

APPENDIX-9.6

Central Financial Assistance for Tourism (2003-2008)

Year	Allocation (Rs.in Crores)
2003-04	12.39
2004-05	21.99
2005-06	48.09
2006-07	40.89

Source: Department of Tourism

Appendix 9.7

Details of availability of accommodation facility in classified hotels 2005 & 2006

Category of Hotels	2005		2006(provisional)	
	Number of Hotels	Number of Rooms	Number of Hotels	Number of Rooms
1	2	3	4	5
5 Star Deluxe	2	242	2	242
5 Star	8	557	8	557
4 Star	14	832	15	850
3 Star	98	3033	115	3320
2 Star	91	2600	93	2639
1 Star	26	652	26	652
Heritage/ Resort	8	250	8	250
Total	247	8166	267	8510

Source: Department of Tourism

Appendix 9.8

Kerala Tourism Development Corporation Ltd - Performance for the year 2006-07

Rs. in lakh (provisional)

Sl. No	Name of Units	Bed Available	Bed Occupancy %	Domestic Tourists	Foreign Tourists	Total income	Operational Expenditure before Interest & Depreciation	Administrative Expenditure	Total Expenditure before interest & Depreciation	Net income
1	2	3	4	5	6	7	8	9	10	11
1	Mascot Hotel TVM	31390	32.56	11164	4412	645.16	533.21	23.78	580.71	64.45
2	Hotel Chaithram, TVM	60590	52.21	11582	9512	298.79	281.82	10.81	303.62	-4.83
3	Hotel Samudra, Kovalam	45990	35.78	21041	1040	388.71	247.82	12.75	276.44	112.28
4	Aranya Nivas & Lake Palace	26280	54.26	6400	4411	558.86	223.22	13.38	264.36	294.50
5	Periyar House, thekkady	33580	42.36	7856	3562	134.94	83.98	5.74	93.91	41.03
6	Bolgaty Palace Hotel,Kochi	18990	41.21	7596	3643	303.11	251.20	14.95	273.52	29.59
7	Garden House, Malampuzha	12410	25.36	3145	9	46.74	46.88	1.23	50.30	-3.56
8	Hotel Nandanam, Guruvayur	32050	32.89	13889	0	30.45	37.41	1.04	39.65	-9.20
9	Hotel Mangalya, Guruvayur	4380	41.26	5190	0	55.43	54.66	5.69	58.73	-3.30
10	Water Scapes Kumarakom	29200	39.24	12159	1984	396.56	261.33	16.28	290.45	105.11
11	Malabar Mansion Kozhikode	5110	38.67	6254	0	88.14	86.47	4.91	92.01	-6.87
12	Tea County Munnar	31390	77.85	20960	3013	444.95	217.56	12.68	250.32	194.64
13	Ayurveda resort Thaneermukk	10945	38.45	3472	78	36.91	35.88	1.83	38.80	-1.69
14	Anjanam, Guruvayur	7300	46.29	3542	0	5.12	4.32	1.67	4.70	0.43
15	Agastya House Neyyar Dam	2920	40.26	2918	423	39.36	36.91	0.01	39.01	-0.45
16	Motel Aaram	15840	31.96	9046	1429	487.61	444.48	28.94	480.37	7.14
17	Yatri Nivasea	50320	36.24	60112	3968	294.99	302.24	12.23	323.96	-28.97
18	Sabala restaurant & beer parlour					1110.96	1008.67	50.05	1090.46	20.50
19	Miscellaneous Group					317.90	304.45	23.97	327.85	-9.95
	GRAND TOTAL	427475		208933	37484	5681.62	4462.28	242.16	4880.57	801.05
	Interest Charge									150.27
	Depreciation Charge									326.72
	Net Profit (-) Loss									324.06

Appendix 10.1

Growth of Transport & Communications in Kerala since 1999 compared to 1975

Sl. No.	Item	Unit	1975	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Road Length (PWD)	Kms.	14670	21938	21731	21908	21947	21987	21461	28289	28203	28203
2	Road Length (PWD) per sq.km.	"	0.38	0.56	0.55	0.55	0.55	0.56	0.56	0.88	0.72	0.72
3	Road Length (Panchayats)	"	54572	77356	81790	87094	92084	95516	98073	104257	108457	108105
4	Motor Vechicles	Nos.	1 18720	1704938	1910237	2111680	2315372	2552177	2792094	3120692	3558304	4028350
5	Motor Vechicles per 100 sq.km	"	308	4397	4945	5434	5954	6567	7184	8033	9156	10368
6	Buses & Stage Carriages	"	7824	48884	58888	65081	71966	79713	87447	94485	127574	138918
7	Good Vechicles	"	15675	151082	163443	173858	184178	195362	211798	234181	264262	294481
8	Buse owned by KSRTC	"	2717	3926	4093	4562	4671	4300	4319	4842	4668	4368
9	Railway route length	Kms.	896	1186	1179	1148	1148	1146	1146	1148	1148	1148
10	Post Offices	Nos	4024	5051	5070	5071	5073	5077	5080	5082	5074	5070
11	Telephone Exchanges	"	296	850	924	969	1083	1175	1185	1218	1223	1209
12	Total Equipped Capacity	"	70410	1704365	2208934	2584228	2153418	3853418	4070834	4319868	4700810	5637725
13	Public Call Offices	"	2762	23485	27385	36926	48321	69444	81917	104143	130570	127149

Appendix- 10.2

District-wise and Category-wise Length of Roads Maintained by PWD (R&B) as on 31-3-2007

(In Km)

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	181.00	2256.00	0.00	0.00	2437.00
2	Kollam	100.00	1677.00	0.00	0.00	1777.00
3	Alappuzha	170.00	1095.00	0.00	0.00	1265.00
4	Pathanamthitta	271.00	1605.00	0.00	0.00	1876.00
5	Kottayam	404.00	2426.00	0.00	0.00	2830.00
6	Idukki	954.00	1530.00	0.00	0.00	2484.00
7	Ernakulam	171.00	2484.00	0.00	0.00	2655.00
8	Thrissur	320.00	1458.00	0.00	0.00	1778.00
9	Palakkad	232.00	1495.00	0.00	0.00	1727.00
10	Malappuram	393.00	2031.00	0.00	0.00	2424.00
11	Kozhikode	275.00	1933.00	0.00	0.00	2208.00
12	Wayanad	177.00	693.00	0.00	0.00	870.00
13	Kannur	330.00	2013.00	0.00	0.00	2343.00
14	Kasaragode	149.00	1270.00	0.00	0.00	1419.00
	Total	4137.00	24066.00	0.00	0.00	28203.00

Source: P.W.D. (R & B)

Appendix 10.3

District-wise, Surface-wise & Category-wise length of roads maintained by Kerala PWD as on 31-03-2007

Sl. No.	District	State Highways				Major District Roads				Total Roads
		CC	BT	WBM	Others	CC	BT	WBM	Others	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	0.000	161.000	0.000	0.000	0.000	2212.782	12.978	30.240	2437.000
2	Kollam	0.000	100.000	0.000	0.000	0.000	1670.103	6.897	0.000	1777.000
3	Alappuzha	0.000	170.000	0.000	0.000	0.000	1019.922	36.785	35.293	1265.000
4	Pathanamthitta	0.000	271.000	0.000	0.000	0.000	1555.837	29.650	19.513	1876.000
5	Kottayam	0.000	404.000	0.000	0.000	0.000	2322.893	25.640	77.467	2820.000
6	Idukki	0.000	500.000	0.000	20.000	0.000	1309.743	22.407	197.850	2454.000
7	Ernakulam	0.000	171.000	0.000	0.000	0.464	2314.176	60.715	108.645	2655.000
8	Thrissur	3.391	915.609	0.000	0.000	0.000	1003.000	15.000	0.000	1778.000
9	Palakkad	0.000	216.250	1.250	14.500	0.000	1435.310	40.690	19.000	1727.000
10	Malappuram	0.000	393.000	0.000	0.000	0.000	1977.950	122.650	30.400	2424.000
11	Kozhikode	0.000	275.000	0.000	0.000	0.000	1519.560	14.440	0.000	2208.000
12	Wayanad	0.000	175.000	2.000	0.000	0.000	749.218	23.600	20.182	970.000
13	Kannur	2.800	327.200	0.000	0.000	0.000	1988.481	4.388	40.130	2343.000
14	Kasaragode	0.000	149.000	0.000	0.000	0.000	1244.850	25.150	0.000	1419.000
	Total	6.191	4093.059	3.250	34.500	0.464	23042.735	443.988	578.813	28203.000

Source : PWD (R&B)

Appendix- 10.4

Surface-wise and Category-wise Length of P.W.D. Roads added during 2006-2007

(in Kms.)

Item	State Highways	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6
Cement Concrete					
Length as on 31.3.2006	6.191	0.464	0.000	0.000	6.655
Length added in 06-07	0.460	0.000	0.000	0.000	0.000
Length as on 31.3.2007	6.651	0.464	0.000	0.000	6.655
Black topped					
Length as on 31.3.2006	3577.571	21461.322	0.000	0.000	25038.993
Length added in 06-07	515.388	1581.413	0.000	0.000	2096.801
Length as on 31.3.2007	4093.059	23042.735	0.000	0.000	27135.794
Water Bound Macadam					
Length as on 31.3.2006	3.250	443.993	0.000	0.000	447.243
Length added in 06-07	0.000	0.005	0.000	0.000	-0.005
Length as on 31.3.2007	3.250	443.988	0.000	0.000	447.238
Others					
Length as on 31.3.2006	200.868	578.813	0.000	0.000	779.868
Length added in 06-07	-166.355	0.000	0.000	0.000	-166.355
Length as on 31.3.2007	34.500	578.813	0.000	0.000	613.313
Total					
Length as on 31.3.2006	3787.987	22484.592	0.000	0.000	26272.555
Length added in 06-07	349.033	1581.408	0.000	0.000	1930.441
Length as on 31.3.2007	4137.020	24066.000	0.000	0.000	28203.000

Source : PWD (R&B)

Appendix- 10.5

District-wise and Surface-wise Length of Roads Maintained by P.W.D. as on 31.3.2007

(In Kms.)

Sl.No	Name of District	Cement Concrete	Black Topped	Water Bound Macadam	Others	Total
1	2	3	4			5
1	Thiruvananthapuram	0.000	2393.782	12.978	30.240	2437.000
2	Kollam	0.000	1770.103	6.897	0.000	1777.000
3	Alappuzha	0.000	1189.922	39.785	35.293	1265.000
4	Pathanamthitta	0.000	1826.837	29.650	19.513	1876.000
5	Kottayam	0.000	2728.890	25.640	77.467	2830.000
6	Idukki	0.000	2253.743	22.407	217.850	2494.000
7	Ernakulam	0.464	2485.176	60.715	108.645	2655.000
8	Thrissur	3.391	1759.609	15.000	0.000	1778.000
9	Palakkad	0.000	1651.560	41.940	33.500	1727.000
10	Malappuram	0.000	2270.860	122.650	30.490	2424.000
11	Kozhikode	0.000	2193.560	14.440	0.000	2208.000
12	Wayanad	0.000	924.218	25.600	20.182	970.000
13	Kannur	2.800	2296.661	4.386	40.133	2343.000
14	Kasaragode	0.000	1393.850	25.150	0.000	1419.000
	Total	6.655	27135.794	447.238	613.313	28203.000

Source - PWD (R&B)

Appendix- 10.6

No.of Bridges and Culverts in P.W.D. Roads as on 31.3.2007

Sl. No.	Item	SH	MDR	Total
1	2	3	4	5
1	Total Number of bridges	627	1552	2179
2	Number of unsafe bridges	60	88	148
3	Total Number of culverts	11512	39910	51422
4	Number of unsafe culverts	641	878	1519

Source : PWD (R&B)

Appendix - 10.7

NUMBER OF MOTOR VEHICLE HAVING VALID REGISTRATION AS ON 31.03.2007(Provisional)

Sl No	District	Goods Vehicles		Buses		Cars and Station Wagons				Three wheelers		Two Wheelers		Tractors, Trailer Articulated	Tractors				Total
		Four wheelers & above	Three wheelers including Tempos	Stage carriages	Contract Carriages/ Omni Buses	Cars	Station wagons	Taxis	Jeeps	Auto rickshaws	Motorised Cycle rickshaws	Motorised cycles	Scooter/ Motor cycles		Tractors	Tillers	Trailers	Others	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Thiruvananthapuram	17424	9206	7881	13706	70840	0	14942	7172	36116	12	0	388417	0	240	108	141	2834	556109
2	Kollam	14202	5057	1008	5547	62115	0	9501	4879	29760	9	1004	182763	0	372	227	337	568	304649
3	Pathanamthitta	5366	3317	953	3877	33061	0	8589	3460	14299	0	4	91753	0	181	37	177	101	186187
4	Alappuzha	10332	8745	1050	5283	37542	0	7480	544	15800	3	3	190569	0	287	108	255	192	277913
5	Kottayam	16114	5124	2462	10320	58039	0	12331	11130	31142	37	0	166064	0	586	101	50	153	313581
6	Idukki	4188	1244	816	1828	8785	0	3728	5355	8122	0	0	27474	0	194	131	12	303	62270
7	Ernakulam	43489	11323	4642	17181	104771	0	14608	2124	41894	0	0	422473	0	866	1289	151	4568	669500
8	Thrissur	20795	9525	4228	15274	48853	0	12949	4424	33898	0	0	275484	0	829	451	812	483	428115
9	Palakkad	16772	3886	2115	8333	20711	0	7388	3738	23908	0	0	184763	0	4348	949	121	1578	258131
10	Malappuram	21180	10945	3905	9409	37215	0	13110	9786	65540	0	6	144851	0	850	714	98	478	312972
11	Kozhikode	17403	6578	3267	4417	44281	0	8138	8003	28013	0	0	203827	0	258	143	78	1733	356213
12	Wayanad	3055	1174	482	1135	4412	0	2683	3874	6486	0	0	22684	0	114	266	103	1493	46331
13	Kannur	14021	5331	3329	5009	25117	0	8970	5838	27587	0	0	110827	0	1310	258	68	2277	210073
14	Kasargode	4161	1462	658	58[illegible]	13782	0	2187	3282	16120	0	0	46013	0	54	402	69	351	88346
	Total	211175	83318	37076	101840	587298	0	127873	73560	368705	61	1017	2416092	0	10657	5184	2307	17372	4025350

Source : Motor Vehicle Department

Appendix - 10.6

NEWLY REGISTERED VEHICLES FOR THE YEAR 2006 - 07

Sl.No.	CLASSIFICATION OF VEHICLES	TVM	KLM	PTA	ALP	KTM	IDK	ERK	TSR	PKD	MLP	KZD	WYD	KNR	KSD	ATL	MUV	VKA	NB	TOTAL
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	TRANSPORT VEHICLES																			
1	Motorised Articulated Vehicles	0	5	27	0	2	0	32	13	0	18	3	8	3	0	5	8	0	0	129
2	Trucks and Lorries	209	267	89	205	293	168	381	357	386	238	88	65	465	44	119	204	100	0	3658
3	Four Wheelers	899	684	320	972	1092	310	1061	1054	1569	1001	530	180	970	313	957	878	450	0	13158
4	Three Wheelers	1463	643	318	374	762	318	1585	1161	739	1466	817	315	1127	363	926	565	542	0	13296
	TOTAL	2131	1879	754	2054	2149	844	3059	2585	2724	2785	1438	568	2571	820	772	1654	1092	0	30229
5	Stage Carriage	4	60	44	41	164	138	291	177	34	177	50	30	173	33	44	141	104	233	1870
6	Contract Carriage	154	115	37	153	160	31	207	280	515	82	0	10	81	8	72	71	26	0	2068
7	Private Service Vehicles	41	11	35	28	35	8	38	29	17	9	45	1	25	1	12	4	7	0	335
8	Other Buses	126	92	17	52	53	34	92	78	103	53	0	14	93	36	35	38	17	0	895
	TOTAL	325	278	123	274	402	201	678	571	669	271	95	55	339	81	163	252	158	233	5166
9	Motor Cabs	70	255	242	850	550	353	743	337	235	126	198	10	96	21	48	304	50	5	4288
10	Maxi Cabs/Taxi	2	49	40	18	12	9	0	4	3	3	0	0	16	5	0	0	0	0	158
11	Other Taxis	438	306	82	97	54	39	783	259	84	92	299	99	388	168	160	58	132	0	3874
	TOTAL	510	610	344	774	616	401	1526	600	322	221	497	108	664	192	208	362	182	0	8120
12	LMV 3 seater	1928	544	423	291	1487	871	1848	0	3517	4929	263	143	168	937	751	680	300	0	18885
13	LMV 4 to 6seater	129	871	150	499	221	533	955	1950	599	65	173	11	1514	0	0	0	936	0	7980
14	Motor Cycle Hire	21	0	0	0			0	0	1584	0	0	0	0	3		0	0	0	1608
	TOTAL	2078	1415	573	790	1708	1204	1903	1950	5693	4994	436	154	1870	940	751	680	1236	0	28145
	TOTAL TRANSPORT	5044	3943	1794	3832	4875	2820	7748	5706	9616	8211	2488	885	5248	1833	1694	2948	2886	233	71600
	NON TRANSPORT																			
15	Scooters	0	664	202	3060	1728	187	2703	1430	393	1070	2103	8	121	144	383	779	384	0	15256
16	Mopeds	1048	137	49	2305	146	81	2085	2408	5216	87	0	294	17	57	44	188	113	0	14800
17	Motor Cycles	35088	24184	8843	21846	14753	4047	35570	33281	20292	22397	10751	1866	14778	6593	10825	11319	9506	0	267307
	TOTAL	36144	24985	10184	27331	16628	4328	40358	37119	26401	23554	12854	2168	14916	6795	11272	12286	9983	0	317362
18	Cars	5625	4806	3222	3854	8076	1468	10534	6206	2528	4220	1852	450	4338	2033	1803	2271	2215	0	66922
19	Jeeps	5	62	36	0	69	29	4	9	63	54	0		8	0	0	20	153	0	622
20	Omni Buses	494	333	152	286	429	109	660	486	1461	386	278	39	367	58	118	159	80	0	6176
21	Tractors	10	28	17	25	39	30	40	68	231	91	0	8	18	6	8	73	10	0	378
22	Trailers	0	8	2	1	0	0	[illegible]	1	0	7	0	20	2	1	1	0	1	0	43
23	Others	42	92	16	38	76	34	188	101	0	71	150	19	118	32	20	174	18	0	1192
	TOTAL	9877	9344	3446	4211	7590	1670	11347	6840	4946	4800	2310	527	4846	2130	1630	2697	2486	0	77434
	NON TRANSPORT VEHICLES TOTAL	46021	30328	13632	31542	24208	5998	51705	43966	31391	28354	15164	2815	19761	8919	13111	15983	12469	0	394796
	GRAND TOTAL	50865	34211	15426	35374	29083	8818	59451	46674	41207	36628	17670	3701	25008	10752	15008	18941	15154	233	465846

Source : Motor Vehicle Department

Appendix -10.9

District-wise Growth of Motor Vehicles in Kerala and Their Index (Base 1980-81 =100)

Sl No	District	1980-81		2001-02		2002-03		2003-04		2004-05		2005-06		2006-07	
		Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Thiruvanathapuram	101980	100	320061	314	350455	344	388763	381	433458	425	490306	481	558169	215
2	Kollam	57694	100	168907	293	189348	328	212249	368	239511	415	270438	469	304649	225
3	Pathanamthitta	35555	100	106070	298	117704	331	131254	369	146207	411	162741	430	188167	191
4	Alappuzha	39545	100	139551	353	157011	397	176296	446	201743	510	242539	613	277913	253
5	Kottayam	39758	100	196400	494	213004	536	230997	581	251133	632	284478	715	313561	188
6	Idukki	12812	100	36359	284	39721	310	43468	339	48044	375	53635	419	82270	214
7	Ernakulam	105622	100	405861	384	446859	423	484922	459	525204	497	591137	560	669509	204
8	Thrissur	70831	100	241580	341	266885	376	296783	419	333598	471	378441	534	428115	218
9	Palakkad	37623	100	134854	358	151979	404	185072	439	181608	482	217724	577	258131	248
10	Malappuram	30671	100	174504	569	192958	629	214127	698	239623	781	276347	901	312972	223
11	Kozhikode	55939	100	190809	341	207117	370	227125	406	252962	452	293439	525	328213	210
12	Wayanad	8378	100	31663	377	33660	400	36026	430	39047	466	44630	533	48331	176
13	Kannur	36540	100	118115	323	129680	355	142899	392	161150	441	185061	506	210070	220
14	Kasaragode	14793	100	50988	345	56022	379	62113	420	68784	465	78588	497	69340	217
	Total	647742		2315372		2562171		2782074		3122082		3559504		4026350	

Source : Motor Vehicle Department

Appendix 10.10

Category - Wise Growth of Motor Vehicles in Kerala since 2000 compared to 1990

Sl. No	Type of Vehicles	1990	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11
I	GOODS VEHICLES									
1	Four Wheelers and above	61630	135058	142168	146719	152802	161343	173110	194232	211175
2	Three Wheelers including Tempos	3576	29385	31698	37457	42561	50455	61081	70030	83316
II	BUSES									
1	Stage Carriages	15056	23537	26161	28899	29049	31889	33736	35206	37078
2	Contract Carriages/Omni buses	5234	35351	40520	45067	50464	63558	61750	82388	101840
III	CARS AND STATION WAGONS									
1	cars	116575	257796	282996	305987	336583	378955	428327	498472	587294
2	Station Wagons	849	0	0	0	0	0	0	0	0
3	Taxi Cars	37638	71581	75628	82236	89070	93458	100012	119763	127873
4	Jeeps	24351	67497	69261	70212	70884	71656	72227	73158	73560
IV	THREE WHEELERS									
1	Autorickshaws	56166	227895	248350	265757	285082	303092	320788	342486	368708
2	Motorised Cycle rickshaws	62	58	58	163	63	63	63	61	61
V	TWO WHEELERS									
1	Motorised Cycle	70	1124	1124	1124	1124	1124	1124	1017	1017
2	Scooter/Motor Cycles	246374	1070397	1151735	1289035	1440263	1595907	1818760	2098535	2418092
VI	Tractor, Trailer, Articulated	2861	0	0	0	0	0	0	0	0
VII	Tractors	4115	7782	8177	8469	8700	9002	9469	9876	10657
VIII	Tillers	1927	4763	4763	4979	4980	4980	5037	5184	5184
IX	Trailers	580	1506	1578	1771	1823	1913	2001	2284	2307
X	Others	4190	27107	29690	29997	30513	32879	34607	16880	17072
	Total	581054	1914237	2111885	2315972	2542171	2792074	3122082	3559504	4025350
	Percentage increase over the previous year	11.03	11.78	10.56	9.63	10.23	10.58	11.8	12.06	13

Source: Motor Vehicle Department

Appendix :10 11

District-wise Road Accidents in Kerala in which number of persons held during 2005-06, 2006-07

Sl.No	Name of District	No of Accidents		Increase / Decrease	No.of Persons Injured		Increase / Decrease	No.of persons Killed		Increase / Decrease
		2006	2007	s %	2006	2007	s %	2006	2007	%
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram City	2109	1604	-7.1	2469	1860	-2.5	181	107	-23.0
2	Thiruvananthapuram Rural	3374	2114	-17.2	3711	2252	-20.6	257	198	-1.6
3	Kollam	3472	2309	-13.6	4092	2768	-11.6	370	239	-17.3
4	Pathanamthitta	1691	1171	-5.3	2011	1327	-10.0	140	79	-24.0
5	Alappuzha	3645	2831	-3.0	4168	2735	-12.2	322	198	-22.4
6	Kottayam	3127	2087	-9.4	3494	2418	-6.7	255	167.00	-13.3
7	Idukki	1199	833	-3.3	1527	1146	6.7	88	63	-4.6
8	Ernakulam City	2738	1896	-4.6	2432	2027	9.4	163	94	-29.3
9	Ernakulam Rural	4227	3017	-3.9	5049	3442	-8.9	287	261	24.9
10	Trissur	4544	3313	-0.4	5267	3798	-1.5	367	273	-1.4
11	Palakkad	2483	1861	-11.7	3231	2171	-9.8	307	228	2.7
12	Malappuram	2537	1909	1.8	3545	2383	-10.6	283	185	2.2
13	Kozhikode City	1685	1282	4.1	1953	1287	-12.3	158	98	-9.3
14	Kozhikode Rural	1601	1188	-0.2	2080	1375	-10.8	146	122	8.0
15	Wayanad	623	435	-8.4	1079	596	-31.7	44	33	-2.9
16	Kannur	1717	1268	1.6	2523	1887	0.4	151	134	11.7
17	Kasaragod	896	807	-7.5	1220	999	12.5	90	87	31.7
	Total	41647	28348	-5.6	49881	34429	-7.6	3589	2544	-8.3

Source : Director General of Police

Appendix - 10.12

Motor Vehicle Accidents in Kerala by Primary Causes of Accidents during 2007 (upto September -07)

Sl. No	Name of District	Fault of Driver of motor vehicles	Fault of driver other than motor vehicles	Fault of Cyclist	Fault of Pedestrian passengers	Fault of	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	1503	0	0	0	0	0	0	0	1	1	1505
2	Thiruvananthapuram Rural	2110	0	1	0	0	0	1	0	2	2	2116
3	Kollam	2317	0	0	0	0	0	0	0	0	2	2319
4	Pathanamthitta	1172	0	0	0	0	0	0	0	0	1	1173
5	Alappuzha	2625	0	1	0	0	0	0	0	0	2	2628
6	Kottayam	2085	0	0	0	0	0	0	0	0	2	2087
7	Idukki	829	0	0	0	0	0	1	0	3	0	833
8	Ernakulam City	1970	0	0	0	0	0	0	0	7	7	1984
9	Ernakulam Rural	2997	0	0	0	0	0	0	0	8	6	3011
10	Trissur	3312	0	0	0	0	0	0	0	0	1	3313
11	Palakkad	1643	0	1	0	0	0	0	0	4	3	1651
12	Malappuram	1905	0	0	0	0	0	0	0	4	5	1914
13	Kozhikode City	1277	0	0	0	0	0	0	0	2	3	1282
14	Kozhikode Rural	1187	0	0	0	0	0	0	0	0	-	1188
15	Wayanad	433	0	0	0	0	0	0	1	1		435
16	Kannur	1265	0	0	0	0	0	0	0	3	2	1270
17	Kasaragod	606	0	0	0	0	0	0	0	0	-	607
	Total	29236	0	3	0	0	0	2	1	35	39	29316
	Percentage to total	99.70	0.00	0.01	0.00	0.00	0.00	0.007	0.00	0.12	0.13	100.00

Source: Director General of Police

Appendix - 10.13

Type-wise details of Motor Vehicles involved in Road Accidents in Kerala during 2007

Sl.No	District	KSRTC Buses	Other Buses	Goods Vehicles	Motor Cars	Jeeps	Autorickshaws	Two wheelers	Miscellaneous vehicles	Class not known	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram City	98	44	53	314	14	250	699	78	27	1577
2	Thiruvananthapuram Rural	107	90	107	369	64	327	972	166	157	2359
3	Kollam	98	194	128	487	108	360	621	188	50	2434
4	Pathanamthitta	30	83	87	204	83	223	351	75	62	1178
5	Alappuzha	84	145	190	659	22	320	1229	203	39	2691
6	Kottayam	47	242	149	470	110	454	832	104	50	2558
7	Idukki	6	95	81	117	137	226	217	33	26	938
8	Ernakulam City	44	268	174	544	14	245	1239	174	230	2930
9	Ernakulam Rural	65	296	288	657	71	462	1784	267	89	3936
10	Trissur	48	481	248	665	47	524	1153	243	54	3463
11	Palakkad	31	221	171	242	91	317	585	140	19	1817
12	Malappuram	19	284	184	350	107	470	772	117	29	2332
13	Kozhikode City	26	239	99	224	41	172	423	64	13	1301
14	Kozhikode Rural	13	177	85	184	105	219	382	86	16	1247
15	Wayanad	10	31	24	73	58	98	159	44	10	505
16	Kannur	18	231	87	202	97	244	352	71	16	1318
17	Kasaragod	14	81	80	119	33	131	191	74	7	710
	Total	758	3199	2193	5860	1182	5040	12241	2127	894	33494
	Percentage to To	2.26	9.55	6.55	17.50	3.53	15.05	36.55	6.35	2.67	100

Appendix - 10.14

Motor Vehicle Accidents by time of day during 2007 (Upto Sep 2007)

Sl.No	District	Day light	Darkness	Time not known	Total
1	2	3	4	5	6
1	Thiruvananthapuram City	1155	279	70	1504
2	Thiruvananthapuram Rural	1736	230	148	2114
3	Kollam	1636	651	22	2309
4	Pathanamthitta	891	285	5	1171
5	Alappuzha	1774	795	62	2631
6	Kottayam	1421	613	53	2087
7	Idukki	622	188	23	833
8	Ernakulam City	1553	424	19	1996
9	Ernakulam Rural	2071	923	23	3017
10	Thrissur	2397	892	24	3313
11	Palakkad	1202	429	20	1651
12	Malappuram	1520	378	8	1909
13	Kozhikode City	865	382	15	1262
14	Kozhikode Rural	926	249	13	1188
15	Wayanad	321	98	16	435
16	Kannur	954	293	22	1269
17	Kasaragod	462	139	6	607
	Total	21519	7248	549	29316
	Percentage to Total	73.4	24.72	1.87	100.00

Source : Director General of Police

Appendix 10.15

Age-Wise Details of Vehicles Owned by KSRTC as on 31.03.2007& 31.08.2007

Sl.No	Buses	31.03.2007	31.08.2007
1	2	3	4
1	10 Years and above	1135	1342
2	Above 7 years and below 10 years	1071	1209
3	Above 5 years and below 7 years	892	567
4	Below 5 years	1461	1458
	Total	4559	4576

Source : KSRTC

Appendix 10.16

Major indicators showing operational efficiency of KSRTC

Sl.No	Items	Year 2005-06	Year 2006-07	Increase/Decrease
1	2	3	4	5
1	Fleet Strength (Nos)	4658	4656	-2
2	Gross revenue earnings (Rs. In crores)	838	886 (*)	48
3	Gross revenue expenditure (Rs. In crores)	971.67	1020 (*)	48.33
4	Gross operating loss (Rs. In crores)	(-)133.67	(-)134.00 (*)	0.33
5	No. of schedules operated as on 31st March 2007	3746	3335	-4.11
6	Average earnings per vehicle on road per day (Rs)	6053	6589	536
7	Average earnings per km. of buses operated (paise)	1853	2033	180
8	Average earnings per Passenger (Paise)	770	714	-56
9	Average route length (Kms)	49.07	49.07(*)	0
10	Average kms. Run per bus per day	326	323	-3
11	Average number of buses held daily (Nos.)	4711	4666	-45
12	Passengers carried (Lakhs)	12022.47	12045	22.53

(*) Provisional Figures

Source KSRTC

Appendix 10.17

KSRTC Operational Statistics during 2006 - 07

Sl No	Unit	No.of buses held as on 31.03.07	No.of schedules 31.03.07	No of routes as on 31.03.07(*)	Route distance (Kms) (*)	Gross Kms.Operated	Effective Kms.Operated	Passengers Carried (*)	Average carrying Capacity per Bus
1	2	3	4	5	6	7	8	9	10
1	Parassala	77	75	106	5676	79.99	71.42	106.94	60
2	Nayyattinkara+Vellarada	157	148	246	8130	140.33	125.29	407.63	60
3	Pooyar	75	72	66	2400	73.47	65.6	198.34	60
4	Vizhanjam	60	57	40	1824	63.23	56.46	198	60
5	Kattakkada	87	89	85	2650	81.72	72.97	237.6	60
6	Thiruvananthapuram City	113	120	225	2478	72.98	66.16	370.84	60
7	Pappanamcode	112	129	205	2352	80.22	71.62	401.39	60
8	Thiruvananthapuram Central	105	78	40	12210	174.65	156.11	200.12	60
9	Vikas Bhavan	84	79	126	2791	57.87	51.67	200.98	60
10	Perukkada	78	85	171	2634	54.39	48.67	323.71	60
11	Nedumangad+PLD+ARD+VTR	173	163	320	10651	144.23	128.77	379.57	60
12	Vellanad	51	55	70	1777	41.28	36.88	149.78	60
13	Kanjiyapuram	65	60	39	1694	50.95	45.69	150.34	60
14	Vanjaramoodu	39	37	97	7562	31.04	27.71	82.94	60
15	Chathannur	41	40	125	4776	43.40	38.76	130.74	60
16	Attingal	82	85	72	1557	75.78	64.88	237.45	60
17	Kilimanoor+ PPM+CDLM	140	138	220	7429	111.59	124.88	460.83	60
18	Kollam	93	97	123	7102	108.44	96.82	375.3	60
19	Kottarakkara	116	120	133	8320	120.26	107.37	283.84	60
20	Punalloor+ Kulathupuzha	83	77	230	6672	73.69	65.8	276.36	60
21	Karunagapally	75	70	142	2803	77.58	69.27	233.34	60
22	Edathuva+ Mallappally	42	38	22	1440	34.1	30.44	45.97	60
23	Pathanamthitta	64	59	77	5150	73.01	65.19	165.19	60
24	Adoor+ Pandalam	63	62	78	4849	59.6	53.21	198.82	60
25	Thiruvalla	59	49	70	3278	52.05	46.47	101.14	60
26	Kayamkulam	68	64	111	4954	73.51	65.63	216.76	60
27	Haripad	39	37	66	3134	42.1	37.59	103.28	60
28	Mavelikkara	40	36	26	1323	62.57	55.86	129.38	60
29	Alappuzha	97	97	60	3368	99.83	89.13	250.99	60
30	Cherthala	97	99	30	1579	103.52	97.43	286.73	60
31	Chengannur	54	58	30	1768	60.44	53.98	219.75	60
32	Changanassery	55	52	23	1778	51.52	46	161.81	60

Contd....

Sl. No	Unit	No.of buses held as on 31.03.07	No.of schedules 31.03.07	No.of routes as on 31.03.07(*)	Route distance (Kms) (*)	Gross Kms.Operated	Effective Kms.Operated	Passengers Carried (*)	Average carrying Capacity per Bus
1	2	3	4	5	6	7	8	9	10
33	Kottayam	110	102	59	5567	128.91	115.1	303.45	60
34	Ponkunnam+ Erumely	44	40	77	3233	45.27	40.42	85.69	60
35	Pala	78	68	58	3906	85.21	76.97	184.05	60
36	Erattupetta	49	49	22	2870	51.56	46.04	124.03	60
37	Vaikom	32	37	14	1254	43.73	39.05	94.36	60
38	Muvattupuzha	60	59	49	2280	62.57	55.88	156.82	60
39	Thodupuzha+Moolamattom	67	64	45	3934	71.48	63.82	146.02	60
40	Kothamangalam+Munnar	55	48	44	4065	63.38	56.59	82.94	60
41	Ernakulam	75	73	50	4564	96.71	86.35	213.74	60
42	Aluva	67	64	37	2768	68.11	60.81	181.33	60
43	Ankamaly	38	37	40	1700	38.69	34.55	122.13	60
44	North Parayoor	59	62	80	3477	58.44	52.18	148.78	60
45	Perumbavoor	44	49	21	2287	47.26	42.19	178.48	60
46	Chalakkudy	46	46	34	1245	51.04	45.57	109.15	60
47	Irinjalakkuda	13	13	9	372	13.75	12.27	21.55	60
48	Mala+ Kodungallur	57	56	90	3298	60.56	54.08	106.56	60
49	Thrissur	88	84	40	3878	111.4	99.48	214.07	60
50	Puthukkad	15	11	21	776	15.62	13.94	40.45	60
51	Guruvayoor	41	39	22	4338	52.72	47.07	82.98	60
52	Ponnani	26	24	30	2326	30.84	27.54	66.9	60
53	Perinthalmanna	29	28	19	2120	36.29	32.4	51.96	60
54	Malappuram+Nilambur	55	53	65	2195	75.36	67.28	117.39	60
55	Palakkad+Vadakkanchery	96	85	47	4947	136.76	122.11	399.1	60
56	Chittur	25	23	14	2095	134.41	30.73	61.56	60
57	Mannarkkadu	18	13	18	4785	19.96	17.82	25.86	60
58	Thottilpalam+ Vadakara	31	28	28	1720	29.22	26.1	53.89	60
59	Kozhikkode	88	72	48	3908	107.29	96.79	210.17	60
60	Thamarassery	47	43	45	2880	50.69	45.26	101.57	60
61	Kannur	88	76	53	6749	122.59	109.45	207.4	60
62	Payyannur	56	59	38	2551	63.07	58.31	158.47	60
63	Sulthan Bathery	67	60	28	3083	75.1	67.06	125.39	60
64	Kasaragode	95	89	48	3817	111.06	99.15	243	60
65	Mananthavady	60	51	42	2704	65.52	58.5	109.8	60
66	Kalpatta	46	38	39	2285	46.82	41.81	101.93	60
67	Kumily	34	34	43	2973	37.17	33.15	65.11	60
	Total	**4499**	**4324**	**4907**	**242470**	**4779.1**	**4226.17**	**12022.46**	**4020**

Source : KSRTC

Appendix- 10.18

Fare structure of KSRTC during 2007

Sl. No.	Type of service	Basic fare per KM (paise)	Minimum fare (paise)
1	2	3	4
1	City	48	300
2	Ordinary	48	300
3	City Fast Passenger	52	300
4	Fast Passenger	52	400
5	Super Fast	55	600
6	Express	No Service	No Service
7	Super Express	60	1000
8	Super Deluxe Service	70	2000
9	A/C Air Bus	80	300
10	High Tech (Volvo)	80	300

Source : KSRTC

Appendix - 10.19

KSRTC Operational Statistics during 2006-07

Sl. No	Unit	Average No.of buses held daily	Average Kms. run per day per bus	Percentage vehicular utilisation	Average route length (Kms) (*)	Average earning per passengers (Rs)	Average distance travelled by a passenger (Kms) (*)	Earning per Vehicle on road per day (in Rs)	Earning per km of buses operated (in Rs)
1	2	3	4	5	6	7	8	9	10
1	Parassala	79	336.66	73.42	5694	457	13.45	6826	1955
2	Neyyattinkara+ Vellarada	159	309.5	71.7	10127	496	12.67	5692	1838
3	Poovar	78	304.99	75.64	5044	450	17.94	6085	1985
4	Vizhinjam	83	271.06	68.87	1655	399	18.2	5945	2193
5	Kattakkada	89	283.92	78.65	4601	599	14.92	5440	1916
6	Thiruvananthapuram City	121	202.3	72.73	10479	290	28.19	4844	2394
7	Pappanamcode	135	208.38	69.63	2131	254	10.14	3983	1914
8	Thiruvananthapuram Central	109	460.59	81.85	1834	958	9.81	11184	2329
9	Vikasbhavan	84	225.55	75	2854	342	12	5159	2283
10	Peroorkada	83	207.51	77.11	2688	275	9.26	4520	2178
11	Nedumangad+ PLO+ARO+VTR	170	252.61	71.78	5074	488	18.19	6202	2119
12	Vellanadu	54	247.76	75.93	1430	470	27.58	5875	2291
13	Kanyapuram	64	283.44	68.75	2045	454	17.99	5681	2004
14	Venjaramoodu	39	270.59	71.79	985	570	15.81	5232	1934
15	Chathannur	42	327.08	76.19	3165	525	17.65	6593	2015
16	Attingal	82	329.19	76.83	3335	454	17.14	7210	2191
17	Kilimanoor+PPM+CDLM	144	312.27	72.22	4601	570	19.86	6434	2060
18	Kollam	96	341.74	82.11	7960	525	18.59	7577	2217
19	Kottarakkara	117	322.88	77.78	7138	471	17.92	6854	2081
20	Punalur+ Kulathupuzha	85	282.96	74.12	6198	488	19.75	5934	2097
21	Karunagappally	75	299.9	84	6750	508	19.03	6289	2097
22	Edathua+ Mallappally	41	286.89	68.29	1279	557	22.07	6372	2102
23	Pathanamthitta	67	354.48	74.63	6317	530	17.88	7066	1991
24	Adoor+ Pandalam	67	310.27	70.15	4752	484	21.07	6114	1971
25	Thiruvalla	53	312.1	77.36	1564	657	18.46	6265	2014
26	Kayamkulam	67	329.27	82.09	4026	539	20.47	6931	2105
27	Haripad	39	324.81	82.05	3026	512	18.1	6508	2098
28	Mavelikkara	47	354.73	73.17	1646	672	22.01	7039	1984
29	Alappuzha	88	316.38	80.21	3678	509	17.88	6689	2114
30	Chenthala	39	309.03	82.83	1958	553	21.1	6471	2094
31	Changannur	56	307.04	86.71	2196	478	18.46	6417	2090
32	Changanassery	55	257.83	76.38	1653	537	19.20	6892	1978
33	Kottayam	107	354.52	83.18	3654	578	21.24	7477	2109
34	Ponkunnam+ Erumely	44	340.93	72.73	3747	709	26.72	8450	1858
35	Pala	77	360.82	75.32	3873	543	20.63	8964	1927
36	Erattupetta	48	324.6	79.59	2385	545	21.98	7009	2158
37	Vaikkom	41	333.91	78.05	1192	520	21.12	6236	1874
38	Muvattupuzha	60	313.15	81.87	2116	545	19.38	6772	2163
39	Thodupuzha+ Moolamattom	66	344.01	73.63	2728	571	20.39	7319	2127

Sl. No	Unit	Average No. of buses held daily	Average Kms. run per day per bus	Percentage vehicular utilisation	Average route length (Kms) (*)	Average earning per passengers (Ps)	Average distance travelled by a passenger (Kms) (*)	Earning per Vehicle on road per day (In Rs)	Earning per km of buses operated (in Ps)
1	2	3	4	5	6	7	8	9	10
40	Kothamangalam+ Munnar	55	323.26	78.16	3137	648	22.16	8658	2059
41	Ernakulam	78	382.83	79.49	4763	520	17.28	8870	2285
42	Aluva	67	295.64	83.58	2895	387	16.09	5831	1905
43	Angamali	36	304.15	86.11	1057	420	16.09	5083	1934
44	North Paravoor	61	308.78	77.05	4787	511	20.94	5669	1848
45	Perumbavoor	47	303.8	80.85	1248	455	17.79	6321	2040
46	Chalakkudy	47	318.13	82.98	1794	543	19.99	6554	2060
47	Irinjalakkuda	13	360.89	69.23	1190	543	20	7385	2046
48	Mala+ Kodungallur	58	318.78	75.86	6380	648	24.22	6188	1940
49	Thrissur	86	490.36	71.59	4400	675	23.8	8615	2002
50	Puthukkad	14	318.89	85.71	654	675	18.00	8082	1921
51	Guruvayoor	41	406.78	78.05	4863	846	33.47	7976	1966
52	Ponnani	27	380.533	74.07	2346	829	24.79	7136	1875
53	Perinthalmanna	29	449.22	68.97	1953	684	26.42	9060	2017
54	Malappuram+ Nilambur	98	455.06	75	3007	735	27.82	9174	2016
55	Palakkad+VDCY+Chittur	122	450.8	78.69	11829	761	29.36	9955	2143
56	Mannarkkadu	18	379.85	81.25	2840	761	29.38	7097	1888
57	Thottippalam+ Vadakara	37	308.33	75	1452	537	15.98	5865	1902
58	Kozhikkode	90	367.56	78.89	4149	537	15.96	7634	2077
59	Thamarassery	48	311.17	89.33	2637	548	21.86	6838	1876
60	Kannur	109	350.25	78.9	8104	479	19.63	6348	1812
61	Payyannur	59	337.17	77.97	2702	516	22.99	8140	1821
62	Sulthan Bathery	87	327.8	83.58	3485	536	19.80	6519	1989
63	Kasaragod	100	338.61	80	3859	583	18.64	6041	1785
64	Manantthavady	63	337.07	76.19	2264	585	21.34	7055	2093
65	Kalpetta	45	337.73	75.56	1622	477	17.91	8333	1876
66	Kumily	34	378.98			620	15.32	7484	1985

(*) Provisional

Source: KSRTC

Appendix No 10.20
Category-Wise staff position of KSRTC

Sl. No.	Category	As on 01.04.06	As on 01.04.07	As on 31.10.2007
1	2	3	4	5
1	Administrative staff	2429	2275	2161
2	Traffic Personnel	16110	14864	15450
3	Maintenance Personnel	3967	3645	3326
	Total	22506	20784	20937

Source : KSRTC

Appendix 10.21
NO. OF SHIPS CALLED AT COCHIN PORT DURING 2005-06 AND 2006-07

SLNo	Type of Vessel	No of Ships 2005-06	No of Ships 2006-07	% variation Increase (+) Decrease (-)	Net Registered Tonnage 2005-06	Net Registered Tonnage 2006-07	% variation Increase (+) Decrease (-)
1	Container	421	382	-9.26	2326724	2675191	14.98
2	Break Bulk	109	92	-15.60	308221	261914	-15.02
3	Dry Bulk	50	54	8.00	495115	532485	7.55
4	Liquid Bulk	383	382	-0.26	5200593	5550843	6.73
5	Passenger (Foreign)	26	38	46.15	297961	380077	27.56
6	Others	236	225	-4.66	200865	171031	-14.9
	Total	1225	1173	-4.24	8829499	9571341	8.40

Source Cochin Port Trust

Appendix 10.22

Commodity - wise cargo handled at the intermediate and Minor ports of Kerala during 2006-07 (in tonnes)

SLNo	Name of Port	Commodity	Imports			Exports			Grand Total
			Coastal	Foreign	Total	Coastal	Foreign	Total	
1	2	3	4	5	6	7	8	9	10
1	Kasaragod		0	0	0	0	0	0	0
2	Azhikkal	Miscellaneous	0	392	392	150	0	150	542
3	Kannur		0	0	0	0	0	0	0
4	Thalassery		0	0	0	0	0	0	0
5	Kozhikode	Soda Ash	33842	0	33842	0	0	0	33842
		Machinery	67	0	67	392	0	392	459
		Palm Oil	2	46102	46104	0	0	0	46104
		Wet Date	769	0	769	0	0	0	769
		Wheat	9050	0	9050	0	0	0	9050
		Oil Cake	387	0	387	0	0	0	387
		Salt	3532	0	3532	0	0	0	3532
		Rice	269	0	269	42	0	42	311
		Cattle feed	5297	0	5297	366	0	366	5663
		Mustard seeds	1197	0	1197	0	0	0	1197
		Cement	0	0	0	13923	0	13923	13923
		POL	10	0	10	11776	0	11776	11786
		LPG	0	0	0	604	0	604	604
		Timber	1	0	1	1761	0	1761	1762
		Iron & Steel	2	4	6	1008	0	1008	1014
		Metal	126	106	232	5941	0	5941	6173
		Sodium Bi Carbonate	429	0	429	0	0	0	429
		Bauxite	601	0	601	0	0	0	601
		Veg. & Fruits	0	0	0	489	0	489	489
		Granite & Marble	0	0	0	3564	0	3564	3564
		Miscellaneous	9665	0	9665	8534	0	8534	18199
		Sub Total	66246	46712	111458	48430	0	48430	159888
6	Ponnani		0	0	0	0	0	0	0
7	Kodungallore		0	0	0	0	0	0	0
8	Alappuzha		0	0	0	0	0	0	0
9	Neendakara		0	0	0	0	0	0	0
10	Trivandrum		0	0	0	0	0	0	0
11	Vizhinjam	Miscellaneous	0	0	0	0	12065	12065	12065
	Total		66246	46604	111350	48560	12065	60665	172515

Source : Directorate of Port

Appendix 10.23

Number and Tonnage of steamers and sailing vessels which sailed at the Intermediate and Minor Ports of Kerala during 2006-07.

