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GOVERNMENT OF KERALA

# ECONOMIC REVIEW 2012

State Planning Board, Thiruvananthapuram, Kerala, India  
March 2013

**Volume One**



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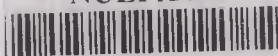


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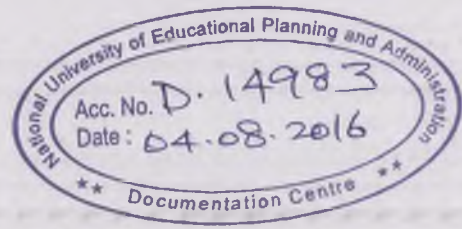


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# FOREWORD

**T**his year's Economic Review attempts to capture economic progress in the State in a more analytical, yet user friendly format. The Review relies on innumerable sources of government information and serves as a credible and comprehensive account of the economic progress of the State. Volume 1 of the Review provides a thematic look at various economic sectors and brings out challenges as well as the accomplishments of various government institutions engaged in the provision of public goods and services. This is complemented by Volume 2, which provides time series and cross sectional data on state and national level economic parameters.

Kerala is one of the most globalized States in India and hence the faltering growth of several trade partners does have a major impact on Kerala's own growth prospects. Kerala is also dependent to a great extent on other States of India for key essentials such as food, fertilizers, most manufactured goods and basic industrial pre-requisites such as coal, cement, steel, crude oil, natural gas and electricity. High food inflation and hike in fuel prices tend to aggravate Kerala's developmental problems. Under the circumstances, Kerala's performance in 2011-12 and 2012-13 has to be viewed against the global and national growth scenario. Kerala's growth in GSDP as well as per capita income growth, even without factoring in non-resident remittances, was significantly higher than the national average in 2011-12.

Kerala's achievements in attaining high human development indicators has put the State way ahead of other Indian States and on par with developed economies in critical areas such as literacy, health care, gender consciousness, labour rights and participative governance. These strengths can be leveraged further by understanding the changing aspirations of the people in the light of global dynamics. Second generation reforms have been introduced to focus not just on literacy but on technical and marketable skills, not just on basic health but on universalization of world class health care, with emphasis on life style diseases, geriatric care and the like. Kerala has a very high self imposed code of decent work and dignity of labour and work ethics are of a high order. Unfortunately, not enough publicity is given to the high skill and clean working practices of Kerala's workforce. The perception that Kerala labour is militant continues to linger even though industry situated in Kerala is fully conscious of the fact that there has been a tectonic change in attitudes over the years. Kerala is considered a model state for Governance, in general, and Local Self Government, in particular.

Against the backdrop of these achievements, what is required now is momentum in employment generating and environment friendly growth. Despite banks being flush with funds, there do not appear to be adequate investment avenues to tap. Both land and labour are severely constrained. Farm viability is low and there are major transport and energy infrastructural constraints. The rapid pace of urbanization in Kerala has brought with it major challenges including provision of adequate and affordable houses, public transport services, solid waste management and supply of uninterrupted power. Migration, both outward and inward, have separate and well defined challenges, which could adversely affect the State's progress, if not appropriately tackled. Various social problems such as alcoholism, violence, increase in women-headed households, deterioration in mental health, life-style diseases and so on are emerging as threats to progress.

Several new initiatives taken by the Central Government in the 12th Plan would be of advantage to Kerala. The greater flexibility given to Centrally Sponsored Schemes will give us an opportunity to design schemes to better suit our own needs. Various new infrastructure projects are in the pipeline – Kochi Metro, Thiruvananthapuram and Kozhikode Monorail projects, Vizhinjam Port, Kochi-Palakkad National Investment Manufacturing Zone, Palakkad Rail Coach Factory, High Speed Rail Corridor, to name a few. Close monitoring of these projects to ensure timely take-off will ease the pressure on our strained physical infrastructure. Every effort should be made to tap non-budgetary sources on investment so that budgetary funds are more effectively used. Better targeting of subsidies and pruning of unproductive expenditure will provide fiscal space for channelling borrowed funds into productive capital assets. The quick introduction of destination based Goods and Service Tax is also likely to help a net importing state like Kerala.

The Review brings out various measures taken by Government to combat these threats and provides the reader with an objective account of the state of the economy. The web version of this Review is available on [www.spb.kerala.gov.in](http://www.spb.kerala.gov.in). We welcome your suggestions for further improvement of the Review.

# CONTENTS

	<i>Kerala at a glance</i>	<i>ix</i>
	<i>List of tables</i>	<i>xi</i>
	<i>List of boxes</i>	<i>xv</i>
	<i>List of figures</i>	<i>xvii</i>
<b>Chapter 1</b>	<b>MACRO ECONOMIC PROFILE</b>	<b>1-31</b>
	Demography	3
	Income	5
	Poverty	11
	Urbanisation in Kerala	14
	Prices	15
	State Finances	18
	Banking	28
<b>Chapter 2</b>	<b>AGRICULTURE AND ALLIED SECTORS</b>	<b>35-84</b>
	Agriculture	35
	Crop Insurance	48
	Live Stock Development	53
	Fisheries Development	61
	Water Resources	66
	Forestry and Wild Life	70
	Environment	74
	Co-Operation & Agricultural Finance	76
	Agricultural Finance	77
	Rural Development Programmes	79
	Food Security	81
<b>Chapter 3</b>	<b>INDUSTRY, LABOUR AND EMPLOYMENT</b>	<b>87-127</b>
	Industry	88
	State Level Public Sector Enterprises (SPSE)	89

	Micro Small and Medium Enterprises (MSME)	93
	Food Processing Industries (FPI)	98
	Handloom Sector	100
	Textile Sector	103
	Power loom	103
	Handicrafts	104
	Coir Industry	106
	Khadhi and Village Industries	108
	Cashew Industry	109
	Minerals	111
	Labour and Labour Welfare	112
	Health Insurance Scheme	116
	Unemployment Situation in Kerala	119
	Employment in the Organised Sector	120
	Employment in the Unorganised Sector	122
	Performance of KSESDM	126
<b>Chapter 4</b>	<b>SOCIAL SERVICE</b>	<b>131-199</b>
	Education	131
	Higher Secondary Education	137
	Vocational Higher Secondary Education	138
	University and Higher Education	138
	Technical Education	141
	Art & Culture	145
	Medical and Public Health	146
	Major Health Problems in Kerala	150
	Medical Education	159
	Indian System of Medicine	160
	Homoeopathy	162
	Social Security and Welfare	165
	Drinking Water	175
	Gender Development	182
	Welfare of SCs/STs, OBCs and Minorities	187
	Development Programmes for SC &ST	188
	SCP and TSP through Local Governments	189
	Welfare of Other Backward Classes	197
	Welfare of Minorities	199
<b>Chapter 5</b>	<b>INFRASTRUCTURE</b>	<b>203-245</b>
	Transport	204
	Transport Policy for Kerala – 2011	204
	Road Transport Sector in Kerala	205

	Trend of Road Accidents in Kerala	209
	Railways in Kerala	211
	Water Transport Sector	212
	Energy	218
	Power Sector in Kerala	218
	Generation	219
	Transmission	223
	Distribution	224
	Non-Conventional Sources of Energy	225
	Urban Infrastructure	228
	Communication Infrastructure	231
	Information Technology	234
	Sports Infrastructure	237
	Housing	240
	Information & Publicity	243
Chapter 6	<b>EXTERNAL SECTOR</b>	<b>249-262</b>
	Trade	250
	Welfare of Non-Resident Keralites (NRKs)	255
	Tourism	256
Chapter 7	<b>CAPACITY BUILDING</b>	<b>265-275</b>
	Scientific Services & Research	266
	Kerala State Council for Science, Technology and Envmt.	267
	Skill Development	272
Chapter 8	<b>LOCAL GOVERNMENT AND DECENTRALISED PLANNING</b>	<b>280-294</b>
	Trajectory of Decentralised Planning in Kerala	280
	Achievements and Challenges	293
	<i>Glossary</i>	295
	<i>Abbreviations</i>	299





# KERALA AT A GLANCE

Sl. No.	Item	Unit	Kerala	India
1	Geographical Area (2001 Census)	Sq: Km	38,863	32,87,240
2	Total Population (2011 Census)	'000s	33,387	12,10,193
3	Males (As a % of Total population - 2011 Census)		48	51.54
4	Females (As a % of Total population - 2011 Census)		52	48.46
5	Rural population (As a % of Total population - 2011 Census)		52.28	68.84
6	Urban population (As a % of Total population - 2011 Census)		47.72	31.16
7	Sex Ratio (Females per 1000 males - 2011 Census)		1084	940
8	2001-2011 Decadal Growth of Population	Per cent	4.86	17.64
9	Literacy Rate (2011 Census)	Per cent	93.91	74.04
10	Total SC Population (2001 Census)	'000s	3124	166635
11	Total ST Population (2001 Census)	'000s	364	84326
12	SC Population (As a % of Total population - 2001 Census)		9.8	16.2
13	ST Population (As a % of Total population - 2001 Census)		1.1	8.2
14	Total Workers (2001 Census)	'000s	10283.89	402234.72
15	Net Area Sown (2008-09)	'000ha	2088.95	141360 (P)
16	Area Sown More than once (2008-09)	'000ha	605.98	53740 (P)
<b>BASIC HEALTH INDICATORS (2012)</b>				
17	Birth Rate	'000popula- tion	14.8	22.1
18	Death Rate	'000popula- tion	7	7.2

Sl. No.	Item	Unit	Kerala	India
19	Infant Mortality Rate	'000popula- tion	13	47
20	Child Mortality Rate (0-4 years)	'000popula- tion	2	15
21	Maternal Morality Rate	Per lakh live birth	81	212
22	Total Fertility Rate	Children per woman	1.7	2.6
23	Life at Birth:			
	Male	In years	71.4	62.6
	Female	In years	76.3	64.2
	Total		74	63
<b>AREA UNDER PRINCIPAL CROPS (2009-10)</b>				
24	Paddy	'000ha	234.01	41920
25	Total Food grains	'000ha	241.53	122731
26	Total pulses	'000ha	4.45	23968 (P)
27	Total Livestock – 2007 (P)	'000s	3587	529698
28	Forest Area (2011)	Sq.Kms	11309.50	692027
29	Total Electricity Generation (2011-12)	MU	7969.3	798947.7
30	Electrical Energy Consumption in Industries (2009-10)	GWH	1799.87	136314.82
31	Offices of the Scheduled Commercial Banks (March 2012)	No.	4783	96059
<b>INCOME 2011-12 QE (at current prices)</b>				
32	Gross Income	₹ Crore	315205.67	8148952
33	Per Capita Income	₹	68491	90816

(P) - Provisional  
(QE) - Quick Estimate

## LIST OF TABLES

Sl. No.	Item	Page
Table 1.1	Ranking of Districts by Population Size, 2001 and 2011	4
Table 1.2	National Income, Domestic Product & Per Capita Income at Factor Cost (All India)	6
Table 1.3	State Domestic Product and Per Capita Income of Kerala	7
Table 1.4	District-wise Distribution of Gross State Domestic Product	9
Table 1.5	District-wise Per Capita Income at Constant (2004-05) Prices	10
Table 1.6	GSDP of Southern State of India at constant (2004-05) Prices	11
Table 1.7	Poverty Ratio of Southern States	12
Table 1.8	Annual Average Consumer Price Index of Agricultural and Industrial Workers of Selected Centres in Kerala 2008 & 2012.	16
Table 1.9	District-wise Per Capita Income at constant (2004-05) Prices	18
Table 1.10	Central Transfers: 2007-08 to 2012-13 (BE)	21
Table 1.11	Development of Expenditure - Comparison of Select States 2012-13 BE	24
Table 1.12	Debt of the State	25
Table 1.13	Ratio of Debt and Consolidated Debt as percentage of Revenue Receipts	26
Table 1.14	Interest payment as percentage of Total Revenue Receipts	27
Table 1.15	Outstanding Guarantees	27
Table 2.1	Annual Growth Rate in Agricultural Income and Share of Agricultural GSDP in Kerala (Base 2004-05)	36
Table 2.2	Area, Production and Productivity of Principal Crops	39
Table 2.3	Average Annual Growth Rate of Milk and Egg Production	54
Table 2.4	Production and Investment Credit to Agriculture Sector	78
Table 3.1	Plan Outlay and Expenditure	89
Table 3.2	Workforce Participation in the Economy	113
Table 3.3	Physical and Financial Achievement of RSBY/CHIS	117

Sl. No.	Item	Page
Table 3.4	Unemployment Rate in Kerala based on different approaches	119
Table 3.5	Registered Job Seekers in Employment Exchanges - Kerala (As on 30th September 2012)	122
Table 3.6	Percentage Share of Employment Seekers according to level of Education-Kerala	124
Table 3.7	Percentage Share of Professional and Technical work seekers in Kerala	124
Table 3.8	Achievement of Kerala State Entrepreneur Self Development Mission	126
Table 4.1	Plan Outlay & Expenditure during Xth& XIth plan	132
Table 4.2	Outlay and Expenditure of SSA	137
Table 4.3	Plan and Non Plan Grant to Universities in Kerala	139
Table 4.4	Technical Institutions under Directorate of Technical Education-2012	141
Table 4.5	Visiting Faculty Programmes in Various Engineering Colleges	142
Table 4.6	Placement Details of Students of Various Government Engineering Colleges during 2011	143
Table 4.7	Basic Health Indicators in Kerala and India during 2007 &2012	147
Table 4.8	Outlay and Expenditure of the Southern States during Eleventh Plan	148
Table 4.9	Major Schemes under Health Sector during XIth Plan	148
Table 4.10	Details of Dengue Fever Reported in Kerala	150
Table 4.11	Chikugunya Cases Reported in Southern States	151
Table 4.12	Prevalence Rate of Public Health Diseases during 2007 & 2012	154
Table 4.13	Status of Medical College Hospitals and Attached Institutions during 2007 & 2012	159
Table 4.14	Beds and Patients treated in Ayurveda Medical Colleges during 2007 & 2012	162
Table 4.15	Major Medical Colleges in Health Sector in Kerala 2012	163
Table 4.16	Target and Achievement of Immunization during 2011	164
Table 4.17	Demographic Profile of Elderly 2001-2061	166
Table 4.18	Health and Nutritional Indicators of Children in Kerala	172
Table 4.19	Plan and Non-Plan expenditure trend of KWA	181
Table 4.20	Crime against Women in India 2010	186
Table 5.1	The Outlay and Expenditure in Transport Sector during 2010-11 &2011-12	204
Table 5.2	Outlay and Expenditure	219
Table 5.3	Growth of kerala power system at a glance - 2007-2012	219
Table 5.4	District wise Distribution of Post Offices	232
Table 5.5	Plan Outlay and Expenditure	234
Table 5.6	Details of Programmes Conducted by IIITMK	235

Sl. No.	Item	Page
Table 5.7	Present Status of the Infrastructure Development in Sports Infrastructure	238
Table 5.8	Financial Progress of National Games Infrastructure	239
Table 5.9	Houses Constructed by Various Agencies	241
Table 6.1	Cargo Handled at Cochin Port during 2007-08 to 2011-12	251
Table 6.2	Export Trend of Marine Products – India & Kerala 2007-08 to 2011-12	251
Table 6.3	Export of Cashew Kernels – Kerala & India (2007-08 to 2011-12)	252
Table 7.1	Year wise Plan Outlay and Expenditure	267



## LIST OF BOXES

Sl. No.	Item	Page
Box 1.1	States Vulnerability Matrix	26
Box 1.2	Meaningful Financial Inclusion for Ernakulum District	30
Box 2.1	Key Initiatives in 2012-13	46
Box 2.2	Evaluation Study of Coconut Palm Insurance Scheme (CPIS)	48
Box 2.3	Agro Ecological Zone Series- Bulletin No.1	52
Box 2.4 (a)	Production of Vaccine in Veterinary Biological Institute, Palode	59
Box 2.4 (b)	Key Initiatives in 2012-13	60
Box 2.5	Effects and Consequences of Small Scale Cage Culture Technology Adoption in Kerala	66
Box 2.6	Environmental Performance Index of Indian States 2012– Ranking of Kerala	75
Box 2.7	Refinance Support by NABARD	78
Box 3.1	State Level PSEs under Industries Department as on 31-3-2012	90
Box 3.2	Major projects promoted by KSIDC for Industrial Development	91
Box 3.3	MSME sector in Eleventh Five Year Plan (2007-12)	94
Box 3.4	Major schemes of the Annual Plan 2012-13	97
Box 3.5	Handloom Sector in XIth Plan (2007-12)	101
Box 3.6	Lacquer Ware	106
Box 3.7	Major Schemes in the Coir sector (2012-13)	108
Box 3.8	Performance of Khadi Sector during 2011 and 2012	109
Box 3.9	Major Schemes in the Khadhi Sector 2012-13	109
Box 3.10	Cashew Sector in Eleventh Five Year Plan (2007-12)	110
Box 3.11	New Schemes of the Department during 2012-13	114
Box 3.12	Highlights of Draft Labour Policy 2011, Kerala	115
Box 4.1	Major Achievements under Higher Secondary Education in 2011-12	138
Box 4.2	Major Findings of the Excavation	141
Box 4.3	District Mental Health Programme Thiruvananthapuram	155



Sl. No.	Item	Page
Box 4.4	Para Medical Services in Kerala	157
Box 4.5	Adulteration Trend in Government Analyst Laboratory during 2012	157
Box 4.6	Major Achievements under Food Safety Commissionerate during 2012	158
Box 4.7	Major Achievements of Health University	160
Box 4.8	Global Ayurveda Fest 2012	161
Box 4.9	Major Achievements under Homoeopathy during 2012	163
Box 4.10	Composite Regional Centres (CRCs)	168
Box 4.11	State Initiatives in the Area of Disabilities	169
Box 4.12	Major Initiatives of Prison Department	170
Box 4.13	Kerala Social Security Mission	172
Box 4.14	New Initiatives in SC Department during 2012	192
Box 5.1	Issues and Constraints Faced in the Road Sector	211
Box 5.2	The Major Initiatives of the Port sector during 2011-12	213
Box 5.3	Competitive Advantage of Vizhinjam	214
Box 5.4	Problems and Issues in the Inland Water Sector	217
Box 5.5	Challenges in the Energy Sector	227
Box 5.6	Achievements of Bharat Sanchar Nigam Ltd (BSNL) in 2011-12	233
Box 5.7	Major Responsibilities of Kerala State Information Technology Mission	235
Box 5.8	Housing schemes and implementing agencies	241
Box 5.9	Centrally Sponsored Scheme for Rural Housing	242
Box 5.10	Financial Institutions in Housing Sector	242
Box 5.11	Focus Areas in Housing Sector during XII th plan	243
Box 6.1	Kerala's model for success in Global Tourism	257
Box 6.2	Performance of Kerala Tourism during 2011-12	257
Box 6.3	Plan Outlay and Expenditure	258
Box 6.4	Kerala Tourism Policy 2012	259
Box 6.5	Major Tourism Projects Approved in 2011-2012	262

# LIST OF FIGURES

Sl. No.	Item	Page
Fig 1.1	Decadal Population Growth of India and Kerala 1901-2011	4
Fig 1.2	Growth Rate of GSDP at Constant (2004-05) Prices - Kerala	7
Fig 1.3	Per Capita Income at Constant Price	8
Fig 1.4	Sectoral Distribution of GSDP	8
Fig 1.5	Rural Urban Distribution Of Poverty Ratio India-Kerala in Percentages	12
Fig 1.6	Consumer Price Index (CPI) of Agricultural and Industrial workers in Kerala	15
Fig 1.7	Revenue Receipts	19
Fig 1.8	Revenue Expenditure	22
Fig 1.9	Capital Expenditure	24
Fig 1.10	Growth of Bank Deposit in Kerala	28
Fig 1.11	District wise distribution of number of bank branches in Kerala	30
Fig 2.1	South West Monsoon received in Kerala during 1st June – 30th September 2012	37
Fig 2.2	North East Monsoon received in Kerala during 1st October – 31st December 2012	37
Fig 2.3	Land use Pattern of Kerala (2011-12)	39
Fig 2.4	Percentage change in Area and Production of Rice in Major Districts of Kerala during 2011-12 over 2010-11	41
Fig 2.5	Area, Production and Productivity of Coconut in Major States of India (2011-12)	42
Fig 2.6	Milk Production of Kerala (2007-08 to 2011-12)	54
Fig 2.7	Trend in Per capita Availability Based on Production of Milk in Four Southern States and all India (2007-08 to 2010 - 11)	55
Fig 2.8	Egg Production of Kerala (2007-08 to 2011-12)	56
Fig 2.9	Trend in Average Prices of Livestock Products from (2007-08 to 2011-12 )	59

Sl. No.	Item	Page
Fig 2.10	Marine and Inland Fish Production All India (2011-12) Marine and Inland Fish Production Kerala (2011-12)	62
Fig 2.11	Fish Production in Kerala (2007-08 to 2011-12)	62
Fig 2.12	Live Storage Position in the Reservoirs (2010, 2011 & 2012)	67
Fig 2.13	Live Storage Position in the Reservoirs (Average for 10 years): 2010, 2011 & 2012	67
Fig 2.14	Forest Revenue in Kerala (2007-08 to 2011-12)	72
Fig 2.15	SUPPLYCO - Sales Turnover	83
Fig 2.16	Mid-day Meal Programme	84
Fig 3.1	Contribution of Manufacturing Sector to GSDP at 2004-05 prices	88
Fig 3.2	Investment, Production & Employment in MSME sector in XIth Plan	94
Fig 3.3	District wise Investment, Value and Employment of Enterprises registered in Kerala as on 30.11.2012	95
Fig 3.4	Income generated through SIDCO units in XIth Plan	98
Fig 3.5	Production and Employment in Handloom sector	102
Fig 3.6	Number of Working Children in Kerala	114
Fig 3.7	Percentage Distribution of Interstate Migrant workers in Kerala during 2011	118
Fig 3.8	Employment in the Organized Sector- Kerala	120
Fig 3.9	Distribution of Employment in Public Sector- March 2012	121
Fig 3.10	Trends of work seekers in Kerala	123
Fig 3.11	Work Seekers in Kerala as on 31.03.2012 (Status of Men and Women)	125
Fig 3.12	Placement through Employment Exchanges -Kerala	125
Fig 4.1	State Wise Comparison of Literacy Rates in Southern India	132
Fig 4.2	Enrollment of Students in School	135
Fig 4.3	Student Strength in Polytechnic	144
Fig 4.4	Routes of Transmission of HIV, India, 2011-12	151
Fig 4.5	H1N1 Fever Cases and Deaths Reported in Southern States of India during 2011	152
Fig 4.6	Leptospirosis Cases and Death Reported in Kerala	152
Fig 4.7	New Cases of Leprosy in Kerala	153
Fig 4.8	Cancer Cases and Deaths in Southern States of India during 2011	153
Fig 4.9	Institutions Under Directorate of Health Service	156
Fig 4.10	Sanctioned Strength and Inmates of Welfare Institutions	165
Fig 4.11	Classification of Nutritional Status of Children under ICDS	174
Fig 4.12	Physical Progress of ICDS	175
Fig 4.13	Quality Profile of South Indian States	176
Fig 4.14	District Wise Water Quality Profile in Kerala	177
Fig 4.15	Availability of Drinking Water in Kerala	177
Fig 4.16	Piped Drinking Water Access in Kerala	178
Fig 4.17	Coverage of Water Supply Schemes in Kerala	179

Sl. No.	Item	Page
Fig 4.18	Production and Distribution of Water	179
Fig 4.19	XIth Plan Fund Utilisation Pattern	180
Fig 4.20	Percentage of Women Students in Professional Colleges in Kerala	183
Fig 4.21	Total Number of Crimes reported in Kerala for the last 4 years	186
Fig 4.22	SCP/TSP-Yearwise Outlay	189
Fig 4.23	Budget Provision of SCP through LSGIs 2012-13	189
Fig 4.24	Budget Provision of TSP through LSGIs 2012-13	189
Fig 4.25	Corpus Fund Allocation from 2007-08 to 2012-13	193
Fig 4.26	Outlay and Expenditure of Education Sector for ST (Plan)	195
Fig 4.27	Housing Programmes undertaken by ST Development Department	195
Fig 4.28	Outlay and Expenditure under Corpus fund from 2007-08 to 2012-13	196
Fig 4.29	Outlay and Expenditure under SCA to TSP during 2007-08 to 2012-13	197
Fig 5.1	Roads under PWD in Kerala (2010-11)	206
Fig 5.2	Growth in the Vehicle population	208
Fig 5.3	Trend of Motor Vehicles Accidents in Kerala	209
Fig 5.4	Passenger Transport Operation in Kerala (2010-11)	210
Fig 5.5	Total Installed Capacity	218
Fig 5.6	Electrical Energy consumption in Kerala	222
Fig 5.7	Aggregate Technical and Commercial (AT & C) losses	224
Fig 6.1	Export trend of Coir and Coir products from Cochin Port	253
Fig 6.2	Year Wise Foreign Tourists Arrivals	257
Fig 6.3	District Wise Tourist Arrivals	258
Fig 8.1	Share of Grants-in-Aid in State Plan	281
Fig 8.2	Category wise Allocations during IXth, Xth and XIth 5 year Plans	282
Fig 8.3	Sources of Financing the LGs Plan	284
Fig 8.4	Share in LGs Plan during 2007-08 to 2011-12	284
Fig 8.5	Funds to Various Tiers of LGs from all Sources	285
Fig 8.6	Utilisation of Funds by LGs	285
Fig 8.7	Source wise utilisation of Funds by LGs	286
Fig 8.8	Grants-in-aid given to LGs	286
Fig 8.9	Utilisation of Grant-in-aid by LGs	287
Fig 8.10	Category wise Allocation of Grant-in-Aid to LGs	288
Fig 8.11	Category wise performance of Grants-in-Aid to LGs	288
Fig 8.12	Sector wise Allocation to LGs	289
Fig 8.13	Allocation & Utilisation in Productive Sector	289
Fig 8.14	Allocation & Utilisation in Service Sector	290
Fig 8.15	Allocation & Utilisation in Infrastructure Sector	291
Fig 8.16	Allocation & Utilisation in Special Sector Plans	292



# MACRO ECONOMIC PROFILE



10/10/11

10/10/11

## MACRO ECONOMIC PROFILE

## Introduction

The pace of growth in developing economies, including India, has slowed down in recent years due to weak external demand, uncertainty, loss of business confidence, high unemployment and fiscal austerity measures introduced in the European Union and USA, which are our major trade partners. The mid-year Economic Analysis 2012-13 (GOI, Ministry of Finance) has emphasized the role of both global and domestic factors in being responsible for the slowdown in India's growth (5.4 per cent in the first half of 2012-13). The slowdown has been pervasive across all sectors and has been aggravated by high international price of crude oil, relatively tight monetary policy followed by RBI to control inflation, high cost of borrowing, failure of monsoons in June and July and an overall pessimism in investor sentiment. Kerala's own well-being depends to a great extent on external factors as it is a net importing state for essential commodities and utilities like food, manufactured goods, electricity and other basic agricultural and industrial inputs. Kerala is also a large exporter of several commodities, which are affected by changes in global demand and global prices. Non-resident Keralites, through their inward remittances, are a major contributor to the level of consumption, savings and investment in the State. Hence there is a degree of vulnerability that is inevitable in Kerala's development.

Kerala has the special distinction of following a model of development, which places it well above other Indian States in terms of key development indicators such as health, education, social welfare and participatory governance. In this chapter, recent trends in key macro aggregates such as Demography, State Domestic Product, Per capita Income, Poverty, Urbanization, Inflation, Banking and State Finances are discussed objectively to bring out the present conditions in Kerala. Subsequent chapters deal with thematic issues and supplement the information given in this chapter through a sectoral lens.

## Demography

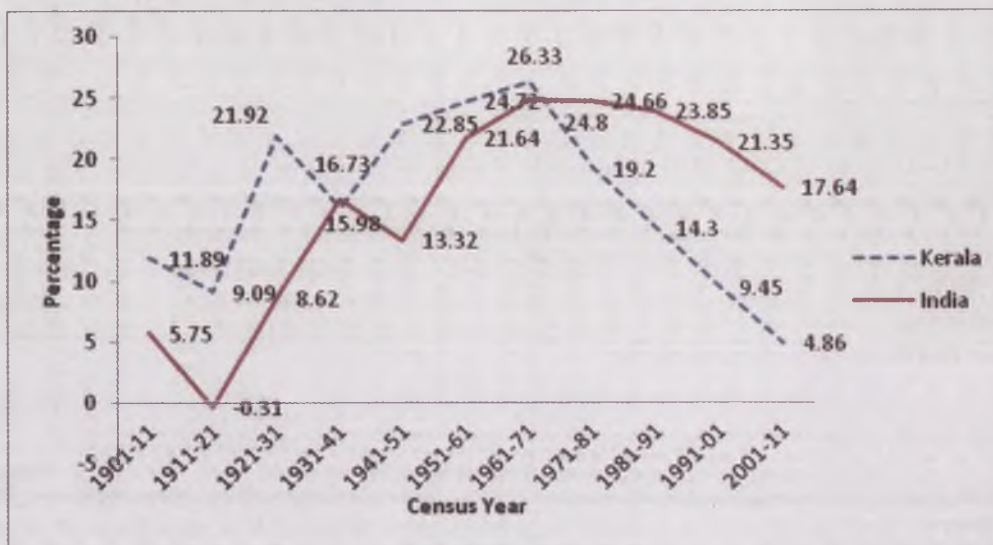
Although there are many factors which affect the development prospects of an economy, the size and quality of the population remains a major determinant of the potential of an economy. As per the provisional data published from the Directorate of Census, the population of Kerala at the 'zero hours' of March 1, 2011 was 3,33,87,677 persons. Out of this 1,60,21,290 (48.0 per cent) are males and 1,73,66,387 (52.0 per cent) are females. When the last census was taken in 2001, these figures were respectively 3,18,41,374 total, 1,54,68,614 (48.6 per cent) males and 1,63,72,760 (51.4 per cent) females. Children in the age group of 0 to 6 account for almost 10 per cent of the total population.

1.2 The growth rate of Kerala's population during the last ten years is 4.9 per cent, one of the lowest rates among Indian States. This was much smaller than the 9.5 per cent growth in population during the decade ending 2001 (previous census). Fig. 1.1 shows that the national rate of growth during the



last ten years was 17.6 per cent compared to the previous decade's rate of 21.4 per cent for the nation. The details are at **Appendix 1.1**.

**Fig. 1.1**  
**Decadal Population Growth of India and Kerala 1901-2011**



Source: Census of India 2011

1.3 The trend of population growth in the State shows a steady decline, and the coming decade may mark a negative growth rate for the State. Malappuram has the highest population (12.3 percent) of the State. The lowest population is reported from Wayanad. The growth rate is also maximum (13.4 percent) in Malappuram district during the last decade. It is interesting to note that the growth rates reported for the two districts in Kerala, viz. Pathanamthitta and Idukki are negative. Details are given in the Table 1.1.

**Table 1.1**  
**Ranking of Districts by Population Size, 2001 and 2011**

Rank in 2011	District	Population 2011	Per cent to total	Population 2001	Growth Rate	Rank in 2011
1	Malappuram	41,10,956	12.31	36,25,471	13.39	1
2	Thiruvananthapuram	33,07,284	9.91	32,34,356	2.25	2
3	Ernakulam	32,79,860	9.82	31,05,798	5.60	3
4	Thrissur	31,10,327	9.32	29,74,232	4.58	4
5	Kozhikode	30,89,543	9.25	28,79,131	7.31	5
6	Palakkad	28,10,892	8.42	26,17,482	7.39	6
7	Kollam	26,29,703	7.88	25,85,208	1.72	7
8	Kannur	25,25,637	7.56	24,08,956	4.84	8
9	Alappuzha	21,21,943	6.36	21,09,160	0.61	9
10	Kottayam	19,79,384	5.93	19,53,646	1.32	10
11	Kasaragod	13,02,600	3.9	12,04,078	8.18	12
12	Pathanamthitta	11,95,537	3.58	12,34,016	-3.12	11
13	Idukki	11,07,453	3.32	11,29,221	-1.93	13
14	Wayanad	8,16,558	2.45	7,80,619	4.60	14

Source: Census of India 2011

## Literacy:

1.4 Kerala still leads in the nation with 93.9 percent (leaving out the children below six years). In the last census, the rate was 90.9 percent. Among the districts, Pathanamthitta tops with 96.9 percent. Kottayam (96.4 percent) and Alappuzha (96.3 percent) were close behind. The Capital district Trivandrum has 92.7 percent literacy. Palakkad district has the least literacy (88.5 percent).

## Sex Ratio:

1.5 Kerala has the highest sex ratio in the country with , 1084 women for 1000 men. This was 1058 during the last census. The all India figures are 933 and 940 respectively for the 2001 and 2011 census. District-wise, in Kerala, Kannur district tops the list with 1133 women for 1000 men, while the lowest is reported from Idukki district (1006). However, what is worrying is that the sex ratio of children below age six is falling from 960 per 1000 in 2001 census to 959 per 1000 in 2011 census. While this is much better than the All India average of 912, this trend has to be watched and corrective action has to be taken if necessary.

## Density of Population:

1.6 Density of population per sq. km. is 859 in Kerala which is much higher than India (382). Thiruvananthapuram district tops with 1,509 persons and Idukki recorded the lowest with 254 persons. Details are at **Appendix 1.2**

## SECTION 2

### Income

#### National Income

1.7 The Gross National Income (GNI) at factor cost at 2004-05 prices is estimated at ₹ 5150686 crore during 2011-12, as against the previous year's estimate of ₹ 48,33,178 crore (Table 1.2). In terms of growth rates, the gross national income is estimated to rise by 6.6 per cent during 2010-11, in comparison to the growth rate of nearly 8 per cent in 2009-10. The GNI at factor cost at current prices is estimated at ₹ 8148952 crore during 2011-12, as compared to ₹ 70,78,512 crore during 2010-11, showing a rise of over 15 per cent. The Net National Income (NNI) at factor cost at current prices is estimated at ₹ 7,284,523 crore during 2011-12, as compared to ₹ 6,325,039 crore during 2010-11, showing a rise of 15.2 per cent.

1.8 GDP at factor cost at constant (2004-05) prices in the year 2011-12 is estimated at ₹ 5202514 crore showing a growth rate of 6.5 per cent over the Estimates of GDP for the year 2010-11 of ₹ 48, 85,954 crore. The GDP at factor cost at current prices in the year 2011-12 is estimated at ₹ 8,232,652 crore showing a growth rate of 15 per cent over the estimates of GDP for the year 2010-11 of ₹ 71,57,412 crore. The per capita income (per capita GDP at factor cost) in real terms, i.e. at 2004-05 prices, is estimated at ₹ 43,282 for 2011-12 as against ₹ 41,197 in 2010-11, registering an increase of over 5 per cent during the year. The per capita income at current prices is estimated at ₹ 68,491 in 2011-12 as against ₹ 60,349 for the previous year depicting a growth of 13.5 per cent.

**Table 1.2**  
**National Income, Domestic Product & Per Capita Income at Factor Cost**  
**(All India)**

(**₹ crore**)

Sl. No	Item at factor cost	At 2004-05 Prices			At Current Prices		
		2009-10	2010-11 (P)	2011-12 (Q)	2009-10	2010-11 (P)	2011-12 (Q)
1	Gross National Income (GNI)	4479973	4833178 (7.9)	5150686 (6.6)	6,053,585	7,078,512 (16.9)	8,148,952 (15.1)
2	Net National Income (NNI)	3959653	4268715 (7.8)	4549652 (6.6)	5,395,688	6,325,039 (17.2)	7,284,523 (15.2)
3	Gross domestic product (GDP)	4507637	4885954 (8.4)	5202514 (6.5)	6,091,485	7,157,412 (17.5)	8,232,652 (15.0)
4	Net domestic product (NDP)	3987317	4321491 (8.4)	4601480 (6.5)	5,433,588	6,403,939 (17.9)	7,368,223 (15.1)
5	Per capita Gross domestic product (₹)	38,527	41,197 (6.93)	43,282 (5.06)	52,064	60,349 (15.91)	68,491 (13.49)

*Source: Central Statistical Organisation.*

*Note: The figures in parenthesis shows the percentage change over previous year.  
Q-Quick Estimate, P- Provisional Estimate*

1.9 The details of GDP, NDP, GNI and NNI at current and constant (2004-05) prices from 2004-05 to 2011-12 with percentage change over previous year are given in **Appendix 1.3 to 1.6**. The sectoral distribution of GDP at constant (2004-05) prices and current prices with percentage change over previous year is given in **Appendix 1.7 and Appendix 1.8**

## State Income

1.10 The quick estimate of Gross State Domestic Product (GSDP) at factor cost at constant (2004-05) prices is ₹ 21010717 lakhs during 2011-12 as against the provisional estimate of ₹ 19186676 lakhs during 2010-11, registering a growth rate of 9.5 percent in 2011-12 compared to just over 8 percent in 2010-11 (Fig 1.2). At current prices the Gross State Domestic Product is estimated at ₹ 31520567 lakhs (quick estimate) during 2011-12 as against the provisional estimate of ₹ 26947379 lakhs during 2010-11 showing a growth rate of nearly 17 per cent.

**Fig. 1.2**  
Growth Rate of GSDP at Constant (2004-05) Prices - Kerala



Source : Department of Economics and Statistics

1.11 The quick estimate of Net State Domestic Product (State Income) at factor cost at constant prices (2004-05) is ₹ 18699759 lakhs during 2011-12 compared to the provisional estimate of ₹ 17023691 lakhs during 2010-11, recording a growth rate of 9.9 per cent in 2011-12. At current prices the State Income is estimated at ₹ 28087084 lakhs (quick estimate) in 2011-12 compared to the provisional estimate of ₹ 23942585 lakhs during 2010-11. The growth rate of State Income at current prices is 17.3 per cent in 2011-12 compared to 16.2 per cent in 2010-11 (Table 1.3).

**Table 1.3**  
State Domestic Product and Per Capita Income of Kerala

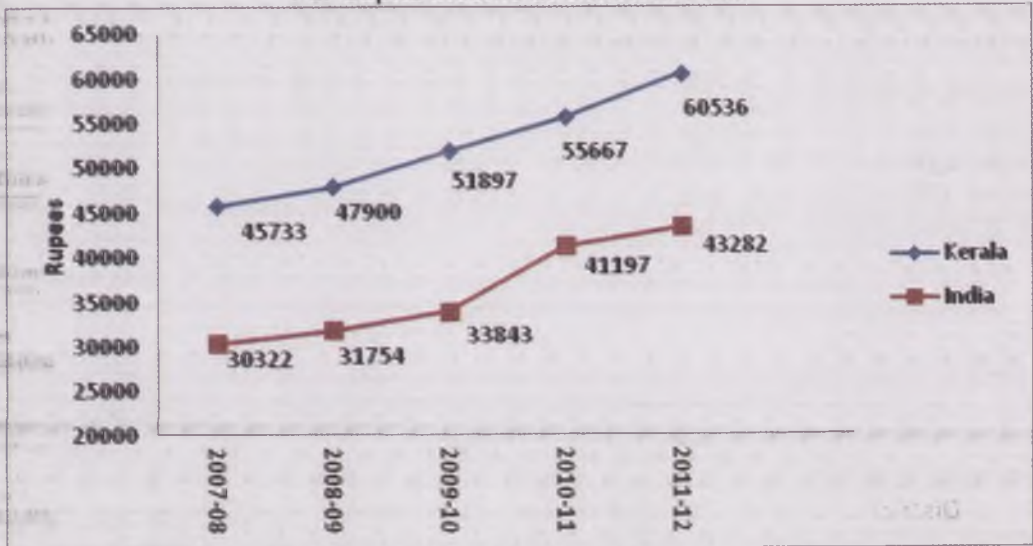
Sl. No	Item	Income (₹ Lakhs)			Growth Rate (Percent)	
		2009-10	2010-11 (P)	2011-12 (Q)	2009-10	2010-11 (P)
1	Gross State Domestic Product					
	a) At Constant (2004-05) prices	17757135	19186676	21010717	8.05	9.50
	b) At Current prices	23199867	26947379	31520567	16.15	16.97
2	Net State Domestic Product					
	a) At Constant (2004-05) prices	15712270	17023691	18699759	8.35	9.85
	b) At Current prices	20606979	23942585	28087084	16.19	17.31
3	Per Capita State Income (₹)					
	a) At Constant (1999 2000) Prices	51897	55667	60536	7.26	8.75
	b) At Current Prices	67804	78183	90816	15.31	16.16

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

## Per Capita State Income

1.12 As per the quick estimates in 2011-12, the per capita Gross State Domestic Product at constant (2004-05) prices was ₹ 60536 as against provisional estimate of ₹ 55667 in 2010-11, recording a growth rate of 8.8 per cent in 2011-12. At current prices, the per capita GSDP in 2011-12 was ₹ 90816 registering a growth rate of 16.2 per cent over the previous year's estimate of ₹ 78183. The Fig. 1.3 shows that during the period 2006-07 (the entire XI<sup>th</sup> Plan period) to 2011-12, the per capita state income at constant prices was higher than the per capita national income.

**Fig. 1.3**  
Per Capita Income at Constant Price

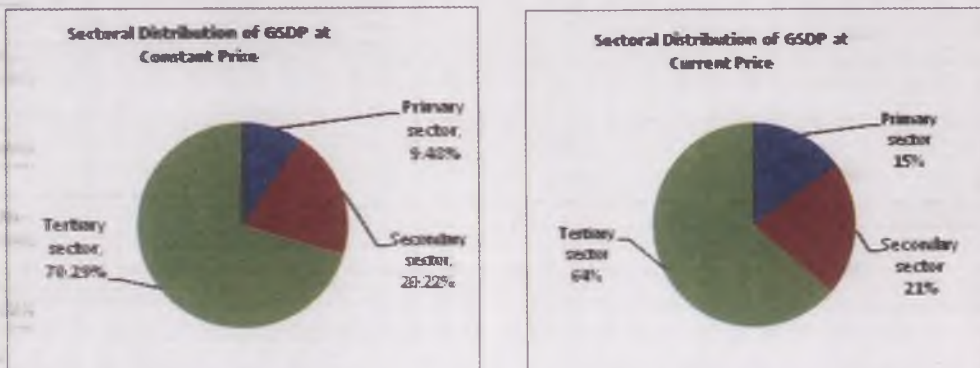


Source: Central Statistical Organization and Department of Economics and Statistics

## Sectoral Distribution of Gross State Domestic Product

1.13 During 2011-12, the contribution from primary, secondary and tertiary sectors to the GSDP at constant prices (2004-05) was 9.5 per cent, 20.2 per cent and 70.2 per cent respectively. At current prices, the primary, secondary and tertiary sectors contributed 15.1 per cent, 21 per cent and 63.2 per cent respectively to the GSDP during 2011-12 (Fig. 1.4). This difference in sectoral share between constant and current prices shows that inflationary trends in the primary sectors are much higher than in the secondary and tertiary sector.

**Fig. 1.4**  
Sectoral Distribution of GSDP



1.14 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 stagnant. The analysis of annual sectoral growth rate of Gross State Domestic Product shows that tertiary sector recorded the highest rate of growth 11.81 percent in 2011-12 at constant (2004-05) prices followed by secondary sector (7 percent) and primary sector showed a negative growth (-0.7 per cent). At current prices, the tertiary sector recorded a growth rate of nearly 18 percent, primary sector 15.5 percent and secondary sector with 15.2 percent in 2011-12. The details of sectoral distribution of GSDP with percentage during the last three years is given in **Appendix 1.9 to 1.11** and the details of GSDP, NSDP at constant and current prices during 2004-05 to 2011-12 are given at **Appendix 1.12 to 1.15**.

## District-wise Gross State Domestic Product

1.15 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 ₹ 44129.38 crore in 2011-12 as against ₹ 37836.28 crore in 2010-11 registering a growth rate of 16.6 per cent. At constant (2004-05) prices, this amounts to ₹ 30286.66 crore during 2011-12 compared to ₹ 27596.61 crore during 2010-11. The details are given in Table 1.4 below.

**Table 1.4**  
**District-wise Distribution of Gross State Domestic Product**

(₹ Lakhs)

Sl. No	District	Gross State Domestic Product at Factor Cost				Growth Rate ( per cent)	
		At Current Prices		At Constant Prices		At Current Prices	At Constant Prices
		2010-11	2011-12	2010-11	2011-12	2011-12	2011-12
		(P)	(Q)	(P)	(Q)		
1	Thiruvananthapuram	2871463	3358011	2100157	2309934	16.94	9.79
2	Kollam	2041190	2385361	1427520	1559333	16.86	8.66
3	Pathanamthitta	1098843	1286345	785578	863525	17.06	10.08
4	Alappuzha	1723815	2015165	1241826	1361875	16.90	9.15
5	Kottayam	1880383	2202442	1324493	1450284	17.13	9.26
6	Idukki	1037411	1210983	667287	716116	16.73	7.66
7	Eranakulam	3783628	4412938	2759661	3028666	16.63	9.38
8	Thrissur	2570599	3010494	1889958	2082359	17.11	9.63
9	Palakkad	2082266	2433089	1453581	1582894	16.85	8.99
10	Malappuram	2152352	2519438	1491032	1624188	17.06	8.51
11	Kozhikode	2331326	2732062	1676121	1839750	17.19	8.82
12	Wayanad	537612	629425	362008	392695	17.08	8.48
13	Kannur	1956146	2293771	1394441	1528965	17.26	8.89
14	Kasaragod	880344	1031041	613013	670134	17.12	8.78
	GSDP	26947379	31520567	19186676	21010717	16.97	9.50

P - Provisional, Q - Quick Estimate

Source: Department of Economics & Statistics

## District-wise Per Capita Income

1.16 Growth rate at current prices does not eliminate the inflationary impact. When district level growth rate at constant prices, we compared the "real" GSDP growth rate may be observed as the inflationary impact has been eliminated. Pathanamthitta, Thrissur and Thiruvananthapuram had higher real growth in GSDP than the State Average. Idukki had a much lower growth than other districts.

1.17 The analysis of district wise per capita income shows that Ernakulam district stands first with the per capita income of ₹ 89131 at constant (2004-05) prices in 2011-12 as against ₹ 81768 in 2010-11. The district wise per capita income with corresponding rank and growth rate is given in Table 1.5

**Table 1.5**  
**District-wise Per Capita Income at Constant (2004-05) Prices**

SI No	District	2010-11 (P) ₹	Rank	2011-12 (Q) ₹	Rank	Growth Rate ( per cent) 2010-11
1	Thiruvananthapuram	59885	4	65419	4	9.24
2	Kollam	51741	10	56132	10	8.49
3	Pathanamthitta	61325	3	66940	3	9.16
4	Alappuzha	56014	7	60989	6	8.88
5	Kottayam	63708	2	69259	2	8.71
6	Idukki	56406	6	60127	7	6.60
7	Eranakulam	81768	1	89131	1	9.00
8	Thrissur	59080	5	64629	5	9.39
9	Palakkad	51182	11	55365	11	8.17
10	Malappuram	36068	14	39005	14	8.15
11	Kozhikode	53670	9	58498	9	8.99
12	Wayanad	40997	13	44123	13	7.62
13	Kannur	54492	8	59354	8	8.92
14	Kasaragod	46161	12	50122	12	8.58
	STATE	55667		60536		8.75

*P: Provisional Q:Quick*

*Source: Department of Economics & Statistics*

1.18 Table.1.5 shows that in 2010-11, the districts of Thrissur, Thiruvananthapuram, Pathanamthitta and Ernakulam had a much higher growth rate than the average growth in per capita income. Idukki and Wayanad showed much lower growth in per capita income than the state average.

1.19 District wise and sectorwise analysis of GSDP reveals that Ernakulam district contributions in all the these sectors are highest. District-wise sectoral distribution of Gross State Domestic Product from 2009-10 to 2011-12 at current and constant (2004-2005) prices are given in **Appendix 1.16 to Appendix 1.21**

## GSDP - Southern States of India

1.20 In 2011-2012, Kerala recorded 9.5 percent economic growth rate, the highest among Southern States and much above the national average. Karnataka posted 6.4 percent growth rate; Andhra Pradesh 6.8 per cent and Tamil Nadu 9.4 percent. The all-India average was 6.5 percent, according to provisional figures available with the Central authorities (see Table 1.6). It may be seen that only Kerala, has shown a higher growth in 2011 - 12 than in the previous year.

Table 1.6  
GSDP of Southern State of India at constant (2004-05) Prices

₹ In Crores

State Name	2009-10	2010-11	2011-12	Growth Rate 2009-10 & 2010-11	Growth Rate 2010- 11 & 2011-12
ANDHRA PRADESH	347344	381942	407949	9.96	6.81
KARNATAKA	257125	279932	297964	8.87	6.44
KERALA	177571	191867	210107	8.05	9.51
TAMIL NADU	350258	391372	428109	11.74	9.39

Source: Hand Book of Statistics RBI (2011-12)

1.21 An analysis of the growth pattern reveals that the Services sector continues to dominate the economy. Segments such as financial services, real estate and hotels performed relatively well. Compared to 2010-2011, the secondary sector recovered marginally in 2011-12. Tamil Nadu's primary sector's performance (2.7 percent) was the best among the Southern States, though it did not touch the targeted mark of four percent.

## SECTION 3

### Poverty

1.22 Poverty may be defined as the inability to attain the minimum standard of living in a society. The poor are those who are unable to achieve basic facilities like food, safe drinking water and shelter, access to information, education, health care, social status, political power or even the opportunity to develop meaningful connections with other people in the society. This condition is absolute poverty. Relative poverty is the condition of having fewer resources or less income than others within a society or country or compared to world wide averages.

1.23. The existing poverty measure of Planning Commission of India is based on the recommended nutritional requirements of 2400 calories/person/day in rural areas and 2100 calories/person/day in urban areas. The official percentage of population below poverty line is estimated based on the household consumer expenditure survey carried out by National Sample Survey Organization (NSSO). Former methods of poverty estimation viz; URP method of estimation and MRP method of estimation have been replaced by Tendulkar method of estimation from NSSO 66th round onwards.

1.24. The state specific poverty line 2009-10 for Kerala is fixed at monthly per capita income of ₹ 775.30 which is above the poverty line fixed by 23 other states. The corresponding figures for Karnataka, Tamil Nadu and Andhra Pradesh are ₹ 629.4, ₹ 639 and ₹ 693.8 respectively. The poverty ratios for the period 1993-94, 2004-05 and 2009-10 based on Tendulkar methodology of estimation, pertaining to Kerala and other Southern States and All India are given in Table 1.7 below.



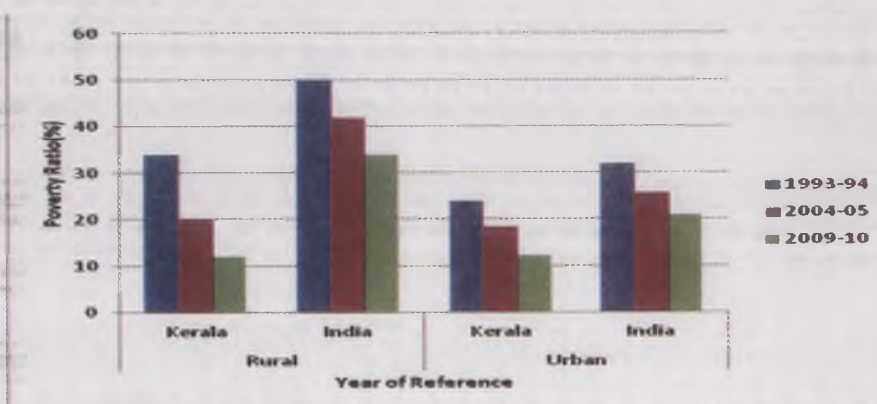
**Table 1.7**  
**Poverty Ratio of Southern States ( per cent)**

Sl. No.	Category	Name of State	1993-94	2004-05	2009-10
1	Rural	Kerala	33.9	20.20	12
		Tamil Nadu	51	37.50	21.20
		Andhra Pradesh	48.10	32.30	22.80
		Karnataka	56.60	37.50	26.10
		All India	50.10	41.80	33.80
	Urban	Kerala	23.9	18.4	12.1
		Tamil Nadu	33.7	19.7	12.8
		Andhra Pradesh	35.2	23.4	17.7
		Karnataka	34.2	25.9	19.6
		All India	31.8	25.7	20.9

(Source: GOI, 2011-12 "Economic Survey", [www.mospi.gov.in](http://www.mospi.gov.in). NSSO 66th round)

1.25 The poverty ratios of Kerala, (Fig. 1.5) whether rural or urban, were the least in 1993-94 compared to other Southern States as well as All India level. The same status was maintained during 2004-05 and 2009-10. Moreover the trends in Table 1.7 shows that the number of persons below poverty line for Kerala is exhibiting a downward trend. It is possible to achieve a zero poverty State in Kerala.

**Fig 1.5**  
**Rural Urban Distribution Of Poverty Ratio India-Kerala in Percentages**



## Poverty Index

1.26 Every two years, a survey is conducted for assessing the urban poor by Community Development Societies 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. The nine risk factors of the poverty index are furnished below.

- 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 such risk factors is classified as family at risk of poverty.

1.27 The magnitude of urban poverty has been increasing due to stagnation in manufacturing industry resulting in lower income for urban dwellers. Due to rapid increase in land price and construction costs, a good number of the urban people in Kerala are forced to live in slums. Availability of drinking water and sanitation facilities is grossly inadequate. Urbanization is an important aspect in the process of economic and social development and is associated 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 people, provision of facilities like water supply, sanitation, transport and power, pattern of economic development, location and dispersal of industries, civic administration etc. Several schemes are being implemented by the Department of Urban Affairs/municipalities/corporations to provide urban infrastructures.

1.28 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 household, urban poverty results in casual labour households

1.29 Various poverty alleviation programmes both rural and urban sectors that are being implemented are given in other chapters of the review. There are many agencies and Government Departments whose mandate is to eradicate poverty in Kerala.

## Kudumbashree Mission and Alleviation of Poverty

1.30 This Community Based Organisation is a three-tiered structure with its apex tier anchored in the local self governments. Neighbourhood Groups (NHGs) comprising of 10-20 women, Area Development Societies (ADS) within wards of LSGs and Community Development Societies (CDS) – Registered Society as the Federation of ADS within the LSGs form the three tiers.



Poverty reduction is targetted through various initiatives, some of which are:

### Linkage Banking

1.31 Neighbour Hood Group (NHG) – Bank linkage scheme is a Flagship Programmes of Kudumba shree Mission. National Bank for Agricultural and Rural Development (NABARD) Bank linkage grading procedures are applied while selecting eligible NHGs for availing loan. Banks will provide loans to those NHGs who acquire 80 per cent marks in grading. The cumulative amount that has been lent to NHGs through linkage banking is ₹1380 crore as on 30th September 2012. The number of NHGs availed bank linkage was 97993. The details of Linkge Banking is given in **Appendix 1.22**

## Micro Enterprises

1.32 Rural Micro Enterprises helps women to set up individual and group enterprises. Through Yuvasree unemployed youth are helped to start enterprises. A Revolving Fund for meeting urgent requirements of working capital to available. During 2011-12, 72 individual enterprises and 739 group enterprises were started as a whole in the state.

## Ashraya

1.33 This project rehabilitates destitute families and integrate them with mainstream of the civil society. The specific objectives include provision of food for starving, shelter to the homeless, infrastructure to support for the destitute through medical and care service, educational and pension support and income generation activities. The cumulative number of destitute families assisted under the programme till September 2012 was 78417 spread over 1005 LSGIs.

## SECTION 4

### Urbanization in Kerala

1.34 The urban sector in Kerala comprises of 5 Municipal Corporations and 60 Municipalities. As per the 2011 census, 47.7 percent of the population lives in urban areas. This is higher than the National average of 31.2 percent. However, unlike the other parts of the country urbanization in Kerala is not limited to designated cities and towns. Barring a few Panchayats in the hilly tracts and a few isolated areas, the entire State is an urban rural continuum. The Kerala society by and large can be termed as urbanized. Details of urban and rural population in Kerala are given in **Appendix 1.23**.

1.35 Ottappalam (UA), Chalakkudy (UA), Kothamangalam (UA), Changanassery (UA) and Kayamkulam (UA) are the five new Urban Agglomerations for 2011 census. The Urban Agglomeration of Vadakara (UA), 2001 census has being merged with Kozhikode (UA) for 2011 census. Similary Kodingalloor (UA) Guruvayoor (UA) are merged with Thrissur (UA) for 2011 census.

1.36 Among the districts, the percentage of Urbanization has varied from nearly 4 per cent in Wayanad to 68% in Ernakulam. Thrissur and Kozhikode districts follow Ernakulam with Urban content of around 67% each. In six districts viz, Ernakulam, Kozhikode, Thrissur, Kannur, Alappuzha and Thiruvananthapuram the percentage of urban population is higher than the state average. In the Districts of Waynad and Idukki the Urban population is less than 10%



## SECTION 5

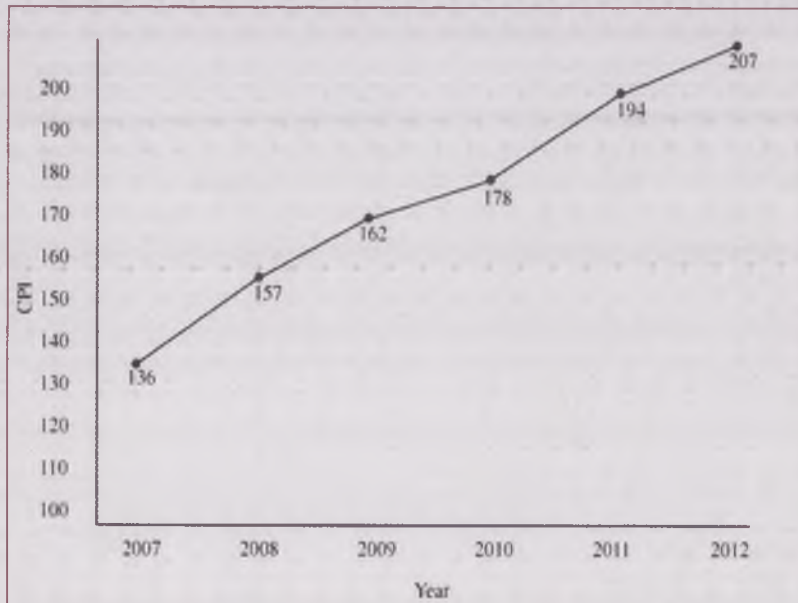
### Prices

1.37 Kerala is a high consumption economy, which is dependent on cross border trade for consumption of several food articles and manufactured goods. Inflation in Kerala is due to both cost-push factors (high land, labour and interest cost) and demand pull (high consumption levels). Hence price fluctuation can be due to a variety of reasons including changes in production cost due to higher input costs and transport cost.

### Consumer Price Index

1.38 Consumer Price Index for the agricultural and industrial workers in Kerala went up by 13 points (base 1998-99 = 100) in 2012 compared to the corresponding period of 2011. The percentage increase in consumer price inflation was 8.7 in August 2010, which increased by 9.7 in August 2011 and further increased by 6.6 in August 2012. Hence during the period August 2010 to August 2011 there was a reduction in the rate of increase in inflation. The inflationary hike is shown in (Fig. 1.6).

**Fig. 1.6**  
**Consumer Price Index (CPI) of Agricultural and Industrial Workers in Kerala**  
**(Base 1998-99 = 100).**



1.39 Centre wise analysis of indexes of the 17 centres during 2012 shows that Pathanamthitta recorded the highest price index (220) while Thrissur had the lowest (194) (**Appendix 1.24**). Looking at the year on year inflation growth, the state average was 6.5 per cent and six centres namely Thiruvananthapuram, Punalur, Kottayam, Eranakulam, Chalakudy and Thrissur experienced a price increase that was lower than the state average (Table 1.8). The trends in CPI over the 11th Plan period indicate that Mundakayam had maximum inflationary pressure, while Thrissur had the least.

**Table 1.8**  
**Annual Average Consumer Price Index of Agricultural and Industrial Workers of Selected Centres in Kerala 2008 & 2012.**

Centres	2008	2012	per cent increase in 2012 over 2008
Thiruvananthapuram	159	212	33.33
Kollam	158	215	36.07
Punalur	152	211	38.8
Pathanamthitta	159	220	38.36
Alappuzha	151	212	40.39
Kottayam	151	209	38.41
Mundakayam	150	217	44.6
Munnar	144	202	40.27
Eranakulam	150	202	34.66
Chalakyudy	152	203	33.55
Thrissur	148	194	31.08
Palakkad	155	212	36.77
Malapuram	153	204	33.33
Kozhikode	148	202	36.48
Meppady	148	197	33.10
Kannur	146	204	39.72
Kasargod	148	204	37.85
State Average	151	207.058	37.12

*Source: Directorate of Economics and Statistics*

1.40 The average retail prices of almost all essential commodities, rose considerably during January - October 2012, while the prices of coconut & coconut oil and spices declined, indicating that stringent measures are required for stabilising the prices of essential commodities (**Appendix 1.25**). Vegetable Prices also showed an upward spiral.

## Wholesale Price Index

1.41 Wholesale price index of agricultural commodities declined by 492 points in Kerala 2012 (upto March) compared to the corresponding period of 2011. The weighted contribution of important agricultural commodities to WPI inflation has declined by 8.8 per cent in 2012, compared to the corresponding period in 2011 (**Appendix 1.26**). The reason for this decline was that the price hike in most commodities during 2011 was very high compared to 2010. Hence this decline is mainly due to the high base effect.

1.42 Among food crops, price rise is seen for condiments and spices (28 per cent) and molasses (16 per cent). The price of non food crops remained relatively lower (18.4 percent) compared to food crops, but was still high. Efforts are required to be made for ensuring moderation in food inflation by promoting domestic cultivation of food crops, especially vegetables and increasing production of milk and eggs. In this context it is important to introduce new ways of improving medium term supply responses in agriculture and making structural improvements in supply chains and infrastructure. The month wise wholesale price index of agricultural commodities in Kerala is given in **Appendix 1.27**.

## Price Parity

1.43 Price fluctuations has been disadvantageous to farmers over the years. Prices paid by farmers constantly increased ever since 2003, (**Appendix 1.28**) whereas the prices received for their produce fell well below what they paid, thus affecting farm viability. Hence market interventions are needed to protect the interest of cultivators.

## Factor Prices

1.44 Land is a scarce commodity in Kerala due to its dense population and urban continuum. Land Prices in Kerala are high. As far as wages are concerned, the wages of both skilled and unskilled workers in Kerala almost doubled over the past five years. The average daily wage rate of skilled workers increased by nearly 94 per cent for carpenters and 95 per cent for masons (**Appendix.1.29(a)**). Similarly while there is a hike in the average daily wage rates of unskilled workers in the Agricultural sector over the years, it may be noted from **Appendix 1.29(b)** that some gender disparity exists in payment of wages to paddy field workers in Kerala. While the average wage rate of a male worker was ₹ 373, it was only ₹ 273 for a female worker during 2012. The per day wage increased by 90 per cent for male workers and by 99 per cent for female workers in 2012 compared to 2008 but the wage disparity continues.

1.45 A well planned strategy to reduce supply constraints both in the factor market and the product market and sustained improvements in infrastructure and logistics are required to ensure price stabilization in Kerala.



## SECTION 6

### State Finances

1.46 There is an increasing awareness globally that Government has a critical role to play in shaping the economy by providing adequate public goods and services, where market failure is likely. In Kerala, Public Expenditure in social development has earned major social dividends over the years. Further, Public expenditure in infrastructure, institutions and state public sector enterprises, has "crowded in" private investment in all sectors of the economy. While accepting the critical role of Public Investment and Public Expenditure, there is a need for increasing sources of tax and non tax revenue and curtailing unproductive expenditure so that the State does not have to rely on huge borrowings, which will have to be paid back by future generations. Various institutional reforms introduced by Kerala include enactment of the Fiscal Reform Legislation in August 2003, the implementation of VAT in April 2005, imposition of a ceiling on guarantees and setting up of a Consolidated Sinking Fund to repay debt. Such reform measures encourage better control of State Finances.

1.47 The Fiscal Responsibility Act is as an effective tool to enhance the quality of deficit in State's finances. As per the Kerala Fiscal Responsibility (Amendment Act) 2011, the State Government has committed to achieve a Revenue Deficit target of 1.4 percent of GSDP, a Fiscal Deficit target of 3.5 percent and to restrict State's total debt liability to 32.3 percent of GSDP in 2011-12. The targets set by the Budget 2012-13 indicate that considerable fiscal consolidation has taken place in Kerala but there are still some challenges. Table 1.9 give a comparative picture of critical fiscal indicators of neighboring states as well as the all states Average position. Important financial indicators for Government of Kerala for the period from 2002-03 to 2012-13 BE are given in **Appendix 1.30**.

**Table 1.9**  
**State-wise Per Capita Income at constant (2004-05) Prices**

Sl. No	Items	Kerala	Karnataka	Tamil Nadu	Andhra Pradesh	All States
1	RR/GSDP	12.3	15.6	14.6	15.1	13.1
2	OTR/GSDP	8.2	10.0	10.3	8.5	6.3
3	ONTR/GSDP	0.9	0.6	0.9	1.8	1.2
4	RE/GSDP	13.2	15.5	14.2	14.5	12.7
5	DRE/GSDP	6.8	9.8	8.2	10.1	7.8
6	NDRE/GSDP	5.3	4.6	4.7	4.4	4.5
7	IP/GSDP	1.8	1.4	1.5	1.6	1.5
8	PN/GSDP	2.1	1.3	2.0	1.5	1.7
9	RD/GSDP	0.9	-0.2	-0.3	-0.6	-0.4
10	FD/GSDP	2.7	2.9	2.9	2.6	2.1
11	Debt/GSDP	27	22.3	21.7	22.4	21.9

Source: RBI State Finances A Study of Budgets 2012-13

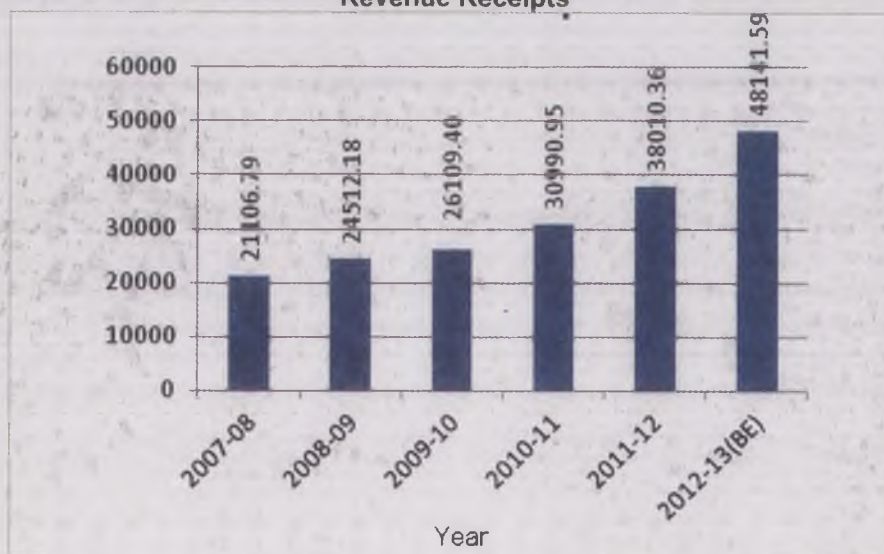
- RR = Revenue Receipt  
 OTR = Own Tax Revenue  
 ONTR = Own Non Tax Revenue  
 RE = Revenue Expenditure  
 DRE = Development Revenue Expenditure  
 NDRE = Non Development Revenue Expenditure  
 IP = Interest Payments  
 PN = Pension Payments  
 RD = Revenue Deficit  
 FD = Fiscal Deficit  
 GSDP = Gross Domestic State Product

1.48 The three pillars of State Finances are (1) Revenue (2) Expenditure and (3) Debt.

## 2. Revenue Receipts

1.49 Revenue receipts consist of State's own tax and non-tax revenues, Central tax transfers and grants-in-aid from Centre. State's Revenue Receipts grew by nearly 23 percent in 2011-12 compared to the previous year. In 2011-12 State's Revenue Receipts reached the level of ₹ 38010 crore, of which the contribution on of State's own tax was ₹ 25719 crore (67 percent), and the non tax revenue was ₹2592 crore (7 percent). The share of Central taxes was ₹ 5990 crore (16percent) and Central grants accounted for ₹ 3709 crore (10percent). Actual Revenue Receipts in 2011-12 constituted more than 96 percent of the budget target. The growth of Revenue Receipts dropped sharply to 6.5 percent in 2009-10 from the much higher growth rate of around 16 percent in 2007-08 and 2009-10, due to the adverse impact of economic slowdown, which reduced taxable income. The ratio of revenue receipts to GSDP declined from 12 percent in 2008-09 to 11.2 percent in 2010-11 but registered a slight improvement to 11.6 percent in 2011-12. The buoyancy of revenue receipts came down from 1.5 in 2006-07 to 0.5 in 2009-10. Since then it improved to almost 1 in 2010-11 and further to 1.3 in 2011-12. Revenue buoyancy (rate of growth of revenue receipts / rate of growth of GSDP) should be at least one or more than one since an increase in GSDP increases the ability of the Government to raise revenue. However the state has control only on Own Tax and Non tax Revenue. Other Central transfers are based on certain formulae either recommended by the Finance Commission or Planning Commission or in the case of grants, are based on fulfilling conditionalities imposed by the Central Government. The trend in Revenue Receipts from 2007-08 to 2012-13 BE is given in Fig. 1.7. The details of Revenue Receipt from 2002-03 to 2012-13 BE is given in **Appendix 1.31**.

**Fig 1.7**  
**Revenue Receipts**



1.50 Compared to neighboring states as well as all states average, Kerala had lower revenue receipts targeted in BE 2012-13 compared to GSDP (Table 1) There is potential to increase the tax rate or tax base or both.

### (i) State's Own Tax Revenue

1.51 The main sources of State's Own Tax Revenue (SOTR) are Sales Tax including Value Added Tax (VAT), Stamps and Registration fees, State Excise Duties, Motor Vehicle Tax and Land Revenue tax. The trend in the growth rate of State' Own Tax Revenue has been fluctuating since 2006-07. State's Own Tax Revenue recorded a growth of more than 18 percent in 2011-12 ie; from ₹ 21722 crore in 2010-11 to ₹ 25719 crore in 2011-12. The rate of growth of SOTR in 2011-12 over the previous year (2010-11) was above 18 percent. Against the budget estimate of ₹ 26641 crore, the actual realization of tax revenue during 2011-12 was ₹ 25719 crore which is above 96 percent of the targeted revenue.



The State taxes - GSDP ratio was showing upward trend during 2006-07 (7.8 percent) and 2008-09 (7.9 percent). However, it dropped to below 8 percent in 2009-10 and improved in subsequent years to reach to nearly 8 percent in 2011-12. Sales Tax and VAT contributed 74 percent of the total SOTR in 2011-12, followed by Stamps and Registration fees (12 percent), State Excise duties (7 percent), Taxes on Vehicles (6 percent), Land revenue (0.2 percent) and others (0.8 percent). The details of State's Own Tax Revenue from 2002-03 to 2012-13 (BE) is given in **Appendix 1.32**.

1.52 Compared to other southern states, Kerala's BE target of Own Tax Revenue in 2012-13, as a percent of GSDP was lower, but it was higher than the all states average (Table 1.9). Karnataka and Tamil Nadu targeted a much higher percent of their GSDP as Own Taxes in BE 2012-13; Andhra Pradesh was just a little more with OTR being 8.5 per cent of GSDP compared to Kerala's 8.2 per cent.

## (ii) State's Own Non-Tax Revenue

1.53 The major contributors of State's Non-Tax Revenue are State Lotteries, Forest Revenues and receipts under various social developmental services. There was commendable growth in the State's Own Non Tax Revenue (SONTR) during 2011-12 (34.3 percent). This could be owing to the reforms initiated by the administration of State Lotteries, which increased revenue receipts. The total SONTR of the State increased to ₹ 2592 crore in 2011-12 from ₹1931crore in 2010-11 showing a growth of more than 34 percent. Gross receipts from lotteries rose sharply to ₹ 1283 crore in 2011-12 from ₹ 571 crore in 2010-11, registering an increase of nearly 125 percent. Receipts from State Lotteries constituted nearly 50 percent of the total SONTR of ₹ 2592 crore. This was followed by ₹ 415.9 crore from Social Developmental Services, ₹ 220.5 crore from Forest and ₹136.5 crore from debt services.

1.54 The ratio of State's non-tax revenue to GSDP hovered between 0.6 percent and 0.7 percent during 2006-07 to 2010-11 and it improved to 0.8 percent in 2011-12. The non-tax revenue buoyancy for 2011-12 also improved significantly to 1.9 from 0.2 in 2010-11. The actual receipt of ₹ 2592 crore of State Non Tax Revenue exceeded the estimated target of ₹ 2531crore by 2.4 percent in 2011-12. This trend of increased growth in Non Tax Revenue is visible in 2012-13 also, as almost 70 percent of the targeted collection could be achieved in the first three quarters itself. The details of State's Own Non Tax Revenue from 2002-03 to 2012-13 (BE) is given in **Appendix 1.33**. Component wise realization of own Non Tax Revenue of Kerala and all States from 2009-10 to 2011-12 (BE) is given in **Appendix 1.34**

1.55 A comparative position of non-tax revenue with the neighboring States during 2011-12 (B.E) is given in **Appendix 1.35**. It reveals that the non-tax revenue realized by Andhra Pradesh, Karnataka and Tamil Nadu are 12.7 percent, 5.7 percent and 5.9 percent respectively to their total revenue expenditure whereas for Kerala it is 5.6 percent. Similarly the ratios of non tax revenue to the revenue receipts for Andhra Pradesh, Karnataka and Tamil Nadu are 12.2 percent, 5.5 percent and 5.9 percent respectively and for Kerala it is 6.4 percent. In BE 2012-13, Kerala had a lower target of Own Non Tax Revenue as a percent of GSDP compared to All States average, and to Andhra Pradesh. It was however on par with Tamil Nadu and higher than Karnataka (Table 1.9).

## 13th Finance Commission Award:

1.56 13th Finance Commission has recommended, among other things, grants aggregating to ₹ 6371.5 crore for the State for the award period 2010-15. The State Level Empowered Committee (SLEC) and High Level Monitoring Committee (HLMC), constituted as per the stipulations in the guidelines issued by Government of India (Gol), have already approved the Perspective Action Plans for 2010-15 and Annual Action Plans for the years 2010-11 and 2011-12 in most of the cases enabling the implementing Departments to take up and complete the projects within the stipulated time frame. There is reduction in the share of taxes awarded by the 13th Finance Commission when compared to the previous Finance Commission's award. For instance, the 13th Finance Commission awarded 2.3 percent to Kerala as share of taxes from the divisible pool whereas it was 2.7 percent and 3.1 percent respectively in the 12th and 11th Finance Commissions. Similarly, there has been consistent

decline in the share of total transfers to Kerala, which includes share of taxes and grants, from 2.8 percent, 2.6 percent and 2.4 percent respectively by the 11th, 12th and 13th Finance Commissions awards. The scheme wise details of 13th Finance Commission award to the State are given in **Appendix 1.36**.

### (iii) Central Transfers

1.57 Central Transfers comprises of share in central taxes and grants in aid from Centre. The share of States in net proceeds of shareable central taxes during the 13th FC period from 2010-11 to 2014-15 is 32 per cent. Out of this, Kerala's share is 2.3 per cent. The growth of Central Transfers has not been in favor of Kerala in recent years. The growth rate of Central Transfers in 2007-08 and 2008-09 was 17.4 percent and 11.8 percent respectively, while in 2009-10 it was negative (- 4.8 per cent). However it registered an upward growth of 10.7 percent in 2010-11. The annual growth of 32.2 percent in 2011-12 was remarkable, compared to the poor growth trends in past years. The share of Central transfers in total revenue receipts, which has been declining persistently, since 2007-08 improved to 25.5 percent in 2011-12 from 23.7 per cent in 2010-11. Central transfers as percent of GSDP have also been consistently declining since 2007-08. It decreased from 3.6 percentage in 2007-08 to 2.7 percent in 2010-11. In 2011-12, it improved slightly to 3 percent. Against the estimated target of ₹ 10255 crore, the actual central transfer received in 2011-12 was ₹ 9700 crore (94.6 percent). Out of this, the receipts from share in central taxes and central grants from the Centre were ₹ 5990 crore and ₹ 3709 crore respectively. In the fiscal year 2012-13, central transfers to the tune of ₹ 6543 crore being 52 percent of the targeted receipts, has been received by the State till the end of December 2012. The details of Central Transfers from 2007-08 to 2012-13 are given in Table 1.10

**Table 1.10**  
**Central Transfers: 2007-08 to 2012-13 (BE)**

(₹ in Crore)

Year	Share in Central Taxes & Duties	Annual Growth Rate	Grant-in-aid and other receipts from Centre for plan and non-plan	Annual Growth Rate	Total transfers	Annual Growth Rate
2007-08	4051.70	26.14	2176.59	3.88	6228.29	17.35
2008-09	4275.52	5.52	2687.19	23.46	6962.71	11.79
2009-10	4398.78	2.88	2233.38	-16.89	6632.16	-4.75
2010-11	5141.85	16.89	2196.62	-1.65	7338.47	10.65
2011-12	5990.36	16.50	3709.22	68.86	9699.58	32.17
2012-13 (BE)	7103.46	18.58	5420.51	46.14	12523.97	29.12

1.58 Regarding Central Transfers to States, Kerala's position is the lowest (2.1 percent). Andhra Pradesh is at the top position getting 6.7 percent of the total transfers followed by Tamil Nadu (4.4 per cent) and Karnataka (3.9 percent). Central transfers in Kerala and neighboring states during 2011-12 (B E) are given in **Appendix 1.37** While Central transfers are formula based and cannot be increased by the State, more effective tapping of available grants by fulfilling conditionalities attached would help increase grants to the State.

### Revenue Expenditure

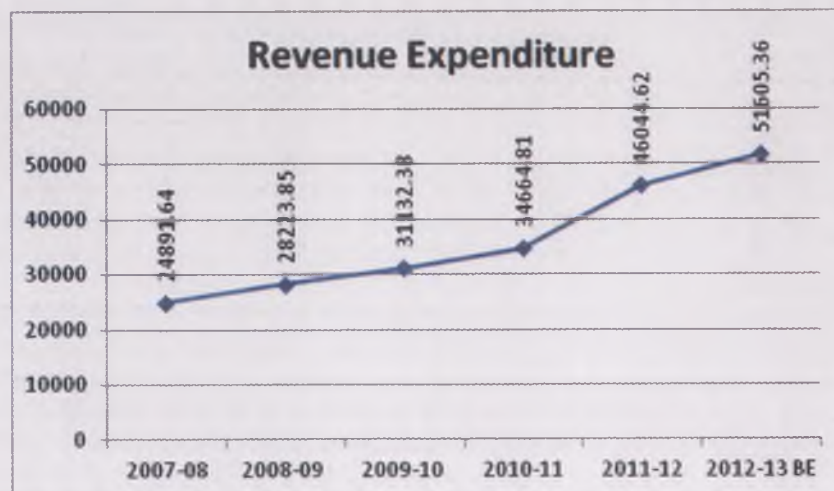
1.59 The performance of the State on the Revenue expenditure front is in accordance with the expenditure projected in the annual budget, which is invariably of a recurring nature. The major items of expenditure under Revenue Account are Pension, Interest payments and Salaries and devolutions to the Local Bodies. It includes the charges on account of the working expenses and maintenance of completed assets. Grants in aid given to local bodies are presently classified under State's revenue

account. A major portion of this fund is used for the creation of capital assets. Though this fund adds to the capital assets of the respective local body, the expenditure met by the State Government on this account is classified under State's revenue expenditure. Similarly, significant sums provided to other institutions such as universities, autonomous bodies, etc. for asset creation are also classified under State's Revenue Expenditure. This unnecessarily inflates the figure for revenue expenditure and revenue deficit. In this context Government of India has introduced a new fiscal indicator, viz. "Effective Revenue Deficit" in the Central Budget in 2011-12, which is defined as the Revenue Deficit net of the Revenue Expenditure by way of grants for creation of capital assets. Subsequently, the State Government has also introduced this concept in the budget from 2012-13. The effective Revenue Deficit for 2011-12 is 1.6 percent of GSDP and in real terms it is ₹ 5306 crore. Out of the Revenue Deficit of ₹ 3464 crore in 2012-13, the Effective Revenue Deficit of the State is projected to be ₹ 190 crore and it is 0.05 percent of GSDP.

1.60 The combined expenditure of Social and Economic Services under Revenue Account constitutes the Developmental Expenditure. The expenditure on expansion and development funds and maintenance given to LSGD is also considered as developmental expenditure. Expenditure on interest charges, Pension charges, Administrative Services, Police, etc. are the main components under non- developmental revenue expenditure. In 2011-12, revenue expenditure increased to ₹ 46045 crore (32.8 percent from ₹ 34665 crore in 2010-11. The hike in both plan and non-plan revenue expenditure during 2011-12 was very large compared to the prevailing trend. The plan revenue expenditure increased to ₹ 5327 crore in 2011-12 (27 percent from ₹ 4195 crore in 2010-11. The non-plan revenue expenditure increased to ₹ 40717 crore in 2011-12 (33.6 percent) from ₹ 30469 crore in 2010-11. The actual revenue expenditure of ₹ 46045 crore in 2011-12 exceeded the budget estimates of ₹ 44961 crore by 2.4 percent. The ratio of revenue expenditure relative to GSDP declined persistently from 14.2 percent in 2007 to 12.5 percent 2010-11. But the trend reversed and it increased to 14.1 percent in 2011-12, mainly due to the expenditure on salary and pension, which increased substantially in 2011-12 due to revisions announced. Similarly, arrear liability on pay and pension revisions relating to 2009-10 and 2010-11 were also absorbed during 2010-11. As a result, the percentage of increase in salary and pension expenditure in 2011-12 over 2010-11 was 45.3 and 50.8 respectively.

1.61 The share of Developmental Expenditure in Total Revenue Expenditure improved marginally to 55.3 percent in 2011-12 from 54.6 percent in 2010-11. Developmental Expenditure estimated in BE 2012-13 contributes 59 percent of the Total Revenue Expenditure. The trend in Revenue Expenditure from 2007-08 to 2012-13 BE is given in Fig.1.8

Fig. 1.8  
Revenue Expenditure



1.62 The combined expenditure on interest, pension and salaries contributed 67.4 per cent of the total revenue expenditure in 2011-12, compared to 62.4 per cent of the total revenue expenditure in 2011-12. Out of the total projected estimates of `51605 crore in 2012-13 (BE) on interest, pension and salaries, the combined expenditure of `32178 crore accounts for 62.4 percent. On the other hand, the expenditure on committed liabilities constitutes 78 percent of revenue expenditure and consumed 95 percent of revenue receipts of the state during 2011-12. Committed expenditure mainly consists of interest, pension, salaries, subsidies and devolutions to LSGIs, for which payments are obligatory.

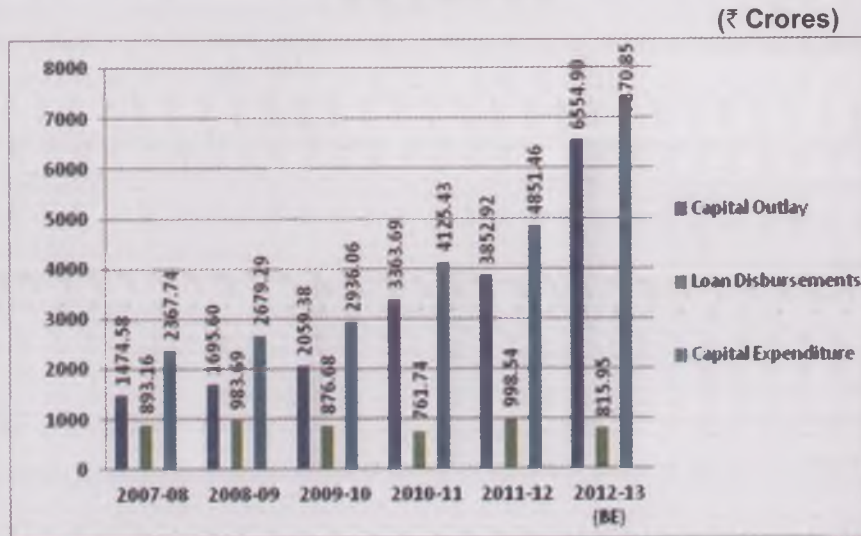
1.63 There has been sharp increase in payment of subsidies for the last five years. It increased from ₹ 202 crore in 2007-08 to ₹ 1014 crore in 2011-12 (400%) increase. In 2011-12 the payment of subsidies increased by 62 percent over the previous year. The main reason for this huge increase is the increase in payments to Food Corporation of India towards reimbursement of price difference of ration rice and wheat (₹ 650 crore) and on account of Special Support Scheme for farm sector (₹108 crore). The details of Revenue Expenditure (item wise) from 2002-03 to 2012-13 BE is given in **Appendix 1.38** and expenditure on interest, pension and salary from 2002-03 to 2012-13 BE is given in **Appendix 1.39**.

1.64 Compared to other southern states and All states average (in BE 2012-13), (Table 1) Kerala had a lower RE /GSDP than Karnataka, Tamil Nadu and Andhra Pradesh but had a higher RE/GSDP ratio than the all states average. Kerala had lower developmental revenue expenditure than all the southern states and was even lower than the all states average. This is because non developmental revenue expenditure especially interest payments and pension payments in Kerala are much higher as a percent of GSDP than other Southern States or the all States average. Committed expenditure reduces the amount available with the Government for productive and developmental purposes.

## Capital Expenditure

1.65 The share of capital outlay in total expenditure has been marginal in past years despite consistent efforts to provide adequate funds for creation of capital assets. The capital outlay increased from ₹1475 crore in 2007-08 to ₹ 2060 crore (39.7 percent) in 2009-10 and ₹ 3364 crore (63.3 percent) in 2010-11. It increased to ₹ 3853 crore in 2011-12 (14.5 percent) and further to ₹ 6555 crore (70 percent) in 2012-13(BE). The ratio of capital outlay to GSDP that stood below 1 per cent in some of the preceding years advanced to 1.2 per cent in 2010-11. This trend continued in 2011-12 also with a ratio of capital expenditure to GSDP prevailing around 1.2 percent. The ratio of capital outlay to GSDP as per the budget estimate for 2012-13 is almost 1.7 percent. The actual expenditure of ₹ 3853 crore on capital outlay in 2011-12 exceeded the budget estimates of ₹ 3835 crore by ₹ 18.2 crore. As in the previous years, Public Works continued to absorb a major segment of capital outlay. During 2011-12 the allocation to Public works constituted above 47 percent (₹1820 crore) of total capital outlay. Sector- wise allocation of capital outlay in 2011-12 to sectors like irrigation, agriculture and allied activities and industries was in the order of ₹ 247 crore (6.4 percent), ₹311crore (8 percent) and ₹ 314.5crore (8.2 percent ) respectively. As regards loan disbursements, the trend shows consistent decline for the last five years. It declined from ₹ 984 crore in 2008-09 to ₹ 762 crore in 2010-11. However, this trend changed in 2011-12 consequent to the increase in the disbursement of loan, which rose to ₹ 999 crore in 2011-12, with an increase of ₹ 237 crore over 2010-11. The trend in Capital Outlay, Loan Disbursement and Capital Expenditure from 2007-08 to 2012-13 BE is given in Fig 1.9. The trend in Capital Outlay (sector wise) from 2002-03 to 2012-13 BE is given in **Appendix 1.40**

Fig 1.9  
Capital Expenditure



1.66 In the expenditure basket, development expenditure, which includes social sector expenditure is considered to be good quality expenditure as it builds social assets and improves the Human Development Index. Similarly capital outlay is considered to be high quality expenditure as it builds physical assets. Table 1.11 indicates that as a percent of GSDP, in BE 2012-13 Kerala had a lower quality of expenditure than the Southern States, as well as the All States average.

Table 1.11  
Development of Expenditure - Comparison of Select States 2012-13 BE

Sl.No	Item	Kerala	Karnataka	TN	AP	All States
1	Development Expenditure/GSDP	8.7	12.9	12.6	13.2	10.2
2	Social Sector Expenditure/GSDP	5.5	7.4	8.3	7.6	6.4
3	Capital Outlay/GSDP	1.7	2.8	2.4	2.6	2.3

Source: RBI State Finances A Study of Budgets 2012-13.

**Note:** Social Sector Expenditure consists of social services, along with warehousing and food storage and rural development heads under economic services. Development expenditure includes social sector expenditure, economic sector expenditure and devolution to local bodies.

## Debt Profile

1.67 The gap between revenue receipts and total expenditure of the state is bridged through borrowings, which constitutes the stock of debt for the state. Debt of the State includes borrowing on account of internal debt, loans and advances from GOI and liabilities in respect of Small Savings PF. Debt reached ₹ 89418 crore at the end of the financial year 2011-12. The annual growth rate of debt increased by 13.7 per cent in 2011-12 against 10.9 per cent in 2010-11. The debt of the State from 2007-08 to 2012-13 BE is given in Table 1.12

**Table 1.12**  
**Debt of the State**

(₹ in Crore)

Year	Internal Debt	Small Savings, Provident Fund, Others	Loans and advances from Central Government	Total
2007-08	34019.00 (61%)	15858.00 (29%)	5533.00 (10%)	55410.00 (100)
2008-09	38814.00 (61%)	18447.00 (29%)	6009.00 (10%)	63270.00 (100)
2009-10	43368.00 (61%)	21296.00 (30%)	6305.00 (9%)	70969.00 (100)
2010-11	48528.10 (62%)	23786.06 (30%)	6359.08 (8%)	78673.24 (100)
2011-12	55397.39 (62%)	27625.10 (31%)	6395.69 (7%)	89418.18 (100)
2012-13 (BE)	66626.49 (66%)	27413.78 (27%)	7138.90 (7%)	101179.17 (100)

( ) indicates percentage share

1.68 Table 1.12 indicates that in recent years there is a higher proportion of internal debt in the total debt basket.

1.69 The consistent decline of the ratio of debt to GSDP continued in 2011-12 also. It came down to 27.4 per cent in 2011-12. It is estimated to come down further to 25.9 per cent in 2012-13 (BE). The ratio of debt outstanding to revenue receipts has been falling consistently and dropped to 235 percent in 2011-12 and it is projected to come down further in 2012-13. Public debt constituted around 69 percent of total debt outstanding in 2011-12. Liabilities under public debt increased to ₹ 61793 crore in 2011-12 from ₹ 54887 crore in 2010-11 with showing a growth of 12.6 percent. The increase in the liabilities under small savings, PF, etc. in 2011-12 over 2010-11 was 16 percent. From ₹ 23786 crore in 2010-11, the liabilities under small savings, PF, etc. increased to ₹ 27625 crore in 2011-12. The repayment of past debt together with its interest charges always consumes a major portion of the debt receipts. Out of the total debt of ₹ 32781 crore availed in 2011-12, ₹ 22036 crore was expended for the repayment of debt while ₹ 6294 crore was used for payment of interest on outstanding liabilities. The repayment of past debt together with interest charges, amounting to ₹ 28330 crore, constituted 86.4 percent of the total debt receipt of ₹ 32781 crore in 2011-12. This means that only a small fraction of funds borrowed in 2011-12 was available after servicing past debt obligations. The Debt profile of the State from 2002-03 to 2012-13 BE is given in **Appendix 1.41**.

1.70 The per capita debt of Kerala which was ₹15700 in 2007 increased to ₹19900 in 2009 and ₹ 24600 in 2011(BE). A comparison of debt / GSDP ratio as well as per capita debt liability of Kerala with neighboring states is shown in **Appendix 1.42**.

1.71 A look at the BE target of debt – GSDP ratio indicates that Kerala has a much higher debt – GSDP ratio than southern states and the all States average.

1.72 RBI has created a matrix (Box 1.1) to show the debt stress of various states in the pre consolidation period (period before Debt Swap Scheme and Debt Consolidation and Relief Facility Scheme of Central Government) and the post consolidation period (after Central loans were consolidated). It may be noted that in both the periods, Kerala is placed under high vulnerability because of its high debt to GSDP ratio as well as its high ratio of interest payments to revenue receipts.

Box 1.1  
States Vulnerability Matrix

Debt/GSDP		Debt GSDP Ratios		
			High (30-50%)	Medium (20-30%)
IP/RR				
Ratio of Interest payments to Revenue Receipts	Very High (Above 25%)	Pre-consolidation	Odisha Punjab Uttar Pradesh West Bengal	
		Post consolidation	West Bengal	
	High (15-25%)	Pre-consolidation	Bihar Kerala Rajasthan	Andhra Pradesh Chhattisgarh Gujarat Haryana Madhya Pradesh Maharashtra
		Post consolidation	Bihar Goa Kerala Odisha Punjab Rajasthan Uttar Pradesh	Andhra Pradesh Gujarat Haryana Maharashtra
	Medium (10-15%)	Pre-consolidation	Goa	Jharkhand Karnataka Tamil Nadu
		Post consolidation	Madhya Pradesh	Jharkhand Karnataka Tamil Nadu
	Low (10%)	Pre-consolidation		
				Chhattisgarh

Source: RBI State Finances A study of Budgets 2012-13.

Note: Pre-debt consolidation refers to the period 1992-93 to 2001-02 and post debt consolidation period refers to the period 2002-03 to 2011-12

1.73 At the end of March 2013, according to RBI Kerala will have 27 per cent of its GSDP as outstanding liabilities compared to the All States average of 22 per cent, and around 22 per cent in the case of other Southern States (Table VI.3 RBI State Finances, A study of Budgets of 2012-13).

Table 1.13  
Ratio of Debt and Consolidated Debt as percentage of Revenue Receipts  
(for various years)

Period/Item	Consolidated Debt/ Revenue receipts
2007-08	262.52
2008-09	258.11
2009-10	271.8
2010-11	243.77
2011-12	230.59

Source: RBI State Finances A study of Budgets 2012-13

1.74 While consolidated debt/revenue receipts is coming down steadily, the interest payment to revenue receipts ratio is still on the higher side (See Tables 1.13 and 1.14).

**Table 1.14**  
**Interest Payment as percentage of Total Revenue Receipts**

Year/tem	Interest Payment /TRR
2007-08	20.51
2008-09	19.01
2009-10	20.27
2010-11(RE)	17.18
2011-12 (BE)	16.23

Source: Budget in Brief (various years)

1.75 Debt management of the Government also has to be improved to deliver a debt package at the lowest feasible cost. Costly sources of debt like NSSF funds (which seems to be still the second largest source of internal debt) or those from NCDC have to be kept at the minimum feasible level, relying as much as possible on cheaper debt such as market borrowings. Kerala also has its own indigenous public instrument of Treasury Deposits, which appears to be a cheap source of funds, helping to keep the cost of debt lower than what it would be otherwise (Working Paper : 449,CDS,Tvpm,2012).

## Contingent Liabilities

1.76 The outstanding guarantees of the State Government from 2007-08 to 2011-12 are shown in Table 1.15. Contingent liabilities can also become the debt obligations of the state in the event of default by borrowing public sector units for which Government is a guarantor. The Outstanding Guarantees during 2011-12 is ₹ 11332 crore.

**Table 1.15**  
**Outstanding Guarantees**

(₹ in Crore)

Year	Maximum Amount Guaranteed	Amount outstanding		
		Principal	Interest	Total
2007-08	14871.08	7575.28	742.06	8317.34
2008-09	11385.54	6912.65	690.67	7603.32
2009-10	10225.78	6889.22	605.78	7495.00
2010-11	12625.07	-	-	7425.79
2011-12	11332.11	-	-	8277.44

1.77 There is scope to increase revenue for the state by encouraging industries as it is the secondary sector that is more likely to contribute to the exchequer. Similarly judicious use of user fees for use of select or specialized infrastructure facilities may also be required. As more production and services shift from the un-organized to the organized sector, they are likely to come within the tax net. A destination based Goods and Service Tax (GST) in the place of origin-based elements like the central sales tax would be highly advantageous for a net importing state like Kerala and has the potential to raise revenues. Unproductive revenue expenditure should be reduced and capital expenditure, which is likely to yield future revenue streams, should be encouraged. A zero revenue balance, if not a revenue surplus should be targeted so that borrowed funds are used only for asset creation. Prudent debt management will be necessary as Kerala is more vulnerable to indebtedness than many other states in the country.



## SECTION 7

### Banking

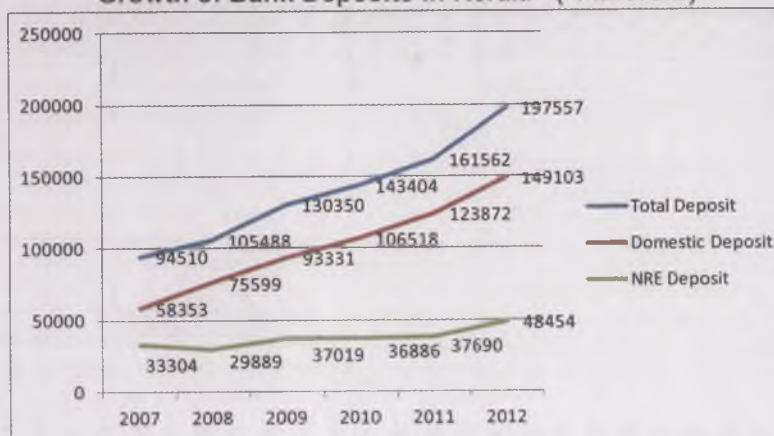
1.78 Availability of adequate and affordable finance is a key determinant for the performance of an economy. Despite being a small state, Kerala has an extensive bank network and accounts for 4.2 per cent of the total Scheduled Commercial Banks operating in the country on par with larger states like Bihar and Punjab (**Appendix 1.43**). At the end of March 2012, Kerala had 4783 branches and there was an increase of 256 branches compared to March 2011. Kerala has 3.1 per cent of the total advances financed by Scheduled Commercial Banks, on par with Haryana and much higher than states like Assam, Punjab, Rajasthan and Bihar (**Appendix 1.44**). All leading commercial banks have their presence in Kerala, with State Bank of India and State Bank of Travancore being the most dominant players.

1.79 Increase in deposits depend on the level of income and the propensity to save. In March 2012, deposits in Kerala banks accounted for 3.3 per cent of the total deposits in Scheduled Commercial Banks in the country (**Appendix 1.45**). Total deposits in Kerala grew by 22 per cent in 2012 over the previous year, with NRE deposits growing at nearly 29 per cent and domestic deposits growing by 20 per cent (**Appendix 1.46**). A unique feature of Kerala is the large proportion of NRE deposits, which was over 34 per cent of the total deposits in private sector banks in March 2012 (**Appendix 1.47**). NRE deposits accounted for around 25 per cent of the total bank deposits in Kerala (**Appendix 1.46**) and Fig. 1.10.



Fig:1.10

Growth of Bank Deposits in Kerala (₹ in crore)



1.80 People borrow from banks mainly for asset creation or investment. High rates of interest are a deterrent only if the expectation of financial return is low. In public sector banks, Kerala has a relatively low credit deposit ratio compared to neighbouring states of Tamil Nadu and Andhra Pradesh. It however, has a higher credit deposit ratio than Karnataka and the All India average (**Appendix 1.48**). However, the credit deposit ratio has increased significantly from just over 69 percent in March 2010 to 80.5 percent in March 2012, showing that credit growth is increasing at a higher rate than deposit growth. However, as long as the ratio is less than one, banks are likely to have idle funds, which need to be productively tapped. **Appendix 1.49** indicates that the CD ratio in public sector banks in Kerala is much higher than in private banks.

## Housing Loans

1.81 During 2011-12, banks in Kerala including Private Sector Banks sanctioned an amount of ₹ 23191.79 crore to 653165 beneficiaries as housing loan against ₹ 18531.91 crore to 596934 beneficiaries during 2010-11 (SLBC: 2012) showing more than 25 per cent growth in total housing loan sanctioned.

## Educational Loans

1.82 All major banks in Kerala now sanction education loan to deserving students as per the direction of the Ministry of Finance, Govt. of India. It is observed that, at the end of March 2012, ₹ 7210.63 crore was sanctioned to 359013 students and the percentage increase of education loan and beneficiaries during March 2011 was nearly 30 and 20 percent respectively over the last year (SLBC:2012)

## Advances to Weaker Sections and SC/STs

1.83 During 2011-12, an amount of ₹ 29658.12 crore has been disbursed to 3590688 beneficiaries of weaker sections in the state. Corresponding figures in 2010-11 was ₹ 23186.37 crore to 3841112 beneficiaries indicating nearly 28 per cent of growth in the amount sanctioned. During 2011-12 the advances to SC/STs was ₹ 3672.87 crore to 311892 beneficiaries against ₹ 3654.72 crore to 329107 beneficiaries in the previous year.

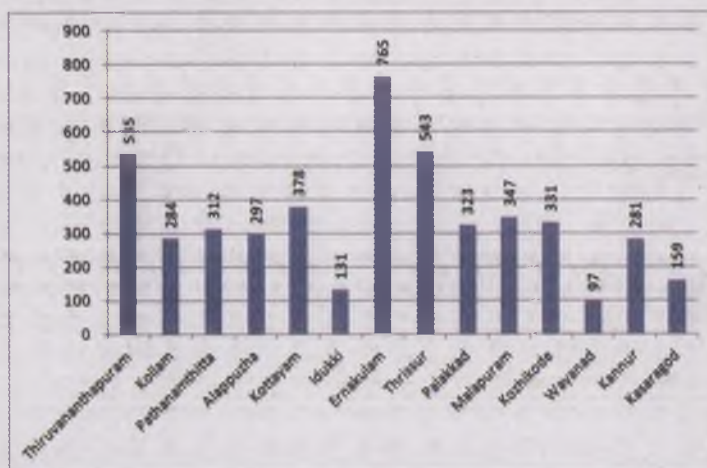
## Micro finance

1.84 Microfinance provides high quality financial services to the poor, either individual or as part of a group, with the aim of helping them out of poverty. It includes microcredit (also known as microloans), which is the provision of credit in small amounts to those who could previously not afford them due to the high cost of such services. It is a boon for those who do not have access to regular banking services. In Kerala More than 4 lakh Self Help Groups (SHG) maintaining their savings bank accounts with ₹ 625.49 crore in various banks as on March 2012. (SLBC:2012).

## District –wise Analysis of Banking Statistics

1.85 The District-wise details of banking statistics in Kerala reveals that Ernakulam district with 765 branches holds the largest number followed by Thrissur with 543 branches and Thiruvananthapuram 535 branches. (Fig.1.11). In Ernakulam, Wayanad and Idukki districts, the credit intake exceeded considerably against the deposits (**Appendix.1.50**). The disbursement of credit against deposit in Pathanamthitta district was very low with the C.D ratio of 30.6 percent.

**Fig 1.11**  
**District wise Distribution of Bank Branches in Kerala**



### Financial Inclusion:

1.86 Financial inclusion means the provision of affordable financial services, (viz., access to payments and remittance facilities, savings, loans and insurance services) by the formal financial system to those who tend to be excluded either because they are poor or because they are uneducated or because they live in remote areas or for any such reason. Meaningful Financial Inclusion involves ensuring that per family minimum one operating account is opened and people are persuaded to route their savings through their accounts. This will help them to develop better banking habit. They may provided with small credits if found genuine, and in emergencies. The ultimate aim is to liberate the poor from the clutches of private money lenders and to have a decent banking culture among them so that banks will not be hesitant to extend their services.

#### BOX 1.2

##### Meaningful Financial Inclusion for Ernakulam District

Ernakulam district which was the very first district in the country to achieve financial literacy as early as 1990, achieved Meaningful Financial Inclusion in line with national scenario. For achieving this task, the following efforts have been made.

- A baseline survey covering all households was conducted through Kudumbasree.
- Bank branches conducted campaigns in different locations to open the bank account among the poor.
- Effective publicity was taken to achieve the objectives.
- Steps were taken for linkage of bank accounts with AADHAAR number.
- During the period, out of the three unbanked villages, branches were opened in two villages and Ultra Small Branch in the third one.
- The survey showed that 81% of the families in the District were having bank accounts and 1.28 lakh households without bank accounts. Out of 26.36 lakh adult population 15.78 lakh (60%) were without bank accounts.
- Five Financial Literacy Centres are functioning in the district.
- As Lead Bank, Union Bank of India took initiative in all these activities.

*Source: Union Bank of India*

1.87 Details on Agricultural finance and Co-operative Credit are available in Chapter 2. Similarly details on industrial credit, Housing Loans and Loans for specific purposes/specific target groups are given in subsequent chapters.

## Macro Economic Outlook for Kerala

1.88 Kerala's fundamental advantages, other than the high quality of the population, are : higher GSDP and per capita income growth compared to national averages, relatively low poverty, excellent banking network and high financial literacy. However, these advantages are not uniform across the state and special attention is being given through various schemes ( targeting development of Idukki, Wayanad, Kuttanad, Palakkad, coastal areas, hill areas, remote areas and so on ) to reduce variations in development indicators across districts/regions so that there is balanced intra-state regional development. At the macro level, Kerala's challenges are: lack of adequate urban infrastructure (especially transport, energy, housing and waste management) to cater to the growing urban population, high inflationary trends in all factors of production (land, labour and capital), high cost of food and manufactured items (Kerala being a net importing state) and the difficulty faced by the Government to balance revenue and expenditure, without resorting to high levels of borrowing.

- Keeping unproductive revenue expenditure in check, reducing subsidies by effective targeting of the genuinely needy groups and increasing capital expenditure by better use of all sources available, including Central Assistance and Private Investment will improve the quality of public expenditure.
- Simultaneously, greater efforts to increase revenue through both tax and non tax revenue sources, considering people in Kerala have a relatively high disposable income, could reduce the dependence on debt, which will have to be paid by future generations. Kerala's approach to development in the XIIth Plan is based on care and compassion for all groups of people and systems are being put in place to ensure even better standards of living for all.



# AGRICULTURE AND ALLIED SECTORS





LD-14923  
04-08-2016

# AGRICULTURE AND ALLIED SECTORS

## Introduction

*Kerala is known for its lush green landscape, its dense forest cover, abundant water bodies, long coastline and its environment friendly culture. Agriculture, Fishing and Forestry contributed 9 percent to Kerala's GSDP in 2011-12 (current prices). The share has been falling steadily over the years. There has been negative growth in this sector in all the years of the XI<sup>th</sup> Plan except in 2008-09. The low availability of land and the high cost of other factors of production (farm labour, fertilizer, etc), the excessive dependence on volatile international commodity prices and the vagaries of the monsoon have resulted in low farm viability. However, this sector is very significant from the point of view of rural livelihood options, food security, raw material for the food processing industries and for exports. It is this sector which gives character to the State and various initiatives have been taken to promote crop development, animal husbandry and fisheries in Kerala.*

*This chapter deals with the performance of various agriculture crops and discusses the major concerns (drought, declining production of food crops, high fertilizer prices, threat of plant pests etc.) as well as the initiatives taken by Government to mitigate them. An analysis of Livestock Development and Fisheries has also been made. Separate sections have been devoted to Water Resources, Forests and Environment, bringing out the critical issues and recent key initiatives taken. A factor of production which is as critical to this sector, as to any other sector is capital for timely and adequate investment. Various sources of agricultural finance and co-operative credit are detailed in this chapter. This chapter also includes a section on Rural Development where various schemes promoting rural employment and rural infrastructure, which are essential to the overall growth of the farm sector and well being of farmers and agricultural workers are discussed. Food security measures in the State are also brought out.*

## Agriculture

The inherently vulnerable, predominantly commodity trade dependent economy of Kerala's agriculture has been characterized by a high degree of volatility. Kerala economy had developed strong linkages with international markets and has historically been tied to trade and export. The export orientation of crops like spices, cashew, coffee, tea and marine products and indirect implication of palmoil import on coconut prices are subjected to global vulnerability. Growth is estimated to have weakened appreciably in developed countries and low growth and uncertainty in advanced economies are affecting the market opportunity of commodities resulting in unremunerative prices of farm produce and decline in growth in agricultural GSDP. The instability in farm production is also causing serious shocks to supply and farm income and there is a growing concern about the increased volatility in farm production, prices and farm income. Increased intensity and frequency of moisture stress, altered



hydrological cycles and precipitation variation caused in recent periods have negative implications and cause instability in the perennial crop based agrarian economy of the State.

## Performance of Agriculture

2.2 The growth performance of the agriculture sector has been fluctuating across the plan periods. It witnessed a negative growth rate of 1.3 percent in XI<sup>th</sup> Five Year Plan while a positive growth of 1.8 percent in X<sup>th</sup> Plan period. The quick estimate of 2011-12 indicated a negative growth of 1.6 percent over the previous year. The provisional estimate of agricultural income of the state again shows a negative growth of 4.5 percent during 2010-11. The crippling growth rate in agriculture as against a reasonably robust annual growth rate of GSDP of the State is a cause of concern.

2.3 The agriculture in Kerala has undergone significant structural changes in the form of decline in share of GSDP from 26.9 Percent in 1990-91 to 9.1 percent in 2011-12, indicating a shift from the agrarian economy towards a service sector dominated economy. The annual growth rate of agricultural income and share of agricultural GSDP for the last five years are shown in Table 2.1.

**Table 2.1**  
**Annual Growth Rate in Agricultural Income and Share of Agricultural GSDP in Kerala**  
**(Base 2004-05)**

SL No.	Year	Rate of change over previous year	Share of Agriculture and Allied Sectors in GSDP
1	2007-08	-2.2	13.2
2	2008-09	2.1	12.7
3	2009-10	-3	11.5
4	2010-11*	-4.5	10.1
5	2011-12**	-1.6	9.1

\*Provisional \*\* Quick

Source: Directorate of Economics and Statistics

2.4 Although the share of agricultural GDP (agriculture and Animal Husbandry alone) has declined in almost all states, agriculture is an important contributor to GSDP in some States in 2011-12 like Punjab (21.5%), Assam (18.1%), Bihar (15.9%), Uttar Pradesh (20.3%). On the other hand the States like Tamilnadu (6.6%) and Kerala (7.7%) the share of agriculture is relatively low. But a large share of rural population in almost all the States is dependent on agriculture for employment and livelihood. The share of agriculture and allied sectors including fisheries and forestry is only 9.1 percent in the State in 2011-12.

2.5 Reviving the agriculture sector require a quantum increase in productivity from the current levels. This in turn requires technological breakthrough given the limited supply of land and other structural rigidities, addressing low level of mechanization, shortage of irrigation facilities, treatment of soil acidity and multiple nutrient deficiencies, plant health management, remunerative prices and poor extension services.

## Monsoon 2012

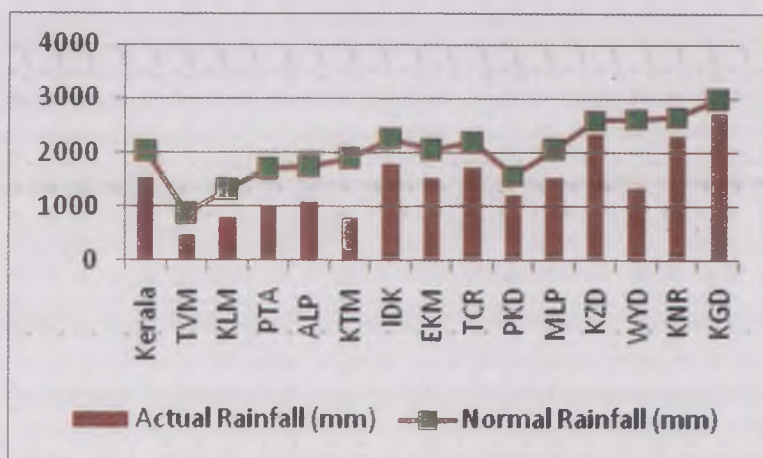
2.6 The Pre monsoon rainfall received in the state from 1st March 2012 to 31st May 2012 was normal with a departure of -19 percent from the normal. The actual rainfall received during the period was 308.5 mm. Ernakulam District recorded excess pre monsoon rainfall (23%) and Kannur District had scanty rainfall (-68% departure from normal). Normal rainfall was received in 7 districts of the state ( Alappuzha, Idukki, Kollam, Kottayam, Pathanamthitta, Thrissur and Wayanad). Pre monsoon rains were deficient in 5 Districts ( Kasargod, Kozhikkode, Malappuram, Palakkad and Thiruvananthapuram)

2.7 Southwest monsoon current advanced over the Andaman Sea on 23rd May with a delay of about

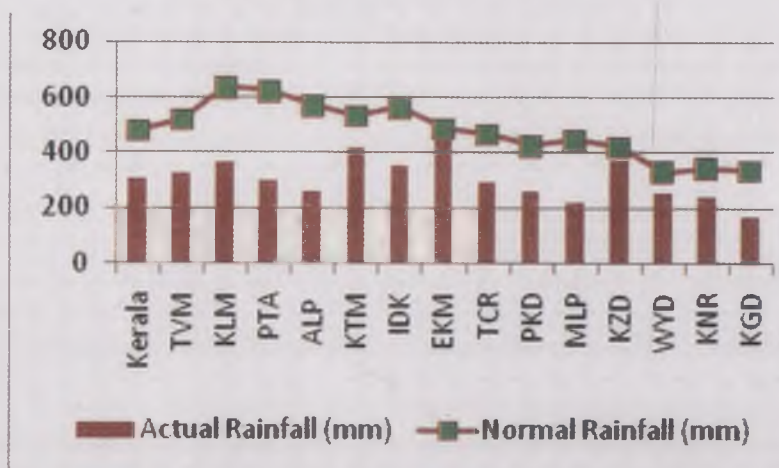
3 days and set in over Kerala on 5th June, 4 days later than its normal date of 1st June. The actual rainfall received in Kerala during the South West Monsoon season (1<sup>st</sup> June to 30<sup>th</sup> September 2012) was 1551.3 mm as against the normal rainfall of 2039.6 mm which was -24 percent deficient. During the previous SW monsoon (2011) Kerala had received an actual rainfall of 2215.8 mm. Eleven districts in the state received deficient rainfall during 2012, while Kasaragod, Kannur and Kozhikkode districts normal rainfall. Deficiency in SW monsoon was highest in Wayanad District (-49%) followed by Thiruvananthapuram (-43%).(Fig.2.1)

2.8 During the North East Monsoon season 2012 ( 1<sup>st</sup> October to 31<sup>st</sup> December 2012) the state received 310.8 mm of rainfall as against 480.7 mm of normal rainfall which was deficient with a percentage departure of -35 percent from the normal. Twelve districts in Kerala received deficient rainfall during this season except Ernakulam and Kozhikkode which recorded normal rainfall. Percentage departure from the normal was highest in Alappuzha District( -54%) followed by Malappuram and Pathanamthitta districts and both showed a deviation of -51 percent from the normal rainfall (Fig.2.2). District wise rainfall distribution in the state during 2012 is given as **Appendix 2.1**

**Fig 2.1**  
South West Monsoon received in Kerala during  
1<sup>st</sup> June – 30<sup>th</sup> September 2012



**Fig 2.2**  
North East Monsoon received in Kerala during  
1<sup>st</sup> October – 31<sup>st</sup> December 2012



## Drought Situation 2012

2.9 During North East monsoon season the most affected districts during South West monsoon season ie. Thiruvananthapuram and Wayanad received comparatively more and distributed rainfall. But other districts still received less rainfall compared to normal. This adversely affected the second (Mundakan) crop of rice from which the farmers expected maximum yield. In addition to this Alappuzha district also suffered from salt water inundation. In North Kerala, Malappuram, Kasaragod and Palakkad were the most affected districts. A long dry spell of more than 7 months is expected in these districts. Another most affected crop is coconut. The nut yield in the coming year is likely to be affected. Moreover these districts face more problems for raising summer vegetables due to deficiency of water. (Source : Quick study by Project team on Crop Weather Analysis and Climate Change Adaptation Study, Kerala Agricultural University, 2013).

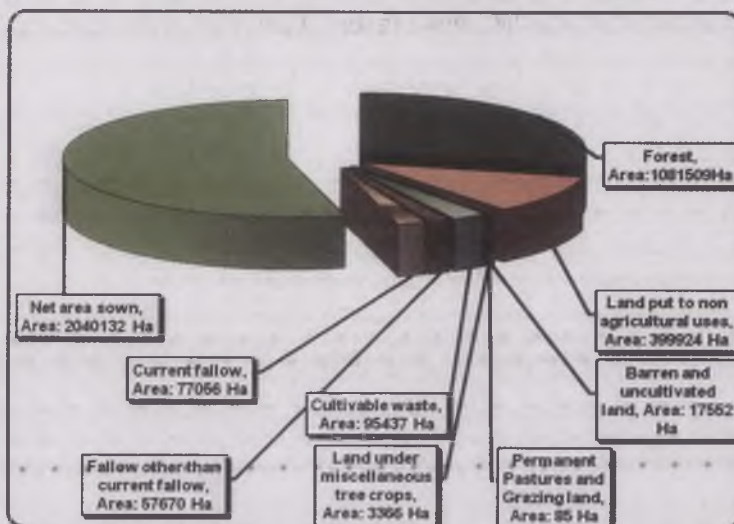
2.10 Rainfall for the country as a whole during the period 1<sup>st</sup> June to 30<sup>th</sup> September, 2012 is 8 percent less than long period average. Major States affected were Jharkhand, West Bengal, Tripura, Maharashtra, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. The North East monsoon commenced on 19<sup>th</sup> October 2012 in the country and out of a total of 36 met sub-divisions, 15 met sub-divisions constituting 39 percent of the total area of the country have received excess / normal rainfall and 21 met sub-divisions constituting 61 percent of the total area of the country have received deficient/scanty rainfall. Cumulative Post-Monsoon Rainfall for the country as a whole during the period 1<sup>st</sup> October to 31<sup>st</sup> December, 2012 is 21 percent less than Long Period Average (LPA). Major states affected with water shortage were Jharkhand, West Bengal, Tripura, Maharashtra, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu.

2.11 The deficiency of monsoons has affected the reservoir storage levels in major reservoirs in the state. The low levels of reservoir storage further narrows the chances of providing life saving irrigation to these crops and the end result will be extensive crop damage. The entire state has been declared as drought affected and a series of initiatives were proposed for implementation including restructuring loans with the support of commercial banks. Departments may prepare both short term and long term strategies for addressing drought situation. The restoration of tanks and ponds, basin wise management strategies for water management, micro irrigation and agronomic measures for improving water use efficiency needs to be implemented urgently.

## Land Use

2.12 Data on land use pattern of Kerala for the year 2011-12 is given in **Appendix 2.2**. Out of a total geographical area of 38.86 lakh ha. net sown area is about 53 per cent. The net sown area has declined by 1.5 percent in the current year over 2010-11. The share of total cropped area in the total geographical area is 68 percent. It marked an increase of 14296 ha during 2011-12 over the previous year while the net area sown declined by 31375 ha over the previous year. The share of land under non-agricultural uses out of total geographical area is 10 per cent in 2011-12. There is an increase in the area under current fallow (1028 ha) and increase in the area under fallow other than current fallow (5727 ha) during 2011-12. The area under cultivable waste also increased by 3772 ha and barren and uncultivated land declined by 2021 ha. The land use pattern is shown in Figure 2.3

**Fig 2.3**  
**Land use Pattern of Kerala (2011-12)**



### Trend in Area, Production and Productivity of Crops and Performance

2.13 In Kerala total food grain production reached to 0.6 lakh MT during the respective year. Data regarding the area, production and productivity of important crops grown in Kerala are shown in Table 2.2 and **Appendix 2.6**. Out of a gross cropped area of 26.6 lakh ha. in 2011-12, food crops comprising rice, pulses and tapioca occupy 10.8 per cent. Kerala state which had a low base in food production is facing serious challenges in retaining even this meager 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 banana and plantations.

**Table 2.2**  
**Area, Production and Productivity of Principal Crops**

SL No.	Crops	Area (Ha)		Production (MT)		Productivity (Kg/ha)	
		2010-11	2011-12	2010-11	2011-12	2010-11	2011-12
1	Rice	213187	208160	522738	568993	2452	2733
2	Pulses	3824	3668	2908	3128	760	853
3	Pepper	172182	85335	45267	37989	263	445
4	Ginger	6088	6908	33197	37130	5453	5375
5	Turmeric	2391	2970	6198	7946	2592	2675
6	Cardamom	41242	41600	7935	10222	192	246
7	Areca nut	99834	104548	99909	121623	1001	1163
8	Banana	58671	59069	483667	514054	8244	8703
9	Other Plantains	49129	48747	353772	330634	7201	6783
10	Cashewnut	43848	54052	34752	36743	793	680
11	Tapioca	72284	74498	2408962	2567953	33326	34470
12	Coconut *	770473	820867	5287	5941	6862	7237
13	Coffee	84931	84413	65650	68175	773	808
14	Tea	36965	37028	57291	57903	1550	1564
15	Rubber	534230	539565	770580	788940	1442	1462

Source: DES

\* Production of coconut in million nuts and productivity in numbers

2.14 During 2011-12, the area under rice declined by 5027 ha. In the case of pepper, the area declined from 1.7 lakh ha in 2010-11 to 0.9 lakh ha. in 2011-12. Area under coconut was 7.7 lakh ha in 2010-11. But it increased to 8.2 lakh ha during 2011-12. All the major crops except rice and pepper showed increase in area in 2011-12. Similarly production of all major crops increased in 2011-12 except pepper. Substantial increase in production of rice is reported to the tune of 9 percent in 2011-12. In the case of coconut 12 percent increase in productivity is also reported.

2.15 With the use of the index numbers it is easier to know the trends over time with respect to area, production, productivity of prominent crops. Index of area under food grains reveals again a declining trend. The deteriorating trend is more visible in the case of cereals. Area under pulses also shows a consistent fall during 2010-11 and 2011-12 periods. Despite of it, production and productivity levels improved in the respective periods. Area under coconut, plantation crops, vegetables and fruits, cashew and tapioca shows an increasing movement. Index of production of all these crops are expanded during the period. The productivity index of cashew fell drastically during 2011-12 due to rise in area coupled with comparatively small increase in production. Details are given in **Appendix 2.7**

## Crop Wise Analysis

### Rice

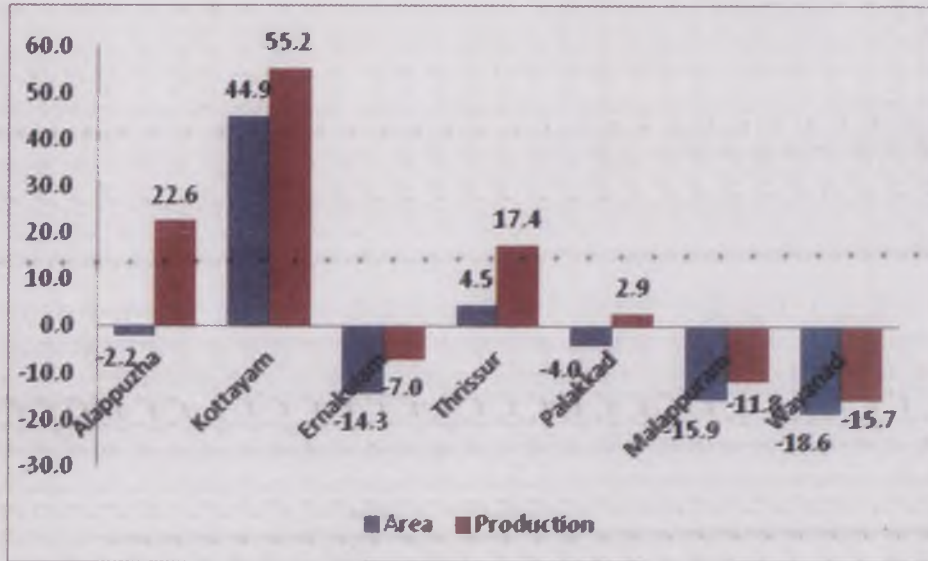
2.16 In order to increase food production in the state, a major food security project was launched in 2008-09. As part of the project, regional subprojects were launched with additional incentives, interest free loans, project based support for fallow land cultivation and a package of support measures. The procurement price was also enhanced to ₹13 per kg and further to ₹17 per kg. A modernization programme for lift irrigation was also initiated as part of the food security project. A rehabilitation project on ponds was also initiated. The outputs in terms of area is discouraging even after enacting paddy land and wetland conservation act as well as after enhancing the procurement price. The paddy procurement has extended to all districts from February 2012. For procurement alone an amount of ₹107.65 crore was paid to Civil Supplies Corporation. The area under rice has been declining consistently over the last several years. After a long period of continuous decline, area under rice increased from 2.29 lakh ha in 2007-08 to 2.34 lakh ha in 2008-09 and sharply declined by 20828 ha in 2010-11 period over the previous year. During 2011-12, the area under rice declined by 5027 ha, but the production has increased by 0.5 lakh MT. The production is increased due to increase in productivity. The productivity increased to the tune of 11.5 percent. The upland rice development was implemented in 6539.06 ha and fallow land cultivation in another 731.7 ha. Reorganization of rice development scheme with focus on potential areas covering regional targets and technology package is essential with effective procurement operation.