Name of Port	Coastal / Foreign	Steamers		Sailing Vessles		Total No of	Total Tonnage
		No.	Tonnage	No.	Tonnage		
1	2	3	4	5	6	7	8
Kasaragod	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Azhikkal	Coastal / Foreign	0	0	1	74	1	74
		5	16949	0	0	5	16949
Kannur	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Thalassery	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Kozhikode	Coastal / Foreign	100	69191	254	123750	354	208941
		17	101005	0	0	17	101005
Ponnani	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Kodungallore	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Alappuzha	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Neendakara	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Trivandrum	Coastal / Foreign	0	0	0	0	0	0
		0	0	0	0	0	0
Vizhinjam	Coastal / Foreign	0	0	0	0	0	0
		46	14973	39	4095	85	19068
Total		168	218118	294	127849	462	345967

Source : Directorate of Port

Appendix 10.24

Number of Harbour Crafts registered at the Intermediate and Minor Ports of Kerala during 2006-07

Name of Port	Cargo boats including Barges		Canoes including boats		Mechanised fishing vessels		Mechanised sailing vessels		Total		Grand Total
	New	Renewal	New	Renewal	New	Renewal	New	Renewal	New	Renewal	
1	2	3	4	5	6	7	8	9	10	11	12
Kasaragod	0	0	0	0	0	0	0	0	0	0	0
Azhikkal	0	0	0	0	11	0	0	0	11	0	11
Kannur	0	0	0	0	5	0	0	0	5	0	0
Thalassery	0	0	0	0	0	0	0	0	0	0	0
Kozhikode	0	0	0	0	2	0	0	0	2	0	2
Ponnani	0	0	1	1	0	0	0	0	1	1	2
Kodungallore	0	0	0	0	41	350	0	0	41	350	391
Alappuzha	0	0	0	0	185	1121	0	0	185	1121	1306
Neendakara	0	0	0	0	31	210	0	0	31	210	241
Trivandrum	0	0	0	0	0	0	0	0	0	0	0
Vizhinjam	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	275	1681	0	0	276	1682	1958

Source. *Directorate of Ports*

Appendix 10.25

Category - wise break up of Revenue Collected at the Intermediate and Minor Ports of Kerala during 2006-07

(In Rupees)

Name of Port/Office	Port Dues	Export & Import dues	Tug hire Charges	Pilotage fees	Registration and other fees	Miscellaneous	Total
1	2	3	4	5	6	7	8
Kasaragod	0	0	0	0	35185	5093016	5128201
Azhikkal	7329	8130	0	0	4730	3567205	3587483
Kannur	0	0	0	0	3440	90148	93588
Thalassery	0	0	0	0	0	1722945	1722945
Kozhikode	208158	1830459	1022261	223010	42260	3397947	6774415
Ponnani	0	0	0	0	12076	30512	42588
Kodungallore	0	0	0	0	182216	2220	184436
Alppuzha	0	0	0	0	521224	299880	821104
Neendakara	0	0	350812	0	123700	813354	1287866
Trivandrum	0	0	0	0	0	170984	170984
Vizhinjam	0	124726	0	0	357439	923866	1406032
Directorate of Ports	0	0	0	0	0	54198	54198
Total	215786	2013387	1373073	223010	1262290	16186354	21253900

Appendix 10.26

Operational Statistics of Inland Water Transport Agencies in Kerala

Particulars	State Water Transport Department		Kerala State Inland Navigation Corporation	
1	2	3	4	5
	2005-06	2006-07	2005-06	2006-07
No. of boats/Jhankars	81	81	25	25
Boat in operation	49	47	15	5
No. of trips on Schedule	646	646	12905	8318
No. of passengers carried	14.83 (Lakh)	15.3(Lakh)	1071142	529090
Gross Route Distance (In KM)	6775	6775	148928	40937
Volume of Cargo carried (000 tonnes)	Nil	Nil	743145	592137
Total Revenue Receipts (in lakhs)	483	479	380.06	426.45
Total Revenue Expenditure (in lakhs)	1479	1593	422.95	472.69
No. of Employees (Total)	1003	786	276	258

Source : State Water Transport Department,
Kerala State Inland Navigation Corporation

Appendix 10.27(A)

Details of flights operated by various agencies from Thiruvananthapuram International Airport

Sl.No.	Airlines	2005-06				2006-07			
		No. of Flights		No of Passengers		No. 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	0	1720	0	183883	0	1698	0	154958
2	Gulf Air	0	730	0	151074	0	730	0	143785
3	Oman Air	0	746	0	99862	0	730	0	95788
4	Kuwait Airways	0	416	0	84,754	0	414	0	85,761
5	Sri Lankan Airways	0	1210	0	169,038	0	1324	0	151,183
6	Qatar Airways	0	730	0	120985	96	730	0	112817
7	Jet Airways	960	0	88492	0	2166	0	132933	0
8	Silk Airways	0	348	0	30979	0	412	0	34077
9	My Travels/First Choice	0	62	0	12672	0	70	0	18752
10	Emirates	0	130	0	19837	0	834	0	142816
11	Air Decan	236	0	10709	0	2409	0	215229	0
12	Indian	2499	1225	223324	129331	2764	1316	202283	130264
13	Air India Express	0	328	0	22443	0	834	0	84790
14	Non Schedule	6	2	0	0	325	0	1568	0
15	Air Sahara	0	0	0	0	356	44	18187	1240
16	Air Arabia	0	0	0	0	0	294	0	44085
17	Paramount	0	0	0	0	0	460	0	15716
18	King Fisher	0	0	0	0	0	304	0	12326
	Total	3701	7647	322525	1004458	8136	10184	568180	1924841

Source : Thiruvananthapuram International Airport

Appendix 10.27 (B)

Details of flights operated by various agencies from Kozhikode Airport

Sl.No.	Airlines	2005-06				2006-07			
		No.of Flights		Passengers		No.of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Indian Airlines	3079	2257	102735	216235	238	238	9391	21232
2	Air India	569	3109	13262	444027	86	144	865	25668
3	Jet Airways	720	0	80788	0	82	0	680	0
4	Expo Cargo	0	136	0	0	0	0	0	0
5	Sriro Lankan Airways	0	884	0	91742	0	70	0	10972
6	Air Decan	174	0	5220	0	0	0	0	0
7	King Fishor	0	0	0	0	124	0	1458	0
8	(Defence,Casuals Etc)	265	66	0	0	19	0	0	0
	Total	4807	6452	182035	752004	529	452	12214	57873

Source; Kozhikode Airport

Appendix 10.27 (C)

Details of flights operated by various agencies from Nedumbassery International Airport

Sl.No	Airlines	2005-06				2006-07			
		No.of Flights		Passengers		No.of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India	0	2176	0	238724	0	2112	0	181019
2	Air India Express	0	1322	0	169809	0	2552	0	203744
3	Indian Airlines	2108	3257	205167	106456	2185	3204	201053	101494
4	Oman Air	0	710	0	81367	0	716	0	82625
5	Silk Air	0	548	0	51765	0	610	0	58974
6	Kuwait Airways	0	314	0	58954	0	358	0	64659
7	Emirates Airlines	0	588	0	145082	0	740	0	203424
8	Qatar Airways	0	500	0	78707	0	552	0	72803
9	Saudi Arabian Airlines	0	314	0	73154	0	316	0	79218
10	SriLankan Airways	0	1052	0	108134	0	1134	0	122430
11	Gulf Air	0	540	0	65741	0	528	0	60861
12	Mahan Air	0	102	0	8824	0	358	0	42810
13	Air Arabia	0	0	0	0	0	778	0	120787
14	Jazeera Airways	0	0	0	0	0	182	0	23024
15	Non Scheduled flights	427	21	0	0	582	36	0	0
16	Air Deccan	0	0	0	0	3151	0	217884	0
17	King Fisher Airlines	0	0	0	0	3160	0	182170	0
18	Go Air	0	0	0	0	590	0	48401	0
19	Paramount Airways	0	0	0	0	582	0	0	0
	Total	2535	11444	205167	1154717	10580	14172	849306	1429172

Source : Nedumbassery International Airport

Appendix 10.28

No. of Passports issued from the Passport Offices in Kerala from 2000-01 to 2006-07

Year	No. of applications Received				No. of Passports Issued			
	Thiruvananthapuram	Kochi	Kozhikode	Total	Thiruvananthapuram	Kochi	Kozhikode	Total
1	2	3	4	5	6	7	8	9
2000-01	84609	11'974	147831	344414	76454	101356	'41169	318979
2001-02	97952	134863	182604	415419	90989	130084	181860	402933
2002-03	100525	136971	168922	406418	96396	136766	164126	397288
2003-04	125517	133754	238543	497814	120907	126965	199680	447552
2004-05	'19177	177598	228566	525341	'26529	163627	250036	560192
2005-06	126814	189638	241248	557800	125455	185308	248539	559302
2006-07	140634	210961	217327	568922	144889	203404	235589	583862

Source : Passport Offices, Thiruvananthapuram, Kochi & Kozhikode

Appenxi.10.29

Growth of Post Offices in Kerala During the Last Eight Years

Year	HOs	DSOs	EDSOs	EDBOs	Total
2000	51	1462	528	3028	5069
2001	51	1461	528	3031	5071
2002	51	1462	527	3034	5074
2003	51	1463	527	3036	5077
2004	51	1464	526	3042	5083
2005	51	1464	508	3059	5082
2006	51	1451	470	3099	5071
2007	51	1451	468	3100	5070

Source : Chief Post Master General, Kerala Circle

Appendix 10.30

Category - wise Offices in Postal and other Postal Services in Kerala.

Category of Office	As on 31st March	
	2006	2007
1	2	3
(a) Postal Services		
1. Head Post Offices	51	51
2. Sub Post Offices	1451	1451
ii) Extra Departmental Sub Post Offices	470	468
3. Branch Offices	3089	3100
Total (a)	**5071**	**5070**
(b) Speed Post Centres National		
National	9	13
State	16	12
Extension Counters	183	Now Introduced to all Pos
Total (b)	**208**	
© Other Postal Services		
1. Head Record Office	3	3
ii) Sorting Mail Offices	28	28
iii) Sub Record Office	26	26
iv) Transit Mail Offices	12	12
v) R.M.S Sections	19	18
vi) Press Sorting Office	2	2
vii) Parcel Sorting Office	2	2
viii) Pathrika Channel Office	5	5
ix) Mail Motor Service Division unit	1	1
x) Circle Stamp Depot	1	1
xi) Postal Store Depot	3	3
Total (C)	**102**	**101**

Source: Chief PostMaster General , Kerala Circle

Appendix 10.31

Division-wise and Category - wise Post Offices under Kerala Circle as on 31.3.2007

Sl.No.	Name of Division	Head Offices	Sub Offices			
			SO	EDSO	EDBO	Total
1	2	3	4	5	6	7
1	Trivandrum (N)	2	74	8	112	196
2	Trivandrum (S)	2	68	15	135	220
3	Quilon	3	91	28	123	243
4	Pathanamthitta	3	77	45	187	312
5	Thiruvalla	2	64	26	67	159
6	Alappuzha	2	48	28	48	124
7	Mavelikara	2	52	20	53	127
8	Changanacherry	2	48	8	109	185
9	Kottayam	2	52	12	225	291
10	Kottayam	3	79	40	136	256
11	Ernakulam	2	72	4	61	139
12	Aluva	3	71	28	153	255
13	Thrissur	3	106	28	158	295
14	Irinjalakuda	2	63	11	118	192
15	Lakshadweep	0	6	3	1	10
16	Palakkad	3	83	21	129	236
17	Ottappalam	1	55	20	143	219
18	Manjeri	2	46	21	191	260
19	Tirur	2	52	18	101	173
20	Kozhikode	3	70	13	217	303
21	Vadakara	2	40	31	152	225
22	Thalassery	1	44	7	158	208
23	Kannur	2	53	25	139	229
24	Kasaragod	2	29	10	188	229
	Total - (Kerala Circle)	51	1451	488	3169	5070

Source : CPMG, Kerala Circle

Appendix 10.32

Urban/Rural Split of Post Offices as on 31-3-2007

Name of Division	Head Office		Sub Office		EDSO		EDBO		Grand Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
TV North	0	2	44	30	7	1	94	18	145	51
TV South	0	2	39	29	15	0	130	5	184	36
Kollam	2	1	68	25	26	2	118	5	212	33
Pathanamthitta	0	3	69	8	43	2	181	6	293	19
Thiruvalla	0	2	53	11	25	1	62	5	140	19
Total SR	**2**	**10**	**271**	**103**	**116**	**6**	**585**	**39**	**974**	**158**
Alappuzha	0	2	23	25	19	7	36	12	78	48
Mavelikara	0	2	45	7	20	0	50	3	115	12
Changanacherry	1	1	43	3	8	0	107	2	159	6
Idukki	1	1	48	4	12	0	223	2	284	7
Kottayam	0	3	56	23	35	5	133	3	224	34
Ernakulam	0	2	19	53	2	2	43	18	64	75
Aluva	0	3	40	31	25	3	148	5	213	42
Thrissur	1	2	68	38	18	10	138	20	225	70
Irinjalakuda	0	2	39	24	9	2	98	18	146	46
Lakshadweep	0	0	6	0	3	0	1	0	10	0
Total CR	**3**	**18**	**387**	**208**	**151**	**29**	**977**	**83**	**1518**	**338**
Palakkad	1	2	64	19	21	0	122	7	208	28
Ottappalam	0	1	44	11	18	2	133	10	195	24
Manjeri	0	2	36	8	20	1	178	13	236	24
Tirur	0	2	46	6	18	0	101	0	185	8
Kozhikode	0	3	20	50	9	4	178	39	207	96
Vadakara	0	2	36	4	25	6	150	2	211	14
Thalassery	0	1	15	29	1	6	126	30	142	66
Kannur	0	2	24	39	10	15	101	38	135	94
Kasargod	0	2	20	9	8	2	182	6	210	19
Total NR	**1**	**17**	**307**	**175**	**130**	**36**	**1271**	**145**	**1709**	**373**
Grand Total	**6**	**45**	**965**	**486**	**397**	**71**	**2833**	**267**	**4201**	**869**

Source : CPMG, Kerala Circle

Appendix 10.33

District - wise details of area and population served by one post office during 2006-07

Sl.No.	Name of district	Post Office (Nos.)	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	6	7
1	Thiruvananthapuram	416	2192	5.25	3234356	7268
2	Kollam	365	2491	6.82	2585208	7063
3	Pathanamthitta	316	2637	8.31	1234016	3917
4	Alappuzha	300	1414	4.71	2108160	7505
5	Kottayam	406	2208	5.43	1953646	4700
6	Idukki	294	4358	14.82	1129221	3907
7	Ernakulam	395	3068	7.76	3105790	7902
8	Thrissur	486	3032	6.23	2974232	6167
9	Palakkad	455	4480	9.84	2617482	5803
10	Malappuram	438	3550	8.1	3625471	8315
11	Kozhikode	394	2344	5.94	2879131	7074
12	Wayanad	177	2131	12.03	760819	4788
13	Kannur	380	2966	7.8	2408956	6339
14	Kasaragod	234	1992	8.51	1204078	5258
	Kerala	5056	38863	7.68	31841374	6296
	UT of Lakshadweep	10	32	3.20	60650	6065
	UT of Pondicherry (Mahe only)	4	6.71	2.16	35119	8779

Appendix 10.34

District - Wise details of Telephone net work during 2006-07

Sl.No	Name of District	No. of Exchanges	Equipped Capacity	Working connections	Area (sq.Kms)	No. of Telephone (Sq Kms)	No. of Telephone per 1000 population
1	2	3	4	5	6	7	8
1	Alleppy	70	408620	367525	1414	260	175
2	Calicut	92	560560	500132	2344	215	175
3	Kannur	112	491986	452952	2966	153	188
4	Ernakulam	124	829858	751732	3068	245	243
5	Idukki	80	2[illegible]7135	187644	4358	43	166
6	Kasaragod	58	249478	218392	1992	110	181
7	Kottayam	102	509228	477278	2208	216	244
8	Lakshadweep	11	21084	16308	32	510	269
9	Malppuram	94	570969	505415	3550	142	139
10	Palakkad	117	424910	375773	4480	84	144
11	Pathanamthitta	82	340708	296931	2637	113	241
12	Pondicherry (Mahe)	1	11868	11077	10	1108	369
13	Kollam	85	517094	475816	2491	191	184
14	Thrissur	83	621044	573208	3032	189	193
15	Thiruvananthapuram	97	738803	663977	2192	303	205
16	Wayanad	31	121538	100997	2131	47	128
	Total	1239	6637725	5976235	38905	154	187

Source : BSNL

Appendix -10.35

Details of slum population of Kerala

(No.)

Sl.No	Cities/towns reporting slums	Slum Population		
		Total	Male	Female
1	Thiruvananthapuram Corporation	11817	5912	5905
2	Kollam Corporation	483	256	227
3	Kayamkulam Municipality	1755	851	904
4	Alappuzha Municipality	14588	7018	7566
5	Kottayam Municipality	2285	1127	1158
6	Kochi Corporation	7897	3965	3932
7	Thrissur Corporation	169	82	87
8	Pala'kkad Municipality	2426	1173	1253
9	Ponnani Municipality	4883	2363	2520
10	Kozhikode Corporation	10390	5081	5309
11	Thalassery Municipality	676	321	354
12	Kannur Municipality	3255	1622	1633
13	Kasaragod Municipality	3935	1928	2007
	Total	**64556**	**31699**	**32857**

Source:Census India - 2001

Appendix 10.36

Details of Major Projects undertaken by the Capital Region Development Programme- 2006-07

(Rs. in Lakh)

Sl No.	Major Project	Ongoing/Completed	Year of Starting	Estimated cost	Expenditure as on 30.10.2007	Physical Achievement
1	Solid Waste Management					
a)	Enginaching Landfill Facity at Vilappilsala	Ongoing	2005		241	Thiruvananthapuram Municipal Corporation has to sign the agreement with M/s.Ramky, Hyderabad
b)	Supply of tools and Equipment to Thiruvananthapuram Municipal Corporation	Ongoing	2005		25	Supplied tools and equipment
2	Upgradation of Electrical crematorium at Thycaud	Completed	2006	176	66	Commissioned on 31.08.2007
3	Bus Terminus at Enchakkal	Ongoing	2006	3000	475.83	Land Acquisition completed and the Special purpose company has been formed
4	Flood Prevention and Beautification of the Karamana and Killi River and the Ulloor Thodu					
a)	Flood Prevention of the Karamana and Killi River and the Ulloor Thodu	Ongoing	2006	278	161.03	Flood prevention works of the Karamana River completed and that of the Killi River in progress
b)	Beautification of the Kili River	Ongoing	2005	600	0.78	Work in progress
5	Renovation of the Ulloor Thodu-Kannamoola to Edavacode	Ongoing	2007	200	Nil	Work in progress
6	Ecological Restoration of the Parvathy Puthanar Canal	Ongoing	2006	499	Nil	Work in progress Centrally sponsored scheme

Source. KSUDP

Appendix 10.37

Details of major projects undertaken by Greater Cochin Development authority- 2007

(Rs Lakh)

Sl. No	Major Projects	Year of Starting	Agreed PAC	Physical achievement	Remarks
1	2	3	4	5	6
1	JNI Stadium Kaloor - Leak Proofing at D- Section	Jan-07	2.05 (8% above)	Completed	
2	Cleaning and levelling of Rajendra Maidanam in connection with the Children's day programme	Feb-07	3.30 (Estimate rate	Completed	
3	Maintenace work of pay and use toilet at CMDS	Feb-07	3.56 (14% above)	Completed	
4	CMDS - Essential repairs and replacement of CFL lamps, cables etc on walkway system	Feb-07	3.62 (8.5% above)	Completed	
5	JNI Stadium , Kaloor, Cutting grass and overgrowths in play field	Feb-07	0.77 (8.5% above)	Work in monthly	
6	JNI Stadium, Kaloor- Cutting grass and over growths in the stadium premises (Outside)	Feb-07	1.72 (8.8 % above)		
7	Edathala Housing Scheme II - Electrification of Type III Houses - 50 Nos.	Feb-07	7.94 (4% above)	Completed	
8	CMDS - Providing GI pipe posts at the entrance of walkway	Feb-07	0.83 (23% above)	On going work	
9	Edathala Housing Scheme Phase I - Construction of compound wall and drain	Feb-07	0.43 (9.5% above)	Work in progress	
10	GCDA- Shifting of Quality control Lab	Jul 07	0.48 (28.75% above)	Under progress	
11	Supply and installation of Software ARCHICAD 10.0 for 02 users in Engg. Dept	Jul 07	4.65	Installation completed	
12	Supply and installation of SCM ware STRAP REL 12.6 in Engineering Department	Jul-07	4.82	installed	
13	K.K. Road - Comprehensive maintenance 2007-08 Kacavathara Reach	Jul-07	5.57 (11.9% above)	ongoing work 65% completed	
14	K.K. Road - comprehensive maintenace	Jul-07	5.53 (11.9% above)	ongoing work 65%	
15	2007-08 Kaloor Reach (East side) 2007-08- Kaloor Reach (west) including RCB	Jul-07	5.49 (11.9% above)	ongoing work 65% completed	
16	Construction of cashed for GCDA Quarters opposite to Central School	Jul-07	1.30 (24% above)	Completed	
17	Construction of compound gate and Name Board for Rajendra Maidan	Jul-07	0.73 (24.5% above)	Work completed	
18	Edathala Housing Scheme Phase II - Construction of additional 10 Nos. of Type I houses	Jul-07	8.17 (25% above)	Work in progress	
19	Edathala Housing Scheme Phase II- Construction of Retaining wall - North side- Lower portion	Jul-07	9.53 (42% above)	Work in progress	
20	JNI Stadium, Kaloor, Repairing and maintence of Fancy lamps & posts for GCDA	Jul-07	Rs. 1.25 laks (Payment to GCDA per year)	Installation completed changing to these lines to be done.	Expression of interest. Repairing and maintenance fee of Spot and Revenue to GCDA in lieu of providing Ads Space

(Rs. Lakh)

Sl. No	Major Projects	Year of Starting	Agreed PAC	Physical achievement	Remarks
1	2	3	4	5	6
21	Edathala Housing Scheme Phase II- Construction of retaining wall - south side (upper portion) & site development	Sep-07	7.63 (42% above)	Work in progress	
22	Edathala Housing Scheme Phase II- Formation of road around Type I Houses	Sep-07	10.20 (35% above)	Work Started	
23	Edathala Housing Scheme Phase II - Construction of additional Type II House - 2 Nos.	Sep-07	9.53 (42% above)		
24	Edathala Housing Scheme Phase II - construction of over head tank and water supply distribution system	Sep-07	8.04 (24.99% above)	Work in progress	
25	Providing precast RCC posts at GCDA departmental use	Sep-07	0.69 (16% above)	Work in progress	
26	Edathala Housing Scheme Phase II - Construction of Road for Type II & III Houses	Sep-07	11.27 (35% above)	Work in progress	
27	Eastern Entry to South Railway Station, commerical complex - Providing stainless steel Name Board	Sep-07	1.37 (Contract amount)	Completed	
28	Edathala Housing Scheme Phase II - Construction of Borewell in the premises	Sep-07	5.30 (22% above)	Work in progress	
29	JNI Stadium, Kalor - Cleaning the drain in and around stadium and removing the debris	Sep-07	0.53 (15% above)	Completed	
30	Edathala Housing Scheme Phase 1-Construction of drain for Type I Houses	Sep-07	15.85 (38% above)	Work Started	
31	Edathala Housing Scheme Phase II -Construction of drain for Type II & III Houses	Sep-07	12.69 (38% above)	Work in progress	
32	JNI Stadium, Kalor Essential repair works in chair gallery	Sep-07	1.45 (15% above)	Completed	
33	Computer Net Cabling work for GCDA	Oct-07	1.39 (including labour)	Nearing completion 80 % completed	
34	JNI Stadium, Kalor Water proofing works on the roof slab of Electrical substations	Oct-07	3.26 (9.2 % above)	Work not started	
35	Water proofing works at GCDA staff quarters (E-5-E8)	Oct-07	1.27 (9.2 % above)	Under progress	
36	JNI Stadium - Replacement of pumpset in sewage treatment plant	Oct-07	1.35 (30 % above)	Waiting for the supply of specified after booking	
37	Essential electrical repairs at JNI S Stadium Kalor	Oct-07	0.92 (25 % above)	Completed	
38	JNI stadium, Kochi providing Roofing on 'Turnkey Basis' with Gabled structure design.	Oct-07	1004.83 (30 % above)	Work just started.	

Source: Greater Cochin Authority

Appendix 10.38
Details of major projects under taken by KSUDP

(Rs in Lakh)

Sl.No	Major Projects	Estimated cost	Physical achievement
1	Infrastructure		
a	Water Supply	122.17	The first batch of works are at Tendering stage
b	Sewerage & Sanitation	282.98	The first batch of works are at Tendering stage
c	Storm Water Drainage	84.54	The first batch of works are at Tendering stage.
d	Solid Waste Management	30.94	The first batch of works are at Tendering stage
e	Urban Road Improvement	129.76	The first batch of works are at Tendering stage
	Sub Total	**650.39**	
2	Local Government Development Fund	243.58	
3	Contingencies, Taxes and Duties	210.42	
4	Interest during Constant and commitment Charges	131.67	
5	Poverty Alleviation	101.25	The first batch of works are attendering stage
6	National and Local consultancy	47.8	
7	Research, Equipment, Training & Admn Expenses	23.47	
8	Technical Support Unit	5.2	
9	Land Acquisition	8.53	
	Sub Total	**769.92**	
	Grand Total	**1420.31**	

Source. *KSUDP*

Appendix - 11.1

Literacy rate by Sex for State and Districts 1991 and 2001 -Kerala

Sl. No	States/District	Literacy rate					
		Persons		Male		Female	
		1991	2001	1991	2001	1991	2001
1	2	3	4	5	6	7	8
	Kerala	89.81	90.92	93.62	94.2	86.17	87.86
1	Thiruvananthapuram	89.22	89.36	92.84	92.68	85.78	86.26
2	Kollam	90.47	91.49	94.09	94.63	87.00	88.6
3	Pathanamthitta	94.86	95.09	96.56	96.62	93.29	93.71
4	Alappuzha	93.87	93.66	96.79	96.42	91.12	91.14
5	Kottayam	95.72	95.9	97.46	97.41	94.00	94.45
6	Idukki	86.97	88.58	90.89	92.11	82.97	85.04
7	Ernakulam	92.3	93.42	95.4	95.95	89.22	90.96
8	Thrissur	90.18	92.56	93.77	95.47	86.94	89.94
9	Palakkad	81.27	84.31	87.24	89.73	75.72	79.31
10	Malappuram	87.94	88.61	92.08	91.46	84.09	85.96
11	Kozhikode	91.10	92.45	95.58	96.3	86.79	88.86
12	Wayanad	82.73	85.52	87.69	90.28	77.69	80.8
13	Kannur	91.48	92.8	95.54	96.38	87.65	89.57
14	Kasargod	82.51	85.17	88.97	90.84	75.29	79.80

Note.- Literacy rate is the percentage of literates to population aged 7 years and above

Appendix- 11.2

District wise status of illiterates and new literates in 2006-07

Sl. No	District	Illiterates			New literates		
		2006-07			2006-2007		
		Male	Female	Total	Male	Female	Total
1	Thiruvananthapuram	14734	29983	44717	15470	13609	29079
2	Kollam	9	18	27	1482	3602	5084
3	Pathanamthitta	18712	20823	39535	449	813	1262
4	Alappuzha	1230	1820	3050	49	1049	1098
5	Kottayam	9312	12087	21399	571	709	1280
6	Idukki	1871	2522	4393	1163	1677	2840
7	Ernakulam	1035	2815	3850	1035	2815	3850
8	Thrissur	2480	6578	9058	1937	5384	7321
9	Palakkad	26140	33520	59660	8565	9848	18413
10	Malappuram	25939	42403	68342	101	298	399
11	Kozhikode	13730	34776	48506	306	879	1185
12	Wayanad	12100	32868	44968	14962	17962	32924
13	Kannur	694	1676	2370	2000	5300	7300
14	Kasargod	1789	1605	3394	2327	2582	4909
	Total	129775	223494	353269	50417	66527	116944

Source. Kerala State Literacy Mission Authority

Appendix - 11.3

District-wise/ Management-wise Number of Schools in Kerala: 2006-07

Sl. No	District	High Schools				U.P.Schools				L.P.Schools				Total			
		G	PA	PUA	T	G	PA	PUA	T	G	PA	PUA	T	G	PA	PUA	T
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Thiruvananthapuram	119	95	42	256	98	101	27	226	299	161	27	507	516	377	96	989
2	Kollam	76	131	14	221	62	139	16	217	268	190	25	488	406	460	55	924
3	Pathanamthitta	49	111	9	168	42	84	15	141	168	236	22	426	258	431	46	735
4	Alappuzha	58	129	9	196	67	77	11	155	192	198	21	411	317	404	41	762
5	Kottayam	60	166	22	248	67	128	10	205	169	269	31	468	296	562	63	921
6	Idukki	56	73	11	140	40	63	4	107	85	136	10	231	181	272	25	478
7	Ernakulam	97	175	48	310	91	103	25	219	151	271	33	455	359	549	106	1014
8	Thrissur	80	150	31	261	55	162	14	231	115	381	23	519	250	693	68	1011
9	Palakkad	61	79	33	173	63	159	11	233	194	349	13	556	318	587	57	962
10	Malappuram	82	84	79	245	113	223	38	374	350	477	26	853	545	784	143	1472
11	Kozhikodu	69	99	23	191	74	240	13	327	181	529	11	721	324	868	47	1239
12	Wayanadu	40	23	5	68	34	39	2	75	91	53	6	150	165	115	13	293
13	Kannur	83	80	23	186	76	280	18	374	114	608	10	732	273	968	51	1292
14	Kasaragod	77	33	17	127	72	72	9	153	141	115	16	272	290	220	42	552
	Total	996	1428	366	2790	984	1670	213	3037	2548	3992	277	6817	4498	7290	856	12644

Source: Directorate of Public Instruction, Thiruvananthapuram

G-Govt, PA-Private Aided PUA-Private Unaided T,-Total

Appendix - 11.4

District wise Number of Schools (other than state syllabus) in Kerala (2007-2008)

Sl.No.	District	CBSE	ICSE	Kendriya Vidyalaya	Jawahar Navodaya
1	2	3	4	5	6
1	Thiruvananthapuram	51	13	4	1
2	Kollam	30	15	0	1
3	Pathanamthitta	26	13	1	1
4	Alappuzha	42	11	1	1
5	Kottayam	48	8	1	1
6	Idukki	17	5	0	1
7	Ernakulam	92	15	6	1
8	Thrissur	54	8	1	[illegible]
9	Palakkad	44	2	3	1
10	Malappuram	56	2	[illegible]	1
11	Kozhikode	44	2	2	1
12	Wayanad	15	1	1	1
13	Kannur	46	3	3	1
14	Kasaragod	23	2	2	[illegible]
	Total	587	100	26	14

Source: *Directorate of Public Instruction, Thiruvananthapuram.*

Appendix 11.5

District - wise Details of Govt.Schools having Building Facilities - Kerala (2006-2007)

Sl.No.	District	No.of Schools having Pucca Buildings				No.of Schools having Thatched Sheds				No.of Schools working in Rented Buildings			
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	298	97	93	488	3	7	26	36	0	0	0	0
2	Kollam	258	62	78	406	0	0	0	0	0	0	0	0
3	Pathanamthitta	158	42	48	258	0	0	0	0	0	0	0	0
4	Alappuzha	192	67	58	317	0	0	0	0	0	0	0	0
5	Kottayam	169	57	60	286	0	0	0	0	0	0	0	0
6	Idukki	65	40	56	161	0	0	0	0	0	0	0	0
7	Ernakulam	181	91	87	359	0	0	0	0	2	0	0	2
8	Thrissur	115	65	80	260	0	0	0	0	15	0	0	15
9	Palakkad	184	53	81	318	0	0	0	0	33	1	0	34
10	Malappuram	350	113	82	545	0	0	0	0	62	18	2	82
11	Kozhikode	181	74	69	324	0	0	0	0	35	3	1	39
12	Wayanad	91	34	39	164	0	0	1	1	1	0	0	1
13	Kannur	114	76	83	273	0	0	0	0	23	14	2	39
14	Kasaragod	141	72	77	290	0	0	0	0	12	5	1	18
	Total	2545	847	969	4461	3	7	27	37	183	41	6	230

Source. *Directorate of Public Instruction, Thiruvananthapuram*

Appendix 11.6

District - wise Details of Govt. Schools having Drinking water/Latrines/Urinal Facilities in Kerala (2006-07)

Sl. No	District	No. 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	296	91	117	503	288	90	119	495
2	Kollam	256	134	75	465	259	56	76	391
3	Pathanamthitta	168	42	46	253	166	42	46	256
4	Alappuzha	163	63	58	304	178	62	58	298
5	Kottayam	153	62	54	269	153	67	55	275
6	Idukki	73	37	56	166	77	39	56	172
7	Ernakulam	176	90	87	353	190	89	87	356
8	Thrissur	105	54	79	238	106	50	79	236
9	Palakkad	171	61	61	293	175	62	61	298
10	Malappuram	331	110	82	523	334	112	82	528
11	Kozhikode	165	74	69	308	160	74	69	303
12	Wayanad	81	30	38	152	88	32	40	160
13	Kannur	101	75	83	259	100	75	83	258
14	Kasaragod	136	71	74	281	136	72	74	282
	TOTAL:	2398	997	982	4375	2399	925	987	4310

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.7

Management-wise/Standardwise Enrolment of Students in Schools: Kerala 2007-08

(Nos)

Management	Standards														
	I	II	III	IV	Total	V	VI	VII	Total	VIII	IX	X	Total	Total I to X
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Government	117997	135552	141501	145815	540875	138959	138316	139983	415258	154468	157824	145343	457635	1413766
Aided	228404	255171	260308	261383	1005264	311300	317102	322897	951099	309109	306841	277553	893503	2849866
Un Aided	42151	43533	42793	43001	171478	35669	33999	32243	102911	31273	30747	30368	92388	366777
Grand Total	388552	434256	444600	450199	1717617	484928	489417	494923	1469268	490850	495412	453264	1439526	4626411

Source: Directorate of Public Instruction, Thiruvananthapuram

Appendix 11.8

Enrolment of Students in Schools– District-wise and Stage-wise (2007- 08)

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	77642	79715	157357	66562	66836	133398	67270	68256	135526	211474	212807	424261
2	Kollam	58008	58283	116292	54744	53342	108086	55342	52495	107837	168095	164120	332215
3	Pathanamthitta	22617	22101	44718	22238	21474	43712	23896	22073	45969	68551	65648	134199
4	Alappuzha	42661	43348	86009	40896	39142	80038	42599	40163	82762	126156	122653	248809
5	Kottayam	42908	42092	84900	38259	37001	75260	38386	37694	76080	119453	116787	236240
6	Idukki	28149	25810	53959	22969	21235	44204	20846	18667	39513	70064	65612	135676
7	Ernakulam	65220	64715	129935	60521	58036	118557	60397	58926	119323	186138	181677	367815
8	Thrissur	79846	78882	158728	69872	67584	137456	66321	65005	131329	216039	211474	427513
9	Palakkad	80806	79777	160583	69820	68338	138158	65101	63879	128980	215527	209994	425521
10	Malappuram	152540	147394	299934	123636	113684	237322	115490	111803	227293	391666	372881	764549
11	Kozhikode	85817	83753	169570	73237	69238	142475	72000	69587	141587	231054	222578	453632
12	Wayanad	26238	25297	51535	20426	19453	39879	17314	17074	34388	63977	61824	125801
13	Kannur	65394	63341	128735	57145	53677	110822	56619	54504	111123	179158	171522	350680
14	Kasaragod	39400	38162	77562	31573	30329	61902	30635	29381	60016	101608	97872	199480
	Total	865247	852370	1717617	751899	717369	1469268	731816	707710	1439526	2348962	2277449	4626411

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.9

Standardwise Strength of SC/ST Students in Kerala: 2007-08

Standard	Government Schools				Private Aided Schools				Private Unaided Schools			
	Total	Others	SC	ST	Total	Others	SC	ST	Total	Others	SC	ST
1	2	3	4	5	6	7	8	9	10	11	12	13
I	117997	96543	17203	4251	228404	200264	24494	3646	42151	40363	1646	142
II	135562	111080	19882	4600	255171	223571	27749	3851	43533	41592	1797	144
III	141501	116506	20623	4372	260006	227546	29110	3650	42793	41088	1584	121
IV	145815	120552	20757	4506	261383	229736	27979	3668	43001	41273	1593	135
V	136959	113599	18979	4381	311300	272414	35028	3858	36669	35362	1130	177
VI	138316	115351	18806	4159	317102	278771	34929	3402	33999	32828	1014	157
VII	139983	118342	18329	3312	327697	285619	34161	2917	32243	31260	867	116
VIII	154468	131457	19617	3394	305109	272567	30118	2424	31273	30343	828	102
IX	157824	135215	19581	3028	305841	274930	29792	2119	30747	29811	798	138
X	145343	125649	17319	2375	277553	250871	25142	1540	30368	29540	719	109
Total	1413768	1184294	191096	38378	2845866	2516289	298502	31075	366777	353460	11976	1341

Source: Directorate of Public Instruction, Thiruvananthapuram

Appendix 11.10

District-wise/Stage-wise Drop Out Ratio in Schools: 2005-06

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	169948	848	0.50	133666	716	0.54	139884	797	0.57
2	Kollam	122809	510	0.42	106523	609	0.57	110371	1251	1.13
3	Pathanamthitta	51083	131	0.26	44096	134	0.30	50629	154	0.30
4	Alapuzha	94206	463	0.49	79969	246	0.31	88079	699	0.79
5	Kottayam	96474	334	0.35	76023	209	0.27	80111	746	0.93
6	Idukki	54462	495	0.91	42664	411	0.96	41771	1040	2.49
7	Ernakulam	144384	973	0.67	118238	403	0.34	123408	1379	1.12
8	Thrissur	175032	496	0.28	137149	432	0.31	134539	1789	1.33
9	Palakkad	170194	1499	0.88	133170	985	0.74	132773	2169	1.63
10	Malappuram	298482	1435	0.48	234107	1083	0.46	232107	3837	1.65
11	Kozhikode	176563	930	0.53	140449	553	0.39	145050	1884	1.30
12	Wayanad	52933	875	1.65	36723	414	1.13	36647	62	0.17
13	Kannur	138540	811	0.59	113723	628	0.55	118132	1771	1.50
14	Kasargode	80343	892	1.11	60065	788	1.31	60787	1637	2.69
	Total	1825453	10692	0.59	1456565	7613	0.52	1494288	19215	1.29

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.11

Stage-wise and Management-wise Number of Teachers in Schools in Kerala: 2006-07

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.S. Teachers	3874	9603	13477	6620	19135	25755	230	1858	2091	10727	30595	41073
U.P.S. Teachers	4327	8336	12663	9409	21211	30620	206	1052	1258	14022	31401	45423
H.S. Teachers	11245	18387	29632	14837	35151	49988	2229	7952	10181	27311	61340	88651
TTI Teachers	196	210	406	307	366	673	0	0	0	503	576	979
Total	19642	36536	55130	30973	75963	106936	2748	11412	14060	52113	124013	176126

Source: Directorate of Public Instruction, Thiruvananthapuram

Appendix 11.12

Protected Teachers in Kerala- 2006-2007

Sl No	Name of District	Deployed in Govt School				Retained in parent school				Deployed in other aided school				Undeployed				Total Number of Protected Teachers			
		H.S.A	PD	Spl.	Total	H.S.A	PD	Spl.	Total	H.S.A	PD	Spl.	Total	H.S.A	PD	Spl.	Total	H.S.A	PD	Spl.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Thiruvananthapuram	43	30	31	74	3	8	37	48	0	3	21	24	1	0	3	4	47	39	92	148
2	Kollam	100	149	57	306	26	27	55	108	8	12	6	26	5	11	14	30	139	199	132	470
3	Pathanamthitta	6	27	6	39	5	12	22	39	0	8	2	11	5	4	3	12	16	52	33	101
4	Alappuzha	31	68	35	134	12	28	33	73	4	6	2	12	3	7	1	11	60	109	71	230
5	Kottayam	18	12	0	28	1	11	35	47	7	8	1	16	1	0	2	3	25	31	38	94
6	Idukki	5	6	4	15	1	1	15	17	0	8	1	7	1	0	3	4	7	13	23	43
7	Ernakulam	7	41	7	55	6	26	73	105	5	12	16	33	18	8	5	31	36	87	101	224
8	Thrissur	18	80	20	118	9	39	48	96	4	4	2	10	14	16	18	48	45	139	88	272
9	Palakkad	8	88	19	115	2	28	32	63	0	4	0	4	7	34	5	46	17	155	56	228
10	Malappuram	4	110	19	133	0	71	36	107	0	6	0	6	0	0	0	0	4	187	55	246
11	Kozhikkode	46	207	50	303	4	83	13	100	2	0	0	2	34	91	12	137	86	381	75	542
12	Wayanad	1	8	3	12	1	1	2	4	1	7	0	8	1	3	2	6	4	19	7	30
13	Kannur	40	113	18	171	4	96	63	163	5	2	0	7	29	178	9	216	78	389	90	557
14	Kasaragod	9	29	6	43	3	23	3	29	0	0	0	0	0	0	0	0	12	52	8	72
	TOTAL	304	862	274	1548	77	453	467	997	36	79	51	166	119	352	77	548	536	1852	868	3257

Source: Directorate of Public Instruction, Thiruvananthapuram

Appendix 11.13

SSLC Examination Result 2005 (a)

	TOTAL	BOYS	GIRLS	SC	ST
No.of Candidates Attended	472821	230437	242384	44006	4706
No. of Candidates Passed	277125	125877	151248	16323	1561
Percentage of Pass	58.61	54.63	62.4	37.09	32.55

SSLC Examination Result 2006 (b)

	TOTAL	BOYS	GIRLS	SC	ST
No. of Candidates Attended	471305	232521	238784	44063	5085
No. of Candidates Passed	326741	153061	173680	21405	2094
Percentage of Pass	69.33	65.83	72.74	48.58	41.18

SSLC Examination Result 2007 (c)

	TOTAL	BOYS	GIRLS	SC	ST
No. of Candidates Attended	458890	227256	231634	42564	4907
No. of Candidates Passed	377356	181569	195787	27803	2877
Percentage of Pass	82.23	79.9	84.52	65.17	60.67

Source: Office of the Commissioner of Government Examinations

Appendix 11.14

District-wise/Management-wise Number of Higher Secondary Schools in Kerala 2007

Sl.No	District	Number of Higher Secondary Schools				Number of batches			
		Govt.	Aided	Un-aided	Total	Science	Humanities	Commerce	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	73	46	44	163	359	110	138	607
2	Kollam	55	49	25	129	251	77	95	423
3	Pathanamthitta	26	35	29	90	187	66	75	328
4	Alappuzha	40	49	16	105	219	69	81	369
5	Kottayam	37	59	28	124	277	92	84	453
6	Idukki	24	26	15	65	117	37	45	199
7	Ernakulam	62	63	53	178	387	94	166	627
8	Thrissur	61	44	45	150	284	79	123	486
9	Palakkad	55	23	30	108	212	79	93	384
10	Malappuram	82	44	71	197	402	131	206	739
11	Kozhikode	62	40	34	136	241	90	101	432
12	Wayanad	26	11	7	44	65	32	28	125
13	Kannur	72	26	27	127	231	72	98	401
14	Kasargod	55	11	15	81	123	51	57	231
	Total	729	529	439	1697	3335	1079	1390	5804

Source: Directorate of Higher Secondary Education

Appendix 11.15
Batch-wise Annual intake of Students in Higher Secondary Schools 2006-07

Sl No	No. of Batches	Sanctioned Seats(Nos.)				Students Admitted(Nos)			
		Govt	Aided	Un-aided	Total	Govt	Aided	Un-aided	Total
1	2	3	4	5	6	7	8	9	10
1	Science	64380	79380	56340	200100	45373	55944	39707	141024
2	Humanities	29340	26100	9300	64740	22190	19739	7034	48963
3	Commerce	36060	28620	18720	83400	28851	22899	14978	86728
	Total	129780	134100	84360	348240	96414	98582	61719	256715

Source: *Directorate of Higher Secondary Education*

Appendix 11.16 (a)
Numer of Students appeared and passed in Higher Secondary Education(2006-2007)

Year	Number of students appeared			Number of students Passed			
	Boys	Girls	Total	Boys	Girls	Total	%
1	2	3	4	5	6	7	8
2006-2007	154330	179135	333465	90360	125082	215442	65%

Appendix 11.16 (b)
Number of SC Students Appeared and Passed in Higher Secondary Examination 2006-2007

Year	Number of Students appeared			Number of Students Passed			
	Boys	Girls	Total	Boys	Girls	Total	%
1	2	3	4	5	6	7	8
2006-2007	10989	15505	26494	4752	7686	12438	47%

Appendix 11.16 (c)
Number of ST Students Appeared and Passed in Higher Secondary Examination-2006-2007

Year	Number of Students appeared			Number of students Passed			
	Boys	Girls	Total	Boys	Girls	Total	%
1	2	3	4	5	6	7	8
2006-2007	1333	1666	2999	499	704	1203	40%

Source. *Directorate of Higher Secondary Education*

Appendix 11.17

District-wise details of Vocational Higher Secondary Schools and Courses during 2007-08

Sl. No	District	No. of Schools			No. of Courses		
		Govt	Aided	Total	Govt	Aided	Total
1	Thiruvananthapuram	30	11	41	74	36	110
2	Kollam	20	32	52	51	109	160
3	Alappuzha	10	17	27	35	21	56
4	Pathanamthitta	14	7	21	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	28	10	38	64	32	96
9	Palakkad	18	7	25	37	20	57
10	Malappuram	24	3	27	53	7	60
11	Kozhikode	20	8	28	51	23	74
12	Wayanad	8	2	10	13	5	18
13	Kannur	18	1	19	38	2	40
14	Kasargod	19	3	22	30	8	38
	Total	281	128	389	606	394	1000

Source: Directorate of Vocational Higher Secondary Education

Appendix 11.18

Number of Students Appeared and Passed Vocational Higher Secondary Examination 1998-2007

Year of Examination	Number of students Appeared			Number of students Passed		
	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7
1998 March	8483	9778	18261	3184	5174	8358
1998 September	4091	2961	7052	1878	1983	3861
1999 March	8701	9864	18566	5050	7194	12244
1999 September	3559	2872	6431	1127	825	1952
2000 March	10009	11243	21252	5161	7266	12427
2000 September	3620	3461	7081	1159	1112	2271
2001 March	11905	7298	19203	8091	4960	13051
2002 March	11534	11840	23374	8364	8874	17238
2003 March	11681	13862	25543	7782	10941	18723
2004 March	12364	14522	26886	8341	10616	18956
2005 March	12629	14391	27020	9637	12222	21859
2006 March	12410	14329	26739	9173	11856	21029
2007 March	11084	12950	24034	7774	10972	18746

Source: Directorate of Vocational Higher Secondary Education

Appendix 11.19
District wise Number of Arts and Science Colleges in Kerala 2007

Sl No	District	Government	Private	Total
1	Thiruvananthapuram	8	12	20
2	Kollam	1	12	13
3	Pathanamthitta		9	9
4	Alappuzha		12	12
5	Kottayam	1	21	22
6	Idukki	2	8	8
7	Ernakulam	4	21	25
8	Thrissur	3	17	20
9	Palakkad	4	9	13
10	Malappuram	3	8	11
11	Kozhikode	6	8	14
12	Wayanad	2	4	6
13	Kannur	2	9	11
14	Kasargod	3	2	5
	Total	**39**	**150**	**189**

Source: Directorate of Collegiate Education

Appendix.11.20

Details of B.A Degree Enrolment in Colleges during the year 2006-07

(Students in Nos)

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	Economics	6318	4418	6221	4382	5863	4021
2	History	3628	2461	3115	2352	2408	2111
3	Sociology	881	736	798	796	328	310
4	Politics	1025	912	997	873	401	402
5	Philosophy	861	610	592	423	311	202
6	Geography	168	80	98	61	70	42
7	Psychology	440	230	371	141	281	160
8	English	4429	2318	4251	2301	3521	2136
9	Malayalam	3621	2231	3461	2218	3098	2095
10	Hindi	1211	815	1021	635	821	321
11	Islamic History	427	248	378	230	228	98
12	Arabic	430	315	401	218	202	178
13	Sanskrit	471	304	396	296	198	56
14	Kannada	40	20	51	12	30	12
15	Tamil	60	32	74	20	40	7
16	Music	83	68	90	30	47	8
	Total	24092	15798	22315	14998	17837	12162

Source: Directorate of Collegiate Education

Appendix.11.21

Details of B.Sc.Degree Enrolment in Colleges during 2006- 2007

(Students in Nos.)