System of Rice Intensification (SRI)

2.17 The national target for the food grain production has been fixed at 245.00 million tonnes for 2011-12. The production of food grains during the period is estimated at 259.3 million tonnes compared to 244.8 million tonnes in 2010-11. Rice production in the country is estimated at 92.8 million tonnes. Details are given in **Appendix 2.8 to 2.13**

**Fig 2.4**  
Percentage change in Area and Production of Rice in Major Districts of Kerala during 2011-12 over 2010-11

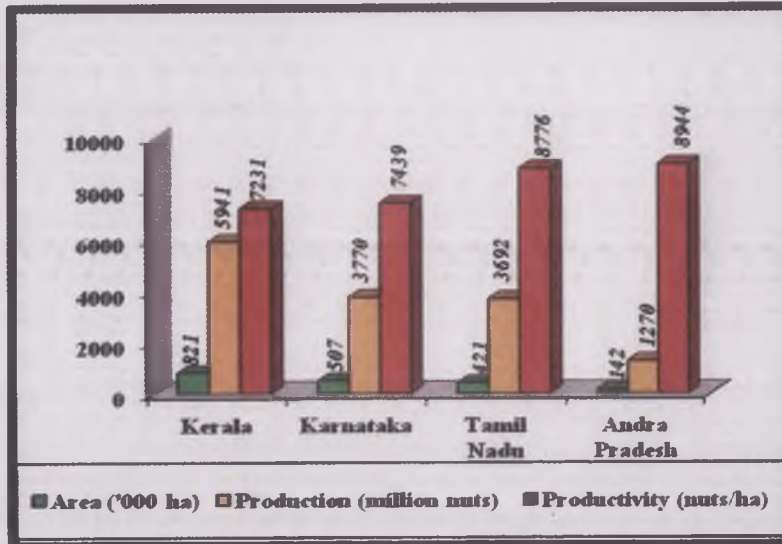


## Coconut

2.18 Coconut based farming is the main stay of farmers of the State with a coverage of 8.2 lakh ha which occupies 40.2 per cent of the net cropped area. During 2010-11, area and production of coconut in the State declined by 1.2 percent and 6.7 percent respectively. In 2011-12, the situation has improved with 6.6 percent expansion of area and 12.4 percent upsurge in production over the previous year. The productivity levels of coconut in Kerala also improved (5.5%) significantly, but is still lower than in other southern states (Fig.2.5).

2.19 The implementation of massive replanting of root wilt affected palms with seedlings of elite palms could be improved immediately campaign mode. 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 for improving income of the farmers. Effective harvesting machines also need to be developed for promotion. Restructuring of the cluster development programme is also essential for more effectiveness. The initiatives of the Coconut Development Board for the skill development and formation of producers societies is expected to address a basic issue in coconut development. Restructuring of the cluster development programme is also essential for more effectiveness. The isolated attempts of production of dwarf coconut seedlings and hybrids need to be scaled up substantially with the support of Research and Development institutions. The strengthening of procurement of coconut as well as promotion of Neera are essential for the survival of the crop. In India, coconut is grown in an area of 2039.1 million ha, producing 14006.5 million nuts with a per hectare productivity of 6869 kg of nuts in 2011-12. Kerala's share in area as well as production of coconut in the country is declining over time. Kerala stands top by contributing 42.4 percent of total production of the crop in the country. (Details are given in **Appendix 2.14**). The area, production and productivity of coconut in southern states are shown in figure 2.5.

Fig. 2.5  
Area, Production and Productivity of Coconut in Major States of India (2011-12)



Source: Department of Agriculture & Co operation (Horticulture Division)  
Department of Economics and statistics, Kerala

## Pepper

2.20 In Kerala, the area under pepper is estimated at 0.85 lakh ha and production at 0.38 lakh MT during 2011-12. It is noted that the production has declined by 16.1 percent in the respective period caused by erratic weather condition in growing regions and also on account of structural issues. Insect pest problem of erythrina (standard), weather viability, absence of alternate standards, poor productivity, fluctuating prices etc. compounded the declining production.



Pepper Garden

2.21 The domestic price of pepper shows an upward trend from the mid twenties and reached ₹ 418.58 per kg in October 2012 and further declined to ₹ 378.04 per kg. in February 2013. Revitalization of pepper is essential for improving the livelihood of farmers. A convergence approach is to be followed for implementing schemes by the Spices Board, State Horticulture Mission and the

Department of Agriculture. Reorientation of pepper development scheme is required to regain the supremacy of the crop covering technology and market support, revival of pepper samithies, good quality planting materials and promotion of alternate standards.

2.22 During 2011-12, in India a total quantity of 26,700 tonnes of pepper valued ₹ 878.13 crore have been exported as against 18,850 tonnes valued ₹ 383.18 crore in the last year. Pepper production in India during 2011-12 is estimated at 48 thousand tonnes. This stagnant nature of pepper production in recent years is mainly due to low productivity and disease affected pepper gardens.

2.23 World pepper production during 2011-12 was estimated at 298.4 thousand tonnes compared to 329.7 thousand tonnes in 2010-11 period which shows a decline of 31.3 thousand tonnes. Vietnam holds the first position with 33.5 percent share of world pepper production and India contribute 16.1 percent share with 2<sup>nd</sup> rank.

## Cashew

2.24 Area under the crop in Kerala, has been declining steadily from 1.25 lakh ha. in 1988-89 to 0.44 lakh ha. in 2010-11. During 2011-12, there is 23.3 percentage increase in the area (0.54 lakh ha) and the production also surged to 0.37 lakh MT from 0.35 lakh MT in 2010-11. The share of Kerala in the area under cashew in the country has come down from 23 per cent in 1987-88 to 5.4 percent in 2011-12 and the corresponding decline in share of production is from 31 per cent to 5.3 percent. Area and production are increasing steadily in other producing States in the country. Even though the major share of area under cashew comes from Andhra Pradesh (19.5%), Maharashtra is the leading producer with 32.2 percent share in production during 2011-12; Maharashtra's share was only 10 per cent in 1990-91. Kerala holds 4<sup>th</sup> position in cashew production.

2.25 In spite of operating special schemes for expansion of area under cashew, the coverage has been steadily declining during the last two decades except in 2011-12. 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 800 kg. In 2011-12, it further declined by 14 per cent (680 kg. per ha) over the previous year. Details are given in **Appendix 2.15**



## Plantation Crops

2.26 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.

2.27 Kerala has a substantial share in the four plantation crops of rubber, tea, coffee and cardamom. These four crops together occupy 7.02 lakh ha, accounting for 34.4 percent of the net cropped area in the state. Kerala's share in the national production of rubber is 87.3 per cent, cardamom 79 per cent, coffee 22 per cent and 7 percent in tea during the year 2011-12.

## Rubber

2.28 In Kerala the coverage under the crop in 2011-12 was 5.39 lakh ha, higher by 5335 ha. over the previous year. The production of natural rubber in Kerala during the period was 7.89 lakh tonnes indicating 2.4 percent increase over the previous year. In 2011-12, the productivity increased slightly to 1462 Kg/ha from 1442 Kg/ha in 2010-11. 87.3 percent of total rubber production in the country was from Kerala in the current year of 2011-12.

2.29 The production of natural rubber in the country was 9.04 lakh tonnes in 2011-12, registering a 4.9 per cent increase compared to 2010-11. The growth in production was attributed by favourable climate and attractive price. India continued to be in the first position in the world in productivity during 2011-12 also which increased to 1841 kg/ ha from 1806 kg/ha during 2010-11 in terms of yielding area. The total consumption of natural rubber in 2011-12 was 9.64 lakh tonnes with a growth of 1.8 percent as against 9.47 lakh tonnes during 2010-11. The import of Natural Rubber in the country up surged to 2.14 lakh tonnes in 2011-12 from 1.90 lakh tonnes in 2010-11. While export of Natural Rubber during 2011-12 declined to 27145 tonnes from 29851 tonnes in the previous year.

2.30 The global Natural rubber production was also marked an increase of 5.75 lakh tones in 2011-12 and estimated at 109.74 lakh tonnes, which was 103.99 lakh tonnes in the previous period. All the major producing countries reported increase in crop, led by Thailand with a share of 30.9 percent share in the total world production, followed by Indonesia (27.2%) and Malaysia (9.1%). India hold only 4<sup>th</sup> position (8.1%) in this regard. Details are given in **Appendix 2.16 to Appendix 2.19**

## Coffee

2.31 The area under coffee in Kerala was 0.84 lakh ha out of 4.09 lakh ha in the country during 2011-12, which works out to around 21 per cent. The percentage share of area under coffee is highest in Karnataka ( 56.1%). The share of Kerala in production is around 22 per cent during 2011-12. Major variety grown in Kerala is Robusta with a share of 97.1 per cent in planted area. Production of coffee during the year was only 0.68 lakh MT against 3.14 lakh MT for the country. Productivity of the crop in terms of bearing area in Kerala is 808 kg/ha which is lower than the national level of 852 kg/ ha during 2011-12. Even though the area under coffee registered a slight decline during the period, the production has recorded 3.8 percent increase as against the previous year. Domestic coffee production for the year 2011-12 is more than 0.12 lakh tonnes compared to the previous year. Among the States, Kerala stands next to Karnataka which produces 70.4 percent of total coffee production.

2.32 Global coffee production during 2011-12 was estimated at 131.9 Million bags compared to 134.2 Million bags in the previous period. The decline in crop was reported from South American countries mainly Brazil(-4.6 Million bags) and Columbia(-0.7 Million bags). Brazil's position remained top in the world coffee scene with a share of 33 percent even there is a fall in the crop during the period. Vietnam occupies 2<sup>nd</sup> position with 15.2 percent share and Indonesia (6.3%) retained its 3<sup>rd</sup> place in the world coffee production. India slipped to seventh position (4%) , despite increase in production.

## Tea

2.33 Against the total area of 5.8 lakh ha under tea in the country Kerala accounts for only 0.37 lakh ha 2011-12. Area under South India is estimated as 1.2 lakh ha in the period. In respect of total production of tea in India, the share of Kerala is 6.9 percent in 2011-12. There is a slight increase in production of tea in Kerala and it ranged from 0.57 lakh MT in 2010-11 to 0.58 lakh MT in 2011-12.

2.34 During 2011-12, slight increase in world tea production was reported i.e., 4217.1 M.kg. compared to 4162.5 M.kgs in the previous year. This increase was recorded from the two major producing countries, viz. China (74.9 M.Kgs) and India (21.9 M.kgs). In India, tea production during 2011-12 was placed at 988.3M.kgs against 966.4 MKGs in the previous year. During this period, the share of India is 23.4 percent in the World tea production, occupying 2<sup>nd</sup> position after China (36.8% ). Details are given in **Appendix 2.20**

## Cardamom

2.35 Kerala accounted for a major share (78.8% ) in the total cardamom production in the country. Karnataka and Tamilnadu contributed 14.7 percent and 6.5 percent share respectively. In Kerala, the area under cardamom is 0.42 lakh ha comprising 59.2 percent of total area of crop in the country during 2011-12. The production has increased from 0.08 lakh MT to 0.10 lakh MT in the respective year.

2.36 The price of cardamom in domestic market was ₹ 1013 per kg. in 2010-11, which further declined ₹ 614 per kg. in 2011-12 and slightly increased to ₹ 677.59 per kg in February 2013. Remunerative prices are required for the development of crop in the state.

2.37 During 2011-12, India produced 12.98 thousand tonnes of Cardamom with an increase of 2.60 thousand tonnes compared to 10.38 thousand tonnes in the last year. Area under cardamom in the country is 0.71 lakh ha during this period. Details are given in **Appendix 2.21**

## Collective Farming through Kudumbashree

2.38 Collective farming is an important area of Kudumbasree which aims at food security both at household and community level. From 2010 onwards collective farming groups were organised as Joint Liability Groups (JLGS). Total number JLGs during this period was 6116 and cultivated 9912.07 ha in 2011-12. The major crops cultivated are paddy, vegetables, banana, pineapple and tubers. Area brought under cultivation of paddy was 3838.06 ha, vegetables contributed to 1352.524 and 4721.49 ha of area was covered by other crops (banana, pineapple and tubers). Details of area covered are depicted in **Appendix 2.24**. More hand holding support including facilitation with banks and technology support are essential for improving livelihood of the women groups involved in farming.



## Key Initiatives of the Department of Agriculture in 2012-13

2.39 The key initiatives of the Department of Agriculture in 2012-13 for the improvement of agriculture sector are shown in box 2.1. The introduction of farmer registration and E- payment system are expected to streamline delivery system in agriculture. The physical target oriented implementation at panchayat level initiated for vegetable development. Implementation of physical target oriented

scheme implementation needs to be introduced for all major schemes. More proactive steps are required for the implementation of extension schemes and value addition projects. Pilot projects for the implementation of income security also to be prepared. The bill for the setting up of Farm Welfare Fund Board also to be introduced in the Assembly. The new initiatives coupled with services notified under Service Delivery Act 2012 are expected to revitalize the agriculture sector of the State.

### Box 2.1 Key Initiatives in 2012-13

- Initiated farmer registration and 14.69 lakh farmers registered with the Krishi Bhavans upto November 2012.
- E- payment system introduced for providing assistance to farmers.
- Agro service centres started in 35 blocks through the department Agriculture and another 40 Farmer Service Centres through Co operation department.
- Hi tech agriculture focussing on polyhouse based vegetables and flower production and open farming initiated. Implementation is progressing with construction of 667. polyhouses
- Steps initiated for the establishment of two rice bio parks and coconut bio park.
- Comprehensive vegetable development project is under implementation with focussed activities in 55 blocks.
- Mobility support provided to Krishi Bhavans.
- Restructured procurement initiated for coconut.
- Paddy procurement price increased and streamlined the procurement operations in all districts.
- Implementation of Agricultural Technology Management Agency (ATMA) Plus for extension initiated in all districts.
- Establishment of Farmer Welfare Fund Board is in the early stage of implementation for the consolidation of the all welfare schemes of farmers.
- Physical target oriented implementation at panchayat level initiated for vegetable development.
- Initiated setting up of two incubation centres at National Institute for Interdisciplinary Science and Technology (NIIST) and Central Tuber Crops Research Institute (CTCRI) for value addition and initiated implementation of value addition projects through Small Farmers Agri Business Consortium (SFAC)
- Revised strategic Research and Extension Plan prepared in all the districts for XII<sup>th</sup> Five Year Plan.

## Crop Development Programme - Review of Annual Plan 2011-12

2.40 During the Annual plan 2011-12 an amount of ₹ 210.75 crores was provided to crop husbandry which include partially aided schemes and 100 percent Centrally sponsored including central release of SHM. Expenditure incurred under crop husbandry and agriculture research amount to ₹ 245.33 crore, which constitute 96 percent of the outlay. A major scheme wise financial achievement made during the period is furnished in **Appendix 2.25**. An amount of ₹ 28.98 crore was utilized for the development of rice in the State. The ultimate objective of rice development programme is to improve the production of rice and to attain the productivity of a minimum of 3 tonnes per ha by the end of the XII<sup>th</sup> Plan period. Paddy cultivation is mainly undertaken by the Group Farming Samithies. It is estimated that about an area of 1.75 lakh ha is under about 6850 group farming smithies. In food security project the following are the achievements under rice development. An area of 1.72 lakh ha was covered under group farming by utilising an amount of ₹ 28.68 crores. Under fallow land cultivation, an area of 3407 ha has been treated and upland cultivation was done in an area of 6539 ha by utilising an amount of ₹ 327 lakh. Wadakkanchery model rice cultivation has been implemented in 12 blocks covering an area of 3000 ha by expending an amount of ₹ 498 lakh. Under comprehensive coconut development programme, an area of 10,209 ha has been covered and 408 coconut clusters were formed for improved cultivation.

2.41 For the development of vegetables, commercial vegetable cultivation was undertaken in 2940 ha by utilising an amount of ₹ 260 lakh, school gardens in 500 schools and distributed 25 lakh vegetable seed kits, establishment of 347 organic villages etc. are the main activities. Under pepper development programme in Wayanad, 2358 ha area was covered by expending an amount of ₹ 6.45 crore (99%) against the outlay of ₹ 6.5 crore. Purchased 50 numbers of harvesting machines under 1st phase of Kuttanad package. The project for strengthening extension –‘LEADS’ was initiated in Kollam, Kannur and Palakkad districts

## Major Achievements during XI<sup>th</sup> Plan.

2.42 The outlay provided to crop husbandry, agriculture marketing and other agriculture programmes during XI<sup>th</sup> Plan was ₹1334.84 crore and the expenditure reported was ₹1257.74 crore (94%). A project on state food security launched in 2008-09. A convergence approach was followed and local governments also supported the initiative. The total outlay for this programme during the plan period was ₹ 92 crore of which ₹ 87.46 crore was expended. The Kerala state Farmers Debt Relief Commission has been set up and functioning in the state since 9-04-2007. The Commission had received 4.11 lakhs application and total amount received was ₹ 112.55 crore. A pepper package was introduced in Wayanad district for the rehabilitation of pepper through a combination of technological and institutional framework.

2.43 A network of markets and associated infrastructures like godown, cold storage facilities including processing infrastructure were set up during the period and for that an amount of ₹18 crore was utilized. Major scheme wise expenditure is given in **Appendix 2.26**

## Horticulture Mission

2.44 The mission aims at addressing problems related to generation of technology, production, post harvest management, processing and marketing under one umbrella in the horticulture sector. A total amount of ₹ 7118 lakh was released during 2011-12 and the total expenditure was ₹ 7349.36 lakh including state share. A project oriented monitoring system has to be evolved for realizing the envisaged outputs. A number of NGOs as well as private sector are also part of the project which needs further monitoring. More convergence of schemes with state plan and RKVY with deliverable are required for improved outputs. Details are given in **Appendix 2.27**

## Vegetable and Fruit Promotion Council's Programme

2.45 During the year 2011-12, 9280 farmers were inducted and 515 new SHG's were formed for the promotion of fruits and vegetables. The council had initiated 14 new farmer markets and 23 collection centres during the financial year.

## Rashtriya Krishi Vikas Yojana (RKVY)

2.46 During 2009-10, an amount of ₹ 110.92 crores was sanctioned, out of which ₹ 30 crore was meant for the implementation of projects sanctioned during 2008-09. The expenditure was only ₹ 105.69 crore in the respective period. During 2010-11, an amount of ₹ 149.65 crore was released and total expenditure was ₹148.70 crores. During 2011-12, ₹ 154.38 crore was expended out of the allocation of ₹ 182.89 crore.

2.47 An amount of ₹ 282.26 crore was allocated during 2012-13. The share of allocation for Kerala is very low compared to the budget provision for the country. A number of very small schemes are included for assistance under RKVY in the state. More focused areas with larger projects have to be identified for support under RKVY. The preparation of district and state agriculture plans are a prerequisite for getting assistance for which concrete steps are required. Most of the documents prepared are a compilation of proposals for assistance under RKVY. The state Agricultural plan also has to be prepared for availing assistance under RKVY. More integrated approach is required for RKVY linkage with state plan. Details are given in **Appendix 2.28**

## Support to State Extension Programme

2.48 Even though a convergence approach is envisaged in the scheme on extension reforms, more needs to be done to realize the objectives. The extension system needs a thorough restructuring. The total expenditure under ATMA during 2011-12 was ₹ 957.20 lakhs. The newly introduced lead farmer centered extension advisory and delivery service (LEADS) to be implemented under the ATMA frame work, with field visit on a regular basis in more districts after the evaluation of the pilot phase. All extension schemes components under ATMA Plus needs to be implemented in XII<sup>th</sup> Five Year Plan with more convergence of schemes under Animal Husbandry, Dairy and Fisheries.

## Crop Insurance

2.49 Under National Agriculture Insurance Scheme (NAIS) Paddy ,Banana, Tapioca, Ginger, Turmeric & Pineapple were notified for Kharif Season & Paddy ,Banana ,Plantain & Tapioca for Rabi Season. Around 30435 farmers were insured covering an area of 31570 Ha .In 2011-12 ₹146.52 Lakhs were paid as claims. Under Weather Based Crop Insurance Scheme (WBCIS) being implemented on pilot basis, the State Government has notified Paddy in Palakkad District, Cashew in Palakkad, Kasargod, Kannur and Kozhikkode Districts and Pepper in Idukki and Wayanad Districts during 2011-12. In this Scheme 4681 farmers were enrolled under the Scheme covering an area of 5899 ha. In 2011-12 ₹ 42.50 Lakhs were disbursed as claims under WBCIS. More crops and areas are to be covered under WBCIS after ensuring automatic weather station network. Appropriate region specific technical parameters also need to be developed.

### Box 2.2

#### Evaluation Study of Coconut Palm Insurance Scheme (CPIS)

In Kerala, the scheme is implemented in the districts of Thiruvananthapuram, Alappuzha, Ernakulam and Kozhikkod jointly by Coconut Development Board(CDB), Department of Agriculture and Agriculture Insurance Company. A total of 1864 growers were insured under CPIS in Kerala during 2010-11. A number of 64565 palms are insured under the scheme out of this 10303 palms are under the age group of 4-15 years whereas palms 54262 fall under the age group of 16-60 years in Kerala. Total premium received under the scheme is ₹ 376854 with farmers paying a premium of ₹ 94212 and CDB and the State Government are providing a subsidy of ₹ 188426 and ₹ 94213 respectively for the CPIS scheme during 2010-11.

#### • Drawbacks identified

Insufficiency in compensation is the main drawback identified with CPIS in the state. Due to complexities in terms and conditions of the scheme, the CPIS is found to be ineffective in the state. Franchise limit is another major drawback identified in the study. All the palms are not covered under the scheme. Limited time bound for claiming and difficulty in procedures are another drawbacks found. There is a lack of communication between farmers and authorities and lack of information about the scheme to the farmers.

#### • Suggestions

The compensation amount may be increased and new palms may be subsidised. Hundred per cent compensation may be paid to the farmers. Lump sum premium payment may be allowed for more tenure. The franchise limit may be removed and all the palms may be covered under the scheme. Claim procedures may be simplified and claiming period may be increased. Information on CPIS may be given and follow ups may be done by AIC and the CPIS scheme should be popularised

*Source :Report of Evaluation of Coconut Palm Insurance Scheme ( CPIS), International Centre for Economic Policy and Analysis (ICEPA), 2012*

2.50 Coconut Palm Insurance Scheme(CPIS) is being implemented presently in Thiruvananthapuram, Alappuzha, Ernakulam and Kozhikkode. In 2011-12 40,429 farmers were insured covering an area of 17693 ha .Around 118 Lakhs were disbursed as claims benefiting 2725 farmers. An evaluation study of Coconut Palm Insurance Scheme (CPIS) has been done by International Centre for Economic Policy and Analysis (ICEPA). The salient findings of the study with respect to Kerala are given in the Box 2.2

## Fertiliser Price

2.51 Fertiliser nutrient consumption in Kerala, though much less than the national average, shows steady increase over the years. N consumption was at a faster pace than the other two , followed by P and K. The rate of growth in intensity of application was nearly double that of total consumption In 2007-08 the total fertilizer consumption (in lakh tonnes) was 2.08 which increased to 2.60 in 2008-09 and then to a peak value of 2.83 in 2010-11. However in 2011-12, the consumption has dropped down to 2.53 lakh tonnes of N,P and K with an intensity of application at 95.10 kg per hectare of total cropped area which could be related with exorbitant hike in fertiliser price. The consumption level of N is at the highest (46.9%) followed by potash (32.465%) and Phosphorous(20.66%) during 2011-12. Soil test based nutrient application including micro and secondary nutrients is to be popularised to save excess application of costly nutrients and to improve productivity.

2.52 The fertilizer price increase during the 19 year period from 90-91(during the RPS regime),was estimated to be to the tune of 4.53 percent,the highest rate of 8.09 percent in the case of P, followed by K and N. The policy shift towards NBS, the oligopolistic nature of global fertilizer market, rising petroleum prices, growing share of private sector and our heavy dependence on imports foretell an imminent and steady rise in future fertilizer prices. The Government implemented Nutrient based subsidy (NBS) policy from April 1, 2010 onwards. After the introduction of NBS policy in April 2010, which moved from fixed price floating subsidy regime to fixed subsidy floating price, the prices of phosphatic and potassic fertilizers registered sharp increase particularly during the last one year. In the case of Muriate of Potash (MOP), prices witnessed a very sharp increase in the post NBS period and the price of MOP increased from ₹ 4455 per MT in March 2010 to ₹ 12000 per MT during 2011-12. The price again steadily increased to about ₹ 17000 per MT in June 2012. This increase is to the tune of nearly 280 percent of its price in March 2010. Similar increase happened in case of phosphatic fertilizers also. The cost of factomphos in Kerala , which is the most common fertilizer was ₹ 6295/MT in March 2010 which increased to ₹ 18691/MT in September 2012., indicating 197percent increase.

2.53 This is a serious issue in Kerala's agriculture where cash crops are cultivated. The farmers are not compensated by any higher procurement prices since major crops from Kerala are out of procurement. A decline in fertilizer application and a likely long term decline in production and productivity of crops and ultimately the livelihood of farmers need to be considered in designing policy options.

## Expansion of Hi-Tech Agriculture

2.54 The promotion of high tech agriculture covering protected agriculture and open precision farming was initiated in 2012-13 as part of vegetable initiative. It is expected to construct about 667 polyhouses in 2012-13 and early phase of 2013-14 and another 21 demonstration units. Several biotic and abiotic stresses are the major factors responsible for low productivity and poor quality in large number of vegetable crops. Protected cultivation structures with partially modified environment are useful for combating both biotic and a biotic stresses that limit the productivity and quality of produce, and also for production throughout the year. The area under protected cultivation in the country is about 2000 ha at the end of 2011 while it is reported 20 lakh ha in China.



2.55 Tomato and bell pepper are estimated to have touched 300 tonnes & 200 tonnes / ha / year and those of cucurbits 80 to 100 tonnes/ha/crop. Raising of high quality seedlings, insect proof net houses, technical support, soil and water quality testing facilities, availability of hybrid seeds and water soluble fertilizers at reasonable cost and marketing network are a prerequisite for the success of the project. Standardization of low cost structural designs to green houses for different agro climatic zones of the State, development of agro techniques, biological control of pests are the key challenges in promoting high tech agriculture. The project needs to be reoriented to benefit the poor and marginal farmers from limited land area.

### Value Addition and Agro Processing

2.56 The development of value addition and agro processing is a crucial area in achieving sustainable agricultural production by ensuring better remuneration for farmers. 2 percent of horticulture produce are processed while more than 35 percent of fruits and vegetables are wasted due to lack of storage and processing facilities as reported by the Varma Committee in 2008 in the country. The development of secondary agriculture in compassing all food and non-food bio resource based products for human and individual use is crucial for the redijalu of remunerative prices for farmers. Constraints in supply and delivery item, poor capacity utilization, shortage of power and trained man power, obsolete and inefficient processing equipments, inadequate technologies, absence of cold chain, precooling of freshly harvested produce, waxing, packaging, technology for ripening of the fruits under controlled conditions, implementation and co-ordination mechanism and development of incubation centres are to be addressed for the promotion of agro processing. The Small Farmers Agri Business Consortium and KINFRA in association with research institutions will be able to provide a facilitating role for the development of the sector. More co-ordinated and proactive steps from the department of Agriculture and Industry are required. The two incubation centres established in 2012-13 at CTCRI and NIIST and value addition projects initiated through SFAC needs to be up-scaled. The future growth in agriculture is likely to come increasingly from the high value sector and agroprocessing.

## Farm Mechanisation

2.57 Inadequate availability of agriculture labour and the resultant farm wage increase forces farmers to seek labour saving devices to remain competitive. Past efforts to accelerate the use of mechanization have produced unsatisfactory results. A new initiative and perspective to address mechanization issues is urgently required. Farm mechanization has been biased in favour of field crops in the state while there is considerable scope for expansion of mechanization in garden land agriculture.



Laser Land Leveller

Levels and types of improved mechanical technologies need to be appropriate, compatible with local agronomic and socio economic conditions. One of the major reasons for the low penetration of mechanization has been the fragmented approach to mechanization issues. Strategic regional plan would bring about the critical mass that is needed to make machinery contractual services viable. Along with the required machines support services including supply of parts is essential for the sustainability of the mechanization initiative. Private-public-panchayat-co-operative partnership is an ideal model for expansion of mechanization in Kerala. The 35 agro service centers established by the department of Agriculture and 40 Farmer Service Centers established by the co-operation department at block level are expected to act as facilitation centers. The initiatives of KAICO & KAMCO also to be consolidated along with the technical support of the agricultural engineering wing of the department of Agriculture. Gender friendly implements, implementation of garden land agriculture, urban agriculture as well as high tech farming are to be developed and popularized.

## Strengthening of Plant Health Management

2.58 In spite of success in controlling the crop pests, pesticides adversely affect public health and environment. Residues of pesticides in food crops often been reported to exceed their acceptable limits. Many new pests which were controlled by their natural enemies present in the ecosystems have assumed the status of the major pests in some regions due to decline in the population of the natural enemies caused by the indiscriminate and excessive use of pesticides. Many interventions are aimed at supporting pest control often relying solely on the application of pesticides or the use of resistant/tolerant cultivars. In the longer term this has been shown to be unsustainable as a result of pest overcoming host plant resistance and building up resistance to pesticides or the improper and or excessive use of pesticides with undesirable impact on human and ecosystem. A rethinking seems essential on the approach and strategies of pest management in Agriculture focusing on Agro ecosystem and human health evolved out of sound plant health management interventions. The new approach of plant health management will bring together management towards sustainable ecosystems and people's health through Good Plant Protection Practices (GPPP). Pest management strategies need to recognize that plant health is an essential element of sustainable agriculture. Improvements in integrated pest management can lead to sound crop health management. Department of Agriculture has a prestigious bio control lab at Mannuthy, Thrissur and the capacity of the lab is to be further strengthened.



2.59 A major problem faced by the farmers of Kerala is the attack by various pests and diseases in all cultivated crops. It is a known fact that the incidence of pests and diseases varies with weather, soil and ecology and a thorough understanding of this variation is inevitable. Kerala State Planning Board has published the Agro Ecological Zone Series Bulletin No. 1 which comprehensively cover the insect pest and disease incidence of major crops in the state along with Adoption Indices of plant protection practices in different Agro Ecological Units (AEU) of the state delineated by NBSS & LUP Bangalore. The salient findings of this publication is summarized in Box.2.3

### Box 2.3

#### Agro Ecological Zone Series- Bulletin No.1

#### Disease and Insect Pest Incidence and Adoption Indices of Plant Protection Technologies in Major Crops of Kerala in different Agro Ecological Units-District wise Analysis

- In case of coconut, root wilt and leaf rot are major problems in Kerala except in AEUs of Northern Districts. Mites and rhinoceros beetle are found to be major pests affecting coconut throughout the state.
- In all the rice growing AEUs, blast disease was found to be a serious issue except in Palakkad. The incidence was however very less in Pokkali lands and high hills of Ernakulam district. In Kuttanad tracts blast followed by leaf blight and sheath rot are major diseases of rice. In southern coastal and Onattukara region, rice bug is a menace. In Kollam, Malappuram and Kasaragod districts stem borer infestation is a serious problem in rice.
- In pepper, quick wilt and pollu beetle attack are higher in Thiruvananthapuram, Palakkad, Kozhikkode, and Kannur Districts. In Idukki, Pathanamthitta and Wayanad districts quick wilt is the most serious disease in pepper.
- In all districts except Idukki, fruit fly is found to be devastating the vegetable crop. In Alappuzha, Malappuram and Kozhikkod districts, leaf spot disease is more serious in vegetables.
- There is lesser adoption of fungicide application and biocontrol measures for pest management in rice crop in Thiruvananthapuram district.
- In Ernakulam and Thrissur districts adoption of plant protection chemicals is generally lesser. In Alappuzha district, Adoption Index for plant protection measures is higher among rice farmers but low among coconut farmers.
- In Kottayam district Adoption Index for insecticides and fruit fly traps are higher in vegetables. In areas cultivating cool season vegetables in Idukki District, Adoption Index for insecticide application is higher.
- In foot hill and high hill regions of Kollam District fruit fly traps are largely adopted for vegetable cultivation compared to other southern districts and AEUs of Palakkad and Kozhikkode districts have better adoption of fruit fly traps than other northern districts.
- Except Kollam, Malappuram and Palakkad, all the districts have poor adoption of bio control measures for pest and disease management.
- Redefining the crop management strategies analysing the problems and prospects to the level of Agro Ecological Unit appears to be the best solution to achieve higher productivity in the state.

*Source : Agro Ecological Zone Series-Bulletin No.1, Disease and Insect Pest Incidence and Adoption Indices of Plant Protection Technologies in Major Crops of Kerala in Different Agro Ecological Units- District wise analysis, Kerala State Planning Board, Govt. of Kerala 2013.*

2.60 Scaling up of safe to eat interventions in food crop production, organic agriculture in feasible areas in a phased manner, area wide crop health management projects focusing on major crops of the state, electronic pest surveillance, strengthening diagnostic systems, biocontrol production units, establishment of pesticide residue testing laboratories, development of early warning systems, safe pesticide application equipments and capacity building are essential to implement plant health management project in a systems perspective for achieving good plant health leading to good human health and health of the ecosystem.

## SECTION- 2

### Livestock Development

#### Trend in Production of Major Livestock Products



2.61 The dairy sector in Kerala could maintain a higher growth rate of 4.2 percent in the 1990s, compared to the national level of 4.2 percent, in spite of a weak fodder base. During the period 2002-03 to 2006-07 ( X<sup>th</sup> Plan Period), a negative growth rate was recorded in the milk production of Kerala (- 4.6%) from 3.7 percent in IX<sup>th</sup> Plan and at all India level the growth rate declined to 4 percent from 4.3 percent in IX<sup>th</sup> Plan period. For the period 2007-08 to 2011-12 a recovery has been marked in milk production of Kerala with an average annual growth rate of 5.1 percent. This is reasonably high rate compared to 4.4 percent at all India level.

2.62 Total milk production in the state which was 24.2 lakh tonnes in 2003 declined to 21.1 lakh tonnes in 2004 and increased to reach 27.2 lakh tonnes in 2011-12. At the same time, over the period, at national level the milk production has been continuously increasing. Contribution of Kerala to national milk production which was 2.4 percent during 2003-04 showed a declining trend and reached to 2.1 percent during 2011-12.

2.63 Egg production in Kerala achieved an average annual growth rate of 7.4 percent during 2007-08 to 2011-12 period. At all India level, the growth rate was 5.3 percent during the period. India ranks third in egg production in the world as per FAO STAT data for the year 2010. The average annual growth rates of milk and egg production in Kerala and India for the period from 2002-03 to 2011-12 are given in Table 2.3 and year wise estimate of production of milk, egg and meat, from 2007-08 onwards are given in **Appendix 2.39**

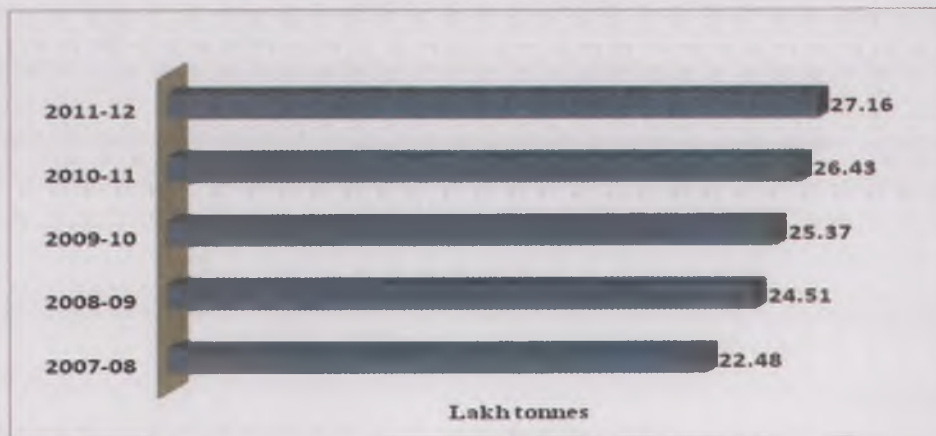
**Table 2.3**  
**Average Annual Growth Rate of Milk and Egg Production**

Sl.No.	Year	Milk		Egg	
		Kerala	India	Kerala	India
1	2002-03 to 2006-07(X <sup>th</sup> Plan Period)	-4.64	3.99	-4.86	5.59
2	2007-08 to 2011-12(XI <sup>th</sup> Plan Period)	5.11	4.40	7.40	5.27
3	2011-12	2.76	4.97	1.14	5.52

Source: Animal Husbandry Department

2.64 India continues to be the largest producer of milk in the world with a total production of 127.90 million tonnes in 2011-12. India's contribution towards world milk production in 2010 was 16.2 per cent. Among the major states in India milk production is highest in Uttar Pradesh(225.56 lakh MT) followed by Rajasthan(135.12 lakh MT) and Andhra Pradesh (120.88 lakh MT). Kerala ranks 13<sup>th</sup> position with 27.16 lakh MT. Though India is the largest producer of milk in the world the per capita availability of milk is low compared to developed countries. Substantial increase in this regard was attained over a period of 10 years, from 225 gm/day to 281 gm/day. Trend in year-wise milk production of Kerala for the period from 2007-2008 to 2011-12 (XI<sup>th</sup> Plan) is given in Fig.2.6.

**Fig. 2.6**  
**Milk Production in Kerala (2007-08 to 2011-12)**

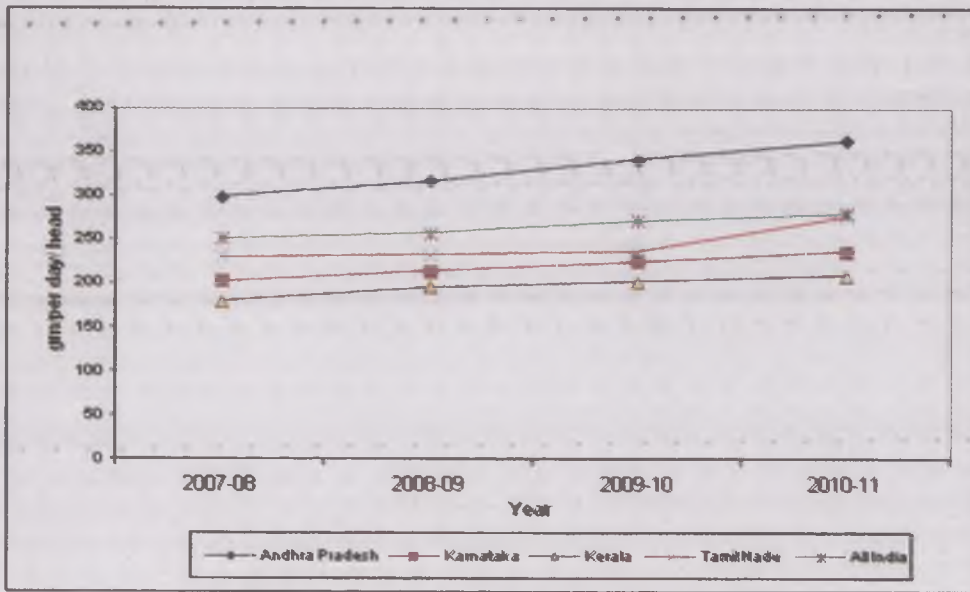


2.65 In spite of India's position as highest producer of milk, productivity per animal is very poor. At the national level it is only 987 Kg/lactation as compared to the world average of 2038 Kg/lactation. This is mainly due to poor level of nutrition as well as low genetic potential for milk production and health care. 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 Karnataka 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 Andhra Pradesh (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.

2.66 Comprehensive dairy development projects need to be prepared to augment milk production in the state covering the potential milksheds. Integrated dairy development projects also to be prepared for implementation under Idukki package, Wayanad and the potential districts with appropriate components on infrastructure development, technology and credit support.

2.67 Regarding the per capita availability of milk based on 2010-11 figures for the southern states viz., Andhra Pradesh, Karnataka, Tamil Nadu and Kerala, Andhra Pradesh ranks first with an availability of 364g/day and Tamil Nadu ranks second with 278gm/day. Among the four states, Kerala has the lowest figure of 210gm/day (See Appendix 3.41). Among the major states at all India level Punjab ranks first with 937gm/day and the lowest in the case of Assam with 71gm/day. Per capita availability of milk at all India level was 281 gm/day (Figure 2.7)

**Fig. 2.7**  
Trend in Percapita Availability Based on Production of Milk in Four Southern States and All India (2007-08 to 2010 - 11)



2.68 The National Dairy Plan phase -1 is prepared to be implemented during the period 2011-12 to 2016-17. The total outlay of the first phase is ₹ 2242 crore. Kerala is expected to get significant support from the National Dairy Plan.

## Milk Marketing

2.69 During 2011-12 a total of 4518 lakh litres of milk was procured by the DCS in the state of which 2834 lakh litres were sent to the dairies and 1684 lakh litres were marketed locally by the societies. The procurement by the DCS is only about 15-16 percent of the total estimated production during 2011-12.

2.70 MILMA represents more than 8.60 lakh dairy farmers through more than 3000 Anand Pattern Co-operative Societies by March 2012. Under KCMMF there are 13 milk processing plants with a combined processing capacity of 11.40 lakh litres per day and 7 milk chilling plants support the procurement of milk. The average milk procured per day by APCOS during the year 2011-12 was 787 MT against the previous year average of 656 MT. The procurement /day/society during 2011-12, 344 litres and during 2010-11 it was 305 litres. The Federation is importing milk from the neighboring states during lean periods when the internal supplies used to shrink. The procurement of milk by dairy under KCMMF stood at 2865.93 lakh litres against the sale of 4297.03 lakh litres during 2011-12 showing a wide gap between procurement and supply. Data on procurement and sale of milk by

different dairies of KCMMF during 2007-08 to 2011-12 is given in **Appendix 2.44** and performance of KCMMF 2007-08 to 2011-12 are furnished in **Appendix 2.45**. The average quantity of milk procured per day by APCOS (1997 to 2012) is given in **Appendix 2.46**

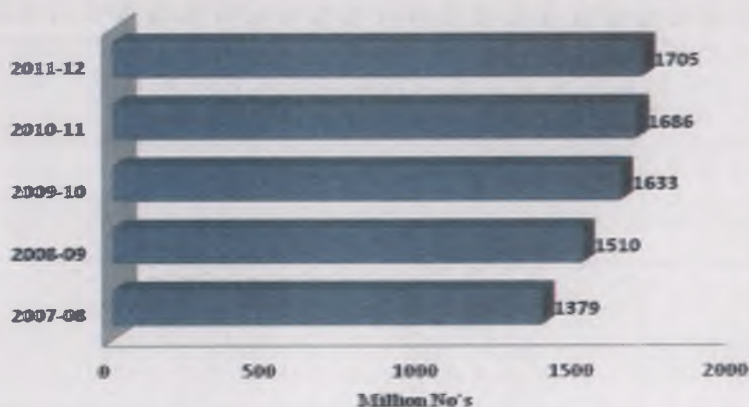
2.71 The procurement and selling price of milk has been revised in Kerala w.e.f 14.10.2012. The average quality of milk procured in the state is 4.1 percent fat and 8.3 percent SNF and the procurement price paid for the same is ₹ 28.61 per litre and sales price for toned milk is ₹ 33 per litre. Price revision details of milk and price spread of milk from 2008 onwards is given in **Appendix 2.47** and **Appendix 2.48** respectively.

## Egg and Meat

2.72 The gap between the production and requirement of egg is increasing at an alarming rate. Concerted efforts of the State to increase the egg production have begun to show signs of improvement. Poultry farming for egg production with purchased feed are uneconomic in Kerala. Poultry rearing on commercial lines is therefore largely confined to broiler production. The egg production which was 2054 million in 1999-2000 continuously declined till 2005-06, but began to increase in 2006-07 and that trend maintained in succeeding years. Compared to previous year egg production increased from 1686 million numbers to 1705 million in 2011-12; an increase of 1.1 percent over the previous year. The per capita availability of egg per annum in Kerala during 2011-12 was 51 numbers compared to 50 numbers in 2010-11.

2.73 Though meat production is increasing over the years, it cannot cater to the demand fully. Poultry meat production increased from 16153 tonnes in 2010-11 to 1,84,000 tonnes in 2011-12 and meat other than poultry meat from 108398 tonnes in 2010-11 to 242000 tonnes in 2011-12 registering an increase of 1039.1 percent and 123.3 percent respectively over the previous year. The per capita availability of meat per day in Kerala during 2011-12 was 35 gms (Poultry meat 15 grm and meat other than poultry meat 20 grms). Kerala has not exploited the potential of meat production. Regional projects with appropriate buyback arrangement have to be prepared for the improvement of meat production in the state. Trend in Egg production during the period from 2007-08 to 2011-12 is given in Fig. 2.8.

**Fig.2.8**  
**Egg Production in Kerala (2007-08 to 2011-12)**



## Backyard Poultry

2.74 Backyard poultry system has good potential in the state where in the cost of production is less and also help to convert unconventional feed into value added protein. A comprehensive project needs to be prepared in association with local governments for the promotion of backyard poultry with appropriate forward and backward linkages to achieve the full potential of the sub sector to consolidate the ongoing schemes implemented by the KSPDC and the Department of Animal Husbandry.



## Fodder

### Weak Feed and Fodder Base

2.75 It is estimated that the state produces only 60 percent of the roughage requirement for cattle in Kerala. Special focus has been given to fodder and feed production in Kerala to overcome the situation during the five year plan periods. Perennial fodder varieties like Hybrid Napier and Guinea are widely acceptable to farmers, and the department is supplying the planting material free of cost to the farmers. Fodder and feed development 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 quantity of seeds supplied by KLD Board during the period under report was 85.41 MT against 79.31 MT during 2010-11. Details of production and sale of fodder seeds by KLD Board from 2004-05 onwards are given in the **Appendix 2.50**. Proactive steps are required to supply new varieties from the Universities and other research institutions for cultivation through societies. Block level fodder plan have to be prepared to utilize all potential areas including coconut garden for fodder planting.

2.76 Kerala farmers have adjusted to the situation by restricting the number of cattle and that too by preferring to maintain high yielding crossbreeds. This is evident from the steady increase in the proportion of crossbred animals, which Kerala achieved during the last three decades. (see **Appendix 2.32**).

2.77 During 2011-12, under department programmes perennial fodder cultivation was extended to 2599 ha and short term crops were cultivated in 365 ha, resulting in the additional production of 5.5 lakh MT of fodder in the state. Details of supply of Fodder seeds/ Root slips by Dairy Department and area covered under fodder cultivation during the last five years are given in **Appendix 2.62**

## Cattle Feed

2.78 During 2011-12, the two plants under KCMMF produced 1.2 lakh MT of cattle feed and sold 1.2 lakh MT. The major customers are APCOS (76%) and Government (16%). The production of cattle feed by Kerala Feeds Ltd., slightly increased to 2.2 lakh MT in 2011-12 from 2.0 lakh MT in 2010-11. The quantity sold also increased from 2 lakh M.tonnes in 2010-11 to 2.2 lakh MT in 2011-12. The Company has a good marketing network which includes 400 dealers and 450 Co-operatives. Of the

total sales 47.4 percent was to dealers, 30.7 percent to APCOS and 16.8 percent to Government. During the review period the production of mineral mixture stood at 203 MT against 137.5 MT during 2010-11. Production details of the above cattle feed plants are given in **Appendix 2.55**. Setting up new cattle feed plant as well as augmenting the capacity of existing plants are essential. Availability of cattle feed at reasonable cost is a prerequisite for the success of dairy development in the state.

## Breeding Support

2.79 Kerala Livestock Development Board (KLDB) is involved in the production and distribution of frozen semen. Compared to 2010-11, semen production increased from 16.9 lakh doses to 24.1 lakh doses during 2011-12. The distribution inside and outside the State increased from 17.4 lakh doses to 17.6 lakh doses and from 3.0 lakh doses to 5.3 lakh doses respectively during this period. Details are furnished in **Appendix 2.51** The number of AI centres in the state as on 31-03-2012 was 2986. The number of inseminations done during 2011-12 was 14.85 lakh and calving recorded was 4.1 lakh. This is against 3.7 lakh calving recorded out of 13.9 lakh AI during 2010-11. The average number of inseminations needed for producing one calf is 3.6 (see **Appendix 2.53**). The quality of AI is not improving and so measures to improve the quality of semen supplied to be taken up immediately. Activities of the Board are given in **Appendix 2.54**

## Special Livestock Breeding Programme (SLBP)

2.80 The calf rearing programme by subsidizing cattle feed for rearing cattle up to 32 months along with health cover and insurance has been under implementation since 1976 onwards. During 2006-07 the scheme was extended to buffalo calves also as a measure to curtail the drastic reduction in the buffalo population. During 2011-12, 12947 calves were enrolled. Year wise details from 2003-04 onwards are furnished in **Appendix 2.61**

## Animal Health Care

2.81 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 27562 polyclinics/hospitals/dispensaries, 25195 veterinary aid centres supported by about 250 disease diagnostic laboratories are functioning in the country. For the production of vaccines, there are 27 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. With increased trade activity and extensive cross-breeding programmes, the chances of ingress of exotic diseases into the country have increased.

2.82 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 2007-08 to 2011-12 are given in **Appendix.2.56**.

2.83 Even though vaccinations were carried out, frequent outbreaks were reported which lead to production loss to farmers. Compared to previous years FM outbreaks and attacks are less in 2011-12 and 4 deaths are reported.

2.84 The reports of minor attacks of major diseases like Anthrax, and Hemorrhagic Septicemia are also reported and are more in numbers compared to previous years. The State has already eradicated the dreadful disease of rinderpest and no outbreak was reported after 1994. Outbreak of black quarter also not reported during 2011-12.

### Box 2.4 (a) Production of Vaccine in Veterinary Biological Institute, Palode

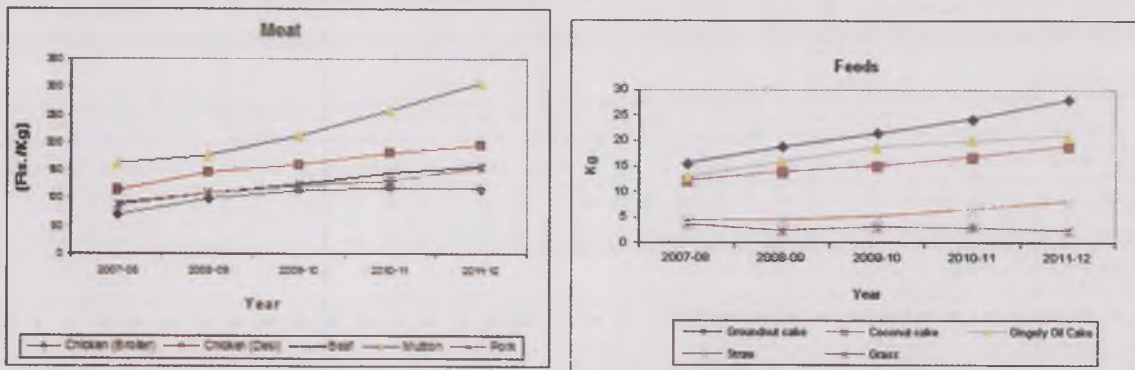
The Veterinary Biologicals, Palode is the sole agency engaged in the production and distribution of animal vaccine in the state. The production details of vaccines manufactured here are shown in **Appendix 2.57**. Compared to previous year poultry vaccine production during 2011-12 was 189.1 lakh doses as against 236.6 lakh doses during 2010-11 and production of livestock vaccine increased by 40.1 percent from 3.3 lakh doses during 2010-11 to 4.6 lakh doses. Number of vaccinations done during 2011-12 was 16.8 lakh Nos for livestock and 102.2 lakh Nos for poultry. Compared to previous year, vaccination to cattle increased by 2.7 percent and vaccination to poultry increased by 14.8 percent. Anti Rabies Vaccinations done in dogs increased from 1.4 lakh to 1.7 lakh during the year under report. Details are given in **Appendix 2.58**

## Prices

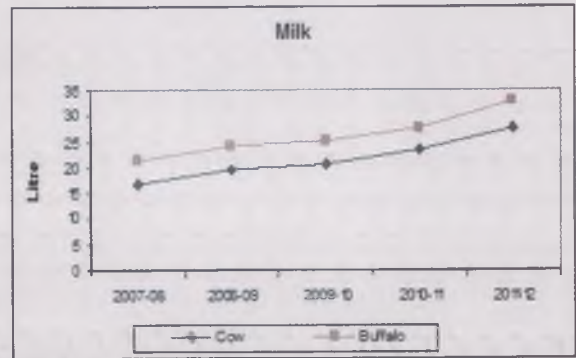
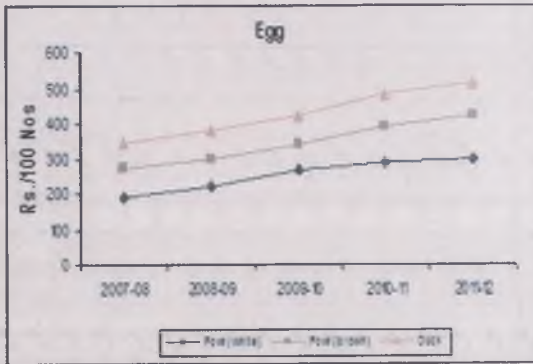
2.85 Average price of important inputs and products of livestock sector for the last five years is presented in **Appendix 2.59** and almost all the products recorded increase in prices during the period. Compared to 2010-11 there was increase in the price of all categories of meat except broiler chicken during 2011-12. During 2011-12, the highest increase was in the case of Mutton (18.9%), followed by pork (10.4%). Compared to 2010-11, the price of fowl-white egg increased by 4.2 per cent, brown egg by 8.8 percent and duck egg by 6.2 per cent during 2011-12. Corresponding increase during the previous year was 8.3 percent 14.8 percent and 14 percent respectively.

2.86 On the input side, the price of grass recorded 20 percent decrease during 2011-12. Compared to previous year, the price of gingely oil cake increased by 4.4 percent, coconut oil cake by 13.2 percent, straw by 21.2 percent, ground nut cake by 15.7 percent during 2011-12 and the increase in the price of inputs is a serious threat to dairy farming. The trend in average prices of livestock products from 2007-08 to 2011-12 are shown in Fig. 2.9.

Fig. 2.9  
Trend in Average Prices of Livestock Products from (2007-08 to 2011-12)







## XI<sup>th</sup> Five Year Plan

2.87 The budgeted outlay and expenditure for Animal Husbandry and Dairy Sector during XI<sup>th</sup> Five Year Plan period were ₹ 571.93 crore and ₹ 495.96 crore respectively. During the period, a major shift in plan priority towards food security was approved and separate funds have been provided. Apart from plan support additional support has been provided from RKVY for the development of the sector. Yearwise outlay and expenditure of the sector during XI<sup>th</sup> Five Year Plan period were as given in **Appendix 2.60**

## Key Initiatives in 2012-13

2.88 The key initiatives of the department of Dairy Development and Animal Husbandry Departments in 2012-13 are shown in box.2.4

### Box 2.4 (b) Key Initiatives in 2012-13

- Door step veterinary services introduced.
- Substantial increase in outlay for Special Livestock Breeding Programme (SLBP) has been provided. It increased from ₹ 9.3 crore to ₹ 25 crore apart from additional support from Rashtriya Krishi Vikas Yojana (RKVY).
- New cattle feed plants initiated in Kozhikode and Idukki.
- New goat and cattle farm in Kasaragod.
- An amount of ₹10.42 crore has been provided for backyard poultry projects for augmenting egg production.
- Establishment of hi-tech dairy complexes at Vithura, Kuriyottumala, Kolahalamedu and a hi-tech layer farm.
- An amount of ₹15.7 crore has been provided for calf protection programme under XIII<sup>th</sup> Finance Commission Award Scheme.
- Substantial increase in outlays for modernization of dairy co-operatives and milk

## SECTION-3

### Fisheries Development

2.89 As per the population census 2011, the fisher folk population in Kerala is 10.02 lakh covering 7.71 lakh in coastal area and 2.31 lakh in inland sector. It is also estimated that about 71600 people are engaged in fishery – allied activities. This fishermen of the state contribute about 8 percent of the GSDP from the agriculture sector which gives the significance of the sector to the state economy. The total fishermen population in Alappuzha district is 1.68 lakh which is the highest fishermen populated district, followed by Thiruvananthapuram (1.65 lakh) and Ernakulam (1.33 lakh). The district wise details of fisherfolk population are given in **Appendix 2.63**. The Gross State Domestic Product of the State has increased by about 60 percent during the period from 2005-06 to 2011-12 and the share of fisheries sector in the State Domestic Product has declined from 1.3 to 0.9 percent in the same period. The share of Primary Sector in GSDP has also declined from 17.1 to 9.5 percent. The contribution of fisheries sector in GSDP is given in **Appendix 2.64**

2.90 Marine fish landings of India during the year 2011 has provisionally been estimated as 3.23 million tonnes with an increase of about 1.21 lakhs compared to the estimate for the last year. Among the states, Gujarat was the highest contributor of marine fish followed by Kerala. During 2011-12, 5.53 lakh tonnes of marine fish were landed in Kerala showing a decline of 0.07 lakh tonnes (1.25%) over the previous year. The high value species among the fish catches are still few, prominent among them are Seer fish, Prawn, Ribbon fish and Mackerel. The quality of these high value species in the total catch ultimately decides the income of the fishermen. The species wise marine fish landings in Kerala from 2008-09 to 2011-12 are shown in **Appendix 2.65**.

2.91 India has been a major contributor to the world marine fish production and second largest producer of inland fish. The south west comprising Kerala, Karnataka and Goa were the top contributors among regions (31 %) and Tamilnadu among states (21%) followed by Kerala (20%). Presently fisheries and aquaculture contribute 1.2 percent to the national GDP and 5.3 percent to agriculture and allied activities.



## Trend in Production

2.92 Estimates of the fishery resources assessment shows that among the maritime states in India, Kerala occupies the 2nd position in marine fish production. The fish production in Kerala during 2011-12 was 6.93 lakh tonnes. The marine fishery resources of the state has almost attained the optimum level of production. At national level more than 50 percent of the total fish production is contributed by the inland sector. Government have approved a master plan for increasing the inland fish production of the state from the current level of 75000 tonnes to 2 lakh tonnes over a period of 10 years. The current level of Inland fish production is to the quantum of about 1.40 lakh tones, an increase of 13 percent of the previous year. The species-wise inland fish production in Kerala from 2008-09 to 2011-12 are shown in **Appendix 2.66**.

2.93 Indian marine fisheries is also passing through a crisis due to its over capacity and open access nature. During 2011-12, India's total fish production was 6.57 million tonnes of which 3.23 million tonnes was from marine sector and 3.34 million tonnes was from Inland sector (Fig 2.10).

**Fig. 2.10**

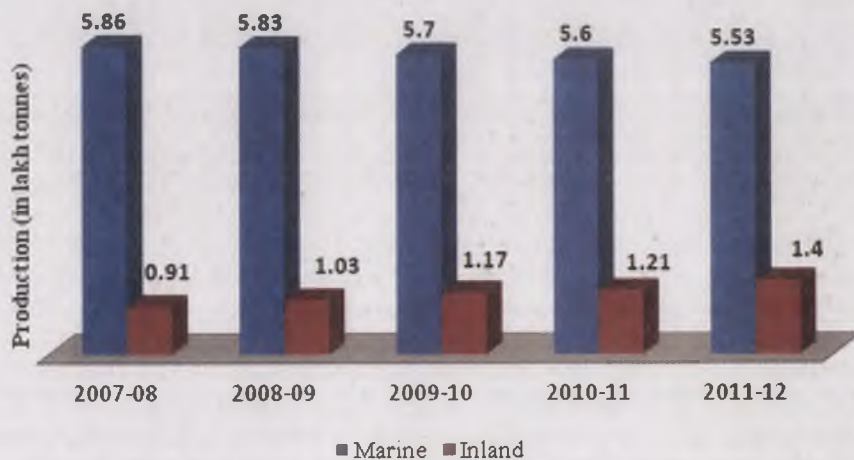
Marine and Inland Fish Production All India (2011-12) Marine and Inland Fish Production Kerala (2011-12)



2.94 The marine fish production in Kerala tended to fluctuate while the inland fish production showed a sign of improvement from 1999-2000. During 2011-12, the marine fish production has declined to 5.53 lakh tonnes from 5.60 lakh tonnes of 2010-11. Inland production sustained on increasing trend. During 2011-12, the share of inland fish production to the total fish production of the State was 20 percent. The details of fish production for the last 6 years are given in **Appendix 2.67** and Fig 2.11

**Fig.2.11**

Fish Production in Kerala (2007-08 to 2011-12)



2.95 To improve fish production in Inland water bodies, a comprehensive programme need to be chalked out. It is possible through by utilizing all available resources augmenting the aquaculture pro-

duction and productivity through diversification and intensive aquaculture practices, ensuring conservation and management of aquatic resources through responsible and participatory approaches. Reservoirs are the most important and promising fresh water resources for fish culture in Kerala. The potential resources of back waters estuaries and river systems are to be suitably utilized for the enhancement of fish production of the State. Strengthening of hatcheries and seed farms are essential at this point. But the production from the Government hatcheries is far below their installed capacity and many of these have not met with their targeted production and maintain quality of their produce. The State Government hatcheries need to be strengthened to have sustainable level of output to meet the projected demands for seeds. The ornamental fish industry is a much promising sector in the inland fisheries. The export potential of the ornamental fisheries may also be suitably utilized for making more income. The programme could be envisaged as an alternative livelihood venture to the fishermen and marginal farmers.

2.96 The Key elements of the XII<sup>th</sup> Plan Approach paper in the fisheries sector are launching of a comprehensive coastal area development project covering infrastructure, housing, sanitation, drinking water and livelihood, action plans for augmenting inland fish production to 2 lakh tonnes by the end of the plan from 1.17 lakh tonnes, enhancement of seed production, strengthening of post harvest infrastructure like better fish landing and handling facilities, cold chains, storage facilities as well as marketing facilities for the development of the sector and improvement in the production of value added products, micro enterprises, credit support and coverage under social security. Accordingly the first year plan programme of the XII<sup>th</sup> Five Year Plan was launched in 2012-13.

## Performance Review under XI<sup>th</sup> Plan & Annual Plan 2012-13

2.97 The total approved outlay during the XI<sup>th</sup> Plan under the fisheries sector was ₹ 255.25 crore which accounts 0.6 percent of the total state plan outlay and 11 percent of the outlay under Agriculture & Allied Sectors. But the actual amount budgeted during the plan period was ₹ 380 crore and the expenditure was ₹437.21 crore (115%). In addition to this an amount of ₹ 55.89 crore was set apart for Integrated Coastal Development Scheme under Special Area Development Programme and the expenditure incurred was ₹ 40 crore (71.64%). The total expenditure under state plan schemes during 2011-12 was ₹ 143.87 crore which accounts 117.4 percent of the state plan outlay. There are 10 partially aided central sector schemes having an outlay of ₹ 42.72 crore and the expenditure during this period was ₹ 47.61 crore. Additional allocation was provided for fishing harbours and share capital contribution to NCDC assisted schemes and thus the expenditure exceeds the outlay provided under Central Sector Schemes. The outlay and expenditure for various schemes implemented in the fisheries sub sector during 2011-12 are given in **Appendix 2.69**

## Debt Relief to Fishermen

2.98 It has been estimated that fisherman have a debt liability of ₹ 524 crore. During the period 2008-09 to 2011-12, an amount of ₹ 36 crore was provided with budget for debt relief measures to fishermen and as on 31.03.2012, ₹ 35.69 crore has been released for this programme.

## Major Developmental Programmes

2.99 Government have initiated the new project Matsyakeralam during 2008-09. From 2009-10 to 2011-12, the total amount budgeted for this scheme was ₹ 5.50 crore as state share and the provision was fully utilised for the scheme. The total project cost estimated as ₹ 71.16 crore. The achievement of the project during the first phase shows an encouraging result especially in shrimp and mussel farming. The harvest details are shown in **Appendix 2.70** and **2.71** respectively. Under Special Area Development Programme a new project viz., Integrated Coastal Area Development project was started during 2007-08. During the period 2007-10, the project was implemented in Kannur, Kasargode and Thrissur districts covering the projects of water supply, fish landing centres, public centres, dispensaries, biogas plant, anganavadies etc. During 2011-12 had taken up the the coastal

area development infrastructure works viz., drinking water supply schemes, hospital buildings, fisheries roads, matsya bhavan etc. at a total outlay of ₹18.69 crore. During 2012-13, a new scheme viz., model fishing villages was envisaged in the budget with an outlay of ₹ 50 crore under state plan for the development of 25 fishing villages @ ₹ 2 crore per village. More pro active steps in the implementation of the coastal area development project is required since the progress is quite slow.

2.100 During 2011-12 an amount of ₹100 lakh were expended for the implementation of one paddy one fish in kuttanad and kole lands for covered an area of 1629 ha in kuttanadu and kole lands. About 305 tons of scampi and 1200 tons of fish were produced during 2011-12 and a revenue collection of ₹ 1662.5 lakh was achieved. The details of achievement in oru nellum oru meenum in kuttanad and kole lands from 2006-07 to 2011-12 are given in **Appendix 2.72**. The project sustainable development of shrimp aquaculture aims at the development of 2500 ha of Pokkali fields of Ernakulam, Thrissur and Alappuzha districts during the X<sup>th</sup> Plan period. During 2011-12 an area of 443 ha was brought under culture and an amount of ₹100 lakh was provided for the scheme. 280 tons of Shrimp worth ₹ 7 crore was produced during the period. The details of shrimp aquaculture production in Pokkali lands from 2005-06 to 2011-12 is given in **Appendix 2.73**.

## Fishing Harbour

2.101 The Government of Kerala has so far implemented 9 fishing harbour and the works of other 8 harbours are in progressing. The completed fishing harbours are Thangassery, Neendakara, Kayamkulam, Munambam, Beypore, Puthiyappa, Chombal, Moplabay and Azheekal. The fishing harbours now supported are Koyilandi, Thalai, Cheruvathoor, Chettuvai and Muthalapozhi. The works of Ponnani, Chethi, Thalai and Koyilandi fishing harbours were completed soon. The construction of Muthalapozhi fishing harbor is lagging. The project was approved in 2000 at a cost of ₹ 13.66 crore with total expenditure till 2011-12 was ₹ 13.52 crore. During 2011-12, ₹ 1341 lakh were allotted for the construction of fishing harbours for which ₹ 743.55 lakh was expended. An amount of ₹ 1533.11 lakh was expended during the year through RIDF. Time bound completion schedules for all ongoing harbours need to be worked out. Status of the progress of ongoing fishing harbours is shown in **Appendix 2.74**.

2.102 Total revenue collected from the completed fishing harbours and fish landing centres during 2010-11 and 2011-12 were ₹ 410.58 lakh and ₹ 416.04 lakh respectively. Revenue collection from Puthiyappa fishing harbour during 2010-11 and 2011-12 were ₹ 225.85 lakh and ₹180.99 lakh, which accounts 20 percent decrease over the previous year. During 2011-12 the highest revenue collection was from Puthiyappa harbour which accounts 43.50 percent of the total revenue collection. Neendakara fishing harbour contributed 28 percent of the total revenue collection during 2011-12 which accounts 7 percent increase in the revenue collection for the previous year. The details are given in **Appendix 2.75**.

2.103 Under RIDF XI, NABARD has approved two projects viz balance work of Kayamkulam fishing harbour and modernisation of Neendakara fishing harbour and sanctioned a loan amount of ₹1062.54 lakh and ₹ 895 lakh respectively. Under RIDF XIII, NABARD has sanctioned a loan of ₹ 1026.43 lakh for the construction of fishing harbour at Thalai. The expenditure upto March 2012 is ₹ 717.06 lakh. Details of NABARD assisted scheme through Harbour Engineering Department is given in **Appendix 2.76**. Prioritised action plan has to be prepared for the completion of all ongoing and pending infrastructure projects. Expansion of more harbours to be based on need and technical studies.

## Social Security and Livelihood Support to Fishermen Community

2.104 The major highlights of social security schemes are given in **Appendix 2.77 to 2.78**. During 2011-12, 578 number of houses were completed including spillover from 2010-11 and the expenditure incurred was ₹ 276 lakh. The saving cum relief schemes provided assistance to about 185348 beneficiaries at an amount of ₹ 2120 lakh.

## Matsyafed

2.105 Matsyafed is an apex federation of 666 primary level Fishermen Development Welfare Co-operative Societies, of which 341 numbers are in marine sector, 192 are in inland sector and 133 women co-operative societies. The total membership in these societies is more than 3 lakhs. The paid up share capital of the federation is ₹150 crore. Matsyafed have organised more than 14715 SHGs with 179532 members. The groups have mobilized ₹ 5248 lakh as thrift. The achievement of various programmes implemented by Matsyafed is given in **Appendix 2.80**.

2.106 In the last Five Year Plan, marine fisheries sector has achieved better growth in its infrastructure development. The XII<sup>th</sup> Plan strategy is to ensure sustainable growth of Fish and Fisheries for nutrition, food security and economic growth by ensuring proper utilization of infrastructure created in the last plan. Special emphasis has to be given to conservation and management of inshore fishery resources, enhancement of offshore marine fish production and maximum utilization of harvested fish and its value addition. The major issues in the sector are price exploitation of selected stock, ineffective regulation, ever increasing fleet size, lack of responsible fishing practices etc. The marine environment has to be revitalized with the introduction of artificial reef to enhance its productivity. Maximum utilization of harvested resources can be ensured for its proper storage, transportation and distribution. Effective preservation of fish quality as per international standard, promote export as well as domestic marketing legislation is needed for the assurance of hygiene and quality in domestic fish marketing. The hygiene condition of the harbours need to be modernized by integrated harbor management societies may be constituted for each harbor. Regarding social infrastructure, provision for safe shelter and drinking water, improvement of public health and education facilities, total sanitation and solid waste management etc. needs special care and attention. Focussed attention for the implementation of coastal area development project including livelihood security is urgently required.



## Cage Culture

2.107 The enclosure fish culture can play a significant role in augmenting yield from capture fishery. The advantage of this captive aquaculture is high production owing to dense stocking and intensive feeding. Cage fish culture has great potential in large water bodies such as lakes and reservoirs. The endemic fish *E.suratensis* has been demonstrated to grow upto 230- 350 gm in seven to eight

months when reared under a feeding regime using commercial pellets. A study was conducted by Department of Aquatic Biology and Fisheries, University of Kerala to find out the effects and consequences of small scale cage culture technology adoption in Kerala. The salient findings of the study is given in the Box. 2.5

#### Box 2.5

##### Effects and Consequences of Small Scale Cage Culture Technology Adoption in Kerala

- There is a low level of adoption of cage culture technology in the state and there is a lack of trust in the technology and its ability to provide economic returns.
- Rains and extreme summer leading to receding water levels were identified as constraints.
- The algal booms in the cages causing fish mortality has been reported by the respondents.
- The state fish *Etroplus suratensis* (Karimeen) was reared in cages and one fourth of the respondents faced problems in seed collection and maintaining stocking densities at recommended levels in cages.
- The risk factors in cage culture was found to be low and no diseases were recorded during the cage culture.
- Attack by crabs, rodents, snakes and birds were risk factors identified.
- Majority of the respondents reported low growth performance of species in cages.
- Poor quality of net and availability of seed were also some of the issues identified in the study.
- The study emphasised the need to improve the motivation level of farmers through demonstrations for further popularising the cage culture practice.

Source :Proceedings of the National Seminar on Faunal Diversity of Kerala, 23-24 March 2012

## SECTION -4

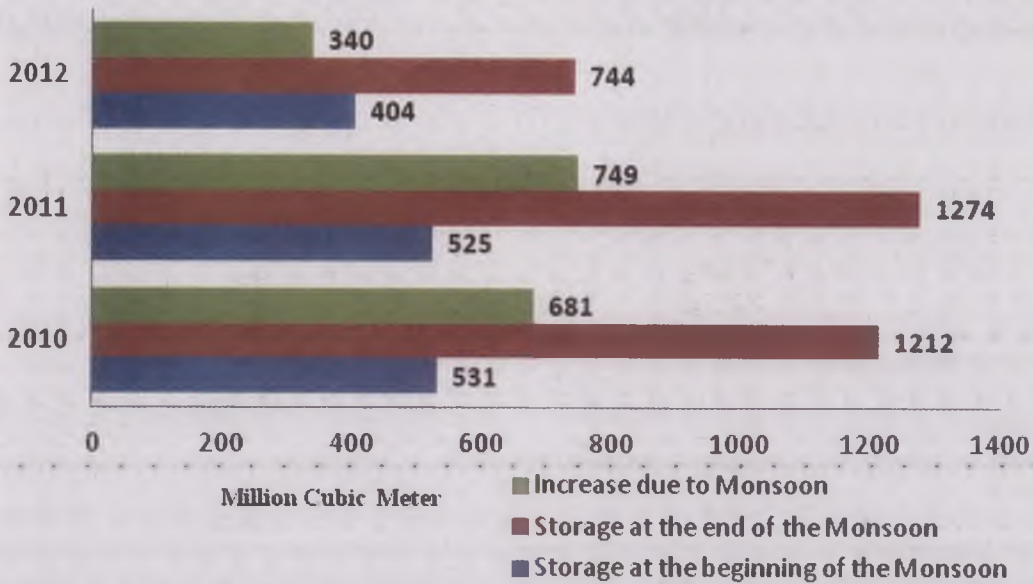
### Water Resources

2.108 Irrigation development in Kerala is mainly centered 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. About 50 to 60 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. Investments in irrigation are changing globally in response to changes in environment and experience with previous projects. Increased water scarcity has shifted the focus from exploitation of water resources and building infrastructure to improvement of water use efficiency.

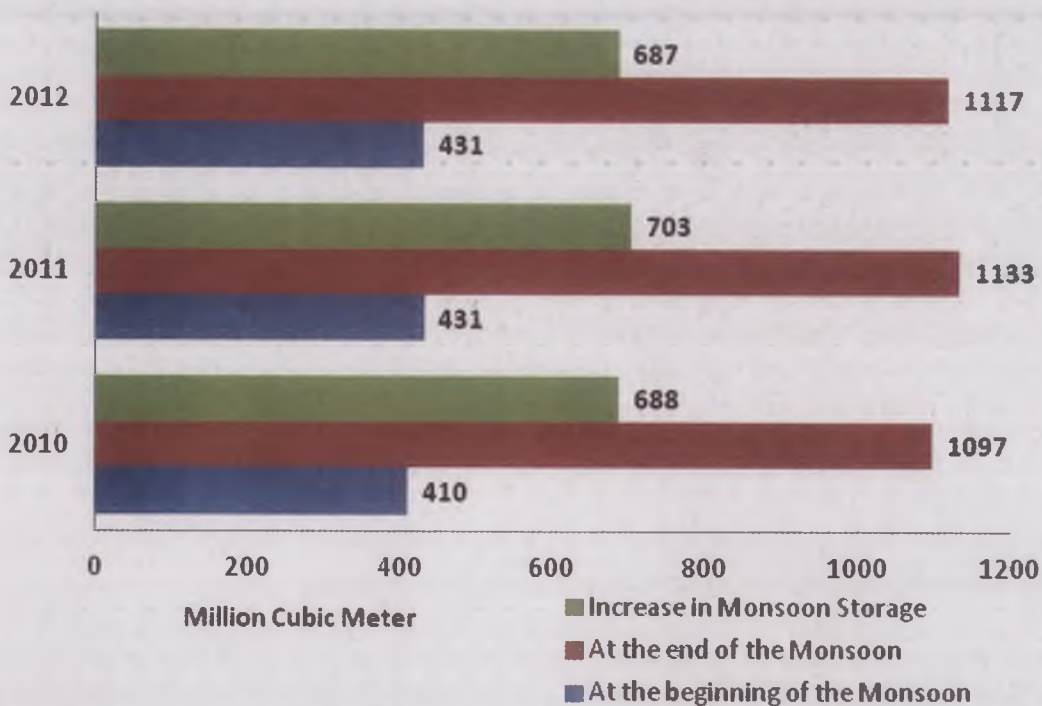
### Live Storage Capacities of Irrigation Reservoirs

2.109 The surface irrigation constitute major chunk of irrigation infrastructure in the state. There are 18 dams in the state intended for irrigation. Out of this, 14 have storages and remaining are barrages. The live storage position of the reservoirs during the beginning and end of the monsoon period during 2010 to 2012 are given in **Appendix 2.81** In the beginning of the Monsoon in 2012 the total storage was 404 Mm<sup>3</sup> and at the end of the monsoon, the level was 744 Mm<sup>3</sup>, against the levels of 525 Mm<sup>3</sup> and 1274 Mm<sup>3</sup> respectively, during the previous year. The decline in storage is due to the deficit rainfall reported in the state.

**Fig 2.12**  
**Live Storage Position in the Reservoirs (2010, 2011 & 2012)**



**Fig 2.13**  
**Live Storage Position in the Reservoirs (Average for 10 years): 2010, 2011 & 2012**



## Water Resource Management

2.110 Development patterns, increasing population pressure and the demand for the better livelihood across the globe are contributing to a looming global water crisis. Efforts to improve the efficiency of water use and limit demand in the agriculture sector, the largest consumer of water, have had limited success. Integrated water resources management on basin wise has made limited progress. The



basic premise of water resource management is that river basins are best managed and developed as an integrated whole. In many cases the need for river infrastructure such as weirs, dykes, regulators and other storage structures are primary drivers for adopting institutional solutions. During XII<sup>th</sup> Plan, it could be attempted in the state to select 2-3 basins for integrated water resources management. Bharathapuzha basin is one such basin which needs immediate attention.

## Review of Major Projects

2.111 The overall performance of the major and medium irrigation sector during the initial years was not encouraging. The cumulative area brought under irrigation through major and medium irrigation projects is 32044 hectares (gross). The details of the progress of implementation of ongoing projects as on December 2012 are given in **Appendix 2.82**

### Karapuzha Irrigation Project

2.112 Karapuzha Project is the first project for irrigation taken up in the Wayanad District of Kerala to create a reservoir of 76.50 Mm<sup>3</sup> storage capacities. The original estimate of the project was ₹ 7.60 crore in 1979 and the revised estimate as per 2010 schedule of rates was ₹ 441.50 crore. The cumulative expenditure incurred up to Dec 2012 is ₹ 289.62 crore. The project has been partially commissioned on 20.6.2010 and an ayacut area of 601 ha has been achieved so far. Major components under head works and the works of 8.805 Km right and 16.59 Km left bank canals are also completed. Land acquisition in respect of distributaries of Left and Right Bank Canals are yet to be completed. The progress of implementation of the project is very slow. More proactive steps are required to complete the project in the drought affected district. The project has been included under AIBP but the implementation of the work plan is very slow. Prioritization of work to complete the ongoing work is also required.

### Muvattupuzha Valley Irrigation Project

2.113 The project envisages the utilisation of the tailrace water from the Idukki Hydro electric project and the works started during 1978. Water from the reservoir is intended to give irrigation facilities to 19237 ha.(net) and 37737 ha.(gross) in Ernakulam, Kottayam and Idukki districts. The estimated cost of the project as per 1980 Schedule of Rates was ₹ 48.08 crore and the revised estimate cost, which is under finalization, based on 2012 SoR, reported is ₹ 1075 crore. The expenditure as on Dec 2012 is ₹ 826.16 crores. Out of which the work of the dam, Left and Right bank main Canals are completed and in respect of branches and distributaries, a total length of 50.971 km, 180.557 km respectively, have been completed so far. The project was commissioned partly in November 2004, and the ayacut area created so far is 31106 ha gross. The project has to be closed at a convenient stage for the optimum utilisation of resources invested considering the implementation of the project for more than three decades. The cropping pattern in the ayacut has changed and additional investment is required to irrigate the crops.

### Idamalayar Irrigation Project

2.114 The Idamalayar Irrigation Project is a diversion scheme intended to irrigate an extend of 14394 ha. of wet and dry lands and the Cultivable Command Area (C.C.A.) is 13209 Ha. The latest estimate of the project being prepared as per 2011 SOR is ₹ 694 crores and the cumulative expenditure as on December 2012 is ₹ 367.98 crores.

2.115 The works of 85 percent of main canal, 45 percent of low level canal, 37 percent of link canal and 95 percent of RBMC have been completed so far. In view of the Government policy to complete the long pending projects, the execution of the works needs to be arranged to the project at an early phase of the plan period so as to close the project in the XII<sup>th</sup> Five Year Plan itself.

## Banasurasagar Irrigation Project

2.116 The project was commenced in 1971 with an estimated cost of ₹ 11.37 crore to irrigate an area of 2800 ha. agriculture land for the second and third crops. The project report was revised based on 1996 SoR and Administrative Sanction was given to a cost of ₹ 37.88 crores. The revised estimate of the project based on 2010 SoR is ₹185.5 crores. The work of the Main canal of length 2.73 Km is completed and the works of aqueduct from Ch.0-150 M. and from Ch. 1130 M to 1500 M are in the progress. The land acquisition process of distributaries is in the progress. Expenditure incurred up to December 2012 is ₹ 42.31 crore including a part of the share cost given to KSEB.

## Accelerated Irrigation Benefit Programme (AIBP)

2.117 The release of central assistance to Kerala under AIBP is very low compared to other states. There has been a decreasing trend in the utilization during the last few years and very low release during the year under report. The details of release of central assistance under AIBP to Kerala with respect to other states are shown in the **Appendix 2.83**. During the period from 1998-99 to 2011-12 (Upto December 2011), Government of India had sanctioned ₹ 49376.72 crore to various states out of which, the assistance sanctioned to Kerala was ₹ 160.52 crore (0.3%). During the XI<sup>th</sup> Plan period, from 2007-08 to 2011-12 (upto December 2011) the corresponding figures were ₹ 29089.08 crore and ₹ 14.73 crore (0.05 %) respectively. The details of release of assistance under AIBP from 1998-99 to 2011-12 is shown in the **Appendix 2.84** and that of implementation in the state during XI<sup>th</sup> Plan period are shown in **Appendix 2.85**. More focused attention is required for the implementation of AIBP assistance in Kerala. The assistance has been released for Muvattupuzha project, Karappuzha and three projects under Prime Minister's rehabilitation package in Palakkad District covering Malampuzha, Kanjirapuzha and Chitturpuzha projects.

## Irrigation Status

2.118 The source-wise area irrigated as on March 2012 is given in **Appendix 2.86** As per the assessment of the Directorate of Economics and Statistics the net irrigated area in the state as on March 2012, is 4.09 lakh ha. and the gross area irrigated is 4.91 lakh ha. There is an increase of 5 percent in the gross irrigated area of the state in compared to the previous year of 2010-11. During 2011-12, among the crops, coconut tops among the major crop supported by irrigation. It accounted for about 37 per cent followed by paddy 31 percent, banana 9 percent, arecanut 8 percent and vegetable 4 percent. There has been a good progress in irrigated area under Vegetable cultivation as well as coconut during the year and also an increase in the area under irrigation for paddy cultivation compared to the previous year.

## Minor Irrigation

2.119 Minor irrigation is considered to have an important role to play in states like Kerala, where the average farm size is small. A comprehensive revival of minor irrigation schemes were implemented under Malabar package during XI<sup>th</sup> Five Year Plan. A master plan needs to be prepared for development of minor irrigation in the state. A survey has already been completed on tanks and ponds. The cumulative physical achievement of Minor irrigation up to XI<sup>th</sup> Five Year Plan was 2.82 lakh ha. (net). Minor irrigation has been given a considerable thrust during XI<sup>th</sup> Plan and the same accounted nearly 19 percent of the total budgeted outlay. The details of physical achievement for 2009-10, 2010-11 and 2011-12 are shown in **Appendix 2.87** NABARD has been providing loan assistance for irrigation works through RIDF phase I to XVII since 1995-96. The assistance of NABARD is by way of reimbursement. RIDF I to XI have been closed and the works under RIDF XIII to XVII are in progress. Under RIDF XIII the work of RCB at Chamravattom sanctioned by NABARD under project I been completed. One work under RIDF XV and 15 works under RIDF XVI and 24 works in RIDF XVII are in progress and all the works under RIDF XIV has been completed.

## Ground Water Development

2.120 Ground water fulfils the irrigation needs of around 50 percent of irrigated area. The total ground water recharge in the State is estimated as 6840.80 MCM. The existing ground water draft for all uses, based on the GEC 2004 methodology is 2693.38 MCM including 1596.02 MCM for irrigation. Net ground water availability for future irrigation use is worked out as 3221.23 MCM. The overall stage of development of the State is 43.2 percent. The district wise stage of development is maximum in Kasaragod (71.2%) and minimum in Wayanad district (21.6%). The blocks were categorised based on the stage of development and long term trend of ground water levels during pre- and post-monsoon seasons. Thus, out of 151 blocks, 33 are showing a stage of development 70 percent or more. Three blocks are falling under 'over-exploited', six blocks under 'critical' and six blocks under semi-critical' category. The remaining 136 blocks are categorized as 'safe' blocks. The expenditure incurred during the period 2011-12 was ₹ 7.91 crores against the budget outlay of ₹ 10.58 crores. The detailed physical achievement during the year under report is given in **Appendix 2.88**.

## Performance during the XI<sup>th</sup> Plan Period

2.121 During the XI<sup>th</sup> Plan period an expenditure of ₹ 619.24 crore was incurred for Major and Medium irrigation, ₹ 188.14 crore for Minor Irrigation ₹ 13.10 crore for CADA and ₹ 333.56 crores for Flood Management and Coastal zone management against the total budgeted outlay of ₹ 1651.18 crore. A major share of the total outlay for the water resource sector (51 %) was budgeted for Major and Medium sector, followed by Flood Management and Coastal zone Management (25 %) and Minor Irrigation (22%). The target set for the realization of additional irrigation potential during XI<sup>th</sup> Plan was 2.50 lakh ha (gross) comprising 50 lakh ha under major and 2.00 lakh under minor irrigation and the actual achievement aggregates to 1.09 lakh ha. Overall performance of the Irrigation sector was not encouraging during the XI<sup>th</sup> Plan, besides poor utilization AIBP assistance and under performance in the implementation of Kuttanad Package also aggravated the situation.

## SECTION -5

### Forestry and Wild Life

2.122 The forest cover of the Kerala State as per the 2011 report of FSI was 17300 sq.km. with 1442 sq.km of very dense forest, 9394 sq.km of moderate dense forest and 6464 sq.km of open forest. This constitute 44.5 percent of the total geographical area of the State, shows that the forest cover of Kerala increased over previous assessment. There is an increase of very dense forest cover to the tune of 419 sq.km, moderate forest of 774 sq.km and open forest 536 sq.km. As per FSI, the main reason for forest cover increase was due to the change in the area of the trees outside forests. In Kerala, Idukki District has the maximum forest cover of 3930 sq.km and Alappuaha District has the lowest forest cover of 38 sq.km. In terms of percentage of forest cover with total geographical area, Wayanad has the highest forest cover of 83.3 percent, followed by Idukki and Pathanamthitta. The district wise details of forest cover in Kerala is given in **Appendix 2.99**. The estimated forest area (provisional) in Kerala is 11309.5 sq.km. This includes 9107.2 sq.km of reserve forest, 364.5 sq.km of proposed reserves and 1837.8 sq.km of vested forests. Division wise details of forest area are given in **Appendix 2.100**.

2.123 The total forest cover of the country as per India State of Forest Report 2011 is 78.3 million ha. which constitute 23.8 percent of the geographical area of the country. In comparison to the 2009 assessment, there is a decrease of 367 sq.km. in country's forest cover. 15 states have registered aggregate increase of 5000 sq.km. in their forest cover with Punjab leading with increase of 100 sq.km. 12 States mainly in (Northern Eastern States) have shown decreased the extent of 867 sq.km. Decline of 281 sq.km. in forest cover of Andhra Pradesh is mainly attributed to cutting the Eucalyptus and other species. The state of Madhyapradesh has the largest forest cover in the country at 77700 sq.km. followed by Arunachal Pradesh at 67410 sq.km. As per the 2011 assessment, forest cover of Kerala is 17300 sq.km.



## Natural Forest

2.124 The forest of Kerala is mainly classified into 5 major categories. The coverage of the plantations forestry is to the extent of 13.2 percent of the total area. The major types of forests in Kerala are given in **Appendix. 2.101**. The quantity of timber production in 2011-12 was 17283.2 cum (round log). The number of bamboos and reeds produced were 4.7 lakh and 93.9 lakh respectively. The sandal wood production was 52104.1 kg. The trend in production of forest produces from 2001-02 to 2011-12 (provisional) are shown in **Appendix 2.102**.

2.125 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. 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 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.

## National Afforestation Programme

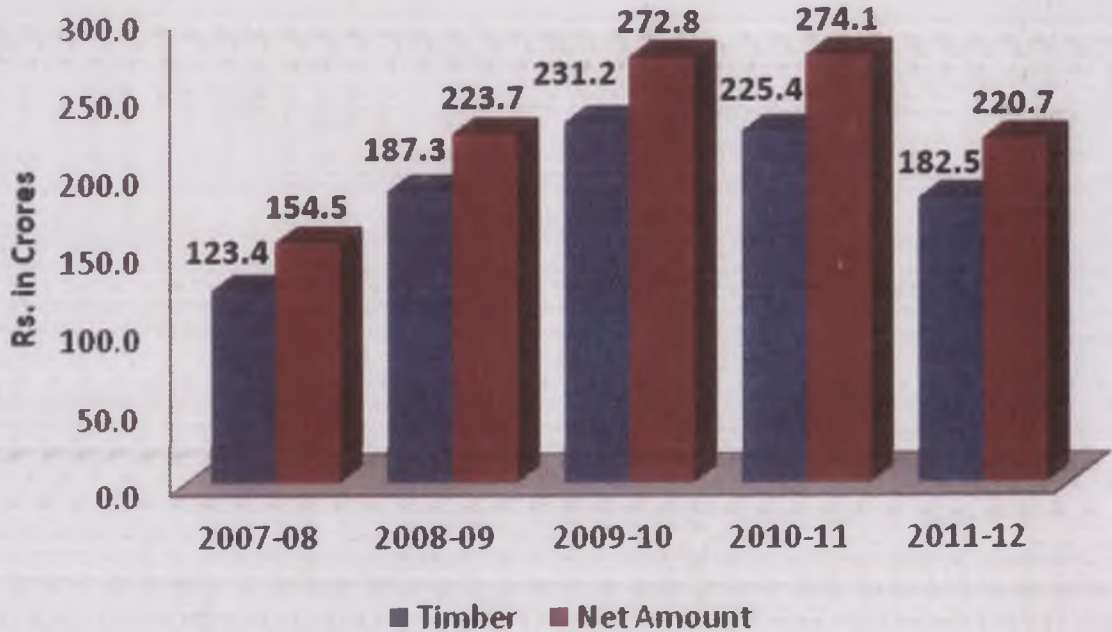
2.126 In the implementation of NAP, 27 Forest Development Agencies were participated. An extend of 2585.99 ha. of degraded forest has been afforested under the scheme during 2011-12.

## Forest Revenue

2.127 The forests contribute substantially to the non-tax revenue of the State. The revenue from the forestry sector by way of sale of timber and other forest products comes to ₹ 220.7 crore in 2011-12 and the revenue from the forest sector in 2010-11 was ₹ 274.4 crore, compared to the forest revenue

for these two years, a decrease of 20 percent over the previous year. Major portion of the forest revenue is from timber (Fig. 2.14). During 2011-12, ₹182.5 crore was the revenue from timber, which account for 82.7 percent of the total forest revenue. The forest also supply non-wood forest produce valued at ₹ 5 crore annually. Forestry sector provides maximum employment opportunities to the rural masses including the tribes. Details are given in **Appendix 2.104**

**Fig 2.14**  
**Forest Revenue in Kerala (2007-08 to 2011-12)**



## Wild Life and Biosphere Reserve

2.128 The 'Malabar Wildlife Sanctuary' was constituted in 2009 with an extend of 7421.5 Ha (74.2 Sq.Km) area. Also a new wild life sanctuary by name "Kottiyoor Wild life Sanctuary" was constituted in 2011 with an extent of 30.4 sq.km. The name of sanctuaries, National Park, Biosphere Reserves and other Protected Areas in Kerala is shown in the **Appendix 2.105**. The India Eco-development Project implemented in Periyar Tiger Reserve has got wide recognition nationally. The project was successful in weaning out forest offenders and make them part of conservation efforts. Presently, the Forest Department is trying to emulate the Periyar model in the management of all the PAs of the State. During 2011-12, an amount of ₹ 2012 lakh was earmarked under various plan schemes for protected area management and out of which ₹ 1628 lakh were utilized.

## General Forestry

2.129 Natural Forests in Kerala are being managed for sustaining the life support systems and biodiversity conservation. During 2011-12 also, no timber was extracted from the natural forests by way of clear felling or selection felling. Only timber from wind fallen trees was extracted wherever it is economically viable. Under 'Hardwood' species 159 ha new areas was raised and 585 ha was maintained during the year 2011-12. Also under industrial plantation, 534.1 ha were newly planted and 1931.3 ha were maintained. Under the NTFP including medicinal plantation, 311.9 ha new areas was raised and 1690.2 ha were maintained.

## Performance review under XI<sup>th</sup> Plan and Annual Plan 2012-13

2.130 The total state plan outlay during XI<sup>th</sup> Plan under forestry sector was ₹288.87 crore and the expenditure was ₹ 251.1 crore (87.2%). In addition an amount of ₹114.6 crore was provided for centrally sponsored schemes and the expenditure reported was ₹67.6 crore (59%) The state plan expenditure during 2011-12 is ₹ 70.4 crore against the budgeted outlay of ₹75.4 crore, which includes forest protection with an expenditure of ₹13.1 crore, regeneration of denuded forest with ₹1.8 crore, strengthening bio-diversity conservation and management of protected area with ₹12.88 crore, strengthening of infrastructure facilities with ₹4.5 crore for roads and buildings, improving productivity of Plantation with ₹ 5.6 crore, extension forestry with ₹ 7.9 crore and XIII<sup>th</sup> Finance Commission Award with ₹13.8 crore. Under central sector scheme the expenditure reported was 45 percent of the budgeted outlay. The outlay and expenditure for various schemes implemented in the Forestry sector is shown in **Appendix 2.106**. The major physical achievements during the XI<sup>th</sup> Plan period is shown in **Appendix 2.107**. The major physical achievements during 2011-12 were distribution of seedlings/plants under Harithakeralam, Harithatheeram and Vazhiyora Thanal programme is 70.22 lakh nos., construction of cairns 2214 lakh nos., construction of kayyala 3.927 km., construction of fire line 7204 km., regeneration denuded forest 364 ha., planting of hardwood species 159 ha., planting of NTFP including medicinal plants 311 ha., improvement of forest roads 75 km. and launching the project Suvarnodhyanam at Nedumbasseri in 4 ha. area.

### Key Initiatives during 2012-13

2.131 Key initiatives of the department during 2012-13 are establishment of Zoological Park in Puthur, Thrissur District; renovation of forest museum at PTP Nagar, Thiruvananthapuram as National History museum, establishing orchidarium at Vagamon in Idukki District, setting up elephant care centre at Kottur, Kappukode in Thiruvananthapuram District, establishing Gandhi Smrithivanam and eco-tourism project at Purakkad in Alappuzha District, establishment of new forest stations and model forest stations, establishment of Kottiyoor Wildlife Sanctuary etc.

### Management of Non -Wood Forest Produce (NWFP)

2.132 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. 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. Under the scheme Management of NWFPs, new NWFP species were planted at an area of 311.90 ha. Also maintenance of NWFP plantations of different species was done at an area of 1690.20 ha. A new brand for value added products of NWFP known as "Vanasree" was developed and 22 sales outlets of vanasree products were established in the State.

### Afforestation Outside Forest Area

2.133 The objective of the programme is to increase tree cover in non-forest areas to achieve the ideal target of 33.3 percent of forest cover. The department have embarked on massive afforestation programme outside forest areas since 2007 with novel ideas. The massive afforestation programme launched outside the forest areas are 'Entemaram programme, 'Nammude maram programme, Vazhiyora thanal programme, Haritha theeram programme and Haritha keralam programme'. The total number of seedlings distributed/planted under the various programmes upto 31-03.2012 are 258.34 lakh. The details of seedlings distributed under these programmes are given in **Appendix 2.108**. The sustainability of the trees planted has to be ensured.

## SECTION -6

### Environment

2.134 The fragile nature of ecosystem in Kerala is a concern and many natural and man-made causes pose a great threat to its biodiversity. About 159 species of flowering plants are threatened and same is the case with hundreds of animal species. The major man made causes include collection of firewood, illicit felling of trees, cattle grazing, encroachments, poaching, illegal sand mining, mass tourism soil, water and land contamination. Investigations of hazardous waste contaminated sites conducted by CPCB reported that the Kuzhikandom thodu and Ammenthuruthu in the Eloor-Edayar industrial area of Kochi are contaminated with heavy metals and persistent organic pollutants. The ground water and surface water monitoring revealed the presence of high concentration of pesticides in the Eloor area of Kochi (The summary of state wise/Union Territory wise status of highly polluting industries in 17 categories indicated that in Kerala of the total of 49 industries, 24 are complying with standards, 8 are not complying and 17 have been closed down. Among the 29 grossly polluting industries in the state discharging their effluents in rivers and lakes (as on 31st March 2011), 20 are complying, 2 are not complying and 7 have been closed down (Source :CPCB Annual Report, 2010-11).



### The Environmental Performance Index (EPI)

2.135 The Environmental Performance Index(EPI) is taken as a yard stick to measure the efficiency in keeping the environment properly by the Planning Commission, Government of India. The 2012 EPI offers a composite index of current national environmental protection efforts. Recognizing that on-the-ground conditions are the ultimate gauge of environmental performance, the EPI focuses on measurable outcomes that can be linked to policy targets and tracked over time. The EPI builds on measures relevant to two core objectives – (i) reducing environmental stress to human health (the environmental health objective) and (ii) protecting ecosystems and natural resources (the ecosystem vitality objective). After studying different methodologies an EPI methodology named as Planning Commission environmental performance index (PC-EPI) has been evolved for adoption, which calculates EPI scores for the selected criteria for all the states and Union Territories (UTs). The methodology evolved for ranking and status of Kerala with respect to PC-EPI are discussed in the Box 2.6

**Box 2.6****Environmental Performance Index of Indian States 2012– Ranking of Kerala****Methodology**

The Environmental Performance Index (EPI) christened Planning Commission-EPI is based on 5 categories such as air pollution, forests, water quality, waste management and climate change comprising 16 indicators. Indicators were sought to cover the full spectrum of issues underlying each of the major components of the environment, i.e. criteria identified. To ensure the use of the best-suited metrics, the indicator selection criteria applied were relevance (the indicator clearly tracks the environmental issue of concern), performance orientation (the indicator tracks ambient conditions or on-the-ground results to national standards and requirements) and data quality (the data used represent the measures taken by the states). The cumulative EPI is a measure of environmental well being of the state i.e. the states with score 1 are characterised by cleaner environment, adherence to environmental standards including implementation of legislation and institutional mechanism and efforts towards National Resource Conservation. Each criteria is assigned a maximum score of "one" and based on average score states are ranked.

**PC-EPI ranking of Kerala**

In air pollution category the state has been ranked 1, in water quality the rank assigned was 24, in forest the rank was 20, in waste management and climate change the rank assigned to the state was 16. The Final Environmental Performance Index of Kerala in 2012 was 9 and the score was 0.6660. During 2011, the Final Environmental Performance Index of the state was at 15 and the score was only 0.6311 which indicates the improvement in the environmental management. (Source: Indrani Chandrasekharan, R.Senthil Kumar, Seena Reghunathan and Shweta Chandrasekaran, Construction of Environmental Performance Index and ranking of states, Current Science, Vo. 104, No. 3

**River Water Quality**

2.136 The monitoring programme on river Water Quality of Kerala was undertaken by KSCSTE. In the recently published 4<sup>th</sup> part of the report covers water quality status of Chaliyar, Kallai, Achencoil and Kuttiyadi River basins. Water quality problems of Kuttiyadi river basin are associated with pH, colour, TDS, chloride, hardness, sodium, potassium and bacteriological contamination. In pre-monsoon season 100 percent of the surface water samples were contaminated with E.coli, in post-monsoon season 95 percent of surface water samples were contaminated and in monsoon season 32 percent surface water samples were contaminated with E.coli. Lindane, Aldrin and DDD were detected surface water samples collected from Kuttiyadi River. The analysis of groundwater samples indicates that 80 percent of samples had pH below the desirable limit. In Chaliyar river basin almost all surface water samples were found to be alkaline in nature. EC and TDS were much high in the downstream stations of the Chaliyar river basin during post monsoon and pre monsoon seasons. Due to salinity intrusion, sodium and potassium values were found to be high in pre-monsoon season in the downstream region. The value of Biochemical Oxygen Demand varied from 0.2 to 7.2 mg/l. In post-monsoon 68 percent of the ground water samples were bacteriologically contaminated where as in premonsoon and monsoon it was 41 percent and 20 percent respectively. In Kallai basin almost all surface water samples were found to be alkaline in nature. The value of chloride was found to be high in pre monsoon season, the value is 10200mg/l in the downstream region. The maximum value of BOD (13.3 mg/l) was observed at Muriyad Bridge. Of the total samples collected, 64 percent of the surface water samples were contaminated. Maximum pH (9.9) value was observed for the ground water sample collected from Kozhikode Corporation area during post monsoon



season. In case of Achencoil river basin, during post-monsoon 35 percent samples and in monsoon, 20 percent of the total samples showed pH less than 6.5. Almost all the water samples were found to be bacteriologically contaminated and showed higher index for total coliform. 95 percent of the water samples were tested positive for E.coli in pre-monsoon. But in post and monsoon seasons, the percentage of E.coli contamination was 65 percent and 30 percent respectively. Majority of the groundwater samples were found to be acidic in nature (Source : Environmental monitoring programme on water quality -2012, KSCSTE).

2.137 Environmental concerns have assumed significance in the recent years. Commensurate with industrial expansion, a strong regulatory mechanism is required to ensure minimum environmental standards. Concerted efforts are needed to educate the people on the importance of environmental protection and for redressing the complaints of the public on pollution problems and environmental issues. Environmental protection is to be incorporated as a part of curriculum in school and college education. The activities of the students related to environmental protection should be recognised within the academic system and should be encouraged by providing grace marks or certificate of recognition. The Green Awards constituted by the Kerala State Biodiversity Board for recognising outstanding contributions of individual/organisations in the field of nature/biodiversity conservation is an initiation in this direction. Peoples Bio Diversity Register is a comprehensive data base recording people's traditional knowledge and insight of the status, uses, history, ongoing changes and forces driving these changes on the biological diversity resources of their own localities. The Kerala State Biodiversity Board has completed the preparation of 412 Biodiversity Registers out of total 978 panchayats in the state by 2011-12. The Board has also achieved the constitution of Biodiversity Management Committees in all the panchayats in the state.

## SECTION -7

### Co-operation & Agricultural Finance

#### Support by National Co operative Development Corporation (NCDC)

2.138 As on 31.3.2012, the cumulative financial assistance of the NCDC was ₹ 4415.9 crores in Kerala. During 2011-12 Kerala stood 1<sup>st</sup> in all for sanctions and 3<sup>rd</sup> for disbursement of NCDC assistance to the States. Sanctions and releases of funds to Kerala for 2011-12 was ₹1428.6 crore and ₹ 895.1 crore respectively, contributing around 20 percent of total sanctions and 18 percent of total release made by NCDC, country wide. Under NCDC's direct funding scheme, during 2011-12, an amount of ₹ 1315 crore was sanctioned and ₹ 810 crore released to the Kerala State Cooperative Agriculture & Rural Development Bank Ltd and 10 District Cooperative Banks as short term working capital for meeting their credit requirements in Agriculture & Allied sectors.

2.139 Activity wise sanction and release of assistance from NCDC are shown in **Appendix 2.109**. The Year-Wise amount released by NCDC from 1962-63 to 2011-12 with rate of interest is given in **Appendix 2.110**. The interest rate of NCDC loans ranged from 7.5 percent to 11.8 percent in 2010-11 which in view to 10.8 percent to 13 percent on 2011-12. The interest rate of NCDC loan is referred as one of the highest rates reported. Deduction in rate seems to be essential to avail more support from NCDC

#### Primary Agricultural Credit Societies (PACS)

2.140 The Co-operative Credit structure in Kerala comprise of 1616 Primary Agricultural Credit Societies (PACS) and 63 affiliated Primary Co-operative Agricultural and Rural Development Banks supported by the Central and Apex Co-operative banks. As on 31.3.2012, there were 1616 PACS out of which 724 were running in loss and 56 societies were threatening under liquidation. The PACS are functioning with a paid up share capital of ₹1809.8 crores and reserves of ₹ 2150.8 crores. The

co-operatives during the year under report was encouraging. The total loan disbursed during 2011-12 was ₹ 46689.6 crores against that of ₹ 36822.3 crores in 2010-11. Compared to the previous year, there was an increase in the disbursement of short term and medium term loans. In the case of loan disbursement 31 percent increase is recorded in the agriculture sector.

2.141 The Selected indicators of the credit operations of the Primary Agricultural Credit Societies show that, during 2011-12, deposits of the societies increased to ₹ 39856.9 crores as against ₹ 32527.6 crores during 2010-11. The average deposit per member is increased to ₹ 8514.6 from last year's level of ₹ 6340.7. Similarly the average working capital position of the societies increased to ₹ 4732.2 lakh against ₹ 2484.2 lakh during 2010-11. Selected indicators and credit operations of PACS are given in **Appendix 2.111** and **Appendix 2.112**.

## Deposit Mobilisation Campaign by Co operative Societies

2.142 Deposit Mobilisation campaigns by co-operative credit institutions continued during the year under report also. The deposit mobilisation by the Co operatives have shown an increasing trend over the years. During the period under review, the Co operatives could mobilize ₹ 2592.8 crore as against the target of ₹ 1905.7 crores, showing 136.1 percent of increase, which was 126.3 percent in the previous year. Year wise target and achievement is given in **Appendix 2.113**.

## XI<sup>th</sup> Plan Performance

2.143 The XI<sup>th</sup> Plan outlay envisaged for the sector was ₹ 113 crores. The budget outlay for the XI<sup>th</sup> Plan was 135.60 crores and the expenditure was ₹ 144.03 crores ie, 106.21 percent of the budgeted outlay. The sub-sector wise financial achievement during the XI<sup>th</sup> Plan is given in **Appendix 2.114**. The proactive involvement of co-operatives could be considered in procurement of farm produce and establishment of more agro-processing units in the state. A major project for setting up of rural godown with the support of RIDF could be considered.

2.144 The co-operative movement in Kerala has a solid foundation and impressive record in terms of strength and financial stability. There are 13766 co operative societies were working under the Registrar of Co-operative Societies. 2689 miscellaneous registered professional, cultural co operatives generating employment, income to the weaker section of the community were functioning in the state. Details are given **Appendix 2.115**. The major physical achievements in the sector during 2012 is shown in **Appendix 2.116**. The Integrated Co-operative Development Project (ICDP) was successfully implemented in all districts and the second phase of ICDP in Wayanad district is under implementation.

## Agricultural Finance

2.145 Agency-wise disbursement of the annual credit flow in the state reveals that out of total disbursement of priority sector advances, commercial banks stood at the first place disbursing ₹ 40159 crore (57.6%) in 2011-12, followed by Co-operative Banks (35.4%), RRBs (6.4%) and KFC(0.6%). In Agriculture lending also commercial banks dominated by disbursing ₹ 23889 crore (68.1%) followed by Co operative Banks (23.9%) and RRBs (8%). Details are given in **Appendix.2.119**.

2.146 The credit flow to agriculture sector during the last 5 years is given in Table 2.4 The share of production credit has increased by 6 percent while investment credit diminished by 6 percent during 2011-12.

**Table 2.4**  
**Production and Investment Credit to Agriculture Sector (₹ Crores)**

Year	Production Credit	Investment Credit	Total
2007-08	13203 (83%)	2757 (17%)	15960 (100%)
2008-09	14605 (78%)	4228 (22%)	18836 (100%)
2009-10	18817 (78%)	5307 (22%)	24124 (100%)
2010-11	23512 (82%)	5141 (18%)	28653 (100%)
2011-12	27728 (88%)	3901 (12%)	31629 (100%)

Source: SLBC

2.147 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 commercial banks followed 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 disbursement was 100 per cent in production credit. The share of RRBs in production credit and investment credit was 99 per cent and 1 per cent respectively. Details of credit flow during 2011-12 is given in **Appendix 2.120**.

### Long Term Credit:

2.148 A net work consisting of the Kerala State Co-operative Agricultural and Rural Development Bank (KSCARDB) at the Apex and 63 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 sheds, Barbed wire or stone fencing, Construction of drainage channels etc. The Bank raises funds through floating of debentures issued on government guarantee. The total long term loan disbursed during 2011-12 by KSCARDB was ₹1264.30 crore registering an increase of 29 percent. Long term loan disbursement and debentures floated by KSCARDB and purpose wise classification of long term loans issued by Primary Co-operative Agricultural and Rural Development Banks is shown in **Appendix.2.121** and **Appendix.2.122**

#### **Box 2.7** **Refinance Support by NABARD**

In Kerala the total refinance disbursement from NABARD was ₹ 2684.87 crores during 2011-12. Commercial Banks accounted for the highest share of 71.4 percent in the total refinance disbursed in the state. This was followed by Kerala State Co operative Agricultural Rural Development Bank ₹ 671.37 crore (25%) and RRBs. The disbursement of RRBs registered a lowest of 3.6 percent Agency wise and purpose wise disbursement of refinance assistance by NABARD in Kerala is given in **Appendix 2.123** and **Appendix 2.124**.

The purpose-wise analysis of the refinance by NABARD reveals that as against the previous years, the major share of assistance was availed by plantation and horticulture sector (35.4%), followed by non farm sector (15%). Other major schemes availed refinance support was land development, minor irrigation, dairy Development etc. The sectors like fisheries and poultry, which are very important in the rural economy of Kerala were neglected during 2011-12 from the disbursement of refinance by NABARD. As against the declining trend in total refinance till 2011, 66 percent increase was reflected during 2012.

NABARD prepares Potential Linked Plans for all districts in the country as a part of the strategy advocated by RBI for decentralizing the credit planning exercise. In Kerala the exercise outlined credit potential in agriculture & allied sectors and rural development projects and serves as an important tool for banks in credit planning. Considering the infrastructure, discussions with line departments, districtwise credit potential assessed during 2013-14 for crop loan is given in **Appendix 2.125**.

## Rural Infrastructure Development Fund (RIDF)

2.149 The RIDF was set up in NABARD with contribution from the Commercial banks which were not able to fulfill the commitment of channelising at least 18 per cent of their total lending to agriculture. RIDF has been instrumental in strengthening the rural infrastructure in the State. From RIDF I to XVII total sanction and disbursement stands at ₹159476.5 crores and ₹112815.4 crore respectively as on 31-03-2012.

### Assistance to Kerala

2.150 Kerala has been receiving assistance under RIDF for the last fifteen 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. In Kerala the cumulative sanction and disbursement as on 31-03-2012 was ₹4458.6 crores (61.2%) and ₹ 2728.3 crores respectively. During the XVII tranche an amount of ₹949.1 crore was sanctioned and ₹193.9 crores was disbursed on 469 projects. The tranche wise sanction and disbursement under RIDF are shown in **Appendix 2.126**

## SECTION 8

### Rural Development Programmes

2.151 Poverty and Unemployment are inter related and form a vicious circle. The major Centrally Sponsored Scheme of the Government of India under Rural Development focus on gainful wage employment as well as self employment opportunities to the poor so as to improve their livelihood conditions. A brief review of the financial and physical progress of these Centrally Sponsored Scheme and Kudumbashree programmes are given in the following paras.

### The Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP)

2.152 MGNREGP provides for the enhancement of livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household, whose adult members volunteer to do unskilled manual work with the auxiliary objective being generating productive assets and protecting environment to achieve long term livelihood sustainability. In terms of auxiliary objectives, the programme is not a complete success in Kerala since we fail to attract the male work force with the meager per day wages of ₹ 164 which is not sufficient to attract labour in Kerala. Hence we are unable to reap the benefits of the scheme in terms of productivity and maintenance of assets.

2.153 The average financial achievement of the programme during XI<sup>th</sup> Plan was 86%, the financial release being ₹ 2945.5 crore. The financial achievement under MGNREGP during 2010-11 was 81.9% where as that of 2011-12 was 95%. The total employment in terms of mandays generated under MNREGP during the XI<sup>th</sup> plan was 16.8 crore. The employment generation during 2011-12 was 6.3crore mandays, 1.8 crore in excess of that in 2010-11. The physical and Financial progress of the programme 2012-13 till August 2012 is given in **Appendix-2.127 & 2.128**

### Swarnajayanti Grama Swarozgar Yojana (SGSY)

2.154 The Swarnajayanti Grama Swarozgar Yojana (SGSY) which was in operation in the country from 1st April 1999 continued up to the 11th plan period. This programme was the massive self employment programme of GOI for poverty alleviation with focus on social mobilization through SHGs.

2.155 The financial achievement of the scheme was 95.1% during XI<sup>th</sup> plan, the target being ₹ 261.1crore. The expenditure of the scheme during 2010-11 was 97% where as that of 2011-12 was just below, 96%. The targeted number of Self Help Group members assisted during XI<sup>th</sup> plan was 139971 and the physical achievements was cent percent. The physical target for 2010-11 and 2011-12 were to assist 33770 and 33970 SHG members respectively which was also fully achieved.

2.156 The SGSY programme has been restructured and rechristened as National Rural Livelihood-Mission and under implementation from 2012-13 onwards. The project duration of the programme is 7 years and Kudumbashree Mission is the nodal agency for implementing the programme in the State at present.

## Indira Awas Yojana (IAY)

2.157 The Indira Awas Yojana (IAY) is one of the six components of Bharat Nirman Programme of the Government of India for providing dwelling units to the homeless rural poor Below Poverty Line with a grant-in-aid of ₹ 48, 500/- per house. The benefit of the programme will cover beneficiaries with at least two cents of land. As far as rural housing is concerned, IAY has provided 2.7 lakh houses during the XI<sup>th</sup> Plan (details given in **Appendix 2.129 &2.130**).



## Rural Infrastructure Development – PMGSY

2.158 PMGSY is a 100% CSS to build up rural infrastructure with the objective of facilitating a higher degree of rural – urban integration and for achieving an even pattern of growth for the poor and disadvantaged sections of the society. Some of the initiatives taken by the Government to facilitate building of rural infrastructure and development include the PMGSY.

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

## SECTION -9

### Food security

2.160 Food Security implies “access to adequate and appropriate food throughout the life cycle of a human being from pregnancy to old age so as to ensure healthy body and mind”. Public Distribution System (PDS) ensures food security to people especially to Kerala where there is more than 75% deficit in food grain production. Continuous decline of cultivated land and low production along with population pressure necessitates the need for strengthening Public Distribution System in the State.

#### Public Distribution System

2.161 The Public Distribution System aims to i) provide food grains and other essential items to vulnerable sections of the society at reasonable (subsidized) prices fixed by the Government ii) put an indirect check on the open market prices of various items iii) prevent unfair trade practices like hoarding, undue profiteering and black marketing and iv) attempt socialization in the matter of distribution of essential commodities.

2.162 Total number of card holders in the State during the 2011-12 was 78,98,005, which is 2,69,349 more than 2010-11 period (3.5 per cent increase). Similarly number of APL card holders also increased to 58,24,134 in 2011-12 from 55,71,568 of 2010-11 (4.5 per cent). But the number of BPL and Anthyodaya Anna Yojana (AAY) card holders decreased to 14,47,078 and 5,92,486 respectively in 2011-12 (1.1 per cent and 0.44 per cent respectively).

2.163 From 2012 April to May, APL card holders were allotted 1,03,032 MT of rice and 33,652 MT of wheat. Similarly rice allotted for BPL and AAY is 53,132 MT and 41,710 MT respectively and 13,926 MT of wheat has been allotted to BPL cardholders. Supply price of rice for APL and BPL during 2012 was ₹ 8.90 and ₹ 1.00 respectively and that of wheat is ₹ 6.70 for APL and ₹ 2.00 for BPL. Public Distribution System, Kerala profile: 2007-08 to 2011-12 is given in Appendix 2.131 and Distribution of rice, wheat, kerosene and sugar through PDS from 2006-07 to 2011-12 (up to May) is shown in Appendix 2.132



## Scheme for Providing Food Grains at ₹ 2/Kg.

2.164 This scheme is for providing food grains to all prescribed special category of beneficiaries @ ₹ 2/Kg. In 25th January, 2011 the Government of Kerala approved the schemes for providing food grains (Rice and Wheat) @ ₹ 2/Kg. to all cardholders subject to certain conditions. 42.8 lakh APL beneficiaries were given rice and, 14.62 lakh BPL and 42.8 lakh APL beneficiaries were given wheat @ ₹ 2/kg in 2010-11 while 42.23 lakh APL beneficiaries were provided with rice and, 14.55 lakh BPL and 42.23 lakh APL beneficiaries were provided with wheat @ ₹ 2/Kg. in 2011-12. Quantity allotted and Subsidy amount required for meeting the expenditure under these scheme is furnished in **Appendix 2.133**.

## Scheme for Issue of Food Grains at Re.1/Kg

2.165 The scheme for issuing Rice @ ₹ 1/-per Kg. has been implemented in the State since 1st September 2011. In 2011-12 so far 14.55 lakh beneficiaries under BPL were supplied with rice while it was 14.62 lakh in 2010-11. Food grain distribution under PDS for BPL and APL from 1-9-2011 to 31-5-2012 is given in **Appendix 2.134**.

## Anthyodaya Anna Yojana Scheme (AAY)

2.166 The aim of the scheme is to provide 35 Kgs. of rice per month to the poorest of the poor families under BPL and is being implemented in the State since 25-12-2001. Allotment of rice continued at the level of 250260 MT in 2011-12 also. The Government of India supplies food grains to the State Government @ ₹ 3/- per Kg., State Government in turn provides it to the beneficiaries at the subsidized rate of ₹ 1/- Kg. Distribution of Food Grains under AAY and ANP Schemes during 2011-12 is given in **Appendix 2.135**.

## Annapoorna Scheme

2.167 Under this scheme 10 Kg of rice per month is distributed to destitutes of the age of 65 years and above free of cost. The number of Annapoorna Cardholders is only 34,307 as on 31-03-2012. Quantity of rice allotted was 3600 MT and 1350 MT in 2010-11 and 2011-12 respectively. As every person in the State is covered by any of the pension schemes, finding beneficiaries for this scheme is difficult. Eligibility criteria for identifying Annapoorna beneficiaries may be relaxed so as to include more deserving persons in the scheme.

## Central Allotment of Sugar and Kerosene

2.168 Central Allotment of Sugar was restricted to BPL/AAY cardholders alone from February 2001 onwards. The allotment of sugar to Kerala was 3879 MT (Up to April 2012). The central allotment of Kerosene was 21804 KL from 1/4/2012 to 31/5/2012.

## SUPPLYCO – Second Line of PDS in the State

2.169 Kerala State Civil Supplies Corporation (SUPPLYCO) was set up in 1974 with a mission of "food security for Kerala" and acts as second line of PDS in the State by distributing essential commodities at reduced price. The corporation is head quartered in Kochi and operating through 5 regional offices, 56 depots and many retail outlets. Details of outlets are given in **Appendix 2.136**

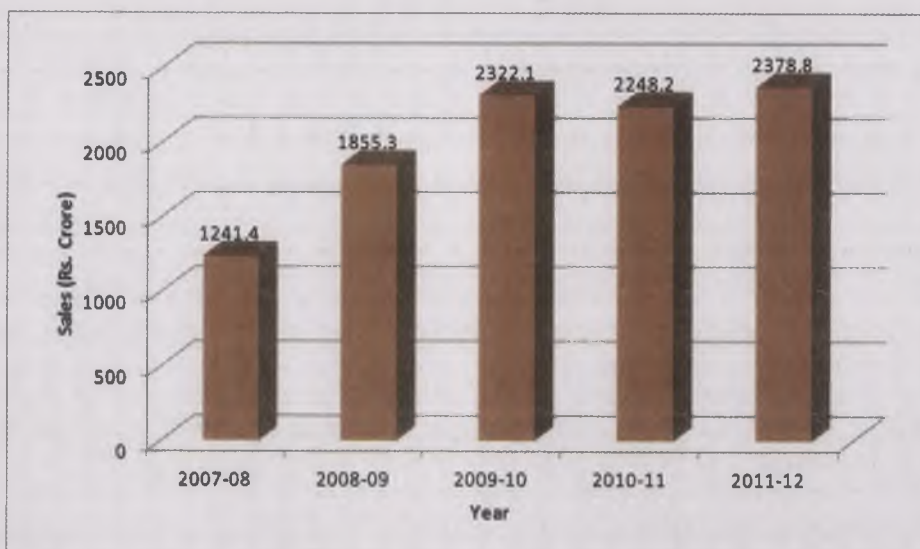
2.170 Activities include market intervention for stabilizing the price of essential items, retailing of FMCGs (Fast Moving Consumer Goods) at lower price, conducting special fairs for arresting the undue rise in price during festive seasons, retailing of medicines by opening medical stores, acting as a nodal agency for the paddy procurement, arranging process of wheat and distribution of its products, acting as dealer of petroleum product like kerosene, petrol, diesel and LPG and also acting as nodal agency to implement the programme of Government of India to State to start Micro Biology Lab and Food Processing Unit. Sales turnover of SupplyCO from 2007-08 to 2011-12 is depicted in figure 2.15.

## Mid-Day Meal Programme

2.171 The Mid-day Meal Programme, aimed at providing nutritional support to primary school going children and to give boost to universalisation of primary education by increasing enrolment, retention and attendance was introduced in 1995 by the Ministry of Human Resource Development. The Mid Day Meal Scheme is being implemented in the state with the financial support of State Government in addition to the Central assistance. The Government of India provides 100 grams of rice to primary children and 150 grams of rice to upper primary students per day. Government of India provides cooking cost also @ Rs.1.58 for primary and Rs.2.10 for upper primary students per day. Number of beneficiaries from 2007-08 to 2011-12 is shown in Fig. 2.16



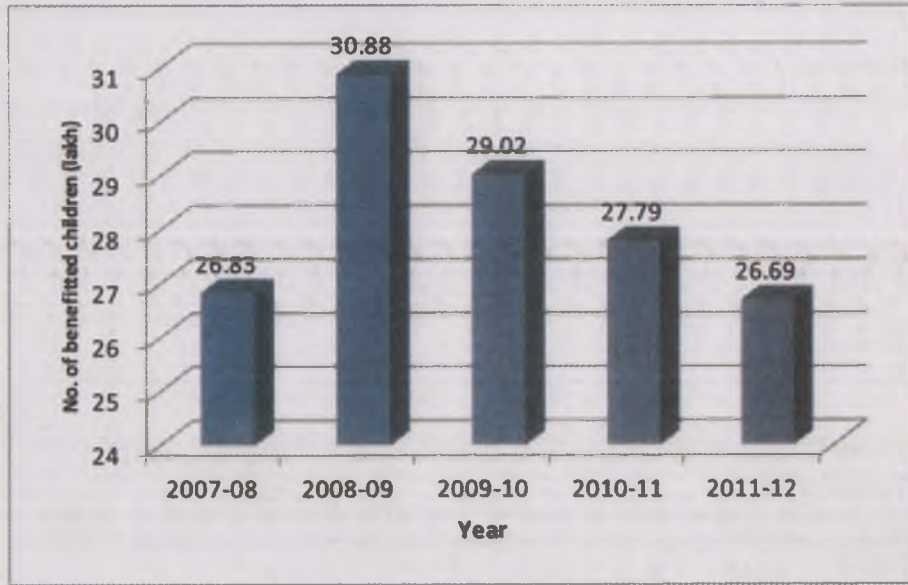
**Fig.2.15**  
**SUPPLYCO - Sales Turnover**



Source: SupplyCo



Fig.2.16  
Mid-day Meal Programme



Source: SupplyCo

2.172 The supply of commodities to schools for Noon-Meal scheme in Kerala is entrusted to SupplyCo. 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 2011-12 the Corporation supplied 4,92,512.11 Qtls of rice and 1,32,330.73 Qtls of pulses to 12638 schools and about 26.69 lakh children got the benefit of the scheme. Details of mid-day Meal Programme - Supply of food grains from 2006-07 to 2011-12- is given in **Appendix 2.137**.