Sl.No	Subject	First Year		Second Year		Final Year	
		Total	of which girls	Total	of which girls	Total	of which girls
1	2	3	4	5	6	7	8
1	Mathematics	5568	3386	5212	3073	4408	2872
2	Physics	4302	3112	4020	2983	3316	2681
3	Chemistry	4212	3013	3925	2817	3016	2513
4	Zoology	4017	2912	3973	2671	3062	2494
5	Botany	3652	2921	3863	2621	3030	2521
6	Statistics	308	128	222	95	125	82
7	Geology	218	115	162	88	108	92
8	Homescience	102	67	76	57	31	26
9	Bio Chemistry	158	50	110	41	95	81
10	Polymer Chemistry	172	48	130	37	95	85
11	Bio Technology	156	50	207	42	96	88
12	Computer Science	161	30	126	28	98	90
13	Industrial Fish and Fisheries	68	29	40	26	25	15
14	Electronics	112	30	92	27	60	38
15	Analytical Chemistry	52	17	30	10	10	8
	Total	23258	15908	22188	14616	17575	13686

Source: Directorate of Collegiate Education

Appendix. 11.22
Details of B.Com Degree Enrolment in

Year	Students in Number		
	Boys	Girls	Total
First Year	3882	4502	8384
Second Year	3860	4468	8328
Third Year	3771	4035	7806
Total	11513	13005	24518

Source: Directorate of Collegiate Education

Appendix.11.23
Details of Enrolment of M.A. Students in Colleges during 2006- 2007 (in Nos.)

Sl.No	Subject	First Year			Second Year		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
1	Economics	92	798	890	68	772	840
2	History	96	450	546	62	421	483
3	Sociology	20	18	38	8	6	14
4	Politics	35	240	275	41	186	227
5	Philosophy	28	50	78	21	30	51
6	Geography	20	37	57	15	28	43
7	Psychology	18	27	45	9	15	24
8	English	128	622	750	112	610	722
9	Malayalam	125	461	586	110	434	544
10	Hindi	106	198	304	80	187	267
11	Geology	22	16	38	25	8	33
12	Arabic	48	57	105	71	25	96
13	Sanskrit	32	61	93	28	40	68
14	Kannada	12	15	27	9	10	19
15	Islamic History	38	152	190	21	121	142
16	Tamil	9	12	21	5	8	13
	Total	829	3214	4043	685	2901	3586

Source: Directorate of Collegiate Education, Thiruvananthapuram

Appendix.11.24
Details of Enrolment of M.Sc. Students in Colleges during 2006 - 07(in Nos.)

Sl. No	Subject	First Year			Second Year		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
1	Mathematics	188	798	986	161	710	871
2	Statistics	163	651	814	172	602	774
3	Physics	171	668	839	148	623	771
4	Chemistry	172	652	824	155	592	747
5	Zoology	178	578	756	157	532	689
6	Botany	172	521	693	121	560	681
7	Home Science	12	85	97	10	60	70
8	Geology	38	52	90	20	47	67
9	Analytical Chemistry	30	41	71	11	30	41
10	Bio-Chemistry	21	32	53	9	21	30
	Total	794	2629	3423	631	2465	3096

Source: Directorate of Collegiate Education, Thiruvananthapuram

Appendix. 11.25

Details of Enrolment of M.Com Students in Colleges during 2006-07(in Nos)

Sl.No	Category	Enrolment		
		Boys	Girls	Total
1	2	3	4	5
1	First Year	528	1220	1748
2	Second Year	412	1181	1593
	Total	940	2401	3341

Source: Directorate of Collegiate Education, Thiruvananthapuram

Appendix. 11.26

University-Wise Number of Teachers in Arts & Science Colleges in Kerala(2004-05 to 2006-07)

Sl.No.	Name of University	Number of Teachers								
		2004-05			2005-06			2006-07		
		Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11
1	Kerala	1632	1535	3167	1528	1305	2833	1515	1297	2812
2	Calicut	1461	1372	2833	1401	1208	2609	1386	1108	2594
3	Mahatma Gandhi	1987	1701	3688	1891	1632	3523	1871	1618	3489
4	Kannur	402	378	780	562	275	837	546	256	802
	TOTAL:	5482	4986	10468	5382	4420	9802	5328	4369	9697

Source. Directorate of Collegiate Education, Thiruvananthapuram

Appendix 11.27

Details of Scheduled Caste/Scheduled Tribe Students in Arts and Science Colleges during 2006-07

Sl. No	Name of Course	Number of SC/ST Students					
		Scheduled Cast		Scheduled Tribe		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
1	M Phil	8	0			8	9
2	M A	161	595	29	65	190	660
3	M Sc.	185	638	22	71	207	709
4	M Com	124	333	18	18	142	351
5	M.S.W	11	23	2	2	13	25
6	M.B.A	16	7	6	6	22	13
7	M.C.A	2	2			2	2
8	B.B.A	68	59	13	5	79	64
9	B.B.S	10	15	5	3	15	18
10	B.P.T.	15	1	1	1	16	2
11	B.B.M	28	8	2	1	30	9
12	B.C.A	19	16	4	2	23	18
13	B.A	3206	5877	461	887	3667	6764
14	B.Sc	1900	4339	167	411	2067	4747
15	B.Com	1371	1771	138	175	1509	1946
16	B.Ed	61	220	8	32	69	252
17	M.Ed	8	4			8	4
	Total	7189	13914	876	1679	8065	15593

Source: Directorate of Collegiate Education

Appendix-11.28

District-wise and Management wise details of Engineering Colleges in Kerala-2007

Sl No	Name of District	No 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	13	15	833	0	3600	4433
2	Kollam	0	1	8	9	0	500	2145	2645
3	Pathanamthitta	0	0	5	5	0	0	1350	1350
4	Alappuzha	0	0	3	3	0	0	600	600
5	Kottayam	1	0	6	7	300	0	1845	2145
6	Idukki	1	0	3	4	240	0	900	1140
7	Ernakulam	0	1	12	13	0	480	4030	4510
8	Thrissur	2	0	8	10	533	0	2550	3083
9	Palakkad	1	1	1	3	180	480	240	900
10	Malappuram	1	0	3	4	48	0	620	668
11	Kozhikode	1	0	3	4	240	0	1080	1320
12	Wayanad	1	0		1	120	0	0	120
13	Kannur	1	0	3	4	300	0	900	1200
14	Kasaragod	0	0	2	2	0	0	510	510
	Total	11	3	70	84	2797	1460	20570	24822

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix. 11.29

Branch-wise Distribution of Seats in Engineering Colleges-2007-08

Sl No	Name of Course/Branch	Total Sanctioned Seats
1	2	3
1	Applied Electronics	1200
2	B Tech (Agriculture Engineering)	46
3	Architecture	140
4	Bio-medical Engineering	100
5	Bio-Technology	240
6	Civil Engineering	1772
7	Chemical Engineering	150
8	Automobile Engineering	240
9	Computer Science & Engineering	4920
10	Dairy Science & Technology	23
11	Electronics and Communication	5895
12	Electrical and Electronics	3510
13	Electronics & Instrumentation Instrumentation and Control	300
14	Engineering	120
15	Industrial Engineering	30
16	Information Technology	2415
17	Mechanical (Automobile)	240
18	Mechanical (Engineering)	3291
19	Mechanical (Production Engineering)	90
20	Polymer Engineering	60
21	Production Plant Engineering	60
22	Printing Technology	30
23	Bio Technology & Bio Chemical Engineering	60
	Total	24822

Source: Directorate of Technical Education, Thiruvananthapuram

Appendix- 11.30(a)

Annual Intake and Students Strength in Government Polytechnic in Kerala

(2006-07 to 2007-08)

Year	No. of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2005-06	43	22068	2457	24520	7344	816	8160
2006-07	43	22032	2448	24480	7344	816	8160
2007-08	43	22016	2464	24480	7328	832	8160

Source: Directorate of Technical Education

Appendix- 11.30(b)

Annual Intake and Students Strength in Private Aided Polytechnic in Kerala

(2006-07 to 2007-08)

Year	No. of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2005-06	6	4059	451	4510	1350	150	1500
2006-07	6	4050	450	4500	1340	160	1500
2007-08	6	4053	452	4505	1346	155	1500

Source: Directorate of Technical Education

Appendix. 11.31

Trade-wise Annual Intake of students in Polytechnics - 2007-08

Sl. No.	Name of Trade	Sanctioned Intake	Actual Intake
1	Civil Engineering	960	960
2	Mechanical Engineering	1310	1310
3	Electrical Engineering	970	970
4	Electronics	1770	1770
5	Chemical Engineering	90	90
6	Automobile	240	240
7	Textile Technology	160	160
8	Computer Engineering	1840	1840
9	Instrument Technology	110	110
10	Polymer Technology	140	140
11	Computer hardware Maintenance	470	470
12	Tool & Die making	90	90
13	Electronic Production	120	120
14	Architecture	70	70
15	Electronics & Communication	380	380
16	Electrical & Instrumentation	320	320
17	Wood A2 Paper Technology	40	40
18	Painting Technology	70	70
19	Commercial Practice	300	300
20	Electronics& Avionics	50	50
21	CA & BM	280	280
22	Bio Medical Engineering	40	40
23	Information Technology	40	40
	Total	9880	9880

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.32

Number of Students and Teachers in Polytechnics 2006& 2007

Type of Institutions	Students (in Nos)						Teachers (in Nos)					
	2006			2007			2006			2007		
	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	22032	2448	24480	22080	2540	24620	1330	80	1410	1344	90	1434
2. Private (Aided)	4050	450	4500	4150	460	4610	246	73	319	246	73	319
Total	26082	2898	28980	26230	3000	29230	1576	153	1729	1590	163	1753

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.33

Number of SC/ST Students and SC/ST Teachers in Polytechnics

Type of Institution	Students						Teachers					
	2005-06			2006-07			2005-06			2006-07		
	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	1958	490	2448	1965	485	2450	88	14	102	90	20	110
Private Aided Polytechnics	441	9	150	440	11	451	-	-	-	-	-	-

Appendix-11.34

Number of Students and Teachers in Technical High Schools

(2005-06 to 2007-08)

Year	Number of Students			Number of Teachers		
	Boys	Girls	Total	Men	Women	Total
1	2	3	4	5	6	7
2006-06	5830	625	6253	835	180	1015
2006-07	5674	631	6305	837	178	1015
2007-08	5670	630	6300	840	179	1019

Source: Directorate of Technical Education

Appendix 11.35 (a)
Number of SC Students and Teachers in Technical High Schools

(2006-07 to 2007-08)

Year	Number of Students			Number of Teachers		
	Boys	Girls	Total	Men	Women	Total
1	2	3	4	5	6	7
2006-06	440	60	500	98	42	140
2006-07	439	65	504	102	48	150
2007-08	450	60	510	105	45	150

Source: Directorate of Technical Education

Appendix 11.35 (b)
Number of ST Students and Teachers in Technical High Schools
(2006-07 to 2007-08)

Year	Number of Students			Number of Teachers		
	Boys	Girls	Total	Men	Women	Total
1	2	3	4	5	6	7
2005-06	105	20	125	27	8	35
2006-07	107	19	126	28	12	40
2007-08	104	18	122	29	13	42

Source: Directorate of Technical Education

Appendix. 11.36

Department wise Details of Courses in Cochin University of Science & Technology during 2007-08

Sl. No.	Name of the Courses	Duration of course	Sanctioned Intake	Actual Intake
1	2	3	4	5
	FACULTY OF ENGINEERING			
1	B.Tech Civil Engineering	8 Sem.	130	130
2	B.Tech Computer Science and Engg	8 Sem.	150	150
3	B.Tech Electrical & Electronics Engg.	8 Sem.	120	120
4	B.Tech Electronics & Comm.Engineering	8 Sem	150	150
5	B Tech Mechanical Engineering	8 Sem.	150	150
6	5 year Integrated MSc Software Engg	10 Sem.	40	40
7	B Tech Information Technology	8 Sem.	150	60+60
8	B Tech. Safety & Fire Engg.	8 Sem.	30	30
9	M.Tech Chemical Engg.	5 Sem.	15	15
10	M E by research (admissions only for Civil, Mechanical and Electronics Engg.)	5 Sem (Part time) 4 Sem. (Full time)	Variable Variable	Variable Variable
11	Ph D		Variable	Variable
	FACULTY OF ENVIRONMENTAL STUDIES			
12	MSc Environmental Tech Stream I. Env. Engg. Stream II Env.Bio tech	4 Sem. 4Sem.	6 6	6 6
13	Ph D		Variable	Variable
	FACULTY OF HUMANITIES			
14	Certificate programmes in French/ German/Japanese/Russian	1 Year	25	25 each
15	Diploma in Communicative English	1 Years	25	25
16	Diploma Programmes in French/German/Japanese/Russian	1 Years	10	10 each
17	Diploma in Functional Arabic	1 Years	20	20
18	Integrated Diploma in French/German/Japanese/Russian	1 Years	20	20 each
19	M.A Translation in German/Russian	4 Sem.	5	5each
20	M A Hindi Language and Literature	4 Sem	28	26
21	M Phil Hindi	2 Sem	10	10
22	PG Diploma in Translation, Administrative Drafting and Reporting in Hindi	1 Year	28	26
23	Ph D		Variable	Variable
	FACULTY OF LAW			
24	LLB	6 Sem.	60	60
25	LLM	4 Sem	36	36
26	PhD		Variable	Variable
	FACULTY OF MARINE SCIENCES			
27	MSc (Industrial Fisheries)	4 Sem.	18	18
28	MSc Meteorology	4 Sem.	12	12
29	M.Tech (Atmos.Sciences)	4 Sem.	10	10
30	MSc. Hydrochemistry	4 Sem.	12	12
31	M Phil Chemical Oceanography	2 Sem.	6	6
32	MSc Marine Biology	4 Sem.	19	19
33	M Phil Life Sciences	2 Sem.	6	5
34	MSc Marine Geology	4 Sem.	10	10
35	MSc Marine Geophysics	2 Years	10	10

Sl. No.	Name of the Courses	Duration of courses	Sanctioned Intake	Actual Intake
1	2	3	4	5
36	PG Diploma in Coastal Zone Management (No admission in the current year)	4 Sem.	16	16
37	MSc Oceanography	4 Sem.	12	12
38	M.Tech Ocean Technology	4 Sem	8	8
39	Ph D		Variable	Variable
	FACULTY OF SCIENCE			
40	MSc Applied Chemistry	4 Sem	12	12
41	M Phil Cehmistry	2 Sem.	9	9
42	M.Tech Industrial Catalysis	4 Sem.	10	10
43	M.Sc Biotechnology	4 Sem.	10	10
44	MSc Mathematics	4 Sem.	20	20
45	M.Sc (Operations Research & Computer Applns) (offered only odd years)	4 Sem.	15	15
46	MSc Physics	4 Sem.	25	25
47	M Phil Physics	2 Sem.	8	8
48	MSc Statistics (offered only in even years)	4 Sem.	15	15
49	M.Tech Engg. Statistics	4 Sem.	8	8
50	Ph D		Variable	Variable
	FACULTY OF SOCIAL SCIENCES			
51	M.Phil Applied Economics	2 Sem	10	10
52	MBE (Master of Business Economics)	4 Sem	15	15
53	MBA (Full time)	4 Sem	50	50
54	MBA (Part time)	6 Sem	30	30
55	MIB (Master of International Business)	4 Sem	30	30
56	M.Phil (Commerce)	2 Sem	6	6
57	Ph D		Variable	Variable
	FACULTY OF TECHNOLOGY			
58	5 year Integrated MSc in Photonics	10 Sem.	20	20
59	MCA	6 Sem	50	50
60	M Tech Electronics (with specialization in Digital Electronics Microwave and Radar Electronics)	4 Sem.	20	20
61	MSc Electronics Science (with specialization in Artificial Intelligence, Robotic Microwave Electronics and Computer Technology)	4 Sem.	25	25
62	B.Tech Instrumentation	8 Sem	28	28
63	B.Tech Polymer Science & Rubber Technology	8 Sem	20	20
64	M Tech Polymer Technology	4 Sem	10	10
65	B Tech Naval Architecture & ship Building	8 Sem.	24	24
66	M Tech Computer Aided Strucutural analysis and Design	4 Sem	15	15
67	M Tech Opto Electronics & Laser Technology	4 Sem.	10	10
68	M.Phil Photonics	2 Sem.	6	6
69	MCA	6 Sem.	30	30
70	M Tech Computer & Information Science	4 Sem.	14	14
71	M.Tech Software Engineering	4 Sem.	13	13
72	MCA	6 Sem.	60	60
73	Ph D		Variable	Variable

Source:- Cochin University of Science & Technology

Appendix 11.37

University-wise details of Engineering Colleges under Co-Operative Sector-2007

Sl No	College	Name of Courses	Duration of Courses	Sanctioned Intake	Actual intake
1	2	3	4	5	6
1	College of Engineering Perumon	Computer Science	4	60	240
		Electronics& Communication	4	120	480
		Electrical & Electronics	4	60	240
		Information Technology	4	60	240
2	College Endineering Kidangoor	Computer Science	4	60	240
		Electronics& Communication	4	60	240
		Electrical & Electronics	4	60	240
		Information Technology	4	45	180
		Electronics & Instrumentation	4	60	240
3	Co-operative Institute of Technology, Vadakara	Computer Science	4	60	240
		Electronics& Communication	4	60	240
		Electronics & Instrumental	4	60	240
		Information Technology	4	60	240
4	College of Engineering Thalassery	Computer Science	4	60	240
		Electronics& Communication	4	120	480
		Electrical & Electronics	4	60	240
		Information Technology	4	60	240
		Mechanical Engineering	4	60	240
5	College of Engineering Thrikaripoor	Computer Science	4	60	240
		Electronics & Communication	4	60	240
		Electrical & Electronics	4	60	240
		Information Technology	4	30	120

Appendix 11.38

ITI wise details of seat strength and enrolment in Government ITI's

Sl No	Name of Institution	Total Seat Strength			Total Enrolment			Women			SC			ST		
		2004-05	2005-06	2006-07	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	ITI D'Puram	690	690	690	686	636	638	93	98	89	90	120	121	1	1	2
2	Aryanad	57	57	57	56	55	55	5	7	4	23	35	30	1	8	14
3	Chadayamangalam	800	800	800	831	764	764	70	64	54	100	80	84	8	3	10
4	Kazhakkuttam(W)	233	233	233	225	233	233	225	233	233	24	25	32	1	–	0
5	Attingal	469	570	670	306	564	564	14	43	66	25	77	45	–	1	3
6	Chandanathoppe, Kollam	673	640	640	643	540	540	69	42	56	60	52	58	5	2	0
7	Kollam(W)	257	257	257	212	212	212	212	212	213	30	32	15	7	–	0
8	Chathannoor	57	57	57	55	55	55	17	17	15	5	8	8	3	–	0
9	Basic Training Centre (BTC,Kollam)	110	110	110	100	110	110	5	8	10	9	11	21	2	..	0
10	Chengannur	741	741	741	709	580	580	53	51	58	100	119	121	8	3	31
11	(W) Chengannur	108	106	106	97	103	103	97	103	122	20	24	26	2	1	2
12	Cherthala	114	114	114	105	110	110	6	21	26	10	16	10	1	0	2
13	Pallickathodu	228	371	371	196	305	305	15	16	22	31	23	22	2	5	9
14	Ettumanoor	596	556	596	585	558	558	30	27	36	58	51	57	2	5	3
15	Kanippayur	138	138	138	134	128	128	9	5	10	20	14	17	1	3	10
16	Kalamassery	590	590	590	567	542	542	41	36	52	71	70	55	11	7	0
17	(W) Kalamassery	110	110	110	81	80	90	81	90	104	10	17	15	-	0	10
18	Chalakudy	580	580	580	572	558	558	49	56	61	70	74	75	4	2	0
19	(W)Chalakkudy	96	99	96	84	93	83	64	82	170	15	19	20	1	0	10
20	Mala	120	120	120	108	106	106	26	25	31	16	17	20		0	1
21	Malampuzha	560	560	560	554	493	493	49	47	48	79	79	99	5	6	0
22	(W) Malampuzha	72	110	110	65	109	109	65	109	102	8	8	9		0	1
23	Kuzhalmannam	96	96	96	92	91	91	8	15	17	6	10	10	2	0	2
24	Arecode	242	242	242	229	190	190	28	24	30	38	20	43	0	0	0
25	Nilambur	36	36	36	36	36	36	0	2	6	4	30	26	3	0	7
26	Kalpetta	69	114	114	54	113	113	4	12	14	2	18	10	4	0	1
27	Kozhikode	510	510	510	496	490	499	54	46	60	68	43	65	4	4	7
28	(W)Kozhikode	192	219	219	161	210	210	161	210	162	23	38	15	3	0	1
29	Quilandy	44	44	44	38	38	38	4	6	7	6	9	4	2	0	0
30	Kannur	640	560	560	626	524	524	63	54	56	66	62	77	7	6	7
31	(W) Kannur	96	96	96	85	84	84	85	84	122	6	7	7	–	1	2
32	Kasargode	90	210	210	65	186	186	19	27	28	5	10	18	–	0	4
33	Kayyur	124	124	124	101	118	118	43	36	40	7	9	8	1	3	1
34	Attappadi		50	50		42	42		10	15		10	10		0	4
	Total	9529	9851	9951	8964	9087	9087	1821	1806	2078	1120	1234	1354	86	55	151

Source : Industrial Training Department

Appendix 11.39

District-wise Details of Trainees admitted during 2007-08 (As on 9/2007) in ITI/ITC/SCDD (No

Sl. No	District	No. of Trainees admitted		SC		ST		Women		SCDD/ STDD	PH
		ITI	ITC	ITI	ITC	ITI	ITC	ITI	ITC	ITC	
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	2300	1879	400	110	12	1	500	468	159	2
2	Kollam	964	2785	125	179	2	0	235	424	94	4
4	Alappuzha	683	1655	143	331	5	0	154	216	66	4
3	Pathanamthitta	110	1078	20	98	15	19	21	128	53	1
5	Idukki	120	254	15	10	3	42	5	49	16	0
6	Kottayam	863	966	90	54	10	2	61	150	50	0
7	Ernakulam	635	1951	87	100	7	0	127	158	33	0
8	Trissur	780	1259	110	29	2	2	156	84	167	5
9	Palakkad	700	600	96	20	6	2	171	15	70	0
10	Malappuram	228	800	54	10	0	0	26	7	45	1
11	Kozhikode	747	1187	88	22	4	7	282	172	37	5
12	Wayanad	113	127	19	10	0	4	12	34	0	2
13	Kannur	608	534	75	4	7	0	138	70	31	2
14	Kasaragod	304	157	32	15	13	0	68	38	36	4
	Total	9183	18000	1354	992	86	79	1940	2009	855	30

Source : Industrial Training Department

Appendix 11.40

Trade wise in take and out turn in Govt. ITIs during 2006-07 as on 30-06-2007 (1 Year Course) (In Nos.)

Sl. No.	Name of trade	Students admitted in 2005						Students passed					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Plumber	435	0	52	0	4	0	350	0	40	0	3	0
2	Mech Diesel	268	4	23	1	3	1	165	2	15	2	2	0
3	Secretarial Practice	0	60	0	8	0	0	0	40	0	3	0	0
4	COPA	162	450	32	60	1	0	130	395	20	52	1	2
5	Steno-English	123	212	19	47	1	0	85	200	6	38	0	2
6	Steno-Hindi	5	65	0	5	1	0	3	42	0	1	1	0
7	Dress Making	0	94	0	15	0	0	0	90	0	10	0	0
8	Welder	825	0	110	0	3	0	502	0	69	0	1	0
9	Foundryman	150	0	30	0	0	0	0	0	0	0	0	0
10	DTPO	0	865	0	11	0	0	65	75	0	8	0	0
11	Front Office Assistan	5	15	0	3	1	0	0	15	0	0	0	0
12	Upholstery	27	0	5	0	0	0	0	0	0	0	0	0
13	SMW	300	35	25	11	3	0	140	5	15	0	0	0
14	Carpenter	435	0	36	0	1	0	255	250	21	0	0	0
15	PPO	64	14	10	5	0	0	30	24	4	1	0	0
16	Mech Tractor	70	0	18	0	0	0	33	33	4	0	0	0
17	Sanitary Hardware Fi	11	0	2	0	0	0	0	0	0	0	0	0
18	Mech Auto Electrical and Electronics	15	0	0	0	0	0	0	0	0	0	0	0
19	Health Sanitary Inspe	15	31	12	5	0	0	0	0	0	0	0	0
20	Driver-cum Mechanic	70	0	11	0	0	0	0	0	0	0	0	0
21	Diarying	18	6	2	0	0	0	0	0	0	0	0	0
22	Network Technician	18	2	2	0	0	0	0	0	0	0	0	0
23	Data Entry Operator	30	1	0	0	0	0	0	0	0	0	0	0
24	Architectural Assistar	19	20	6	2	0	0	0	0	0	0	0	0
25	Hospital Housekeepi	20	18	7	3	0	0	0	0	0	0	0	0
	Total	3093	1883	402	176	18	1	1748	1171	194	124	8	4

Source : Industrial Training Department

Appendix 11.41

Trade wise in take and out turn in Government ITI's during 2005-07 as on 30.09.2007 (two year course) (in Nos)

Sl.No	Name of Trade	Students admitted in 2004						Students passed					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	MRTV	314	120	61	21	3	[illegible]	167	52	25	11	2	0
2	D/Civil	172	160	20	28	4	2	125	150	7	24	2	2
3	D/Mech	72	30	11	6	0	0	40	14	4	3	0	2
4	MRAC	283	24	67	12	1	0	180	11	32	1	0	1
5	Surveyor	52	80	10	9	0	0	27	80	3	3	0	3
6	Fitter	688	10	78	12	2	0	537	9	41	4	0	3
7	Wireman	427	0	56	0	1	0	251	0	24	0	3	0
8	Electronic Mechanic	393	255	75	69	4	0	202	130	24	17	1	0
9	Electrician	481	38	46	14	2	0	238	17	15	5	1	0
10	Mechanic Computer Hardware	64	26	15	10	2	0	30	11	12	2	2	0
11	MMV	524	12	53	10	10	0	409	17	49	0	6	0
12	Turner	356	1	45	0	1	0	277	8	32	0	1	0
13	Machinist	303	13	35	7	1	0	210	10	15	5	0	0
14	Painter General	85	4	15	0	1	0	72	2	11	0	0	0
15	Instrument Mechanic	82	12	5	1	1	0	63	9	5	0	1	0
16	Electro Plater	0	0	0	0	0	0	0	0	0	0	0	0
17	MMTM	9	4	1	0	0	0	0	1	1	0	0	0
18	Agriculture Machinery	15	6	3	0	0	0	0	1	1	0	0	0
19	Mechanic Industrial Electronics	10	19	5	4	0	3	10	13	0	0	0	0
	Total	4329	834	601	192	33	6	2838	524	301	75	19	11

Source: Industrial Training Department

Appendix 11.42

New Trades Introduced during the last 2 years as part of Modernisation

Sl.No	Name of ITI	Trade	Unit
1	ITI Dhanuvachapuram	Mechanic Computer Hardware	1
		Mechanic Consumer Electronics	1
		Health Sanitary Inspector	1
		Driver cum Mechanic	1
2	ITI Thiruvananthapuram	Mechanic Computer Hardware	1
		Network Technician	1
3	ITI Kollam	Lift Mechanic Operator	1
		Health Sanitary Inspector	1
4	ITI(W)Kollam	Network Technician	1
		Data Entry Operator	1
		Front Office Assistant	1
5	ITI Changanur	Mechanic Auto Electrical & Electronics	1
6	ITI Ettumanoor	Architectural Assistant	1
7	ITI Pallickathode	Mechanic Computer Hardware	1
		Front Office Assistant	1
8	ITI Kattappana	Front Office Assistant	1
9	ITI Kalamassery	Driver cum Mechanic	1
10	ITI Areacode	Lift Mechanic Operator	1
11	ITI Kozhikode	Mechanic Computer Hardware	1
		Mechanic Auto Electrical & Electronics	1
		Fashion Technology	1
12	ITI(W) Kozhikode	Mechanic Computer Hardware	1
		Front Office Assistant	1
		Data Entry Operator	1
13	ITI Kannur	Mechanic Mechatronics	1
		Building Maintenance	1

Source: Industrial Training Department

Appendix 11.43

Institution Wise Details of Apprentices Under Industrial Training Department

Sl.No	Name of Institute	Seat Strength		Apprentices Trained			
				2006		2007	
		2006	2007	Boys	Girls	Boys	Girls
1	Thiruvananthapuram R.I.C	1196	1483	1101	96	1355	106
2	Kollam "	688	732	553	113	611	100
3	Alappuzha "	613	614	564	46	376	39
4	Kottayam "	639	219	400	43	182	37
5	Kalamassery "	1396	636	1321	77	480	53
6	Thrissur "	767	1487	690	77	1322	92
7	Palakkad "	688	262	529	61	55	11
8	Kozhikode "	468	765	126	23	694	91
9	Kannur "	374	908	297	77	521	112
10	Chemeerkara I.T.I	216	321	169	47	264	17
11	Kattappana "	262	448	47	9	400	46
12	Areacode "	284	90	257	7	64	4
13	Kasaragode "	89	353	40	9	261	92
14	Kayalla "	73	73	37	1	28	10
	Total	7689	9401	8233	687	8633	812

Source: Industrial Training Department

Appendix 12.1

District wise details of infrastructure under Co-operative sector - 2007

Sl. No.	Name of District	No of hospitals	No. of beds	No.of doctors	No of other Paramedical Staff including Nurses	No.of patients treated during 2009		Remarks
						IP	OP	
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	1	25	2	4	3524	5779	
2	Kollam	10	196	30	120	2648	18747	1 Hospital under liquidation. 3 Dormant
3	Pathanamthitta	1	25	[illegible]	7	1484	20194	
4	Alappuzha	7	20	2	8	142	4348	5 hospitals are not working
5	Kottayam	2	25	9	50	2282	40593	
6	Idukki	1	180	10	44	1625	40257	
7	Ernakulam	7	710	57	111	21922	136696	2 Dormant
8	Thrissur	9	638	79	187	39272	119237	
9	Palakkad	2	112	16	25	8886	75061	
10	Malappuram	4	760	74	455	29504	344933	
11	Kozhikode	15	686	111	214	38903	234629	
12	Wayanad	Nil	Nil	Nil	Nil	Nil	Nil	
13	Kannur	15	2586	300	1437	198782	875836	
14	Kasaargode	7	188	28	110	6591	73288	
	TOTAL:	81	6129	719	2772	355565	1990513	

Source: Registrar of Co-operative societies

Appendix - 12.2

District wise details of infrastructure in the Directorate of Insurance Medical Services - 2007

Sl. No.	Name of District	No of hospitals	No. of beds	No. of dispensaries	No.of doctors		No of other Paramedical Staff including Nurses		No.of patients treated during 2007		
					Hospital	Dispensaries	Hospital	Dispensaries	Hospital (OP)	Dispensaries (OP)	Hospital (IP)
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	1	128	11	26	26	37	20	30417	343098	2980
2	Kollam	2	238	30	40	102	104	119	39881	1537171	6439
3	Pathanamthitta	0	0	3	0	9	0	7	0	56699	0
4	Alappuzha	1	60	14	18	23	17	25	3920	438313	1500
5	Kottayam	1	65	7	17	14	22	18	19208	205384	1110
6	Idukki	0	0	1	0	1	0	1	0	6405	0
7	Ernakulam	2	220	20	45	47	79	40	56851	647846	4011
8	Thrissur	2	212	16	37	29	64	30	20807	278989	2581
9	Palakkad	1	50	7	17	10	18	10	7225	52336	811
10	Malappuram	0	0	4	0	4	0	7	0	18160	0
11	Kozhikode	1	100	13	24	35	35	46	28891	213810	1845
12	Wayanad	0	0	0	0	0	0	0	0	0	0
13	Kannur	1	50	11	17	18	21	22	9382	125131	721
14	Kasaargod	0	0	1	0	1	0	2	0	7396	0
	TOTAL:	12	1123	137	241	318	395	345	215392	3828720	21976

Source: Directorate of Insurance Medical Services

Appendix 12.3

District wise medical institutions and beds - Government sector (2007)

(Nos)

Sl.No.	District	Allopathy		Ayurveda		Homoeopathy		Total		Beds per lakh of population*
		Institutions	Beds	Institutions	Beds	Institutions	Beds	Institutions	Beds	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	117	8225	81	923	56	285	254	9433	292
2	Kollam	89	2189	62	190	40	75	191	2454	95
3	Pathanamthitta	84	1755	45	150	26	25	135	1930	157
4	Alappuzha	88	4324	55	180	44	75	196	4579	217
5	Kottayam	83	3810	52	160	47	175	182	4145	212
6	Idukki	61	1235	37	160	37	50	139	1445	128
7	Ernakulam	115	4550	75	485	54	85	244	5120	185
8	Thrissur	123	4526	36	446	40	25	299	4997	168
9	Palakkad	112	2474	81	160	40	25	233	2659	101
10	Malappuram	123	2520	80	370	44	50	247	2940	81
11	Kozhikode	85	5170	80	210	49	175	204	5555	193
12	Wayanad	41	913	28	170	20	25	87	1108	140
13	Kannur	105	2766	69	318	40	25	214	3109	129
14	Kasaragode	80	1094	41	100	24	75	125	1269	106
	TOTAL	1279	45553	871	4020	561	1170	2711	50743	159

Note (1)Including medical college hospitals
(2)Population based on 2001 Census

13—5002/2S.P

Appendix - 12.4

Medical Institutions and Beds in Kerala - Category-wise - 2007

Sl.No.	District	Hospitals		PHCs including MCH Centres		Community Health Centres		Dispensaries		T.B. Clinics/Centres		Grant in aid institutions		Sub centres	Leprosy Control Clinics/Units
		No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Thiruvananthapuram	18	3752	77	490	10	528	9	34	1		3	245	455	1
2	Kollam	9	1434	60	342	9	413	..		2		3	325	449	4
3	Pathanamthitta	8	1185	51	504	3	66	1		1		4	883	200	.
4	Alappuzha	10	2457	65	493	8	307	1	..	2	36	4	750	368	1
5	Kottayam	12	1906	60	544	8	426	..		2	48	6	1021	359	.
6	Idukki	3	488	52	528	6	219	2	..	1	.	0	0	23'	
7	Ernakulam	22	3010	77	935	10	485	5	80	1	40	3	1010	351	
8	Thrissur	16	2558	87	640	9	323	5	6	1	..	1	'70	492	4
9	Palakkad	8	1147	82	790	12	537	8		1	.	3	187	471	1
10	Malappuram	7	1302	94	700	11	408	6	.	2	52	2	70	608	3
11	Kozhikode	8	2115	69	311	11	364	3	..	1	.	0	0	389	2
12	Wayanad	3	374	25	318	5	221	7	..	1	.	0	0	204	.
13	Kannur	9	1693	70	781	7	244	9	70	1	..	0	0	352	.
14	Kasargode	3	844	46	258	5	191	3	.	1	.	0	0	205	2
	TOTAL:	136	23585	929	7875	114	4730	59	190	18	176	28	4641	5094	18

Source. Directorate of Health Services

Excluding Medical colleges and attached institutions

Appendix-12.5

District -wise details of IP,OP, major/minor operations conducted in hospitals/dispensaries under DHS (2005-06 and 2006-07)

S.No	District	2005-06				2006-07			
		IP	OP	Operations conducted		IP	OP	Operations conducted	
				Major	Minor			Major	Minor
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	188772	6601981	14443	38899	223845	6494998	15442	31215
2	Kollam	148207	2252159	17228	11294	131741	2254089	18095	8518
3	Pathanamthitta	82690	2428477	8798	11280	83564	2257668	8928	8562
4	Alappuzha	85842	4804840	3506	10298	89622	4507804	5227	16880
5	Kottayam	87548	3369776	1934	6031	132271	3351341	2058	5424
6	Idukki	29427	1645565	2192	7857	34902	1678475	1905	4998
7	Ernakulam	31[illegible]884	4208722	10813	10618	100144	3611459	6617	10532
8	Thrissur	117165	3855041	4972	34538	143752	4238592	4857	35098
9	Palakkad	359291	3[illegible]78223	4415	11119	250894	3143851	4440	8950
10	Malappuram	114467	331[illegible]879	1756	11875	143883	3377887	5587	13792
11	Kozhikode	128257	40432[illegible]3	12445	59531	108376	3702981	3978	25864
12	Wayanad	63451	1066136	2739	684	67988	1141012	2479	23254
13	Kannur	[illegible]50535	2875835	6531	10041	117527	2874341	8445	7482
14	Kasargode	34069	1226335	1938	5842	28677	1328903	2816	4524
	TOTAL:	1696615	4[illegible]56+07	93810	229407	1656266	44053017	87283	207779

Source: Directorate of Health Services

Appendix - 12.6

Target and achievement of Immunisation programme

Sl.No	Item	Unit	2005-06		%	2006-07		%
			Target	Achievement		Target	Achievement	
1	2	3	4	5	6	7	8	9
	M.C.H. Programme							
a)	Immunisation Programme							
(i)	D.P.T	Dose	556520	557925	100.3	567318	526300	92.8
(ii)	Polio	Dose	554704	552201	99.5	567318	522888	92.1
(iii)	B.C.G.	Dose	568520	560967	99.0	567318	565879	99.7
(iv)	Measles	Dose	564704	540524	87.4	567318	500048	88.1
(v)	T.T for Pregnant women	Dose	560463	594647	106.1	617170	545094	88.3
(vi)	T.T. for 5 Years	Dose	511619	481521	94.1	529720	412518	77.9
(vii)	T.T. for 10 Years	Dose	511619	510971	99.9	540874	361349	66.8
(viii)	T.T for 16 Years	Dose	511619	499793	97.7	534042	381515	71.4
b)	Prophylaxis against nutritional anaemia							
(i)	Women	Dose	552979	555430	99.6	604717	344326	56.9
(ii)	children	Dose	1864112	1514431	109.9	1653840	644543	39.0

Source: Directorate of Health Services

Appendix -12 .7

Number of attack and death due to major principal diseases during 2006 & 2007

Sl.No.	Name of Diseases	Attack		Death	
		2006	2007	2006	2007
1	2	3	4	5	6
1	Acute Diarrhoeal Diseases	475434	344503	4	5
2	Diptheria	1	3	0	*
3	Acute Poliomyelitis	0	0	0	0
4	Tetanus-Others	10	4	1	3
5	Neonatal Tetanus	0	0	0	0
6	Whooping Cough	156	116	0	0
7	Measles	2766	2076	0	1
8	Chickenpox	13739	13776	6	5
9	Acute Respiratory Infection	7929133	581[illegible]490	165	110
10	Pneumonia	25908	11047	82	54
11	Enteric Fever	6386	3129	2	2
12	Dengue Fever	1087	387	2	7
13	Viral Hepatitis-A	6515	4683	7	2
14	Viral Hepatitis-B	624	348	1	9
15	Weils Disease(Leptospirosis)	1708	848	59	58
16	Japanese Encephalitis	0	0	0	0
17	Menningococal Meningitis	22	7	2	0
18	Rabies(Hydrophobia)	23	11	23	11
19	Syphilis	38	33	0	0
20	Gonococcal Infection	318	66	0	0
21	Pulmonary Tuberculosis	13801	8781	232	73
22	All Other Diseases (including communicable and non communicable diseases	22605338	26241325	5424	4328
23	Anthrax	0	2	0	0
	Total	31062606	32242535	5990	4867

Source: Directorate of Health Services

Appendix 12.8

District wise details of Dengue fever - 2007

(Nos.)

Sl.No.	District	OP	IP	Total	Death
1	2	3	4	5	6
1	Thiruvananthapuram	6	115	121	0
2	Kollam	36	29	65	5
3	Pathanamthitta	26	9	35	0
4	Alappuzha	0	8	8	1
5	Kottayam	3	7	10	0
6	Idukki	3	16	19	0
7	Ernakulam	0	14	14	0
8	Thrissur	31	43	74	0
9	Palakkad	3	2	5	0
10	Malappuram	0	8	8	1
11	Kozhikode	2	4	6	0
12	Wayanad	12	0	12	0
13	Kannur	0	2	2	0
14	Kasaragode	4	6	10	0
	Total	126	261	387	7

Source: Directorate of Health Services

Appendix-12.9

District wise details of Leptospyrosis - 2007

(Nos.)

Sl.No.	District	OP	IP	Total	Death
1	2	3	4	5	6
1	Thiruvananthapuram	7	19	26	0
2	Kollam	23	18	41	12
3	Pathanamthitta	36	19	55	9
4	Alappuzha	0	45	45	7
5	Kottayam	10	17	27	9
6	Idukki	34	56	90	8
7	Ernakulam	0	38	38	7
8	Thrissur	67	46	113	4
9	Palakkad	2	24	26	0
10	Malappuram	0	23	23	3
11	Kozhikode	9	13	22	0
12	Wayanad	20	78	98	0
13	Kannur	3	8	11	1
14	Kasaragode	9	24	33	0
	Total	220	428	648	58

Source: Directorate of Health Services

Appendix-12.10

DETAILS OF BLOOD UNITS COLLECTED IN BLOOD BANKS - KERALA

Sl.No	Name of Category	Blood units collected (No.)		
		2005	2006	2007 till October
1	2	3	4	5
A	GOVERNMENT SECTOR			
1	Medical College Hospitals	77707	58997	63300
2	General Hospitals	7088	6380	5560
3	District Hospitals	13513	12330	10730
4	Women and Children Hospitals	1176	1400	1310
5	Taluk Head Quarters Hospitals	6063	6885	8170
6	Other Hospitals	23602	16282	15130
	SUB TOTAL :	129149	110284	102200
B	AUTONOMOUS INSTITUTIONS			
1	Regional Cancer Centre	9450	11000	10000
2	Sree Chitra Thirunal Institute of Science and Technology	6176	5100	4800
	SUB TOTAL :	15626	16100	14800
C	PRIVATE SECTOR	160738	158269	143257
	TOTAL : (A+B+C)	305513	284653	260257

Source: Drugs Controller

Appendix - 12.11

Medical and Para-medical courses conducted in Govt. Medical Colleges with annual intake of Students

Name of Courses	No.of seats in Medical Colleges				
	Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6
Degree Courses					
1. M.B.B.S.	200	200	150	100	150
2. B.D.S.	40	40	40	–	–
3. B.Sc. Nursing	60	60	60	60	60
4. B.Pharm	60	20	–	–	–
5. B.Sc. MLT	24	–	–	–	–
Sub - Total	384	320	250	160	210
Post Graduate Courses					
1. M.Sc. Nursing	15	4	3	–	–
2. M.D.S.	23	16	–	–	–
3. M.D.Anaesthesia	4	2	2	1	–
4. M.D.Biochemistry	1	1	–	–	–
5. M.D.Forensic medicine	1	1		–	–
6. M.D.Dermatology and Venereology	1	2	1	1	–
7. M.D.General Medicine	7	6	4	1	2
8. M.D.Microbiology	1	1	–	–	–
9. M.D.Obstetrics and Gynaecology	4	4	4	1	–
10. M.D.Pathology	3	1	2	–	–
11. M.D.Pharmacology	2	2	–	–	–
12. M.D.Physiology	1	1	1	–	–
13. M.D.Paediatric	3	3	1	1	–
14. M.D.Psychiatry	1	1	2	–	–
15. M.D.Radio Diagnosis	1	2	–	–	2
16. M.D.Radiotherapy	1	–	–	–	–
17. M.D. Community Medicine	1	–	1	–	–
18. M.D.T.B. And Respiratory Diseases	2	2	2	–	–
19. M.S. Anatomy	1	1	2	–	–
20. M.S.Otorhinolaryngology	1	1	1	–	–
21. M.S.General Surgery	10	8	4	1	–
22. M.S.Orthopaedics	2	2	2	–	–
23. M.S.Ophthalmology	3	2	1	–	–
24. M.D.Physical Medicine	2	1	–	–	–
Sub - Total	92	66	30	6	4
Super Speciality courses					
1. Mch.Paediatric Surgery	2	2	–	–	–
2. Mch.Plastic Surgery	2	2	–	–	–
3. Mch. Genito Urinary surgery	2	2	1	–	–
4. Mch. Thoracic Surgery	2	2		–	–
5. Mch. Neuro Surgery	2	1	2	–	–
6. D.M.Gastro Enterology	1	–	–	–	–
7. D.M.Neurology	1	1		–	–
8. D.M.Cardiology	2	1	2	–	–

Name of Courses	No.of seats in Medical Colleges				
	Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6
9. M.Ch Gastro Enterology	2	1	–	–	–
10. D.M Nephrology	1	1	1	–	–
Sub - Total	17	13	7	0	0
Diploma Courses					
1. Diploma in Anaesthesia	4	3	3	1	–
2. Diploma in Child Health	3	8	3	1	–
3. Diploma in Clinical Pathology	3	6	–	–	–
4. Diploma in Dermatology and Venereology	–	1	–	–	–
5. Diploma in Laryngology and Otology	4	3	1	–	–
6. D.M.R.D	1	2	–	–	–
7. D.M.R.T.	1	2	–	–	–
8. Diploma in Obstetrics and Gynaecology	6	6	9	1	–
9. Diploma in Ophthalmology	2	3	2	–	–
10. Diploma in Orthopaedic Surgery	4	3	3	–	–
11. Diploma in Physical Medicine and Rehabilitation	4	4	–	–	–
12. Diploma in Psychiatric Medicine	2	–	–	–	–
13. Diploma in Public Health	6	–	–	–	–
14. D.T.C.D	2	2	–	–	–
Sub - Total	42	41	21	2	0
Diploma / Certificate Courses.					
1. MLT Certificate(2 years)	60	50	15	15	15
2. Diploma in Radiological Technology (2 Years)	10	30	15	15	10
3. Diploma in Ayurveda Certificate(2 Years)	10	20	15	5	5
4. D.Pharm(2 years)	80	50	30	40	–
5. Dental Mechanic Certificate course(2 years)	5	10	–	–	–
6. Dental Hygienist Certificate Course	10	–	–	–	–
Sub - Total	245	190	95	70	105
TOTAL:	780	630	403	239	318

Source: Directorate of Medical Education

Appendix - 12.12

District-wise details of Medical and Paramedical Personnel under DHS - 2007

Sl.No.	District	Medical Officers	Dentists	Senior Nurses	Junior Nurses	Lady Health Inspectors	Pharmacists	JPHN (ANMS)	Junior Health Inspectors	Health Inspectors	Population for one doctor
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	557	6	305	1125	7[illegible]	184	527	296	75	5807
2	Kollam	254	8	80	363	79	102	427	283	73	10174
3	Pathanamthitta	196	4	33	278	44	75	268	180	42	6284
4	Alappuzha	277	7	158	631	71	136	381	215	53	7801
5	Kottayam	269	5	161	645	61	113	341	223	53	7260
6	Idukki	152	4	24	172	59	65	315	223	56	7425
7	Ernakulam	337	9	178	885	76	148	427	265	64	9194
8	Thrissur	345	8	182	659	99	160	499	328	79	8624
9	Palakkad	291	6	73	408	80	127	515	284	71	8993
10	Malappuram	320	7	67	421	97	136	589	333	83	11343
11	Kozhikode	270	5	203	913	67	156	419	272	88	10661
12	Wayanad	122	2	28	166	34	46	205	128	30	6448
13	Kannur	312	4	102	484	63	132	423	290	74	7732
14	Kasaragode	180	4	31	182	41	81	249	168	38	7521
	TOTAL:	3862	77	1605	7133	962	1850	5583	3496	857	8244

Source: Directorate of Health Services

NB: Population Based on 2001 census

Appendix -12.13

Details of Personnel (Clinical/Non-clinical) in Medical Colleges -2000-2007

Sl No.	Category	No. of Clinical/Non Clinical personnel							
		2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10
	Medical Education								
1	Director and Professor								
2	Professor	202	207	207	189	189	189	219	219
3	Associate Professor	242	236	236	236	236	236	268	268
4	Assistant Professor	449	490	490	431	431	431	517	517
5	Tutor/Lecturer	711	1877	1877		613	613	854	854
	Sub Total	1604	2810	2810	856	1469	1469	1856	1856
	Nursing Education								
6	Director								
7	Professor	7	7	7	8	8	8	11	11
8	Associate Professor	18	17	17	16	16	16	21	21
9	Assistant Professor	27	25	25	23	23	23	29	29
10	Tutor	40	29	29	32	32	32	52	52
	Sub Total	92	78	78	79	79	79	113	113
	M.L.T. Course								
11	Director				..				
12	Assistant Professor	3						3	3
13	Tutor	5	3	5	9			5	5
14	Tutor Technician	14	..			9	9		
	Sub Total	22	3	5	9	9	9	8	8
	Dental								
15	Principal	2	3	3	3	3	3		
16	Professor	16	16	16	17	17	17	30	30
17	Associate Professor	12	4	4	8	8	8	10	10
18	Assistant Professor	25	24	24	20	20	20	36	36
19	Tutor/Lecturer	44	43	43	45	45	45	66	66
	Sub Total	99	90	90	93	93	93	142	142
	Pharmacy								
20	Director	1	5	5	5	5	5		
21	Professor	3	4	4	4	4	4	8	8
22	Associate Professor	7	5	5	4	4	4	9	9
23	Assistant Professor	13	12	12	12	12	12	14	14
24	Lecturer	30	27	27	28	28	28	35	35
	Sub Total	54	53	53	53	53	53	64	64
	TOTAL:	1871	3034	3036	1090	1703	1703	2183	2183

Source: *Directorate of Medical Education*

Appendix-12.14

Registered Medical Practitioners

Sl No	System	Case of Registration	2006	2007
1	2	3	4	5
1	Modern Medicine	A	918	933
2	Homeopathy	A	182	217
3	Ayurveda	A	308	345
4	Siddha	A	Nil	Nil
5	Unani	A	5	Nil

Source: *Travancore-Cochin Medical Council*

Appendix-12.15

Registered para medical practitioners

Sl.No	Category	2006	2007
1	2	3	4
1	Nurse	–	–
2	Midwife	–	–
3	Nurses and Midwives	4736(inside) 2713(outside)	1450(inside) 4000(outside)
4	AuxiliaryNurse	214	425
5	Health Visitors	–	–

Source: Travancore-Cochin Medical Council

Appendix -12.16

Annual intake in different Nursing courses - 2007

(Nos.)

Sl.No.	Name of Institutions	Annual intake
I	Integrated General Nurse-cum-Midwives (3 year course)	
1	2	3
1	Thiruvananthapuram	28
2	Kollam	25
3	Pathanamthitta	20
4	Alappuzha	23
5	Kottayam	20
6	Idukki	20
7	Ernakulam	30
8	Thrissur	28
9	Palakkad	25
10	Malappuram	25
11	Kozhikode	26
12	Wayanad	23
13	Kannur	20
14	Kasaragode	20
15	SC/ST - Nursing School Kollam	20
	Sub Total	364
I	Junior Public Health Nurses (18 months)	
1	Thiruvananthapuram	45
2	Kottayam	45
3	Palakkad	45
4	Kasaragode	45
	Sub Total	180
II	Government Nursing Colleges-B.Sc. Nursing	
1	Thiruvananthapuram	60
2	Alappuzha	60
3	Kottayam	60
4	Thrissur	60
5	Kozhikode	60
	Sub Total	300
III	Government Nursing Colleges-M.Sc. Nursing	
1	Thiruvananthapuram	16
2	Kozhikode	8
	Sub Total	24
	Grand Total	868

Appendix - 12.17

District-wise distribution of Institutions, Beds and Patients treated under Ayurvedic system of Medicine in Kerala (2006-07)

(Nos.)

Sl No	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated in 2006		2007(till September)	
		2006	2007	2006	2007	2006	2007	2006	2007	Inpatients	Outpatients	IP+OP	Doctors-2007
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	13	13	285	285	64	64	77	77	4551	2483354	1337626	95
2	Kollam	9	9	190	190	53	53	62	62	2642	1954056	1487521	70
3	Pathanamthitta	5	5	150	150	40	40	45	45	1295	1107630	884729	54
4	Alappuzha	10	10	180	180	56	56	66	66	1564	2154716	1843009	76
5	Kottayam	9	9	160	160	43	43	52	52	2428	1546324	1712136	62
6	Idukki	3	3	160	160	34	34	37	37	2436	707741	560394	46
7	Ernakulam	13	13	280	280	61	61	74	74	2737	2200416	1487000	90
8	Thrissur	18	16	293	293	79	79	95	95	2949	2377585	2185390	112
9	Palakkad	8	8	160	160	75	76	81	81	1388	1448230	930779	95
10	Malappuram	10	10	220	220	68	68	79	78	1221	1624744	1854307	84
11	Kozhikode	7	7	210	210	53	53	60	60	1847	1900804	813086	79
12	Wayanad	3	3	170	170	23	23	26	26	21920	627867	458304	37
13	Kannur	8	6	218	216	62	62	68	68	2889	1374865	923183	76
14	Kasaragode	6	6	100	100	36	38	41	41	799	737693	519297	47
	TOTAL:	115	115	2774	2774	747	747	862	862	50662	22247045	16554741	1023

Source: *Directorate of Ayurveda*

Appendix- 12.18

Annual intake of students and courses in Ayurveda Colleges

Sl.No.	Name of College	Annual intake of students	
		BAMS	P.G.Degree
1	2	3	4
	Government		
1	Ayurveda Medical College, Thiruvananthapuram	70	57
2	Ayurveda Medical College, Trippunithura	30	5
3	Ayurveda Medical College, Kannur	40	10
	Government aided		
4	Vaidyaratnam Ayurveda college, Ollur	40	–
5	Vaidyaratnam P.S.Varrier Ayurveda College, Kottakkal	50	10
	Total	**230**	**82**
	Self-financing		
6	Pankajakasthuri Ayurveda Medical college, Kattakkada, Thiruvananthapuram	50	--
7	Parassinikadavu Ayurveda Medical College, Pappinissari	50	--
8	Vishnu Ayurveda College, Shornur	50	--
9	Santhigiri Ayurveda Medical College, Palakkad	50	--
10	Nangeli Ayurveda Medical College, Kothamangalam	40	--
11	Santhigiri Siddha Medical College, Pothencode, Thiruvananthapuram	50	--
12	Amritha Ayurveda Medical College, Kollam	60	
13	Sreenarayana Institute of Ayurveda studies and Research, Puthoor, Kollam	50	
14	Mannam Sugar Mill Co-operative Ayurveda College, Pandalam	50	
	Total	450	--
	Grand Total	680	82

Source. Directorate of Ayurveda Medical Education

Appendix - 12.19

District-wise Distribution of Institutions , Beds and patients treated under Government Homoeopathy Directorate (2006 & 2007)

(Nos.)

Sl.No.	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated 2007		Doctors-2007
		2006	2007	2006	2007	2006	2007	2006	2007	I.P	O.P	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	4	4	165	165	51	51	55	55	4229	1235396	63
2	Kollam	3	3	75	75	37	37	40	40	1455	992310	44
3	Pathanamthitta	1	1	25	25	25	25	26	26	0	546754	27
4	Alappuzha	3	3	75	75	41	41	44	44	882	1252088	48
5	Kottayam	3	3	175	175	44	44	47	47	2084	1212678	54
6	Idukki	2	2	50	50	35	35	37	37	4167	1240419	38
7	Ernakulam	3	3	85	85	51	51	54	54	1413	2195277	59
8	Thrissur	1	1	25	25	39	39	40	40	780	1236150	42
9	Palakkad	1	1	25	25	39	39	40	40	523	905225	42
10	Malappuram	2	2	50	50	42	42	44	44	201	177091	47
11	Kozhikode	3	3	75	75	45	45	48	48	238	306986	52
12	Wayanad	1	1	25	25	19	19	20	20	566	417939	22
13	Kannur	1	1	25	25	38	38	40	40	386	742604	26
14	Kasaragode	3	3	75	75	21	21	24	24	627	526411	28
	TOTAL:	31	31	870	870	527	527	558	558	17528	13072630	594

Source: Directorate of Homoeopathy

Appendix- 12.20

Annual intake of students and courses in Homoeo Colleges

Sl.No.	Name of College	Annual intake of students	
		BHMS	P.G. Degree
1	2	3	4
	Government		
1	Homoeopathic Medical college, Thiruvananthapuram	50	18
2	Homoeopathic Medical college, Kozhikode	50	18
	Government aided		
3	Dr Pariyar memorial Homoeopathic Medical college, Ernakulam	50	–
4	Athirasramam N.S.S. Homoeopathic Medical college, Kottayam	50	
5	Sree Vidhyadhiraja Homoeopathic Medical college, Nemom	50	–
	Total	250	36

Source: Govt. Homoeo Medical College, Thiruvananthapuram

Appendix - 12.21

Achievement of Family Welfare Programme (2006-07) District -wise

Sl.No.	District	Vasectomy	PPS	Minilap	Laparoscopic	Total (3+4+5)	Cu T	Nirodh supplied	Oral pills
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	89	13983	408	4276	14480	5155	1502289	[illegible]
2	Kollam	14	7492	237	530	7743	4696	984718	[illegible]
3	Pathanamthitta	30	3839	630	346	4199	3286	607963	[illegible]
4	Alappuzha	39	5375	503	597	5816	2535	753447	[illegible]
5	Kottayam	204	5511	132	893	5837	7010	533851	[illegible]
6	Idukki	84	5617	303	591	6014	4276	358197	[illegible]
7	Ernakulam	117	16177	273	2109	18567	8832	1001238	[illegible]
8	Thrissur	21	8172	826	2209	9019	8508	578328	[illegible]
9	Palakkad	24	9191	596	1527	9811	6219	791259	[illegible]
10	Malappuram	18	11790	388	312	12196	7095	1430826	[illegible]
11	Kozhikode	86	9228	986	270	10282	5588	891777	[illegible]
12	Wayanad	15	3289	203	291	3487	2844	827062	[illegible]
13	Kannur	46	8904	411	360	9361	6092	982717	[illegible]
14	Kasargode	4	2521	105	785	2630	2717	354878	[illegible]
	TOTAL:	872	111068	8001	14955	117942	70682	11294850	[illegible]

Source: Directorate of Health Services

Appendix -12.22

District wise Couple protection rate 2007

Sl No.	District	Couple protection
1	2	3
1	Thiruvananthapuram	58.2
2	Kollam	45.76
3	Pathanamthitta	58.2
4	Alappuzha	35.8
5	Kottayam	53.69
6	Idukki	63,62
7	Ernakulam	63.12
8	Thrissur	50.76
9	Palakkad	58.30
10	Malappuram	44.69
11	Kozhikode	44.7
12	Wayanad	68.26
13	Kannur	46.48
14	Kasaragode	37.11
	State Average	53.49

Source: Directorate of Health Services

Appendix 12.23

District wise Patients treated and death reported - Dengue Fever and Leptospirosis 2007 (Upto August 2007)

(Nos.)

Sl.No.	District	Dengue Fever		Leptospirosis	
		Treated	Death reported	Treated	Death reported
1	2	3	4	5	6
1	Thiruvananthapuram	121	0	26	0
2	Kollam	68	5	41	12
3	Pathanamthitta	35	0	55	14
4	Alappuzha	8	1	48	7
5	Kottayam	10	0	27	9
6	Idukki	10	0	90	6
7	Ernakulam	14	0	38	7
8	Thrissur	74	0	113	4
9	Palakkad	5	0	28	0
10	Malappuram	6	1	23	3
11	Kozhikode	6	0	22	0
12	Wayanad	12	0	90	0
13	Kannur	2	0	11	1
14	Kasaragode	10	0	33	0
	State	367	7	848	68

Source: Directorate of Health Services

Appendix 12.24

District wise Patients treated for Chikungunia and Viral Fever 2007 (Upto September 2007)

(Nos.)

Sl No.	District	Chikungunia	Viral Fever
1	2	3	4
1	Thiruvananthapuram	1204	237183
2	Kollam	918	137817
3	Pathanamthitta	34555	154866
4	Alappuzha	1789	154347
5	Kottayam	10661	271144
6	Idukki	538	159002
7	Ernakulam	1852	387908
8	Thrissur	390	214612
9	Palakkad	247	200485
10	Malappuram	1812	234467
11	Kozhikode	812	177174
12	Wayanad	57	123472
13	Kannur	77	171802
14	Kasaragode	75	121234
	State	54857	2754493

Source: Directorate of Health Services

Appendix 13.1

Achievements under Major Housing Schemes (Nos) by Different Housing Agencies in Kerala

Sl No	Name of Schemes	2003-04	2004-05	2005-06	2006-07	2007-08(up to 30-09-07)
1	Kerala State SC/ST Dev. Corporation	44	24	33	14	
2	SC Dev. Dept.	2090	6471	11978		
3	Fisheries dept.	1500	1500	4000	1500	1500
4	KS Co op. Agri & RDB	14794	16389	17495	17087	8835
5	Sainik Welfare	77	9	13	41	16
6	LIC Housing Finance	4189	4396	4309	3346	1189
7	GIC Housing Finance	1345	396	93	238	117
8	Commissionerate of Rural Dev	26375	43291	12990	30817	9888
9	Canfin Homes	156	149	60	157	55
10	HOUSE FED	7812	6996	5119	5639	3133
11	KSHB	12933	2414	93	145	374
12	Nationalised Scheduled Bank	54454	74327	25095	398606	
13	HUDCO	379	370	28881		274
14	Nirmithi Kendra (KESNIC)	92	91	134	201	228
15	ST Dev. Dept.	393	104	508	1455	183
	Total	128413	155929	110621	459526	23560

Source: Housing Commissioner

Appendix13. 2

Houses Assisted and Amount Disbursed by Kerala State Co-operative Housing Federation

(Rs Lakh)

Sl No	Category	Amount distributed				Houses Assisted			
		2003-04	2004-05	2005-06	2006-07 (up to 30-09-07)	2003-04	2004-05	2005-06	2006-07 (up to 30-09-07)
1	EWS	1110.62	782	685.16	472.8	2574	1747	1500	1060
2	LIG	2305.27	1994.46	2710.78	3687.84	2810	2280	3094	3957
3	MIG	1482.45	1579.39	3428.07	7228.3	731	744	1642	4002
4	Others	1495.9	1817.21	3154.93	48.53	1697	1915	3054	25
	Total	6393.24	6173.06	9978.94	10817.57	7812	6692	9298	8938

Source: Kerala State Co-operative Housing Federation

Appendix 13. 3

Interest Rates of Different Financial Institutions on Housing Loan as on 30/09/2007

Sl No	Name of institutions	Floating rate	Fixed rate
1	2	3	4
1	**STATE BANK OF INDIA**		
	upto 20. upto 5 years	10%	
	5 to 15 years	10.25%	
	above 15 years	10.50%	
	above 20L upto 5 years	10.50%	
	5 to 15 years	10.75%	
	above 15 years	11.00%	
2	**STATE BANK OF TRAVANCORE**		
	upto 5 years	10.50%	12.25%
	above 5 years to 20 years	11.00%	12.25%
3	**SYNDICATE BANK**		
	Upto 5 years	10.00%	10.50%
	5 to 10 years	10.50%	11%
	10 to 20 years	10.75%	...
	20 to 25 years	11.00%	..
4	**CORPORATION BANK**		
	upto 20L upto 5 years	11.00%	..
	5 to 15 years	11.50%	
	15 to 25 years	11.75%	
	above 20L upto 5 years	12.00%	
	5 to 15 years	12.25%	
	15 to 25 years	12.25%	
5	**H D F C**		
		10.50%	13.25%
6	**H U D C O**		
	A EWS housing by all borrowers		
	(i) Housing projects for widows, SC/STs, legally handicapped, single woman above 35 years of age and natural calamities affected areas	9.25%	10.25%
	(ii) Others and action plan projects	9.75%	10.75%
	B LIG housing projects by all borrowers	10.50%	11.50%
	C Direct borrowing by Govt.Police Organisation and Govt/Public borrowers	11.00%	12.00%
	D Other borrowers		
	(i) Not rated	12.00%	13.00%
	(ii) 'AAA' rated proposals/ borrowers by CRISIL,ICRA, CARE & FITCH	11.00%	12.00%
	(iii) 'AA' but below rated proposals/ borrowers by CRISIL,ICRA etc	11.50%	12.50%
	HUDCO Niwas(Upto 10 lakhs)	10.25%	11.25%
	(Above 10 lakhs)	10.75%	11.75%
7	**LIC HOUSING FINANCE LTD.**	11.25%	
	flexi 4	10.50%	12.75%
8	**GIC HOUSING FINANCE**		
	Upto 5 years	10.75%	
	Upto 10 years	11.25%	
	Upto 15 years	11.50%	
	Upto 20 years	11.75%	

Sl No	Name of Institutions	Floating rate	Fixed rate
1	2	3	4
9	**CANFIN HOMES**	11.50%	14%
10	**DHANALEKSHMI BANK**		
	20L Upto 5 years	11.5%	12.50%
	5 to 10 years	12.5%	
	Above 10 years	13.00%	
	above 20L	13.50%	
11	**BANK OF INDIA**		
	Upto 5 years	9.5%	....
	6 to 10 years	10.00%	
	10 to 25 years	10.50%	
12	**KERALA STATE CO-OP:BANK**		
	upto 50,000	.....	8%
	50,000 to 1L	....	8.50%
	1L TO 3L	. .	10%
	3L TO 5L	.....	11%
	above 5L	.....	12%
13	**KERALA STATE CO-OP:AGRI: & RURAL DEVELOPMENT BANK**		
	NABARD		
	Construction/purchase of new houses/flats		
	Upto Rs. 50000/-		11.25%
	Rs. 50001/- to 1,00,000		12.5%
	Repairs of houses		
	Upto Rs. 50000/-		11.25%
	Above Rs. 50000/- to 3,00,000		12.5%
14	**K S H B**		
	LIG		11% - 14.5%
	MIG		13% - 15.5%
	HIG		13.5%-16.5%
	Hire Purchase		13% - 16.5%
15	**Bank of Baroda**		
	20 L Upto 5 years	9.75%	11.00%
	5 to 10 years	10.00%	11.50%
	10 to 15 years	10.25%	12.25%
	15 to 20 years	10.75%	——
	above 20 L upto 5 years	10%	11.25%
	5 to 10 years	10.25%	11.75%
	10 to 15 years	10.50%	12.50%
	15 to 20 years	11.00%	
	20 to 25 years		11.25%
16	**Indian Overseas Bank**		
	20L upto 5 years	10%	....
	5 to 10 years	10.25%	
	10 to 20 years	10.5%	
	above 20L upto 5 years	10.50%	
	5 to 10 years	11.00%	
	10 to 20 years	11.00%	
17	**Federal Bank**		
	20L upto 5 years	10.5%	11.00%
	5 to 15 years	11.00%	11.5%
	above 15 years	11.50%	12%
	above 20L upto 5 years	10.75%	11.25%
	6 to 15 years	11.50%	12.00%
	above 15 years	12.00%	12.50%

Sl No	Name of Institutions	Floating rate	Fixed rate
1	2	3	4
18	**Lord Krishna Bank**		
	upto 5 years	12.25%	12.50%
	5 to 10 years	12.50%	13%
	10 to 20 years	13%	13.25%
19	**South Indian Bank**		
	20L upto 5 years	10.50%	11%
	above 5 years	11%	11.50%
	above 20L upto 5 years	11.50%	12%
	above 5 years	12%	12.50%
20	**ICICI Bank**		
	upto 20 years	11.5%	....
21	**Indus Ind Bank**		
	upto 20 years	11.5%	.
22	**Indian Bank**		
	upto 5 years	9%	10.00%
	6 to 15 years	9.50%	10.50%
	16 to 20 years	9.75%	11%
23	**Bank of Maharashtra**		
	20L upto 5 years	10.00%	10.75%
	5 to 10 years	10.25%	11.25%
	above 10 years	10.50%	11.50%
	above 20L upto 5 years	10.25%	11.00%
	5 to 10 years	10.75%	11.75%
	above 10 years	11.00%	
24	**Catholic Syrian Bank**		
	upto 5 years	12.50%	....
	5 to 15 years	13%	...
	above 15 years	13.50%	...
25	**TN Merchantile Bank**		
	upto 16 months	10%	....
	above 16 months	10.50%	
26	**Canara bank**		
	20L upto 5 years	10.25%	.
	5 to 10 years	10.50%	.
	above 10 years	10.75%	. .
	above 20L upto 5 years	10.50%	....
	5 to 10 years	10.75%	....
	11 to 20 years	11.00%	....
27	**Central Bank of India**		
	20Lupto 5 years	9.50%	10.50%
	5 to 10 years	10.25%	10.75%
	10 to 20 years	10.75%	nil
	above 20L upto 5 years	10.00%	10.75%
	5 to 10 years	10.50%	11%
	10 to 20 years	11.00%	nil
28	**Dena Bank**		
	15L upto 5 years	9.75%	10.25%
	upto 10 years	10.25%	10.75%
	above 10 years	10.50%	10.75%
	above 15 L upto 5 years	10.25%	10.75%
	5 to 10 years	10.75%	11.25%
	above 10 years	11.00%	11.50%
29	**Andhra Bank**		
	upto 5 years	9.75%	..
	5 to 10 years	10.25%	
	10 to 20 years	10.75%	

Sl No	Name of institutions	Floating rate	Fixed rate
1	2	3	4
30	UCO Bank		
	upto 10 years	10.00%	....
	above 10 years	10.50%	
31	Vijaya Bank		
	upto 5 years	10.00%	10.75%
	5 to 10 years	10.50%	11.25%
	10 to 15 years	10.75%	....
	above 15 years	11.25%	....
32	Union Bank		
	20 L upto 5 years	9.75%	10.75%
	5 to 10 years	10.25%	
	10 to 20 years	10.50%	
	above 20 L upto 5 years	10.50%	11.50%
	5 to 10 years	11%	
	10 to 20 years	11.25%	

Source: Housing Commissioner

Appendix 13. 4

Fund Flow to Kerala State Co-operative Housing Federation

(Rs Lakh)

Year	Institutions	Borrowing	
		Funds Flow	Amount Disbursed
2003-04	NHB	1500	6393.24
	NHB	4500	6173.06
2004-05	Canara Bank	5000	
	Canara Bank	4000	9978.84
2005-06	Federal Bank	2500	2500
2006-07(up to 30-09-07)	LIC	4000	4000

Source: Kerala State Co-operative Housing Federation

Appendix 14.1

Poverty Projection for 2007-08

Sl No	State/Union Territories	Rural		Urban		Combined	
		Percentage of poor	No. of Poor (lakh)	Percentage of poor	No. of Poor (lakh)	Percentage of poor	No. of Poor (lakh)
1	2	3	4	5	6	7	8
1	Andhra Pradesh	4.58	28.97	16.99	41.75	8.49	88.72
2	Arunachal Pradesh	37.89	3.54	4.48	0.14	29.33	3.68
3	Assam	37.89	95.36	4.48	1.78	33.33	97.14
4	Bihar	44.8[illegible]	482.18	32.88	54.74	43.18	536.90
5	Goa	NA	NA	NA	NA	NA	NA
6	Gujarat	2.00	6.88	2.00	4.38	2.00	11.26
7	Haryana	2.00	3.30	2.00	1.51	2.00	4.81
8	Himachal Pradesh	2.00	1.18	2.00	0.14	2.00	1.32
9	Jammu Kashmir	NA	NA	NA	NA	NA	NA
10	Karnataka	7.77	28.68	6.00	16.34	7.85	45.00
11	Kerala	1.63	4.03	9.34	8.01	3.61	12.04
12	Madhya Pradesh	28.73	192.07	31.77	74.48	29.52	266.53
13	Maharashtra	16.96	101.61	15.20	72.68	16.16	174.29
14	Manipur	37.89	8.10	4.48	0.27	30.62	8.37
15	Meghalaya	37.89	7.99	4.48	0.24	31.14	8.23
16	Mizoram	37.89	[illegible].88	4.48	0.23	20.78	2.11
17	Nagaland	37.89	8.01	4.48	0.21	31.85	8.22
18	Orissa	41.72	[illegible]39.12	37.46	23.67	41.04	161.89
19	Punjab	2.00	3.40	2.00	1.96	2.00	5.36
20	Rajastan	11.09	54.41	15.42	23.44	2.11	77.65
21	Sikkim	37.89	2.08	4.48	0.03	33.78	2.11
22	Tamil Nadu	3.88	12.46	9.54	31.61	5.81	44.07
23	Tripura	37.89	10.70	4.48	0.28	31.88	10.98
24	Uttar Pradesh	24.25	373.16	26.17	111.25	24.67	484.41
25	West Bengal	21.88	137.53	8.98	22.21	18.30	159.74
26	A&N Island	3.68	0.10	9.84	0.14	5.62	0.24
27	Chandigarh	2.00	0.02	2.00	0.19	2.00	0.21
28	Dadra & Nagar Haveli	NA	NA	NA	NA	NA	NA
29	Daman& Diu	NA	NA	NA	NA	NA	NA
30	Delhi	NA	NA	NA	NA	NA	NA
31	Lakshadweep	1.63	0.01	9.34	0.02	4.50	0.03
32	Pondicherry	3.68	0.13	9.84	0.70	7.72	0.83
	All India	21.09	1704.86	14.99	492.27	19.33	2197.13

Source: Indian Five Year Plan (Complete Document) First Five Year Plan 1951 – 56 to Tenth Five Year Plan 2002-07 - Mid Term Appraisal June 28 2005, Planning Commission, Government of India

Appendix 14.2

Community based organisation status in Rural Areas as on 30-9-2007

Sl.No.	District	No. of GPs	Total NHGs	Cumulative Families Covered (nos)	Thrift (Rs)	Loans (Rs)
1	2	3	4	5	6	7
1	Thiruvananthapuram	78	16744	344225	650594016	1504975690
2	Kollam	71	12142	225550	607194518	1343712615
3	Pathanamthitta	54	6486	137905	310192533	821871588
4	Alappuzha	73	13075	261392	668587696	1548119853
5	Kottayam	75	10736	219213	509588968	9865[illegible]6549
6	Idukki	52	9119	[illegible]63068	534761589	1335081139
7	Ernakulam	88	12810	215610	548036114	1599016660
8	Thrissur	92	[illegible]5602	283764	803079217	3050405655
9	Palakkad	91	[illegible]9827	337440	889825804	2379530227
10	Malappuram	102	[illegible]3756	314538	677342852	1019477838
11	Kozhikkode	78	[illegible]4127	289676	895472475	2225716344
12	Wayanad	25	73[illegible]6	120246	276614508	1050405760
13	Kannur	81	[illegible]0882	2[illegible]2744	582973941	[illegible]842797332
14	Kasargode	39	5535	120022	326052075	[illegible]293559814
	Total	899	168167	3243395	8480312525	21561168334

Source: Kudumbashree, Government of Kerala

Note. Tribal NHGs are separately tracked, these are not reflected in the District wise data.

Appendix 14.3

District wise details of Linkage Banking as on 30-09-2007

Sl. No.	Name of District	Cumulative NHGs linked	Amount (Rs Lakh)
1	Thiruvananthapuram	9632	3747.59
2	Kollam	8575	6319.31
3	Pathanamthitta	2622	2745.35
4	Alappuzha	899[illegible]	5656.57
5	Kottayam	3942	2718.06
6	Idukki	4278	2882.02
7	Ernakulam	7423	3959.78
8	Thrissur	8980	4075.22
9	Palakkad	10580	4558.93
10	Malappuram	4564	1649.78
11	Kozhikkode	8409	3949.71
12	Wayanad	4584	3836.28
13	Kannur	4386	1727.82
14	Kasaragode	2841	1359.78
	Total	88805	48365.98

Source: Kudumbashree Government of Kerala

Note: In case of the second and subsequent linkages of the NHGs, only the amount is accounted.

Appendix 14.4

District wise details of Lease Land Farming as on 31-10-2007

Sl. No.	Name of District	No. of GPs	No. of NHGs	No. of families	Area in Acres
1	Thiruvananthapuram	73	2019	21159	2624.38
2	Kollam	68	1324	5008	2718.83
3	Pathanamthitta	38	349	18119	2002.31
4	Alappuzha	72	1044	10887	2094.20
5	Kottayam	65	799	7492	1813.25
6	Idukki	49	6818	54141	7269.00
7	Ernakulam	52	3044	29949	7960.95
8	Thrissur	32	510	4459	676.83
9	Palakkad	87	2369	17808	4920.45
10	Malappuram	72	2276	9202	2819.00
11	Kozhikkode	77	2090	13284	2268.50
12	Wayanad	25	1316	1814	6582.43
13	Kannur	70	2308	27366	2924.58
14	Kasaragod	39	1303	9883	608.05
	Total	820	27316	223779	46762.36

Source: Kudumbashree Government of Kerala

Note: LLF taken up in 2006-07

Appendix 14.5

District wise details of Balasabha - Childrens NHG as on 30-09-2007

Sl No.	District	No. of GPs	2007-08		Cumulative		
			No. of Balasabha	No. of Children	No. of Balasabha	No. of Children	Thrift (Rs)
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	78	513	7216	4175	59682	2096394
2	Kollam	67	187	4045	1651	35348	455547
3	Pathanamthitta	53	722	11485	1948	33290	695332
4	Alappuzha	73	1755	19347	4389	86089	325104
5	Kottayam	75	863	11123	2981	53651	1598920
6	Idukki	50	104	4229	2231	39909	4676832
7	Ernakulam	88	1045	18374	3425	81282	2584318
8	Thrissur	83	394	6260	2479	46243	1281411
9	Palakkad	91	255	5609	3400	58385	1529428
10	Malappuram	100	534	15163	3830	67416	2732581
11	Kozhikkode	78	415	5139	4222	76022	672703
12	Wayanad	25	155	1869	2374	34372	740144
13	Kannur	81	357	6735	2894	53224	1643858
14	Kasargode	38	235	4904	1875	34183	5496031
	Total	981	7334	122508	41872	728978	26527543

Source: Kudumbashree Government of Kerala

Appendix 14.6

District wise details of Rural Micro Enterprises (RME)
Programme- Status of Individual Enterprises as on 31-10-2007

Sl. No.	District	2007-08		Cumulative	
		No. of enterprises	Subsidy (Rs)	No. of enterprises	Subsidy (Rs)
1	Thiruvananthapuram	1	7500	243	1631400
2	Kollam	1	7500	176	1324500
3	Pathanamthitta	0	0	1	7500
4	Alapuzha	0	0	31	217440
5	Kottayam	8	60000	15	112500
6	Idukki	33	241500	203	1476350
7	Ernakulam	0	0	0	0
8	Thrissur	15	112500	45	330300
9	Palakkad	33	246000	42	312000
10	Malapuram	46	360000	135	941850
11	Kozhikkode	10	75000	122	903000
12	Wayanad	1	7500	6	45000
13	Kannur	6	42000	15	107400
14	Kasargod	27	202500	119	805500
	Total	183	1362000	1155	8214740

Source: Kudumbashree Government of Kerala

Appendix 14.7

District wise details of Rural Micro Enterprises (RME)
Programme- Status of Group Enterprises as on 31-10-2007

Sl. No.	District	2007-08		Cumulative	
		No. of enterprises	Subsidy (Rs)	No. of enterprises	Subsidy (Rs)
1	Thiruvananthapuram	41	1575000	291	15382469
2	Kollam	34	1140000	223	6687500
3	Pathanamthitta	14	507500	163	5178500
4	Alapuzha	62	2362500	246	10922500
5	Kottayam	55	2120000	101	4600000
6	Idukki	89	3297500	517	24525460
7	Ernakulam	43	2547500	269	14416500
8	Thrissur	30	1304000	195	9437996
9	Palakkad	127	6107500	334	15339750
10	Malapuram	37	1652300	227	14542550
11	Kozhikkode	36	1297500	310	16528500
12	Wayanad	13	522500	59	3240000
13	Kannur	11	510000	115	5447310
14	Kasargod	22	872500	115	5574400
	Total	813	25616300	3165	153783424

Source: Kudumbashree Government of Kerala

Appendix 14.8

Financial Achievement under SGSY, IAY, JGSY, EAS/SGRY

(Rs in Lakhs)

Sl No	Year	SGSY		IAY		EAS		SGRY		Total	
		Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Fund	Expenditure
1	2	3	4	5	6	9	10	11	12	13	14
1	2003-04	2127.44	2054.13	6246.27	6767.77	7535.14	5628.49	0.00	0.00	16907.85	13450.39
2	2004-05	2514.48	2445.14	8212.78	7838.16	0.00	0.00	16897.32	13565.39	27624.58	23849.69
3	2005-06	2481.03	2420.47	7785.82	7150.22	0.00	0.00	16563.85	15532.67	26820.70	25103.36
4	2006-07	2772.86	2717.76	7865.32	7062.58	0.00	0.00	11045.83	10241.71	21683.81	20022.05
5	2007-08 (Upto Nov. 07)	1992.78	1546.89	5375.86	3783.27	0.00	0.00	9668.15	6282.12	17036.78	11612.28
	Total	11888.59	11184.39	35485.64	31603.00	7535.14	5628.49	54174.85	45621.89	109673.72	94037.77

Source: Commissionerate of Rural Development.

Appendix 14.9

EMPLOYMENT GENERATION UNDER NREGA DURING THE YEAR 2006 - 2007 & 2007-2008 AS ON NOVEMBER 2007

Name of District	No.of households issued job cards (till the reporting month)				No.of households who have demanded wage employment			Out of Col.3 number of provided employment			Out of total of Col. No.4 No. of individual applicants provided employment during the month	No. of women provided employment of Col. 5	Cumulative No. of households which have completed 100 days of employment
	SCs	STs	Others	Total	Households demanded up to previous month	Additional (fresh) household demand during month	Total	Households provided employment upto previous month	Additional (fresh) households provided employment during month	Total			
Wayanad	11838	42962	129644	184464	87287	12280	99567	84212	10961	95173	124237	71286	632
Palakkad	67739	17748	218034	303521	98580	14334	112914	95988	14647	110635	11795	68832	261
Kasargod	524	322	4363	5209	0	0	0	0	0	0	0	0	0
Idukki	40	0	1060	1100	0	0	0	0	0	0	0	0	0
Total	80141	61052	353101	494294	185867	26634	212481	180200	25608	205808	136035	158118	913

Source: Commissionerate of Rural Development.

Appendix 14.10

EMPLOYMENT GENERATION UNDER NREGA DURING THE YEAR 2006-07 & 2007-2008 AS ON NOVEMBER 2007

[lakh man days]

Sl. No	Name of District	SCs Households	SCs Person days	STs Households	STs Person days	Others Households	Others Persondays	Total Households(Col 3+5+7)	Persondays(Col.4+6+8)	No of days worked by women in col. 10	No. of land reforms/IAY beneficiary out of col.9	Disabled beneficiaries out of col.9
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Wayanad	6223	169091	22607	586489	66686	1507314	95516	2262894	1200153	18347	43
2	Palakkad	32517	686937	6386	210103	72756	1710370	111659	2607410	2017376	1343	5
3	Kasargod	0	0	0	0	0	0	0	0	0	0	0
4	Idukki	0	0	0	0	0	0	0	0	0	0	0
	Total	38740	856028	28993	796592	139442	3217684	207175	4870304	3217529	19690	48

Source: Commissionerate of Rural Development

Appendix 14.11

District-wise distributions of surplus land as on 31.10.2007

Name of District	Number of beneficiaries				Land Distributed (Area in acres)			
	SC	ST	OTHERS	TOTAL	SC	ST	OTHERS	TOTAL
Kasargod	4345	886	7653	12884	1343.17.300	275.46.930	2387.85.660	4007.49.890
Kannur	2057	3179	19069	26315	3553.01.000	2394.08.000	5596.93.000	11544.02.000
Thrissur	5776	186	17935	23897	906.91.746	25.36.468	1969.10.331	2901.38.540
Pathanamthitta	4	0	16	20	0.14.000	nil	00.64.000	00.78.000
Ernakulam	1413	72	2222	3707	315.34.445	2.93.000	409.06.776	727.84.221
Alappuzha	3408	76	4402	7886	1916.27.200	3.86.200	2656.58.500	4576.71.900
Palakkad	11276	1374	12952	25602	5863.04.000	1488.12.000	6038.68.000	13382.84.000
Malappuram	9573	95	10051	19749	3237.29.000	64.42.000	3665.10.450	6966.81.210
Thiruvananthapuram	2.94	Nil	1779	3971	254.42.334	Nil	254.69.786	509.12.120
Kollam	2981	59	2814	5854	666.79.262	35.09.000	882.10.492	1583.98.750
Wayanad	1286	2172	3427	7085	818.65.000	2260.01.000	1815.32.000	4993.98.000
Kottayam	1467	70	3433	7970	1156.45.147	57.21.000	801.54.607	2015.00.760
Kozhikode	3596	21	5148	8765	878.73.000	3.85.000	1150.99.000	2033.57.000
Idukki	26	4	170	200	3.83.916	1.76.000	30.12.797	35.72.713
Total	55415	8594	85098	149107	20914.57.180	6713.16.594	29648.54.49	57276.28.500

Revenue, Survey and Land Records Department

Appendix 14.12

District wise Urban Thrift & Credit Operation - as on 31-12-2007

Sl. No	Name of District	No. of NHG	No. of ADS	No. of CDS	Amount of Thrift (Rs)	Amount of Loan (Rs)	No. of families started Thrift
1	Thiruvananthapuram	2214	120	5	52822172	44648139	69714
2	Kollam	1339	72	3	56110805	56835389	38774
3	Pathanamthitta	410	30	3	12514340	9048239	17420
4	Alappuzha	1060	102	5	86378150	89823784	33269
5	Kottayam	431	46	4	19200174	19938458	12855
6	Idukki	60	5	1	3842700	2802630	2100
7	Ernakulam	1900	164	10	105402027	164269053	54575
8	Thrissur	1078	105	7	38972058	45892732	22758
9	Palakkad	1355	127	4	37338472	75026730	28201
10	Malappuram	856	107	6	30846929	19592067	23564
11	Kozhikkode	1400	73	3	46312627	58515206	28220
12	Wayanad	79	11	1	3310455	3542545	2471
13	Kannur	592	71	6	14548222	13018446	14534
14	Kasaragod	475	67	2	18608768	8206060	9100
	Total	13279	1090	59	523209219	613058387	347545

Source : Kudumbashree, Thiruvananthapuram

Appendix 14.13

List of Micro Enterprises (District wise)

As on 30-12-07

Sl.No	Name of District	DWCUA	USEP
1	Thiruvananthapuram	310	2880
2	Kollam	65	1870
3	Pathanamthitta	32	960
4	Alappuzha	152	1850
5	Kottayam	78	1095
6	Idukki	10	135
7	Ernakulam	520	2850
8	Thrissur	188	1045
9	Palakkad	87	2188
10	Malappuram	83	1120
11	Kozhikkode	210	1697
12	Wayanad	22	127
13	Kannur	88	1860
14	Kasargod	44	942
	Total	1689	20539

Source: Kudumbashree, Thiruvananthapuram

Appendix 14.14

List of Group Micro Enterprises in Urban Area

Sl. No.	Name of Project	No. of Units
1	Direct Marketing	150
2	IT unit	93
3	Soap making unit	65
4	Canteen	80
5	Catering Service	75
6	Dairy unit	58
7	Ethnic Delicacies	60
8	IT @ School	50
9	Garments/Readymade	60
10	Hotel	65
11	Tender Coconut selling unit	35
12	Provision Store	38
13	Paper Cover & Paper Bag	50
14	KeraSree (Coconut processing/Oil extraction unit)	32
15	Mat Weaving/Cover making unit	28
16	Super Market	33
17	Curry Powder unit	36
18	Umbrella Manufacturing	30
19	Mobile market (Pick up van)	22
20	Laundry unit	24
21	Solid waste processing unit	45
22	Remedial Education Centre	19
23	Bakery/Sweet stall unit	36
24	Tailoring unit	23
25	Book Binding unit	30
26	Food Products	22
27	Agricultural Nursery	25
28	Sanitation unit	26
29	Clean Kerala Business	79
30	Grinding unit	17
31	KSRTC Canteen	17
32	Fish vending unit	17
33	Palm mat unit	13
34	Consumer Store/Traders	14
35	Pickles making	25
36	Bag manufacturing	18
37	Coir Yarn/Products	9
38	Vanila Nursery	14
39	Cloth Bag unit	10
40	Bamboo unit	8
41	Chappel making	9
42	Coconut Products	10
43	Metal crushing unit	10
44	Neighbours - Support Services to Friends	8
45	Note Book Manufacturing	30
46	Beauty parlour	11
47	Bricks/Hollow bricks	14
48	Flowers & Garland	7
49	Handicrafts	14
50	Toy manufacturing	8
51	Computer Hardware unit	10
52	Hospital Restaurant	14
53	Telephone Repair	5
54	Herbal Nursery	13
55	Hosiery unit	4

Sl. No.	Name of Project	No. of Units
56	Prasoothika	4
57	Rice/Rice powder business	12
58	Chicken Stall	6
59	Cooking mate/Gas light/Decoration (Hiring service)	3
60	Electronic unit	4
61	Fish/Sea shell processing	6
62	Instant Mix manufacturing unit (Palada)	3
63	Paddy Cultivation	3
64	Pappad making unit	14
65	United Services	3
66	Water Meter Repair unit	3
67	Multi Purpose Job Club	3
68	Agarbathi/Candle unit	6
69	Atta packing	2
70	Chips unit	5
71	Construction work of women	6
72	Courier Service	4
73	Day Care centre	2
74	Documentation/File works unit	4
75	Electronic Choke Assembling unit	2
76	Furniture manufacturing	9
77	Ice Cream Parlour	3
78	Marketing unit	5
79	Ornaments Manufacturing unit	2
80	Painting unit	2
81	Pandhal unit	2
82	Poultry farm	8
83	Printing unit	4
84	Shawl/Pardha Making	2
85	Tarpolin production/Chackaviri	2
86	Women Hostel	2
87	Tire wood	2
88	Photo Album	2
89	Sound system	2
90	Bio Technology	1
91	Cashew nut processing	1
92	Cement products	1
93	Handloom weaving	1
94	House Nursing unit	1
95	Net works	1
96	Plastic chair & mat	1
97	Pottery unit	1
98	Soda making	1
99	Solar Cooker	1
100	Vegetable Vending	1
101	Vehicle Service	1
102	Wire Coir Carpet making unit	1
103	Fancy and rental	1
104	Fashion designing	1
105	Goat rearing	2
106	Hiring service	1
107	Jewellery designing	1
108	Mosquito control unit	3
109	Pipe bending	1
110	Waste paper collection	1
111	Women's Resource Group	1
	Total	1259

Source: Kudumbashree, Thiruvananthapuram

Appendix 14.15

Details of projects under IHSDP

(Rs.in Lakh)