## Outlook for Agriculture and Allied Sectors in Kerala

2.173 The Agriculture and Allied Sector is being promoted through a variety of schemes including subsidies and support prices, introduction of high technology and innovative techniques, provision of various credit options, watershed management and the like. The revival of this sector is essential for inclusive growth and food security.

2.174 New uncertainties for growth in 2012-13 in the State have emerged from the unsatisfactory progress of monsoon which has deepened the prospects of most of the crops. The implication of a drought in a perennial crop based agricultural economy could be quite long lasting. Coupled with this, globally the debt crisis in Europe intensified and China's growth slowed which could affect the export prospects of commodities including marine products. The commodity forecast issued by the World Bank on January 15, 2013 has projected a lower international price for most of the commodities of our interest. The coconut oil price is projected to decline to \$ 950/mt in 2013 from \$ 1111/mt in 2012, Palm oil from \$ 999 to \$ 930/mt, Robusta coffee from € 227/kg to € 205/kg, tea from € 290 to € 285/kg, Shrimp from € 1006/kg to € 1005/kg, rubber (Malaysia ) from € 338 to € 330/kg.

2.175 Conservation and management of natural resources is required for building drought proof resilient system in the State. The short, medium and long term strategies are to be put in place to manage the drought situation. Risk Management Strategies targeting both production as well as price are crucial for the improvement of livelihood of the farmer for the revival of agriculture sector of the State.

# INDUSTRY, LABOUR AND EMPLOYMENT





# INDUSTRY, LABOUR AND EMPLOYMENT

## Introduction

*In this chapter, issues concerning industry, labour and employment are grouped together to bring out the striking economic complementarities between labour and entrepreneurship. At the same time the need for development policy to ensure that there is no compromise on dignity of labour and decent work standards, while stimulating industrial growth is emphasized. Though inter-related, there are specific issues concerning each of these areas and the chapter is sub-divided into three sections viz. Industry, Labour and Employment.*

*As brought out in Chapter 1, manufacturing in Kerala has been growing at 13.5 percent in 2011-12 over the previous year, much higher than the 2.5 percent growth of this sector at the national level. Manufacturing in Kerala contributes 7.3 per cent to the State's GSDP at current prices. The share of manufacturing to Kerala's GSDP in 2011-12 is almost the same as the contribution of overall manufacturing to the Nation's GDP. In the case of mining also, this sector contributes 0.6 % to the state's GSDP, which is on par with the contribution of mining to the country's GDP. Mining in Kerala has grown at 11 percent in current prices in 2011-12, while there was negative growth in mining at the national level. Section 3.1 includes the performance of State level Public Sector Enterprises (PSEs), Micro, Small and Medium Enterprises (MSMEs) and Traditional industries (Coir, Handloom, Cashew and Handicrafts) in recent years. It also provides an account of the mining sector in the state. The institutional structure in the state to promote industry is also brought out. The major challenges faced by these industries and some of the important schemes introduced to tackle these challenges are brought out in this section.*

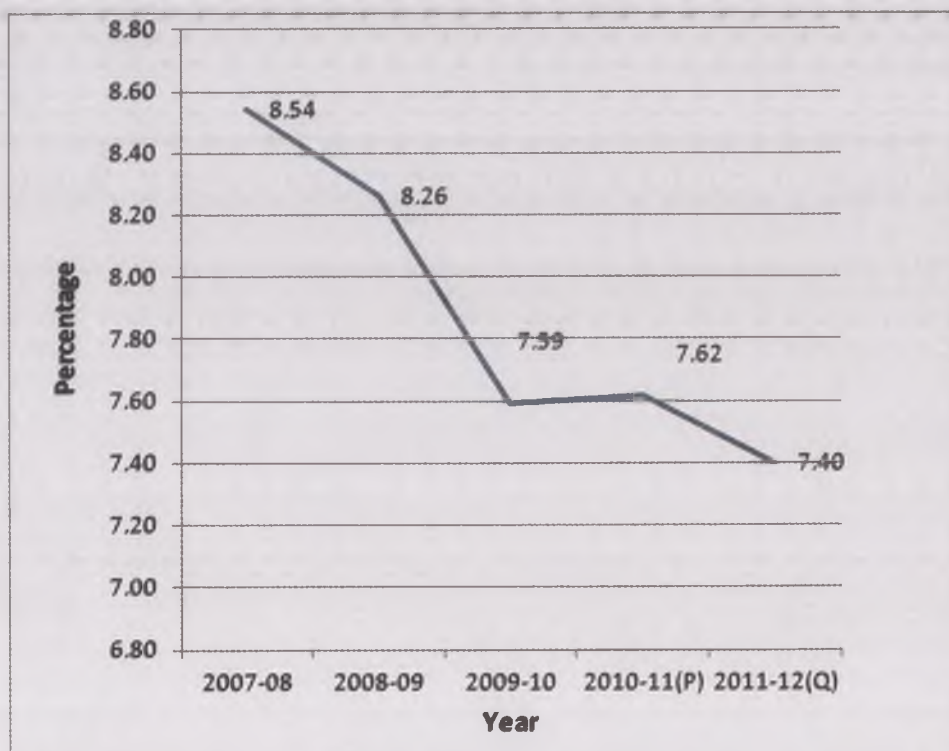
*The State is on par with advanced countries in ensuring that interests of Labour are not compromised while striving towards economic growth. Kerala's labour force is well aware of their rights and there is relatively high ethical standards and values in the labour market in Kerala. This chapter brings out highlights of various welfare measures recently undertaken for Kerala's workers, which include a growing proportion of inter-state migrants. A section in this chapter is devoted to the growing unemployment problem in Kerala, where the work participation rate is the lowest among general category states in the country. Ensuring appropriate employment avenues to different categories of workers so that they enjoy a high standard of living continues to be a challenge.*

## Industry

Industrial slowdown has been all pervasive nation wide. The continuing recessionary trends in European Union, USA, Japan, coupled with infrastructural bottlenecks and high cost of credit has adversely impacted investment in new projects, thus clearly indicating a fall in business confidence.

3.2 According to the latest estimates available on the Index of Industrial Production (IIP), the index of mining, manufacturing and electricity registered growth rates of 1.8 percent, 0.2 per cent and 2.8 per cent respectively during second quarter of 2012-13 as compared to the growth rate of (-) 4.1percent, 3.4 percent, and 10.5 percent in these industries in second quarter of 2011-12. The key indicators of construction sector, namely, cement production and steel consumption have registered growth rates of 5.1 per cent and 2.3 per cent respectively during second quarter of 2012-13. (CSO) In Kerala, the manufacturing sector recorded a decline in growth rate of nearly 13.5 per cent in GSDP at current prices during 2011-12 compared to the growth of almost 15 percent in the previous year. The contribution of income from manufacturing sector to GSDP at constant and current prices during 2011-12 is 7.4 per cent and 7.3 per cent respectively. The income from manufacturing sector to GSDP and its growth rates from 2007-08 to 2011-12 are given in **Appendix 3.1**. A drastic decline can be observed in the growth rate of manufacturing during 2009-10 and after that there was an increase and again declined during 2011-12. Fig.3.1 shows the contribution of manufacturing to GSDP during the 11th Plan period.

**Fig.3.1**  
Contribution of Manufacturing Sector to GSDP at 2004-05 prices



3.3 An Industrial and Commercial Policy has been drafted in 2011. It aims to convert Kerala from a wage earning society to an entrepreneurial state.

Table 3.1  
Plan Outlay and Expenditure (₹in Lakh)

Sl. No.	Sector/ Sub sector	Annual Plan 2010-11		Annual Plan 2011-12		Annual Plan 2012-13
		Outlay	Expenditure	Outlay	Expenditure	Outlay
1.	Village & Small Enterprises					
i.	Small-Scale Industries	4038.00	2843.87	4060.00	2547.48	5505.00
ii.	Commerce	10.00	10.00	10.00	10.00	75.00
iii.	Handicrafts	227.00	1213.00	226.00	225.75	300.00
iv.	Handloom & Powerloom	5668.00	5519.02	5767.00	6541.98	6832.00
v.	Coir Industry	8205.00	10292.31	8205.00	8220.23	10070.00
vi.	Khadi & Village Industries	878.00	878.00	928.00	928.00	1210.00
vii.	Cashew Industry	5200.00	5200.00	5200.00	4688.00	6500.00
viii.	Beedi Industry	60.00	649.06	40.00	32.29	-
	Sericulture	350.00	75.00	-	-	-
	Subtotal-VSE	24636.00	26680.26	24436.00	23193.73	30492.00
2.	Other Industries	17100.00	29669.68	22030.00	15266.12	24067.00
3.	Minerals	162.00	1115.18	162.00	58.22	211.00
	TOTAL : Industry & Minerals	41898.00	57465.12	46628.00	38518.07	54770.00

Source: Finance Department, Govt. of Kerala

3.4 The total outlay on Industry and Minerals during 2011-12 was 11 percentage higher than that in 2010-11 and the total outlay during 2012-13 is 17 percentage higher than that of 2011-12.

### State Level Public Sector Enterprises (SPSE)

3.5 SPSEs have played a crucial role in the manufacturing and service sector of the State. It is one of the largest employers in the organized sector. PSEs have established a strong foundation for the development of small, medium and ancillary industries.

3.6 Multi pronged strategies are being introduced to revive and revitalize the PSEs through systematic monitoring and Good Governance. Due diligence was carried out with updation of accounts. Government have been taking steps to restructure and revive the PSEs by a comprehensive policy initiative through up-gradation of technology, performance contract agreement, inter-PSE tie up, capacity building and effective Corporate Governance systems under the initiative of Restructuring and Internal Audit Board (RIAB) ([www.riab.kerala.gov.in](http://www.riab.kerala.gov.in))

**Box 3.1****State Level PSEs under Industries Department as on 31-3-2012**

1. No. of PSEs	- 44
2. Sector-wise PSEs	- 9 in Textiles, 8 in Traditional and Welfare, 7 in Chemical, 6 in Engineering, 4 each in Development & Infrastructure and Electrical Equipments, 3 in Electronics, 2 in Ceramics & Refractories and 1 in Wood & Agro based sectors
3. Profit Making Units	- 20, mainly in Chemical, Development & Infrastructure and Electronics
4. Loss Making Units	- 24, mainly in Textiles and Traditional Industries
5. Total Turnover during 2011-12	- ₹ 3148.22 crore
6. Net Profit during 2011-12	- ₹ 245.8 crore

Source: RIAB

3.7 The performance trend of PSEs during the last 5 years are given in **Appendix 3.2**. During 2012-13 (up to October 2012) PSEs have recorded a turnover of ₹ 1427.22 crore and a Net Profit of ₹ 11.97 crore. The turnover and profit/loss of PSUs during 2011-12 are detailed in **Appendix 3.3**.

## Joint Stock Companies

3.8 The total number of Joint Stock Companies in Kerala as on March 2012 is 19521 of which nearly 93 percent are private limited and 7 percent are Public Limited. During 2011-12, 2823 Companies were newly registered which included 2757 private limited and 66 public limited companies. Details of Joint Stock Companies working in Kerala are given in **Appendix 3.4**.

## Industrial Financing

3.9 Kerala has been taking serious efforts to identify new industrial and infrastructural opportunities and to equip itself to meet the emerging challenges. The role of Government has changed from a provider to that of a facilitator for industrial investment. Some major financial institutions in the public sector are :

### Kerala Financial Corporation

3.10 Kerala Financial Corporation was established as Travancore Cochin Financial Corporation on 1-12-1953 and in November 1956 the Corporation was renamed as Kerala Financial Corporation (KFC). The main objective of KFC is the rapid industrialisation of the State by extending financial assistance to Micro, Small and Medium Enterprises in manufacturing and service sectors. Corporation can give financial assistance for setting up of new Units and for the expansion / modernisation / diversification of existing Units in both manufacturing and service sectors.

3.11 Kerala Financial Corporation has achieved substantial growth in terms of sanction, disbursement and recovery of financial assistance and made an operational profit. The Corporation is the No. 1 State Financial Corporation in the country in terms of profitability and low level of Non Performing Asset. Corporation has earned the highest ever profit of ₹ 45.65 crore during 2011-12. The non-performing assets are at the lowest level.

3.12 The Corporation sanctioned financial assistance of ₹ 538.26 Crore during 2011-12 ( 6.3percent growth over previous year). An amount of ₹ 464.57 crore was disbursed to various industrial units during financial year 2011- 12 (nearly 5 percent growth over previous year). The growth in the amount

sanctioned and disbursed when compared to the previous year indicates healthy contribution of the Corporation to the development of the industrial activity in the State. Performance of working of KFC during the last 5 years is given in **Appendix 3.5**. The details of loan operations and industry-wise classification of loan during 2011-12 of KFC are shown in **Appendix 3.6** and **Appendix 3.7**.

## Kerala State Industrial Development Corporation (KSIDC)

3.13 Kerala State Industrial Development Corporation Ltd. (KSIDC) was formed in 1961 with the main objective of promoting, stimulating, financing, and facilitating the development of large and medium scale industries in Kerala.

3.14 KSIDC has sanctioned projects costing a capital investment of ₹ 1255 crore with direct term loan assistance of ₹ 216 crore in the year 2011-12. The new projects are expected to generate employment for 23,000 persons directly and indirectly. The Corporation has also registered an all time record of over ₹ 39 crore profit before taxes (provisional), up 10.6 percent compared with last year, while the income hit the highest level of ₹ 56.75 crore, recorded an increase of 8.8percent over the previous year. District-wise analysis shows that maximum employment was in the districts of Kozhikode and Ernakulam which accounted for 80percent of the employment generated in 2011-12. The details of investment and employment made in KSIDC Units during 2011-12 are given in **Appendix 3.8**.

3.15 Majority of projects financed by the Corporation during the year are from Tourism and Manufacturing sectors. Corporation has also sanctioned projects in IT sector, healthcare, logistics, infrastructure and Agro and food processing sectors. Government of Kerala has organized a mega investment mobilization event viz., Emerging Kerala Global Connect 2012 and KSIDC was the nodal agency for conducting Emerging Kerala. As envisaged, the Emerging Kerala will be a biennial global connect programme and requisite steps are being taken to keep the momentum going.

### Box 3.2

#### Major Projects Promoted by KSIDC for Industrial Development

1. Kochi – Palakkad NIMZ (National Investment Manufacturing Zone)
2. 1,200 MW Gas-based Power project at Cheemeni, Kasaragod,
3. Electronic Hardware Park at Kochi – a world class manufacturing and R & D facility for Electronic sector,
4. Life Sciences Park for setting up state-of-the-art manufacturing and R & D facility for Biotechnology, Nano technology, Contract Research etc.
5. Titanium Sponge Project at Kollam
6. Supplementary Gas Infrastructure Project
7. Coconut Industrial Park, Kuttiyadi
8. Organic Industrial Park, Kodungalloor

Source: KSIDC

3.16 The physical and financial performance of KSIDC during 2011-12 are furnished in **Appendix 3.9**.

## Kerala Industrial Infrastructure Development Corporation (KINFRA)

3.17 Kerala Industrial Infrastructure Development Corporation (KINFRA) was set up by an Act of the State Legislature in February 1993, aiming at accelerating the industrial development of the State by providing infrastructure facilities to industries. The Industrial Parks developed by KINFRA have facilities like developed land or built up space, dedicated power, continuous water supply, communication facilities etc.





3.18 KINFRA has completed over the past 18 years, 14 theme based Industrial Parks in Kerala in areas such as garments, infotainment, marine/seafood, rubber, exports, food processing, etc. Some of the notable achievements are the successful completion of India's first International Apparel Park at Thiruvananthapuram; India's first Export Promotion Industrial Park at Ernakulam; India's first Infotainment Park, the Film & Video Park at Trivandrum and India's first Food Processing Industrial Park at Malappuram.

3.19 KINFRA has developed Joint Venture Projects like India's first Rubber Park (a JVC with the Rubber Board) at Kochi, India's first Seafood Processing Park (a JVC with MPEDA) at Alappuzha and Western India KINFRA Ltd. (a JVC with Western India Services & Estates ) at Palakkad. A Joint Venture Company between KINFRA and ICICI, known as I-KIN, has been set up to identify and facilitate the development of infrastructure projects in the State and another company between KINFRA and NTPC, Electrical Supply Co. Ltd. (KINESCO) for distribution of power to KINFRA Parks in the State.

3.20 KINFRA is the Nodal Agency for the Ministry of Food Processing Industries, Government of India (further details on Para 3.45 of this chapter). KINFRA is also acts as the nodal agency of the State for implementing "Assistance to States for Infrastructure Development of Exports and Allied Activities" (ASIDE) of Department of Commerce, Government of India. Government of Kerala has appointed KINFRA as the Nodal Agency for the National Institute of Fashion Technology (NIFT) at Kannur and land acquisition programme for Kannur Airport. The details of allotments in KINFRA Industrial Parks as on 30-09-2012 are given in **Appendix 3.10**.

## Centre for Management Development

3.21 The Centre for Management Development (CMD) is a leading, self supporting autonomous institution established in 1979 under ACT XIII of the "Travancore-Cochin Literary, Scientific and Char-

*\*Public Enterprises Survey 2010-11.*

table Societies Act 1955” intended to provide Research, Consulting and Training Support to the Development Agencies, Corporate and the Government, at the national, state and local levels. During the year 2011-12 also, CMD undertook several research assignments for the Government of India, Government of Kerala, Public Sector Enterprises and Autonomous institutions.

3.22 CMD also prepared the “Review of Public Enterprises in Kerala”, which forms part of the budget documents of the state, on behalf of the Bureau of Public Enterprises, Government of Kerala, for the twenty-fourth consecutive year. In the training front, CMD, in collaboration with the Bureau of Public Enterprises, Government of Kerala conducted Management Development programmes for Officers/Managers of the Public enterprises in Kerala during the year 2011-12. Ten programmes were conducted during the year covering 202 managers of various State level Public enterprise.

## Central Sector Investment

3.23 Central Sector Investment in Kerala is ₹ 28455.29 crore (2.3%) during 2010-11 against the All India figure of ₹ 1263664.85 crore\*. State-wise analysis shows that other southern states have higher investment in Central PSEs. Andhra Pradesh ranked 2nd, Tamilnadu 3rd and Karnataka 10th. As for Kerala it ranked 16th. Though the Central Sector Investment to Kerala has been increasing in absolute terms, the percentage share has decreased from 2.4 percent in 2007-08 to 2.3 percent in 2010-11. Details of Central Sector Investment in Kerala from 2008 to 2011 are given in **Appendix 3.11** and Central Sector Investment in selected states are given in **Appendix 3.12**.

## Micro Small and Medium Enterprises (MSMEs)

3.24 The Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last few decades. It is estimated that this sector contributes about 45 per cent of manufacturing output and 40 per cent of total exports of the country and employs about 69 million persons in over 29 million units throughout the country. Within the MSME Sector there is a significant increase of Micro Enterprises, both in terms of working enterprises and employment. There are over 6000 products ranging from traditional to high-tech items manufactured by the MSMEs. Kerala is one of the main centres of MSMEs in the country. In fact as per the 4th MSME Census\*\*, Kerala accounted for nearly 10 percent of the total working MSMEs in the country and provided an employment for nearly 7 per cent of the total employed in MSME sector in the country. Though highly ranked in terms of number of units, employment provided, fixed assets and investment in P&M, Kerala did not figure in the top 10 states in terms of output produced.

3.25 In Kerala, MSME sector, which has been provided special support by the Government, contributes significantly towards domestic and export markets, employment, income generation and foreign exchange earnings by producing varieties of products ranging from traditional to modern. MSMEs play a critical role in innovation and have ability to experiment with new technologies. However, they often suffer from lack of funds, poor access to technology and markets and face the difficulty of attracting skilled manpower. The industries coming under this sector are Handicrafts, Handloom, Khadi, Food processing industries, Garment making and Textile industries, industries related to coir/wood/bamboo/Plastic/rubber/ leather/ clay products etc.

\*Public Enterprises Survey 2010-11.

\*\* Fisme.org.in\document\Final Report 0101711.pdf

## Box 3.3

## MSME Sector in Eleventh Five Year Plan (2007-12)

## □ Achievements

In the plan period, State as well as Central Government provided assistance such as working capital, skill development training, assistance for participation in fairs, marketing, creation of adequate infrastructure, technology upgradation and facilitating appropriate investment climate to attract private investment to MSME sector for improving the volume, quality, energy consumption, environmental effects on production in the sector and for diversification of value added products.

## □ Major Issues of the sector

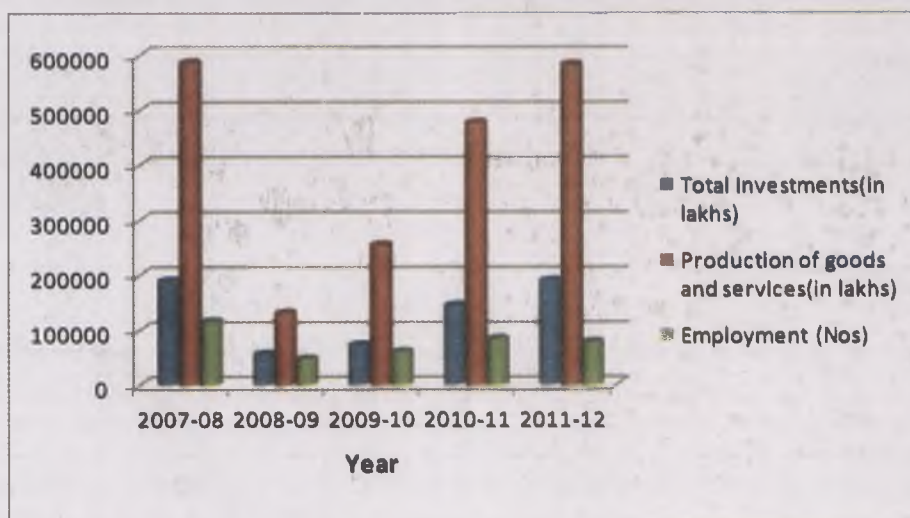
- Lack of Infrastructure facilities, Land Acquisition delays and Environmental Issues
- Delay in getting license and clearance.
- Limited credit flow to MSME
- Lack of skilled man power
- Lack of proper Entrepreneurship Development Programmes/Skill Development Programmes.
- Inadequate collaboration between technology providers and entrepreneurs
- Lack of modernization and new designs/ innovations
- Inadequate marketing facilities for value added products

## Profile of the MSME Sector

3.26 The total number of SSIs/MSMEs registered in Kerala as on 31.3.2012 is 205987 against 194908 in the previous year indicating a growth of about 6 percent. Of this, 4 percent are promoted by SCs, approximately 1 percent by STs and 25 percent by women entrepreneurs. The total investment was ₹ 1083169 lakh in 2011-12 against ₹ 892526.17 lakh in the previous year, with an increase of more than 26 per cent and the total number of employment generated was 1021162 indicating about 8 per cent over the previous year which was 947981.

3.27 Investment, production & employment in MSME sector over the last 5 years is shown in the Fig 3.2. The investment & production has been increased significantly over the period while employment remains almost unchanged. The data is given in Appendix 3.13.

Fig 3.2

Investment, Production & Employment in MSME sector in XI<sup>th</sup> Plan

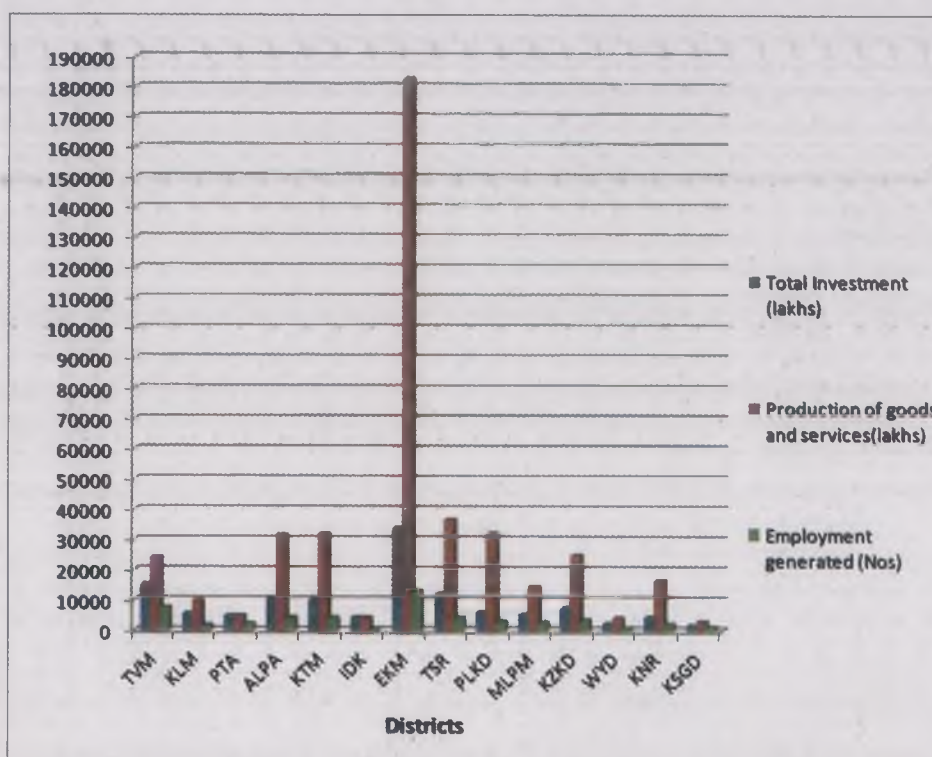
3.28 The number of new enterprises that filed Memorandum during 2011-12 in the MSME sector, was 11079 making a percentage increase of 2 percent from the previous year, while the investment increased by 31 percent to ₹190642.75 lakh. The employment generated is 79181, which shows a narrow decrease while the value of goods and services produced has been increased by 22 per cent ie, ₹ 584985.35 lakh. Out of the new enterprises that filed memorandum, 341 are constituted by SCs, 84 by STs, and 2606 by women entrepreneurs.

3.29 Details of enterprises that filed memorandum & District-wise details of enterprises which filed memorandum in Kerala during 2011-12 and 2012-13 (up to 30.11.2012) are given in **Appendix 3.14, 3.15, 3.16.** and in Fig 3.3.

3.30 During the current year (as on 30.11.2012) 7881 new enterprises have filed memorandum with an investment of ₹ 124392.15 lakh to provide employment to 53005 persons.

3.31 District wise analysis reveals that during the year under review, Ernakulam occupies highest position in all aspects and Idukki was at the lowest position except in the value of goods and services produced.

**Fig 3.3**  
**District wise Investment, Value and Employment of Enterprises registered in Kerala as on 30.11.2012**



### Industrial Co-operative Societies

3.32 In Kerala, the total number of Industrial Co-operative Societies registered as on 31.03.2012 is 2466 against 2275 in the previous year which made an increase of 8 per cent. Out of which, 811 Societies were registered by women. The total number of working Industrial co-operative societies as on 31.3.2012 is 582. The details are given in **Appendix 3.17.**

## Industrial Development Plot / Areas

3.33 Directorate of Industries and Commerce (DIC) has also promoted Investment by providing and developing infrastructure facilities for small scale sector in the state. At present there are 37 DA/DP s under DIC having a total acquired area of 2481.37 acre and out of which 40 acres of land given to KINFRA and 20.75 acres of land transferred to various agencies. Out of the total area, 2094.76 acre is allotted to 2616 industrial units and of which 2019 are working. The details are given in **Appendix 3.18**.

## Mini Industrial Estates

3.34 The total number of Mini Industrial estates under DIC as on 31.03.2012 was 94 and the total number of SSI units were 780. Out of which 663 units were working. The total number of employees under the units were 3345. The Income generated from these units amounted to ₹ 11952.86 lakh during 2011-12. The details are given in **Appendix 3.19**.

## Industrial Cluster Development

3.35 Industrial clusters are increasingly recognised as an effective means of industrial development and promotion of small and medium-sized enterprises. For MSME participants, clusters play an important role in their inclusiveness, technology absorption, efficiency improvement and availability of common resources. The Ministry of Micro, Small and Medium Enterprises (MSMEs) adopted the cluster approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of small enterprises.

3.36 The major clusters in Kerala are Rubber cluster, Rice Millers cluster, Furniture cluster, Plastic cluster, Plywood cluster, Terra Tile cluster, Wood cluster, Ethnic food processing cluster, General engineering cluster, Printers cluster, Natural Fibre & allied products cluster, Automobile cluster, and Note books cluster.

3.37 The Kerala Bureau of Industrial Promotion (K-BIP) is coordinating the Cluster Development activities throughout the State in association with Directorate of Industries and Commerce and the respective District Industries Centres. It coordinates the implementation of setting up of Common Facility Centers (CFCs) in clusters as per MSME EDP scheme of Government of India. Under MSME EDP scheme of Government of India in the year 2011-12, two projects for setting up of Common Facility Centers (CFC) in Wood cluster, Kollam and Wood Furniture Cluster, Taliparamba, Kannur were sanctioned. Government of India has sanctioned assistance of ₹ 259.53 lakh for setting up CFC in Wood cluster at Kollam, of which Government of Kerala share is ₹ 51.91 lakh ie.20 per cent.

## MSME Development Institute, Thrissur & Cluster Development in Kerala

3.38 MSME-Development Institute, Thrissur, Kerala (MSME-DI, Thrissur), is the field outfit of Development Commissioner(MSME) under the Ministry of MSME, Government of India to take care of the needs of MSME sector in the State of Kerala and the Union Territory of Lakshadweep, in the area of Techno-economic and managerial consultancy services.

3.39 The Institute has conducted 148 tailor made development training programme on Entrepreneurship Development, motivation campaigns, Business Skill Development, Entrepreneurship Skill Development, Management Development and Special Skill Development and several Educational Seminars and other awareness programmes during 2011-12. 6393 persons benefited through these programmes of which almost 24 percent belongs to SC/ST. The institute has been providing technical consultancy to the units for acquiring ISO 9000/14000 scheme and also providing reimbursement to the extent of 75 per cent of the expenses incurred by the units under the scheme.

3.40 MSME-DI, Thrissur has taken up 6 clusters for development. They are in the areas of Gold Ornaments, Dies & moulds, Notebooks, Rice Milling, General Engineering and Diamond; and the work thereof is in progress. Details are given in **Appendix 3.20**.

## Box 3.4

**Major Schemes of the Annual Plan 2012-13****Entrepreneurship Support Scheme(ESS)**

Provide assistance to entrepreneurs in Fixed Capital Investment and Technology Acquisition to start new enterprises with special attention to women and SC/ST population, Priority industries and enterprises are being started in Wayanad and Idukki Districts.

**Infrastructure Development under MSME sector – Multi storied Industrial estates.**

Development of industrial estates for the benefit of MSME entrepreneurs, with quality infrastructure like roads, power, water, waste management etc. through PPP mode. It is envisaged to construct 2 Multistoried Industrial Estates at Kochuveli & Manjeri and an exhibition cum convention centre Kottakkal in the year 2012-13.

**Capacity Building**

Other than giving emphasis on skill development, the scheme provides Industrialization support/ other industrial promotion activities and creation of Business Incubation services.

**Development of Commerce**

Assistance to conduct research studies and evolve long term policy frame work for the sustained growth of commerce, development of infrastructure, conduct or participate in national and international events/exhibitions and to motivate MSME sector through awards .

**Small Industry Cluster Development Programme**

This is a Centrally Sponsored Scheme of cluster development for micro, small and medium enterprises which provides assistance for sourcing of raw material, offers mutual credit guarantee for sourcing loans and assists on common brand creation, marketing, setting up of Common Facility Service Centre, training and quality testing.

**Prime Minister's Employment Generation Programme (PMEGP)**

3.41 Government of India have introduced PMEGP Scheme, ie, credit linked subsidy programme from 2008-09 by merging the two schemes viz, PMRY and REGP. The Khadi and Village Industries Commission (KVIC) is the nodal agency for implementation of the scheme at national level. In Kerala, State KVIC Directorate, State Khadi and Village Industries Board (KVIB) District Industries Centres (DICs) and bankers are the agencies for implementation of the scheme. A target of 728 number of units was allocated to District Industries Centers. and 1112 applications received during the year 2011-12. The banks sanctioned 851 applications which includes pending applications in the banks during the previous year and provided Margin Money of ₹ 1162.13 lakh. Details are given in **Appendix 3.21 and 3.22.**

**Bank Credit to SSI / MSME Sector**

3.42 The outstanding bank credit to various sectors by the commercial banks in Kerala at the end of March 2012 was increased by 22 percent ie. ₹ 149293 crore against ₹ 121982 crore in the previous year. The outstanding flow of credit to MSME sector was ₹ 20593 Crore which also shows an increase of 22 percent from ₹ 16894 crore in 2011-12. As on 30.06.2012 in the current year the outstanding advances to MSME sector is ₹ 19942 Crore. The status of flow of credit to various sectors is given in **Appendix 3.23.**

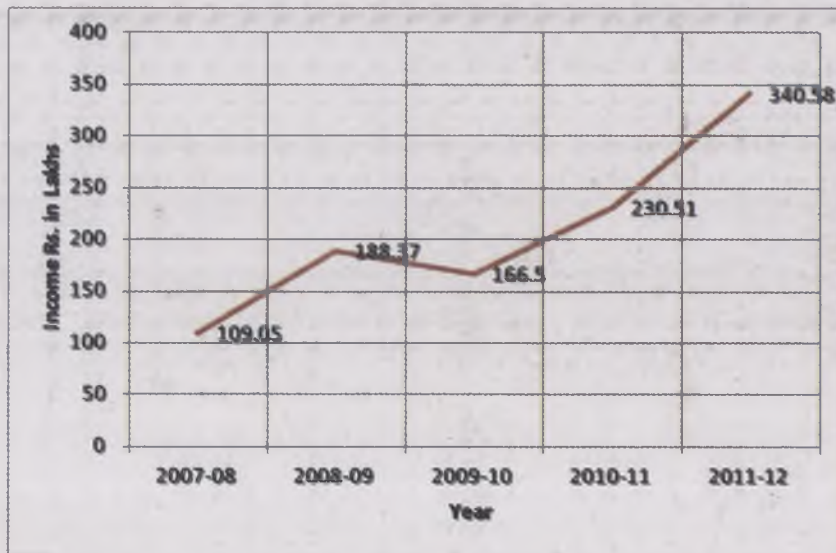
## Small Industries Development Bank of India (SIDBI)

3.43 Small Industries Development Bank of India (SIDBI) is the principal financial institution for the promotion, financing and development of MSME industries. It also acts as the nodal agency for the scheme sponsored by Government of India in this regard.

## Kerala Small Industries Development Corporation (SIDCO)

3.44 Kerala Small Industries Development Corporation was established for strengthening the Small Scale Sectors in the State. It provides infrastructure facilities such as land, work shed, water, distribution of scarce raw materials, marketing the products etc. by setting up of industrial estates, mini industrial estates and industrial parks. Execution of construction works for Industries department and public sector undertakings are the other activities of SIDCO. There are 17 major industrial estates and 802 units are working in these estates. These working units provided nearly 7188 employment opportunities as on 31.03.2012 which is 13 percent more than that of the previous year. Besides, there are 36 mini industrial estates under SIDCO as on 31.03.12. About 1750 employees are working in 328 units all over the states. The employment provided and income generated through SIDCO units has been increased in last 5 years and the turnover during 2011-12 was ₹ 204.00 Crore while it was ₹ 127.00 crore in the previous year. Details of SIDCO are given in **Appendices 3.24, 3.25, 3.26 and 3.27.**

**Fig 3.4**  
**Income generated through SIDCO units in XI<sup>th</sup> Plan**



## Food Processing Industries (FPI)

3.45 Food processing industry is a sunrise sector that has gained prominence over the recent years. As per Annual Survey on Industry results, in India, the contribution of food processing sector to GDP has been growing faster than that of the agriculture sector. It has been recognized as a priority sector in Kerala due to its potential for sustainable and more inclusive growth, diversification, possibility of generating substantial employment and further advancement in respect of industrial development in urban and rural areas. FPI in Kerala are seen in both organized as well as unorganized sectors. The spices, pickles and the marine products are the major food product export from Kerala. Two thirds of Kerala's export income comes from processed food. Dairy products, Fish/Meat products, Rice & wheat products, Ready to eat/ Ready to cook products and bakery products, masala powder, Coconut & other oils, Ayurvedic medicines, Fruit juices etc are the major food items produced in the State.

3.46 Ministry of Food Processing Industries is the nodal Ministry of the Government of India for Food Processing Sector in India. A State Food Processing Mission has been recently set up for which Central Assistance will be available to set up cold chains, technology development, Research & Development etc.

3.47 Kerala Industrial Infrastructure Development Corporation (KINFRA) is the state agency engaged in the promotion of food processing industry in the State. KINFRA has set up exclusive Food Processing Parks to suit the specific needs of the food processing sector and they offer space for food processing units in their 12 Industrial parks, as the demand for space is high. Out of these Mazhuvannur (Ernakulam) and Kakkancherry (Malappuram) food processing parks are having the highest number of units. KINFRA provides 4114 sq.ft space for 132 food Processing Units with an investment of ₹ 26979 lakh. Details are given in **Appendix 3.28**.

3.48 The National Centre for Hazard Analysis Critical Control Point (HACCP) Certification in association with K-BIP has initiated the process of auditing and certification of 39 food processing and allied units from the State and outside the State. Out of this, NCHC has successfully audited and certified 24 food processing units and the remaining is under progress.



## Promotional Events and Exhibitions

3.49 The Directorate of Industries and Commerce conducted/participated in 20 Exhibitions /Fairs / Expos inside Kerala with 740 stalls in 2011-12 and generated an income of ₹ 53.68 lakh. The DIC represented Kerala in 5 national/international Exhibitions/ Fairs/ Expos outside Kerala with 64 stalls. Details are given in **Appendix 3.29**.

## Grand Kerala Shopping Festival (GKSF)

3.50 GKSF aims to make the State of Kerala a prominent International Shopping destination by making use of the brand image of Kerala Tourism and upgrade the infrastructure of the traditional marketing centers in the State. The Government organized the fifth edition of the event through Department of Tourism in association with Department of Industries and Commerce and other departments during the period from 1st December 2011 to 15th January 2012.



3.51 Department of Industries and Commerce along with K-BIP also organized other promotional events and assisted in the participation of Kerala State in various national and international events, for industrial promotion and to showcase investment friendly climate of the State.

## Participation in National & International events

### • Aahar 2012, New Delhi - Gold Medal for Kerala Pavilion

3.52 A Kerala Pavilion set up by Department of Industries and Commerce, Govt. of Kerala won the Gold Medal for the excellence in display at "Aahar 2012" the 27th International Exhibition on Food, Food Processing, Hotel & Restaurant equipments & Supplies, which was organized by Indian Trade Promotion Organisation (ITPO) with the support of Ministry of Food processing Industries, GOI at Pragathi Maidan, New Delhi from March 12 to 16, 2012.

### • ProFoods ProPack 2011

3.53 The 10th edition of the International Processed Food & Packaging Exhibition "ProFoods ProPack 2011" was organized by the Sri Lanka Food Processors Association (SLFPA) and Government of Sri Lanka at Sirimavo Bandaranike Memorial Exhibition Centre, Colombo from Aug 26 to 28, 2011.

### • Annapoorna World of Food India, 2011, Mumbai

3.54 The 6th edition of "Annapoorna World of Food India 2011", the exhibition of Food Processing & Related Equipments, Hotel and Restaurant Equipments & Supplies was organized by the Federation of Indian Chamber of Commerce & Industry (FICCI) and Kolenmesse GmbH (organizer of Anuga Food Fair, Germany) from November 16 to 18, 2011 at Mumbai.

### • Participation in Dubai Shopping Festival 2012

3.55 Kerala State was the 'Partner State' of the India Pavilion at Global Village in Dubai Shopping Festival held from January 5, 2011 to February 27, 2012.

### • Malappuram Crafts Mela 2011

3.56 The fifth edition of the spectacular traditional fair, Malappuram Crafts Mela was organized as part of the GKSF from December 16 to 30, 2011 at Kottakkunnu Maidan. Turkey was the Partner Country for the Mela and 10 artisans/craftsmen from Turkey demonstrated their products and skills in the Crafts Mela.

### • Kerala Bamboo Fest 2011

3.57 The 8th edition of 'Kerala Bamboo Fest' was organized at Jawaharlal Nehru Stadium Ground, Kaloor, Kochi from December 8 to 11, 2011.

## Handloom Sector

3.58 The Handloom Sector in Kerala stands second to the coir sector in providing employment among the traditional industries of the State. It provides employment to about 50000 of which 40 percent are women. The Handloom Industry in the State is mainly concentrated in Thiruvananthapuram and Kannur District and in some parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod Districts. The Industry is dominated by the Co-operative sector covering with 94 percent of total looms. The remaining six per cent of Handlooms units are owned by Industrial entrepreneurs. The Co-operative sector consists of factory type and cottage type societies. There were 591 registered Primary Handloom Weavers Co-operative Societies in the State as on March, 2012, indicating almost a 8 per cent decrease from the previous year, of which 166 are factory type and 425 are Cottage type societies. All of these are in working condition as at the end of financial year 2011-12. Details are given in **Appendix 3.30**.

3.59 The major varieties of products produced in the handloom sector of the State are dhothis, furnishing material, bed sheets, grey saree and lungi. The production of these items contribute 67 per cent of the total production of handlooms. About 80 percent of the major items are produced in the southern region followed by the North (12 per cent). Of the total production, nearly 95 per cent is contributed by the co-operative sector.

### Box 3.5

#### Handloom Sector in XI<sup>th</sup> Plan (2007-12)

##### □ Objectives

Repositioning and strengthening of the handloom industry to face up to global challenges was envisaged in the Eleventh Plan by introducing measures like technology upgradation, professional marketing, developing regional brand and encouragement of private sector investment. The development and production of value added, diversified and innovative products have been given priority in this sector for enhancing exports and thereby the income and prosperity of the traditional workers and their families.

During the XI<sup>th</sup> Plan period, the entire outlay of ₹ 231.21 Crore was utilized. In fact the expenditure was ₹ 235.48 Crore (nearly 102 per cent of outlay). During 2010-11 an amount of ₹ 55.19 crore has been utilised against the outlay of ₹ 56.68 crore. The corresponding figures for 2011-12 are ₹ 65.42 crore and ₹ 57.67 crore.

##### □ Achievements

These include the establishment of Indian Institute of Handloom Technology at Kannur, establishment of hank yarn production centres at Kannur, Alappuzha and Thrissur co-operative spinning mills, Registration of the products such as Kuthampully saree, Kasargod saree and Balaramapuram saree and fine fabrics under Geographical Indication Act 1999 and setting up of 20 clusters and 21 Group projects with the support of GOI. Assistance has been given to the propagation of handloom mark scheme. A new project "Keralathanimakku kaithari" was introduced. New technology developed with the help of IIHT, Salem for pre-loom process and new designed products have been introduced.

Handloom Industry provided employment to almost 1 lakh weavers.

##### □ Major Issues of the sector

- Low productivity due to lack of technology intervention & poor market segmentation
- Competition from cheap power loom fabrics and dumping of cheap fabric from outside the State.
- Lack of dissemination of the quality and innovative designs.
- Lack of product diversification in accordance with new trends.
- Difficulty in getting workers due to low wages.
- Lack of working capital.
- Fluctuation in hank yarn price.
- Weak performance of apex societies and organizations.

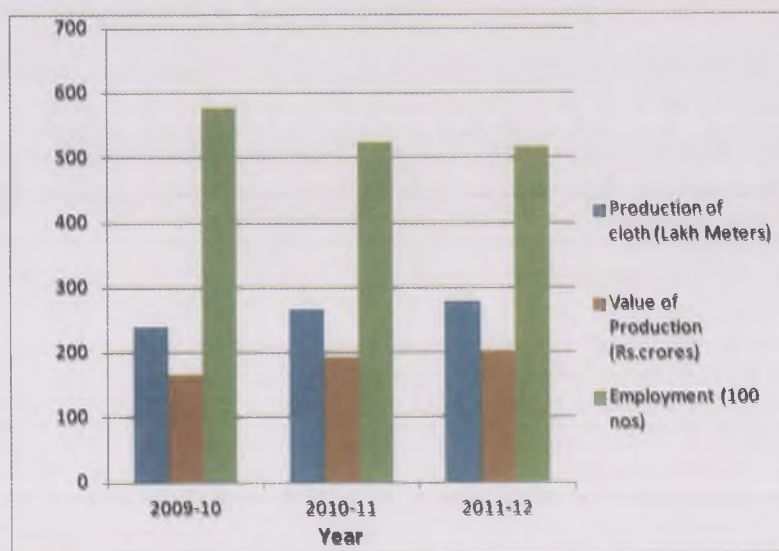
### Major Schemes of XI<sup>th</sup> Plan to promote Textile sector

- Integrated Handloom Development Scheme through Cluster and Group Approach
- Integrated Handloom Cluster Development Scheme (IHCD) to facilitate sustainable development to handloom weavers located in identified clusters into a cohesive, self managing and competitive socio-economic unit.
- Revitalisation and strengthening of handloom co-operatives, apex societies and handloom development corporation
- Upgradation to Powerloom/ modernisation of factory type societies
- Establishment of mini pre-loom process centres through grants and loans
- Contributory Thrift fund for welfare of weavers
- Partial Mechanisation of Preloom Processing with 100 percent grant
- Upgradation of Facilities for Training in Powerloom
- Insurance Schemes for workers - Health Insurance Scheme with Central Government Assistance targeted for 15000 weavers.

3.60 Government Assistance extended for the development of handloom industry, by way of loan is ₹ 11576.27 lakh and grant is ₹ 8330.14 lakh for the last five years. Details are shown in **Appendix 3.31**.

3.61 The total production of handloom cloth shows an increase of about 5 percent from 26.68 Million metres in 2010-11 to 27.89 Million metres in 2011-12. But the total value of production shows an increase of about 6 percent from ₹ 190.96 crore to ₹ 202.14 crore during the period. The total number of weavers employed increased from 52386 in 2010-11 to 51590 in 2011-12. The number of women employed is also increased from 20909 during 2010-11 to 21632 in 2011-12. The total employment decreased from 96.65 lakh man days in 2010-11 to 90.32 lakh man days in 2011-12. Details are given in **Appendix 3.32** and in **Fig 3.5**.

**Fig 3.5**  
Production and Employment in Handloom sector



## Institutional Support to Handloom sector

3.62 Promotional measures of handloom sector such as procurement, sales and marketing of handloom fabrics are being undertaken by two state level organisations namely Hantex and Hanveev.

3.63 Hantex is the apex society of handloom co-operative societies in the state. Number of PHWCS registered under Hantex is 469. Despite grants and loans are being given to the society, the organisation is running in loss as per the balance sheet of the year 2011-12. The working results of Hantex are given in **Appendix 3.33**.

3.64 Hanveev is a PSU setup to assist handloom weavers outside the co-operative fold by providing necessary raw materials at reasonable price and making arrangements for marketing their products. This organisation is also running in losses and the net loss at the end of 2011-12 is ₹ 976.68 lakh while it was ₹ 479.86 lakh at the end of 2010-11. The working results of Hanveev are given in **Appendices 3.34 & 3.35**. Hanveev conducted 23 Exhibitions within the State during 2011-12 and generated an income of ₹ 121.99 lakh.

## Textile Sector – Spinning Mills

3.65 The Textile Industry in Kerala is spread over in public sector as well as in Co-operative Sector and there exist 14 Spinning Mills jointly in the public/ co-operative sector. In addition, 4 new spinning mills are functioning at their initial stage.

3.66 Kerala State Co-operative Textile Federation (TEXFED) has nine Co-operative Spinning Mills. Five of them are administered by the Government and four have elected boards. Spinning Industry in Kerala is facing deep crisis and the Mills in Co-operative Sector have huge accumulated losses amounting to ₹ 132.52 crore. An amount of about ₹ 43 crore has already been provided to these mills in the XI<sup>th</sup> Plan Period, including under the NCDC approved revival packages of Malappuram and Cannanore Co-operative Spinning Mills. The 4 spinning mills under Kerala State Textile Corporation (KSTC) shows declining trend in production continuously, even though an amount of about ₹ 11 crore has been provided for the modernisation of the mills in the year 2011-12. This includes ₹ 3 crore provided for Sitaram Spinning Mill, which is under the administrative control of KSTC.

3.67 The Co-operative Spinning Mills in the State were formed with a social objective to provide raw material support to the traditional handloom weavers of the state. But from 1999 onwards due to various reasons this has been stopped. An integrated approach for the industry has been put in place with three hank yarn production centres established at Cannanore, Alleppey and Trichur Co-operative Spinning Mills by the Government to provide raw material support to the weavers.

3.68 The main handicaps faced by the Mills were the lack of working capital and non availability of raw materials. Due to the Government support of ₹ 7 crore to procure cotton for the entire textile sector through professionally constituted committee comprising of RIAB, TEXFED and KSTC, raw material cost was brought down significantly. Spinning mills in the State were set up several years ago and require modernization.

## Power loom

3.69 In the power loom sector there are 17 working co-operative societies. Out of the 536 powerlooms in the state 93 per cent is in the co-operative sector and the rest in the private sector. Total production of cloth in this sector remains almost unchanged over the last 5 years and it is 27.82 lakh meters during 2011-12 with slight increase over the previous year. Details are given in **Appendix 3.36**.



3.70 The five integrated power loom co-operative societies in the state at Calicut, Wayanad, Neyyattinkara, Kottayam and Malappuram have been accelerated by providing budgetary support.

3.71 The Calicut Integrated Power loom Co-operative Society Ltd., has been converted as a textile park comprising all the segments of a composite mill, with semi automatic and automatic power-looms together. A modern processing unit to process yarn for both handloom and power loom with modern facilities and a garment making unit with state of art technology and professionally trained manpower is also functioning in this project.

3.72 In Wayanad, the remotest district in Kerala, a rehabilitation cum industrial project is functioning. As part of it, a powerloom production centre has been started in Thirunelli for tribal women folk for providing training. This will be converted as an employment generating centre in Powerloom & Handloom for adivasi women. Integrated Power loom Co-operative Societies in Neyyattinkara and Kottayam has also been activated and are in the process of production of grey cloth and some conversion orders for export market. The sizing unit functioning at Kottayam is activated as a common facility centre for all the integrated power loom Co-operative societies in the state.

## Handicrafts

3.73 Handicraft industry is one of the traditional industries of Kerala, providing employment to Artisans. Eighty percent of these artisans are from socially and economically backward classes. Kerala has the tradition of making beautiful handicrafts with ivory, bamboo, palm leaves, seashells, wood, coconut shells, clay, cloth, coir, metals, stone, lacquer ware etc. and the artists are experts in making beautiful flower vases, ash trays, ornamental plates, jewel boxes, miniature boats, elephants, idols, kathakali masks and embroidery works. Many antique handicraft treasures can be seen in palaces, old heritage homes and museums in the State.

3.74 Kerala State Handicrafts Apex Co-operative Society (SURABHI), Handicrafts Development Corporation and Artisans Development Corporation are the major promotional agencies in the handicraft industry. SURABHI is the apex organization of primary handicrafts co-operatives established with a view to uplift the artisans by marketing the product produced by the primary co-operatives and

implementing welfare schemes with the assistance from State and Central Governments.

3.75 Handicrafts Development Corporation of Kerala is engaged in procuring and marketing handicraft products by giving fair returns to artisans through SMSE Institute and Kairali emporia spread all over India. At present it is having a net work of 19 such sales emporia. HDCK also owns a Common Facility Service Centre (CFSC) at Thiruvananthapuram where lot of artisans are provided with the facilities for the development of crafts. The Kerala Artisans Development Corporation (KADCO) is one of the State agencies to provide assistance to artisans for establishing production units, promoting marketing of products and providing employment opportunities through schemes of trade fairs and marketing centres.



## Bamboo Industry

3.76 Bamboo/Reeds industry is one of the age-old traditional industries of the state. The Kerala State Bamboo Corporation Ltd. was established in 1971 in Kerala with main objectives to develop & promote industries based on bamboo, reed, cane and rattan. It is an ISO 9001-2000 certified Company now. Kerala State Bamboo Corporation's main activity is collection of good quality reeds from Government forests and distributing these reeds to the registered mat weavers of the Corporation, throughout the State of Kerala, on credit basis and procuring woven mats made of these reeds at reasonable prices, thus providing employment and regular means of livelihood to these weaver sections of the society. Bamboo mats, Bamboo ply, Flattened board, Flooring tiles are the main products. The Hi Tech Bamboo Flooring Tile Factory was commissioned in February 2011 at Nallalam, Kozhikode with a view to manufacture Hi-Tech Bamboo Flooring Tiles using Bamboo as the main raw material using imported Chinese Technology. There are four Feeder/Primary Processing Units at Palakkad, Kadampuzha, Mananthawady and Nadapuram.

3.77 During XI<sup>th</sup> Plan project based assistance has been provided to the Apex Organizations in the handicraft sector. Major schemes under handicrafts sector are given below.

- Share Capital Contribution to Handicrafts Primary Co-operative Societies
- Assistance to Apex Organizations in the Handicrafts Sector
- Entrepreneur Assistance Scheme in Handicrafts/ Artisan Sector
- Establishment of Common Facility Service Centres for Handicrafts

*\*NCRMI report*

## Box 3.6

**Lacquer Ware**

The combination of woodcraft and metal produces lacquer ware. Wood carvings are famous and many skilled workers have showed their talents in such artistic works on wood. The trees mainly used for carvings are sandal wood and rose wood. Various shapes are carved in these woods after which a lacquer finish is given to them. The final product is then decorated with various precious metals. The district in Kerala which is popular in these works is Ernakulam.

**Coir Industry**

3.78 Coir Industry is the largest agro based Traditional & Cottage industry in Kerala and is concentrated mainly in the rural areas. It provides livelihood to nearly 3.75 lakh people, of which women constitute 80 per cent. Government has given more emphasis on Coir Industry by considering the special features and problems being faced by it. India's export of coir accounts for a value of `1052.63 crores during 2011-12 and Kerala's share is 80 per cent.

3.79 Coirfed, Kerala State Coir Corporation(KSCC), Foam Matting's India Ltd(FOMIL), National Coir Research & Management Institute(NCRMI), Exporters, Coir Co-operatives, Coir yarn producers, product manufactures and workers are the major stake holders of the Coir industry. The welfare activities are implemented through the Kerala State Coir Workers Welfare Fund Board. The Co-operative Sector as well as Private Players dominates the Coir Industry in Kerala.

3.80 Fomil has a state of the art manufacturing facility such as Latex baking Plant, Modern Dye House, Fully Automatic Power Loom etc. and its spare capacity is used for undertaking job works of other exporters too. Fomil has no liability against loans. KSCC's Sales turnover increased from ₹ 2.94 crores to ₹ 56.38 crores between 2006-07 and 2011-12. The company is working at profit in the last three years and ₹ 211.00 lakhs is the profit during 2011-12. Coirfed has two factories engaged in the manufacture of value added products and has 4 defibering units. The sales turnover of Coirfed during 2011-12 (tentative) is ₹ 3200 lakhs.

3.81 The export of coir and coir products from India during the year 2011-12 was 410854 MT valued at `1052.63 crore as against the export of 187567 MT valued at 592.08 crore in 2007-08. This recorded an increase of 119 per cent in quantity and an increase of 78 per cent in terms of value over the export achieved during 2007-08. Among the items of export from India, curled coir, coir fibre, coir pith, coir rope, coir yarn, coir other sorts coir geo-textile, handloom mattings, Power loom Mats & rubberized coir have shown an increase both in terms of quantity and value when compared to the previous year. The items such as coir rugs & carpets have shown a decrease both in terms of quantity and value over to the previous year. The items handloom mats & tufted mat have shown an increase in value even though the quantity has decreased. Item wise export of coir and coir products from India during the XIth Five Year Plan are shown in Appendix 3.37. Government has been providing adequate financial support to the development of the sector. Coir Kerala-2012 – 'an International event on Coir and Natural Fiber Products' aimed at exploring and expanding the international market was conducted at Alappuzha, in which buyers from 32 countries participated.



3.82 Under Regulated Mechanization of Coir Industry scheme, during 2011-12 as many as 97.77 lakh number of husk procured by spending an amount of ₹ 136.92 lakh, purchased 18348.12 tonnes of fibre at a cost of ₹ 5701.97 lakh and produced 15408.2 tonnes of yarn worth Rs.3286.39 lakh, through coir co-operative societies. Details of the last Five Years are shown in **Appendix 3.38**. During 2012-13, the State Govt. has provided financial outlay to the tune of ₹ 100.7crore under plan of which ₹ 44.55 crore has been expended as on 31st January2013. This sector, achieved 100 per cent financial targets in 2011 and 2012.

3.83 Since the sector is society dominated, uneconomic societies are liquidated and the number of working societies decreased from 499 (as on 31.3.11) to 473(as on 31.03.12). The reduction in the number of societies was effected as a part of modernization and revival program initiated in the department, which means the subsector, is in the path of development. Details of the societies are shown in **Appendix 3.39**.



## Box 3.7

**Major Schemes in the Coir sector (2012-13)**

- 1. Regulated Mechanization of Coir Industry** – The Scheme is intended to modernize the industry and enhance the productivity and the amount sanctioned in the current financial year is ₹ 5600 lakh.
- 2. Marketing, Publicity, Propaganda Trade Exhibitions and Assistance for Setting up of Showrooms** – An amount of ₹ 300 lakh is set apart for the scheme and under this scheme Coir Kerala-2013 – ‘an International event on Coir and Natural Fiber Products’ was conducted at Alappuzha.
- 3. Price Fluctuation Fund-** The scheme is intended to stabilize the price of coir fibre, yarn, and coir products. ₹ 2400 lakhs is the current year’s allocation.
- 4. Coir Geo- Textiles Development Programme-** The Programme is aimed at implementing pilot projects, inclusion of Geo-Textiles as a standard engineering material, creation of awareness on Geo-Textiles, strengthening of R&D and marketing efforts, orientation on Geo-Textiles. Current year’s outlay is ₹ 30 lakh.
- 5. Cluster Development programme in Coir Sector** – ₹ 300 lakh is the current year’s allocation and at present 5 clusters are functioning under coir sector and more are being developed.

**The National Coir Research & Management Institute (NCRMI)**

3.84 The National Coir Research & Management Institute (NCRMI), the State Government Organization is looking after the Research and Development of Coir Sector, and is acting as a nodal agency for coordinating the technological, commercial and academic developments in the entire gamut of activities related to the coir sector in Kerala. The National Coir Research & Management Institute has developed a defibering machine capable of defibering 3000-4000 husk/day and around 185 machines were supplied on demand. During 2011-12, an amount of ₹ 200 lakh was provided to the Centre for undertaking various R&D works and 100 per cent achievement attained.

3.85 Under the Prime Minister's Gram Sadak Yojana (Bharat Nirman), it has already been decided to use Coir Geo-Textiles for construction of rural roads in nine States and this is likely to be extended in 28 states. This is a huge opportunity for Kerala Coir Industry.

3.86 The coir industry is likely to face problems in catering to the huge requirements in the rural road sector. Hence it may be required to infuse appropriate technology to improve quality and up-scaling manufacturing capacity in the Twelfth Plan to meet the requirements.

**Khadi and Village Industries**

3.87 Khadi and Village Industries play a substantial role in generating employment in rural areas with minimum investment. These industries use eco friendly, local resources and generating higher employment opportunities. The Kerala Khadi and Village Industries Board is a statutory body vested with the responsibility of organising, developing and promoting Khadi and Village Industries in the state. Co-operative societies, registered institutions and departmental units carry out the activities of the Board, by availing finance assistance from State Government, Khadi Commission and Nationalised Bank. The Board has achieved 100 per cent financial targets in 2011 and 2012.

3.88 During the XI<sup>th</sup> Five Year Plan the Departmental Khadi Production Achievement has shown an increasing trend both in the Cloth value & Yarn value. The quantity of cloth and Yarn production has

shown an increasing trend up to 2009-10 and then a decreasing trend. The details of Departmental project wise Khadi production for the last Five years are shown in **Appendix 3.40**.

### Box 3.8

#### Performance of Khadi Sector during 2011 and 2012

- ❖ Under Prime Ministers Employment Generation Programme(PMEGP), an amount of ₹ 905.31 lakh was disbursed as Margin Money Grant to 393 projects. This generated 2884 jobs under Special Employment Generation Programmes, 800 units were set up with a total cost of ₹ 400 lakh and an amount of ₹ 110 lakh was given as a subsidy and 1600 jobs were created (District wise achievement are shown in **Appendix 3.41**)
- ❖ Goodsworth ₹ 14472.90lakh were produced and goods for ₹ 16747.44lakh were sold by providing employment of 128769 persons. The details of value of production, sales, employment, and wages paid are given in **Appendix 3.42**
- ❖ Under the Expansion & Modernisation of Sliver project at Ettukudukka in Kannur, 797 numbers of cotton bales were purchased.
- ❖ The Board conducted Onam Melas to propragate Khadhi
- ❖ Goods worth ₹ 31.37 crore has been sold through 216 sales outlets of Khadi & Village Industries. District wise details are shown in **Appendix 3.43**.

3.89 As part of popularizing and re-establishing the pride in wearing Khadi and Handloom products, the State Government has mandated wearing it in schools and offices on Saturdays.