Sl No	Name of Local Body	Total Project cost	State share released to ULB	Central share released
	2006-07			
1	Malappuram	1045.58	52.28	358.109
2	South Paravur	264.32	8.285	122.05
3	Taliparamba	243.43	12.17	105.217
4	Changanassery	347.17	17.36	150.905
5	Mattanur	131.1	6.555	
6	Kanhangad	205.72	10.285	97.67
7	Kasaragod	127.54	4.06	
8	Kozhikode	696.62	24.88	
9	Koyilandy	308.1	8.135	
10	Koothuparamba	82.3	3.92	37.42
11	Chittur-Thathamangalam	1230.92	42.326	359.564
12	Kunnamkulam	178.64	8.935	
13	Shornur	994.78	49.735	294.398
14	Attingal	156.42	4.62	71.805
15	Thodupuzha	390.49	10.34	172.468
	Sub Total	6403.12	271.885	1779.606
	2007-08			
1	Alappuzha	1003.85	50.19	NA
2	Ollapalam	898.59	34.16	-
3	Thalessery	189.21	9.115	-
4	Punalur	892.96	40.44	-
5	Perinthalmanna	579.67	25.74	-
6	Chavakkad	156.89	5.415	-
7	Kannur	194.91	8.55	-
	Sub Total	3918.08	173.61	-
	Total	10321.2	445.495	1779.606

Source: KSUDP

Appendix 14.16

Details of approved projects by Kochi Corporation under BSUP during 2006-07(Phase I)

(Rs. in lakh)

Sl.No.	Project Components	Total project cost	Central share	State share	ULB share	Beneficiary share
1	Housing					
a)	New housing(3 colonies-240 houses)					
b)	New housing-Individual houses(Kochi cor.-790, Chellanam GP-245,Kadamakkudy GP-218)	2007.74	1003.87			252.01
c)	Housing upgradation (187 houses)	99.68	49.84			
2	Community facilities-(Community hall, anganwadi,Public toilets, extention of existing buildings)	26.7	13.35			
3	Roads	32.04	18.02			
4	Solid Waste Management	72.02	30.01			
5	Land scaping	1.48	0.74			
6	Electrification	12.89	6.45			
7	Community buildings or relief settlement	325.06	162.83			
9	Water supply	83.03	41.52			
	Total	2661.24	1330.63	532.25	546.37	[illegible]

Source: Kudumbashree

Appendix 14.17

Details of approved projects by Thiruvananthapuram Corporation under BSUP during 2006-07 (Phase I)

(Rs. in lakh)

Sl.No.	Project Components	Total project cost	Central share	State share	ULB share	Beneficiary share
1	Housing					30.19
a)		218.71	174.97			
b)	Housing upgradation(107 houses.)	28.75	21.4			
2	Community facilites-(Community hall, angamwadi,informal study centre)	61	48.8			
3	Roads	13.47	15.68			
4	Solid Waste Management	3.8	3.04			
5	Storm water drains	152.7	122.16			
6	Electrification	1.96	1.57			
7	Sewerage	2.75	2.2			
8	Retaining wall,bio fencing land scaping etc	7.8	6.24			
9	Water supply	8.3	8.64			
	Total	503.24	402.6	50.32	20.14	30.19

Source: Kudumbashree

Appendix 14.18

Details of approved projects by Thiruvananthapuram Corporation under BSUP during 2006-07(Phase II)

(Rs. in lakh)

Sl.No.	Project Components	Total project cost	Central share	State share	ULB share	Beneficiary share
1	Housing					420.04
a)	New housing(680nos) Scattered new housing -2000 houses(1000 in Tvpm corporation, 250 each in Vattiyoorkavu,Vizhinjam,Kazhakootam and sreekaryam	1005.89	804.55			
b)	GPs)	2417	1933.8			
2	Community facilites-(Community hall, angamwadi,informal study centre)	50.78	40.62			
3	Roads	41.69	33.35			
4	Solid Waste Management	1.91	1.53			
5	Storm water drains	113.27	90.62			
6	Electrification	6.5	5.2			
7	Sewerage	9.14	7.31			
8	Generator,bio fencing land scaping etc	19.29	15.43			
9	Water supply	64.13	51.3			
	Total	3729.4	2983.51	174.31	151.53	420.04

Source: Kudumbashree

Appendix 14.19

District-wise Number of beneficiaries in Welfare Institutions - 2007

Sl.No	Name of Welfare Institution	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasargode	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	100	29		26	28		36	34		20	39		18	41	371	1000
2	Mahila mandiram	18	11	13	13	14		31	28	16	18	28		21	15	218	300
3	Ashabhavan	62						33	38			48				181	200
4	Daycare center & oldage home	26														26	25
5	Home for physically handicapped	32						24				21				77	75
6	Care home for disabled children			12										5		17	75
7	Aftercare home for adolescents		14									59		8		81	250
8	Home for physically handicapped(aged)			22			18			24			33			85	150
9	Rescue home			8							19					27	200
10	Children's home			35												35	50
11	Pratheeksha bhavan										34					34	50
12	HMDC											25				25	50
13	Short stay homes											6				6	50
14	Observation homes	60	24	36	8	60		60	60	24	24	60	60	24	204	702	425
15	Juvenile homes	51	86	32		97			62			336			14	678	9000
16	Special home	120										80				160	60
17	Balasadanam															0	100
18	Fondling Homes & Orphanages	2675	1811	583	760	4666	2043	3982	5006	4386	6812	5023	1348	2778	616	43280	
19	Beggar Homes		220	126		44	30	106							419	946	
20	Home for Aged Infirm	220	108	249	168	2260	490	2745	764		522	512	198	3071	227	10230	

Source: Social Welfare Department

Appendix 14.20

Major Pension Schemes in Kerala through Revenue Deprtment - District-wise Beneficiaries 2007

Sl. No.	Name of Scheme	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasargod	State Total
1	Special Pension for persons with Disabilities	22413	18230	14042	5578	9673	4067	15153	16809	15489	21561	18444	3783	12593	7231	188188
2	Widow/Destitute Pension Scheme	38835	35864	15808	6750	13271	3537	22111	24911	26804	32830	26716	6793	19354	12883	298867
3	National Old Age Pension	20064	14335	8888	3741	10277	3707	13201	11260	19399	15212	6837	2203	9239	5593	141958
4	Unmarried women above 50years	2713	1264	3164	872	1438	113	3225	6240	3384	2202	5336	150	4869	794	35584
5	Kerla Freedom Fighters Pension	1398	738	1253	29	45	122	420	426	304	437	877	29	1286	167	7511
6	Financial Assistants to Leprosy, Cancer patients	2942	1890	417	279	132	46	414	299	72	239	348	79	87	49	7393

Source:Land Revenue Department

Appendix 14.21

Details of Rates per person on Social Security Pension Schemes in Kerala - 2007

Sl No.	Welfare institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	6	5	7	8	9	10	
1	Agricultural Workers Welfare Scheme	1. Pensioner - Above 60 years. Annual family income Rs 1,000	1980	Rs 40/m	Rs 45/m(1985)	Rs 60/m(1987)	Rs 70/m(1991)	Rs 80/m(1996)	Rs 100/m (1997)	Rs120/m (2000)
		2. Retirement benefit - minimum one year membership	1980	Rs500/- to Rs25000						
2	Kerala Widow Pension Scheme	Death of husband/divorced/not remarried. Income Rs.300/m	1973	Rs 35/m	Rs 65/m(1991)	Rs 90/m(1996)	Rs 110/-(1996)			
3	Special Pension for the Disabled and Mentally Retarded Persons	40% Disability Medical Certificate. Family Income below 500/m	1992	Rs 75/m	Rs 100/m(1995)	Rs. 110/m(1996)	Rs. 140/m(2006)			
4	Pension to Sportsmen	Income Rs. 1100 per annum. Inter District/State level participation	1978	Below 60 years Rs 75/m. 60 to 70 yrs Rs 150/m. 70 yrs and above Rs 200/m	Below 60 yrs Rs.200/m(1990). 60 to 70 yrs Rs.300/m. 70 yrs and above Rs400/m	Below 60 yrs Rs 400/m(1996). 50 to 70 yrs Rs.500/m. 70 yrs and above Rs600/m				
5	IInd World War Veterans	Participated in the 2nd World War. Not receiving any other assistance. Annual income Rs 6000	1997	Rs 200/m	Rs.300/m(2000)	Rs 400/m(2006)				
6	Freedom fighters Pension Scheme	Participated in the National Movement	1971	Rs 35/m	Rs 400/m(1980). Rs 500/m(1981)	Rs. 750/m(1986). Rs. 1000/m(1990)	Rs 1500/m(1997). Rs.2000/m(1998)	Rs.3000/m (2000)	Rs. 3800/m (2006)	
7	Financial Assistance to Leprosy and Cancer Patients	Certificate from hospitals. Income Rs. 200/m	1975	Rs.30/m	Rs.200/m(1997)					
8	Pension to Journalists' Dependents	1. Living Journalist who are unemployed due to ill health and average	1975	Rs 300/m	Rs 500/m (1997)					
		2. Pension to journalist who retired after 10 year service	1993	Rs 1000/m	Rs 1400/m(2001)					
		3. Pension to daily workers. Minimum 10 year service for full pension, 50% pension for 5 year service.	2000	Rs.1000/m						

SL No	Welfare Institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	5	6	7	8	9	10	
9	Welfare Fund for Cine Artists	Cine Artists in distress. Annual family income Rs.12000	1981	Rs.[illegible]/m	Rs.[illegible]/m(1997)	Rs.500/m(1998)				
10	Kerala Cashew Workers Welfare Scheme	1. Cashew Workers above the age of 60 incapable to do work	1609	Rs.75/m	Rs.100/m(1992)	Rs.125 to 200/m(1996)				
		2. Death benefit to nominees	1681	Rs.250/m	Rs.500/m(1995)	Rs.1000(1998)				
11	Kerala Coir Workers Welfare Scheme	1. Pension - Workers above the age of 60 years	1589	Rs.75/m	Rs100/m(1997)					
		2. Family Pension - Death of the member worker	1589	Rs.75/m						
12	Kerala Construction Workers Welfare Scheme	1. Pension - Workers having one year service 60 years of age	1991	Rs.75/m	Rs.100/m(1995)	Rs.150/m(1998)	Rs.200/m(2000)			
		2. Disability pension - Medical Certificate	1993	Rs.150/m						
		3. Family Pension - Death of the Pensioner	1998	Rs.100/m						
13	Kerala Khadi Workers Welfare Scheme	10 years service, 60 years of age	1980	Rs.60/m	Rs.150/m(1997)	Rs.100 to Rs.300(1998)				
14	Kerala Handloom Workers Welfare Scheme	1. Pension - Above the age of 60 years, minimum 3 years service	1988	Rs.75/m	Rs100/m(1997)	Rs.110/m(2007)				
		2. Self employed pension	1988	Rs.100/m		Rs.110/m(2007)				
		3. Death Benefit	1990	Rs.1000/m	Rs.5000/m(1998)					
15	Kerala Abkari Workers Welfare Scheme	1. Pension - 60 years. Completed 3 years continuous service	1989	Rs.115/m	Rs.200/m(1998)					
		2. Death benefit		Rs.10000						
		3. Permanent Disability Benefit		Rs.5000						
16	Kerala Toddy Workers Welfare Scheme	1. Pension - Not less than 10 years membership	1987	Rs.100/m						
		2. Assistance to Disabled workers	1988	Rs.150/m	Rs.125/m(1992)	Rs.150/m(1994)				

Sl. No.	Welfare Institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	5	6	7	8	9	10	
17	Kerala Head Load Workers Welfare Scheme	1. Death benefit	1987	Normal death Rs.10000 Accidental death Rs.20000	Rs.15000 and Rs.30000 respectively					
		2. Invalid Pension	1990	Rs.150/m	Rs 200 to Rs 2400(2000)					
18	Kerala Motor Workers Welfare Scheme	1. Death benefit - 3 months continuous service	1998	Rs.5000	Rs.25000(2000)					
		2. Retirement benefit		Rs 12000 for 5years service and Rs 60000 for 15 years service						
19	Kerala Fishermen Welfare Scheme	1. Pension - Completed 60 years, Annual Income Rs 6000	1987	Rs.75/m	Rs.85/m(1992)	Rs.100/m(1996)	Rs 120/m(2000)			
		2. Accidental death/missing - 18 to 70 years.	1986	Rs.15000	Rs.21000(1990)	Rs.25000(1992)	Rs.50000(1996)	Rs 100000(1999)		
		3. Permanent disability	1985	Rs 7500	Rs 10500(1990)	Rs.25000(1992)	Rs 50000(1996)	Rs.100000(1999)		
20	Kerala Tailoring Workers Welfare Scheme	1. Pension - Completed 60 years, Minimum 9 years service.	2000	Rs 100 to Rs 430/m						
		2. Disability Pension	1997	Rs.100/m						
21	Kerala Artisans & Skilled Workers Welfare Scheme	1. 60 years and above and is a member	1986	Rs 50000 for 40 years of service. Rs.400 for 2 yrs service						
		2. Death Benefit		Rs 10000						
		3. Permanent disability		Rs 1000						
22	Financial Assistance to Widows for the marriage of their daughter	Family annual income Rs.10000, Individual income Rs.5000.	1978	Rs.1000	Rs. 1250(1991)	Rs.2000(1996)	Rs.2500(1998)	Rs 5000(2002)		

Sl No.	Welfare Institution	Qualifying condition	Year	Year of Revision and Rate of assistance						
1	2	3	4	5	6	7	8	9	10	
23	Tree Climbers Welfare Scheme	Workers in the event of total accidents and permanent total disability following the accidents	1980	Rs 10000						
24	Kerala Network Employment Services	1. Unemployment Assistance Passed SSLC registration of employment exchange for more than 3 years. Age limit 18-35 years Family Annual income Rs 12000 should not be a student	1982	Rs.50/m	Rs.60/m(1987)	Rs 70/m(1991)	Rs 80/m(1996)	Rs 90/m(1997)	Rs.100/m(1998)	Rs.120/m (2000)
		2. Self Employment Scheme for the registered unemployed Persons between 21-40 years Annual Family Income Rs.24000	1999	Rs.30000 to Rs.50000/ Loan 20% loan amount subsidy						
25	National Old Age Pension Scheme	Above 65 years. Annual Family Income below Rs.11000	1995	Rs.110/m	Rs.110/m(1996)	Rs. 235/m(2005)				
26	Ration Dealers Welfare Fund Scheme	1 Pension - completed 60 years/ Minimum 10 years of service	2000	Rs 150/m						
		2 Death Benefit - one year minimum membership	2000	Rs.10000 to the nominee						
27	Beedi and Cigar Workers Welfare Scheme	1 Pension - Completion of 60 years/Minimum 3 years service	1997	Rs.100/m						
		2. Retirement benefit	1997	Rs 10000						
28	Pension to unmarried women	Above 50 years Annual family income below Rs.6000. Not covered under any other social security schemes	2001	Rs.110/m						

Source: Different Welfare Fund Boards/Departments.

Appendix.14.22

DISTRICT- WISE COMPLAINTS RECEIVED BY KERALA WOMEN'S COMMISSION (January-September 2007)

Sl. No.	Item	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Idukki	Kottayam	Ernakulam	Trissur	Palakkad	Malappuram	Wayanad	Kozhikode	Kannur	Kasargode	Total
1	Harassment of Women	381	145	83	116	145	89	86	70	99	35	31	58	46	38	1362
2	Dowry Harassment	7	5	10	12	3	9	5	2	9	12		10	5	4	93
3	Harassment by Husband	152	22	5	50	20	38	20	10	13	12	9	51	43	18	483
4	Cheating	24	18	6	13	6	11	6	12	6	2	3	13	8	5	132
5	Divorced by Husband	8	5	3	1	2	14	4	2	2	8	2	4	4	2	59
6	Suspicious death	8	12	5	5	1	5	7	5	1	3	2	9	4	2	69
7	Property related	87	13	14	14	14	4	21	11	19	3	3	8	8	5	205
8	Job related	17	6	2	2	3	22	7	8	8	27	4	3	2		107
9	Threatening to life	21	15	15	8	7	12	10	9	4	3		7	3	1	113
10	Sexual Harassment	9	3	5	6	10	16	8	4	6	13	3	6	7	4	100
11	Use of abusive language	11	23	7	8	8	9	5	7	2		1	2	1	1	81
12	Neighbour's nuisance	42	3	3	8		34	4	2		12	2	8	8	8	133
13	Atrocities	24	20	13	12	3	2	22	8	7	13	1	6	7	4	142
14	Against Police	7	2	1	9	1	3	2	2	1		1	2	2	4	37
15	Theft		1		2		1		2				1			7
16	Beating		10	18	8		24	7	5				8	7	1	88
17	Nuisance of anti-social elem	8	5		14		4	2	1			1	1	1	2	39
18	To get divorce	8	4	1					3				1			17
19	Nuisance after drinking	5	3	2	8	2	3	1	1	2			2	3		32
20	Alimony	38	8	3	5	2	3	1	3	8	8	1	3	3	3	87
21	Economic help		2		1		1		3			1	2	4	2	16
22	Path problems	8	5	2	8	1	2	3	2	1			4	1	5	42
23	Doctor's negligence	1		1			1		1		2					6
24	Child marriage								1							1
25	Miscellaneous	175	50	21	35	45	39	34	45	49	34	23	24	30	24	628
	Total	1001	378	200	341	271	348	237	217	234	185	86	233	197	131	4059

Source:Kerala Women's Commission

Appendix 14.23

Major Welfare Measures in the Welfare Fund Boards in Kerala - 2007

Sl. No	Name of Welfare Fund Boards	Maternity benefits	Marriage Assistance	Medical Assistance	Death Relief	Pension (per month)	Family Pension (per month)	Superannuation benefits	Permanent disability	Educational Assistance	House Building Advance
1	2	3	4	5	6	7	8	9	10	11	12
1	Kerala Agricultural Workers Welfare Fund Board	1000	2000	1000	1000	0	0	25000	0	NA	0
2	Kerala Building and Other Construction Workers Welfare Board	2000	3000 (Daughters) 2000;Sons;	300 to 5000	15000 to 100000	200	100	0	50000	NA	80000
3	Kerala Handloom Workers Welfare Fund Board	500	2000	5000	5000	100	0	0	5000	300 to 2100	0
4	Kerala Fishermen's Welfare Fund Board	0	0	2000	100000	0	0	0	100000	0	0
5	Kerala Toddy Workers Welfare Fund Board	0	0	7000 (cancer)	5000	150	0	0	150	0	0
6	Kerala Ration Dealers Welfare Fund	0	0	5000 to 15000	0	150	0	0	0	2500	0
7	Kerala Abkari Workers Welfare Fund Board	0	0	0	10000	200 to 300	0	0	10000	0	0
8	Kerala Tailoring Workers Welfare Scheme	1000	1000	5000	10000	100	100	0	100	600 to 1000	0
9	Kerala Headload Workers Welfare Board	0	0	0	0	250 to 2400	125	0	0	0	0
10	Kerala Coir Workers Welfare Fund Board	1000	2000	1000	1000	100	100	0	2500	750 to 3000	10000
11	Kerala Cashew Workers Relief Welfare Fund Board	1000	1000	0	Member 1000 persons-800	125 to 200	0	0	2500	500 to 2000	0

Source: Based on information received from different Welfare Fund Boards.

Appendix 14.24
District-wise ICDS beneficiaries in Kerala-2007

Sl No	Name of ICDS Project(R/U/I)	No. of AWCs reporting	No. of Aw providing SNP for 21+ days in a month	Total population with in project		No. of SNP Beneficiaries		
				0-6 years	Preg. & Lact. women	6-3 years	3-6 years	Preg. & Lact. women
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	3004	2723	302550	39026	39559	44818	18494
2	Kollam	2653	2600	210314	29196	36201	34741	14983
3	Pathanamthitta	1355	1264	80314	10609	13862	16089	5035
4	Alappuzha	2107	2082	163079	21558	29341	29460	11541
5	Kottayam	1996	1955	136369	18297	19406	23148	8781
6	Idukki	1461	1433	97000	15078	30299	21047	9953
7	Ernakulam	2771	2525	219593	29745	36045	35706	13665
8	Thrissur	2996	2931	235056	34013	40233	37417	13357
9	Palakkad	2730	2350	211626	34010	60009	38176	16398
10	Malappuram	3708	3284	462936	69157	72143	61234	26139
11	Kozhikkode	2862	2762	268744	41922	50004	41629	20016
12	Wayanad	809	809	79568	12155	28339	11672	6439
13	Kannur	2442	2109	202068	31883	50250	34448	13860
14	Kasaragod	1275	1275	118803	17953	20308	22126	8767
	Total	**32139**	**30108**	**2779380**	**406178**	**521999**	**449617**	**184428**

Source: Social Welfare Department

Appendix 14.25

ICDS PROJECTS (GENERAL) -2007

SLNo	Name of Project	Year of sanctioning	Type of project	No. of AWC s Sanctioned	Operational	Reporting
1	2	3	4	5	6	7
THIRUVANANTHAPURAM						
1	Thiruvananthapuram U2	95-96	Urban	140	140	140
2	Thiruvananthapuram 8	82-83	Rural	162	162	162
3	Kilimanoor	94-95	Rural	220	220	220
4	Nemom	82-83	Rural	266	266	266
5	Perumkadavila	82-83	Rural	252	252	252
6	Vamanapuram	86-87	Rural	227	227	227
7	Thiruvananthapuram (Ul)	77-78	Rural	154	154	154
8	Athiyannoor	82-83	Rural	240	240	240
9	Chirayinkeezh	81-82	Rural	219	219	219
10	Kazhakuttam	95-96	Rural	255	255	255
11	Varkala	95-96	Rural	195	195	195
12	Nedumangad	99-00	Rural	219	219	219
13	Vellanad	2000-01	Rural	239	239	239
14	Parassala	2000-01	Rural	194	194	194
	Total			**3004**	**3004**	**3004**
KOLLAM						
15	Sasthamkotta	82-83	Rural	152	152	152
16	Ithikara	83-84	Rural	241	241	241
17	Vettikavala	82-83	Rural	193	193	193
18	Chittumala	85-86	Rural	130	130	130
19	Pathanapuram	88-89	Rural	179	179	179
20	Anchal	94-95	Rural	230	230	230
21	Kottarakara	94-95	Rural	172	172	172
22	Chadayamangalam	95-96	Rural	236	236	236
23	Chavara	79-80	Rural	162	162	162
24	Oachira	80-81	Rural	129	129	129
25	Archalumoodu	82-83	Rural	181	181	181
26	Karunagappally	99-00	Rural	153	153	153
27	Mukhathala	2000-01	Rural	263	263	263
28	Kollam Punalur	2000-01	Rural	230	230	230
	Total			**2663**	**2663**	**2663**
PATHANAMTHITTA						
29	Pulikeezhu	85-86	Rural	155	155	155
30	Elanthoor	85-86	Rural	112	112	112
31	Ranni	94-95	Rural	220	220	220
32	Pandalam	94-95	Rural	109	109	109
33	Konni	88-89	Rural	198	198	198
34	Kulanada	90-91	Rural	89	89	89
35	Peravoor	82-83	Rural	216	216	216
36	Mallappally	99-00	Rural	127	127	127
37	Kozhanchery	2000-01	Rural	129	129	129
	Total			**1355**	**1355**	**1355**
ALAPPUZHA						
38	Pallathadu	80-81	Rural	207	207	207
39	Thykattussery	79-80	Rural	116	116	116
40	Kanjikuzhi	82-83	Rural	201	201	201
41	Alappuzha (U)	82-83	Rural	177	177	177
42	Cherpakulam	82-83	Rural	129	129	129

Sl No	Name of Project	Year of sanctioning	Type of project	No. of AWC s		
				Sanctioned	Operational	Reporting
1	2	3	4	5	6	7
43	Ambalappuzha	81-82	Rural	132	132	132
44	Harippad	82-83	Rural	157	157	157
45	Muthukulam	83-84	Rural	202	202	202
46	Mavelikkara	94-95	Rural	153	153	153
47	Bharanikkavu	94-95	Rural	206	206	206
48	Chengannur	95-98	Rural	201	201	201
49	Ariyad	99-00	Rural	126	126	126
50	Veliyanad	99-01	Rural	100	100	100
	Total			2107	2107	2107
KOTTAYAM						
51	Lalam	82-83	Rural	135	135	135
52	Pampady	82-84	Rural	141	141	141
53	Madappally	85-86	Rural	263	263	263
54	Kanjirappally	90-91	Rural	230	230	230
55	Vaikom	79-80	Rural	140	140	140
56	Kaduthuruthy	99-00	Rural	167	167	167
57	Pallam	99-00	Rural	305	305	305
58	Vazhoor	99-00	Rural	120	120	120
59	Erattupetta	2000-01	Rural	138	136	138
60	Ettumanoor	2000-01	Rural	207	207	207
61	Uzhavoor	2000-01	Rural	152	152	152
	Total			1996	1998	1996
IDUKKI						
62	Adimali	81-82	Rural	187	187	187
63	Azuda	86-87	Rural	229	229	229
64	Devikulam	83-84	Rural	214	177	177
65	Elamdesam	79-80	Rural	134	134	134
66	Idukki	87-88	Rural	159	159	159
67	Kattappana	88-89	Rural	240	240	240
68	Nedumkandam	92-93	Rural	198	198	198
69	Thodupuzha	93-94	Rural	137	137	137
	Total			1498	1461	1461
ERNAKULAM						
70	Vypin	83-84	Rural	198	198	198
71	North Paravur	80-81	Rural	175	175	175
72	Mattanchery	79-80	Rural	126	126	126
73	Kochi(U)	95-98	Urban	200	200	200
74	Vadavucode	82-83	Rural	155	155	155
75	Mulanthuruthy	90-91	Rural	183	178	178
76	Vyttila	94-95	Rural	68	68	68
77	Parakadavu	99-2000	Rural	138	136	136
78	Vazhakkulam	99-2000	Rural	245	245	245
79	Pampakuda	99-2000	Rural	139	139	138
80	Koovappady	99-2000	Rural	169	169	169
81	Alangad	2000-01	Rural	164	164	164
82	Angamali	2000-01	Rural	226	226	228
83	Edappally	2000-01	Rural	170	114	114
84	Moovattupuzha	2000-01	Rural	176	176	176
85	Paluruthy	2000-01	Rural	65	65	65
86	Kothamangalam	2000-01	Rural	236	236	236
	Total			2841	2771	2771

Sl.No	Name of Project	Year of sanctioning	Type of project	No. of AWC s		
				Sanctioned	Operational	Reporting
1	2	3	4	5	6	7
THRISSUR						
87	Anilikad	80-81	Rural	108	108	108
88	Chavakkad	78-79	Rural	230	230	230
89	Chelakkudy	83-84	Rural	201	201	201
90	Chowannoor	95-96	Rural	191	191	191
91	Irinjalakkuda	90-91	Rural	151	151	151
92	Mala	82-83	Rural	142	142	142
93	Mullassery	88-89	Rural	100	100	100
94	Pazhayannoor	86-87	Rural	172	172	172
95	Thalikulam	85-86	Rural	129	129	129
96	Vellangallur	94-95	Rural	111	111	111
97	Vadakkanchery	94-96	Rural	222	222	222
98	Puzhakkal	99-00	Rural	275	275	275
99	Ollukkara	99-2000	Rural	262	262	262
100	Cherpu	2000-01	Rural	179	179	179
101	Kodakara	2000-01	Rural	208	208	208
102	Kodungallour	2000-01	Rural	139	139	139
103	Mathilakam	2000-01	Rural	146	146	146
	Total			**2966**	**2966**	**2966**
PALAKKAD						
104	Kuzhalmannam	80-81	Rural	162	162	162
105	Kollengode	81-82	Rural	162	162	162
106	Alathur	83-84	Rural	270	270	270
107	Sreekrishnapuram	83-85	Rural	168	168	168
108	Chittur	86-87	Rural	186	186	186
109	Ottappalam	86-87	Rural	227	227	227
110	Mannarkad	88-89	Rural	299	299	299
111	Thrithala	90-91	Rural	194	194	194
112	Palakkad	91-92	Rural	318	318	318
113	Pattamb	92-93	Rural	264	264	264
114	Nenmara	93-94	Rural	100	100	100
115	Attappady	81-82	Tribal	159	159	159
116	Mallampuzha	99-2000	Rural	221	221	221
	Total			**2745**	**2730**	**2730**
MALAPPURAM						
117	Ponnani	80-81	Rural	201	201	201
118	Tanur	83-84	Rural	285	285	285
119	Tirur	82-83	Rural	250	250	250
120	Thirurangadi	85-86	Rural	282	282	282
121	Andallode	93-94	Rural	154	154	154
122	Manjeri (Areacode)	83-84	Rural	272	272	272
123	Kondotty	81-82	Rural	240	240	240
124	Kuttipuram	92-93	Rural	221	221	221
125	Malappuram	93-94	Rural	213	213	213
126	Mankada	93-95	Rural	285	285	285
127	Nilambur	93-96	Rural	315	315	315
128	Perinthalmanna	83-84	Rural	237	237	237
129	Vengara	75 78	Rural	266	266	266
130	Wandoor	91-92	Rural	350	350	350
131	Malappuram U	2000-01	Urban	157	157	157
	Total			**3706**	**3706**	**3706**

Sl.No	Name of Project	Year of sanctioning	Type of project	No. of AWC s		
				Sanctioned	Operational	Reporting
1	2	3	4	5	6	7
WAYANADU						
132	Sulthan Bathery	82-83	Rural	282	282	282
133	Kalpetta	82-84	Rural	280	280	280
134	Mananthavadi	78-79	Rural	247	247	247
	Total			809	809	809
KOZHIKODE						
135	Balussery	90-91	Rural	240	240	240
136	Koduvalli	82-83	Rural	258	258	258
137	Perambra	83-84	Rural	165	165	165
138	Kunnamangalam	83-85	Rural	327	327	327
139	Meladi	82-83	Rural	124	124	124
140	Calicut(UI)	77-78	Rural	103	103	103
141	Calicut (UII)	83-84	Urban	113	113	113
142	Chelannur	99-00	Rural	206	206	206
143	Kunnummal	99-00	Rural	206	203	203
144	Pathalayani	99-00	Rural	179	179	179
145	Kozhikode (R)	99-00	Rural	297	297	297
146	Thodannur	2000-01	Rural	125	125	125
147	Tuneri	2000-01	Rural	153	153	153
148	Vadakara	2000-01	Rural	121	121	121
149	Kozhikode U3	2000-01	Urban	252	248	248
	Total			2869	2862	2862
KANNUR						
150	Kannur (Urban)	82-83	Urban	63	63	63
151	Kuyiladambu	83-84	Rural	263	263	263
152	Peravoor	86-87	Rural	153	153	153
153	Irikkur	93-94	Rural	239	239	239
154	Edakkad	82-83	Rural	251	251	251
155	Iritty	94-95	Rural	217	217	217
156	Kannur(Rural)	93-94	Rural	156	156	156
157	Payyanur	93-94	Rural	386	386	386
158	Thaliparamba	81-82	Rural	403	403	403
159	Thalassery	94-95	Rural	311	311	311
	Total			2442	2442	2442
KASARGOD						
160	Kanhangad	80-81	Rural	331	331	331
161	Kasargod	85-88	Rural	346	346	346
162	Manjeswaram	94-95	Rural	313	313	313
163	Neeleswaram	99-00	Rural	285	285	285
	Total			1275	1275	1275
	Grand Total			32268	32139	32139

Source: *Social Welfare Department*

Appendix.14.26

District-wise Details of SC/ST population Census 2001

Sl.No	India/State/District	Total Population			Scheduled Caste			Scheduled Tribe		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	Kasargod	588083	615995	1204078	44904	45314	90218	15132	15206	30338
2	Kannur	1152817	1258139	2408956	48275	50716	98991	9793	10176	19969
3	Wayanad	391273	389346	780619	16738	16626	33364	67394	68688	136082
4	Kozhikkode	1399358	1479773	2879131	98388	102597	200985	2924	3016	5940
5	Malappuram	1754578	1870895	3625471	140535	144907	285442	5996	6271	12267
6	Palakkad	1268965	1350497	2617462	210624	221954	432578	19690	19875	39565
7	Thrissur	1422052	1552180	2974232	171443	182783	354226	2293	2533	4826
8	Ernakulam	1538397	1567401	3105798	129706	133812	263518	5079	4967	10046
9	Idukki	566682	562539	1129221	76389	79973	156362	25510	25463	50973
10	Kottayam	964928	998720	1963646	73885	76397	150282	8972	9368	18340
11	Alappuzha	1014529	1094631	2109160	96900	102331	199231	1565	1566	3131
12	Pathanamthitta	589398	644618	1234016	78731	83271	162002	3184	3365	6549
13	Kollam	1249621	1335587	2585208	156890	166007	322897	2447	2743	5190
14	Thiruvananthapuram	1569917	1664439	3234356	178718	192139	370857	9890	11003	20893
	Kerala	15468614	16372760	31841374	1525114	1598827	3123941	180169	184020	364189
	Share of Kerala (Per cent)	2.91	3.31	3.1	1.77	1.98	1.88	0.43	0.45	0.44

Source: Census 2001

Appendix 14.27

Enrolment of Scheduled Caste/Scheduled Tribe Students at School Level 2007-08 as on 1.10.2007

Standard	General	Scheduled Caste	Scheduled Tribe	Total
1	2	3	4	5
I	337170	43343	8039	388552
II	376243	49428	8595	434266
III	385140	51317	8143	444608
IV	391561	50329	8309	450199
Sub Total	1490114	194417	33086	1717617
V	421375	55137	8416	484928
VI	426950	54749	7718	489417
VII	435221	53357	6345	494923
Sub Total	1283546	163243	22479	1469268
VIII	434367	50563	5920	490850
IX	439956	50171	5285	495412
X	406060	43180	4024	453264
Sub Total	1280383	143914	15229	1439526
Grand Total	4054043	501574	70794	4626411

Source: Director of Public Instruction

Appendix 14.28

District wise Strength of Students at School Level as on 1-10-2007

Sl. No	District	LPS			UPS			HS		
		General	SC	ST	General	SC	ST	General	SC	ST
1	Thiruvananthapuram	132802	23103	1254	112380	19996	1322	119041	19377	1198
2	Kollam	95713	20087	492	91201	16509	376	92725	14783	529
3	Pathanamthitta	35257	9008	453	35741	7634	337	38345	7184	240
4	Alappuzha	74848	10879	282	70667	9105	266	73977	8512	273
5	Kottayam	75433	8500	967	66693	7689	878	68307	7023	750
6	Idukki	41506	7692	2761	35507	6706	1991	32529	5500	1484
7	Ernakulam	114471	14695	769	105372	12756	729	107423	11365	535
8	Thrissur	135169	22785	774	118039	18887	490	114668	16262	399
9	Palakkadu	127380	29011	3992	109267	25060	2051	106845	20660	1475
10	Malappuram	275591	23220	1123	217944	18517	861	211025	15779	489
11	Kozhikkode	156172	12162	836	131532	10292	661	131994	9081	512
12	Wayanadu	35285	2929	13321	29245	2528	8105	27733	2035	4600
13	Kannur	120673	4935	3127	104724	4050	2048	106073	3718	1332
14	Kasargode	69816	4811	2935	56004	3514	2184	55698	2615	1703
	Total	1490114	194417	33086	1283546	163243	22479	1280383	143914	15229

Source. Directorate of Public Instructions

Appendix 14.29

DETAILS OF SCHEDULED CASTE/SCHEDULED TRIBE STUDENTS IN THE ARTS AND SCIENCE COLLEGES DURING 2006-06 AND 2006-07 (UPTO OCTOBER)

Sl. No.	Name of Course	Number of Students					
		Scheduled Caste		Scheduled Tribe		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
1	M.Phil	8	9	-	-	8	9
2	M.A	161	595	29	65	190	660
3	M. Sc	186	638	22	71	207	709
4	M. Com	124	333	18	18	142	351
5	M. S. W	11	23	2	2	13	25
6	M.B.A	16	7	6	6	22	13
7	M.C.A	2	2	0	0	2	2
8	B.B.A	68	59	11	5	79	64
9	B.B.S	10	15	5	3	15	18
10	B.P.E	15	1	1	1	16	2
11	B.B.M	28	8	2	1	30	9
12	B.C.A	19	16	4	2	23	18
13	B.A	3206	5877	461	887	3667	6764
14	B.Sc	1900	4336	167	411	2067	4747
15	B.Com	1371	1771	135	175	1506	1946
16	B.Ed	61	220	8	32	69	252
17	M.Ed	6	4			6	4
	Total	7189	13814	873	1679	8062	15493

Appendix 14.30

Details of Scheduled Caste/Scheduled Tribe Employees in Government Service as on 01-01-2003, 01-01-2004, 01-01-2005 & 01-01-2006.

Category	2003			2004			2005			2006		
	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
1.Gazatted	32089	3271	275	30974	3286	282	30622	3320	291	32701	3538	306
2. Non-Gazatted (Excluding Last Grade)	257722	25230	2994	255637	75162	3176	250424	24219	3269	251020	24005	3625
3. Last Grade	43323	5620	830	38227	4796	731	37459	4768	817	37688	4840	821
Total	**333114**	**34121**	**4099**	**324738**	**83248**	**4189**	**318505**	**32307**	**4397**	**321409**	**32381**	**4752**

Source: General Administration (Employment Cell-A) Department

Appendix 14.31(A)
SCP through Local Self Govt. Institutions - Kerala
Physical Achievements 2002-2003 to 2006-07(Provisional)

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8
1	Area brought under cultivation	Ha	1494.46	4121	803.84	559	103.22
2	Beneficiaries of vegetable cultivation	No	6472	9034	5966	18130	1268
3	Benifeciaries who received Planting materials distributed through integrated agricultural development programmes	No		16393	7542	7028	840
4	Pumpset distributed through integrated agricultural development programmes	No	174	753	396	591	283
5	Sprayers distributed through integrated agricultural development programmes	No		165	94	140	12
6	Poultry-egg rearing units	No	544	5151	959	785	227
7	Fresh water fish culture(Area)	Ha	-	0	37	0	
8	Construction of cattlesheds	No	537	1212	691	670	447
9	Watershed development projects	No	22	127	121	39	4
10	Land brought under cultivation through watershed development projects	Ha	220.53	305	169	195	0.06
11	New industrial units	No	66	95	217	25	106
12	Rehabilitation of traditional industrial units	No	21	50	51	29	27
13	Persons who received industrial entrepreneurship training	No	884	36	1068	341	25
14	Skill development(Persons trained)	No	2892	4764	6583	1942	1428
15	Micro enterprises started	No	276	523	230	240	97
16	Self employment units started	No	784	328	321	441	67
17	Self employed persons	No	1248	1938	4581	1260	759
18	Employment training programme for destitutes	No	22	69	211	19	
19	Self employment units started by poor people	No	6	826	62	310	73
20	Self employment units for destitutes	No	1	20	336	29	2
21	Destitutes trained (Persons)	No	58		187	66	
22	Computer training (Persons trained)	No	2076	4019	15313	11559	21768
23	Area of land distributed to landless	Ha	2482.11	1732	5622	2757	30
24	Distribution of house plots	No	1480	4030	4257	1737	399

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8
25	Houses constructed	No	9016	12309	15040	12478	10680
26	Distribution of land to land less(beneficiaries)	No	2424	8038	2011	3724	1972
27	Renovation of houses	No	6718	10020	9135	10866	6488
28	Shelter upgradation	No	1234	2160	1125	1510	1390
29	Renovation of SC/ST houses	No	10551	6534	7251	4985	1319
30	Integrated development SC habitats	No	324	1176	521	442	9
31	Electric wiring of houses	No	6753	3875	2954	2605	1730
32	Construction of sanitation units	No	8946	21883	11167	9716	3351
33	New wells	No	2044	3942	2674	2922	2332
34	New public water tap connection installed	No	1088	1618	1835	838	121
35	New water tap connection to households	No	28	91	256	309	199
36	Renovation of ponds	No	45	195	40	64	1
37	Pump sets	No	17.4	343	184	331	79
38	Ordinary roads (Number)	No	427	2818	1369	1189	314
39	Ordinary roads (Length)	Km	7510.53	6854	7398.14	2118	105.68
40	Roads above 8M width(Number)	No	3	110	11	66	
41	Roads above 8M width(Length)	Km	29	1957	15.89	52	4.15
42	Roads between 6 and 8 M width(Number)	No	33	573	303	228	
43	Roads between 6 and 8 M width(Length)	Km	39.27	960	373.75	1607	36.482
44	Roads below 6M width(Number)	No	517	752	567	255	3
45	Roads below 6M width(Length)	Km	432	3570	536.10	582	2075.179
46	New culverts	No	52	69	46	87	8
47	New bridges	No	9	37	11	32	3
48	Anganwadi Buildings	No	27	36	25	16	12
49	Rehabilitation of puramboke dwellers (projects)	No	17	294	28	91	5
50	Slum development projects	No	77	13	71	22	185
51	Drinking Water Projects	No					565
52	Beneficiaries of Drinking Water	No					1419

Estimated from Annual expenditure statement of Local Governments

Source : Information Kerala Mission

4/197/2008—54

Appendix 14.31 (B)

TSP through Local Self Govt. Institutions - Kerala
Physical Achievements 2002-03 to 2006-2007 (Provisional)

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	6	7
1	Area brought under cultivation	Ha	137.75	240	251.52	26	
2	Beneficiaries of vegetable cultivation	No	323	1295	123	242	1
3	Benificiaries who received Planting materials distributed through integrated agricultural development programmes	No		1360	1530	236	102
4	Pumpset distributed through integrated agricultural development programmes	No	33	41	24	33	9
5	Sprayers distributed through integrated agricultural development programmes	No		73	0	0	
6	Poultry-egg rearing units	No	2	547	0	60	
7	Fresh water fish culture(Area)	Ha			0	0	
8	Construction of cattlesheds	No	43	58	23	32	18
9	Watershed development projects	No	1	16	176	2	
10	Land brought under cultivation through watershed development projects	Ha	50	24	102	100	
11	New industrial units	No	1	11	4	0	
12	Rehabilitation of traditional industrial units	No	0	-	16	0	
13	Persons who received industrial entrepreneurship training	No	239	16	193	100	
14	Skill development(Persons trained)	No	368	284	25	611	19
15	Micro enterprises started	No	49	48	35	6	2
16	Self employment units started	No	23	36	28	44	15
17	Self employed persons	No	240	696	116	196	82
18	Employment training programme for destitutes	No	-	6	0	0	
19	Self employment units started by poor people	No		106	0	29	5
20	Self employment units for destitutes	No	1	2	0	0	
21	Destitutes trained (Persons)	No	35		0	0	
22	Computer training (Persons trained)	No	707	60	0	278	30
23	Area of land distributed to landless	Ha	104	69	132	180	
24	Distribution of house plots	No	20	264	245	241	15
25	Houses constructed	No	1051	1377	1922	2117	1512
26	Distribution of land to land less(beneficiaries)	No	161.03	132	294	229	21

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	
27	Renovation of houses	No	594	1067	1119	1200	609
28	Shelter upgradation	No	60	150	144	222	10
29	Renovation of SC/ST houses	No	203	1116	787	596	24
30	Integrated development SC habitats	No	-	4	39	2	
31	Electric wiring of houses	No	375	1259	1323	1158	598
32	Construction of sanitation units	No	*690	2262	1009	394	1874
33	New wells	No	93	422	103	134	120
34	New public water tap connection installed	No	110	233	43	147	
35	New water tap connection to households	No	2	14	0	31	
36	Renovation of ponds	No	1	8	0	11	
37	Pump sets	No	33	25	4	4	1
38	Ordinary roads (Number)	No	11	332	70	26	4
39	Ordinary roads (Length)	Km	51539	1258	407.59	103	3
40	Roads above 8M width(Number)	No	0	3	0	0	
41	Roads above 8M width(Length)	Km	9.38	751	0.00	0	
42	Roads between 6 and 8 M width(Number)	No	1	14	15	5	
43	Roads between 6 and 8 M width(Length)	Km	0	1278	7.14	8	
44	Roads below 6M width(Number)	No	15	64	38	4	
45	Roads below 6M width(Length)	Km	24	553	19.02	3	
46	New culverts	No	6	11	0	8	
47	New bridges	No	2	5	7	3	1
48	Anganwadi Buildings	No	8	14	4	5	1
49	Rehabilitation of puramboke dwellers (projects)	No	5	2	0	3	
50	Slum development projects	No	5	2	0	7	
51	Drinking Water Project	No					70
52	Beneficiaries of Drinking Water Projects						562

Estimated from Annual expenditure statement of Local Governments

Source : Information Kerala Mission

Appendix 14.32

Details of Lumpsum grant, stipends, scholarships etc. to Scheduled Castes Student during 2006-07

(Up to 31-10-07)

Sl No	Name of Sector	Number of students benefited and amount sanctioned							
		Lumpsum grant		Stipend		scholarship		Pocket money	
		Students	Amount	Students	Amount	Students	Amount	Students	Amount
1	LP	191932	31646202	2412	415475	0			
2	UP	143364	18888513	2416	376590	0			
3	HS	141236	26505359	2154	288802	0			
4	PLUS TWO	47435	64923528	35680	66857930	12828	6334104	160	110320
5	VHS	4244	5229328	3379	5820633	1645	785797	21	11165
6	ITI	1290	560980	1208	1498658	9087	19318362	0	0
7	ITC	643	1299070	496	895882	1677	5191157	0	0
8	Polytechnics	2287	3401780	1381	4196247	80	2979840	97	46775
9	Degree	29242	47769274	20441	41871233	385	7218890	907	610122
10	PG	4086	8639138	3018	6364135	37	1283570	283	203073
11	Engineering								
(a)	Government Aided	1185	4430865	495	1454816	518	5257471	480	285840
(b)	Self Financing	3155	17019605	45	69932	1215	28977912	689	563943
12	Medical								
(a)	Government	621	1086812	230	480223	385	7218890	58	51180
(b)	Co-operation	54	65650	673	889901	37	1283570	32.00	25724
(c)	Self Financing	315	1413273	1695	4843000	195	9387036	93.00	70445
	Total	570969	400879385	75915	135704155	28099	95238819	2830	1867487

Source: Directorate of Scheduled Caste Development Department

Appendix14.33

Number of Houses constructed by the SC Development Department

District	2006-07	2007-08 (Up to 31/10/07)
Thiruvananthapuram	221	12
Kollam	0	0
Pathanamthitta	88	45
Alappuzha	0	480
Kottayam	0	0
Idukky	24	6
Eranakulam	472	56
Thrissur	423	125
Palakkad	615	179
Malappuram	0	0
Kozhikkod	136	40
Wayanad	44	75
Kannur	131	118
Kasargode	0	0
Total	**2154**	**1136**

Source. Directorate of Scheduled Caste Development Department

Appendix 14.34 (A)