### Box 3.9

#### Major Schemes in the Khadi Sector 2012-13

Scheme	Outlay (₹ lakh)
1.Expansion & Modernisation of Sliver project at Ettukudukka in Kannur District	240
2.Marketing, Strengthening of Weaving Sector including Production Incentive to Spinners and Weavers and Establishment of Silk Production Centres	280
3. Special Employment Generation Programme	200

3.90 The strategy for achieving growth during the 12th Plan is to develop product-wise clusters of Khadi and Village Industries products and to develop their domestic as well as export market. Other strategies include introducing innovations in design and technology, creation of entrepreneurship and growth in manufacturing in rural non-farm sector to prevent migration by enhanced allocation for Prime Ministers Employment Generation Programme. The Khadi Reforms Programme, at National Level has been taken up and it includes introduction of Khadi mark.

## Cashew Industry

3.91 Cashew is an important commercial horticulture crop of India. India is the biggest producer, processor and exporter of Cashew in the world. India's processing capacity of cashew far exceeds its production of raw nuts, with only half of the cashews processed in the country being produced domestically. Indian cashew industry is dependent on imported raw cashew. One of the key factors in favor of expanding the cashew industry in India is the stable price in the international market when compared to other nuts such as almond, hazel nut etc.

3.92 The Cashew Industry in Kerala is a Traditional Industry mainly concentrated in Kollam District and is mainly controlled by private sector. The industry has a long history of employing large numbers of workers in decentralised units. The industry is highly labour intensive and employs more than 3,00,000 workers. The unique feature of this industry is that majority of the workers are women from lower economic strata of the society and skills of these workers do not include any entrepreneurial capacities. Many of the workers are barely literate.



#### Box 3.10

### Cashew Sector in Eleventh Five Year Plan (2007-12)

#### □ Objectives

Rejuvenation of Cashew industry by Up gradation of facilities, Modernisation of Cashew Factories and Factory sheds, Expansion of domestic market of cashew, Value addition of cashew kernels, International brand building and Export market development were the objectives of the eleventh five year plan. Against the outlay of ₹ 52 crore the expenditure was ₹ 52 during 2010-11. The corresponding figures for 2011-12 are ₹ 52 crore and 46.68 crore.

#### □ Achievements

Modernization of Cashew factories. Value added products were produced. Continuous Employment was given to workers of KSCDC & CAPEX with good ESI facilities and other benefits. Branded products were established in domestic and international markets. A wide variety of Cashew Grafts was supplied to farmers and institutions through KSACC.

#### □ Major Issues of the sector

1. The rate of growth of production of raw nuts in India and Kerala is very low and the productivity per hectare is also low. Area and production under cashew crop has declined.
2. Cashew factories work at low level of capacity utilization and productivity.
3. Raw nut producing countries started processing kernels and they entered the world market posing a serious threat to Kerala.
4. Global market also witnessed growing demand for substitute nuts and kernels in the place of cashew.
5. The price of kernels which is controlled by market agents in New York undergoes wide fluctuations.
6. The commission system of cashew processing is growing to the advantage of workers as well as State agencies.

## Promotion of Cashew Processing in Kerala State

3.93 The Kerala State Cashew Development Corporation (KSCDC) and Kerala State Cashew Workers Apex Co-operative Society (CAPEX) are the two agencies of the State engaged in cashew processing sector in Kerala. These agencies contribute to the upliftment of the workers being most of them are women from lower economic strata of the society.

3.94 CAPEX with headquarters in Kollam, is the apex body of cashew workers primary societies engaged in the procurement of raw cashew nuts and marketing the processed kernels. The Society owns 10 factories. There are about 6300 workers. The society could provide employment for 229 days in 2011-12. The total sales turnover of the CAPEX increased from ₹ 4875.55 lakh in 2010-11 to ₹ 6773.13 lakh in 2011-12, recording a 39 per cent growth. The performance of CAPEX by the last 5 years is given in **Appendix 3.44**. The KSCDC has 30 factories spread out in the districts of Thiruvananthapuram, Kollam, Alappuzha, Thrissur and Kannur. There are about 18000 workers and majority of them are women. The Corporation process raw cashew nuts into kernels, produce value added products like cashew soup, cashew vita, cashew bitz and cashew powder and market these products. The performance of KSCDC by the last 5 years is given in **Appendix 3.45**.

3.95 Kerala State Agency for the Expansion of Cashew Cultivation (KSACC) was constituted by Government of Kerala to overcome the crisis of diminishing trend in shortfall of area under cashew cultivation in the State. Since 2008, KSACC has been organizing promotional activities in cashew cultivation and distributing cashew grafts of high yielding varieties and financial assistance to farmers and institutions in the State. KSACC is the nodal agency for the Cashew cultivation activities in Kerala, approved by NHM (National Horticulture Mission) and for implementing NHM project, received a financial support of ₹ 23.70 Crore from Government of India, during the period 2009-10 to 2011-12.

3.96 During the period 2009-10 to 2011-12, the agency could achieve an area of 17299 hectares by promoting cashew cultivation involving more than 100000 farmers and a good number of institutions. Assistance was also given for establishing apple processing units.

## Minerals

3.97 Kerala State is endowed with a number of occurrences/ deposits of minerals such as Heavy Mineral Sands (Ilmenite, Rutile, Zircon, Monazite, Silimanite), Gold, Iron Ore, Bauxite, Graphite, China Clay, Fire Clay, Tile and Brick Clay, Silica Sand, Lignite, Limestone, Limeshell, Dimension Stone(Granite), Gemstones, Magnesite, Steatite etc. However, mining activities on large scale are confined mainly to a few minerals – Heavy Mineral Sands, China Clay and to a lesser extent Limestone/Limeshell, Silica Sand and Granite. In fact, Heavy Mineral sand and China Clay contribute more than 90 percent of the total value of major mineral production in the State. However, 75 per cent of the mineral revenue comes from the minor minerals.

3.98 Unlike other States, due to the peculiar nature of the State of Kerala (non availability of land for mining, vast expanse of reserve forest and dense population) the mineral resources cannot be exploited with ease. Mining, invites all kinds of environmental problems (lowering of water table, noise pollution, dust pollution, public safety, threat to flora and fauna, contamination of water, deterioration of river ecosystem etc.). However mining in the State cannot be stopped altogether as minerals (especially those of the category of building materials) are an integral part of infrastructure development of the State.

3.99 There are 81 major mineral mines that are in operation in the State. Also there are 3500 licensed minor mineral quarries in the State. Government gets revenue from minerals mainly by way of royalty. Revenue collected during the year 2011-12 is ₹ 44.3 crore ( ₹ 11.17 crore from major minerals and ₹ 33.13 crore from minor minerals) which is 22 percent higher than the previous year collection of ₹ 36.34 crore. Total area covered by mining leases is 2513.84 ha. The mineral wise details of area covered by mining leases are given in **Appendix 3.6**.

3.100 The production of various major and minor minerals in the state during 2011-12 and the royalty are given in **Appendix 3.7**. An analysis of revenue collection shows that Palakkad district has the highest collection of ₹ 6.87 crore (16% of total revenue) followed by Kollam (14 per cent). The district wise collection of revenue from major and minor minerals are furnished in **Appendix 3.48**.

## SECTION 2

### Labour and Labour Welfare

3.101 Kerala is a State which ensures decent work, social protection and dignity of labour. The Labour Laws and Labour Welfare Schemes implemented by the State places the labour force of Kerala at a level much higher to that of other States in India. Given the changing dynamics of the employment landscape of the State, the role of the Labour Department needs to be restructured. The Department has to shed its traditional image of an arbitrator between the capital and organised labour and reinvent itself as a pro-active agent of change addressing the new issues facing labour market and its agents.

3.102 The Decent work concept was formulated by the ILO's constituents – Governments, employers and workers- as a means to identify the Organisations major priorities. It is based on the understanding that work is a source of personal dignity, family stability, peace in the community and encourages democracies that deliver for people and economic growth that expands opportunities for productive jobs and enterprise development. Countries are encouraged to establish social protection floors (\*) as a "fundamental element of their national social security systems" and as part of their social, economic and environmental development plans. Those countries that cannot afford the basic social protection measures could seek international cooperation and support to complement their own efforts.



3.103 Low labour participation rate (LPR) and workforce participation rates (WPR) have been persistent characteristics of India's labour market. In 2008, the LPR in India was only 56% compared to 74% in China and 71% in Brazil. The work force participation in the economy of India and Kerala is in the table No. 3.2

**Table 3.2**  
**Workforce Participation in the Economy**

Category	India	Kerala
Rural Male	54.8	55.6
Rural Female	28.9	22.1
Urban Male	55.4	57.7
Urban Female	13.8	17.7

Source: Estimates based on NSSO 2007-08

3.104 As per the National Sample Survey Report 2009-10, the work participation rates of rural male and female population in Kerala are 55 and 26 percent compared to 56 and 25 percent respectively during 2004-05 and those in urban area for male and female population are 54 and 14 percent compared to 55 and 20 percent respectively in 2004-05.

3.105 The major hurdle for labour market modernisation in India is the extremely low rate of female labour participation. The numbers of missing women in India-women who withdraw from labour force and engage only in domestic duties-was a staggering 216 million in 2009-10, almost as large as the population of a country like Brazil. The sheer absence of gainful employment opportunities is likely to be the factor most constraining female participation in the workforce. In Kerala, female work participation rate is around 22 percent in rural and 18 percent in urban area during the year 2007-08.

## Composition of Workers

3.106 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.

## Industrial Relations

3.107 Creating and maintaining good and healthy industrial relations is one of the major functions of the Labour Department. All the activities of this department are focused on ensuring fair working and living conditions of the workers in the State and maintaining cordial relationship between the employer and employee to develop good industrial harmony.

3.108 Kerala is acclaimed nationally and internationally on the achievement of Social Security and Welfare measures. In Kerala, every employee/worker should be a member in any of the Welfare Board and they must be protected by the State throughout their lives. Almost 45 lakh of labour force in the state are protected under any one of the Social Security Schemes. There are 16 Labour Welfare Fund Boards functioning under the Labour Department. The rate of welfare pensions has been enhanced by the Government during the 2011-12.

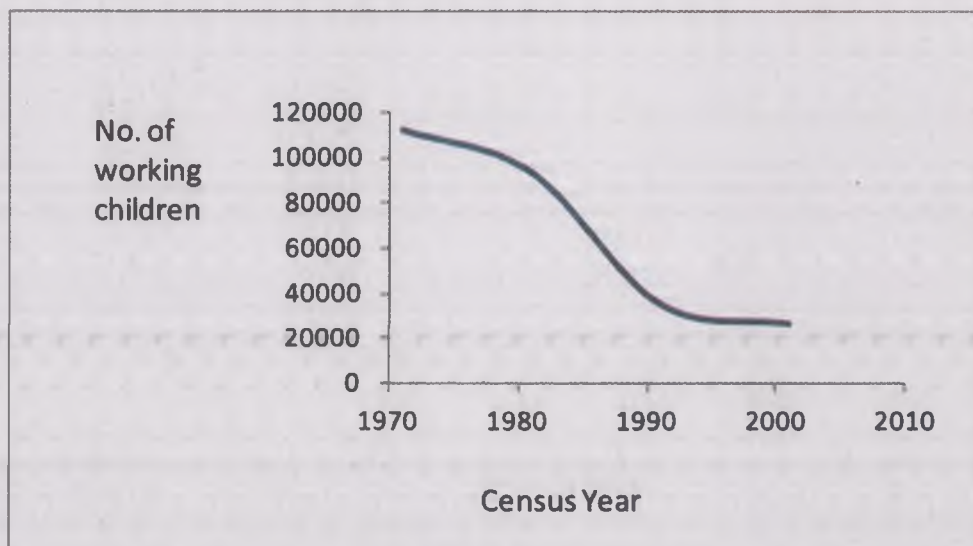
3.109 Kerala is one of the first states in India, to introduce a welfare scheme for migrant labourers ensuring their pay, welfare, health and the educational aid to their families through Kerala Building and Other Construction Workers Welfare Fund Board with the assistance from the Government. The government is committed to continue the benefits granted to the labourers in crisis ridden plantation sector, like medical aid /education assistance like uniform, note books etc.

(\*) Social protection floors are "nationally defined sets of basic social security guarantees which secure protection aimed at preventing poverty, vulnerability and social exclusion".

## Child Labour

3.110 Eradication of child labour in the state is a matter of policy of the government. The Central Government has enacted rules to this effect. Even before that, Kerala had implemented Rules for eradication of child labour. For this, the Labour Department has implemented two main activities like conducted awareness programmes and persuading the society to not engage in child labour. As part of Child Labour Eradication Day, seminars & awareness camps are conducted in the State. As a result of State's intervention, the number of working children has been decreased considerably (i.e. 76.6%) from 111801 in 1971 to 26156 in 2001. Decreasing tendency in the distribution of working children in Kerala during the last four censuses are shown in the Fig 3.6

**Fig 3.6 .**  
**Number of Working Children in Kerala**



## Major Activities of Labour Department

3.111 An amount of ₹ 255.95 lakh has been allotted to the Labour Department and the expenditure reported during that period was ₹161.41 lakh (63 per cent). Three welfare schemes viz, Tree Climbers Disability Pension, Welfare Scheme for the Domestic Workers in Kerala and Maternity Allowances to workers in the unorganised sector are the new schemes of the Department.

### Box 3.11

#### New Schemes of the Department during 2012-13

- The Unorganised Workers Social Security Act has come into effect on 31.12.2008 and the State rules were notified on 11.08.2010. The State Board was also constituted.
- Rehabilitation programme for Inter State Migrant (ISM) Workers
- To ensure Minimum Wages to the employees in different employments, E- Payment of wages introduced in the sectors viz, Textile, Jewellery, IT, Private Bank and Private Educational Institutions.
- Plantation Rehabilitation Scheme for welfare of plantation workers.

3.112 The Highlights of Draft Labour Policy 2011 ensures Social protection and Decent working condition and to the labourers. The highlight of Draft Labour Policy of Kerala is in the Box No. 3.12

### Box 3.12

#### Highlights of Draft Labour Policy 2011, Kerala

The Draft Labour policy 2011 proposes to ensure minimum wages to workers in the unorganised sector and check unhealthy tendencies such as 'nokkukooli' in the loading and unloading sector. No time frame is fixed for achieving these objectives. All Trade Unions have agreed to the elimination of 'nokkukooli' and excessive collection of charges by head load workers. Wherever welfare fund scheme is available, provision will be made for online payment and there will be gradual unification of rates across the State. Disciplinary action will be taken against workers who collect excess charges and those who threaten house owners regarding loading and unloading of household goods. Renewal of registration of workers with the Welfare Fund Board will be made compulsory. Transfer of registration cards and use of ghost cards will be prevented. It will be mandatory for employers to pay wages through banks and the Labour Department will take action on the basis of bank statements if minimum wages are not paid.

The draft policy envisages low cost housing for workers and compulsory registration of migrant workers. Health insurance cover is proposed to be extended to all workers; safety audit will be made compulsory for multi storied buildings. Only registered workers will be allowed to work at building sites.

Fair wages will be introduced in the IT sector also. It is proposed to improve the living conditions of estate workers and to eliminate child labour.

3.113 The Kerala Institute of Labour and Employment is a body for research and development conducting training through workshops/ seminars. In addition, it is conducting memorial lecture series in the names of prominent Trade Union leaders of Kerala. Women development initiatives and special training programmes for unorganised sectors and interstate migrant workers in construction sector are also undertaken.

3.114 An amount of ₹ 320.21 crore has been allotted to the Department for implementing 14 schemes including 4 new Schemes and ₹ 138.14 crore has been expended (43%) as on 30.12.2012 by the Department.

### Safety of Workers

3.115 The Department of Factories & Boilers is the statutory Authority to ensure safety, health and welfare of all workers in factories and the general public living in the vicinity of factories through implementing various laws. The department is in the pursuit of prevention of industrial accident and creation of an environment conducive to industrial hygiene as well as prevention of occupational diseases by inspection and advisory services Priority inspection at Major Accident Hazards (MAH) factories, air monitoring studies in hazardous factories, workshop/training programmes for workers and managers, inspection of hazardous factories by specialist inspectors, medical examination of factory workers were the major activities of the department during 2011-12. License Adalat was conducted as part of public interaction and first aid training was also given to public. During 2011-12, an amount of ₹ 200 lakh was provided to the Department and the expenditure reported during that period was nearly ₹ 99 lakh (50 per cent ). The Department has conducted safety training and first aid training for the public. Monthly comprehensive training programmes to industrial workers were also conducted. Through computerisation, online registration, renewal, submission of application, etc could be implemented.



## Health Insurance scheme - Rashtriya Swasthya Bima Yojana (RSBY)

3.116 RSBY is being implemented in Kerala, from the 1st year of introduction in 2008. As per the Planning Commission estimates, there are 12 lakh BPL families in the State. All of them are being covered under the scheme. The State Government has estimated another 10 Lakh poor families as eligible to be included in the BPL list for this scheme and the entire expenditure for them will be from State Government funds. The scheme will also be extended to the APL families also. The entire premium in this case will be borne by the beneficiary. Accordingly, the State Government has formulated the Comprehensive Health Insurance Scheme (CHIS) on the same lines of RSBY to benefit these 10 lakh poor families and also the APL families. The scheme was started in 2008 in Alappuzha district and then extended to all the other districts.

3.117 The RSBY and CHIS is jointly implemented by the Labour and Rehabilitation Department, Health and Family Welfare Department and the Local Self Government Department. Labour and Rehabilitation Department is the Nodal Department which administers the scheme. A separate agency, CHIAK (Comprehensive Health Insurance Agency, Kerala) was formulated for implementation of RSBY & CHIS. All the five Medical Colleges are implementing the scheme. United India Insurance Company, a public sector unit is selected as the insurer. During the second and third years of implementation the State Government had decided to bring in more families into the scheme, they include SC/ST families, fishermen families, ashraya families, agricultural workers, MGNREGS workers who worked for more than 15 days under the scheme, Street Vendors, Domestic Workers, Beedi Workers etc, who are not otherwise included in the BPL list of the Central Govt.

3.118 United India Insurance Company Ltd, Insurer for the previous year, was again chosen as the Insurer for the implementation of RSBY/CHIS for the financial year 2012-13 through a tender process with a premium of ₹ 1100/- per family. Nearly 300 public and private hospitals are implementing the scheme in the State. Claim status of RSBY is available on website of CHIAK ([www.chiak.org](http://www.chiak.org))

3.119 As per Gol guidelines, 64 KB Cards will have to be issued to all the new families which will be enrolled during January 2013, with validity date starting from 01.04.2013 in the place of existing 32 KB cards. Gol desires to uphold the platform of RSBY with more comprehensive functions so that it can converge more citizen services. Service delivery improvements would be made sustainable and the process would be linked to other welfare initiatives. Public Distribution System is the first step and Indira Gandhi Old Age Pension Schemes (IGNOAPS) is the second scheme which will be implemented by using the RSBY platform. 64 KB cards will have more storage facility and has been designed to hold the data of all such welfare measures of Government.

3.120 In Kerala, 35 lakh families have joined the scheme RSBY-CHIS, out of which nearly 25 lakh families come under RSBY and the balance under CHIS. During 2012-13 ₹ 15.00 crore has been provided in the State Budget for the scheme RSBY as 25% state share and ₹ 20.00 crore has been provided for the scheme CHIS. The annual insurance cover is for a maximum amount of ₹ 30,000 for a family of five members including the worker, spouse, children and dependent parents (if included in the BPL family list). The annual insurance premium is fixed through tender process. The State Government provides 25 per cent of the premium and administrative cost. The Central Government provides 75 per cent of the premium (including cost of smart card) directly to the implementing agency, CHIAK (Comprehensive Health Insurance Agency, Kerala).

3.121 The number of patients covered under the RSBY has been increased from 1, 42,700 in 2008-10 to 7, 00,033 (390 per cent) during 2011-12 and the amount spent for that period was also increased from ₹ 44.85 crore to ₹ 211.44 crore (371%) during that period. The scheme has provided surgical and non surgical medical assistance to 7 lakh beneficiaries in the State, amounting ₹ 211.44 Crore during the period under review. The Physical and Financial achievements of RSBY/CHIS is detailed in the Table 3.3

**Table 3.3**  
**Physical and Financial Achievement of RSBY/CHIS**

Year	No. of Patients			Amount ₹ Crore		
	Public	Private	Total	Public	Private	Total
2008-2010	47858	94842	142700	18.09	26.76	44.85
2010-11	143791	216437	360228	51.5	61.1	112.6
2011-12	377605	322428	700033	118.79	92.65	211.44
Total	569254	633707	1202961	188.38	180.51	368.89

Source: Labour Commissionerate

3.122 CHIS PLUS scheme which is implemented through non insurance route has been extended to 41,532 beneficiaries amounting to Rs. 50 crore through the participating Government Hospitals and Government Institutions like RCC, MCC, Pariyaram Co-Operative Medical college, Kannur and SCTIMST up to 30.10.2012.

### Aam Admi Bima Yojana (AABY)

3.123 Government of India has launched a new insurance scheme called Aam Admi Bima Yojana (AABY) for the rural landless households in the country during 2007-08. As per the scheme, the head of rural landless families or one earning member in each such family will be insured. The premium under the scheme is ₹ 200/-. The Scheme is implemented through CHIAK. Central Government provides 50% of the premium directly to the insurance agency as subsidy from the fund created for this purpose and the remaining 50% is State Government contribution. As per the scheme, the following benefits shall be given.

- |   |                   |
|---|-------------------|
| a. For natural death  | ₹ 30,000/-        |
| b. For accident death                                       | ₹ 75,000/-        |
| c. For permanent total disability due to accident           | ₹ 75,000/-        |
| d. Disability due to accident (Loss of one eye or one limb) | ₹ 37,500/-        |
| e. Scholarship for 2 children @ ₹100/month for a child      | ₹ 200/- per month |

The number of beneficiaries under the scheme is approximately 7, 00,000 Families

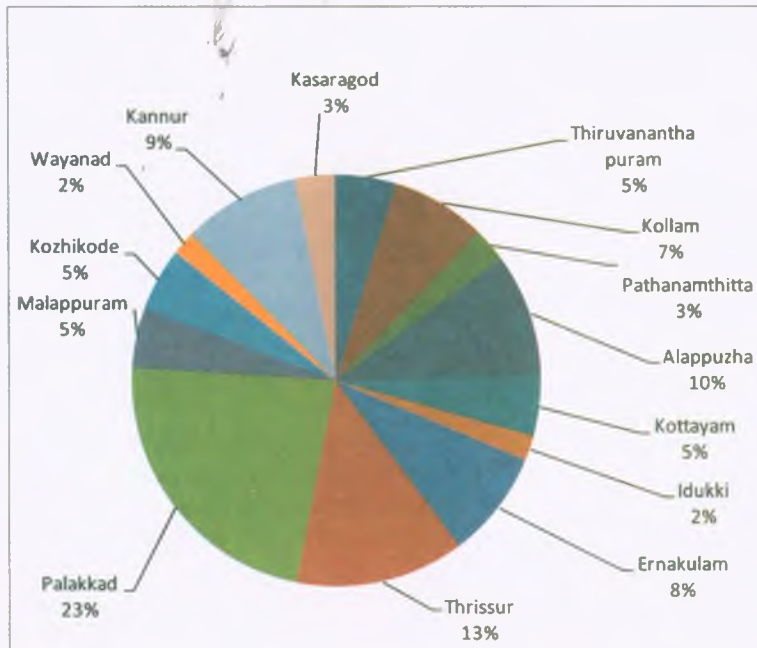
### Migrant Labour into Kerala

3.124 As per 2001 census, 1.3 per cent of the population in Kerala are migrants. A recent trend in the employment sector in the State is the inflow of interstate migrant labour from Bangladesh, West Bengal, Bihar, Orissa, Chattisgarh and Jharkhand besides from the adjacent States. These workers form the less advantaged groups in the labour market and work for subsistence living. Since they are not engaged through a contractor or an intermediary, the legal protection envisaged under the Interstate Migrant Workmen (Regulation of Employment and conditions of Service) Act, 1979 is not available to them.

3.125 Though these workers are predominantly engaged in construction, plywood and steel industries, their presence is noticeable in almost all sectors including service sector in the State. They are preferred by employers as they charge low levels of wages; and they do not have the support of a Trade Union. Most of the Inter State Migrant workers have no proper shelter and are forced to live in unhygienic residential areas without proper sanitation and safe drinking water resulting in spread of communicable diseases and other social problems in the society. The Government proposes to provide them decent working condition and cost effective accommodation with all necessary amenities

close to their workplace under a Private Public Partnership (PPP) arrangement. As a pilot project, efforts will be initiated for the establishment of Labour Shelters in the Corporation area or immediate surroundings of areas where Migrant Labour is concentrated. The project details and modalities for implementation have to be worked out. The Building and other Construction Workers Welfare Board will be authorised for the identification of land and further follow up action for implementation of the programme. The percentage distribution of interstate migrant workers in the districts of Kerala is given in the Fig 3.7

**Fig 3.7**  
Percentage Distribution of Interstate Migrant workers in Kerala during 2011



3.126 Palakkad district accounted for the largest number and Idukki is the least number of interstate migrant labourers in Kerala.

## Industrial Training Department

3.127 Industrial Training Department conducts Craftsman training scheme through Government and Private ITIs and Apprenticeship Training scheme through RI Centres. There are 72 Government ITIs, one Basic Training Centre, Two AVTS, One Staff Training Institute, 454 Private ITIs and 44 ITIs under Scheduled Caste Development Department exclusively for SC and 3 ITIs under Scheduled Tribe Development Department exclusively for ST candidates functioning in the State. The total seat capacity of these ITIs is 61,145 (approximately). The Apprenticeship Training Scheme under Apprenticeship Act 1961 is being implemented through 14 Centres (9 RI Centres and 5 ITIs). During the last five years, 39 new Government ITIs established and Ten ITIs upgraded to first grade ITIs and Twelve ITIs into Centres of Excellence. And also 128 ITIs were sanctioned in the private sector.

3.128 During 2011-12 an amount of ₹ 69.79 crore has been allotted to the Department and the expenditure reported during that period was only ₹ 11.09 lakh (15.9 %). The amount allotted to the Department for the Skill Development Programme during that period (₹ 29.94 crore) has not been expended by the Department due to certain technical issues and hence the poor expenditure.

3.129 During 2012-13 the objective of the Department is to improve the quality of service rendered and to achieve placement for all passed out trainees. An amount of ₹ 79.55 crore provided for the Department during 2012-13 and the expenditure reported as on 30.12.2012 is 22.18 crore (28%) by the Department.

## Training, Counselling and Placement Cell (TCPC)

3.130 NCVT during its 37th meeting held on 17.12.2007, decided for setting up of placement cells in each it is with suggested functions to help the graduates in getting placement in different industries. Moreover this is mandatory under the Vocational Training Improvement Project. There are 76 Government ITIs with total seating capacity of 25000 (approximately) in the State. At present, the Placement Cells in these ITIs are functioning without proper infrastructure. Based on the recommendations of the NCVT, Director General of Employment and Training has issued directions vide circular No. DGE&T 19(28)/2007-CD dated 26.07.2008, to take necessary action for setting up of full fledged Training and Placement Cell in all ITIs with appropriate infrastructure including separate room, Computers with internet facilities, phone line, fax machine and the services of experts as Consultants for proper guidance.

## SECTION 3 Unemployment Situation in Kerala

3.131 Unemployment is always a serious problem in Kerala, though an accurate estimate is difficult to obtain. From the decade of 1970's onwards, there has been an increase in the labour supply particularly due to the increase in the number of women seeking employment. Though the supply of work seekers increased, the demand for them did not increase, which resulted in rapid rise in unemployment in Kerala. As the cost of living in Kerala, unlike many other States, is very high, youths prefer jobs, which ensure high wage. Therefore large number of unemployed persons are migrating abroad especially to Gulf countries.

3.132 As per the second Employment – Unemployment Survey conducted by the Labour Bureau, an organization under the Ministry of Labour and Employment (GOI), during the year 2011-12, Kerala is placed in fourth position in the case of high unemployment with an Unemployment Rate (UR) of 9.9 per cent behind three small States viz; Goa (17.9 per cent), Tripura (14.1 per cent) and Sikkim (12.6 per cent). According to the current daily status (CDS) approach, Kerala (14.3 per cent) is in the second position behind Tripura (17.2 per cent). This indicates that among the larger Indian States unemployment is highest in Kerala.

3.133 In Kerala, the unemployment rate is higher in urban areas as compared to rural areas under all approaches of measurement. While comparing the unemployment rate of male and female labour it is seen that UR is much higher among females as compared to males. For instance, under the UPS approach, the female UR is estimated to be 26.2 per cent whereas for males, the UR is 3.4 per cent. In urban areas, the female UR is estimated to be 37.5 per cent; whereas the same in rural area is 21.4 per cent.

3.134 The unemployment rate based on four different approaches as estimated by Labour Bureau survey during 2011-12 is given in Table 3.4. A comparison between different estimates of unemployment indicates that the CDS estimate of unemployment is the highest. This scenario reflected both in rural and urban areas. The higher unemployment rates according to the CDS approach compared to the current weekly status (CWS) and usual status approaches (UPS and UPSS) indicate a high degree of intermittent unemployment.

**Table 3.4**  
**Unemployment Rate in Kerala based on different approaches (per cent)**

Approach	Rural			Urban			Rural + Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
UPS*	3.2	21.4	8.2	4.0	37.5	14.5	3.4	26.2	9.9
UPSS*	2.9	18.8	7.6	4.0	35.2	13.9	3.2	23.4	9.2
CWS*	3.6	21.8	8.9	4.8	36.1	14.6	3.9	25.8	10.4
CDS*	8.8	24.9	13.2	7.4	39.2	17.2	8.4	29.1	14.3

Source: Report on Second Annual Employment & Unemployment Survey, Labour Bureau, Ministry of Labour and Employment, Govt. of India

3.135 The main data source on employment and unemployment situation in the States as well as the Country is the quinquennial household surveys conducted by National Sample Survey Organisation (NSSO). According to the latest survey conducted in 2009-10 by the NSSO, among the Indian States, the highest Unemployment Rate based on Current Daily Status approach was estimated in Kerala (16.7 per cent); followed by Nagaland (15 per cent), Tripura (14.9 per cent), Tamil Nadu (11.7 per cent) and Orissa (7.9 per cent). At the national level the unemployment rate under CDS approach was estimated at 6.6 per cent with male – 6.1 per cent and female 8.2 per cent. The unemployment rate according to Current Daily Status approach based on 2009-10 survey for each State/UT is given in the **Appendix 3.54**.

3.136 Some important indicators on employment/ unemployment in Kerala as per the surveys conducted in 2004-05 and 2009-10 by the NSSO are given in **Appendix 3.55**; which indicates that the number of unemployed having come down in the State during the five year period 2004-09, under all approaches. For example, the unemployment rate based on CDS approach among male in rural area was 21.1 per cent in 2004-05. This rate diminished to 12.9 per cent as per the 2009-10 sample survey. And in the urban areas, the UR among male decreased from 17.4 per cent to 12.1 per cent during the five-year period. Among rural female, the UR decreased from 34.6 per cent to 27.4 per cent and among urban female, from 42.3 per cent to 21.3 per cent during the same period.

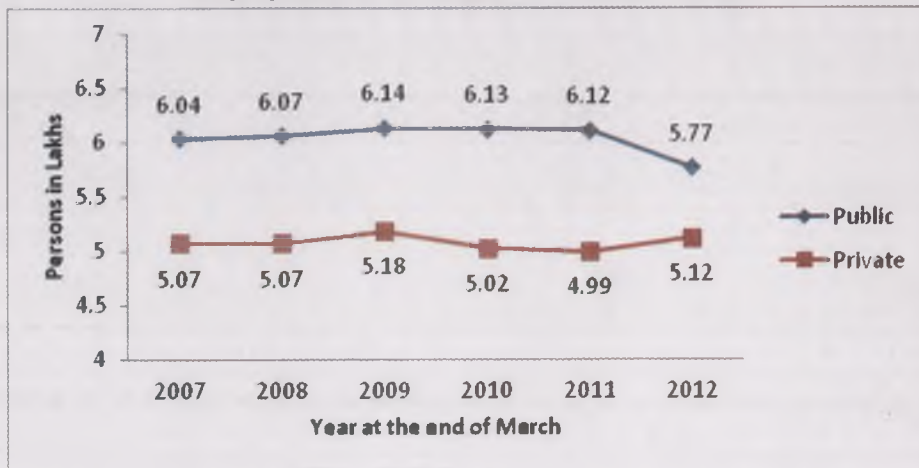
3.137 Estimates on some important indicators reflecting the prevalence of employment/ unemployment in India based on the surveys conducted by the NSSO in 2004-05 and 2009-10 are given in **Appendix 3.56**.

## Employment in the Organised Sector

3.138 In the organised sector wages are regular and working conditions are good. But in Kerala employment in the organised sector is coming down. For instance, persons employed in organised sector were 12.26 lakh in 2000 and it decreased to 11.4 lakh in 2005 and further to 10.89 lakh in 2012, a reduction of 11.2 per cent over a period of 12 years. The share of women in organized-sector employment was 41.2 per cent in 2012 March end and has remained nearly constant in recent years.

3.139 The organised sector comprises of private and public sectors, and in Kerala public sector employment is more when compared to private sector. For instance, in 2012 out of 10.89 lakh persons employed in the organised sector 5.77 lakh (53 per cent) are in public sector and 5.12 lakh (47 per cent) are in the private sector. The share of women in public sector in Kerala is about 32.1 percent; whereas in the case of private sector it is 51.6 per cent. Details on employment in organised sector in Kerala are given in Fig 3.8 and **Appendix 3.57**. All India figures can be seen in **Appendix 3.58**.

Fig.3.8  
Employment in the Organized Sector- Kerala

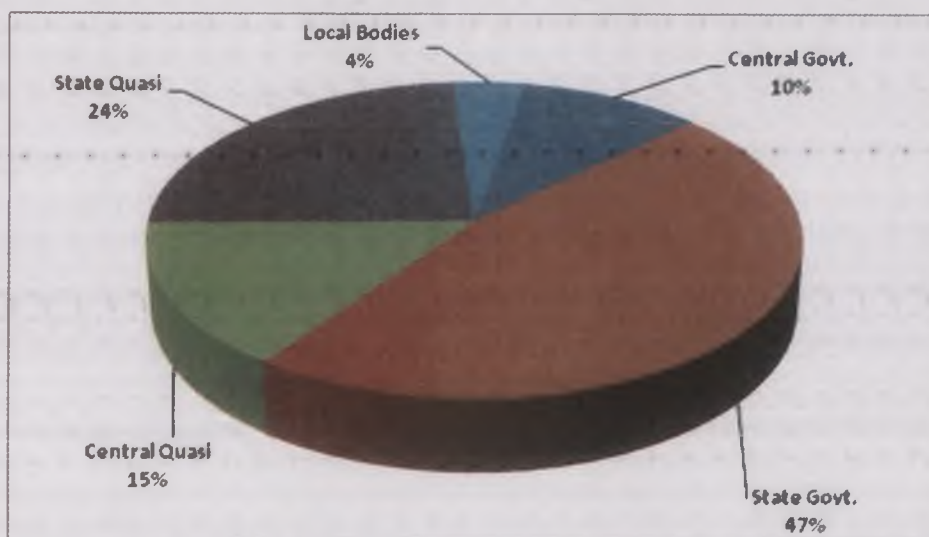


Source: Directorate of Employment, Govt. of Kerala, 2012

3.140 The branch-wise analysis of employment under public sector shows that persons employed in the Central Government offices in Kerala are decreasing over the years. At the end of March 2000 there were 86,889 central Government employees in Kerala. It declined to 76,789 in 2005 and further declined to 60,078 in 2012 (See **Appendix 3.59**). All India figures may be seen in **Appendix 3.60**.

3.141 The percentage distribution of employment in public sector as on March 31st 2012 shows that 47 per cent of employment is from the State Government, and the employment from Central Government is only 10 per cent. The share of Quasi Governments; Central and State together is 39 per cent of Public Sector employment (See Fig. 3.9).

**Fig.3.9**  
**Distribution of Employment in Public Sector- March 2012**



Source: Directorate of Employment, Govt. of Kerala, 2012

3.142 Data on district-wise employment in organized sector as on March 2012 indicates that the highest employment is in Ernakulam District, with 1.86 lakh persons, which accounted for 17.1 per cent of the total employment; followed by Thiruvananthapuram with 1.55 lakh persons, and Thrissur with 0.95 lakh persons. The lowest number of organized sector employment is in Wayanad district with 0.26 lakh persons, which accounted for a paltry 2.4 per cent of the total employment; preceded by Kasaragod with 0.38 lakh persons (See **Appendix 3.61 & Appendix 3.62**).

3.143 The sectoral distribution of workers in organised sector across different years indicates that the dependence on agriculture continues to decline. In 2011-12, the contribution of agriculture to total employment declined by approximately 0.6 per cent as compared to that in 2004-05. The share of Mining & Quarrying and the Manufacturing sector also registered a decline in 2011-12 as compared to that in 2004-05. The sectors Construction and Transport, Storage & Communication also witnessed a decrease in 2011-12. However trade, restaurants & hotels and Community, Social and Personal Services registered a marginal increase in their share in 2011-12. Electricity, Gas, Water & Sanitary Services also witnessed an increase in the share of employment (See **Appendix 3.63**).

3.144 Analysis of the sector-wise growth of employment in organized sector in Kerala as on March 2012 given in **Appendix 3.63** revealed that the highest employment is in the community, social and personal services (45.9 per cent), followed by Manufacturing 21.5 per cent, financing and business services 8.7 per cent and Transport, Storage & Communication 8.4 per cent. All India figures are given in **Appendix 3.64**.

## Employment in Unorganised Sector

3.145 In India, a major chunk of labor force is employed in the unorganized sector, which accounted for nearly 94 per cent of the total employment. The Sub-committee of the National Commission for Enterprises in the Unorganized Sector (NCEUS) in June 2008, estimated that the contribution of unorganized sector to GDP is about 50 per cent. Thus unorganized sector has a crucial role in our economy in terms of employment and its contribution to the National as well as State Income.

3.146 According to the latest survey on employment and unemployment carried out by the NSSO in the 66th round of NSS during July 2009 – June 2010 it is estimated, as per UPSS approach, that the self employed workers in Kerala constituted 38.4 per cent of the total workers, whereas the percentage share of regular wage/salaried employee accounted for 23.2 per cent and that of casual labour 38.4 per cent. Among self-employed workers in Kerala, about 99 per cent in the rural areas and about 97 per cent in urban areas reported to have worked in the informal sector. In the case of workers in casual labour in other than public works, about 82 per cent in rural areas and 86 per cent in urban areas reported to have worked in the informal sector. **Appendix 3.65** depicts a comparison of percentages of informal sector workers under various categories in Kerala and India.

3.147 The gender differentials in the proportion of workers in the informal sector are found to be almost equal both in the rural and urban areas in the case of self-employed workers. For the regular wage/salaried employees the gender differentials are found to be narrow both in the rural and urban areas. In the case of casual labour in other than public works the gender differentials are found to be very sharp. The proportion of male casual workers employed in the informal sector far exceeded the proportion of the female casual workers: nearly 86 per cent of the rural male casual workers were engaged in informal sector, compared to 64 per cent for female and nearly 89 per cent of urban male casual workers were engaged in informal sector, compared to 67 per cent for female.

## Registered Job Seekers at the Employment Exchanges

3.148 At the national level the registered job seekers have come down during the period 2006-2010. There were 414.66 lakh employment seekers in 2006. It declined to 388.18 lakh in December 2010, a reduction of 26.48 lakh over a period of four years. Of the total of 388.19 lakh job seekers as on 31.12.2010, 258.95 lakh are men (66.7 per cent) and 129.24 lakh women (33.3 per cent).

3.149 Year-wise all India registration, placement, vacancies notified, submission made and Live Register for the period 2002 to 2010 are given in **Appendix 3.66**.

3.150 According to live registers of employment exchanges in Kerala, the total number of work seekers as on 30th September 2012 was 45.0 lakh; of which 27.4 lakh (60.9 per cent) are female. Category-wise registered job seekers in Employment Exchanges are given in Table 3.5.

**Table 3.5**  
**Registered Job Seekers in Employment Exchanges - Kerala**  
**(As on 30th September 2012)**

Sl. No.	Category	Numbers
1	Illiterate	101
2	Below SSLC	5,97,655
3	SSLC	28,36,941
4	Higher Secondary	7,49,262
5	Degree	2,66,470
6	Post Graduates	48,946
<b>Total</b>		<b>44,99,374</b>

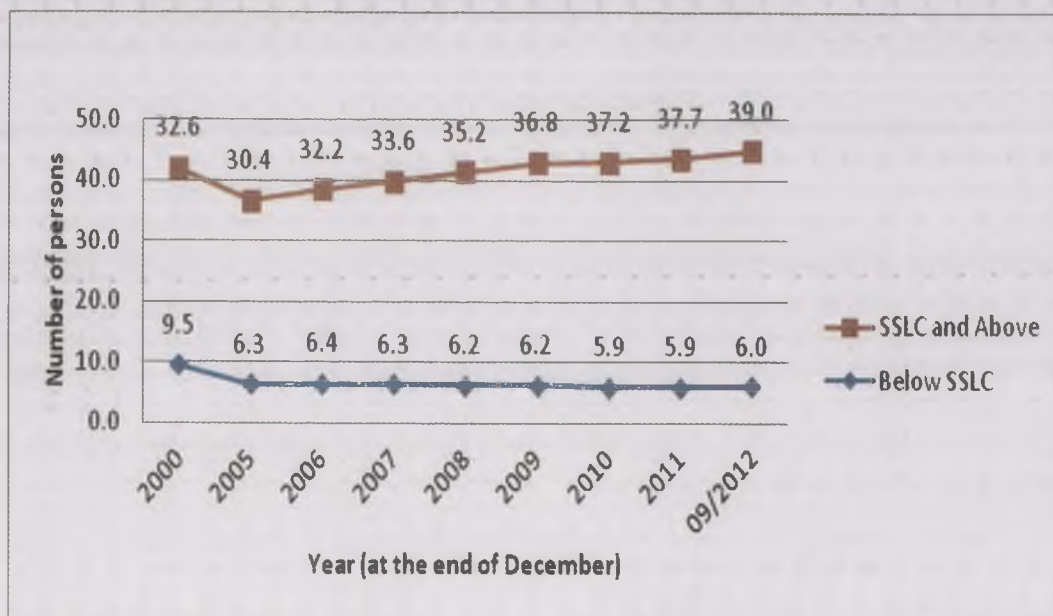
Source: Directorate of Employment, Govt. of Kerala, 2012

3.151 The figures in the live registers of Employment Exchanges in Kerala indicate that contrary to the all India scenario, the number of job seekers is increasing year after year (See **Appendix 3.67**). Youngsters register their names mainly for Govt. jobs while many of them may be engaged in some useful productive work or might have migrated either to other states or to foreign countries. At present no clear mechanism is in place to find out from the live registers of those persons who are engaged in useful productive work. Live registers should always reflect the actual unemployment position of the State so as to enable the Government to formulate policies and programmes for the real unemployed persons in a meaningful way.

3.152 Details of work seekers under the general and professional & technical categories for various years are given in **Appendix 3.67**. Figures indicate that the number of general work seekers has been increasing since 2005. The number of general work seekers registered their names in the employment exchanges stood at 34.93 lakh in 2005. This number increased to 43.29 lakh in 2012; showing an increase of 24 per cent during a span of seven years.

3.153 The number of work seekers below SSLC has sharply decreased from 9.52 lakh in 2000 to 5.98 lakh as on September 2012. Whereas, the total number of work seekers who possess SSLC and above has been increasing year after year. The trend of work seekers in the categories of below SSLC and SSLC & above since 2000 is shown in Fig.3.10.

**Fig 3.10**  
**Trends of work seekers in Kerala**



Source: Directorate of Employment, Govt. of Kerala, 2012

3.154 The number of HSC qualified candidates who have registered at the employment exchanges has increased from 5.30 lakh in 2000 to 7.49 lakh in 2012. In the case of registered graduates and post graduates the figures reveal that no significant change has been taken place during the last three years (See **Appendix 3.68**). Of the total employment seekers as on September 2012, 13.3 per cent is below SSLC, 63.1 per cent SSLC, 16.6 per cent HSC or equivalent, 5.9 per cent graduates and 1.1 per cent postgraduates. The percentage share of work seekers in various levels of education is given in Table 3.6.



**Table 3.6**  
**Percentage Share of Employment Seekers according to level of Education—Kerala**

Sl. No	Level of Education	Share (Percent)				
		2008	2009	2010	2011	9/2012
1	Below SSLC	15.0	14.5	13.8	13.5	13.3
2	SSLC	61.5	62.2	62.4	62.8	63.1
3	HSC or equivalent	16.5	16.5	16.7	16.6	16.6
4	Degree	5.7	5.6	6.0	6.0	5.9
5	Post Graduate	1.3	1.2	1.1	1.1	1.1
Total Work Seekers		100.0	100.0	100.0	100.0	100.0

Source: Directorate of Employment, Govt. of Kerala, 2012

3.155 The number of professional and technical work seekers as on September 2012 is 1.7 lakh. Data as on September 2012 reveal that ITI certificate holders and Diploma holders together constitute 89.1 per cent of the total professional and technical work seekers (See Table. 3.7). The figures give a clear indication that unemployment is increasing among engineering graduates. The number of registered engineering graduates in 2010 was 8143. This has increased to 14,477 as on September 2012 (See **Appendix 3.69**).

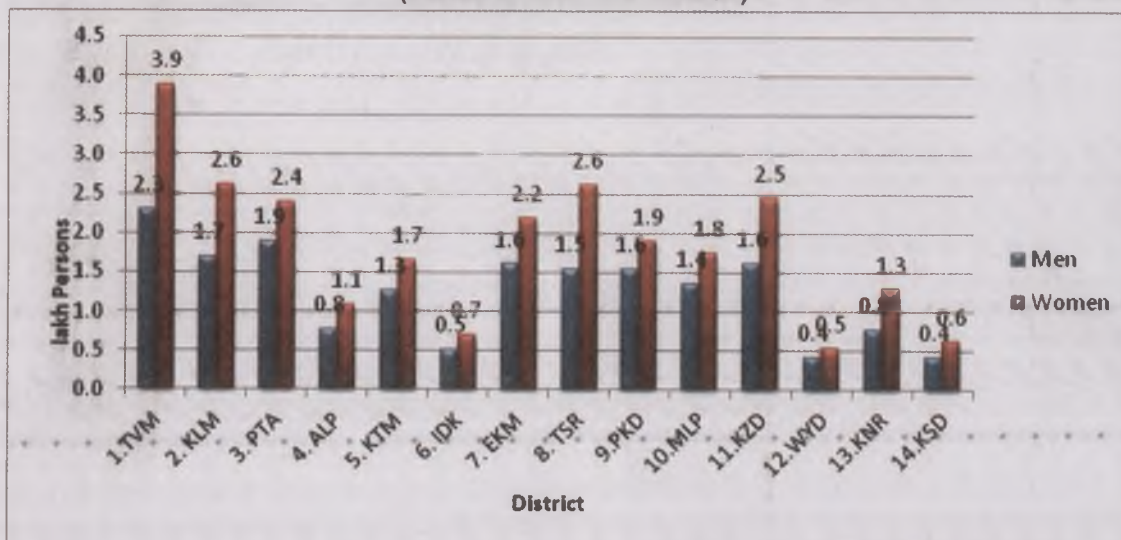
**Table 3.7**  
**Percentage Share of Professional and Technical Work Seekers in Kerala**

Sl. No	Educational Qualification	Share (Percent)				
		2008	2009	2010	2011	9/2012
1	Medical Graduates	1.6	1.7	1.4	1.5	1.7
2	Engineering Graduates	5.5	6.5	5.4	6.7	8.5
3	Diploma holders in Engineering	22.2	24.8	23.4	23.0	22.9
4	ITI Certificate holders	69.8	66.2	69.3	68.2	66.2
5	Agricultural Graduates	0.5	0.4	0.3	0.3	0.3
6	Veterinary Graduates	0.4	0.4	0.3	0.3	0.4
Total		100.0	100.0	100.0	100.0	100.0

Source: Directorate of Employment, Govt. of Kerala, 2012

3.156 A significant and peculiar feature of Kerala's unemployment situation is that women outnumber men, among those who seek employment through employment exchanges. This position is reflected in all the 14 districts in Kerala. The district-wise unemployment of women and men in 14 districts of Kerala as on 31.03.2012 is shown in the following graph (Fig.3.11).

**Fig 3.11**  
**Work Seekers in Kerala as on 31.03.2012**  
**(Status of Men and Women)**



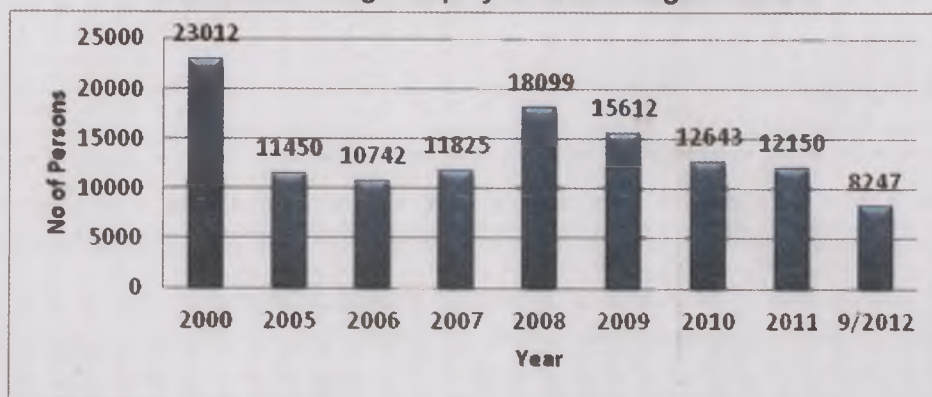
Source: Directorate of Employment, Govt. of Kerala, 2012

3.157 Thiruvananthapuram District ranks first in the number of work seekers in both general and professional categories as on 31.3.2012. The total number of work seekers in Thiruvananthapuram district is 6.2 lakh of which 3.9 lakh are women and 2.3 lakh men. The second largest number of work seekers is from Kollam district. There are 4.3 lakh job seekers in Kollam District as on March 2012, out of which 2.6 lakh are women and 1.7 lakh men. The lowest number of work seekers is in Wayanad district with 0.95 lakh numbers, preceded by Kasargod District with 1.05 lakh numbers (See Appendix 3.70).

## Placement through Employment Exchanges in Kerala

3.158 The figures furnished by the Director of Employment & Training reveal that placement through Employment Exchanges in Kerala has been declining since 2000. Total placement is declined from 23,012 in 2000 to 12,150 in 2011. The placement through employment exchanges in Kerala since 2000 is illustrated in the following graph Fig.3.12.

**Fig 3.12**  
**Placement through Employment Exchanges –Kerala**



Source: Directorate of Employment, Govt. of Kerala, 2012

## Performance of Kerala State Entrepreneur Self Development Mission

3.159 Kerala State Entrepreneur Self Development Mission (KSSEDM), is an ambitious scheme of the Government of Kerala, initiated by a budget announcement for the year 2011-12 and aims at inculcating entrepreneurial confidence among youth of the State by providing interest free loan up to Rs. 20 lakh for setting up micro enterprises.

3.160 The Mission aims to launch 2000 ventures every year and provide employment to 20,000 persons annually, thus generating employment potential of one lakh youths in five years. The enterprises set up under the Mission are eligible for financial assistance depending on the requirement and on the number of members in the group, at the rate of ₹ 10 lakh per technocrat entrepreneur and Rs. 4 lakh per non-technocrat promoter. The minimum promoters' contribution is 10 per cent and the financial assistance is to be repaid in five year, with the initial moratorium of one year. Government will bear the entire interest burden.

3.161 In the first phase, more than 10,000 prospective entrepreneurs representing 4015 enterprises registered under the Mission. Based on the project idea and the drive of the persons behind it 816 persons were selected for awarding financial assistance. The selected promoters underwent a four week training on entrepreneurship at the Rural Self Employment Training Institutes (RSETIs) followed by detailed market surveys for the product/service proposed by them. After successful completion of the training 313 enterprises involving 751 promoters were found eligible to avail financial assistance. For the 22 enterprises that have started commercial operation, an amount of ₹ 174.94 lakh out of the sanctioned amount of ₹ 202.95 lakh has been released. Achievements under the programme are summarised in Table 3.8.

**Table 3.8**  
**Achievement of Kerala State Entrepreneur Self Development Mission**

SI No	Particulars	No. of enterprises	Promoters associated with these enterprises
1	Trained and made eligible for availing financial assistance	313	751
2	Started commercial operation	22	50
3	Being implemented with financial assistance sanctioned	63	169
4	Applications for financial assistance being processed by various funding agencies	88	219

*Source: Kerala Financial Corporation*

3.162 Going by the figures, the Mission's performance in its first year is quite impressive even though it failed to achieve the target fixed for the first year. According to Kerala Financial Corporation, which is the nodal agency of the programme, the reluctance on the part of educated youth in the State to set up enterprises of their own is still seen and fresh registers are few. It can be hoped that the successes of the initial batches will prompt more capable educated and unemployed youth to take up entrepreneurship in the coming months and thus enable the Mission to achieve its objectives.

## Outlook for Industry, Labour and Employment in Kerala

3.163 The increased likelihood of Central Assistance for setting up a NIMZ (Kochi-Palakkad); food processing industry support through State Food Processing Mission; increase in funds for common infrastructure in MSMEs and soft intervention in Clusters etc. need to be tapped fully so that there is greater value added to the industrial sector. Innovative funding mechanisms being promoted by the Centre such as angel funds and venture capital can be tapped by entrepreneurs in Kerala. The en-

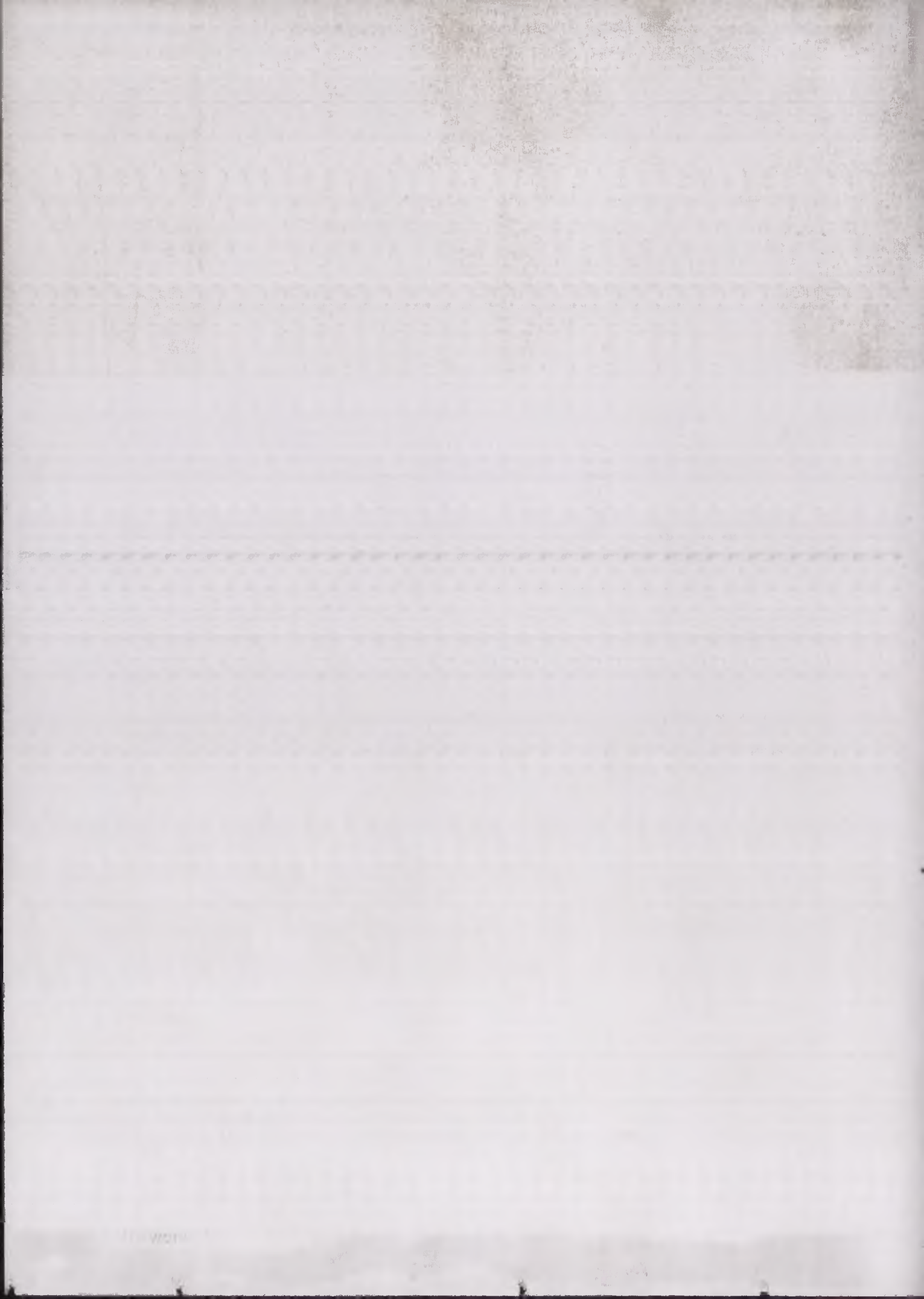
hanced use of Coir geo-textiles in rural roads will provide a boost to the ailing Coir sector. Improved logistics, infrastructure development and demand led skill development will also reduce the cost of production and make industry competitive. However, focus would continue to be on pollution free light manufacturing and traditional industries, with ethical and fair labour standards.

3.164 Kerala is already a model among emerging countries when it comes to provision of acceptable standards of welfare for workers. Nevertheless, special care has to be taken to ensure that dignity of labour is enhanced both by improving their skills so that they can get higher remuneration and by making them a partner in the growth process. Inter state migrants are flocking to Kerala for employment. Their welfare and integration in Kerala society requires attention. Further, a wide range of employment avenues customized to Kerala's work force, including self employment opportunities will be required. The government, both at the central and State level are concerned about the phenomenon of jobless growth and various skill development programmes aimed at increasing the skill sets of the work force are being given the thrust it deserves. Kerala's work force has to equip itself with skills and mindset that enhance high productivity and creativity. This will enable them to enjoy a much better standard of living. The State will continue to ensure that the interests of Kerala's labour force is not compromised in the development of the State. . . . .



# SOCIAL SERVICE





# SOCIAL SERVICE

## Introduction

Kerala can justifiably be considered on par with many developed countries when it comes to attainment of basic social indicators. The Central 12<sup>th</sup> Plan document clearly brings out that Kerala is way ahead of all of all human and social indicators ( such as infant health, maternal health, education and women's welfare). However, the availability of clean drinking water has been indicated as a problem in Kerala on account of great reliance on well water. Despite high achievements, complacency may not be in order. It is time to leverage the lead that has been accomplished and focus on second generation reforms which ensure that higher education is attuned to global employment opportunities, emerging life style diseases and ageing related ailments are tackled effectively, inter-se disparities between districts and communities are bridged and gender issues are sensitively dealt with. This Chapter includes Education (Section 1), Art and Culture (Section 2), Health (Section 3), Social Security and Welfare (Section 4), Provision of Drinking Water (Section 5), Gender Development (Section 6) and Development of Weaker Sections (SC /ST/Minorities) in Section 7, through a variety of social welfare schemes implemented by Government funded departments/institutions. The critical importance of this sector in Kerala, the main accomplishments during the 11th Plan (2007-2012), challenges faced by the sector and some of the major schemes introduced to tackle these challenges are brought out in this chapter.

## Education

Kerala has a unique place in the educational map of India. Educational initiatives spearheaded by various agencies for the last one century made Kerala the most literate state in India. The educational efforts during this period sought to make education a mass- based social good.

4.2 Public spending on education has been more or less equitably distributed between the sexes and among different social groups and regions in the state. The state is making concerted efforts in sustaining the achievements in the elementary education sector and improving the quality of secondary, higher, technical education and research.

## Expenditure on Education

4.3 A sum of ₹1325.7 crore had been earmarked for Education sector during XI<sup>th</sup> five year plan and 109 percent of total outlay on education was expended during the period. The percentage increase of outlay over X<sup>th</sup> plan is 106 percent and the corresponding increase in expenditure is 129 percent. During X<sup>th</sup> & XI<sup>th</sup> five year plans 2.6 percent and 3 percent of the total plan outlay was earmarked for the sector. During the XI<sup>th</sup> plan period more emphasis was given to General education subsector. The details are given in Table 4.1



Table – 4.1  
Plan Outlay & Expenditure during X<sup>th</sup> & XI<sup>th</sup> plan

(₹ in crore)

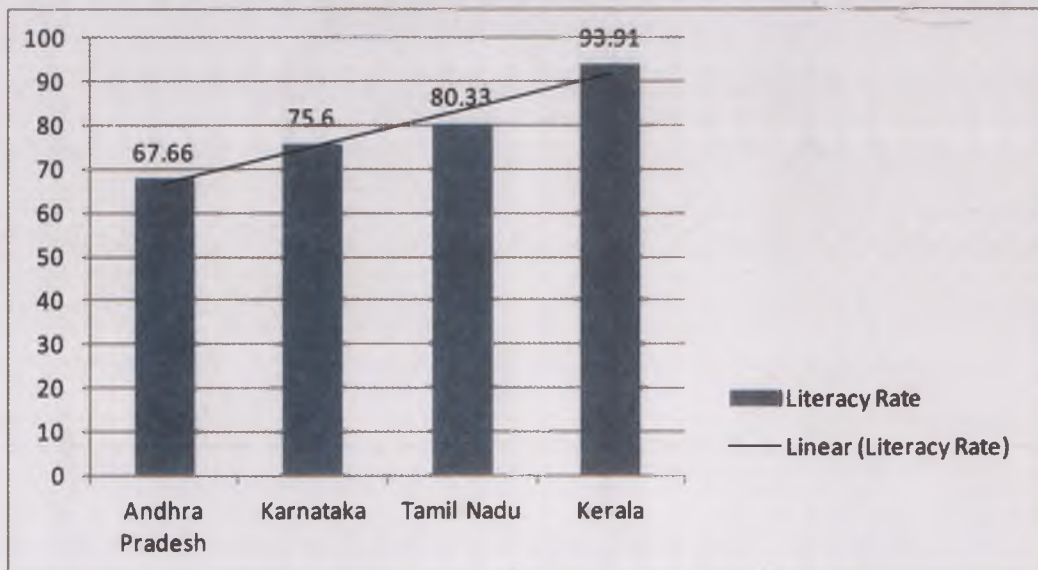
Stages	Xth plan outlay	Xth plan Expenditure	Per cent Exp	XI th plan outlay	XI th plan expenditure	per cent Exp
General Education	189.2	241.2	127	711.8	615	86
University and Higher Education	161.6	149.7	93	345.2	453.8	131
Technical Educa-tion	292.5	242.5	83	268.1	381.36	142
TOTAL	643.3	633.4	98	1325.7	1450.2	109
Grand Total( Five year plan)	25226	20588.9	82	45605.5	39661	87

## Literacy

4.4 Higher levels of literacy and education lead to better attainment of health and nutritional status, economic growth, population control, empowerment of the weaker sections and community as a whole. Also, higher literacy rates improve development indicators consistently. It acts as a catalyst for social upliftment enhancing the returns on investment made in almost every aspect of development effort. Literacy is a basic step towards education, which is a process of life long learning and an entry point to the world of communication and information.