SCHEDULED CASTES AND OTHER BACKWARD CLASSES EXPENDITURE FROM 2002-03 TO 2006-07& 2007-08 (UP TO OCTOBER 2007)

(Rs.in Lakhs)

	Major Head/ Minor Head of Development	Expenditure					
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 as on 31/10/2007
1	2	3	4	5	6	7	8
1	*WELFARE OF SCHEDULED CASTES*						
1.1	*Externally Aided Projects*						
1.2	*State Share for CSSchemes*						
1	Kerala State Development Corporation for Scheduled Castes/Scheduled Tribes Ltd - Share Capital (51%SS)	86.06	76.50	200.00	204.00	333.5	204.42
2	Coaching and Allied Schemes(50%SS)	11.6*	11.03	9.46	11.30	27.72	16.62
3	Construction of Girls' Hostels(50%SS)	15.47	6.82	75.50	16.31	0	10.21
4	Construction of Boys' Hostel(50%SS)	0.68	20.74	53.29	1.87	0	0
5	Book Banks in Professional Colleges and Polytechnics(50%SS)	30.88	21.44	18.14			
6	Protection of Civil Rights and Enforcement of PCR Act (50%SS)	41.95	40.14	95.32	76.22	191.25	56.1
7	Assistance to the Dependance of Safai Karmacharis (50%SS)	9.98	2.63	3.31	5.50	12.94	4.83
8	Enforcement of Prevention of Atrocities Act 1989 (50%SS)	2.55	3.73	0.00			
	Sub Total (A)	**109.79**	**193.03**	**465.02**	**316.20**	**565.41**	**292.18**
1.3	State Schemes						
1	Production-cum-Training Centres and Industrial Training Centres	43.10	20.93	59.87	61.65	54.95	11.33
2	Pre-Matric Studies(Tutorial System in Pre-metric Hostels)	15.08	280.41	0.00	17.56	0	34.21
3	Ayyankali Memorial Talent Search & Special Incentive schemes	31.06	45.61	75.61	67.97	83.88	32.8
4	Better Education to Bright Scheduled Caste Students	28.45	35.31	0.00	0.09		
5	Ayyankali Memorial Sports School	48.12	47.74	39.76	40.04	53.77	15.37
6	Financial Assistance to Failed SC Students	39.11	85.38	47.08	3.48	6.83	0.53
7	Bharat Darshan	7.08	7.53	8.00	8.09	8.00	0.35
8	Boarding Grants		302.73	0.00	0.09		
9	Post Matric Hostels	48.78	55.95	96.24	110.27	160.36	53.67
10	Tuition System in Pre-Matric Hostels	464.20		0.00			
11	Land and Buildings for Hostels and ITCs	22.69	39.30	151.73	3.87	380.67	43.17
12	Pre-Examination Training/ Buildings	0.27		3.29	0.66	0	0
13	Model Residential School	354.05	577.38	692.16	620.01	333.76	115.65
14	Grant to Civil Service Examination Society	52.60	30.00	30.00	32.50	30	0
15	Development of Vulnerable Communities		17.13	0.00	2.58	73.2	14.7
16	P&M Cell/ Modernisation of Offices and Audio-Visual Equipments	4.77	43.35	3.11	30.09	22.02	12.64
17	Information-cum-Guidance Centre	6.20	28.3*	10.56	6.28	6.44	0
18	Office Complex for Directorate of SC and ST Development		0.49	0.11	0.00		

	Major Head/ Minor Head of Development	Expenditure					
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 as on 31/10/2007
1	2	3	4	5	6	7	8
19	Centre of Excellence	0.10	20.00	43.78	30.00	85.01	0
20	High tech courses/Entrance Coaching		1.16	75.00	0.00		
21	National Trade and Arts Fair of SCs and STs	25.00		9.00	5.43	10	3.44
22	Honorarium and Training to SCP promoters	277.74	172.79	222.26	143.44	257.97	137.68
23	Advocate Clerk-cum-Typist	10.29	13.49	0.00			
24	Training on SCP/TSP Schemes		2.21	0.00			
25	Para-medical studies	154.66	286.87	40.20	25.12	38.71	37.61
26	A.M. Talent Search and Development Scheme	4.35	29.22	0.00			
27	Encouragement of Boat race in Onam Festivals			0.00			
28	Self Employment		98.46	143.56	158.69	163.26	39.37
29	Establishing Shopping Complex			0.00			
30	Dr. Ambedkar Bhavanam			450.00			
31	Rehabilitation of Landless		709.04	0.00			
32	Apprenticeship to ITI/ITC Diploma/Degree		19.92	34.06	35.11	25.02	12.96
33	Renovation of Post-Matric Hostels		1.00	402.04			
34	Assistance to the seriously ill			75.00	175.00	100.15	255.4
35	Assistance to marriage of SC girls				0.00	47.62	20.55
36	Pre-primary Education		58.24		0.00		
37	Co-operatives through LSGs				5.00	4	1
38	*Pooled Funds/ Corpus Fund*	8638.94	3702.93	3923.50	3803.18	5534.69	708.88
	Sub Total (B)	**10470.08**	**6720.28**	**6838.92**	**5380.77**	**7443.29**	**1551.31**
	Total (A+B)	**10609.87**	**6903.31**	**7091.94**	**5704.31**	**8008.70**	**1843.49**
	Special Central Assistance to Special Component Plan	1195.76	231.30	7.31	168.84	186.84	166.84
3	***OTHER BACKWARD CLASSES***						
3.1	***Externally Aided Projects***						
3.2	***State Share for CSSchemes***						
1	Construction of Hostels for Girls (50% SSI		0.00	21.85	18.63	33.87.	
3.3	***State Schemes***						
1	Kerala State Development Corporation for Christian Converts from Scheculed Castes and Recommended Communities	225.00	255.00		300.00		
2	Kerala State Backward Classes Development Corporation	350.00			400.00		
3	Post-Matric Studies(Concessions)/Post Matriculation Studies	28.33	1459.47	80.00	105.01	2040.25	112.88
4	Pre-Matric Concessions /Pre-matriculation Studies	11.17	94.84	49.90	44.98	49.45	30.94
	Sub Total (C)	612.50	1895.63	129.90	848.99	2089.70	143.80
	Total. Other Backward Classes	**612.50**	**1895.63**	**151.75**	**868.62**	**2089.70**	**143.80**
	Total (A+B+C)	**11222.37**	**8798.94**	**7243.68**	**6572.93**	**10098.40**	**1987.09**

Source: Directorate of SC Development Department

Appendix 14.34 (B)

Major Schemes of Scheduled Castes Development Department
Physical Achievements during 2002-03 - 2006-07

Sl. No	Name of Scheme	Unit	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8
1	Pre-matriculation studies (SC)	Students	420860	169488	422440	426084	337563
2	Special incentive to talented students	Students	3489	1352	5157	4291	4374
3	Post matric hostel	Students	1002	1320	1280	989	1180
4	Model Residential Schools	School students	661	625	952	1009	1028
5	Bharath Dharsan	Students	60	60	60	60	
6	Financial assistance to failed SC students for continuing education	Students	4784	1343	6343	474	1250
7	Upgradation of performance of SC students in sports and games	School students	190	35	146	180	
8	Self employment scheme for SCs	Beneficiaries		98	618	377	375
9	Apprenticeship to ITI/ITC/Diploma holders	Trainees		106	420	399	320
10	Production cum training centers	Trainees	1356		850	745	155
11	Grant to civil services examination training society	Students	30	30	30	30	

Sl. No	Name of Scheme	Unit	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8
12	Training and Honorarium to SC promoters	Promoters	1175		1175	1175	1175
13	Paramedical Education	Students			2199	799	551
14	Pre-matriculation studies OBC	Students	89013		128545	117916	141066
15	Post matriculation studies OBC	Students	64944		176565	148798	135587
16	Financial assistance to seriously ill SC under poverty line	Families					3067
17	PCR & PA Act	Families	394	7	462	310	1590
18	Coaching and Allied schemes	Center Students	18	65	2700	30	
19	Development of dependence of SC who were engaged in unclean occupation in the past	Families	1550		835	481	496
20	Post matriculation studies SC	Students	89093	83822	91306	98672	100303
21	Corpus fund	Families	10291		11004	12472	8804

Source : Scheduled Castes Development Department

Appendix 14.35 (A)

SCHEDULED TRIBES EXPENDITURE FROM 2002-03 TO 2006-07 & 2007- 08 (UP TO DECEMBER 2007)

(Rs. In Lakhs)

	Major Head/ Minor Head of Development	Expenditure					
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 up to 31.12.2007
	WELFARE OF SCHEDULED TRIBES						
	Externally Aided Projects						
	State Share of CS Schemes						
1	Share Capital Contribution to KSCDC for SC/ST for Implementing Schemes Benefiting Scheduled Tribes(SS 51%)	2.55	4.25	5.00	5.00	5.00	5.00
2	Grant-in-aid to KIRTADS	10.36	9.98	10.58	14.67		11.74
3	Construction of Boys' Hostels(50%SS)	9.99	0.44	43.22	19.82	61.92	13.06
4	Construction of Girls' hostels(50%SS)	13.91	15.26	76.31	27.05	29.01	0.42
5	Enforcement of Prevention of Atrocities Act (50%SS)	2.77	5.35	1.63	3.60	19.34	2.16
6	Model Residential School (Building construction)			325.01	327.37		94.14
7	Health Project Attappady/Art 275(1)25%	20.00	35.00	2.50			
8	Health Project Idukki/Art 275(1)25% SS	4.85	1.33	2.84			
9	Housing for Primitive Tribes (25% SS)	2.89	2.35	0.00			
10	Water Shed Studies Art(30% SS)+ Grant-in-aid to CESS	7.72	15.00			0.01	
	Sub Total (A)	**75.04**	**88.97**	**467.19**	**397.52**	**115.28**	**124.57**
	State Schemes						
1	Support to Group Farms	124.00	100.45	56.69	35.00	75.00	150
2	Assistance to Tribal Co-operative Societies for Providing Medical and Educational Facilities/ Grant-in-aid to Attappadi Cooperative Farming Society(ACFS) for Conducting a School and Hospital		10.00	10.00	10.00	10.00	3
3	Grant-in-aid to Ambedkar Memorial Rural Institute for Development, Wayanad (AMRID)	3.00		3.00	3.00	3.00	5
4	Adikala Gramam/Assistance to Adikala Kendram	10.00	1.46	4.51	9.49	9.39	8.12
5	Tribal Hostels/ Improvement of Tribal Hostels	45.10	28.90	72.33	22.12	59.21	0
6	Scheme for Purchase of Land for Construction of Tribal Hostels	17.17		1.15	3.04	11.83	58.42
7	Model Residential Schools/Ashramam Schools	626.77	589.45	628.25	533.19	657.02	19.83
8	Tutorial Scheme for School Going Students and Failed Students	35.06	63.59	75.18	47.64	57.05	18.42
9	Special Incentives to Brilliant Students	13.83	13.09	17.95	10.00	30.99	
10	Incentive to Talented Tribal Youths in Arts & Sports		9.14	0.09	0.22	1.00	
11	Better Education Facilities to S.T. Students	89.17		3.45			
12	Bharat Darshan	6.00	6.00	6.00	6.00	7.00	0.86
13	Repair of Post Matric Hostels		2.63	4.50	15.01	17.28	15.68

14	Apprenticeship to ITI/ITC Passed Candidates	0.08	0.03	0.18	0.62	1.13	
15	Peripatetic education to the Primitive Tribes		0.00	5.21	27.85	37.35	20.33
16	Health Project,Mamanthavady, Idukki, Alleppady	0.39	11.31	5.00	25.00	50.00	4.28
17	Housing Programme	277.20	179.48	0.00	99.16	190.5	92.6
18	Information Education and Communication (IEC)	17.08	12.77	23.17	16.65	17.3	6.29
19	Modernisation of Dept & Monitoring of scheme	23.93	3.32	30.31	13.72	15	8.19
20	Tribal Youth Festivals &Sports Infrastructure	0.39	5.50	1.00	4.55		
21	Assistance to Marriage of Schedule Tribe girls			0.00	12.10	14.27	6
22	Health Care Packages to Tribals affected by diseases	10.91	21.88	48.11	44.72		54.55
23	Imp of Restoration of Alienated Lands Act 1999		0.00			0	
24	Food support programmes	68.25	96.99	150.00	150.00	149.8	91.08
25	Programmes for PTG – Adiyans & Paniyans	211.53	82.89	90.00	73.59		41.85
26	Social Activists/Tribal Promoters	159.49	147.23	149.91	164.36	140.38	126.65
27	Strengthening field Level Monitoring	15.54	7.18	0.54			
28	Insurance for Tribals/ Health Insurance Scheme	10.00		0.00		17.00	
29	National Trade and Arts Festival	10.00	0.00	8.25	9.09		9.9
30	Training in Information Technology	6.91	4.72	0.00			
31	Extension of Kudumbasree to Tribal Areas	50.00	0.00		0.00	0	0
32	Ayyankali Memorial Talent Search & Development	13.60	10.33	20.37	32.06	33.68	17.71
33	Organisation of Oorukoottams	59.51	18.28	17.74	11.09	8.72	6.56
34	Assistance to NGOs	74.37	0.00	24.99	0.00	0	
35	Opening of Grain Banks	40.00	14.04	8.00	0.00	0	
36	Dr Ambedkar Bhavan for Self Empowerment		0.00	45.00	0.00	0	
37	Corpus Fund for Project based Activities	580.39	890.57	1187.50	631.81	849.09	85.59
38	Resettlement of Landless Tribals	5127.07	0.00	1550.00	1000.00	1000	0
39	Grant in-aid to schemes under Article 275(1)				0.00		
	Sub Total (B)	**7772.47**	**2422.60**	**4227.30**	**3095.31**	**3264.08**	**1382.49**
	Additional Central Assistance						
1	Drinking water supply to Tribals	0.00	550.00	575.02	700.00		0
2	Enhancement of facilities to Tribal areas	0.00	330.69	0.00			0
3	Resettlement of Landless Tribals	0.00	0.00	0.00			0
4	Guaranteeing quality Education to Tribals	0.00	0.00	0.00			0
5	Health Insurance Scheme for Tribals	0.00	0.00	0.00			0
6	Improving Facilities in ST Hostels				80.28	307.53	0.77
	Sub Total (C)	**0.00**	**880.69**	**575.02**	**780.28**	**307.53**	**0.77**
	Total (A+B+C)	**7847.51**	**3392.28**	**5269.51**	**4183.11**	**3889.88**	**1507.83**
	Special Central Assistance to TSP	270.09	328.52	272.17	244.45		

Source: Directorate of ST Development Department

Appendix 14.35 (B)

Physical Achievements of Schemes for Scheduled Tribes Development Department for the period 2002-03 to 2007-08

(upto 31-12-2007)

Sl.No	Name of Scheme	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
1	2	3	4	5	6	7	8	9
	I. State Sector Schemes							
1	IEC Project [Information, Education & Communication	Project		32	1	1	1	1
2	Improvement of Tribal Hostels	Hostel	37		16	8	39	5
3	Tutorial scheme for schoolGoing students and failedstudents	student	3899	10000	1722	787	1439	157
4	Girls Hostels [50% State share]	Hostels	2			2	2	2
5	Boys Hostels [50% State share]	Hostels	2			1	2	2
6	Providing Better Educationfacilities for Talented Student	students	48	100	25		2	
7	Purchase of land for construction of tribal hostels	No. of plots	2		-	-	1	
8	Bharat Darshan	students	43	60	44	49	62	
9	Incentive to Specially Talented Youths in Arts and sports	youths	25	4	4	28	50	
10	Health project Mananchavady under Article 275(1)	project			1 hospital	1 hospital & 6 OP clinics	1	5 OP Clinics
11	Support to Group Farms	families			3	240	2	2 Farms
12	Grant in Aid to Attappady Co-op Farming Society for conductinga School and a Hospital	students			1	219	1	
13	Grant in Aid to Ambedkar Memorial Rural Institute for Development [AMRID], Wayanad	beneficiaries			1	70	1	1 institution 64 beneficiaries
14	Modernisation of Tribal Development Department	Project			1	1	1	1 project
15	Share capital contribution toKerala State Development Corporation for SC/ST forImplementing Schemes benefitting Scheduled Tribes [State share 51%]	Share Capital			Share Capital	Share Capital		share capital
16	Grant in aid to Kerala Institute forResearch Training and Developmentstudies for SC/ST [State share 50%]	Project			1	4	1	
17	Provision of Additional Apprenticeship for ITI/ITI passed candidates.	Students		1	4	7	13	
18	Special Programme for Primitive TribalGroups Adiyas and Panyas	Beneficiaries	5432	6000	7976	8758	7667	3150 beneficiaries
19	Tribal promoters	promoter	1030	1000	931	981	995	107
20	Conduct of Tribal Youth Festivals	Youth festivals			-	12	-	

Sl.No	Name of Scheme	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
1	2	3	4	5	6	7	8	9
21	Special Incentive to Brilliant students	students	493	600	705	533	1089	437
22	Enforcement of Prevention of Atrocities Act 1989 [State Share 50%]	claims			6 claims	23	41	29 persons
23	Providing Health Care Package toTribal Individuals affected by diseases	patients	1880	2675	7784	6721	10927	11994 beneficiaries
24	Implementation of Land Alienation Act 1975	-						
25	Food Support Programme	families	35302	40131	62281	63099	48763	37323
26	Assistance to Adikala Keedram	Institution			1		1	
27	Health project Attappady [State Share 25%] Article 275[1]	OP clinics			2 OP clinics			
28	Post-matric Hostels for Tribals	students				62	7524	119 students
29	Peripatetic education to the PTG's	students			21 Centres	618	1628	272 students
30	Ayyankali Memorial Talent Search and Developement Scheme	students	392	315	530	607	860	1017
31	Organisation of Gotrakootam	Gotrakootam	624	1422	1893, 34	607	1087	882
32	Assistance to Non-Government Organisation	NGO's	10		-	-	-	
33	Opening of Grain Banks	centres	3	39	5	-		
34	Trade & Arts Festivals of STs	Festival			1		2	2
35	Resettlement of Landless Tribals	TRDM Project	328			1428		
36	Model Residential Schools [18 Nos] [Revenue]	students	3004	3440	3731	3851	18	4095
37	Dr. Ambedkar Bhavan for Dalit empowerment	Building				-	1	
38	Corpus Fund for Tribal Sub Plan		4412			47	73	Approved SLWO project
39	Peripatetic Education to the Primitive Tribes	Centres			21			272 students
	Centrally Sponsored/Central Sector Schemes							
1	Construction of Building for Model Residential Schools [10 Schools 50% CSS]				15	9	10 (WIP)	
2	Post Matric Scholarship [100% CSS]		3211		5000			
3	Vocational Training Institute [100% CSS]	students	3		3	72	3	
4	Upgradation of Merits of ST students [100% CSS]	students			10	10	9	10
5	Construction of MRS, Idukki				1	1		
6	Construction of Attappady Health project Hospital				1	1		
7	Construction of MRS Poolane, Article 275[1]				1			
8	Construction of MRS, Njarangeli, Art 275[1]				1	1		
9	New Central Sector Scheme for PTG's [100% CSS] [Insurance coverage]				500			

Source :Scheduled Tribe Development Department

Appendix 14.36

DETAILS OF LUMPSUM GRANT, STIPEND, SCHOLARSHIPS ETC. TO SCHEDULED TRIBES STUDENTS DURING THE YEAR 2005-2007

(Rs. in lakh)

Sl No	Name of Sector	Number of students benefitted and amount sanctioned							
		Lumpsum Grant		Stipend		Scholarship		Pocket Money	
		No. of Students	Amount	No. of Students	Amount	No. of Students	Amount	No. of Students	Amount
1	2	3	4	5	6	7	8	9	10
1	Lower Primary	35027	31.30	33723	98.14	78	3.50	-	-
2	Upper Primary	21770	32.81	20196	70.63	16	0.39	-	-
3	High School	19077	32.71	14684	52.52	23	0.78	-	-
4	Plus two	4603	21.69	4539	83.39	327	1.72	65	0.35
	Vocational Higher								
5	Secondary	264	1.32	207	3.40	53	0.17	19	0.12
6	I.T.I	188	1.98	259	3.25	39	0.12	2	0.01
7	I.T.C	77	1.77	78	1.18	9	0.22	2	0.01
8	Polytechnics	188	0.71	161	4.19	207	5.61	39	0.43
9	Degree	2678	17.53	2098	32.88	502	18.00	412	5.39
10	Post Graduation	757	1.70	206	7.64	103	5.78	167	4.90
11	Engineering								
a)	Government Aided	208	2.58	95	1.98	60	2.72	99	3.30
b)	Self Financing	45	0.40	25	0.56	17	2.22	27	1.57
12	Medical								
a)	Government	98	1.14	21	0.71	60	5.82	84	3.42
b)	Co-operation	29	0.18	22	0.62		-	-	-
c)	Self	74	0.62	23	1.19	40	17.36	52	1.53
	Total	91033	148.54	76331	362.28	1534	64.44	908	21.04

Source. Directorate of Scheduled Tribes Development Department

Appendix 14.37

District-wise distributions of surplus land as on 31.10.2007

Name of District	Number of beneficiaries				Land Distributed (Area in acres)			
	SC	ST	Others	Total	SC	ST	Others	Total
Kasargod	4348	886	7650	12884	1343.17.300	276.46.930	2387.85.660	4007.49.890
Kannur	8067	3179	15069	26315	3553.01.000	2394.08.000	7596.93.000	13544.02.000
Trissur	5776	186	17935	23897	906.91.746	25.36.468	1969.10.331	2901.38.540
Pathinamthitta	4	0	16	20	0.14.000	Nil	00.64.000	00.78.000
Ernakulam	1413	72	2222	3707	315.84.445	2.93.000	409.06.776	727.84.221
Alappuzha	3408	76	4402	7886	1916.27.200	3.86.200	2656.58.500	4576.71.900
Palakkad	11276	1374	12952	25602	5863.04.000	1488.12.000	6028.68.000	13382.84.000
Malappuram	9573	95	10081	19749	3237.29.060	64.42.000	3665.10.450	6966.81.510
Thiruvananthapuram	2194	Nil	1779	3973	254.42.334	Nil	254.69.786	509.12.120
Kollam	2981	59	2814	5854	666.79.262	35.09.000	882.10.492	1583.98.750
Wayanad	1286	2372	3427	7085	818.65.000	2360.01.000	1815.32.000	4993.98.000
Kottayam	1467	70	1433	2970	1156.45.142	57.21.000	801.34.607	2015.00.740
Kozhikode	3596	21	5148	8765	878.73.000	3.85.000	1150.99.000	2033.57.000
Idukki	26	4	170	200	3.83.916	1.76.000	30.12.797	35.72.713
Total	**55415**	**8394**	**85098**	**148907**	**20914.57.100**	**6713.16.590**	**29648.54.90**	**57276.28.500**

Source: Survey and Land Records Department

Appendix 14.38

Scheme wise Expenditure of KSDC for SC/ST during 2007-08

Rs in lakhs

Sl. No	Name of Scheme	Amount received/released		Expenditure		Physical progress		Remarks
		2006-07	2007-08 (upto 31st August)	2006-07	2007-08 (upto 31st August)	2006-07	2007-08 (upto 31st August)	
1	Beneficiary Oriented Scheme			94.88	37.07	218	81	
2	Professional Service Scheme			1.25		2		
3	Foreign Employment Scheme			2.25	1.00	9	4	
4	Petrol Auto for Women			0.88	0.90	1	1	
5	Scheme for Tribal Medicine Practitioners			6.64	1.60	1	0	
6	Educational Loan			26.58	6.31	54	14	
7	Foreign Education Loan	Share Capital:		0.00		0		
8	Marriage Assistance Loan	Central share-	Share Capital.	122.87	64.36	266	138	
9	Mini Venture Schemes	Rs.342.28 lakh	Central share -	13.77	2.98	16	3	
10	Transport Scheme (3 W Auto Pick up Van)	Share Capital:	Nil Share	0.03	8.84		7	
11	Land purchase Scheme for Agri Labourers	State Share -	Capital - State	316.12	32.97	236	26	
12	Micro Credit Finance Scheme	338.50 NSFDC:	share- Nil.	41.34	11.78	384	81	
13	Mahila Samridhi Yojana	Rs.157.15 lakh	NSFDC: 81.40	13.84	5.22	96	36	
14	Transport Scheme (Petrol Auto)	NSTFDC	NSTFDC-11.16	8.75		11		
15	Training Programmes	Rs 14.25 lakh		3.87	4.90	129	143	
16	Small Enterprises Loans			2.46	4.59	4	15	
17	Transport Scheme (Petrol Auto)			7.77	12.33	10	15	
18	Adhivasi Mahila Sasakthikaran Yojana			3.62	2.08	8	6	
19	Training Programmes			0.44		30		
20	Income Generation Linked Housing Scheme			0.83		14		
21	Subsidy (SCA to SCP)			72.02	9.30			
	Total			740.19	206.85	1490.00	570.00	

Source KSDC for SC/ST

Appendix 14.39

Kerala State Backward Classes Development Corporation Ltd.
Physical and Financial Achievements 2006-07 and 2007-08 (up to 31.10.2007)

(Rs lakh)

Sl No.	Source of Fund	Fund received		Expenditure		Physical Target and (Nos)			
						2006-07		2007-08	
		2006-07	2007-08*	2006-07	2007-08*	Target	Achievement	Target	Achievement *
0	1	2	3	4	5	6	7	8	9
1	Government of Kerala	450	0						
2	KSBCDC**	1501.56		1,951.57	1,908.63	5,146	4,252	8,225	2,853
3	NBCFDC	2,700.00	1,000.00	1,945.24	2,253.03	5,525	4,289	6,725	2,439
4	NMDFC	2,450.00	1,000.00	2,222.53	1,592.55	8,450	2,630	4,415	2,450
5	Opening Balance	931.81	1,914.03	-	-	-	-	-	-
	Total	8,033.37	3,914.03	6,119.34	5,754.21	19,115	11,171	19,365	7,742

Source: Kerala State Backward Classes Development Corporation Ltd

* *Up to 31st October 2007.* ** *Own Accruals*

Appendix 14.40

KERALA STATE DEVELOPMENT CORPORATION FOR CHRISTIAN CONVERTS FROM SCHEDULED CASTES AND THE RECOMMENDED COMMUNITIES LTD., KOTTAYAM

Sl.No	Scheme	Outlay		Expenditure		Physical Targets and Achievement	
		2006-07 in lakh	2007-08(Upto 31st October	2006-07 in lakh	2007-08(Upto 31st October	2006-07	2007-08(Upto 31st October
0	1	2	3	4	5	6	7
	Agricultural Land						
1	Purchase Scheme	100	200	39.6	11.25	60	16
2	House Construction	75	100	64.76	17.55	119	109
3	House Revamping	25	60	0.2	0	2	0
4	Foreign Employment	5	5	0.25	0	1	0
5	Marriage Loan	25	75	2.91	2.11	11	9
6	Incentive Grant	6	10	5.41	3.45	681	378
7	Landless/House less	0	100	0	0	0	0
	Self Employment						
8	Scheme	200	265	39.64	1.92	107	4
9	New Scheme	180					

Source: KSDC for Christian Converts

Appendix 15.1

Month-wise Consumer Price Index (Cost of Living Index Numbers) for Agricultural and Industrial workers - Kerala 2006 & 2007

(Base: 1998-1999=100)

Sl. No	Centre	2006								2007					
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept.	Oct
1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Thiruvananthapuram	139	139	140	141	142	143	142	142	143	144	144	143	142	143
2	Kollam	139	139	140	142	142	142	141	140	141	143	142	141	143	142
3	Punalur	133	134	135	135	136	136	134	134	134	134	135	134	135	135
4	Pathanamthitta	135	136	137	138	139	140	140	140	140	141	142	141	142	141
5	Alappuzha	133	134	135	136	136	136	134	133	134	137	139	137	138	136
6	Kottayam	134	134	134	135	136	136	136	136	136	136	137	138	136	136
7	Mundakkayam	127	128	128	130	131	131	130	131	132	133	134	133	132	132
8	Munnar	125	126	126	127	128	128	128	127	128	129	130	129	130	129
9	Ernakulam	133	133	134	136	137	137	135	136	138	138	139	137	136	137
10	Chalakkudy	130	131	132	132	132	133	132	132	133	134	135	134	135	134
11	Thrissur	131	132	133	134	136	136	135	135	136	137	139	137	137	136
12	Palakkad	135	136	137	139	139	139	138	138	136	138	138	137	138	138
13	Malappuram	132	133	134	135	136	137	135	136	138	138	138	137	137	137
14	Kozhikode	128	128	129	130	131	131	130	131	132	134	135	133	133	132
15	Meppady	129	129	129	130	130	130	130	130	131	132	133	132	133	131
16	Kannur	129	130	131	132	133	133	131	131	132	133	134	132	132	132
17	Kasaragod	133	134	134	134	134	134	133	132	134	136	137	136	137	135
	Average	132	133	133	134	135	135	134	134	135	139	137	136	136	136

Source: *Directorate Economics & Statistics.*

Appendix 15.2

Month-wise Average Retail Prices of Essential Commodities in Kerala - 2006 & 2007

SL No.	Name of Commodity	Unit	2006 (Rs.) Oct	Nov.	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	Cereals															
1	Rice Matta (Old)	Kg	14.40	14.03	16.00	16.08	16.16	16.24	16.17	16.13	15.19	15.30	15.35	15.48	15.78	16.38
B	Pulses															
2	Greengram	Kg	43.40	43.99	43.86	43.85	44.25	44.26	44.18	43.70	42.58	41.20	38.94	37.85	36.07	35.47
3	Blackgram split(without husk)	Kg	62.57	67.39	69.46	58.90	56.45	63.30	51.33	50.43	47.81	47.52	46.44	45.34	43.95	44.47
4	Redgram	Kg	31.65	32.14	32.84	33.01	33.17	33.37	33.77	33.75	34.25	33.73	33.56	32.66	32.60	32.93
5	Dhall (Tur)	Kg	36.50	36.34	35.20	35.36	35.88	38.03	36.21	38.77	39.02	40.31	41.28	42.13	43.28	45.21
C	Other Food Items															
6	Sugar (Old)	Kg	16.41	16.40	17.73	15.98	16.45	15.61	15.86	15.06	14.77	15.00	15.00	14.81	14.56	14.56
7	Milk(Cow's)	Ltr	14.03	14.65	14.83	14.03	15.46	15.89	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.09
8	Egg(Hen's Naden)	Dozen	30.71	32.25	32.00	32.56	33.23	33.18	32.98	32.60	34.29	34.78	34.38	34.72	34.61	35.89
9	Egg Hen's White Large)	Dozen	18.63	22.73	21.50	21.72	24.47	24.67	23.53	24.64	26.64	26.03	21.49	22.07	21.82	24.58
D	Oil and Oil seeds															
10	Coconut Oil	Kg	61.48	61.74	61.74	60.35	59.77	65.13	64.67	63.84	63.52	64.58	65.25	63.43	62.17	54.53
11	Groundnut Oil	Kg	73.18	73.40	73.69	74.74	74.07	75.50	77.76	77.77	78.04	78.93	78.34	80.20	81.65	81.83
12	Refined Oil (Postman)	Kg	77.66	77.84	78.15	78.26	79.74	77.62	75.19	74.58	73.01	81.11	73.64	76.67	74.53	77.73
13	Gingelly Oil	Kg	64.91	65.89	67.11	67.57	67.35	67.12	67.15	67.28	67.48	67.14	67.32	67.83	68.50	59.94
14	Coconut (without Husk)	100Nos	583.39	592.41	604.00	593.49	578.20	597.93	511.74	516.25	511.73	521.17	537.34	521.70	513.93	516.30
E	Spices and Condiments															
15	Coriander	Kg	41.36	41.81	41.85	41.91	41.07	40.91	40.58	42.30	42.93	43.79	50.33	55.38	56.14	56.97
16	Chillies (dry)	Kg	81.68	83.30	86.59	56.37	75.81	80.98	83.73	82.13	81.20	81.24	61.88	62.81	60.84	58.64
17	Onion (small)	Kg	16.84	18.88	16.84	13.42	12.74	11.54	11.84	10.98	13.27	17.15	17.03	16.18	16.13	24.69
18	Tamarind (without seed)	Kg	38.98	39.48	40.94	40.33	38.32	36.43	35.31	34.18	34.11	33.58	33.74	34.50	35.92	35.36
F	Tubers															
19	Chena (Elephan Foot)	Kg	9.09	9.68	9.43	8.32	9.32	9.49	10.16	10.30	12.30	13.59	12.40	11.46	11.04	10.60
20	Tapioca (Rava)	Kg	7.07	7.14	7.13	6.82	9.54	8.59	7.13	7.19	7.21	7.20	7.41	7.46	7.52	7.54
21	Potato	Kg	13.78	14.04	13.79	13.43	12.72	12.59	13.43	14.38	16.39	16.00	15.48	16.03	16.36	16.59
22	Colocassia	Kg	17.64	17.78	15.77	14.20	14.27	14.62	15.73	16.14	18.60	17.09	17.66	16.64	18.38	18.01
G	Fruits & Vegetables															
23	Onion(Big)	Kg	8.79	10.19	12.39	10.28	16.04	12.68	10.35	10.26	13.30	14.03	13.47	18.36	20.77	16.86
24	Brinjal	Kg	10.58	14.67	13.53	12.53	12.62	13.98	14.86	15.36	15.70	14.71	15.28	13.14	13.67	15.96
25	Pumpkin	Kg	7.40	7.05	6.11	6.25	6.02	7.61	7.49	8.38	11.88	11.84	9.08	8.18	8.13	8.00
26	Cucumber	Kg	9.68	11.70	10.68	10.50	8.95	7.98	8.14	8.30	11.18	9.77	10.75	9.40	9.50	8.86
27	Lady's Finger	Kg	11.30	18.05	13.77	14.09	14.38	14.09	14.04	12.84	14.38	13.04	13.63	12.98	13.77	14.12
28	Cabbage	Kg	10.80	10.96	9.94	8.83	9.77	10.98	13.21	14.30	14.68	14.03	13.80	12.14	12.70	12.31
29	Bittergourd	Kg	17.36	18.90	17.60	16.08	16.70	15.21	16.53	17.42	21.11	21.94	23.34	20.19	22.73	23.28
30	Ashgourd	Kg	8.00	9.84	9.71	8.32	8.80	8.31	9.09	9.50	12.02	11.83	9.88	6.32	6.08	9.14
31	Bottlegourd	Kg	12.34	12.84	13.88	12.40	11.89	10.80	10.77	12.89	14.91	15.85	14.98	12.68	13.82	13.78
32	Chillies (Green)	Kg	14.11	18.11	19.91	17.11	17.41	15.18	18.82	19.60	20.73	21.02	18.62	18.65	16.41	17.89
33	Beans (Green)	Kg	14.60	14.93	14.84	16.08	16.87	15.17	15.29	14.27	16.20	18.86	18.78	18.64	16.82	17.96
34	Parvain (Green)	Kg	10.77	10.26	10.09	10.80	10.70	10.22	10.08	10.16	10.93	11.40	12.83	12.48	11.68	11.51

Source: Directorate of Economics and Statistics

Appendix 15.3

Per 1000 distribution of persons in rural sector over 17 MPCE classes for different States and all-India - NSS 61st Round (July 2004 to June 2005).

S. No	State	Per 1000 number of persons in MPCE class (Rs)												Average MPCE (Rs)	est. No. of Persons (30)
		0-225	225-270	270-320	320-385	385-440	440-455	455-510	510-580	580-680	680-880	880-1155	1155 and more		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Andhra Pradesh	30	38	80	82	82	83	103	110	118	122	61	60	586	54227[illegible]
2	Arunachal Pradesh	10	8	24	41	50	58	87	122	147	187	141	124	772	7712
3	Assam	14	15	64	78	104	81	118	152	177	129	33	17	543	223104
4	Bihar	52	87	151	158	129	104	133	88	67	41	14	7	417	687341
5	Chhattisgarh	136	136	158	150	115	87	98	58	55	43	13	20	425	181923
6	Delhi	0	0	0	0	82	32	106	146	86	131	182	238	919	8385
7	Goa	0	0	19	37	45	41	56	84	80	203	167	256	985	5708
8	Gujarat	22	30	80	76	85	54	100	112	127	128	75	56	596	302006
9	Haryana	6	7	32	25	59	62	66	122	150	132	147	137	863	165213
10	Himachal Pradesh	3	7	20	44	54	70	84	130	184	186	115	126	798	55575
11	Jammu & Kashmir	0	4	11	12	32	40	38	145	202	180	123	152	792	63845
12	Jharkhand	75	78	162	142	130	96	94	79	67	40	20	9	425	203427
13	Karnataka	27	42	128	124	135	127	106	99	56	68	28	23	505	341121
14	Kerala	10	11	17	26	41	48	67	92	121	191	137	235	1013	235872
15	Madhya Pradesh	115	96	127	120	115	86	89	76	68	62	25	21	435	463184
16	Maharashtra	49	56	96	102	96	66	95	100	103	96	56	57	565	551215
17	Manipur	0	0	2	27	44	78	147	241	201	155	54	21	814	14516
18	Meghalaya	0	0	0	24	22	57	123	103	278	207	83	26	656	18053
19	Mizoram	0	0	14	17	17	17	70	116	231	283	152	90	778	4280
20	Nagaland	0	0	0	0	0	12	5	45	157	324	211	245	1011	5721
21	Orissa	207	104	141	121	55	75	54	52	55	45	20	17	356	321080
22	Punjab	1	4	13	26	47	59	95	121	136	190	154	166	847	152073
23	Rajasthan	13	21	58	74	99	93	129	156	140	122	52	43	691	428771
24	Sikkim	2	1	35	51	82	79	107	122	148	139	102	124	609	4400
25	Tamil Nadu	21	49	80	108	104	104	109	100	115	100	58	54	602	345033
26	Tripura	28	44	135	114	120	116	140	124	90	63	27	21	465	27511
27	Uttar Pradesh	40	58	128	127	106	100	107	93	91	90	39	42	503	1320365
28	Uttaranchal	4	7	49	84	86	128	115	105	146	140	72	60	647	63730
29	West Bengal	23	31	96	93	109	107	105	123	132	98	42	42	562	596168
	All-India	48	61	99	105	102	94	99	102	104	98	50	50	559	7321058

Source: NSS Report No 508 Level and Pattern of Consumer Expenditure 2004-05

Appendix 15.4

Per 1000 distribution of persons in urban sector over 12 MPCE classes for different States and all-India - NSS 61st Round (July 2004 to June 2005).

Sl No	State	Per 1000 No. of Persons in MPCE class (Rs)												Average MPCE (Rs)	est. No. of Persons (00)
		0-355	355-395	395-465	465-580	580-675	675-765	765-930	930-1100	1100-1380	1380-1680	1680-2540	2540 & more		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Andhra Pradesh	30	45	150	116	103	107	110	86	80	96	37	43	1018	188423
2	Arunachal Pradesh	11	17	90	129	121	150	125	120	153	62	18	8	881	984
3	Assam	14	26	69	99	76	124	105	186	98	121	63	26	1058	23365
4	Bihar	184	138	145	119	108	67	94	65	48	40	14	20	698	83105
5	Chhattisgarh	114	34	138	111	51	118	80	84	81	87	39	30	880	32910
6	Delhi	7	7	30	79	64	82	126	146	142	146	58	113	1318	115786
7	Goa	30	1	45	39	108	86	190	91	120	150	51	38	1432	4028
8	Gujarat	11	19	56	75	127	83	119	139	128	132	80	41	1115	162837
9	Haryana	33	33	67	86	88	113	110	118	121	112	81	51	1142	57424
10	Himachal Pradesh	14	9	14	18	150	68	106	94	154	182	120	71	1360	5907
11	Jammu & Kashmir	2	39	18	26	114	120	184	151	152	160	43	18	1070	17059
12	Jharkhand	74	88	98	90	81	82	82	122	126	84	58	43	963	38101
13	Karnataka	54	68	82	103	100	118	77	92	83	106	81	45	1033	151476
14	Kerala	39	40	60	99	93	95	109	89	117	127	68	70	1281	72803
15	Madhya Pradesh	101	82	138	112	102	82	87	84	71	70	24	39	904	140882
16	Maharashtra	44	38	79	80	78	90	123	96	120	108	86	58	1148	372188
17	Manipur	1	12	90	103	127	190	140	108	38	22	3	1	728	4691
18	Meghalaya	0	1	15	53	134	115	140	134	129	228	64	27	1160	2770
19	Mizoram	0	2	10	29	95	110	141	157	178	157	88	34	1201	2789
20	Nagaland	0	0	0	7	28	40	148	140	175	227	187	74	1498	2378
21	Orissa	153	93	149	106	63	102	88	83	121	52	19	13	757	50828
22	Punjab	3	10	73	95	84	117	118	107	121	135	85	62	1326	74498
23	Rajasthan	37	67	117	138	101	127	82	84	82	71	33	41	964	129168
24	Sikkim	4	7	18	92	104	49	140	168	188	115	55	31	1107	669
25	Tamil Nadu	26	37	87	105	124	101	96	88	113	111	58	51	1040	215635
26	Tripura	21	50	81	108	141	102	103	64	98	112	37	40	1001	4468
27	Uttar Pradesh	91	82	135	132	88	101	98	83	87	57	33	30	807	324143
28	Uttaranchal	22	21	131	124	110	92	101	129	118	94	29	34	978	10438
29	West Bengal	40	41	111	83	107	78	83	107	108	111	64	63	1124	108300
	All-India	50	51	88	103	97	89	103	97	102	89	53	48	1052	2483091

Source: NSS Report No.508: Level and Pattern of Consumer Expenditure 2004-05

Appendix 15.5

Month-wise Wholesale Price Index of Agricultural Commodities - Kerala (2006 & 2007)

Base 1952-53 = 100

Sl. No	Groups	2006						2007						
		July	August	September	October	November	December	January	February	March	April	May	June	July
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Rice (Red)	2754.50	2749.70	2791.59	2780.94	2870.15	2850.28	2768.83	2855.02	2845.57	2861.62	2830.60	2822.85	2944.51
2	Minipepper	2886.24	2852.00	2782.13	2588.08	2803.82	2743.48	2469.81	2039.61	2217.85	2174.67	2170.51	2165.41	2147.80
3	Condiments & Spices	3387.54	3397.41	3146.45	2937.15	2787.51	2561.42	2609.00	2811.61	2944.62	3116.31	3881.38	3933.05	3876.11
4	Fruits & Vegitables	3812.02	3825.29	3852.68	3881.64	3965.01	3852.59	3077.55	4714.30	4607.47	4548.13	4252.28	4286.70	4170.54
5	Food Crops	3036.04	3037.08	3028.45	2885.78	2934.47	2971.04	2977.20	3147.61	3137.70	3153.30	3185.41	3229.34	3161.88
6	Oil Seeds	3078.85	3170.88	3284.38	3481.45	3571.61	2813.82	3533.08	3391.73	3107.53	2993.42	3022.42	2950.93	2067.60
7	Plantation Crops	2072.79	2084.88	2005.97	2016.86	2035.32	2053.95	2174.83	2204.87	2163.20	2162.51	2109.58	2054.67	2083.25
8	Non-food Crops	2774.55	2841.35	2898.29	3048.12	3026.59	3148.93	3126.41	3034.84	2822.38	2736.61	2746.74	2687.24	2782.65
9	All Crops	2940.72	2966.54	2980.94	3007.60	3032.47	3035.24	3031.66	3109.45	3022.61	3000.01	3027.20	3021.47	3028.85

Source: Directorate of Economics & Statistics

Appendix - 15.6

ALLOCATION AND OFFTAKE OF RICE & WHEAT FOR THE YEAR 2006-07 (P) UNDER TPDS

(In '000 TONNES)

SL.NO.	STATES/UTs	ALLOTMNET				OFFTAKE			
		BPL	APL	AAY	TOTAL	BPL	APL	AAY	TOTAL
1	AP	1052.088	2194.22	654.288	3900.596	1054.631	1497.672	656.771	3209.074
2	Aru P	25.524	62.148	15.972	103.644	16.264	35.045	9.069	60.378
3	Assam	476.700	943.830	294.216	1714.746	479.337	760.534	272.045	1511.916
4	Bihar	2019.013	1307.240	662.091	3988.344	448.589	9.257	566.332	1024.178
5	Chhatisgarh	483.688	821.390	295.250	1600.328	521.047	33.377	313.059	867.483
6	Delhi	148.464	684.676	23.316	836.456	146.481	378.265	22.884	547.63
7	Goa	5.460	91.190	6.108	102.758	4.4	18.67	3.94	27.01
8	Gujarat	540.630	1444.404	310.848	2295.882	493.911	108.286	259.993	862.19
9	Haryana	221.151	499.540	109.394	830.085	202.689	4.739	102.921	310.349
10	HP	46.831	319.400	76.808	443.037	45.312	247.94	77.244	370.496
11	J&K	205.077	482.720	104.007	791.804	209.473	351.349	98.433	659.255
12	Jharkhand	700.224	189.980	305.268	1195.472	427.972	13.912	299.266	741.15
13	Karnataka	768.116	1594.222	491.350	2853.688	768.531	851.32	465.2	2085.051
14	Kerala	404.277	1604.460	248.331	2257.068	401.026	375.769	249.313	1026.108
15	M. P	1064.538	1041.946	650.160	2756.644	1049.59	136.652	603.987	1790.229
16	Maharashtra	1911.084	2270.900	833.220	5015.204	1637.217	169.94	698.753	2505.91
17	Manipur	48.552	41.328	21.180	111.06	37.784	22.171	18.411	78.366
18	Meghalaya	53.508	44.944	23.352	121.804	53.435	28.895	23.352	115.682
19	Mizoram	17.640	43.662	10.920	72.222	17.64	40.158	11.246	69.044
20	Nagaland	32.112	77.004	19.968	129.084	37.656	87.041	22.976	147.673
21	Orissa	1165.976	838.990	530.716	2535.682	676.998	137.985	433.288	1248.271
22	Punjab	138.228	672.410	58.308	868.946	62.856	53.848	33.563	150.267
23	Rajasthan	635.306	1337.890	385.714	2358.91	516.875	160.975	348.024	1025.874
24	Sikkim	11.766	26.447	6.474	44.687	11.766	25.948	6.474	44.188
25	Tamilnadu	1259.232	3763.560	783.144	5805.936	1159.002	1505.038	775.366	3439.406
26	Tripura	95.364	176.858	28.536	300.758	83.159	116.723	25.458	225.34
27	U. P.	2766.663	3842.700	1720.014	8329.377	2481.039	325.775	1692.331	4499.145
28	Uttaranchal	149.511	287.770	59.661	496.942	134.685	102.36	47.404	284.429
29	West Bengal	1622.066	3473.780	621.684	5617.51	1044.249	838.775	515.641	2398.665
30	A & N Islands	5.040	22.070	1.800	28.91	2.64	13.67	0.82	17.13
31	Chandigarh	2.512	31.806	0.888	35.206	0.21	0	0.07	0.28
32	D & N Havell	4.948	8.850	1.772	13.37	2.54	1.52	0.38	4.44
33	Damen & DIU	1.044	8.900	0.638	10.58	0.46	0.25	0.37	1.08
34	Lakshadweep	0.295	3.698	0.181	4.154	0.24	2.83	0.16	3.23
35	Pondicherry	21.584	50.050	13.548	85.162	9.59	1.81	7.14	18.54
	TOTAL	18004.192	30282.763	9369.101	57656.056	14239.274	8458.499	8661.684	31369.457

Source: Ministry of Consumer Affairs, Government of India.

Appendix - 15.7

FOOD DISTRIBUTION UNDER PDS - 2006-07 (Qty: in MT)

Sl.No	Name of District	BPL Scheme						APL Scheme					
		Wheat			Rice			Wheat			Rice		
		Lifting	% of offtake against allotment	Off-take	Lifting	% of offtake against allotment	Off-take	Lifting	% of offtake against allotment	Off-take	Lifting	% of offtake against allotment	Off-take
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	TVM	9519	101	9615	34342	100	34273	16654	83	17329	22569	8	9221
2	Kollam	9355	103	9662	31168	106	33201	10757	80	11450	13931	4	4605
3	PTA	3582	102	3644	13257	101	13298	7792	79	7578	8614	5	2925
4	Alappuzha	7830	98	7681	28578	102	29493	9627	75	9825	16208	11	10215
5	Kottayam	5908	102	6033	21380	104	23259	8895	85	11090	22192	16	14126
6	Idukki	3787	102	3828	13039	100	13725	12323	86	13921	15908	30	14303
7	Ernakulam	6159	105	6438	20529	98	21921	20980	97	23093	33149	13	19986
8	Trissur	9324	102	9468	33853	120	41576	20015	102	20459	17727	7	9341
9	Palakkad	5696	99	5652	20592	101	20989	16573	97	17645	20398	10	11969
10	Malappuram	8538	100	8541	30677	101	31988	16273	88	17608	24444	14	15948
11	Kozhikode	7338	101	7435	26957	102	27452	15815	92	17240	24003	12	14430
12	Wayanad	1425	100	1426	3020	91	5458	4877	82	4877	8710	18	4760
13	Kannur	5449	102	5537	20183	101	20388	12049	108	13152	22694	17	15577
14	Kasargod	3006	100	2996	11293	98	11089	4858	73	4825	11869	21	8961
	KSCSC	0		0	0		0	14855	47	14855	0		0
	TOTAL	86875	101	87956	309048	103	328620	193088	84	204047	262414	11	156365

Source: Civil Supplies Department.

Appendix - 15.8

MONTHLY DISTRIBUTION OF KEROSENE AND SUGAR 2002-03 TO 2006-07

SL. NO.	MONTH	KEROSENE (M KL)					SUGAR (In MT)				
		2002-03	2003-04	2004-05	2005-06	2006-07	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8	9	10	11	12
1	APR	26400	24397	22876	24268	20419	2046	46	311	2089	3510
2	MAY	25547	23782	22529	24052	20506	1177	23	1935	2532	3051
3	JUN	25180	23666	22531	23850	20443	1253	14	2130	1941	3844
4	JUL	25394	23879	22588	23406	20449	502	95	2030	2937	3901
5	AUG	25412	24155	22622	23350	20537	3639	1098	6469	2886	6366
6	SEP	25389	24304	22607	23191	20385	1352	2904	3447	6037	4371
7	OCT	25427	24338	22585	23239	20477	1351	473	1870	2864	4237
8	NOV	25260	24228	22687	23145	20410	913	188	1392	2309	3449
9	DEC	24778	24267	22833	23200	20446	479	95	2588	1682	3937
10	JAN	26098	24159	23766	23161	20530	157	52	2752	2576	3419
11	FEB	25417	24075	26838	23099	20422	54	117	1714	2888	3593
12	MAR	24839	23953	27636	23189	20425	47	245	2490	2236	3611
	TOTAL	304141	289321	282268	280951	245448	12973	5350	28128	33266	49119

Source: Civil Supplies Department.

Appendix 16.1

WORLD TRADE - SELECTED EXPORTERS/IMPORTERS-2006

(VALUE: BILLION DOLLARS; SHARE %)

SL. No.	EXPORTERS	EXPORT			IMPORT		
		VALUE	SHARE		VALUE	SHARE	
		TOTAL	GOODS	SERVICES	TOTAL	GOODS	SERVICES
1	Germany	1276	9.2	6.1	1125	7.4	8.2
2	USA	1424	8.6	14.3	2221	13.5	11.7
3	China	1056	8	3.2	892	6.4	3.8
4	Japan	768	5.4	4.5	720	4.7	5.5
5	France	602	4.1	4.1	641	4.3	4.1
6	Netherlands	544	3.8	3	494	3.4	3
7	United Kingdom	666	3.7	8.2	770	4.9	6.5
8	Italy	511	3.4	3.7	537	3.5	3.9
9	Canada	444	3.2	2.1	429	2.9	2.7
10	Belgium	428	3.1	2.1	410	2.9	2
11	Singapore	329	2.3	2.1	300	1.9	2.3
12	Korea Republic	377	2.7	1.9	378	2.5	2.7
13	Russia	335	2.5	1.1	209	1.3	1.7
14	Hong Kong	394	2.7	2.8	371	2.7	1.3
15	Spain	306	1.7	3.1	398	2.6	2.9
16	India	193	1	2.7	244	1.4	2.7
	WORLD	14772	-	-	15000	-	-

SOURCE: WTO REPORT - 2006

Appendix -16.2

Major Commoditywise export from India -2002-03 to 2006-07 (US$ Million)

SL.No.	Commodity	Year				
		2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7
1	Agriculture and allied products	6723.26	7538.27	8471.21	10212.30	12506.19
2	Ores and minerals	1999.98	2370.34	5076.48	6162.68	7028.40
3	Leather and leather manufactures	1851.97	2164.51	2420.59	2697.26	2931.12
4	Drugs, pharm & fine chemicals	2655.51	3312.99	3972.81	4994.52	5508.41
5	Electronic Goods	1255.21	1729.50	1831.05	2172.75	2730.33
6	Machinery & Instrument	2012.4	2778.19	3717.82	5076.79	6500.33
7	Manufactures of Metals	1851.27	2428.20	3400.07	4232.62	5023.20
8	Non-ferrouds metals	288.63	454.03	764.61	1340.09	3484.23
9	Prim & semi-fin, iron & steel	1524.68	2155.69	3518.19	2982.29	4371.36
10	Transport Equipment	1338.53	1957.34	2828.52	4322.33	4902.61
11	Textile (excl. RMG)	5936.78	6564.55	6991.01	7783.21	8309.44
12	Yarns, fabrics, madeups	5094.76	5596.78	5984.88	6415.00	6807.71
13	Cotton yarn fab. Madeups etc	3357.68	3397.18	3448.69	3944.20	4133.77
14	Manmade yarn fab. Madeups	1374.62	1762.36	1961.92	1957.53	2163.16
15	Readymade garments (RMG)	6701.14	8235.71	6558.67	8616.47	8668.80
16	Gems & jewellery	9047.75	10580.59	13756.11	15526.78	15575.19
17	Plastic & linoleum products	1224.08	1753.94	3031.54	2818.91	3189.25
18	Petroleum and crude products	2581.62	3570.87	6986.46	11637.94	16539.41
	All Commodities	55919.85	66350.93	84820.53	102893.7	122392.9

Source: CMIE

Appendix -16.3

Commoditywise Import of India -2002-03 to 2006-07 (US$ Million)

Sl.No.	Commodity	Year				
		2002-03	2003-04	2004-05	2005-06	2006-07
1	Petroleum, crude and Products	17574.33	20563.62	29831.81	43956.84	57039.01
2	Food and related items	2697.96	3406.12	3515.89	3263.09	3906.20
3	Fruits and nuts	132.87	174.71	244.90	313.98	422.21
4	Textile yarn fab., made-up articles	972.27	1258.65	1570.52	2050.21	2150.12
5	Fertilizer manufactured	358.33	501.13	959.14	1873.01	2671.63
6	Inorganic Chemicals	1141.95	1271.32	1782.76	2244.49	2373.84
7	Organic Chemicals	1869.18	2763.33	3914.76	4738.60	5432.20
8	Electrical Machinery	665.41	872.82	1194.52	1504.11	1954.35
9	Machine tools	247.43	480.46	620.18	1076.00	1479.69
10	Non-electrical machinery	3572.65	4746.82	6814.98	10008.34	13839.54
11	Transport Equipment	1901.14	3230.13	4325.64	8837.17	15403.19
12	Artificial Resins, plastic materials etc.	783.38	1092.75	1458.26	2267.38	2600.09
13	Coal, coke & briquettes	1242.08	1411.75	3197.10	3868.13	4592.32
14	Electronic goods	5610.46	7511.29	9889.05	13239.80	15935.58
15	Gold & silver	4295.71	5861.09	11145.40	11316.08	14835.30
16	Iron & steel	883.49	1413.67	2490.07	4385.10	6039.40
17	Metalliferous ores & metal scrap	1039.83	1298.80	2487.48	3881.23	6329.18
18	Non-ferrous metals	667.53	949.44	1309.74	1844.10	2904.20
19	Pearls precious & semiprecious stones	6074.72	7133.58	9418.93	9133.08	7482.39
20	Wood & wood products	402.90	711.99	868.66	926.54	1017.49
	All Commodities imports	52254.92	67841.85	97137.69	130527.08	169906.06

SOURCE: DGIS

Appendix 16.1

WORLD TRADE - SELECTED EXPORTERS/IMPORTERS-2006

(VALUE: BILLION DOLLARS; SHARE %)

SL. No.	EXPORTERS	EXPORT VALUE TOTAL	EXPORT SHARE GOODS	EXPORT SHARE SERVICES	IMPORT VALUE TOTAL	IMPORT SHARE GOODS	IMPORT SHARE SERVICES
1	Germany	1276	9.2	6.1	1125	7.4	8.2
2	USA	1424	8.6	14.3	2227	15.5	11.7
3	China	1056	8	3.2	892	6.4	3.8
4	Japan	768	5.4	4.5	720	4.7	5.5
5	France	602	4.1	4.1	641	4.3	4.1
6	Netherlands	544	3.8	3	494	3.4	3
7	United Kingdom	666	3.7	8.2	770	4.9	6.5
8	Italy	511	3.4	3.7	537	3.5	3.9
9	Canada	444	3.2	2.1	429	2.9	2.7
10	Belgium	428	3.1	2.1	410	2.9	2
11	Singapore	329	2.3	7.1	300	1.9	2.3
12	Korea Republic	377	2.7	1.9	378	2.5	2.7
13	Russia	335	2.5	1.1	209	1.3	1.7
14	Hong Kong	394	2.7	2.5	371	2.7	1.3
15	Spain	306	1.7	3.7	396	2.8	2.9
16	India	193	1	2.7	222	1.4	2.7
	WORLD	14772	-	-	15000	-	-

SOURCE: WTO REPORT - 2006

Appendix -16.2

Major Commoditywise export from India -2002-03 to 2006-07 (US$ Million)

Sl.No.	Commodity	Year 2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7
1	Agriculture and allied products	6723.26	7538.27	8471.21	10212.30	12506.19
2	Ores and minerals	1999.98	2370.34	5078.48	6162.69	7028.40
3	Leather and Leather manufactures	1857.97	2164.51	2420.56	2697.26	2931.12
4	Drugs, pharm & fine chemicals	2655.51	3312.99	3972.81	4994.52	5508.41
5	Electronic Goods	1255.21	1729.50	1831.05	2172.75	2730.33
6	Machinery & Instrument	2012.4	2778.19	3717.82	5076.79	6500.33
7	Manufactures of Metals	1851.27	2428.20	3400.07	4232.62	5023.20
8	Non-ferrous metals	288.63	454.03	764.61	1340.09	3484.23
9	Prim & semi-fin, iron & steel	1624.89	2155.58	3518.19	2982.29	4371.36
10	Transport Equipment	1336.53	1957.34	2629.52	4322.33	4902.61
11	Textile (excl. RMG)	5936.78	6564.55	6991.01	7783.21	8309.44
12	Yarns, fabrics, madeups	5094.76	5596.76	5884.88	6415.00	6907.71
13	Cotton yarn fab. Madeups etc	3357.68	3397.18	3446.69	3944.20	4133.77
14	Manmade yarn fab. Madeups	1374.62	1762.36	1961.92	1957.53	2163.16
15	Readymade garments (RMG)	5701.14	6235.71	6558.67	8578.47	8688.80
16	Gems & jewellery	9047.75	10580.50	12756.11	15526.78	15575.19
17	Plastic & linoleum products	1224.08	1753.94	3031.54	2818.91	3189.25
18	Petroleum and crude products	2581.62	3570.87	6986.46	11637.94	18539.41
	All Commodities	55919.85	68350.93	84620.63	102893.7	122392.8

Source: CMIE

Appendix -16.3

Commoditywise Import of India -2002-03 to 2006-07 (US$ Million)

Sl No	Commodity	Year				
		2002-03	2003-04	2004-05	2005-06	2006-07
1	Petroleum, crude and Products	17674.33	20583.62	29631.81	43956.64	57036.01
2	Food and related items	2697.96	3408.12	3515.89	3263.09	3908.20
3	Fruits and nuts	132.87	174.71	244.90	313.96	422.21
4	Textile yarn fab. madeup articles	972.27	1258.65	1570.52	2060.21	2150.12
5	Fertiliser manufactured	358.33	501.13	959.14	1673.01	2871.63
6	Inorganic Chemicals	1141.95	1271.32	1782.76	2244.49	2373.84
7	Organic Chemicals	1689.18	2783.33	3914.76	4738.80	5432.20
8	Electrical Machinery	605.41	872.82	1194.52	1504.11	1954.35
9	Machine tools	247.43	480.46	820.18	1076.00	1479.89
10	Non-electrical machinery	3572.65	4746.82	6614.98	10008.34	13839.54
11	Transport Equipment	1901.14	3230.13	4325.64	8837.17	15403.19
12	Artfcl. Resins, plastic matrls etc.	783.38	1082.75	1458.28	2257.38	2800.09
13	Coal, coke & briquettes	1242.08	1411.75	3197.10	3868.13	4592.32
14	Electronic goods	5610.46	7511.29	9989.05	13239.80	15935.58
15	Gold & silver	4296.71	5881.09	11145.40	11316.08	14635.30
16	Iron & steel	863.49	1413.87	2490.07	4385.10	8039.40
17	Metalliferous ores & metal scrap	1039.83	1296.80	2467.46	3681.23	6326.18
18	Non-ferrous metals	587.83	949.44	1309.74	1844.10	2604.20
19	Pearls precious & semiprecious stones	6074.72	7133.56	8418.83	9133.08	7482.36
20	Wood & wood products	402.90	711.99	888.88	928.54	1017.49
	All Commodities Imports	52254.92	67541.65	97137.69	130527.08	168905.08

SOURCE: CMIE

Appendix 16.4

Commodity-wise Export through Kochi Port 2002- 03 to 2006-07

(Quantity In M.T, Value Rs. Crores)

Sl. No.	Commodity	2002-03		2003-04		2004-05		2005-06		2006-07	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Tea	103544	325.23	86794	269.93	86589	96.200	31985	253.48	88610	540.67
2	Cashew Kernels	84764	1585.47	88994	1147.24	91729	1717.300	80775	1651.12	68179	1504.94
3	Sea Foods	84216	623.76	101517	986.93	103721	1157.89	100256	1173.97	109207	1449.25
4	Coir Products	99319	428.92	113838	259.27	88470	1.070	73391	7.73	108051	12.38
5	Spices	46284	673.76	25419	141.85	24846	53.55	65321	252.91	36732	942.85
6	Coffee	115156	387.37	119384	443.42	115265	462.97	89980	603.23	92218	690.21
7	Miscellaneous	1591876	2508.25	2019910	2731.80	2842724	4544.75	2499129	6187.75	2971199	5197.5
	Total	2125159	6532.76	2559656	5980.45	3153344	8033.73	2919617	10130.2	3474198	10336.8

Source:- Cochin Port Trust

Appendix 16.5

Commodity-wise import through Kochi Port, 2002- 03 to 2006- 07(Quantity In M.T)

Sl. No.	Commodity	2002-03		2003-04		2004-05		2005-06		2006-07	
		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
1	Fertilizers & Raw materials	630778	-2.28	504264	20.06	590358	17.31	726933	28.35	639533	-12.02
2	Foodgrains	0	0	0	0.00	0	0	0	0	181366	100.00
3	Iron Steel & Machinery	231033	59.57	61477	-73.41	76275	24.18	308468	304.4	339674	10.12
4	Newsprint	40652	11.55	67311	65.46	46926	-30.28	406502	766.26	76908	-81.08
5	Cashewnut	259736	19.56	309085	19.00	280483	-9.26	315679	12.55	339674	7.6
6	Miscellaneous	9736627	7.74	10074552	3.47	9980101	-0.94	9210060	-7.72	10206217	10.82
	Total	10898856	96.14	11016659	34.58	10950146	-3.99	10967642	1103.84	11783372	35.44

Source: Cochin Port Trust

Appendix 16.6

Item-wise Export of Marine Products from India, 2002-03 to 2006-07 Quantity in MT, Value in Rs. Crore

Sl No.	Item	2002-03		2003-04		2004-05		2005-06		2006-07	
		Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Frozen Shrimp	134815	4608.31	129768	4013.07	138085	4221	145180	4271	137397	4506.08
2	Frozen Fish	196322	841.65	138023	620.73	159689	759	192344	999	270751	1452.88
3	Frozen Cuttlefish	41381	417.09	39810	435.18	44239	474	49651	549	55701	797.37
4	Frozen Squid	37838	364.37	37832	372.92	46124	477	52352	575	47250	568.32
5	Dried Items	8178	84.23	12574	145.68	9692	121	14167	133	24293	183.16
6	Live Items	2115	536.6	2341	5.11	2262	51	2568	62	2478	64.06
7	Chilled Items	3350	59.14	3778	64.04	3988	88	5060	82	7200	117.3
8	Others	43298	432.86	48090	389.23	55250	476	60842	574	67571	674.35
	Total	**467297**	**7364.25**	412017	6045.96	461329	6647	512164	7245	612641	8363.52

Source: Marine Products Export Development Authority

Appendix 16.7

Market wise Export of Marine Products from India, 2002-03 to 2006-07

(Qty in Tonnes & Value in Rs. Crore)

Sl. No.	Market	2002-03			2003-04		2004-05		2005-06		2006-07	
		Qty	Value	% total	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Japan	54918	1634.76	22.3	50020	1163.68	57832	1202.45	59785	1156	67437	1363.38
2	USA	61703	2151.12	29.8	53153	1636.05	50045	1556.09	55817	1638	43758	1347.8
3	Europe	84541	1488.47	20.2	96284	1470.99	117742	1819.28	136842	2134	149760	2759.92
4	China	170811	852.48	11.1	123738	678.46	124826	693.25	137076	849	203513	1158.96
5	S.E.Area	44097	642.38	9.3	50670	545.77	63842	628.83	60140	586	87650	618.7
6	Middle East	19868	286.74	3	14711	201.52	16624	244.42	22270	308	23599	371.47
7	Others	21561	298.3	4.3	23441	351.48	30418	502.37	40234	573	56924	757.3
	Total	**467297**	**7364.25**	100	412017	6045.96	461329	6646.69	512164	**7245**	**612641**	**8363.53**

Source: Marine Products Export Development Authority

Appendix - 16.8

Kerala's Share in the Export of Marine Products from India

(Qty. In Tonnes & Value in Rs. Crore)

Sl.No.	Year	India		Kerala		Kerala's Share (%)	
		Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8
1	1996-97	378199	412136	92289	93622	24.4	24.75
2	1997-98	385818	469748	89386	94803	23.16	20.18
3	1998-99	392934	462687	70641	81655	17.98	17.65
4	1999-00	343031	511667	92148	114696	26.86	22.42
5	2000-01	440473	644389	88852	104647	20.17	16.24
6	2001-02	424470	595705	72756	95055	17.14	15.96
7	2002-03	467297	686'31	81392	104583	17.42	15.2
8	2003-04	412017	609195	76627	109913	18.6	18.04
9	2004-05	461329	664869	87337	115742	18.94	17.41
10	2005-06	512164	724530	97311	125765	19	17.36
11	2006-07	612642	836353	108616	152412	17.74	19.00

Source: Marine Products Exports Development Authority.

Appendix. 16.9

Item-wise Export of Spices from India, 2002-03 to 2006-07

(Qty in M.T: Value in Rs. Lakhs)

Sl.No	Item	2002-03		2003-04		2004-05		2005-06		2006-07	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2	3	4	5	6	7	8	9	10	11	12
1	Pepper	21609	17887.98	16635	14276.96	14148	12171.08	17363	15094.81	28750	30620.00
2	Cardamom (small)	682	4707.42	757	3691.70	642	2362.4	863	2682.13	650	2236.00
3	Cardamom (large)	1450	2057.08	924	1234.46	954	1129.86	1046	1154.65	1500	1695.00
4	Chilli	81022	31514.68	86575	36687.81	138073	49902.92	113174	40300.51	148500	80775.00
5	Ginger	8461	2396.59	4696	2275.45	13890	5985.81	9411	4295.52	7500	3975.00
6	Turmeric	32402	10337.99	37044	13111.73	43097	15624.95	46405	15286.02	51500	16480.00
7	Coriander	18065	5564.64	21018	7200.95	33582	8208.94	23756	6770.73	20500	7462.00
8	Cumin	10422	9326.33	7957	5883.79	15767	11529.21	12879	9819.07	26000	20150.00
9	Celery	3960	1225.43	4815	1520.33	4297	1449.51	4165	1500.64	3550	1320.50
10	Fennel	4160	1783.75	5007	2211.48	7590	2749.86	5725	2782.33	3575	2380.00
11	Fenugreek	13193	2551.06	6932	1554.56	14635	2747.73	15525	3402.87	8500	2698.50
12	Other Seeds (1)	14920	3617.36	14031	3396.85	16576	4018.66	12670	3321.99	8000	2240.00
13	Garlic	1539	698.68	3691	1422.64	2929	736.37	34688	4798.38	11500	2127.50
14	Tamarind	12590	2275.35	12077	1852.11	5944	1833.98	14101	3078.20	10200	3000.00
15	Nutmeg&Mace	1381	2847.36	1420	2638.14	1260	2323.81	1530	3117.21	2100	4273.50
16	Vanilla	25	2225.72	27	3872.04	43	2875.88	72	1226.80	125	1995.50
17	Other Spices (2)	11307	5107.76	7214	4096.64	9707	5554.25	7033	4414.57	9300	4280.00
18	Curry Powder	8492	6893.67	8318	6805.28	8415	6697.15	9340	7838.03	9500	8692.50
19	Mint Products (3)	13589	56557.94	10110	39435.51	11143	50218.70	14544	81320.66	16250	110095.00
20	Oils & Oleoresins	4839	39094.23	5133	37991.76	5831	46930.81	6074	50557.34	6250	51079.00
	Total	**264108**	**208671.02**	**254381**	**191160.19**	**348523**	**235051.88**	**350364**	**262762.46**	**373750**	**357575**
	Value in Milln.US$		**431.45**		**416.56**		**524.15**		**592.90**		**792.95**

(1) Include Bishops Weed (Ajwanseed), Dill Seed, Poppy Seed, Aniseed, Mustard etc
(2) Include Asafoetida, Cinnamon, Cassia, Cambodge, Saffron, Spices etc.
(3) Include Menthol, Menthol Crystals and Mint Oils
Source: Spices Board

Appendix. 16.10

EXPORT OF SPICES THROUGH COCHIN AND TRIVANDRUM PORTS DURING 2002-03 TO 2006-07

(QTY IN TONNES; VALUES IN Rs.LAKHS)

Sl. No.	Item	2002-03		2003-04		2004-05		2005-06		2006-07	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2	3	4	5	6	7	8	9	10	11	12
1	Pepper	20476.18	16605.50	15709.67	13447.05	13355.54	11433.09	16312.39	14059.66	25537.37	27188.40
2	Cardamom (small)	383.55	2535.12	434.75	2161.83	386.36	1362.72	436.57	1382.85	371.47	1309.87
3	Cardamom (large)	5.02	7.24	39.42	43.21	0.60	1.52	0.30	0.24	0.23	0.17
4	Chilli	10485.18	6512.92	11783.06	7861.76	13785.32	8785.65	13953.08	8797.42	13168.42	9727.74
5	Ginger	3522.07	1685.83	2089.24	1423.89	2856.39	3304.00	2446.16	2589.73	2924.17	2348.85
6	Turmeric	6998.59	2611.08	6666.99	2671.16	5068.76	2973.73	5040.60	2790.60	5559.93	3030.00
7	Coriander	793.23	424.34	2059.63	822.53	988.84	580.87	1265.93	660.17	1469.82	873.70
8	Cumin	315.22	348.25	308.32	268.97	487.87	437.82	522.93	509.56	843.01	824.91
9	Celery	486.84	252.65	435.62	219.13	608.61	311.43	590.19	321.50	473.82	263.77
10	Fennel	116.78	67.77	118.12	79.07	125.44	71.11	170.98	119.88	147.37	113.08
11	Fenugreek	443.91	200.68	544.95	266.37	603.93	350.48	892.86	492.81	762.88	493.23
12	Other Seed Spices	38.10	15.74	320.62	122.26	369.68	166.42	542.03	211.33	171.11	104.04
13	Garlic	13.40	14.06	49.10	31.19	30.49	23.71	116.46	51.09	233.80	130.05
14	Tamarind	826.61	137.00	1191.83	119.3	415.79	126.54	1004.02	161.53	771.17	285.54
15	Nutmeg & Mace	1232.76	2525.78	1262.56	2353.94	1076.83	1968.54	1377.05	2765.95	1761.33	3581.84
16	Vanilla	9.18	876.14	4.33	571.66	9.98	1274.74	22.18	405.35	58.75	636.39
17	Other Misc. Spices	2194.83	655.38	1742.49	680.32	4403.93	2036.91	3809.89	1328.61	5228.11	1454.97
18	Curry Powder/Mixture	1694.51	1699.10	1684.76	1650.02	1999.04	1978.72	2118.64	2164.34	2824.93	3116.41
19	Spice Oils & Oleores	3552.31	31555.04	4207.86	32037.91	5147.19	41656.17	5503.23	44549.35	5056.65	41926.43
20	Mint Products	3.82	27.39	0.89	12.79	1.66	102.73	20.09	130.79	9.46	221.62
	Total	**53692.20**	**68757.01**	**50664.01**	**67044.46**	**51722.46**	**79146.90**	**56145.78**	**83492.86**	**67371.80**	**97630.01**

Source: DGCI&S., Calcutta/s.Bill/Exporters Returns

Appendix - 16.11

Market-wise Export of Cashew Kernels from India - 2004-05 to 2006-07

(Qty. in Tonnes & Value in Rs. Crore)

Sl. No.	Countries	2004-05		2005-06		2006-07	
		Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8
1	U.S.A	61546	1288.49	43149	958.33	46245	969.51
2	Netherland	15693	345.67	18736	408.82	19360	385.07
3	U.A.E	6690	148.23	8274	184.41	9523	207.63
4	U.K	7100	158.34	6238	140.88	4715	95.50
5	Japan	5047	111.21	4665	110.2	4279	91.28
6	France	3329	66.49	3470	75.79	3558	73.17
7	Saudi Arabia	2998	61.55	2827	59.61	3357	66.55
8	Spain	2870	64.8	2648	61.09	2457	52.42
9	Belgium	2497	53.18	2378	54.48	2380	48.99
10	Germany	1966	42.39	1991	42.21	1770	32.79
11	Russia	2331	43.41	1990	38.77	1163	19.20
12	Greece	1511	33.74	1859	42.61	1870	40.83
13	Canada	1540	31.39	1558	33.14	1308	26.04
14	Italy	1119	23.72	1236	25.2	1208	26.18
15	Australia	873	18.36	1114	25.29	1344	25.85
16	Norway	1318	29.15	873	19.89	1105	22.72
17	Kuwait	574	12.78	863	19.76	964	21.17
18	Hong Kong	719	17.71	788	17.28	659	16.66
19	Israel	984	23.26	752	17.4	995	22.74
20	Singapore	510	11.6	694	13.61	318	6.90
21	Lebanon	655	14.95	470	9.61	483	10.35
22	Bahrain	362	7.08	393	7.8	479	9.42
23	Korea Rep	213	5.22	255	5.85	397	8.50
24	New Zealand	201	4.46	204	4.62	212	4.23
25	Malaysia	62	1.39	191	4.05	161	3.11
26	Others	3973	90.68	6505	134.17	8230	168.38
	Total	128869	2709.25	114141	2514.87	118540	2455.17

Source: Cashew Export Promotion Council of India

Appendix 16.12

Countrywise Export of Coffee from India - 2002-03 to 2006-07 (Qty MT, Value Rs. Crores)

SL. No.	Country	2002-03		2003-04		2004-05		2005-06		2006-07	
		Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Itally	45594	184.64	52197	231.7	49232	254.81	53413	365.86	62786	469.31
2	Russia	36578	307.74	33592	225.42	34459	235.74	29432	228.25	27288	242.76
3	Germany	23344	102.6	25680	123.46	16518	106.16	16742	145.20	21835	190.91
4	Belgium	17430	70.14	18777	86.64	9204	47.34	11190	84.72	13989	109.13
5	Spain	11142	42.46	13898	53.92	11499	48.16	10292	63.33	11091	75.44
6	Slovenia	8698	28.32	10795	38.06	8441	30.54	7458	41.46	8049	50.96
7	U.S.A	3505	15.06	3237	14.66	5646	27.8	2448	20.86	4232	37.83
8	Japan	4899	25.37	3538	17.72	5918	40.49	4147	37.27	4644	43.85
9	Greece	4936	18.37	4224	15.33	5642	22.44	4392	26.17	6023	40.55
10	Kuwait	3088	17.82	3150	20.74	2657	21.71	2877	28.56	3452	36.93
11	Switzerland	2872	15.99	3301	19.31	3244	22.79	2440	23.83	3200	29.71
12	Jordan	1519	8.29	3169	14.97	2727	15.85	1784	15.76	2980	26.63
13	Netherlands	2566	9.92	3205	15.31	3604	26.1	2949	26.03	3445	30.51
14	France	3676	17.16	6214	28.47	4283	22.41	3811	26.75	5837	46.00
15	Israel	1487	7.61	1853	8.66	1529	8.33	1581	13.02	3549	26.91
16	Saudi Arabia	1714	10.19	1041	6.28	1181	8.33	1012	10.93	1346	15.97
17	Canada	1422	5.7	2665	9.41	1263	5.66	1169	8.19	1850	13.20
18	Australlia	1743	8.21	2469	12.04	2393	13.52	2615	20.66	3389	27.91
19	Portugal	2967	11.1	3218	12.29	3253	13.5	3504	20.44	3603	27.80
20	Hungary	1606	6.94	2479	11	2607	12.22	2976	17.96	2947	21.13
21	Algeria	4123	14.44	4293	15.51	614	2.22	1306	8.38	4294	26.86
22	Egypt	1913	7.16	1754	6.44	966	4.21	593	4.18	2698	18.61
23	Finland	875	6.71	4762	36.01	3677	26.76	4245	33.48	6147	51.18
24	United Arab Emirates	2840	16.81	2120	13.57	1781	15.25	1530	16.53	2029	22.76
25	Poland	1846	9.67	1018	6.06	1302	8.83	1021	6.63	1119	8.46
26	Ukraine	2908	22.56	3190	25.16	6131	49.61	6920	60.91	6962	67.72
27	Others	12042	60.47	16845	90.31	21994	133.89	19710	155.02	30246	248.87
	Total	**207333**	**1051.45**	**232684**	**1158.45**	**211765**	**1224.67**	**201557**	**1510.38**	**249030.00**	**2007.90**

Source: Coffee Board

Appendix - 16.13

Export of Coir and Coir Products from India 2002-03 to 2006-07

(Quantity in Tonnes, Value in Rs. Lakh)

Sl. No.	Items	2002-03		2003-04		2004-05		2005-06		2006-07	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Coir Fibre	1036.87	103.81	1120.75	142.44	1350.45	186.03	1552.98	196.05	9356.54	1075.8
2	Curled Coir	492.37	60.05	76.54	14.02	69	11.97	0	0	1804.03	208.34
3	Coir Pith	21084.2	1493.01	29179.35	1975.92	43420.54	3042.41	53444.48	3872.8	67152.99	5382.07
4	Coir Rope	332.4	102.05	308.88	111.46	299.67	116.91	162.73	70.41	154.25	68.87
5	Coir Yarn	11482.47	2996.76	12364.43	3498.71	10987.59	3356.16	9582.52	3019	9691.17	3161.22
6	Coir Geo-Textiles	2140.89	986.22	2599.54	1184.74	2323.19	1049.76	2512.32	1140.58	3044.51	1335.87
7	Coir Rugs	1327.08	932.42	1694.58	1071.36	1727.34	1002.64	1242.7	730.38	488.31	328.55
8	Handloom Mats	33059.75	20711.80	36303.99	22133.89	40127.35	25129.27	42516.42	26699.73	42986.07	27370.67
9	Handloom Mattings	4772.62	3191.44	4545.58	2838.86	3516.9	2334.04	2915.81	1913.38	3642.27	2354.63
10	Powerloom Mats	954.85	585.52	1026.28	672.13	1433.22	931.16	1609.94	1027.10	246.21	168.84
11	Powerloom Mattings	183.18	111.79	309.04	215.44	188.94	138.92	155.95	118.89	104.75	85.11
12	Tufted Mats	8429.03	3434.71	11772.50	6359.52	16502.26	9499.05	19671.49	11605.96	29017.02	18213.02
13	Rubberised Coir	535.22	403.42	461.78	334.67	475.92	340.57	536.5	377.05	947.31	697.88
14	Coir Other Sorts	372.85	138.56	490.21	198.90	502.4	199.38	123.03	74.65	119.31	66.04
	Total	84182.58	35270.58	102253.41	40749.68	122926.77	47340.27	136026.97	50844.76	168754.74	60516.69

Source - Coir Board

Appendix 16.14

Major Marketwise Export of Coir Products from India 2006-07 (%)

Countries	HANDLOOM MATS		TUFTED MATS		YARN		PITH		HANDLOOM MATTINGS		GEOTEXTILES		RUGS & CARPETS		POWERLOOM MATS		RUBBERISED COIR		FIBRE		POWERLOOM MATTING		ROPE		OTHER SORTS	
	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %	Qty %	Value %
USA	37.91	42.80	40.86	46.61	19.45	14.09	8.61	8.62	21.00	19.93	45.05	39.59	8.92	7.70	21.65	22.00			3.65	4.75					3.38	8.14
UK	12.65	11.50	7.75	7.06					33.09	33.44			7.97	9.55	20.49	20.39					1.01	1.38				
GERMANY	6.79	7.24	9.54	9.53	11.58	12.49					6.11	9.78	18.36	15.93	17.10	11.45	13.28	14.74			97.73	97.28				
CANADA	3.19	3.61																								
ITALY	4.72	3.61	7.27	5.21	13.23	13.66					3.41	3.76	8.96	13.41												
SPAIN			6.21	5.09			9.97	13.27																		
NETHERLANDS					24.46	25.84	31.14	29.93	10.44	11.71					10.06	9.59			7.28	9.08					16.23	30.09
BELGIUM					7.63	8.04									10.52	12.97			2.24	3.31					18.86	7.43
SOUTH KOREA							16.31	16.26									11.75	10.54								
AUSTRALIA							5.25	5.89																		
SOUTH AFRICA									5.10	5.18											1.26	1.03				
URUGUAY									4.00	4.61																
JAPAN											14.90	16.26													8.86	21.97
FRANCE											13.38	15.32											88.70	99.37		
SWEDEN													19.79	16.50												
MALDIVE ISLANDS																	19.86	21.25								
LATVIA																	11.31	10.06	1.53	1.71						
HUNGARY																	7.25	6.97								
REPUBLIC OF CHINA																			77.26	74.77						
UAE																							1.30	0.63		
AUSTRIA																									4.03	8.86

Source: Coir Board

Appendix 17.1

State wise Financial Assistance Disbursed by NABARD during 2006-07

(Amount Rs. lakh)

Sl No.	Name of State	Disbursement by NABARD	
		Amount	%
(1)	(2)	(3)	(4)
1	Andrapradesh	96643	10.99
2	Assam	9315	1.06
3	Bihar	16806	1.91
4	Gujarat	59337	6.75
5	Haryana	58175	6.61
6	Karnataka	69891	7.95
7	Kerala	51712	5.88
8	Madyapradesh	44265	5.03
9	Maharashtra	40087	4.56
10	Orissa	34414	3.91
11	Panjab	87960	10.00
12	Rajasthan	46926	5.34
13	TamilNadu	52235	5.94
14	Uttarpradesh	112257	12.76
15	WestBengal	52202	5.94
	Total	832225	94.62
	All India Total	879502	100

Source: Annual Reports of NABARD 2006-07
Note: Percentages are to All India Total

Appendix 17.2

State wise Cumulative Financial Assistance Disbursed by NABARD as at the end of March 2007

(Amount Rs. lakh)

Sl. No.	Name of State	Disbursement by NABARD	
		Amount	%
(1)	(2)	(3)	(4)
1	Andrapradesh	992994	10.07
2	Assam	123021	1.25
3	Bihar	282815	2.87
4	Gujarat	497699	5.05
5	Haryana	606730	6.15
6	Karnataka	666088	6.75
7	Kerala	450757	4.57
8	Madyapradesh	547602	5.55
9	Maharashtra	841115	8.53
10	Orissa	350357	3.55
11	Panjab	831074	8.43
12	Rajasthan	543855	5.52
13	TamilNadu	704234	7.14
14	Uttarpradesh	1533205	15.55
15	WestBengal	482331	4.89
	Total	9453877	95.90
	All India Total	9858386	100

Source: Annual Reports of NABARD, 2006-07
Note: Percentages are to All India Total

Appendix 17.3

State wise distribution of commercial bank branches and population per bank office.

States	Number of Banks as at the end of							Percentage to total number of offices as at the end of							Average Population per bank branch(in '000s)						
	Jun-99	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06	Jun-07	Jun-99	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06	Jun-07	Jun-99	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06	Jun-07
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Andhra Pradesh	567	5207	5267	5294	5393	5541	5692	6.9	7.6	7.9	7.9	7.9	7.9	7.9	74	15	15	14	14	15	14
2 Assam	74	1223	1220	1221	1235	1247	1280	0.9	1.6	1.8	1.6	1.8	1.8	1.8	191	22	22	22	22	23	23
3.Bihar	273	3564	3564	3569	3587	3592	3621	3.3	5.4	5.3	5.3	5.3	5.2	5.0	207	21	21	22	23	25	28
4 Gujarat	852	3657	3670	3688	3705	3784	3927	10.3	5.5	5.5	5.5	5.4	5.4	5.5	34	14	14	23	14	15	14
5.Haryana	172	1551	1591	1615	1668	1770	1849	2.1	2.3	2.4	2.4	2.5	2.5	2.6	97	13	13	14	13	13	13
6.Karnataka	766	4779	4804	4634	4949	6095	6229	9.2	7.2	7.2	7.2	7.3	7.3	7.3	37	11	11	13	11	11	11
7.Kerala	601	3334	3370	3404	3493	3615	3734	7.3	5.0	5.1	5.1	5.1	5.2	5.2	34	10	10	11	9	9	9
8 Madhya Pradesh	343	3458	3450	3453	3486	3614	3678	4.2	5.2	5.2	5.2	5.1	5.0	5.0	116	18	18	18	17	19	19
9.Maharashtra	1116	6320	6317	6334	6439	6592	6788	13.5	9.5	9.5	9.6	9.5	9.4	9.5	43	15	15	16	15	16	16
10.Orissa	100	2227	2227	2240	2267	2330	2406	1.2	3.4	3.3	3.3	3.3	3.3	3.4	211	16	17	15	16	17	16
11.Punjab	346	2573	2615	2641	2765	2801	2914	4.2	3.9	3.9	3.9	4.0	4.0	4.1	42	9	9	17	9	9	9
12 Rajasthan	364	3336	3342	3350	3408	3474	3572	4.4	5.0	5.0	5.0	5.0	5.0	5.0	68	17	17	9	16	18	18
13.Tamil Nadu	1050	4748	4746	4757	4846	4989	5162	12.6	7.2	7.1	7.1	7.1	7.1	7.2	37	13	13	17	13	13	13
14 Uttar Pradesh	747	8199	8212	8213	8299	8474	8872	9.0	12.3	12.3	12.3	12.2	12.1	12.1	114	20	20	13	20	22	22
15.West Bengal	504	4430	4446	4468	4519	4593	4691	6.1	6.7	6.7	6.7	6.6	6.6	6.5	85	18	19	20	18	19	19
TOTAL	7877	58578	58841	59049	60048	61391	63113	95.3	88.3	88.2	88.2	88.2	88.0	88.0	-	-	-	16	15	16	18
All India Total	8262	66355	66692	66970	68116	69801	71781	100.0	100.0	100.0	100.0	100.0	100.0	100.0	85	16	16	15	15	16	16

Source: *Report on Trend and Progress of Banking in India, 2006-07, RBI.*

Note 1 *Data for June 2006 are revised*

2 *Data for June 2007 are provisional*

Appendix 17.4

State-wise Deposits, Credits and Credit- Deposit Ratio of Public Sector Banks. (Rs. Crore)

	Jun-99			Mar -05			Jun - 05			Mar -06			Jun - 06			Mar -07		
State/Month	Deposit	Credit	C-D Ratio	Deposit	Credit	C.D Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.Andhra Pradesh	121	122	100.8	84005	63469	75.6	84523	64884	76.8	98019	81969	83.63	100054	84482	84.44	118942	104451	88.32
2.Assam	33	13	39.4	17222	6103	35.4	17096	6561	38.4	19980	8441	42.37	20267	8674	42.80	24564	10677	43.48
3.Bihar	169	53	31.4	40735	11400	28	38541	11308	29.50	45863	14010	30.55	45342	13981	30.83	55927	17012	30.42
4.Gujarat	401	195	48.6	82659	37877	45.6	80272	37624	46.9	89595	49152	54.86	89434	49801	55.68	101527	63569	62.60
5.Haryana	49	23	46.9	30038	18021	60	30371	18014	59.3	39384	26610	67.57	40744	26829	65.85	45717	31759	69.46
6.Karnataka	188	143	76.1	81884	62818	76.8	81275	64968	79.9	97710	80959	82.86	100338	82833	82.55	123831	103832	83.85
7.Kerala	117	77	65.8	47274	29079	58.4	46592	29092	62.4	53015	34831	65.70	54224	35903	66.21	62807	42724	68.02
8.Madhya Pradesh	107	63	58.9	44620	24975	56	45935	25298	55	57417	31560	60.21	52694	31837	60.42	51627	38290	62.13
9.Maharashtra	903	912	101	232635	207111	89	237290	212285	89.5	281312	285715	101.57	300027	292316	97.43	374794	375804	100.27
10.Orissa	29	15	51.7	25542	16116	63.1	25475	16401	64.4	30290	20061	66.25	31332	20747	66.22	38621	25253	65.39
11.Punjab	185	50	27	59998	27904	46.5	59553	29690	49.8	65689	38279	58.29	67208	38857	57.82	75064	48643	64.81
12.Rajasthan	74	38	51.4	36517	26393	72.3	36832	26977	73.6	47421	33841	91.70	43081	34677	80.49	48472	42262	87.19
13.Tamil Nadu	233	311	133.5	79049	73594	93.1	78536	76119	95.70	93631	95911	102.44	95069	98607	103.72	114231	123546	108.15
14.Uttar Pradesh	337	154	45.7	127215	48243	37.9	125633	47846	37.9	142694	60741	42.51	145256	61841	42.57	169289	77509	45.79
15.West Bengal	458	528	115.4	93068	49539	53.2	94794	50181	52.9	104358	60020	57.51	105844	61026	57.66	122622	70308	54.57
TOTAL	3402	2685	79.2	1082482	701542	64.8	1083508	717104	66.2	1255538	822127	73.44	1290815	842410	73.00	1538217	1184029	77.07
All India Total	3697	3035	77.9	1358780	848461	62.4	1365446	887382	65.5	1574664	1111474	70.58	1620235	1132806	69.92	1918478	1425855	74.31

Source: Banking Statistics :Quarterly Handout, RBI (various issues)

Appendix 17.5
Banking Statistics of Kerala – 1990-2007.

(Rs. crore)

	State Bank Group				Other Nationalised Banks				Gramin Bank				Total Public Sector Banks			
Ending March	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1990	2406.71	800.3	1551.12	64.45	2718.08	832.34	1595.29	58.69	87.74		179.83	204.86	5212.51	1632.64	3326.24	63.81
1991	2854.66	949.58	1797.91	62.98	3205.41	997.48	1749.2	54.57	109.78		185.81	176.37	6169.85	1947.06	3742.92	60.66
1992	3410.27	1196.69	1830.95	54.28	3865.81	1262.88	1830.93	47.36	142.3		213.37	149.94	7418.38	2459.55	3895.25	52.51
1993	4285.29	1779.54	2146.1	50.08	4743.08	1815.08	2064.69	43.53	171.56		232.16	135.32	9199.93	3594.6	4443.15	48.30
1994	5312.22	2369.6	2404.91	45.27	5753.17	2418.4	2126.1	36.96	211.59		262.75	124.18	11276.98	4788	4793.76	42.5
1995	6154.52	2698.96	2934.99	47.69	6516.3	2806.37	2387.69	36.64	260.7		313.9	120.41	12931.52	5503.33	5636.58	43.59
1996	6935.66	3059.13	3135.42	45.21	7261.92	3140.39	2890.17	39.8	263.39		351.71	133.53	14460.97	6198.52	6377.3	44.10
1997	7736.39	3648.94	3604.73	46.59	8380.93	3872.82	3282.32	38.93	334.85		439.27	131.18	16452.17	7521.76	7306.32	44.41
1998	8965.43	4310.78	4131.4	46.08	9726.35	4763.39	4064.84	41.99	404.99		515.73	127.34	19098.77	9074.17	8731.97	45.72
1999	10498.17	5299.59	4670	44.48	10141.59	4491.7	4082.02	40.25	510.72		613.52	120.13	21150.48	9791.29	9385.54	44.28
2000	12617.34	6755.85	5580.48	44.23	13536.21	6708.45	5192.63	38.36	649.00		755.89	116.47	26802.55	13464.3	11529	43.0
2001	14663.45	7588.28	6506.93	44.39	15175.61	7786.79	5868.13	38.67	796.85	21.53	967.16	121.37	30635.91	15398.6	13344.22	43.58
2002	16694.74	8874.44	7660.15	45.34	17080.96	8032.07	6973.01	40.82	1000.14	70.38	1086.68	108.65	34975.84	18976.87	15719.84	44.94
2003	19510.64	10124.41	9040.24	46.33	19944.88	9506.81	8744.20	43.84	1271.06	165.45	1202.23	94.58	40726.58	19796.67	18986.87	46.62
2004	21473.4	10764.57	10514.34	49.10	21712.62	9778.45	10716.95	49.36	1511.51	198.96	1456.07	96.33	44697.53	20741.98	22717.36	50.82
2005	22990.85	10545.72	13021.69	56.64	22408.00	9280.74	13169.57	59.27	1752.84	190.12	1862.38	106.25	47151.69	19996.58	28063.84	59.50
2006	25506.07	11513.83	16399.11	64.29	24611.70	9229.90	16342.88	66.40	2100.54	199.16	2295.99	109.30	52216.31	20942.89	35037.86	67.10
2007	30116	12609	20737	68.65	29582.00	9695.00	19309.00	65.27	2448.00	211	2896	118.30	62146	22415	42942	69.10

Appendix - 17.5 (Contd.)