4.5 Kerala has ranks first in the country with a literacy rate of nearing 94 per cent. Kerala's literacy rate is comparable to the most advanced regions of the world. Kerala holds the first rank in the country in female literacy with 92 per cent. The literacy rates for rural population are also highest in Kerala. Kerala's literacy rate from 1951-2011 is given in **Appendix.4.1**. Statewise comparison of literacy rates in Southern India is given in the Fig. 4.1

Fig. 4.1  
State Wise Comparison of Literacy Rates in Southern India



Source: Census 2011

4.6 District wise analysis of Kerala's literacy rate shows that Pathanamthitta district (97 percent) has the highest literacy rate in the State followed by Alappuzha and Kottayam with 96.5 percent each. Palakkad district has the lowest literacy rate in the State (89 percent). Literacy rate by sex for districts in 2001 and 2012 are given in **Appendix 4.2**.

4.7 Kerala State Literacy Mission is implementing literacy and equivalency programmes by appointing 'Preraks' (motivators). Details of the number of people benefited from Equivalency programme of Literacy Mission from 2002-03 to 2011-12 are given in **Appendix 4.3**.

## Right to Education Act

4.8 From April 1, 2010 the Right to Education has come into force ensuring free education to more than 92 lakh out-of-school children in India. This Act gives every child the right to a quality elementary education. The following are the main features of the Act:

- All children aged 6-14 shall have the right to free and compulsory education at a neighbourhood school.
- No direct (school fees) or indirect cost on uniforms, textbooks, mid-day meals, transportation etc needs to be borne by the child or parents to obtain elementary education.
- The Government will provide schooling free of cost until the child's elementary education is completed.
- All schools must comply with certain infrastructure and teacher norms. Two trained teachers will be provided for every 60 students at the primary level.
- Schools shall constitute School Management Committees(SMC) comprising local officials, parents, guardians and teachers. The SMCs will monitor utilization of govt grants and the school environment.
- RTE mandates inclusion of 50 per cent women and parents of children from disadvantaged groups in SMCs.



## School Education

4.9 There were 12644 schools in Kerala during 2011-12. Out of these 4620 were government schools, 7161 aided schools and 863 unaided schools. During 2011-12, 56.6 per cent of total schools were aided schools, 36.5 per cent government schools and 6.8 per cent unaided schools. Compared to Government upper primary and high schools more number of Lower Primary schools are functioning under Government sector. Aided schools outnumber government schools in all sections.

4.10 Malappuram District has the largest number of schools (1472) in the State followed by Kannur (1293) and Kozhikode (1237). Malappuram District has also the largest number of government (546) and unaided schools (145) in the State. But largest number of aided schools is functioning in Kannur district (961). Details of district-wise, management wise and stage-wise number of schools in Kerala during 2011-12 are given in **Appendix 4.4**.

4.11 In the State 946 schools are offering syllabus other than the one prescribed by the State Government. These include 797 CBSE schools, 108 ICSE schools, 27 Kendriya Vidhyalaya and 14 Jawahar Navodayas. One Jawahar Navodaya Vidhyalaya schools each is functioning in all the districts. District-wise details of schools with syllabus other than state syllabus in the year 2011-12 are given in **Appendix 4.5**.

## Physical Infrastructure and Facilities in Government Schools

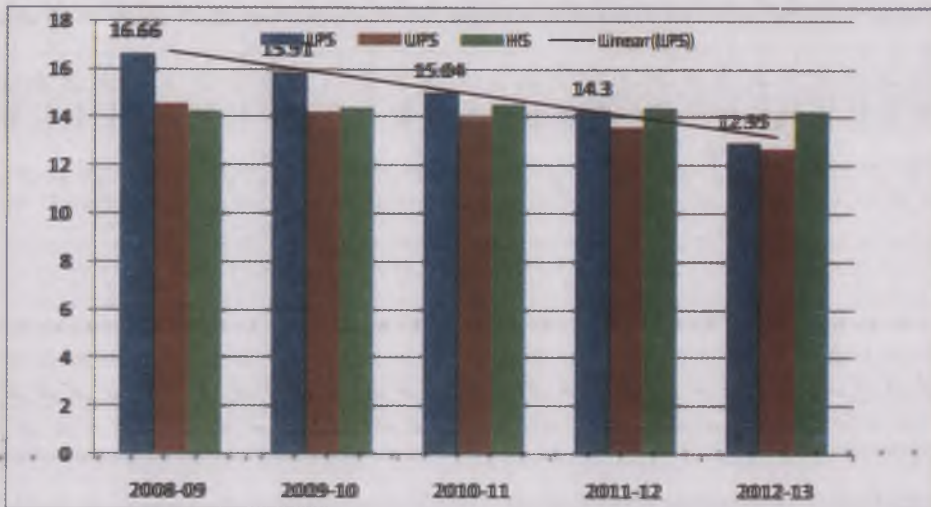
4.12 Most of Government Schools including all LP schools in Kerala are functioning in pucca buildings. Three high schools are in thatched sheds and they are situated in Thiruvananthapuram District. Own buildings have to be constructed for 162 government schools which are now working in rented buildings. District-wise details of government schools having building facilities are given in **Appendix 4.6**

4.13 Local Self Government Institutions and programmes like Sarva Shiksha Abhiyan( SSA) have contributed much to the overall development and improvement of physical infrastructure and common facilities in Government schools in the state. Data available in 2012 shows that 99 per cent of government schools have access to drinking water and 99.7 per cent of Government schools in the state have urinals/latrines facilities. District –wise details of Government schools having drinking water/latrines/urinal facilities in Kerala in 2012 are given in **Appendix 4.7**.

## Enrolment of Students

4.14 Enrolment of students in 2012-13 was 39.86 lakh in 2011-12 and has decreased by nearly 6 percent over the previous year. Change in demographic pattern of the state due to low birth rate is the main reason attributed for this phenomenon. The decline of students in LP section is 135000 numbers in 2012-13 from 2011-12, while the decline in Upper Primary ( UP) section is 93000 numbers in 2012-13, and the High School(HS) section shows a decrease of 19000 students over the previous year. The stage-wise enrolment of students in schools in Kerala from 2008-09 to 2012-13 are given in **Appendix 4.8**. Details of management-wise and standard wise enrolment of students in schools in Kerala during 2011-12 are given in **Appendix 4.9**. District-wise and stage-wise enrolment of students in schools in the state during 2012-13 is given in **Appendix 4.10**. The decrease in the enrollment of students in LP school is shown in Fig.- 4.2

Fig 4.2  
Enrollment of Students in School



Source: Directorate of Public Instructions

## Enrolment of Girl Students

4.15 Girl students constitute 49.4 percent of the total student enrolment in schools. Boys outnumbered girl students in all the districts except in Thiruvananthapuram and Kollam. Generally, in Kerala, there is a more or less uniform pattern in the enrolment of girl students across districts.

## SC/ST Enrolment

4.16 As per the figures of 2012-13, SC students constitute 11 percent of total students in the State. The percentage of SC students in government schools, private aided schools and private unaided schools are 14 percent, 10.8 percent and 3.9 percent respectively.

4.17 ST students constituted 2 per cent of total enrolment in schools in the year 2012-13. The percentage of ST students in government schools, private aided schools and private unaided schools are 3.7 percent, 1.4 percent and 0.3 percent respectively in 2012-13. The standard-wise strength of SC/ST students in the state in 2012-13 is given in **Appendix 4.11**.

## Drop-out Rate

5.18 Kerala has achieved the distinction of having the lowest dropout rate of school students among the Indian states. In the year 2010-11, dropout ratio among school students in Kerala was only 0.53 per cent. The dropout ratio in High school stage is higher than that of LP/UP stage. The dropout ratio in UP stage is negligible when compared to that of High school stage.

4.19 Among the Districts, Wayanad has the highest dropout ratio in the lower primary section (1.2 per cent), upper primary section (1 per cent) and high school section (2.2 per cent). All most all other District have dropout ratio is less than 0.50 per cent in the three stages. District-wise/stage-wise dropout ratio in schools in 2010-11 is given in **Appendix 5.12**. Drop-out ratio among SC students in Kerala as per the figures of 2010-11 was below 1 per cent and that of ST students was more than 2 per cent. District wise and stage wise details of drop out among SC and ST students in Kerala for the year 2010-11 are given in **Appendices 4.13 and 4.14**.

## Number of Teachers

4.20 The number of school teachers in Kerala including Teachers Training Institute( TTI) teachers during 2011-12 was 166939. Out of this 101365(60.7 per cent ) teachers are working in aided schools and 13221 teachers are working in private unaided schools. The remaining 31.4 per cent of teachers are working in government schools. About 50 per cent of total teachers in the state are teaching in high schools, 25 per cent in upper primary schools, 23 per cent in lower primary schools and the remaining in TTI's. 71.5 per cent of total teachers in the state are women. Stage-wise and management-wise number of teachers in Kerala during 2011-12 is given in **Appendix 4.15**.

## Uneconomic Schools

4.21 Schools with insufficient strength of pupils are termed as uneconomic schools. There are 4614 uneconomic schools in Kerala as per the figures of 2011-12, which registered an increase of 334 schools over previous year. Out of these , 2271 are government schools and 2343 are in the aided sector. District-wise analysis shows that highest number of uneconomic schools is in Kannur district (685). In government sector Ernakulam district has the largest (260) number of uneconomic schools followed by Kottayam district (245 ). Among the Government uneconomic schools, 75.7 per cent are of lower primary schools. In the aided sector also 87.3 per cent of uneconomic schools are lower primary schools. District wise details of uneconomic schools in the State in 2011-12 are given in **Appendix 4.16**.



## Sarva Shiksha Abhiyan(SSA)

4.22 The Sarva Shiksha Abhiyaan is also known as the Education for All movement or 'Each One Teach One'. It was introduced in 2000-2001 as the flagship programme run by the Government of India. This scheme is framed to provide useful and relevant elementary education for all children in the age group of 6 to 14 by 2010 irrespective of any social, regional, economic and gender barriers, with the active participation of the community in the management schools. It encompasses all activities of school education-providing physical infrastructure, free text book for children, encouraging enrolment of girls and teacher training. The fund sharing between the central and the states was 75:25 in the

Tenth Plan. The funding pattern for the Eleventh Plan was modified to 65:35

4.23 Total allocation provided to SSA including central and state share during the XI<sup>th</sup> plan is Rs.1152.34 crore and an amount of Rs.1020.33 crore was expended, which constitute 88.5 per cent of the outlay. The financial progress of the scheme during the Eleventh Plan is given in Table 4.2

**Table- 4.2**  
**Outlay and Expenditure of SSA**

Allocation and Expenditure (₹ in Crore)	2007-08	2008-09	2009-10	2010-11	2011-12	Total
GOI Release	103.23	108.54	119.89	196.60	197.22	725.48
GOK(including LSG) Release	48.20	61.43	68.81	133.66	114.76	426.86
Total Expenditure	137.60	176.95	192.33	251.26	262.19	1020.33

Source: Sarva Shiksha Abhiyaan, Kerala

4.24 The landmark achievements of SSA are the following

- The constitutional commitment on Universalisation of Elementary Education has been fulfilled and that Kerala has enrolled all children in the age group 6-14
- The multipronged interventions led to reduction of dropouts
- No gender gap exists on enrolment among different social groups
- As per the index prepared by National University of Educational Planning and Administration(NUEPA), Kerala leads in upper primary education and second in lower primary education in the country
- Under computer education 2000 computers were provided in UP schools and more than 35000 UP teachers were trained during 2002-2011.

## Higher Secondary Education

4.25 Education after the first 10 years was a part of the higher education system for many decades. Higher Secondary courses were introduced in the state during 1990-91 to reorganize the secondary level of education in accordance with National Education Policy. Higher Secondary Course is the turning point in the entire school education in our state. The department serves as a professional institution in formulating and maintaining the standards of Higher Secondary Education and in providing need based timely, scientific, effective and sustainable services to the students and teachers at the Higher Secondary level.

4.26 In the State, 1836 Higher Secondary schools were functioning in 2012. Out of these 755 (41.2 per cent) are Government schools, 668 (36.4 per cent) are Aided schools and the remaining 413 (22.5 per cent) are Unaided schools. Among the districts Kozhikkode has the largest number of Higher Secondary schools (223) in the state followed by Thrissur and Ernakulam (176 each) districts respectively.

4.27 There are 6554 batches for higher secondary courses in 2012. The total number of enrolment of students in Higher Secondary Schools was 329674 and it registered an increase of 2 per cent over the previous year. Kozhikkode district had the largest no of batches (914) with an enrolment capacity of 46004 students. District wise/Management-wise number of higher secondary schools and number of batches are given in **Appendix-4.17** and District wise enrolments of students in higher secondary schools are given in **Appendix 4.18**.

4.28 The pass percentage of students in higher secondary courses has increased to 88 per cent in 2011-12 from 82 per cent in 2010-11. The pass percentage of SC and ST students in Higher

Secondary schools also increased in 2011-12 compared to 2010-11. During 2012, 3593 students got A+ for all subjects and 258233 students were eligible for higher studies. The details are given in **Appendices 4.19 & 4.20**. The pass percentage of SC students also increased from 60 per cent to 75 per cent and ST students from 52 per cent to 71 per cent during 2011-12. Details are given in **Appendices 4.21 and 4.22**. The achievements during the reporting period is given in Box 4.1

#### Box 4.1

#### Major Achievements under Higher Secondary Education in 2011-12

- All the Government/aided/unaided higher secondary teachers (23452nos) were imparted 3-days content based comprehensive training programmes.
- Through the merit cum means scholarship programme, 9900 scholarships were distributed to the students of BPL families.
- Remedial coaching to 5333 students of 41 schools was imparted. This has resulted in a pass percentage between 50 and 98 percentage.

Source: Directorate of Higher Secondary Education

### Vocational Higher Secondary Education

4.29 Vocational Higher Secondary Education was introduced in the state in 1983-84. Vocational Higher Secondary Education is imparted on at plus two level with the objective to achieve self/wages/direct employment as well as vertical mobility. Vocational Higher Secondary Schools numbered 389 in the State with a total of 1099 batches. Out of these Schools 261 are in the Government sector and 128 in the Aided sector. Kollam District (52) has the largest number of Vocational Higher Secondary Schools in the State. District wise details of Vocational Higher Secondary Schools and courses during 2011-12 are given in **Appendix 4.23**.

4.30 The percentage of students eligible for higher education in Vocational Higher Secondary examination in 2012 March is nearly 85 per cent, while the pass percentage in 2011 March was 80.5 per cent. The number of students who appeared and those who passed Vocational Higher Secondary examination from the year 2007 to 2012 and the results of school going students are given in **Appendices 4.24 & 4.25**.

### University and Higher Education

4.31 There are a total of 9 universities functioning in the State. Out of these, four universities viz. Kerala, Mahatma Gandhi, Calicut and Kannur are general in nature and are offering various courses. Sree Sankaracharya University of Sanskrit, Cochin University of Science and Technology and Kerala Agricultural University offer specialized courses in specified subject areas. Besides these, the National University of Advanced Legal Studies (NUALS) established in 2005 and the Central University established in Kasargode district are also functioning.

4.32 The various programmes that have been included in the State Plan have a significant impact in the overall performances of the universities. Programmes such as the Erudite, Aspire (scholarship to researchers and PG students to undertake short term research programmes within research institutions and universities in India), and Acquire for social science have been implemented in the universities. The presence of Nobel laureates and other eminent academicians as scholars in residence for longer periods (up to 15 days) has a significant impact in the university community. The various scholarships for fostering excellence in studies also have a significant impact among the student community.

4.33 Inter University Centres within the Universities in Kerala were established in 2009. These centres provide academic support to the faculty and students of various universities and co-ordinate

major projects undertaken in their respective fields. The Inter University Centre has the objective of developing post graduate programmes in the relevant discipline and serving as an Inter University Centre for research and strengthening the ongoing Ph.D programmes and research activity in the concerned areas of advanced study

## Grant to Universities

4.34 The State Government provides Plan and Non plan grants to universities which are a major source of their revenue. `400 crore is earmarked as grant to universities in the year 2012-13. Out of this, ₹ 304.29 crore (76 per cent) is provided under non plan head and ₹ 95.50 crore is earmarked under plan head. Kerala University has received the maximum assistance from state government in the year 2012-13. In the current year, 38 per cent increase is registered in financial assistance to Universities over 2011-12 revised estimate. Details are given in Table. 4.3

**Table 4.3**  
**Plan and Non Plan Grant to Universities in Kerala**

(₹Crore)

University	2010-11 Accounts			2011-12 Revised Estimate			2012-13 Budget Estimate		
	Plan	Non Plan	Total	Plan	Non Plan	Total	Plan	Non Plan	Total
Kerala	21.3	74.45	95.75	12	89.34	101.34	17	110.99	127.99
Calicut	13.02	54.08	67.10	12	37.18	49.18	17	79.81	96.81
Mahatma Gandhi	14.54	31.00	45.54	12	37.18	49.18	17	45.28	62.28
Sree Sankaracharya	8.55	16.38	24.93	8	17.02	25.02	11	21.80	32.80
Kannur	34	9.72	43.72	12	8.44	20.44	17	10.41	27.41
Cochin University of Science and Technology (CUSAT)	21.13	24.48	45.61	12.01	29.26	41.27	13	36	49
National University of Advanced Legal Studies	2.70	0	2.7	3	0	3	3.5	0	3.50
Total	115.24	210.11	325.35	71.01	218.42	289.43	95.50	304.29	399.79

Source: Detailed Budget Estimates 2012-13, Vol .1 Government of Kerala

## Arts and Science Colleges

4.35 Including 150 Private Aided Colleges and 41 Government Colleges there are 191 Arts and Science Colleges in the State. Ernakulam district (25) has the largest number of Arts and Science colleges in the State followed by Kottayam (22 ), Thiruvananthapuram (20 ) and Thrissur (20 ) districts. Thiruvananthapuram district has the largest number of Government colleges (8 ) in the State. District-wise number of Arts and Science colleges in the State in 2012 is given in **Appendix 4.26**

## Enrolment of Students

4.36 The total number of students enrolled in various Arts and Science colleges (excluding unaided colleges) under the four general universities in Kerala during 2011-12 is 1.82 lakh. Of this 1.27 lakh (69.8 per cent) are girls.



4.37 Out of the total 1.66 lakh students enrolled for degree courses, 45 per cent are enrolled for BA degree courses, 39.5 per cent enrolled for BSc degree courses and 15.5 per cent enrolled for B.Com degree courses. Girls constitute 68.8 per cent of total enrolment for degree courses. 27 subjects are offered for BA degree courses. Among the subjects, Economics has the largest number of enrolment of students. 31 subjects are offered for BSc course and Mathematics has the largest number of student enrolment. Details of enrolment of students in Arts and Science colleges for BA, BSc and B.Com are given in **Appendices 4.27 to 4.29**. 15665 students were admitted to post graduate course in the State in 2011-12. 78.6 per cent of those enrolled in PG courses are girls. Details of enrolment of students in Arts and Science colleges for MA, MSc and M.Com courses are given in **Appendices. 4.30 to 4.32**.

## SC, ST Students

4.38 The enrolment of SC students in degree and post graduate courses is 23680 and 1739 respectively. SC students constitute nearly by 14 percent of total students in 2011-12. Girls' students constitute 65.6 per cent of total SC students in Arts and Science colleges.

4.39 2914 Scheduled Tribe students were enrolled for courses in arts and science colleges in 2011-12. The enrolment of ST students in degree and post graduate courses are 2555 and 359 respectively. Girls constitute 60 per cent of total ST students in Arts and Science colleges. Enrolment of SC and ST students in Arts and Science Colleges in Kerala during 2011-12 is given in **Appendix. 4.33**.

## Scholarships

4.40 About 16 type of central and State sector scholarships are given to students. Various scholarships including merit cum means scholarships (558 nos) and post metric scholarships (65418 nos) are given during 2011-12. The Directorate of Collegiate Education has erected LED display board giving the details of scholarships offered by the Government of Kerala and India. The details of number of scholarships given from 2009-10 to 2011-12 is given in **Appendix 4.34**

## Teachers

4.41 The number of teachers in Arts and Science colleges in 2011-12 was 8927. Out of this 47.5 per cent are women. University-wise number of teachers in Arts and Science colleges in the year 2009-10, 2010-11 and 2011-12 is given in **Appendix.4.35**. 4336 teachers in Arts and Science colleges in the State have Ph.D degree. Details are given in **Appendix 4.36**. A total of 1757 Guest Lecturers were working in Arts and Science colleges of the state in 2012. Details are given in **Appendix. 4.37**.

## Kerala Council for Historical Research (KCHR)

4.42 Kerala Council for Historical Research is an autonomous academic institution committed to scientific research in History and Social Sciences. It is a recognized research centre of the University of Kerala and has academic affiliations with leading research institutions and universities inside and outside the country. KCHR is to publish a comprehensive volume on the scientific history of Kerala from pre-historic to the present times.

4.43 A sustainable/historical tourism project is conceived in the Kodungallur-Parur zone and KCHR is identified as the nodal agency to provide technical assistance. From 2006-07 onwards KCHR has successfully undertaken the multi disciplinary excavation at Pattanam. The excavation has yielded significant evidences for re-conceptualizing the early history of Kerala. The major findings of the excavation are listed below in Box 4.2

### Box 4.2 Major Findings of the Excavation

**a) Pottery:** rim sherds -27907, lid sherds-410, sherds with garaffiti-13. Unclassified distinct potsherds – 2000

**b) Beads:** -20142(including 1834 broken beads) ,Semiprecious stone beads-214 , bead blanks-9. Beads of beryl, carnelian, garnet, quartz, chalcedony, amethyst, agate, crystal, topaz and small number of unknown varieties were excavated.

**c) Metal objects**

Iron nails,fragments-1123,fragments of unidentified iron objects-396,Iron slag piece-47,Copper nails-3,Copper objects-57, Lead objects-18,Lead scrolls-4 , crucible frgments-24 and tiny fragments of ornaments, bits etc of gold-25,Copper coins-17

**d) Terracotta artifacts**

Rings of a ring well-4 nos, lamps-15, beads-9, balls - 5 stoppers-4

Source: Kerala Council for Historical Research

## Technical Education

4.44 Directorate of Technical Education is the nodal department for Technical Education in the State. As envisaged in the 12th plan, the basic objective is to achieve faster, sustainable and more inclusive growth. The details of technical institutions under the administrative and financial control of Directorate of Technical Education is given in Table- 4.4

Table – 4.4  
Technical Institutions under Directorate of Technical Education-2012

Sl. No.	Institutions	Nos
1	Government Engineering Colleges	9
2	Private Aided Engineering Colleges	3
3	Unaided Engineering Colleges	141
4	Government Polytechnic Colleges	36
5	Government Women's Polytechnic Colleges	7
6	Private Aided Polytechnics	6
7	Fine Arts Colleges	3
8	Government Technical High Schools	39
9	Government Commercial Institutes	17
10	Tailoring and Garment making training centres	42
11	Vocational Training Centres	4
<b>Total</b>		<b>307</b>

Source: Directorate of Technical Education

4.45 Some of the major activities undertaken by the Department during 2012-13 are

- Academic Committee for polytechnic education
- Establishment of Kerala Technological University
- Scholar Support Programme
- Quality Improvement Programme Centres in two engineering colleges at Thiruvananthapuram and Thrissur through which the faculty all over India has the opportunity to undergo PhD programmes in these institutions

- Educational Resource Centres in all Government Engineering Colleges
- Additional Skill Acquisition Programme
- Transportation Engineering Research Centre.

## Engineering Colleges

4.46 There are 153 engineering colleges in the state with a total sanctioned intake of 48988 in 2012. Out of these engineering colleges, 141 (92.2 per cent) are self financing colleges, 9 (5.9 per cent) are Government colleges and 3 (2. per cent) are private aided colleges. Major chunk of the unaided engineering colleges are functioning in Ernakulum District (28) followed by Thiruvananthapuram (22). In Pathanamthitta, Alappuzha, Malappuram and Kasargod Districts, only unaided colleges are functioning. During 2012, 11 unaided engineering colleges were newly started in the State. The District wise and management wise details of colleges and sanctioned intake are given in **Appendix-4.38**

4.47 The sanctioned intake of Government colleges during 2012 was 3236 (6.6 per cent), aided colleges 1566 (3.2 per cent) and unaided colleges 44186 (90.2 per cent). The sanctioned intake of unaided colleges has increased by 8.5 per cent during 2012 compared to the previous year.

4.48 Of the engineering colleges in Kerala, the largest number of branch wise seats was in Electronics and Communication (11002) followed by Computer science (8777) and Electrical and Electronics (7572). Branch-wise distribution of seats in engineering colleges in 2011-12 is given in **Appendix.4.39**. 4591 students were studying in Government and aided engineering colleges for graduate courses in the year 2011-12 and 4763 students were newly admitted in 2012-13. Out of these nearly 40 per cent were girls. 906 students were studying in Government and aided engineering colleges for post graduate courses in the year 2011-12 and 814 students were newly admitted in 2012-13. Girl students constitute 45.3 per cent of total students in Government and aided engineering colleges studying for post graduate courses. Details are given in **Appendix 4.40 & 4.41**.

4.49 The visiting faculty programme enables the teachers and students of the institution to share the experience and expertise of the eminent faculty from premier engineering institutions like IIT's, IISc's etc, research organizations like ISRO, DRDO etc. More than 200 lectures were arranged in 9 Government Engineering colleges as part of this programme during 2011-12. It is expected that this will ultimately lead to greater scope for technology incubation. The number of visiting faculty programmes in various engineering colleges during 2011-12 is shown in the Table 4.6.

**Table – 4.5**  
**Visiting Faculty Programmes in Various Engineering Colleges**

Sl. No.	Name of College	No. of programmes
1	College of Engineering, Thiruvananthapuram	54
2	GEC, Barton hill	32
3	RIT, Kottayam	9
4	GEC, Idukki	13
5	GEC, Thrissur	21
6	GEC Palakkad	16
7	GEC, Kozhikkodu	8
8	GEC, Wayanadu	36
9	GECKannur	20

4.50 Under capacity development, 30 training programmes were organized through various agencies for the teaching and non-teaching staff and about 1000 members participated in the programme. During 2011-12, 13 faculty members were deputed for M.Tech and 27 were deputed for Ph.D programme.

4.51 Smart class rooms with all advanced teaching aids were established in all Government Engineering Colleges and polytechnics. Merit Cum Means Scholarships is given to financially weaker students belonging to the minority community. The number of scholarships allotted to Kerala is 1469. Libraries in Engineering colleges have been modernized with e-journals, e-books etc. All libraries have been computerized.

## Academic Excellence in Engineering Colleges

4.52 The academic excellence in various institutions is high and appreciable and this was due to the high pass per cent and increasing placement of students in reputed firms. The pass per cent of final semester result of Government Engineering colleges during 2011 shows that the pass percentage of Government Engineering colleges, TVPM and Thrissur is more than 80 per cent. The pass percentage of GEC, Barton hill and Kozhikkode is nearly 80 per cent. All Government Engineering colleges have a pass percentage of more than 50 per cent.

4.53 The placement record of the students in various institutions is also relatively high. A large number of students are also being qualified for higher studies through competitive examinations like GATE, CAT etc. Most of the students get placement in multinational firms like WIPRO, MAHENDRA, TCS, and BOSCH etc. Placement details of students of various Government Engineering colleges during 2011 is given in the Table 4.6

Table – 4.6

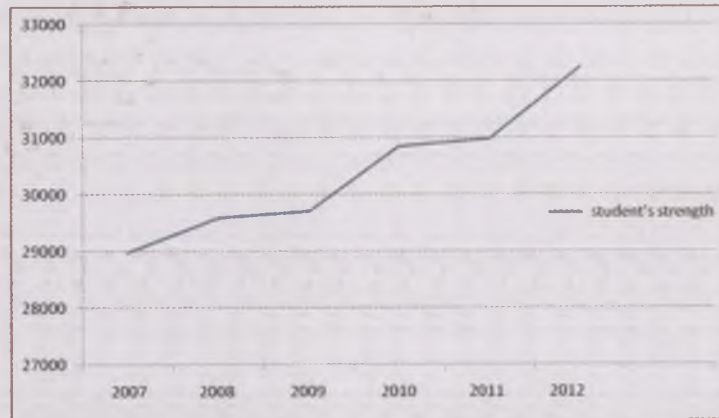
Placement Details of Students of Various Government Engineering Colleges during 2011

Sl. No.	Name of College	No. of offers
1	College of Engineering, Thiruvananthapuram	697
2	GEC, Barton hill	146
3	RIT, Kottayam	9
4	GEC, Idukki	13
5	GEC, Thrissur	370
6	GEC, Palakkad	16
7	GEC, Kozhikkodu	63
8	GEC, Wayanadu	36
9	GECKannur	20
<b>TOTAL</b>		<b>1370</b>

## Polytechnics and Technical High Schools

4.54 43 Government polytechnics and 6 private aided polytechnics were functioning in Kerala. The annual intake of students in Government polytechnics and private aided polytechnics are 10064 and 1544 respectively. The total number of students in Government polytechnics during the year 2012 was 27704 and that of private aided polytechnics 4536. The student's strength shows an increasing trend during the past few years. This is due to the focussed action by the State for creating skilled manpower, enhancing industrial productivity and improving the quality of life of its people. Details of annual intake and student's strength in polytechnics from the year 2010-11 to 2011-12 are given in **Appendices 4.42 & 4.43**. Details of trade-wise annual intake of students in polytechnics of the State in 2011-12 are given in **Appendix 4.44**. Details of students strength from 2007 to 2012 is given in Fig. 4.3.

**Fig- 4.3**  
**Student Strength in Polytechnic Institutes**



4.55 Total number of teachers working in polytechnics of the state is 1998. Women teachers constitute 28 per cent of the total teachers in polytechnics. SC/ST teachers constitute 8.5 per cent of teachers. Details of number of students and teachers in polytechnics are given in **Appendix 4.45**. Number of SC/ST students and SC/ST teachers in polytechnics in the report year are given in **Appendix 4.46**.

4.56 39 Government technical high schools are functioning in the state. Total number of students in technical high schools in the year 2011-12 was 8178, and 849 teachers were working in technical high schools of the state in the corresponding period. Women teachers constitute 21per cent of teachers in technical high schools. Number of students and teachers in technical high schools from 2010-11 to 2012-13 are given in **Appendix 4.47**. SC students in technical high schools accounted for 13.7per cent of total students. ST students in technical high schools constitute 0.8per cent of total students. Details are given in **Appendices 4.48 and 4.49**.

## XII<sup>th</sup> Plan Initiatives

4.57 One of the major challenges of the State's 12<sup>th</sup> plan will be to address special/new problems that emerge in the Education sector and these problems are mainly second generation development problems of the State. Consequently the 12<sup>th</sup> plan anticipates a major hike in the allocation of plan funds to the Education sector. The 12<sup>th</sup> plan will also make an attempt to identify and fill the critical coverage gaps in education facilities.

4.58 The effort taken in the XI<sup>th</sup> plan, especially in providing educational facilities and improving the quality of education have to be continued in the XII<sup>th</sup> plan period to reach its full potential. The challenge that requires much greater attention in the XII<sup>th</sup> plan is that of ensuring better implementation and improved accountability. Major initiatives to be taken in 12<sup>th</sup> plan are

- To promote total literacy among the vulnerable sections
- Special emphasis will be given to address the issue of digital divide
- Continuous modernization of schooling system
- Strengthening the noon meal programme
- Selected colleges will be encouraged to start innovative courses
- At least 10 colleges will be converted into Centres of Excellence
- Encourage curriculum development, innovation in teaching and training techniques.

## SECTION 2

### Art & Culture

4.59 God's own country, Kerala has a rich heritage of art and culture. This sector plays an important role in the economy by creating not only a sense of pride in our heritage but also by creating income and employment. There are many institutions solely set apart for the promotion and encouragement of these art forms. Major activities conducted in this sector during 2012 are Viswa Sahitya Malayala Mahotsavam and International Film Festival.

4.60 Viswa Sahitya Malayala Mahotsavam is an event organized jointly by Kerala Sahitya Academy and Department of Cultural Affairs. There were literary seminars and poetry sessions as part of the three day festival. There were also dialogues with writers from Kerala and outside and great men of Malayalam Literature were honoured. Book fair and cultural performances were the other attractions of the festival.

4.61 The 17<sup>th</sup> International Film Festival of Kerala held at Thiruvananthapuram was organised by Kerala State Chalachitra Academy on behalf of Cultural Affairs Department. Contemporary World cinema, New Malayalam Cinema, retrospective of major film makers etc are screened during this festival.



### Cultural Policy

4.62 For the comprehensive development of the art and culture sector State Government has formulated a Cultural Policy. Cultural Policy enables people to satisfactorily participate in the cultural life without any discrimination on the basis of caste and creed. The main features are:

- It creates an opportunity for the people especially youth for engaging in creative works and leading a value –based life.
- Education, science and art are closely related with culture. A comprehensive development of society requires interconnected relations of these sectors. Co-ordinating the activities of Cultural Affairs department, Education department, Science & Technology department and industry department are a pre- requisite to holistic cultural development.
- This policy aims to respect cultural diversity and include it in the curriculum (at primary & secondary level) as a part of National Education Policy.
- Many cultural institutions are active in Kerala but activities of these institutions do not reach all areas .Decentralisation and people participation are to be encouraged.
- Steps should be taken to preserve archives, monuments, historic places, archaeology, public-private historical and cultural documents.

## SECTION 3

### Medical and Public health

4.63 The National Health Policy envisages a three tier structure comprising of the primary, secondary and tertiary health care facilities to bring health care services within the reach of the people. The primary tier is designed to have three types of health care institutions, namely, a Sub-Centre for a population of 3000-5000, a Primary Health Centre (PHC) for 20000 to 30000 people and a Community Health Centre (CHC) as referral centre for every four PHCs covering a population of 80,000 to 1.2 lakh. The district hospitals are to function as the secondary tier for the rural health care, and as the primary tier for the urban population. The tertiary health care is to be provided by health care institutions in urban areas which are well equipped with sophisticated diagnostic and investigative facilities. The National Health Policy 2002 aims to achieve acceptable standards of good health among the general population of the country. One of the key focus areas of the country today is making healthcare affordable and accessible for all its citizens. India lacks strong healthcare infrastructure. Though the overall level of funding allocated for healthcare nationally is comparatively high (4.1 per cent of GDP), the Government's funding is low (<1 per cent of GDP) compared to other emerging nations. The 12th plan aims to increase the allocation to Health sector from 1.4 per cent of GDP to 2.5 per cent.

4.64 Kerala is one State where private health sector, both indigenous and Western systems of medicine, have played a crucial role. India is undergoing an epidemiologic, demographic and health transition. At present, out of the total health care institutions in the State 46 per cent are under Allopathy, 32.2 per cent under Ayurveda and 22 per cent under Homoeopathy department. The expectancy of life has increased, with consequent rise in degenerative diseases of aging and lifestyles. Nevertheless, communicable diseases are still dominant and constitute major public health issues. Changes in dietary habits and increased tobacco/ alcohol use are likely to increase the incidence of chronic diseases in future and the State needs to build in measures to manage these into the primary health care system. Similarly mental health also deserves special attention. Addressing these issues would require the State to harness high technical and managerial expertise.



## Success Indicators of Kerala Health Model

4.65 In Kerala, a person at birth is expected to live for 74 years, while in States like Bihar, Assam, Madhya Pradesh and Uttar Pradesh, the expectancy is in the range of 58-61 years. Among the four Southern States, Kerala and Tamil Nadu have already achieved the goal of a MMR of 100 per lakh live births but, within the group, Karnataka lags significantly behind with a MMR of 178 per lakh live births and at current rate of decline would only reach to about 130 per lakh live births in the year 2012.

4.66 Uttar Pradesh recorded the highest Crude Birth Rate (28.3 per thousand population) and Goa the lowest (13.2 per thousand population). Kerala (14.8 per thousand population) among the bigger States and Goa (13.2 per thousand population) among the smaller states /UTs recorded the lowest CBR during 2010. The IMR varied very widely across the States. Kerala with an IMR of 13 is the best performing State among the bigger States in the country. The highest Child Mortality Rate was recorded in Madhya Pradesh (20 per thousand population) closely followed by Uttar Pradesh (19.6 per thousand population), Assam (17.9 per thousand population) and Odisha (17.1 per thousand population). Kerala with 2.9 CMR is the best performing State. Basic health indicators in Kerala and India during 2007 and 2012 is given below in Table 4.7

**Table – 4.7**  
**Basic Health Indicators in Kerala and India during 2007 & 2012**

Sl.No.	Health Indicators	Kerala		India	
		2007	2012	2007	2012
1	Birth rate ('000 population)	15	14.8	23.8	22.1
2	Death rate ('000 population)	6.4	7	7.6	7.2
3	Infant mortality rate ('000 population)	14	13	58	47
4	Child mortality rate 0-4 years ('000 population)	3	2	17	15
5	Maternal mortality rate (per lakh live birth)	110	81	300	212
6	Total fertility rate (children per woman)	1.7	1.7	2.9	2.6
7	Couple protection rate (in percent)	72.1	62.3	52	52
8	Life at birth Male	70.9	71.4	61.8	62.6
	Female	76	76.3	63.5	64.2
	Total	73.45	74	62.7	63

Source: Directorate of Health Services

4.67 Among the health indicators, the Child Mortality Rate in Kerala & India shows a declining trend. Death rate has slightly increased in Kerala during 2012 ie, from 6.4 in 2007 to 7 per thousand population. Spreading of communicable diseases & life style diseases are one of the major contributing factors for this. MMR has declined considerably from 110 per lakh live birth during 10th Plan to 81 during 11th Plan.

## Health Indicators during X<sup>th</sup> & XI<sup>th</sup> Plan -Target and Achievement

4.68 In India, X<sup>th</sup> Plan aimed to reduce Maternal Mortality Ratio to 200 per lakh live births and Infant Mortality Rate to 45 per 1000 live births by 2007. But MMR & IMR had not achieved the target during 2007. MMR stood at 300 per lakh live births and IMR remains at 58 per 1000 live births during 2007 (Planning Commission). The major health target during X<sup>th</sup> Plan in Kerala was the reduction of IMR from 14 per 1000 population to 8 per 1000 population by 2007. However as shown in Table 4.7, this was not achieved. XI<sup>th</sup> Plan aimed to reduce Maternal Mortality Ratio to 1 per 1000 live births and Infant Mortality Rate to 28 per 1000 live births in India. Total Fertility Rate was targeted to be reduced to 2.1 Against this, MMR has fallen to 2.1 and IMR stood at 47 per 1000 live births. Total Fertility rate during 2012 is reported as 2.6 children per woman. Hence it is seen that XI<sup>th</sup> plan failed to achieve the health indicators totally in India. In Kerala, XI<sup>th</sup> Plan has achieved the target of reducing MMR to less than 100 per lakh live births. During 2012 MMR stood at 81 per lakh live births.



## Health Sector Financing during XI<sup>th</sup> Plan

4.69 India ranks sixth from the bottom, amongst all countries in the world, in terms of public expenditure on healthcare as a proportion of the Gross Domestic Product. Health sector expenditure by the Centre and States, both Plan and Non Plan, has already increased from 0.94 percent of GDP in the X<sup>th</sup> Plan to 1.04 per cent in the XI<sup>th</sup> Plan (Planning Commission XII<sup>th</sup> Plan). In India out of the total allotment to Health sector during XI<sup>th</sup> Plan (₹. 93981 crores), 95.3 per cent expenditure has been made.

**Table – 4.8**  
**Outlay and Expenditure of the Southern States during Eleventh Plan**  
(₹. in lakh)

State	Outlay	Expenditure	Percentage of Expenditure
Kerala	89915	91483.1	101.74
Tamil Nadu	446614.9	511699.2	114.57
Andhra pradesh	675267.86	635853	94.16
Karnataka	486769	468057.3	96.15

Source: India.stat.com

4.70 Among the Southern States, Tamil Nadu has achieved highest percent of expenditure compared to outlay followed by Kerala.

## Major Schemes under Health Sector during XI<sup>th</sup> Plan

4.71 Kerala has successfully implemented various schemes under three systems of medicine such as Alopathy, Ayurveda and Homoeopathy for attaining better health indicators. Major schemes under Health sector during XI<sup>th</sup> Plan period are given in Table 4.9

**Table – 4.9**  
**Major Schemes under Health Sector during XI<sup>th</sup> Plan**

SI No.	System/Scheme	Outlay	Expenditure	Percentage of Expenditure
<b>Allopathy</b>				
1	Infertility clinics in major hospitals	30	29.33	97.77
2	Surveillance and control of Communicable diseases	340	668.49	196.61
3	Society for Medical assistance to poor	565	1352.8	239.43
4	Prevention of Non Communicable diseases	2376	2321.6	97.71
5	Medical care for victims of violence	150	141.83	94.55
6	Cancer care Programme	70	67.46	96.37
7	Strengthening of diagnostic facilities in DH/TH/CHC labs under DHS	1173.50	1141.49	97.27
<b>Medical Education</b>				
8	Malabar Cancer Centre	2600	5135.78	197.53
9	Medical University	1500	2820.49	188.03
10	Neonatology unit in Medical colleges	400	381.31	95.33
11	New Medical colleges in Idukki, Kasargodu, Pathanamthitta and Malappuram districts	40	39.96	99.9

12	Dialysis unit in Medical college hospitals, General hospitals and Taluk hospitals	500	500	100
13	Special support schemes for patients suffering from Cancer, heart and Kidney diseases	500	500	100
<b>Ayurveda</b>				
14	Ayurveda Mental hospital Kottakkal	175	174.64	99.79
15	Prakrithi Chikitsa hospital	184	123.99	67.39
<b>Homoeopathy</b>				
16	Seethalayam	476	264	55.46

Source: Budget Accounts 2011- 2012

4.72 Infertility clinics were opened in major hospitals during XI<sup>th</sup> Plan. Cancer care programme is a new initiative during the last year of 11th Plan. The scheme aims to make all district hospitals in the State as model centre for cancer treatment and to equip one major Government hospital in the district where there is no facility for cancer treatment. It was envisaged to start new Medical colleges in Idukki, Kasargode, Pathanamthitta and Malappuram districts during the Plan period and the construction works are progressing. Homeopathic Women Health Care Centre (Seethalayam) is the first gender based scheme under Homoeopathy. Seethalayam provides aid to suffering women in the society. Now infertility clinic services and de-addiction treatment facilities are also available in the Seethalayam centres at Thiruvananthapuram, Kottayam and Kozhikkode districts.



## Major Health Problems in Kerala

### Communicable Diseases

4.73 Communicable diseases such as Dengue, AIDs, Malaria, Leptospirosis, Hepatitis, Chikungunya, HINI fever etc are increasing every year. Thiruvananthapuram district is almost endemic to Dengue and reporting about two thirds of cases in the State. Presence of co-morbidity is a major problem which leads to mortality in case of communicable diseases which affects liver.

### Dengue Fever

4.74 Dengue was reported for the first time in Kerala in 1997. Subsequently, it spread far and wide and now it has become endemic in certain areas especially in Thiruvananthapuram district. India has recorded over 37,000 dengue cases, including 227 dengue deaths in 2012 (Health News December 4th 2012). Among the Southern States of India, the highest percent of dengue deaths reported during 2011 is in Kerala (10 out of 1281) and Karnataka reported least percentage of dengue deaths (5 out of 405). During 2012 Kerala has reported the maximum of over 3033 dengue cases and 12 number of deaths up to September 2012. Details of Dengue cases and death reported in Kerala from 2007 onwards is given below.

**Table – 4.10**  
**Details of Dengue Fever Reported in Kerala**

Year	Cases	Deaths	Mortality (per cent)
2007	677	11	1.62
2008	733	3	0.41
2009	1425	6	0.42
2010	2597	17	0.65
2011	1304	10	0.77
2012	3033	12	0.39

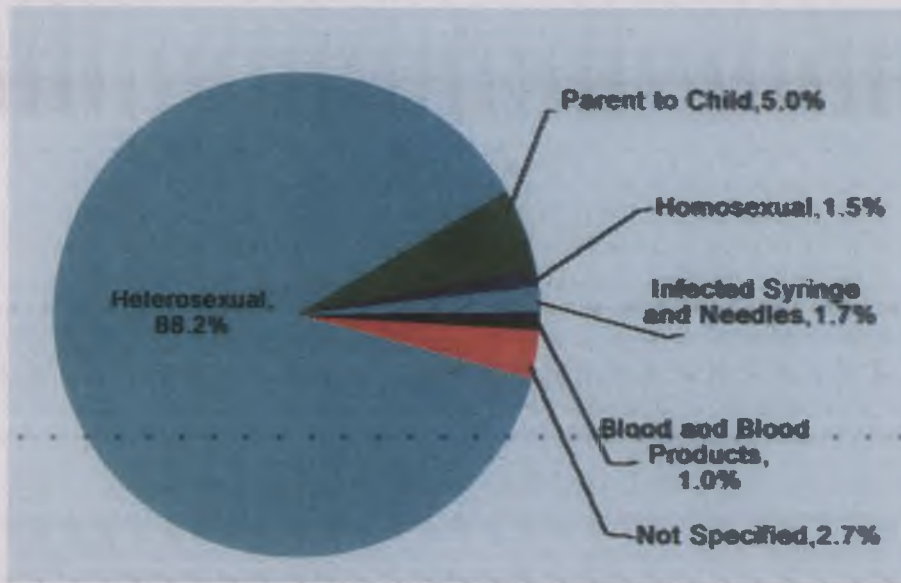
*Source: Directorate of Health Services*

4.75 Water supply mismanagement, gaps in public health infrastructure, increased mobility of population, and poor infrastructure in the State to monitor mosquito breeding were some of the reasons for the spread of communicable diseases. District wise patients treated and deaths reported due to Dengue Fever in Kerala during 2012 is given in **Appendix 4.50**

### HIV/AIDS

4.76 It is estimated that around 2.4 million people in India are currently living with HIV and come from diverse cultures and backgrounds. The vast majority of infections occurs through heterosexual sex (80 per cent), and is concentrated among high risk groups including sex workers, men who have sex with men, and injecting drug users as well as truck drivers and migrant workers.

**Fig 4.4**  
Routes of Transmission of HIV, India, 2011-12



4.77 Among the Southern States, lowest percent of death due to AIDS cases reported during 2011 was in Kerala (0.85). As per the estimates of the Kerala State AIDS control society out of the 10846 AIDS cases reported, 1719 number of deaths were reported. During 2012, 79 pregnant women were detected with HIV and 81 pregnant women underwent CD4 test during the year. The Kerala State AIDS Control Society implements various other programmes with the support of National AIDS Control Organization (NACO) supported by UNAIDS and WHO. The main programmes of the Society are Jyothis, Prathyasa, Pulari, Ushas, Blood safety, Suraksha, Community care centre, Tele counseling etc

### Chikungunya

4.78 During 2006, Chikungunya emerged as a major ever known epidemic in India affecting 151 districts in 8 states of India including Kerala. In India, out of the total 18509 chikungunya cases reported during 2011, only 0.3 per cent were related to Kerala. The number has fallen to 49 during 2012 from 38 in 2011.

**Table 4.11**  
Chikungunya Cases Reported in Southern States

States	2007	2008	2009	2010	2011
Andhra Pradesh	11	5	591	116	99
Karnataka	18	46510	41230	8740	1941
Tamil Nadu	20	46	5063	4319	3838
Kerala	0	24685	13349	1708	58

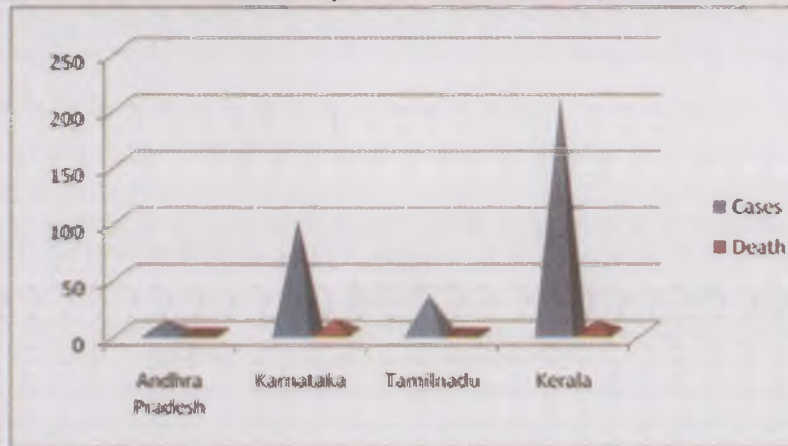
Source: India Stat.com

4.79 Among the Southern States, lowest number of Chikungunia cases were reported in Kerala. More vector control messures are required for the eradication of vector borne diseases.

### H1N1 Fever

4.80 In India 10.7 per cent of deaths were reported due to H1N1 fever during 2011. Details of cases of H1N1 Fever and deaths reported in Southern States of India during 2011 are given in Fig 4.5.

**Fig 4.5**  
**H1N1 Fever Cases and Deaths Reported in Southern States of India during 2011**

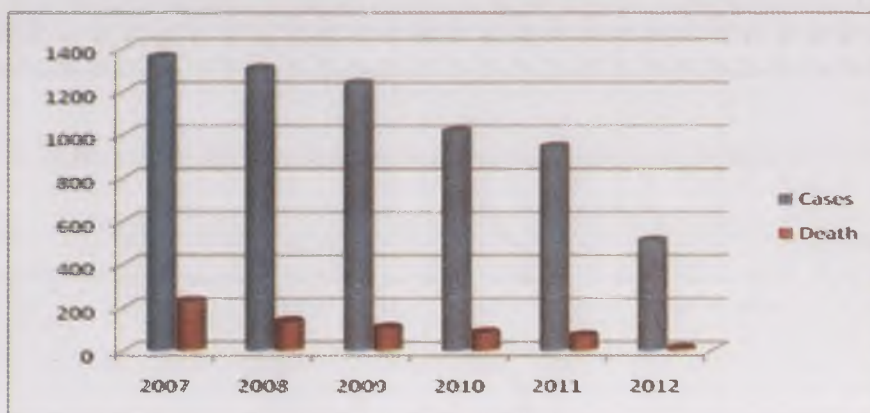


4.81 During 2011, the highest number of H1N1 cases were reported in Kerala State (out of the total number of 603). Among the Southern States in India, Karnataka reported highest per cent of deaths due to H1N1 fever (12 per cent) followed by Kerala. Since Kerala has reported 5 per cent of death, more preventive measures are required.

### Leptospirosis

4.82 This communicable disease is causing the highest number of deaths consistently for the last few years in the State. Although it showed a little decline during the last year, leptospirosis caused more than 100 deaths every year during the past few years. A broader analysis of the available statistics shows that the disease is mainly reported during the monsoon season especially among the young male adults of the labour class. Details of leptospirosis cases and deaths reported in Kerala are given in Fig 4.6.

**Fig 4.6**  
**Leptospirosis Cases and Death Reported in Kerala**

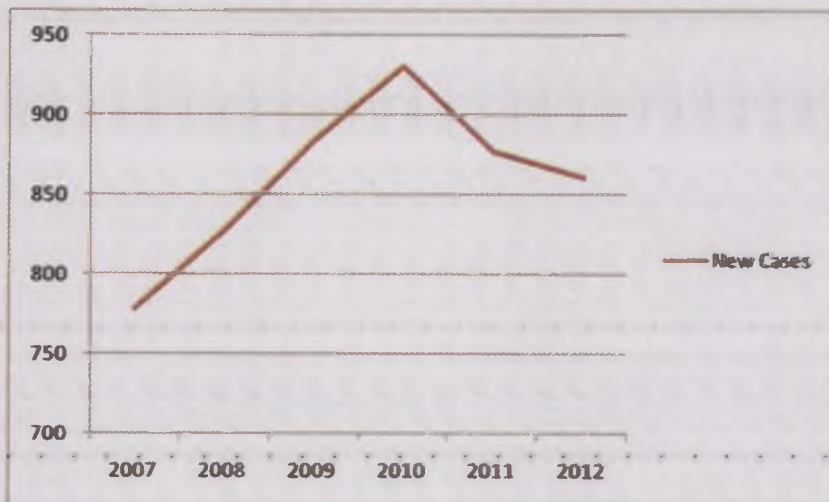


4.83 During 2007, out of the 1359 cases 17 per cent of cases resulted in death. The rate has come down to 7.4 during 2011 and to 2.2 in 2012.

### Leprosy

4.84 The prevalence rate of leprosy in Kerala is 0.26 per 10,000 during 2012. There are three leprosy sanatoriums in Kerala with a bed strength of 1690. Incidence of new cases of leprosy in Kerala is given in Fig 4.7.

**Fig. 4.7**  
New Cases of Leprosy in Kerala



4.85 The incidence of new cases of leprosy is high during 2010 and thereafter it has declined. The National Leprosy Control Programme is effectively implementing eradication of Leprosy in the State.

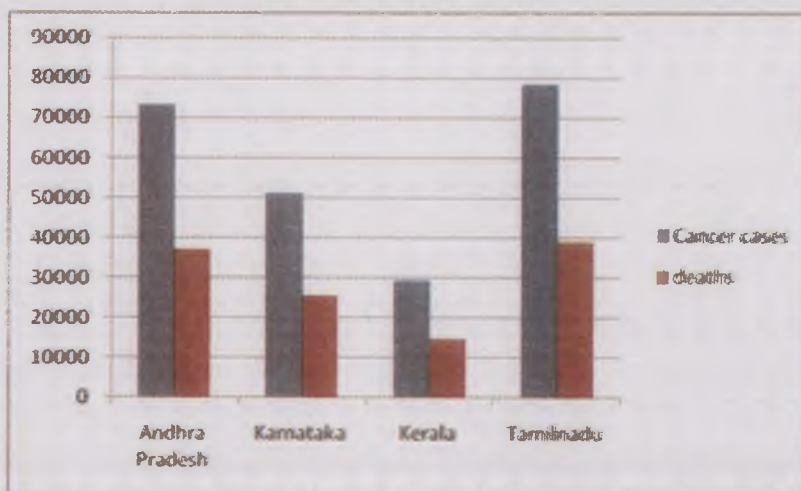
## Non Communicable Diseases(NCD)

4.86 Cardiovascular diseases, cancer, diabetes, chronic obstructive lung disease, mental disorders and Injuries are main causes of death and disability due to NCDs. Unless interventions are made to prevent and control NCDs, their burden is likely to increase substantially in future. Considering the high cost of medicines and longer duration of treatment NCDs, this constitutes a greater financial burden to low income groups.

## Cancer

4.87 Cancer is the second biggest cause of death in India, growing at 11 per cent annually. With more than 10 million new cases every year, cancer has become one of the most devastating diseases worldwide". Cancer cases and deaths reported in Southern States in India during 2011 is given in Fig 4.8.

**Fig.4.8**  
Cancer Cases and Deaths in Southern States of India during 2011



4.88 Among the Southern States Tamil Nadu reported highest per cent of Cancer deaths (7.3 per cent) followed by Andhra Pradesh (6.9 per cent) and Karnataka (4.7 per cent). The lowest per cent of death reported was in Kerala (2.8). As per the estimates of the Malabar Cancer Centre, total number of patients treated during 2012 is 47100. Out of this, 5.9 per cent are new cases. 699 major operations and 125 minor operations were conducted in the MCC during 2012. In the Regional Cancer Centre, 192810 cancer patients were treated during 2012. Of this, 7.4 per cent are new cases.

### Elderly Health

4.89 According to a White Paper on the Quality of Death, released by the Economist Intelligence Unit in 2010, the community model healthcare system from Kerala has been projected as a beacon of hope for providing palliative care services. With only 3 per cent of India's population, the State provides two-thirds of India's palliative care services. Kerala's formal palliative care policy, the only state with such a policy is the community-based Neighborhood Network in Palliative Care (NNPC) Project that employs an army of volunteers with Government funding. There are all most 260 local community-based care units. India is a country with 2nd highest geriatric population. 11 per cent of population comprises elderly which is projected to become 18 per cent by 2026. Care for the elderly would focus on promoting healthy lifestyles, encouraging care within families, integrating strengths of Indian Systems of Medicine with modern systems of medicine in rejuvenation therapies, and preferential attention in all public facilities.

### Prevalence Rate of Other Public Health Diseases during 2007 & 2012

4.90 A comparative analysis of the Prevalence rate of public health diseases during 2007&2012 is given in Table 4.12.

**Table 4.12**  
**Prevalence Rate of Public Health Diseases during 2007 & 2012**

Diseases	Prevalence rate per 10000 population	
	2007	2012
Malaria	0.06	0.19*
Leprosy	0.21	0.26
Tuberculosis	0.40	0.52
Diarrhoeal diseases	14.14	19.76
Pneumonia	0.76	1.51
Enteric fever	0.19	0.25
Measles	0.08	0.06
Respiratory infection	233.88	305.12
Chicken pox	0.41	0.76

Source: Directorate of Health Services\*2011 data

4.91 During the XI<sup>th</sup> Plan period, it is observed that leprosy, tuberculosis, diarrhoeal diseases, pneumonia, enteric fever, respiratory infection, and chicken pox have worsened



## Mental Health

### Box 4.3

#### District Mental Health Programme Thiruvananthapuram

- The first DMHP clinic was established in 1999 in Thiruvananthapuram district
- The DMHP Thiruvananthapuram was selected as the most successful and model programme in India by WHO
- The DMHP conducts clinics in PHCs, CHCs, Taluk hospitals, after care homes etc.
- The DMHP started the first community based occupational therapy unit in Kerala at PHC Mangalapuram on March 2012.
- Weekly psychiatric clinics are conducted in Government hospitals
- DMHP has about 2000 regular patients with 22 clinics and 8 after care homes
- As a part of School mental health project (Thaliru) 64 school counselors, 38 school Junior Public Health Nurses were trained in school mental health issues and incorporated into this programme

*Source: Directorate of Health services*

4.92 In Kerala, three Mental health centres are functioning with a bed strength of 1342. District Mental Health Programme is functioning in eight districts. There are only 22 psychiatrists and 13 clinical Psychologists under DHS. Rehabilitation facilities are offered through centres such as ASHA Bhavan for Men (Poojappura, Kozhikkode and Kochi) and ASHA Bhavan for Women (Poojappura, Thrissur and Kozhikkode). Lack of awareness, attitude of general public, neglect of family members, lack of proper follow up etc are the major problems of mental patients. Repeated and regular psycho education for parents, care givers and other family members, awareness creation of public through media, self employment to cured patients etc can create positive attitude towards the mental patients. Major problems in the mental health area are listed below

- Lack of a standardized form of care
- Lack of rehabilitation services
- Lack of proper regulatory mechanism and accreditation of rehabilitation services by voluntary organizations



- Lack of properly qualified and trained persons
- Lack of proper Guidelines for care of mentally ill patients.
- Lack of properly designed epidemiological and evaluative research and absence of orientation of private sector initiatives
- Lack of integration of services of different mental health personnel such as Psychiatrists, Psychologists and Psychiatric Social worker

4.93 To overcome these issues in the Mental Health sector, a new Mental Health Policy is required.

## Prevalence of Alcoholism & Higher Suicide Rate

4.94 Kerala has the highest per capita consumption of alcohol in the nation- more than 1.76 gallons per person a year. Kerala accounts for the country's highest consumption of alcohol followed by Maharashtra and Punjab. The increasing suicide rate is also an emerging issue in Kerala. There has been an increase in the rate of suicide from 24.6 per lakh population in 2010 to 25.3 per lakh population during 2011.

## Shortage of Health Personnel

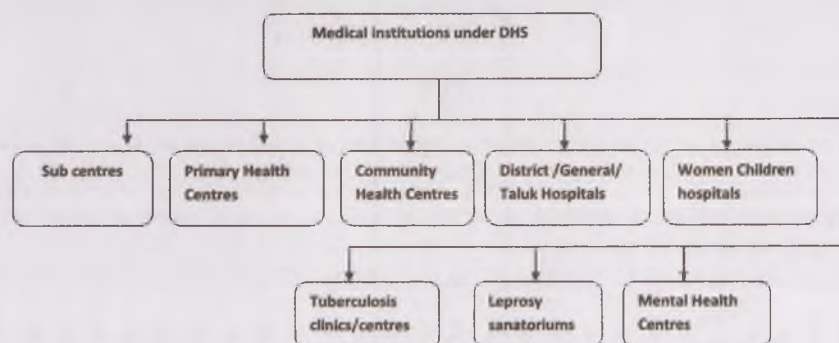
4.95 During the first year of XI<sup>th</sup> Plan there were 25225 medical and para medical personnel attached to the Directorate of Health Services whereas the number has increased to 32490 during 2012, showing 28 per cent of increase. But there is fall in the number of dentists (6 per cent), nurses (10 per cent) and paramedical staff (0.7 per cent) under the Directorate of Health Services. The doctor- population ratio in Kerala, during 2007 was only 8244 whereas it has been increased to 108212 during 2012. District wise analysis shows that there exists considerable inter district variation. Doctor-population ratio varies from 1:6654 in Thiruvananthapuram district to 1:11388 in Malappuram district despite the fact that Malappuram has the highest proportion of medical institutions under the Directorate of Health Services.

4.96 In the Government medical colleges, there are 78 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 personnels in the Government medical colleges comes to 2347 during 2012 against that of 2183 in 2007. There are 1073 doctors under ISM department and 691 doctors in Homoeopathy during 2012. Since health problems are increasing, the availability of medical and para medical personnel has to be ensured properly.