	Co-operative Banks				Private Banks				Foreign Banks				Grand Total			
Ending March	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1990					1407.58	286.09	791.92	56.26	39.47	14.19	68.97	174.74	6659.56	1932.92	4197.13	62.87
1991					1687.81	357.29	895.27	53.04	77.12	12.25	77.15	100.34	7934.78	2318.6	4715.34	59.43
1992					2252.55	578.33	1107.71	49.18	115.82	77.12	90.43	78.08	9786.75	3116	5093.39	52.04
1993					2912.31	904.31	1374.64	47.21	149.2	100.48	42.52	28.50	12261.44	4599.39	5860.51	47.80
1994					3664.17	1226.83	1647.78	44.97	187.19	137.73	43.31	21.96	15138.34	6152.36	6484.86	42.84
1995					4526.39	1382.71	2159.94	47.72	236.39	157.67	46.04	19.48	17694.3	7043.71	7842.56	44.32
1996					5710.33	1803.88	2583.61	45.24	247.68	152.93	45.75	18.47	20418.98	8258.33	9008.66	44.11
1997					8576.22	2434.92	3175.5	48.29	324.48	221.41	83.28	25.67	23352.87	10178.09	10565.1	45.24
1998					8065.02	3395.64	3542.4	43.92	408.27	275.17	88.87	22.01	27572.06	12734.98	12354.24	44.84
1999					9914.39	3204.45	4107.97	41.43	468.97	332.79	103.16	22.09	31531.84	13328.53	13576.67	43.06
2000					11442.39	4948.17	4312.79	37.69	373.9	311.14	98.07	26.50	38616.84	18723.81	15940.96	41.28
2001					13649.15	5791.53	5741.5	41.46	366.09	242.7	94.55	25.83	44850.15	21430.83	19180.27	42.77
2002					16302.23	7329.28	6248.91	38.33	377.71	227.58	93.19	24.67	51855.78	24533.71	22081.84	42.71
2003					18293.05	8641.09	7875.67	43.05	379.73	257.81	144.19	37.97	59399.36	28885.57	27008.53	45.47
2004					20891.72	9146.59	8961.31	42.89	371.86	211.82	168.64	45.35	65981.11	30100.39	31867.31	48.31
2005	2275.84	1.68	3048.94	133.91	22037.99	8826.32	12870.78	57.30	393.96	194.82	223.87	56.83	71680.48	28121.40	43997.43	61.23
2006	2836.22	1.17	3395.58	119.64	25012.45	9477.57	18841.75	88.53	448.31	251.02	238.90	53.53	80515.29	30672.85	55314.09	68.70
2007	2813	0.92	4024	143.05	29039	10599	21055	72.51	510	290	278.00	54.14	94510	33304	68298	72.26

Source: Banking Statistics of Kerala, Reported by State Level Bankers' Committee.

Note. Details of Co-operative Bank statistics are available through SLBC from 2004-05 onwards

Appendix 17.6

District Wise distribution of number of branches, aggregate deposits, gross bank credit and CD Ratio of scheduled commercial banks-Kerala, March 2007

(Amount Rs. Crore)

Sl. No.	District	State Bank Group				Nationalised Banks				Regional Rural Banks				Other Commercial Banks				All Commercial Banks			
		No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1	Thiruvananthapuram	122	5985	3907	65.3	167	4995	3652	73.1					94	3621	1858	51.3	383	14602	9417	64.5
2	Kollam	50	1970	1534	77.9	93	1671	1370	82.2					64	1842	973	52.8	207	5383	3877	72.0
3	Pathanamthitta	54	2971	1018	34.3	87	2244	647	28.8	9	35	37	105.7	105	3001	776	25.9	265	8251	2476	30.0
4	Alappuzha	71	2117	1771	83.7	69	1656	870	52.5	7	24	28		88	1892	869	45.9	233	5691	3538	62.2
5	Kottayam	110	2925	2297	78.5	62	1347	866	64.3	6	55	49	89.1	112	2595	1205	46.4	292	6922	4417	63.8
6	Idukki	39	452	632	139.8	33	229	338	147.6					35	368	378	102.7	107	1049	1348	128.5
7	Ernakulam	118	6500	4573	70.0	207	6017	5281	87.8	13	168	71	42.3	206	9667	5966	62.4	544	21852	15891	72.7
8	Thrissur	69	2352	1284	54.6	107	2998	1295	43.2	22	217	143	65.9	219	6066	2354	46.5	417	10634	5077	47.7
9	Palakkad	54	1481	1012	69.7	112	1922	1258	65.3	14	65	98	150.8	86	942	696	73.9	266	4380	3062	69.9
10	Malappuram	38	1313	606	46.2	73	1644	587	38.0	80	568	657	115.7	57	935	525	56.1	248	4380	2375	54.6
11	Kozhikode	44	1406	1026	73.2	98	1899	1254	66.0	67	443	591	133.4	57	1052	1174	111.6	266	4799	4047	84.3
12	Wayanad	13	162	263	162.3	27	215	250	116.3	27	103	289	281.2	9	99	125	126.3	76	579	907	156.6
13	Kannur	31	1338	690	51.6	84	2032	909	44.7	76	503	546	108.5	41	710	526	74.1	232	4583	2671	58.3
14	Kasaragod	11	289	166	57.4	56	868	603	69.1	48	267	376	140.9	18	191	233	122.0	131	1603	1277	79.7
	Total	934	30830	20781	67.4	1275	29539	19079	64.6	371	2438	2864	117.5	1187	31881	17656	55.4	3867	94688	60380	63.8

Source: Quarterly Banking Statistics – 2007, Reserve Bank of India

Appendix - 17.7

Bank wise performance 2006-07, Kerala (Rs. crore)

Sl No.		Name of Bank	Total Deposit	NRE Deposit	Total Advances	CD Ratio
1		2	3	4	5	6
A		**State Bank Group**				
	1	State Bank of India	10102	4313	6910	68.40
	2	State Bank of Bikaner & Jaipur	40	1	22	54.30
	3	State Bank of Mysore	85	13	68	80.07
	4	State Bank of Saurashtra	30	3	32	107.59
	5	State Bank of Hyderabad	73	8	120	163.87
	6	State Bank of Travancore	19788	8173	13585	68.65
		Total: Stat Bank Group	**30118**	**12509**	**20737**	**68.86**
B		**Nationalised Banks**				
	1	Allahabad Bank	88	6	124	140.13
	2	Andhara Bank	343	16	197	57.35
	3	Bank of Baroda	1497	834	723	48.45
	4	Bank of India	1055	182	1097	103.85
	5	Bank of Maharashtra	132	2	30	23.11
	6	Canara Bank	9337	3524	6530	81.23
	7	Central Bank of India	1390	427	1021	73.47
	8	Corporation Bank	1059	308	613	57.90
	9	Dena Bank	100	13	93	92.36
	10	Indian Bank	2030	783	1038	51.03
	11	Indian Overseas Bank	3161	1440	1450	45.88
	12	Oriental Bank of India	250	22	145	58.07
	13	Punjab National Bank	1603	246	1238	77.20
	14	Punjab & Sind Bank	28	0	20	71.45
	15	Syndicate Bank	2223	643	1735	78.03
	16	Union Bank of India	3835	939	2802	73.09
	17	United Bank of India	166	1	80	48.46
	18	Uco Bank	308	48	513	166.05
	19	Vijaya Bank	1009	222	595	58.95
		Total- Nationalised Banks	**29270**	**9650**	**19013**	**64.94**
C		**Regional Rural Banks**				
	1	North Malabar Gramin Bank	1040	98	1160	111.59
	2	South Malabar Gramin Bank	1408	113	1736	123.29
		Total Regional Rural Banks	**2448**	**211**	**2896**	**118.32**
		TOTAL-PUBLIC SECTOR BANKS	**61836**	**22370**	**42646**	**68.10**
D		**Private Sector Banks**				
	1	Catholic Syrian Bank	3290	877	1388	42.18
	2	Dhanalakshmi Bank	2116	209	948	44.83
	3	Federal Bank	11052	5058	7352	66.52
	4	Karnataka Bank	191	21	119	62.24
	5	Karur Vysya Bank	112	20	95	84.92
	6	Lakshmivilas Bank	81	2	11	13.82
	7	Lord Krishna Bank	565	124	222	39.20
	8	South Indian Bank	6567	2798	3086	46.99
	9	Tamil Nadu Mercantile Bank	181	7	64	35.33
	10	ING Vysya Bank	459	162	316	68.97
	11	IDBI Bank	312	44	296	94.73
	12	City Union Bank	114	21	88	76.09
	13	Centurion Bank	421	73	381	90.50
	14	Indus Ind Bank	385	40	633	164.28
	15	HDFC Bank	937	335	1244	132.78
	16	Bank of Rajasthan	2	0	5	244.71
	17	ICICI Bank	1785	508	4803	269.78
	18	Jammu & Kashmir Bank	6	0	13	214.51
	19	UTI Bank	795	248	489	61.52
		Total-Private Sector Banks	**29351**	**10643**	**21351**	**72.70**
E		**Foreign Banks**				
	1	Stan Chart Grindlays	122	0	120	98.30
	2	HSBC	337	243	155	46.21
	3	Oman Intl. Bank	51	47	1	1.00
		Total - Foreign Banks	**510**	**290**	**276**	**54.14**
		TOTAL - COMMERCIAL BANKS	**91697**	**33303**	**64273**	**70.09**
F		**Co-operative Banks**				
	1	KSCARDB			1826	
	2	Kerala State Co-op. Bank	2813	1	2198	78.14
		Total: Co-op. Bank	**2813**	**1**	**4024**	**143.05**
		TOTAL BANKING SECTOR	**94510**	**33304**	**68297**	**72.28**

Source: SLBC - Kerala, 2007

Appendix 19.1

Total Work Seekers in Kerala

Year(at the end of December)	General Work Seekers	Professional/Technical Work Seekers	Total Work Seekers
1	2	3	4
1999	3748493	152148	3900641
2000	4049082	166201	4215283
2001	4254307	177032	4431339
2002	3499774	180118	3679892
2003	3845641	158897	4004538
2004	3579675	176638	3756313
2005	3492776	176922	3669698
2006	3673148	183556	3856704
9/2007	3897144	157407	4054551

Source: Directorate of Employment and Training

Appendix 19.2

Distribution of Work Seekers in Kerala by Educational Level

Year (at the end of December)	Below SSLC	SSLC	PDC/HSC	Degree	PG	SSLC & above	% to total work seekers	Total work seekers
1	2	3	4	5	6	7	8	9
1999	904194	2300026	415298	228976	52147	2996447	77	3900641
2000	952434	2416709	530231	256772	59137	3262849	77	4215283
2001	966914	2574722	542815	280618	86270	3464425	78	4431339
2002	711714	2162627	510063	242060	53428	2968178	80	3679892
2003	746129	2364016	564939	268124	61330	3258409	81	4004538
2004	673301	2222940	559854	239701	60517	3083012	82	3756313
2005	628788	2181488	574634	229684	55104	3040910	83	3669698
2006	636997	2315838	616571	232739	54214	3219362	83.5	3856704
Sep-07	644591	2461047	657302	238240	53184	3409773	84.1	4054551

Source: Directorate of Employment & Training

Appendix 19.3

Number of Professional and Technical Work Seekers

Year (at the end of December)	Medical Graduates	Engineering Graduates	Diploma holders in Engg	ITI Certificate Holders	Agricultural Graduates	Veterinary Graduates	Total
1	2	3	4	5	6	7	8
1999	1698	6334	39408	101384	1205	119	152148
2000	2455	8858	42991	109592	1204	21	166201
2001	2691	10349	46377	115736	1496	383	177032
2002	3736	8506	43128	123387	881	480	180118
2003	3567	8116	40660	105221	897	436	158897
2004	3910	9213	42539	118518	1662	796	176638
2005	3428	6389	41345	124410	803	547	176922
2006	2825	8465	41700	109780	762	522	164155
9/2007	2418	7431	42053	104175	728	602	157407

Source: Directorate of Employment & Training

Appendix 19.4

District-wise Distribution of Work Seekers (as on 31.03.2007)

Sl.No.	District	General Work Seekers	Professional/Technical Work Seekers	Total	Men	Women
1	2	3	4	5	6	7
1	Thiruvananthapuram	531109	21436	552545	214710	337835
2	Kollam	386198	17572	403770	167286	236484
3	Pathanamthitta	149426	6748	156174	61443	94731
4	Alappuzha	354065	12653	366718	159057	206661
5	Kottayam	224256	7306	231572	97462	134110
6	Idukki	114185	2910	117095	49188	67907
7	Ernakulam	359786	21001	380787	166821	213966
8	Thrissur	317985	9828	327813	121472	206341
9	Palakkad	289640	9774	299414	138181	161233
10	Malappuram	268887	5311	274198	127854	146344
11	Kozhikode	372501	12737	385238	162334	222904
12	Wayanad	81203	1211	82414	37611	44803
13	Kannur	216682	7021	223703	91950	131753
14	Kasaragod	95417	2538	97955	44104	53851
	TOTAL	3761350	138046	3899396	1640273	2259123

Source - Directorate of Employment & Training

Appendix 19.5

Unemployment Assistance and Self Employment Scheme

Year (at the end of December)	Unemployment Assistance			Self Employment Scheme		
	Application received	No of Beneficiaries	Amount Disbursed (Rs. Lakhs)	Application received	No of Beneficiaries	Amount Disbursed (Rs. Lakhs)
1	2	3	4	5	6	7
1996	140003	297253	1464.84	144	438	2.42
1997	138277	294568	3206.69	1985	26	0.03
1998	147380	271959	1928.89	3548	1582	9.52
1999	168584	369863	2366.09	3384	885	7.09
2000	56906	346114	3689.39	17097	469	29.75
2001	65245	351685	2175.97	7114	330	12.89
2002	180586	332287	2516.4	nil	416	29.69
2003	186029	348027	1423.10	7859	868	36.61
2004	192796	387370	7398.43	1920	734	50
2005	170972	387370	10243.38	4172	489	44.76
2006	65978	339879	3667.71	2370	1040	124.44
2007	66700	361930	5005.76	2110	898	102.04

Source Directorate of Employment & Training

Appendix - 19.6

Employment in Organised Public and Private Sectors – All India

(in lakhs)

Sl. No.	Year	Public Sector			Private Sector			Public and Private Sector (Total)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	1996	167.94	26.35	194.29	67.2	17.92	85.12	235.14	44.26	279.4
2	1997	168.31	27.28	195.59	67.77	19.09	86.86	236.08	46.37	282.5
3	1998	166.65	27.53	194.18	67.37	20.11	87.48	233.92	47.74	281.7
4	1999	166.04	28.11	194.15	66.8	20.18	86.98	232.84	48.29	281.1
5	2000	164.67	28.67	193.14	65.8	20.86	86.46	230.37	49.23	279.6
6	2001	162.79	28.59	191.38	65.62	20.9	86.52	228.4	49.49	277.9
7	2002	158.86	28.87	187.73	63.83	20.49	84.32	222.71	49.36	272.1
8	2003	158.75	29.06	185.8	63.57	20.64	84.21	220.32	49.68	270
9	2004	153.07	28.9	181.97	62.02	20.44	82.46	215.09	49.34	264.4
10	2005							214.4	50.2	264.6

Source- DGE & T

Appendix 19.7

Employment in the Public and Private Sectors in Kerala

Year (at the end of December)	Public Sector				Private Sector				Total			
	Men	Women	Total	Index	Men	Women	Total	Index	Women	Men	Total	Index
1	2	3	4	5	6	7	8	9	10	11	12	13
1999	452022	191904	643927	103.53	302377	285960	588337	105.77	477864	754400	1232264	104.59
2000	457374	193867	651241	104.71	306901	283380	603291	107.92	487257	764275	1251532	106.22
2001	450711	194959	645670	103.81	299235	289200	588435	105.79	484159	749946	1234105	104.74
2002	445932	192064	637996	102.59	300768	281540	582308	104.69	473604	746700	1220304	103.57
2003	429208	190055	619263	99.56	275407	274163	549570	98.80	464218	704615	1168833	99.20
2004	427228	187973	615201	98.91	265333	265337	530670	95.40	453310	692561	1145871	97.26
2005	422563	188985	609548	98	249130	243360	492490	88.54	430345	671893	1102038	93.53
2006	421220	185690	606910	97.58	254046	250177	504223	90.65	435867	675268	1111133	94.3

Source: Directorate of Employment.

Appendix 19.8

District-wise Employment both in Public and Private Sectors in Kerala as on 31st March

Sl No	District	2003	2004	2005	2006	2007
1	Thiruvananthapuram	165154	164978	163649	163978	166608
2	Kollam	98232	93478	91673	92756	91588
3	Pathanamthitta	42067	48988	41819	41324	39658
4	Alappuzha	59347	58111	50601	47221	50103
5	Kottayam	62028	61362	60524	60291	60530
6	Idukki	97780	68222	78544	81953	61342
7	Ernakulam	158835	162188	163871	163767	156557
8	Thrissur	105898	106381	106288	97947	106890
9	Palakkad	76393	63412	87554	71550	72138
10	Malappuram	63399	78315	82653	82493	84687
11	Wayanad	30507	35131	30878	60580	24040
12	Kozhikode	88712	90147	72922	51861	73351
13	Kannur	88879	82491	79814	77077	75727
14	Kasargod	53388	53245	49473	39052	47620
	State Total	1211389	1204423	1139773	1101530	1110980

Source. Directorate of Employment

Appendix: 19.9

Districtwise Employment in Public Sector in Kerala on 31st March 2007

Sl. No.	District	Central Government		State Government		Central Quasi		State Quasi		Local Bodies		Total	
		Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	27271	5857	55330	20017	19396	5204	31182	6214	5739	2218	138858	39310
2	Kollam	651	252	17933	7765	5267	1323	18803	9755	3173	1035	45677	20130
3	Alappuzha	754	216	14861	5395	3110	759	6341	3088	1208	442	26382	9901
4	Pathanamthitta	1832	580	11163	4068	3900	752	7538	2812	1190	482	25423	8794
5	Kottayam	676	170	15483	6719	7292	1955	6007	155[illegible]	1338	426	32828	10621
6	Idukki	1387	407	10483	3325	1286	255	2110	390	750	251	15998	4628
7	Ernakulam	12458	2892	25322	10943	28209	5891	15918	3090	2260	822	84167	23354
8	Thrissur	5789	1578	26219	11316	5877	1700	11961	3862	2200	783	51866	18959
9	Palakkad	18447	2044	17542	6808	4075	943	3719	365	1483	359	45286	10317
10	Malappuram	1725	379	22451	8815	3116	580	5428	82[illegible]	1501	382	34219	10777
11	Kozhikode	2511	599	20721	8803	7230	1637	5496	956	2926	848	38884	10643
12	Wayanad	517	128	7457	1769	675	95	1825	[illegible]28	175	54	10649	2173
13	Kannur	1862	475	19644	6298	5126	836	7000	2811	1575	431	35207	10851
14	Kasargod	798	165	11282	4818	1345	260	2571	479	529	12[illegible]	18523	5843
	State Total	76468	15542	273991	103953	95644	21900	129717	36452	26075	8054	603893	186501

Source: *Director of Employment*

Appendix 19.10

Employment in the Public Sector by Industry - All India

(Lakh persons as on 31st March)

Sl. No	Industry	1981	1991	2001	2002	2003
1	Agriculture,hunting etc	4.63	5.56	5.02	4.83	5.05
2	Mining and quarrying	8.18	9.99	8.75	8.51	8.47
3	Manufacturing	15.02	18.52	14.3	13.5	12.6
4	Electricity,gas and wate	8.83	8.05	9.35	9.23	9.13
5	Construction	10.89	11.49	10.8[illegible]	10.26	9.48
6	Wholesale and retail tra	1.17	1.5	1.63	1.57	1.62
7	Transport,storage&com	27.09	30.26	30.42	30.09	28.39
8	Finance,insurance,real	7.48	11.84	12.8[illegible]	12.3	[illegible]3.77
9	Community Social&pers	73.55	92.27	98.3	97.35	96.09
	Total	154.84	190.58	191.38	187.73	185.8

Source: Economic Survey

Appendix 19.11

Number of Placement through Employment Exchanges and Monthly Average & No of Employers using Employment Exchanges in Kerala

Year	No. of Placements	Monthly average no. of Employers using employment Exchanges
1	2	3
1999	19661	447
2000	23012	388
2001	15750	376
2002	12409	312
2003	9802	223
2004	8711	225
2005	11450	244
2006	10742	312
9/2007	9158	401

Source: Directorate of Employment & Training

Appendix - 20.1

Score and Rank of various Indicators in Human Development of Big States in India

Sl No	Name of State	Agriculture	Infrastructure	Primary Education	Primary Health	Consumer Market	Budget and Prosperity	Investment Scenario	Law and Order
1	2	3	4	5	6	7	8	9	10
1	Kerala	0.91 (13)	3.14 (3)	4.19 (1)	2.44 (1)	2.12 (5)	2.07 (5)	1.14 (16)	4.15 (1)
2	Tamil Nadu	3 (2)	2.68 (7)	2.98 (6)	2.05 (3)	1.97 (6)	1.98 (8)	2.08 (7)	2.18 (2)
3	Rajasthan	1.02 (12)	2.06 (13)	1.67 (17)	0.69 (12)	1.04 (13)	1.59 (14)	1.35 (13)	1.39 (7)
4	Karnataka	1.99 (8)	2.67 (8)	2.77 (9)	1.81 (4)	1.50 (10)	1.88 (10)	2.12 (6)	1.53 (3)
5	Madhya Pradesh	1.11 (11)	2.08 (12)	1.72 (18)	0.72 (14)	0.81 (15)	1.38 (16)	1.32 (15)	1.41 (5)
6	Himachal Pradesh	0.78 (15)	3.40 (2)	4.09 (2)	2.05 (2)	2.24 (2)	2.83 (2)	2.25 (3)	1.43 (4)
7	Gujarat	1.90 (5)	2.65 (9)	2.45 (10)	1.53 (8)	1.94 (7)	2.33 (3)	2.68 (1)	1.41 (5)
8	Andhra Pradesh	2.06 (3)	2.38 (10)	2.29 (12)	1.41 (9)	1.33 (11)	1.94 (9)	1.51 (10)	1.05 (8)
9	Maharashtra	1.44 (7)	2.63 (6)	3.17 (4)	1.74 (E)	2.14 (4)	2.25 (6)	2.27 (2)	1.01 (9)
10	Chhattisgarh	0.42 (18)	1.79 (14)	1.84 (14)	0.42 (19)	0.85 (17)	1.69 (12)	1.60 (9)	0.80 (11)
11	Haryana	1.94 (4)	2.76 (4)	2.34 (11)	0.64 (16)	2.20 (3)	2.18 (4)	2.24 (4)	0.85 (10)
12	Punjab	5.89 (1)	3.40 (1)	2.91 (7)	1.80 (5)	2.75 (1)	2.88 (1)	1.88 (8)	0.54 (12)
13	Orissa	0.52 (17)	1.77 (16)	1.81 (15)	0.68 (15)	0.67 (19)	1.06 (18)	0.85 (17)	0.52 (13)
14	West Bengal	1.25 (9)	1.77 (15)	2.27 (13)	1.19 (11)	1.14 (12)	1.48 (15)	0.80 (19)	0.40 (16)
15	Uttaranchal	1.17 (10)	2.69 (5)	3.70 (3)	1.36 (10)	1.61 (9)	1.58 (13)	2.15 (13)	0.35 (17)
16	Jharkhand	0.24 (19)	1.52 (19)	1.27 (19)	0.30 (20)	0.87 (16)	1.10 (17)	1.42 (12)	0.35 (18)
17	Jammu & Kashmir	0.71 (16)	2.44 (11)	2.89 (8)	1.60 (7)	1.77 (8)	2.05 (7)	1.35 (14)	0.44 (15)
18	Assam	0.21 (20)	1.71 (17)	3.11 (5)	0.80 (13)	0.91 (14)	1.72 (11)	1.45 (11)	0.44 (14)
19	Bihar	0.82 (14)	1.29 (20)	0.72 (20)	0.43 (18)	0.21 (20)	0.53 (20)	0.50 (20)	0.30 (19)
20	Uttar Pradesh	1.38 (8)	1.68 (18)	1.35 (18)	0.51 (17)	0.77 (18)	1.04 (19)	0.85 (18)	0.30 (20)

Note. Col 3 to 10 - Score and numbers in bracket is rank (Figures are as on 2007)
Source: India Today Special Issue, September 2007

Appendix - 20.2

GROSS ENROLMENT RATIO IN CLASSES I-V AND VI-VIII AND I-VIII

Sl No	States/UTs	2004-2005								
		Classes I - V (6 - 11 Years)			Classes VI - VIII (11 - 14 years)			Classes I - VIII (6 - 14 years)		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	96.05	97.40	96.71	73.73	69.60	71.78	87.32	86.64	86.99
2	Arunachal Pradesh	129.95	115.90	123.12	81.75	69.18	75.53	113.47	99.63	106.70
3	Assam	105.59	104.80	105.20	72.05	67.22	69.70	92.99	90.81	91.92
4	Bihar	96.40	71.16	83.75	39.66	24.29	32.43	74.95	54.43	65.16
5	Chattisgarh	136.06	127.03	131.84	69.20	70.19	79.87	118.67	106.42	112.63
6	Goa	111.43	108.76	110.13	102.18	98.90	100.61	107.44	104.55	106.04
7	Gujarat	126.44	109.86	118.65	80.39	66.27	73.77	109.07	93.42	101.70
8	Haryana	80.00	84.90	82.23	77.68	74.85	76.39	79.12	81.07	80.01
9	Himachal Pradesh	109.27	108.49	108.90	109.85	107.04	108.50	109.49	107.93	108.74
10	Jammu&Kashmir	84.41	82.98	83.72	64.97	55.39	60.28	76.69	72.08	74.45
11	Jharkhand	102.91	86.34	94.80	49.41	36.98	43.41	82.99	68.27	75.82
12	Karnataka	108.40	105.73	107.10	87.64	83.19	85.47	100.38	97.07	98.78
13	Kerala	93.53	93.69	93.61	100.91	95.38	98.19	96.32	94.33	95.35
14	Madhya Pradesh	146.47	141.24	143.95	98.04	88.51	92.58	128.41	121.19	124.95
15	Maharashtra	110.34	110.40	110.37	98.96	97.09	98.08	106.00	105.36	105.70
16	Manipur	154.41	148.88	151.69	97.72	91.53	94.69	132.45	128.75	129.65
17	Meghalaya	145.34	149.95	147.62	72.08	80.96	76.45	118.76	125.17	121.93
18	Mizoram	132.26	122.71	127.53	82.19	81.33	81.77	112.47	106.47	109.51
19	Nagaland	86.68	87.15	87.94	55.68	55.50	55.60	76.23	75.26	75.76
20	Orissa	131.89	127.37	129.69	78.82	69.21	74.11	111.70	105.10	108.47
21	Punjab	74.69	80.52	77.20	63.78	67.40	65.42	70.30	75.34	72.57
22	Rajasthan	125.40	118.68	121.24	84.82	54.80	70.67	110.42	94.06	102.67
23	Sikkim	144.46	142.71	143.58	61.50	72.16	66.70	109.36	113.86	111.49
24	Tamil Nadu	119.52	117.23	118.41	109.22	104.66	107.00	115.51	112.32	113.86
25	Tripura	133.67	128.26	131.03	80.65	75.55	78.18	112.14	108.92	109.58
26	Uttar pradesh	110.63	104.15	107.54	57.82	46.29	52.43	90.78	82.88	87.04
27	Uttaranchal	117.02	118.52	117.74	88.23	87.92	88.08	106.01	106.80	106.39
28	West Bengal	112.92	111.27	112.11	69.43	63.31	66.46	96.20	93.07	94.67
29	Andaman &Nicobar Island	109.75	107.90	108.85	103.68	109.87	106.50	107.40	108.60	107.97
30	Chandigarh	77.80	69.94	74.01	65.35	72.75	68.57	72.65	70.98	71.87
31	Dadar & Nagar Haveli	139.12	129.49	134.50	89.90	66.64	79.05	120.37	108.34	113.70
32	Daman & Diu	144.93	127.06	136.01	108.63	127.17	116.57	130.41	127.11	128.85
33	Delhi	89.83	99.72	94.47	82.61	93.54	87.59	87.08	97.41	91.84
34	Lakshadweep	67.27	55.26	58.78	67.45	60.40	58.71	80.34	56.99	58.75
35	Pondicherry	141.30	122.70	131.64	112.98	103.48	108.22	128.57	114.42	121.34
	India	111.41	105.48	108.56	74.84	65.76	70.51	97.58	90.61	94.33

Source (1) Selected Educational Statistics, 2004-05, Ministry of HRD, Government of India.

Appendix 22.1

Year-wise, Tier-wise and sector-wise allocation of Grant-in-Aid during IXth & Xth Plan period (1997-07)

(Rs. Crore)

Local Body	No. of Local bodies	General	SCP	TSP	Total
1997-1998					
Grama Panchayaths	990	307.02	105.65	7.57	420.49
Block Panchayaths	152	65.79	35.28	7.62	108.69
District Panchayaths	14	65.79	35.28	22.87	123.94
Municipalities	55	49.54	12.15	0.65	62.34
Corporations	3	27.86	5.44	0.24	33.54
Total	**1214**	**516**	**194**	**39**	**749**
1998-1999					
Grama Panchayaths	990	426.02	108.21	15.31	549.54
Block Panchayaths	152	91.29	36.07	7.66	135.02
District Panchayaths	14	91.29	36.07	15.31	142.67
Municipalities	55	71.18	10.17	0.54	81.89
Corporations	3	36.22	4.48	0.18	40.88
Total	**1214**	**718**	**196**	**39**	**950**
1999-2000					
Grama Panchayaths	990	464.1	111.03	19.88	595.01
Block Panchayaths	152	99.45	37.01	7.95	144.41
District Panchayaths	14	99.45	37.01	11.93	148.39
Municipalities	55	77.51	10.38	0.24	88.13
Corporations	3	39.49	4.57	-	44.06
Total	**1214**	**780**	**200**	**40**	**1020**
2000-2001					
Grama Panchayaths	990	467.08	120.47	21.37	608.92
Block Panchayaths	152	100.09	40.16	8.55	148.8
District Panchayaths	14	100.09	40.16	12.82	153.07
Municipalities	55	78	11.26	0.26	89.52
Corporations	3	39.74	4.95	-	44.69
Total	**1214**	**785**	**217**	**43**	**1045**
2001-2002					
Grama Panchayaths	991	384.84	98.59	-	483.43
Block Panchayaths	152	82.46	32.86		115.32
District Panchayaths	14	82.46	32.86		115.32
Municipalities	53	84.85	9.56		74.41
Corporations	5	53.39	8.13		61.52
Total	**1215**	**868**	**182**		**850**

Local Body	No of Local bodies	General	SCP	TSP	Total
2002-2003					
Grama Panchayaths	991	818 84	142		760.84
Block Panchayaths	152	132 61	47 33 -		179.94
District Panchayaths	14	133 61	47 33		180 94
Municipalities	53	105 38	17 22 -		122 6
Corporations	5	83 06	14 62		97 68
Total	1215	1073 5	268 5		1342
2003-2004					
Grama Panchayaths	991	580 42	139 26	22 02	741 7
Block Panchayaths	152	124 37	46 42	8.81	179 6
District Panchayaths	14	125.38	46 42	13 21	185 01
Municipalities	53	100.15	16.89	0 4	117 44
Corporations	5	78 91	14 34 -		93.25
Total	**1215**	**1009.23**	**263.33**	**44 44**	**1317**
2004-2005					
Grama Panchayaths	991	584.84	150 5	23 83	759 17
Block Panchayaths	152	125 32	50.17	9.53	185 02
District Panchayaths	14	126 32	50 17	14 3	190 79
Municipalities	53	100.88	18.56	0.47	119 91
Corporations	5	79 31	15 8		95 11
Total	**1215**	**1016.67**	**285.2**	**48.13**	**1350**
2005-2006					
Grama Panchayaths	991	574.75	177.5	24 8	777 05
Block Panchayaths	152	123.16	59 17	9 92	192 25
District Panchayaths	14	124.16	59 17	14.88	198 21
Municipalities	53	93 75	20 8	0 57	115 12
Corporations	5	74.54	17.83		92 37
Total	**1215**	**990.38**	**334.47**	**50.17**	**1375**
2006.2007					
Grama Panchayaths	999	544 11	213 87	29.91	787.89
Block Panchayaths	152	116 6	71 29	11 96	199 85
District Panchayaths	14	116 6	71 29	17.94	205.83
Municipalities	53	88 7	25 06	0 68	114 44
Corporations	5	70 5	21 49		91.99
Total	**1223**	**936.51**	**403**	**60 49**	**1400**

Source Budget documents

Appendix 22.2

Tier-wise and Sector-wise Grant-In-Aid-Outlay and Expenditure under 9th and 10th Plan periods

(Rs. Crore)

Tier	9th Plan								10th Plan							
	Outlay				Expenditure				Outlay				Expenditure			
	General	SCP	TSP	Total	General	SCP	TSP	Total	General	SCP	TSP	Total	General	SCP	TSP	Total
Grama Pts	2049.06	544.44	64.18	2657.68	1527.86	364.04	46.85	1938.75	2902.96	823.13	100.56	3826.65	229[illegible].98	583.10	77.88	2952.96
Block Pts	439.08	181.38	31.78	652.24	337.36	133.49	25.70	496.55	672.06	274.36	40.22	936.65	478.76	204.33	31.43	714.52
District Pts	439.08	181.38	62.93	683.39	321.93	128.27	55.37	505.57	676.07	274.36	60.33	960.78	443.70	179.34	38.80	661.84
Municipalities	341.08	53.52	1.69	396.29	253.48	37.97	1.38	307.78	486.86	98.53	2.12	589.51	377.76	59.78	0.63	438.17
Corporations	196.70	27.28	0.42	224.40	184.31	23.42	0.44	208.17	386.32	84.08	-	470.40	267.86	36.38	-	304.24
Total	**3465.00**	**988.00**	**161.00**	**4614.00**	**2634.94**	**687.09**	**129.74**	**3451.77**	**5026.27**	**1554.50**	**203.23**	**6784.00**	**3860.06**	**1062.93**	**148.74**	**6071.73**

Source: Budget documents & IKM

Appendix 22.3
Performance of LSGs in 9th Plan period (1997-02)
Year-wise Expenditure of Grant-in-Aid

(Rs Crore)

Sl. No	Local Body	Grant-in-Aid Outlay				Expenditure			
		General	SCP	TSP	Total	General	SCP	TSP	Total
	1997-98								
1	Grama Pts	307.02	105.85	7.62	420.49	286.49	96.47	6.98	389.94
2	Block Pts	65.79	35.28	7.62	108.69	60.8	32.67	8.5	99.97
3	District Pts	65.79	35.28	22.87	123.94	60.14	33.62	21.4	115.16
4	Municipalities	49.54	12.15	0.65	62.34	45.31	11.08	0.53	56.92
5	Corporations	27.86	5.44	0.24	33.54	32.53	7.6	0.19	40.32
	Total	**516**	**194**	**39**	**748**	**485.27**	**181.44**	**35.6**	**702.31**
	1998-99								
1	Grama Pts	426.02	108.21	15.31	549.54	259	63.37	8.06	330.43
2	Block Pts	91.29	36.07	7.66	135.02	58.53	21.02	3.6	83.15
3	District Pts	91.29	36.07	15.31	142.67	57.91	19.54	8.5	85.95
4	Municipalities	71.18	10.17	0.54	81.89	46.08	6.5	0.25	52.83
5	Corporations	36.22	4.48	0.18	40.88	32.93	3.7	0.16	36.79
	Total	716	195	39	950	454.45	114.13	20.57	589.15
	1999-00								
1	Grama Pts	464.1	111.03	19.88	595.01	425.75	96.98	15.78	538.49
2	Block Pts	99.45	37.01	7.95	144.41	91.48	33.56	6.3	131.34
3	District Pts	99.45	37.01	11.93	148.39	89.43	35.94	13.85	139.22
4	Municipalities	77.51	10.38	0.24	88.13	70	9.54	0.4	79.94
5	Corporations	39.49	4.57		44.06	46.82	5.37	0.08	52.07
	Total	780	200	40	1020	723.28	181.39	36.39	941.06
	2000-01								
1	Grama Pts	467.08	120.47	21.57	609.92	333.48	64.84	12.15	410.47
2	Block Pts	100.09	40.16	8.55	148.8	74.7	26.48	7.5	108.68
3	District Pts	100.09	40.16	12.82	153.07	69.48	22.04	7.96	98.48
4	Municipalities	78	11.26	0.26	89.52	59.03	6.4	0.13	65.56
5	Corporations	39.74	4.95	-	44.69	44.51	4.57	0.01	49.09
	Total	785	217	43	1045	580.2	124.33	27.75	732.28
	2001-02								
1	Grama Pts	384.84	98.59	-	483.43	223.14	42.38	3.9	269.42
2	Block Pts	82.46	32.86	-	115.32	51.85	19.76	1.8	73.41
3	District Pts	82.46	32.86		115.32	45.97	17.08	3.68	66.71
4	Municipalities	64.85	9.56		74.41	43.06	4.4	0.07	47.53
5	Corporations	53.39	8.13		61.52	27.72	2.18		29.9
	Total	668	182	0	850	391.74	85.8	9.43	486.07

Source: IKM & Budget documents

Appendix 22.4

Performance of LSGs in 10th Plan period (2002-07)

Year-wise Expenditure of Grant-in-Aid

(Rs. Crore)

Sl. No	Local Body	Grant-in-Aid Outlay				Expenditure			
		General	SCP	TSP	Total	General	SCP	TSP	Total
	2002-03								
1	Grama Pts	518.84	142		760.84	277.89	49.07	3.32	330.28
2	Block Pts	132.61	47.33	-	179.94	69.41	19.97	0.68	90.06
3	District Pts	133.6[illegible]	47.33		180.94	66.3	18.28	0.95	85.53
4	Municipalities	[illegible]35.38	17.22	-	122.6	51.77	8.06	0.09	59.92
5	Corporations	83.06	14.62		97.68	31.57	4.9		36.47
	Total	**1073.5**	**268.5**	**0**	**1342**	**496.94**	**100.28**	**5.04**	**602.26**
	2003-04								
1	Grama Pts	580.42	139.26	22.02	741.7	651.68	130.47	14.[illegible]2	796.27
2	Block Pts	124.37	46.42	8.8[illegible]	179.6	135.59	43.79	6.1	185.48
3	District Pts	125.38	46.42	13.21	[illegible]85.01	137.25	31.34	5.89	174.48
4	Municipalities	130.[illegible]5	16.89	0.4	117.44	103.96	14.19	0.09	118.24
5	Corporations	78.91	14.34	-	93.25	70.29	5.58		75.87
	Total	**1009.23**	**263.33**	**44.44**	**1317**	**1098.77**	**225.37**	**26.2**	**1350.34**
	2004-05								
1	Grama Pts	584.84	150.5	23.83	759.17	424.29	107.39	16.62	548.3
2	Block Pts	125.32	50.[illegible]7	9.53	185.02	85.95	35.72	7.12	128.79
3	District Pts	126.32	50.[illegible]7	14.3	190.79	73.77	29.01	7.63	110.41
4	Municipalities	100.88	18.56	0.47	119.91	73.59	7.47	0.09	81.25
5	Corporations	79.31	15.8		95.11	46.89	7.45		54.34
	Total	**1016.67**	**265.2**	**48.13**	**1350**	**704.59**	**187.04**	**31.46**	**923.09**
	2005-06								
1	Grama Pts	574.75	177.5	24.8	777.05	464.14	[illegible]10.58	[illegible]8.53	599.25
2	Block Pts	123.16	59.17	9.92	192.25	85.45	39.47	7.48	132.4
3	District Pts	124.18	59.17	14.88	198.2[illegible]	72.08	31.14	10.05	113.27
4	Municipalities	93.75	20.8	0.57	115.12	74.31	7.22	0.12	81.65
5	Corporations	74.54	17.83		92.37	56.42	7.22		65.64
	Total	**990.38**	**334.47**	**50.17**	**1375**	**754.4**	**195.63**	**36.18**	**988.21**
	2006-07								
1	Grama Pts	544.11	213.87	29.91	787.89	473.98	185.59	25.29	684.88
2	Block Pts	118.8	71.29	11.98	199.85	102.36	65.38	10.05	177.79
3	District Pts	116.8	71.29	17.94	205.83	94.3	69.57	14.28	178.15
4	Municipalities	88.7	25.08	0.88	114.44	74.03	22.84	0.24	97.11
5	Corporations	70.5	21.49		91.99	60.89	11.23		71.92
	Total	**938.51**	**403**	**60.49**	**1400**	**805.36**	**354.61**	**49.86**	**1209.83**

Source: IKM & Budget documents

Appendix 22.5

List of Local Bodies Achieved Nirmal Puraskar Award during 2006-07

Sl No.	Kannur District	Sl No.		Sl No.	Trissur District
1	Kallyassery	36	Thalakkulathur	71	Puthukkad
2	Ezhoam	37	Nanmanda	72	Thrikkur
3	Karivellour peralam	38	Kakkur	73	Alagappa Nagar
4	Kankol-Aalampadamba	39	Elathur	74	Muttathoor
5	Cheruthazham	40	Kakkodi	75	Varandarappilly
6	Malappattam	41	Puduppadi	76	Nenmenikkara
7	Koodali	42	Thiruvambadi	77	Anthikkad
8	Keezhalloor	43	Madavoor	78	Koratty
9	Maloor	44	Peruvayal	79	Kadukkutty
10	Chittariparamba	45	Kodenchery	80	Mehur
11	Mangattidam	46	Karassery	81	Pariyaram
12	Mokeri	47	Kuruvattor	82	Paralam
13	Padiyam	48	Mavoor	83	Cherpu
14	Kunnothuparambu	49	Kayakkodi	84	Vallachira
15	Pannyannur	50	Ramanattukara	85	Avinissery
16	Ancharakandi		**Malappuram District**	86	Chowwanur
17	Chelora	51	Kizhimanna	87	Porathissery
18	Chembilod	52	Puzhikkattiri	88	Karalam
19	Elayavoor		**Palakkad District**	89	Muriyad
20	Kadambour	53	Ambalappara	90	Parappukkara
21	Munderi	54	Ananganadi	91	Kuzhur
22	Peralasseri	55	Kumaramputhur	92	Poyya
	Wayanad District	56	Thachampara	93	Aalur
23	Nenmeni	57	Koduvayur	94	Edathiruthy
24	Vythiri	58	Akathethara	95	Perinchanam
	Kozhikode District	59	Kannadi	96	Mullassery
25	Azhiyoor	60	Kuppam	97	Elavally
26	Eramala	61	Vilayur	98	Venkitangu
27	Edacheri	62	Parodur	99	Pavaratty
28	Kuttradi	63	Nagalassery	100	Madakkathara
29	Kavilumpara	64	Pattithar	101	Nadathara
30	Nadapuram	65	Cherpchery	102	Kolazhy
31	Villiappally	66	Kadampazhipuram	103	Chelakkara
32	Koothali	67	Sreekrishnapuram	104	Kondazhy
33	Konnachundu	68	Vellinezhi	105	Thiruvillawamala
34	Arikkulam	69	Pookkottukavu	106	Panjal
35	Narikkuni	70	Thrikkaderi	107	Vallathol Nagar

108 Tholur
109 Arimpoor
110 Nattika
111 Thalikkulam
112 Valappad
113 Vadanappilly
114 Padiyur
115 Poomangalam
116 Puthenchira
117 Vellangalloor
118 Velookkara
119 Thekkumkara
120 Mullurkara
121 Varavoor
122 Vadakkanchery
123 Punnayurkulam
124 Vadakkekadu
125 Thycaud
126 Enyadu
127 Edavilangu
128 Meethala

Ernakulam District

129 Vadakkekkara
130 Valakom
131 Paipra
132 Pothanikkad
133 Pallarimangalam
134 Nelikkuzhi
135 Kottappady
136 Mookkannur
137 Kalady
138 Malayattoor Neeleswaram
139 Manjapra
140 Sreemoolanagaram
141 Kanjoor
142 Chottanikkara
143 Aamballur
144 Thiruvamkulam
145 Rayamangalam
146 Thirumarady
147 Palakuzha
148 Koothattukulam
149 Vadavukodu-
150 Poothrika
151 Thiruvaniyoor
152 Mazhuvannoor
153 Marado
154 Ayyampuzha

Idukki District

155 Edaverty
156 Manakkad
157 Perappuzha
158 Kodikulam
159 Karimannoor
160 Alakkode
161 Kudayathoor
162 Kokkayar
163 Kumily

Kottayam District

164 Poonjar
165 Velloor
166 Akalakkunnam

Alappuzha District

167 Ambalapuzha South
168 Cherayanad
169 Aryad
170 Bharanikkavu
171 Thakazhi
172 Nedumudi

Kollam

173 Sooranad South
174 Sasthamcotta
175 Sooranad North
176 Karunagappally
177 Pattazhi
178 Thalavoor
179 Kulathupuzha
180 Alayamon
181 Mandrothuruthu
182 Neendakara
183 Thrikkadavur
184 Elamvallur
185 Kottankara
186 Mayyanad
187 Chadayamangalam
188 Kadakkal
189 Ittiva
190 Chithara
191 Kumanil
192 Nedumpana
193 Kallevathukkal
194 Poothakkulam
195 Chathannur
196 Chirakkara

Thiruvananthapuram

197 Vamanapuram
198 Karakulam
199 Kazhakuttom
200 Sreekariyam
201 Vattiyoorkavu
202 Kudappanakkunnu
203 Ottasekharamangalam
204 Venganoor
205 Parassala

Block Panchayaths

Thrissur District

206 Mullassery
207 Cherpu
208 Vellangalloor
209 Kodungalloor

Thirivananthapuram District

210 Trivandrum Rural