## Modern Medicine-Allopathy

4.97 Out of the 1255 health care institutions under the Directorate of Health Services, 67percentage comprises Primary Health Centres (PHCs), 18 per cent comprises Community Health Centres (CHCs), 9 per cent comprises Taluk Head Quarter Hospitals/ District hospitals/ General hospitals, 2 per cent specialty hospitals and 4per cent are other hospitals. Category wise major medical institutions and beds in Kerala, details of IP, OP cases and Medical and Para medical personnel under DHS during 2012 are given as **Appendix 4.51, 4.52 & 4.53.**

**Fig 4.9**  
**Institutions Under Directorate of Health Service**



4.98 A comparative analysis of the health care institutions under the Directorate of Health Services during the last year of 10th Plan and 11th Plan is given below.

## Health Care Institutions under DHS

4.99 During the first year of XI<sup>th</sup> Plan there were 1274 health care institutions with a bed strength of 36642. During 2012 the number has fallen to 1255 and bed strength has increased to 37388. During XI<sup>th</sup> Plan period, 18 leprosy sanitariums and a TB centre was merged with General health system. Hence it is seen that there is a shortage of 19 institutions under the Directorate of Health services during the period. At the same time, there is considerable increase in the bed strength of the health care institutions. Due to the up gradation of PHCs into CHCs there is fall in number of PHCs during 2012. Similarly dispensaries were also upgraded into PHCs. At present private health care institutions are growing at a faster rate. These institutions possess huge infrastructural facilities but may not always have qualified health personnel. Therefore, the existing health care institutions has to be strengthened with adequate infrastructural facilities and medical and para medical personnel.

## Para Medical Services

4.100 Medical and paramedical professionals are essential for better diagnostic facilities. The different type of laboratories functioning for the paramedical services in the State are given in Box 4.4

**Box 4.4**  
**Para Medical Services in Kerala**

Public Health Laboratory	The Public health laboratories cater to diagnostic needs of patients from both Government and private sectors
Government Analyst Laboratory	Check the quality of food materials and drinking water available to the public, the detection of newer type of adulterants such as pesticide residues, heavy metals, aflatoxins, histamine etc
Food Safety Commissionerate	Food Safety and Standards Authority of India has been established as a statutory body for laying down scientific standards for articles of food and to regulate manufacture, storage, distribution, sale and import of food so as to ensure availability of safe and wholesome food for human consumption.
Chemical Examiner's Laboratory	It renders independent scientific service to Criminal Justice Administrative System including checking the adulteration of liquor samples during festivals, issuing certificates after examining material objects involved in criminal cases and also provides expert opinion to various courts
Drugs Control Department	Drugs control Department is involved in the work of licensing inspections, analysis of random samples of drugs and prosecution against offenders of law and other related acts implemented by the Department

4.101 Details of technical work for the year 2012 in the Chemical Examiners laboratory is given in **Appendix 4.54**

### **Box 4.5** **Adulteration Trend in Government Analyst Laboratory during 2012**

The highest percentage of adulteration is found in PFA samples is in turmeric powder and the least adulteration is found in cereals and cereal products

*Source: Government Analyst Laboratory, Thiruvananthapuram*

**Box 4.6****Major Achievements under Food Safety Commissionerate during 2012**

- Ban of Pan Masala and Gutkta
- Inspection of 1858 hotels and closure of 73 hotels due to food poisoning.
- Improvement notice issued to 696 hotels
- ₹ 18,48,000 has been collected from hotels as compounding offences due to food poison
- Permanent Food Testing Lab has been set up at Sabarimala with financial and infrastructural support of Travancore Devaswam Board
- During 2012, 12438 licenses were given to Food business operators and the Department has collected ₹37314000 as licensing fee. 44230 number of registration has been made and ₹ 5044900 has been collected as registration fees.

*Source: Food Commissionerate Office*

**National Rural Health Mission (NRHM)**

4.102 Kerala has implemented the activities of National Rural Health Mission effectively for attaining the goals and objectives of National Population Policy and Millennium Development Goals. The mission aims to provide accessible, affordable and accountable quality health services to the poorest households in the remotest rural regions. Under NRHM, the focus is on a functional health system at all levels, from the village to the district. Although progress has been made towards achieving the goals of NRHM much more needs to be done in order to attain the Millennium Development Goals (MDGs). The provision of adequate human resources for health remains a challenge. Further, inequities based on rural–urban divides, gender imbalances and caste patterns are concerns that need eradication. The National Rural Health Mission will be converted into a National Health Mission (NHM) which would cover all villages and towns in the country (Planning Commission).

**Kerala Emergency Medical Services (108 Ambulance)****-New Initiative under DHS**

4.103 The Kerala Emergency Medical Services provides timely medical care services to road accident victims and other trauma victims. It is proposed to extend this programme to all districts by providing basic trauma care facilities in hospitals along the side of major roads, advanced trauma care facilities in all Medical colleges, timely services of ambulances etc. This Emergency Service can be availed by any person through a toll free number 108. The scheme has been implemented in Thiruvananthapuram and Alappuzha districts so far. Now it is proposed to implement the scheme in two more districts viz, Wayanad and Pathanamthitta. At present there are 43 number of ambulances functioning in these two districts and 66,119 number of medical emergencies have been attended to.



## Medical Education

4.104 In Kerala, medical education is imparted through five medical colleges at Thiruvananthapuram, Alappuzha, Kozhikode, Kottayam and Thrissur districts. Nursing Education is imparted through Nursing colleges in Thiruvananthapuram, Kozhikode, Kottayam, Alappuzha and Thrissur districts. Dental Colleges are functioning in Thiruvananthapuram, Kozhikode and Kottayam districts. Medical and Para medical courses conducted in Govt. Medical Colleges with annual intake of students and details of Clinical and non clinical personnel in Medical Colleges under DME, during 2012 is given in **Appendix 5.57 & 5.58**. A comparative analysis of the status of medical college hospitals and attached institutions during the last year of X<sup>th</sup> & XI<sup>th</sup> Plan period is given in Table 4.13.

**Table 4.13**  
**Status of Medical College Hospitals and Attached Institutions during 2007 & 2012**

Medical College Hospitals	Beds		per cent of increase	Inpatients		per cent of increase	Outpatients		per cent of increase	Major Operations conducted		per cent of increase
	2007	2012		2007	2012		2007	2012		2007	2012	
Thiruvananthapuram	2415	3160	30.9	96700	170765	76.6	798000	1353060	70.0	38455	32575	-84.7
Alappuzha	1031	1035	0.4	39394	50975	30	378540	710179	87.6	1163	3821	228.5
Kottayam	1499	1604	7.00	53743	76898	43.1	654634	857648	31.0	8240	6571	-20.3
Thrissur	1107	1155	4.3	64367	61444	-4.5	346890	680123	96.0	2376	6275	164.1
Kozhikode	2350	3325	0.06	114931	122820	6.9	580319	1734932	199.0	20062	15743	-21.5
Total	8402	10279	22.33	369135	482902	30.8	27558383	5335942	93.4	70296	64985	-7.6

Source: Directorate of Medical Education

- Lack of properly qualified and trained persons
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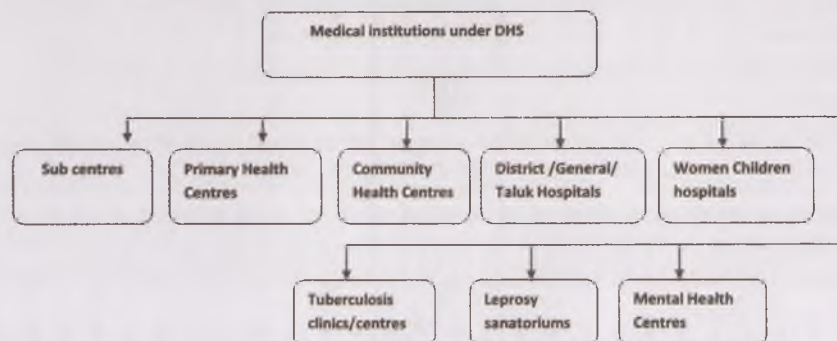
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Total	8402	10279	22.33	369135	482902	30.8	27558383	5335942	93.4	70296	64985	-7.6

Source: Directorate of Medical Education



4.105 There is considerable increase in bed strength (22 per cent), inpatients (30 per cent) and out-patients (93 per cent) in the medical institutions under DME during 2012. Major operations conducted in Alappuzha and Thrissur Medical colleges has been increased during the period. Similarly the delivery cases attended in Government medical colleges declined to 27 per cent. The mushrooming growth of private sector and lack of infrastructural facilities to meet the increasing health requirement of the public are the major contributing factors for this.

## Kerala University of Health and Allied Sciences

4.106 The Kerala University of Health and Allied Sciences commenced its activities from 2010-11. This university is established for the purpose of ensuring proper and systematic instruction, training and research exclusively in all systems. The university has affiliated professional colleges which includes all systems of medicines such as Alopahy, Ayurveda, Homeopathy, Sidha, Unani, Yoga, Naturopathy, Nursing, Pharmaceutical science and paramedical courses. The University conducted 69 courses since inception and declared results of 40 examinations. Now the University is facing acute shortage of manpower. Out of the 19693 students who attended examination 50.3 per cent passed (9897) during 2011-12.

### Box 4.7

#### Major Achievements of Health University

- Affiliation of 239 colleges including 50 new colleges and 189 transferred colleges from universities has been completed
- Online transmission of question papers, entry of internal marks, including practical marks and online publication of results
- Examination held under CCTV surveillance
- 24 Under graduate examinations were conducted in which 18451 candidates appeared and 9097 passed with an aggregate pass percentage of 50
- 86 post graduate examinations were conducted in which 1242 candidates appeared and 800 passed with an aggregate pass percentage of 65

*Source: Kerala University of Health and Allied Sciences*

## Indian System of Medicine

4.107 Ayurveda is a science dealing not only with treatment of some diseases but also a complete way of life. Indian System of Medicine department renders medical aid to the people through the network of Ayurveda hospitals and dispensaries, grant-in-aid Ayurveda institutions, Sidha- Vaidya, Unani, Visha, Netra and Naturopathy. Special hospitals such as Mental Hospital, Panchakarma, Nature cure and Marma are functioning under this department. At present there are 119 hospitals and 768 dispensaries under ISM department. The State Medicinal Plants Board also co-ordinate matters relating to the cultivation, conservation, research and development and promotion of medicinal plants in the State. List of major institutions and district wise distribution of institutions, beds and patients under ISM department during 2012 is given in **Appendix 5.59 and 5.60**.

### Box 4.8 Global Ayurveda Fest 2012

Global Ayurveda Festival (GAP) was held on February 2012 at Thiruvananthapuram as a joint venture of Centre for Innovation in Science and Social action (CISSA) department of AYUSH. Following are the major recommendations:

- The State of Kerala should be declared as Ayurveda State of India
- High priority in Government intervention should be given to health education based on Ayurveda principles and preventive health practices
- An international Trans-disciplinary advanced research centre should be established
- A 10 fold increase in industry turn over should be targeted in the next five years through innovative, long term support to the sector by various Agencies of the Government alongside incentives like tax holidays and concessions
- State and Central Governments should support centres of Excellence in clinical practice in various specialities of Ayurveda with interdisciplinary perspective
- Ayurveda biology should be included in school curriculum
- India should take the lead to chalk out a joint action programme with the SAARC countries for promoting Ayurveda and tapping the potential of global markets
- A certification agency for authentic Kerala Ayurvedic products and services should be set up by the State Government
- A global network should be established to promote authentic Ayurveda products and services by involving an appropriate agency
- Medicinal plant cultivation should be promoted in the co-operative segment and in the small scale land holdings, with buy back guarantee of products. Farmers should given subsidy, grants and soft loans on a long term basis
- A contemporary model of Ayurveda gurukula should be attempted on pilot basis at selected places where adequate initiatives and competency are available

Source: Kerala Calling April 2012

### Balamukulam-School Health Programme-New Initiative under ISM

4.108 The School Health Programme which is named as Balamukulam was started in three districts viz, Palakkad, Wayanad & Kasargode during 2012-13. Under this scheme, 5766 number of students received counseling, treatment, medicine etc. Now as a part of the scheme, it is proposed to implement schemes such as Prasadam, Ritu and Kaumarasthoulyam in Kollam, Thrissur and Kozhikkode districts which are intended to manage iron deficiency anemia in school going children, health problems of adolescent girls and correcting menstrual disorders and obesity in school children.

### Ayurveda Medicine Manufacturing- OUSHADI

4.109 OUSHADI is the largest manufacturer of Ayurvedic medicines all over India in Government sector functioning especially as a profit making public sector undertaking. Oushadhi is the exclusive supplier of Ayurvedic medicine to 1016 Government hospitals and dispensaries of ISM department. In Kerala Oushadhi supplies ₹ 18-20 crores of medicines each year to State ISM department at 40 per cent less than market price and ISM department supplies this medicine to the poor patients in the State free of cost. The company also caters to the demand of the public through a network of 468 exclusive agencies spread all over the State. Total sales has shown 85 per cent increase during 2012 when compared to the sales during the year 2007-08. Similarly profit after tax shows 271.6 per cent of increase during the same period. Similarly the dividend paid to State Government also shows an increasing trend. The details of turnover for the period from 2007-08 to 2011-12 are given below in **Appendix 4.61**.

## Ayurveda Medical Colleges

4.110 There are 3 Government Ayurveda Medical Colleges situated at Thiruvananthapuram, Thrippunithura and Kannur districts having a bed strength of 1259. Panchakarma hospital and Women & Children hospital are also functioning under the Government Ayurveda Medical college Thiruvananthapuram. There are two aided colleges, 11 self financing colleges and a self financing siddha college for imparting Ayurveda medical education. Annual intake of students and courses in Ayurveda Medical colleges are given in **Appendix 4.62**. Details of Beds and patients in Ayurveda Medical colleges during the last year of X<sup>th</sup> Plan & XI<sup>th</sup> Plan is given in Table 4.14.

**Table 4.14**  
**Beds and Patients treated in Ayurveda Medical Colleges during 2007 & 2012**

SI No.	Medical College Hospital	Beds		In patient		Outpatient	
		2007	2012	2007	2012	2007	2012
1	Government Ayurveda College Thiruvananthapuram	638	620	6373	22410	103858	149247
2	Government Ayurveda College Thrippunithara	205	489	1103	2701	308425	189070
3	Government Ayurveda College Kannur	150	150	830	1328	14903	65665
	<b>Total</b>	<b>943</b>	<b>1259</b>	<b>8306</b>	<b>26439</b>	<b>427186</b>	<b>403982</b>

*Source: Directorate of Ayurveda Medical College*

4.111 The above analysis shows that there is considerable increase in the bed strength (34 per cent) and inpatients (218.3 per cent) under the Government Ayurveda medical colleges.

## HOMOEOPATHY

4.112 There are 581 homeopathic dispensaries and 30 hospitals with a total bed strength of 945 under Homoeopathy department in the State. In addition, Kerala State Homoeopathic Co-operative pharmacy (HOMCO) Alappuzha, a medicine manufacturing unit is also functioning under the Directorate of Homeopathy. During 2006, there were 31 hospitals and 525 dispensaries with a bed strength of 970. As Pathanamthitta homoeo hospital is functioning in a remote area there are no inpatients in the hospital and therefore the hospital is now functioning as a dispensary. District wise distribution of institutions, beds and patients treated under Homoeopathic department during 2011 & 2012 is given as **Appendix 5.63**. Homoeo Medical Education is imparted through two Govt. Homoeopathic Medical Colleges, at Thiruvananthapuram and Kozhikode. Annual intake of students and courses in Homoeo Medical Colleges are given in **Appendix 4.64**.

**Box 4.9****Major Achievements under Homoeopathy during 2012**

- 30 new homoeo dispensaries started
- 14 dispensaries were upgraded as model dispensaries
- Up gradated one homoeo dispensary into a 10 bedded hospital
- 15 temporary dispensaries opened during festival seasons
- 717 medical camps and 283 health awareness camps were conducted and preventive medicine were distributed to 76718 patients
- Regional communicable diseases prevention programme was implemented in 5 wards of Kainakari panchayath in Alappuzh adistrict
- School health programme conducted in 28 selected schools
- De-addiction centres and infertility clinics started in the Seethalayam centres at Thiruvananthapuram, kottayam and Kozhikkode
- Speciality clinics started for endocrine disorders in Idukki, mother and child centre in Kannur, geriatric centre in Alappuzha, speciality mobile clinic in endosulphan affected area in Kasargod

*Source: Directorate of Homoeopathy*

### Ayush Holistic Centre for Prevention and Management of Life style Diseases New initiative under Homoeopathy

4.113 The scheme provides prevention and management of life style diseases by integrating different ayush systems by integrating the merits of homoeopathy, ayurveda, naturopathy and yoga. The Homoeopathy department started AYUSH centres for prevention and management of life style diseases at Thiruvananthapuram and Kozhikkode districts during 2012.

### Medical Institutions in the Public and Private sector- a Comparison

4.114 Kerala's health care system consists of a mix of public and private sector providers of health services. Due to lack of infrastructure facilities in the public sector, people often goes to the private sector. The private institutions lack qualified medical and para- medical personnels. A comparative analysis of the medical institutions under Public sector and private sector in Kerala during 2012 are given in Table 4.15.

**Table 4.15**  
**Major Medical Colleges in Health Sector in Kerala 2012**

SI.No.	Institutions	(No.)	
		Govt sector	Private sector
1	Medical College	5	17
2	Dental College	3	19
3	Nursing College	5	106
4	Ayurveda Medical colleges	3	14
5	Homoeo Medical colleges	2	3
6	Siddha	1	1
	<b>Total</b>	<b>19</b>	<b>160</b>

*Source: Kerala University of Health Sciences, Thrissur, DHS, DME*

4.115 Out of the total Medical colleges functioning in the State 77 per cent are under private sector whereas only 23 per cent are functioning under Government sector. Similarly 86 per cent of

Dental colleges and 95 per cent of Nursing colleges are functioning in the private sector. There is a tremendous increase in the number private Nursing colleges.

## Immunization Coverage

4.116 Immunization is one of the most successful and cost-effective health interventions and prevents debilitating illness, disability and death from vaccine-preventable diseases such as diphtheria, hepatitis A and B, measles, mumps, pneumococcal disease, polio, rotavirus diarrhoea, tetanus and yellow fever. Starting on 21 April 2012, WHO is uniting countries across the globe for a week of vaccination campaigns, public education and information sharing under the umbrella of World Immunization Week.

**Table 4.16**  
**Target and Achievement of Immunization during 2011**

State	Target	Achievement	Per cent
Andra Pradesh	1480000	500003	33.78
Karnataka	1149000	84904	73.71
Tamil Nadu	1147000	756171	65.93
Kerala	486000	458860	98.05

*Source: India Stat.com & Directorate of Health Services*

4.117 Kerala has achieved 98 per cent of target in Immunization during 2011. During 2012, the coverage of BCG was 211362. The coverage of immunization programmes in Kerala during 2011-12 is given in **Appendix 5.65**

## Need for a National Health Policy

4.118 The Central Government is now trying to redraft the National Health Policy. Though the country has implemented various programmes in health sector the goal of health coverage to all has not been achieved. At the same time new challenges are emerging. It is necessary to provide medical care to all through standardized health care institutions. Health sector is now facing crucial shortage of qualified medical and para medical personnel. Similarly, treatment through newer technologies should reach the grass root level. The cost of medicines are increasing and the National Health Policy should ensure the availability of free medicines to the poor patients and availability of affordable medicines. Special attention to the needs of marginalised sections of the population is also necessary.

4.119 To improve the prevailing situation, the problem of rural health is to be addressed both at macro and micro levels. This is to be done in a holistic way, with a genuine effort to bring good health to the poorest of the population. Kerala has to recapture the basic structure and policies that helped reduce mortality in the past and to develop the capacity to deal with the problems associated with non-communicable diseases which now affect all segments of the population. The control and management of NCDs should adopt a holistic approach leading from preventive action for the healthy, screening for the high risk population, primary care for the affected, tertiary care for acute cases and palliative care for the terminally ill patients. Shortage of human resources is a distressing feature of Kerala's healthcare services.

4.120 Geriatric and palliative care should be integrated into routine health care. Promotion of Mental Health among adolescents and addressing mental health needs of the aged are also priority areas. Kerala faces the paradoxical situation of more doctors passing out every year and lesser number being available to work in the public sector. Systems have to be devised to ensure that persons educated through public resources are available to serve the public should the need arise. Kerala

has to focus on developing and improving systems to ensure good governance of the health system.

4.121 Twelfth Plan will aim to improve the coverage of public health institutions to reach hitherto uncovered regions and segments of population. Second generation and special problems in the health sector will be addressed by specially and separately designed new programmes. Vulnerable sections and problem areas will be given due importance. The departments in the Health sector will improve the quality of services with properly defined components for development of infrastructure, manpower and other aspects. The Twelfth Plan will put in place a comprehensive regulatory and governance mechanism to ensure quality standards.

## SECTION 4

### Social Security and Welfare

4.122 Social security provides an assurance for physical, mental, social and economic health of the society. In Kerala, the Social Justice Department is the nodal agency involved in addressing the problems of social security and welfare. The departments and agencies stands for social security measures and their major activities are given in **Appendix 4.70**

#### Trends in Outlay and Expenditure

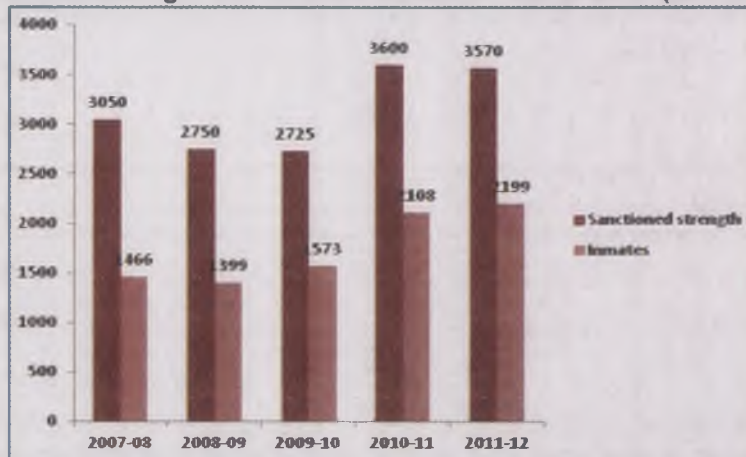
4.123 The proportion of the outlay of social security and welfare sector including child development to State plan during 2007-08, the first year of the eleventh five year plan was nearly 1 percent which doubled in 2011-12, reflecting the higher priority given to this sector. However the consistent increase in outlay has not been maintained in spending. The expenditure on the sector in proportion to total State Plan Expenditure declined from 2per cent in 2007-08 to 1per cent in 2008-09 & 2010-11 which improved to 2per cent in 2011-12.

4.124 The social security programmes in Kerala can be grouped into two:- A. Institutional Care and B. Social Assistance Programmes.

#### A. Institutional Care

4.125 In the state, Government as well as Voluntary Organizations provides institutional care and protection to the weaker sections. The number of welfare institutions in Government sector was 50 in 2007, which increased to 56 in 2011.

**Fig 4.10**  
**Sanctioned Strength and Inmates of Welfare Institutions (in numbers)**



Source: *Economic Review 2007 to 2010 & Social Justice Department*

4.126 The number of inmates is less compared to the sanctioned strength among all categories of institutions during this period. This reveals the ineffectiveness and failure of the existing delivery system of the institutions. For example, though the district of Kasaragod has a large number of

Endosulphan victims, it does not have any institutions for the physically challenged persons. This necessitates an integrated policy framework, careful planning for establishing and managing the institutions and thorough revamping to attain desired results. Major welfare institutions run by SJD and the services offered by them are given in **Appendix 4.71** The district wise details are given in **Appendix 4.72**

## B. Social Assistance Programmes

4.127 Social assistance programmes aims to reduce poverty and vulnerability among the people having little or no regular means of subsistence. Various social assistance programmes are listed below.

### Social Security Pension Schemes through LSGs

4.128 Agriculture labour pension, Indira Gandhi National Old Age pension, pension for disabled, pension for unmarried women above 50 years of old and widow pension are the major schemes. In 2011, the total no. of pensioners except ALP was about 14 lakh which is double the number in 2007. The highest category is of widow pensioners. Among the districts, Thiruvananthapuram is top with highest number of beneficiaries and Idukki the least. The district wise coverage is given in **Appendix 4.73**

### Unemployment Assistance

4.129 For social security of the registered unemployed, Government provides unemployment wages through the LSGs. During 2011, about ₹ 26 crore has been disbursed to 303691 beneficiaries. The district wise coverage is given in **Appendix 4.74**

### Social Security and Welfare to Unorganized Sectors

4.130 Social security coverage to workers in the unorganized sectors is given through the Welfare Fund Boards(WFBs). Of the 28 welfare fund boards in 2011, twelve are under the direct control of the Labour department. In 2011, the total members enrolled in these boards were about 60 lakh, of which 47per cent from agriculture sector including fisheries and dairy. Now the boards are functioning under different departments and the rate of assistance varies. To bring all these boards under one umbrella is very helpful for monitoring and bringing uniformity. Details of workers enrolled in the WFBs are shown in **Appendix 4.75**

### Welfare of Aged People

4.131 The increase of ageing population is a complex phenomenon. As per 2001 census, Kerala has the highest proportion (10.5per cent) of the elderly in the country. Population projections predict that the proportion of elderly population in the state is likely to increase 40 percent in 2061.

**Table 4.17**  
**Demographic Profile of Elderly 2001-2061**

Year	No. of aged (millions)			Percentage Total			Growth rate (per cent)		
	60+	70+	80+	60+	70+	80+	60+	70+	80+
2001 (Census)	3.33	1.4	0.39	10.5	4.4	1.2	2.94	3.99	3.45
2011	4.20	1.94	0.54	12.2	5.6	1.6	2.61	3.86	3.85
2021	5.75	2.46	0.76	16	6.8	2.1	3.69	2.68	4.07
2031	7.78	3.52	1.01	21.3	9.7	2.7	3.53	4.31	3.29
2041	9.88	4.86	1.48	27.8	13.7	4.2	2.7	3.81	4.65
2051	11.48	6.22	2.11	34.4	18.6	6.3	1.62	2.8	4.26
2061	11.95	7.18	2.76	39.6	23.8	9.1	0.41	1.54	3.08

*Source: Kerala State Development Report, Planning Commission of India*

4.132 Among the elderly population the women outnumbered the men and majority of them are widows. Also Kerala is the second largest state with highest proportion (1.2 per cent) of people above the age of 80 and this is likely to increase 9 percent in 2061.

## Institutional Services to Aged People

4.133 During 2011, there were 11 Old Age homes with 566 inmates against the sanctioned strength of 1025. Also there were about 5000 inmates in 82 registered Old Age homes and 5 foundling homes run by NGOs. In addition a number of private paid Old Age homes are functioning in the state. More effective licensing, regulation and monitoring to scrutinize these homes at the Government level is required to ensure better facilities including pain and palliative care units in these homes.

## Old Age Pension Scheme

4.134 It is a monthly pension scheme shared by both State and Centre for BPL persons aged 60 years or above. During the reporting period the scheme benefited close to 3 lakh older persons. The maximum coverage is from Trivandrum district and the least from Pathanamthitta. District wise coverage in 2011 is given in **Appendix 4.73**

## Vayomithram

4.135 Vayomithram, first of its kind in India launched by Kerala Social Security Mission in 2011 is intended to give welfare services such as free medicine, palliative home care, help desk facilities to persons above 65 years. During 2011-12, the programme assisted 62588 persons.

4.136 An ageing population has become a major challenge to the state and society. The CDS study in 2010 reveals that 73 percent elderly are depending on their family members. Further, as per an estimation of Alzheimer's Decease International, there are nearly 1.5 lakh Alzheimer's patients in the state. The State Policy on older persons drafted in 2003 recognizes the well-being of the elderly as a responsibility of the State is still pending implementation. Identification of more eligible NGOs and other support agencies under IPOP scheme of GOI are necessary for getting financial assistance from centre as only two agencies in the State were supported in 2010.

## Persons with Disabilities

4.137 As per 2001 census, nearly 3per cent of the total population in Kerala has at least one disability. The SPAC report in 2004 observed that approximately 5 lakh children have one form of disability or the other. It is estimated that the incidence of learning disability in children is about 12per cent to 14per cent.





## Institutional Services to Persons with Disabilities

4.138 In 2011, there were 18 institutions for the care and protection of physically and mentally challenged persons with 616 inmates against a sanctioned strength of 725. Under Education Department there were 4 special schools for visually impaired children and 3 for hearing impaired children. Even though 277 private institutions in the state giving some sort of education in the area, only 55 schools received grant- in-aid from GOI, under DDRS, a scheme for vocational training to mentally challenged. Though there are about 12 private institutions attempting specific rehabilitation for children with Cerebral Palsy, Autism and Down Syndrome, there is no such institution in Govt. sector.

## Disability Pension Schemes

4.139 This scheme includes two pension schemes viz. pension for mentally challenged and pension for physically challenged. In 2011, the schemes benefited about 3 lakh persons. District wise coverage of pensioners is given in **Appendix 4.73**

## Issuing Disability Certificate-cum- Identity Cards

4.140 According to the Persons with Disability Act, 1995 it is mandatory to provide disability certificate to all disabled. In view of this, Government has started this scheme in 2009-10. From 2010 to 2011, the department issued 251273 identity cards. Though the programme envisaged issuing ID cards to the entire disabled population by the end of 2011-12, the desired target has not been achieved.

### Box 4.10

#### Composite Regional Centres (CRCs)

CRCs are a part of overall strategy to reach out to the disabled people for awareness generation, training of rehabilitation professionals, service delivery and so on. At present there are 7 CRCs functioning in India. In Kerala, one such institution has been set up at Kozhikode on 17th February 2012.

## State Commissionerate for Persons with Disabilities

4.141 The State Commissionerate was set up under the Act of Persons with Disabilities Act, 1995 to monitor whether the rules stipulated in the above Act is implemented properly. The other functions of the Commissionerate are conducting awareness camps, redressal of the complaints of disabled persons, inspection of institutions for disabled, etc.

## National Institute of Speech and Hearing (NISH)

4.142 NISH was established in 1997 for the rehabilitation and welfare of the deaf and hard of hearing persons in the state with facilities for detection, evaluation of hearing loss and rehabilitation. The activities conducted in the area of disabilities are pre- school programmes and parent guidance programmes, audiology evaluations and speech evaluations, speech therapy, physiotherapy, psychology services and medical services, ear mould fabrication and academic programmes.

### Box 4.11 State Initiatives in the Area of Disabilities

As per the recommendation of the Working Group on Disability for the formulation of XII<sup>th</sup> Plan, Government has launched a special programme for prevention, detection and early intervention of disabilities and for education, employment and rehabilitation of disabled. The major activities visualized under the programme are implementation of Rubella Vaccination to adolescent girls, setting up of Early Detection Centres and establishing Pre-schools for handling multiple disabilities in each district for deaf and hard of hearing children, visually challenged children, mentally retarded children, children with Autism and children with Cerebral Palsy. As a part of this, the National Institute for Speech and Hearing (NISH) will be developed into a University for Disability Research and Education. Government has appointed an empowered committee for the smooth implementation of the programme. Expert Committees were also appointed on each area, viz, prevention of disabilities, early screening and early detection of disability, early intervention and for the upgradation of NISH as a university.

#### Kerala State Handicapped Persons Welfare Corporation

4.143 It is a State Undertaking set up for promoting and implementing welfare schemes for disabled persons. Distribution of aids and appliances, self-employment scheme (bank loan subsidy), financial assistance to self-help groups, vocational training to SC/ST disabled persons, etc. are the major activities of the corporation. Further, it is the nodal agency for the implementation of the NPRPD scheme of Government of India being implemented in Kasaragod, Palakkad and Kollam districts. In 2011-12, the corporation assisted 2338 disabled persons through various schemes.

4.144 There is a need to bring in programmes focusing (i) Prevention, Detection and Early Intervention of disabilities (ii) Requirement of persons with disabilities for Cerebral Palsy, Autism and Mentally Retarded (iii) Strengthening the machinery attending to the rehabilitation, development and empowerment of persons with disabilities (iv) Preparation of comprehensive database and online State depository of resources on disabilities (v) Training of care-givers (vi) Formation of a State Mission for disabled (vii) Extending DCRCs for early detection of disabilities in unserved districts.

#### Welfare of Ex-Servicemen & War Widows

4.145 As on 30th March 2012, there were 163072 ex-service men and 243 war widows. Rehabilitation training on vocational / professional / technical courses for equipping the ex-service men/war widows is a major programme. 291, ex-service men were provided rehabilitation training in 2011-12, of which 138 were widows and dependents.

#### Welfare of Prisoners

4.146 In Kerala, the jail infrastructure consists of 52 different types of jails. As on March 2012, there were 6538 prisoners, of which 183 are women. The number of prisoners reduced to 3per cent when compared to the figures in 2007. The women prisoners in Kerala are marginal (3per cent) compared to other southern states where this proportion ranged from 4 to 6 percent. Overcrowding in jails is the major problem as it is very difficult to accommodate further prisoners. Modernization of Prison and Welfare of Prisoners are the two major schemes implemented by the Prison department. During 2011-12, the department utilized the entire budget provision. Details of prisoners in jails is given in **Appendix 4.76**

**Box 4.12****Major Initiatives of Prison Department**

**Solar Energy System and Energy Saving Measures in Jails:** - The Jail Department plans to install solar power project in all 52 jails in Kerala under XIII<sup>th</sup> Finance Commission Award. It would save an amount of ₹.40 lakh in every year by using solar cooking facilities instead of LPG cylinders. The project has been commissioned on 3rd October, 2012 at Central prison, Thiruvananthapuram on a pilot basis.

**Commercial Production of Chapatti and Chicken Curry:** - As a new initiative, the Department launched sales outlet of Chapatti and Chicken curry in three Central prisons, Thiruvananthapuram, Viyyur and Kannur and in District jail, Kozhikkode. Chapatti and chicken curry is being sold at a nominal price. About ₹.4 Crore has been achieved through this project. Since the project is a great success, it has been extended to the public through mobile sales units and sales outlets in various locations.

**Open Prison, Nettukaltheri:** - This open prison, the first its kind in the nation, is a prison without a compound wall. The main objective of the prison is to rehabilitate the inmates by changing their attitudes and to ensure that they have a good social life after release. There are 360 inmates in 2012 and each inmate earns nearly ₹.117 per day from various agricultural activities. A check dam with a capacity of 4 crore litres and a reservoir with a capacity of 1 lakh litre has been constructed for the irrigation of 60 acres of land. During 2012, an amount of ₹.1.62 crore was earned by the department from these activities of prisoners.

**Welfare of Women**

4.147 There were 22 different institutions for the care and protection of widows, mentally cured women, women under immoral traffic, etc. As against the sanctioned strength of 950, the inmates in 2011 were 612. Though there are needy women who require secure shelter, revamping of the institutions as per the provisions visualized in State Old Age Policy and Women Policy need improvement measures for effective service delivery.

**Pension Scheme for Women**

4.148 Widow pension scheme and pension for unmarried women above 50 years are the major schemes. During 2011, nearly 8 lakh women were assisted which is 148 per cent of the beneficiaries of 2007. Among the beneficiaries, nearly 60 per cent are widow pensioners. The highest number of beneficiaries is from Thiruvananthapuram district and least from Idukki. District wise coverage of beneficiaries is given in **Appendix 4.73**

**Skill Development Programmes**

4.149 The flagship programme on finishing school started during the eleventh plan focused to improve the skill development activities for vocation of women. Kerala State Women Development Corporation is the main agency imparting skill development activities. The Corporation established two REACH institutions to impart training programmes for women. Providing proper placement to the trainers after completion of the training is a matter of grave concern

**Rajiv Gandhi Scheme for Empowerment of Adolescent Girls**

4.150 The central scheme launched in Kollam, Idukki, Malappuram and Palakkad districts aims at empowering the nutritional and health status and upgrading various skills of adolescent girls by

using the platform of ICDS. During 2011 the scheme assisted around 3 lakh beneficiaries which is an increase of 19 per cent compared to 2010. The scheme requires strengthening of the linkage with education and skill development.

### Indira Gandhi Matritva Sahyog Yojana

4.151 IGMSY is a centrally sponsored scheme to improve the health and nutrition status of pregnant, lactating women and infants by promoting appropriate practices, care and service utilization during pregnancy, safe delivery and lactation. The scheme assisted 25477 beneficiaries in 2011 which shows a percentage decline of 31 per cent compared to 2010.

### Psycho-social Service to Adolescent Girls

4.152 Under the scheme adolescent health clinics were established in selected schools for solving the psycho-social problems of the adolescent girls with the support of concerned PTAs and LSGs. A qualified counselor is engaged in the school for providing counseling and guidance to the adolescent girls. The health clinics started in 251 selected schools in the year 2008 have been extended to 500 schools in 2011-12.

### Snehasparsham

4.153 The programme aims to address the problem of unwed mothers particularly ST communities in Wayanad district. Monthly assistance of ₹.1000 is given to all unwed mothers of SC/ST families and to other communities of BPL families and the scheme benefited 581 women in 2011-12.

### Kerala Women's Commission

4.154 For the empowerment of women, the commission has been conducting gender concentration seminars, adalaths, district level Jagratha Samithies, petition/redressal etc. During 2011-12, the commission received 21327 complaints of which Thiruvananthapuram is on top and Wayanad is the least. The nature of complaints shows that harassment of women is on the increase. There is three times increase in no. of complaints received in 2011 compared to 2007. The category wise and district wise details of complaints received as on 31-03-2012 are given in **Appendix 4.77**

### Kerala State Women's Development Corporation

4.155 Self employment schemes for women, flagship programme on gender awareness and construction of She- toilets are the major programs of the corporation. During 2011-12 the corporation benefitted 1630 women in self employment through National Corporations and constructed 11 automatic and unmanned cost effective and environment friendly She-toilets. As part of micro finance the corporation has distributed ₹.1 crore to 39 selected SHGs. Under gender awareness programmes, 800 adolescent's girls were trained in self defence and 288 students were given ICT awareness.

4.156 Addressing violence against women is a major challenge to the state. Establishing fast-track courts for early disposal of cases against women, establishing more women police stations, strengthening of women help lime services, Jagratha Samathis and Vigilance committees at local level are to be initiated for protection of women. For increasing work participation rate of women, convergence of various programmes such as Ajeevika, MGNREGA and other skill development initiative of Ministry of Labour and Employment is a major tool.

### Welfare of Children

4.157 Kerala has achieved marked improvement in child empowerment particularly in the area of immunization, pre-school education, elimination of polio, reducing infant mortality etc. Some important health and nutritional indicators of children in Kerala are summarized in Table 4.18

**Table 4.18**  
**Health and Nutritional Indicators of Children in Kerala**

	Current Status			Target for XII Plan			Target for Millennium Development Goal (2015)	
	IMR	MMR	Anemia	IMR	MMR	Anemia	IMR	MMR
Kerala	13	81	32.80	6	37	16		
India	47	212	55.30	25	100	28	27	109

Source: Planning commission of India & Directorate of Health Services

4.158 According to 2011 census, 9 per cent of Kerala's population constitutes children below the age of 6 years. The State Plan of Action for the Child in Kerala 2004, adopted wider perspective measures for the holistic development of the children. However some social as well as health issues are still exist which needs priority attention.

4.159 As per census 2011, Kerala's child sex ratio (0 to 6years) has come down in the last decade. While the overall sex ratio in Kerala improved from 1058 in 2001 to 1084 in 2011, the child sex ratio decreased from 963 in 2001 to 959 in 2011 particularly in central Kerala where it is below the state average. This clearly highlights the need for a comprehensive strategy for care and protection of the girl child. As per NFHS II & III surveys, wasting and underweight among children in Kerala has been increased from 11 to 16per cent and 27 to 29per cent respectively.

4.160 As per the report published by the National Crime Records Bureau, the crime against children in the state has increased by 164 per cent from 2008 to 2011. Of the total no. of crimes Kerala's share was nearly 5per cent while that of Karnataka 4per cent and Tamil Nadu 3per cent. There is an increase in kidnapping and abduction, rape and murder. More over about 12per cent of children and adolescents are at high risk of developing mental disorders including alcohol and drug abuse. Also the children of the poor in urban areas face multiple instances of deprivation, violence and exploitation including sexual abuse.

## Institutional Services to Children

4.161 During 2011, there were 38 different institutions for the care and protection of children. 419 registered orphanages and 3 beggar homes are functioning in the state managed by NGOs and Voluntary organizations with the support of Govt benefitting about 44000 children.

### Box 4.13

#### Kerala Social Security Mission

The Mission was established in 2008 under the Department of Social Justice, the first organization in the country for providing social security to the weaker sections. During 2011-12, the mission focused on the needs of children.

**Cancer Suraksha for Child Patients:** The scheme intends to give free treatment to child patients below the age of eighteen through Government approved hospitals and the scheme assisted 2693 child patients, till date.

**Thalolam:** The Scheme aims to provide free treatment to children below the age of 18 years who are suffering from life threatening diseases. Till date, the programme covered 4931 patients.

**Cochlear Implantation:** The objective of the project is to provide cochlear implant to children selected by Regional and State level Technical Committees for cochlear implantation. During 2011-12, the programme benefitted 50 children.

## Juvenile Justice Services

4.162 Juvenile justice endeavors to undertake steps for all round development and rehabilitation of children such as orphans, destitute, neglected, street children, victims of violence etc. Now, there are 9 Juvenile Homes, 14 Observation Homes and one Balasadanam (certified as juvenile home) with a capacity of more than 7000 children in the age group of 5 to 18 years. Juvenile justice board and child welfare committees are functioning in all the 14 districts. At present skill development training is imparted to the inmates but they have to be improved with different vocational trades.

## Adoption Services

4.163 Adoption is recognized as the best non institutional form of child care to discarded children or children without parent or children without a family set up. The Kerala State Council for Child Welfare started this programme in 1979 and now in Kerala 3 adoption centers and 17 registered placement agencies are functioning. A total of 185 children were adopted during 2011 of which, 156 males and 29 females. Details of adopted children are given in **Appendix 4.78**

## Integrated Child Protection Scheme

4.164 The components under the scheme are State child protection units, State child protection society, District child protection society, Child welfare committee, Juvenile justice board, Institutions for children as per JJ Act 2000 and State Adoption Resource Agency. The utilization of funds for the scheme in the eleventh plan was only about 26 per cent. There is difficulty to implement the state specific activities along with the activities in the ICPS guidelines due to lack of matching share from Government of India. The scheme requires consolidation as well as focused efforts to address implementation gaps by constituting state and district child protection society and other statutory bodies as per ICPS guidelines. As part of strengthening the child rights and protection of children the state needs to constitute the State Adoption Resource Agency (SARA) and State Commissions for Protection of Child Rights (SCPCRs).



## Child Participation Programmes

4.165 Kerala's model of Bala Sabha and Bala Panchayat as neighborhood network of children in LSGs for holistic development of child health has been widely acknowledged. Cultivating creative potential in children by providing opportunities to express learn and develop, identifying and nurturing innate talent that leads to the larger goal of recognition and protection of child rights is the prime objective of the programme. As on March, 2012, the formation of 50618 number of Bala sabhas across the State has been completed with a membership of 878826 children.

### Nutrition

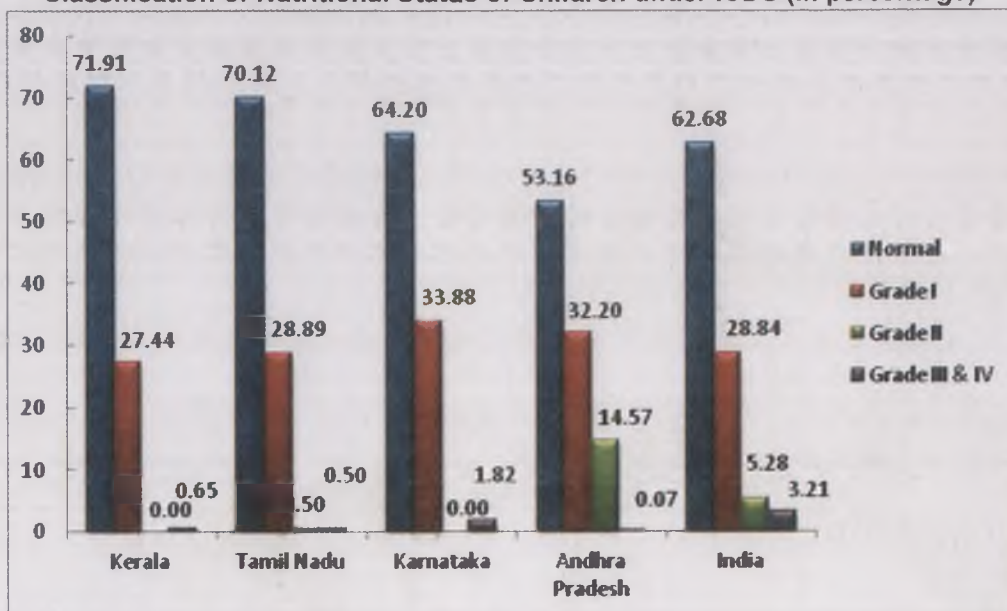
4.166 The nutritional status of both children and adolescents must have high priority in any strategy for human development. Adolescent girls, pregnant mothers, breastfeeding mothers and young children are the vulnerable groups which require concerted attention. Iron Deficiency Anemia (IDA) and Vitamin A and iodine deficiencies are the major public health problems of these groups. Also, the percentages of overweight children who are at greater risk for non communicable diseases such as diabetes and cardiovascular heart diseases are increasing.

### Integrated Child Development Services (ICDS)

4.167 It is one of the largest early child care programmes for improving the nutritional status of women and children by providing an integrated package of services to the beneficiaries such as supplementary nutrition, immunization, health checkup, referral service, health and nutrition education and Pre-school education. The classification of nutritional status of children under ICDS as on March 2012 reveals that Kerala is better than its counter parts in the Southern States but the rate of severely malnourished children is higher in Kerala than that of Tamil Nadu and Andhra Pradesh.

Fig 4.11

Classification of Nutritional Status of Children under ICDS (In percentage)



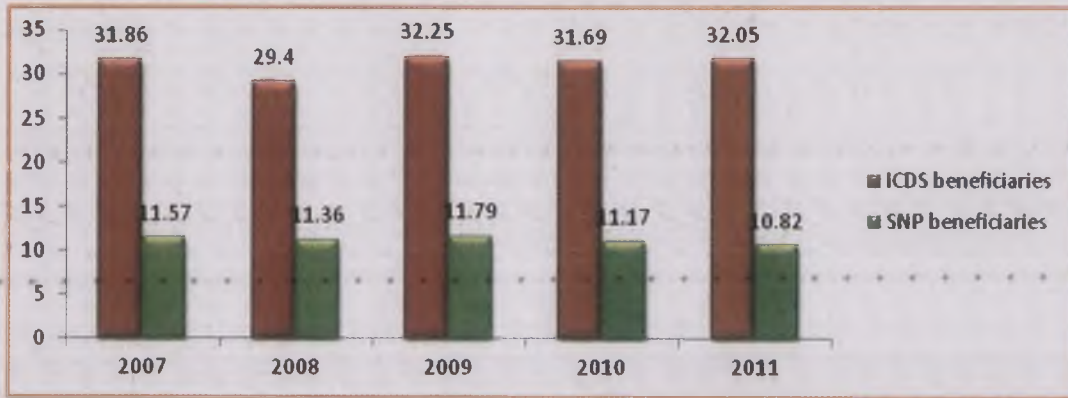
Note: - Grade I & II – Moderately malnourished children  
Grade III & IV – Severely malnourished children

Source: Ministry of Women & Child Development, Govt. of India

\* Within the premise assigned if sources are located where household lives. Near the premise is within a range 100 meters from the premises in urban areas and within a distance of 500 meters in rural areas. Away from the premises is located beyond 100 meters from the premises in urban areas and beyond 500 meters in rural areas.

4.168 In 2007-08, there were 163 projects and 32139 operational Anganwadis in Kerala and now it is increased to 258 ICDS projects and 33115 operational Anganwadi centres. In 2011, this programme benefited about 32 lakh children including pregnant and lactating women. District wise coverage is given in **Appendix 4.79**

**Fig 4.12**  
**Physical Progress of ICDS (Nos. in lakh)**



Source: Economic Review 2007 to 2010 & Social Justice Department

4.169 There is no significant improvement in the coverage of ICDS beneficiaries during the 2011-12. Less than 1 per cent increase is noted as compared to 2007-08. The coverage of beneficiaries declined all the districts other than Kollam, Thrissur, Palakkad, Malappuram, Kannur and Kasaragod. The coverage of ICDS programme needs to be further strengthened in the remote areas and among under privileged communities in Idikki, Wayanad and Palakkad districts. Supplementary Nutrition Programme is an important component of ICDS services implemented by the LSGs and the programme covers 11 lakh beneficiaries. There is a decline of 6 per cent coverage in 2011-12 compared to 2007-08.

4.170 At present, 33115 Anganwadis are functioning in Kerala, of which only 17845 have proper buildings and rest of them are in temporary sheds and other rented buildings that have no basic infrastructure facilities. This can have a significant negative impact on the delivery of services, if left unaddressed. Also chalking out of proper programmes to reduce the prevalence of anemia to 16 percent, the target of XII<sup>th</sup> Plan, is quite essential since it is an underlying determinant of maternal mortality and low birth weight. As nutritional status is a sensitive proxy indicator of human development and a key determinant of the effectiveness of the ICDS programme, strengthening and restructuring of ICDS in the 12th Plan should be given top priority by the State.

## SECTION 5

### Drinking Water

4.171 There is a mistaken notion that Kerala is abundant in water resources. Even if the State experiences both South West monsoon and North East monsoon, there is a large spatial and temporal variation in the rainfall system and the abundance of water resources in one season leads to shortage in next season. Due to the rapid urbanization, increased economic activity, population explosion, changes in land use pattern and higher standard of living, the gap between the demand for and supply of water has been widening. To meet this demand, augmentation of existing water resources by development of additional sources of water or conservation of the existing resources through impounding more water in the existing water bodies and its conjunctive use is required. An integrated water management system is essential to ensure sufficient water in the entire system.



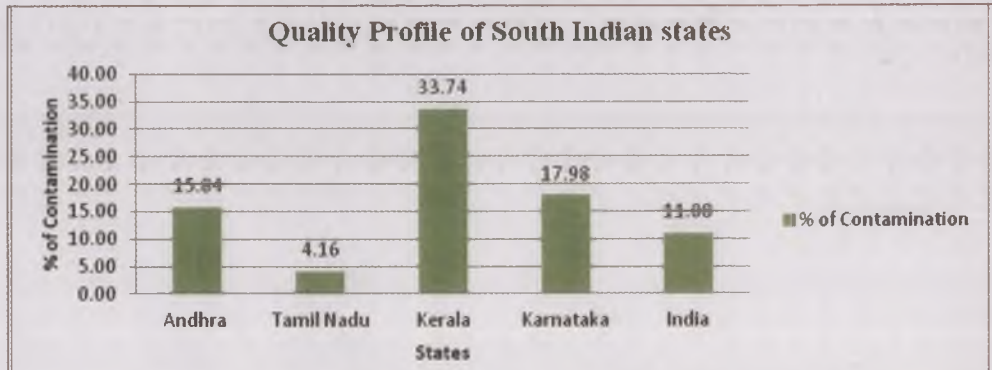
Rain water harvesting and ground water recharge programme must be effectively implemented to reduce the consumption of potable water and sustainability of ground water resources.

4.172 Primary responsibility of providing drinking water facilities in the country rests with the respective State Governments. However, Central Government formulates policies to supplement the State Government initiatives through Ministry of Water Supply and Sanitation. Accelerated Rural Water Supply Programme (ARWSP), now renamed as National Rural Drinking Water Programme (NRDWP) is the major programme of Gol, which formulates guiding policy, sets standards, and provides funds and technical assistance to the states for rural water supply and sanitation. The 73rd and 74th amendment to the constitution has been a landmark policy shift from a supply-based approach to demand-driven strategy by providing greater role for community participation. As on 31.03.2012, the existing water supply schemes in Kerala have covered 77 percent of the total population. Out of the total coverage, 71 percent are rural and 29 percent are urban population. However, the state has been facing many challenges in terms of quality, quantity and sustainability of water resources.

## State Water Quality Profile

4.173 According to World Health Organisation 88 percent of the diarrhoea disease is attributed to unsafe water supply and inadequate sanitation practices in the world. Since well water is the major source in Kerala, bacterial and chemical contaminations in drinking water are high. As per Ministry of Drinking Water and Sanitation, Gol, Kerala has the highest chemical /bacterial contaminated drinking water among 28 tested states in the country. As on 09.01.2013, out of the total 102900 tested sources from Kerala, nearly 34 percent have been identified with the contamination of Iron, Fluoride, Salinity, Nitrate, Arsenic and other bacterias (**Appendix. 4.80**). Quality profile of drinking water in Kerala and other southern states of India are given in Fig. 4.13

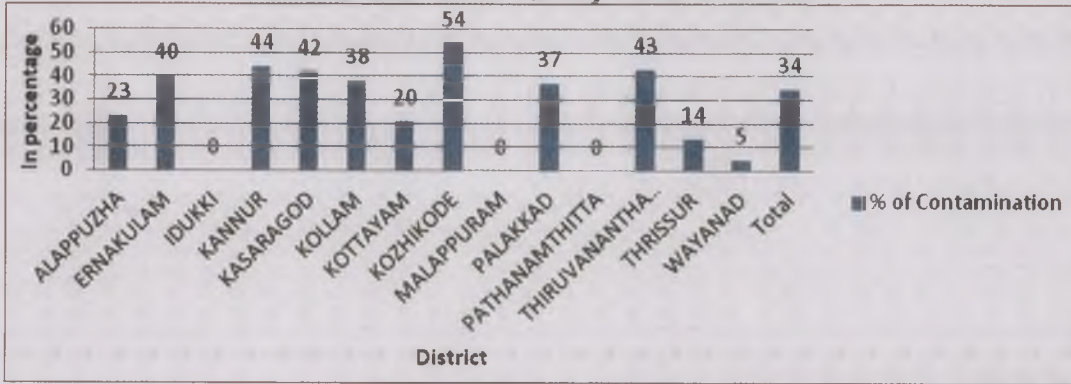
**Fig 4.13**  
**Quality Profile of South Indian States**



Source: Ministry of Drinking Water and Sanitation, NRDWP, Gol.

4.174 District wise, Kozhikode has the highest chemical/bacterial contaminated water in Kerala. Out of the 10803 tested sources, 54 percent of samples have been found as contaminated sources. Thiruvananthapuram, Kannur, Kasaragod, Ernakulum and Palakkad are other vulnerable districts in terms of access to safe drinking water in the state. District wise quality of drinking water is given in Fig. 4.14 ( also see **Appendix 4.81**)

**Fig 4.14**  
**District Wise Water Quality Profile in Kerala**

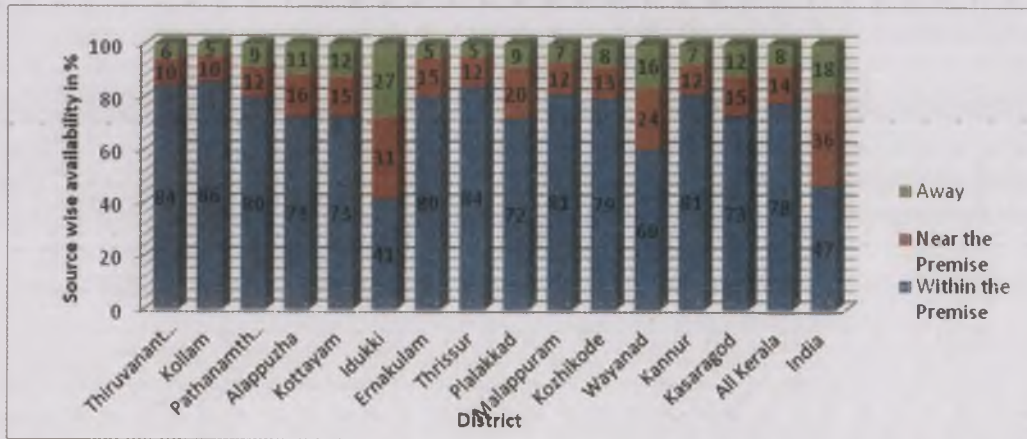


Source: Ministry of Drinking Water and Sanitation, NRDWP, Gol.

### Availability of Drinking Water

4.175 Based on the distance, Census of India 2011 classified water source availability into three category such as Within the premise, Near the premise and Away from premise \*. In Kerala 78 percent of the people are availing drinking water from their own premises, 14 percent of the people depend upon Near the premises and 8 percent Away from the premises. However, in Idukki district, 27 percent of the people are depending on Away from the premises, 31 percent from Near the premise and 41 percent within the premises.

**Fig 4.15**  
**Availability of Drinking Water in Kerala**



Source: Census of India 2011

4.176 In rural Kerala, 72 percent of people having drinking water within the premises. District wise, Kollam has the highest access of 85 percent and Idukki has the lowest access of 39 percent. For urban region, Thiruvananthapuram, Kollam and Pathanamthitta have the highest levels of more than 86 percent within premises and Wayanad has the lowest level of 74 percent. In Alappuzha nearly 11 percent of urban people do not have drinking water access within or nearby premises. (Appendix 4.82)

\* Within the premise assigned if sources are located where household lives. Near the premise is within a range 100 meters from the premises in urban areas and within a distance of 500 meters in rural areas. Away from the premises is located beyond 100 meters from the premises in urban areas and beyond 500 meters in rural areas.

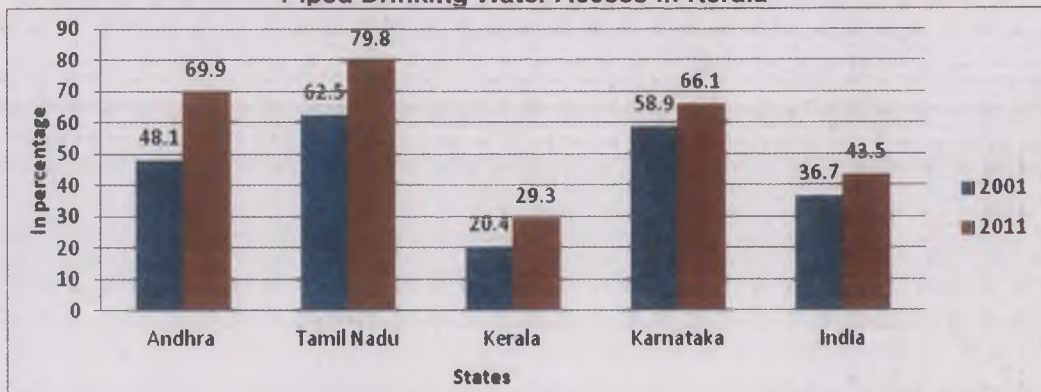
4.177 Rural drinking water is one of the six components of Bharat Nirman Programme of GoI. Even if the existing schemes have greatly increased the coverage of safe drinking water in the rural areas of the country, the provision of drinking water to rural areas is fraught with problems. Many habitations which once came under the “covered” status have been found to slip down to the “partially covered” or even “uncovered” status. As per the Ministry of Drinking Water and Sanitation, GoI, there are 11883 habitations in Kerala, of which 934 habitations have been slipped back in 2011-12. The highest frequency reported in Alappuzha with 19 percent, followed by Palakkad as 18 percent and then Kasargode by nearly 14 percent (**Appendix 4.83**).

4.178 Major reasons for this slipped back status may be the drying of sources, system working below rated capacity due to poor operation and maintenance, sources becoming quality affected, increasing in population resulting into lower per capita availability and the emergence of new habitations.

## Piped Drinking Water Supply

4.179 People in Kerala mainly rely on wells for their drinking water purpose. There are only 29 percent of the households dependent on the tap water system (Census 2011). Percentage of households depending on well water is 62, the Handpumps /Tubewells/Borehole water covers 4 percent and the remaining nearly 5 percent avail water from other sources. National average of people using tap water system is 43.5 percent. Neighboring states have made remarkable achievement in tap water system. Tamil Nadu provides tap water system for nearly 80 percent of people, Andhra Pradesh (70 percent) and Karnataka (66 percent).

**Fig 4.16**  
**Piped Drinking Water Access in Kerala**



Source : Census of India 2011.

4.180 Within Kerala, Kannur has the lowest access to tap system with nearly 12 percent of tap system, followed by Kasaragod having 13 percent and Malappuram 15 percent. Under well system, Kannur has the highest level of 81 percent followed by Malappuram with 78 percent and then Pathanamthitta as 74 percent (**Appendix 4.84**).

## Coverage

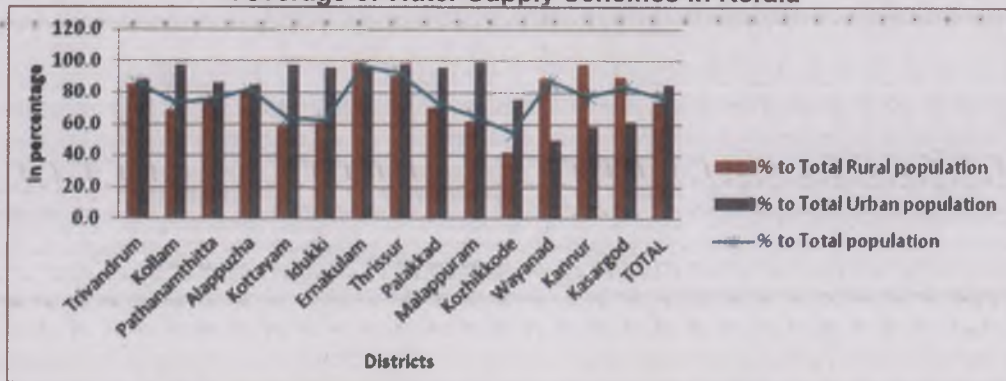
4.181 Kerala Water Authority (KWA) is the primary drinking water supplier in the state. It covers 94 percent of total piped water supply in Kerala. Other agencies which provide water supply in rural area are Kerala Rural Water Supply and Sanitation Agency (KRWSA) and Local Self Government Institutions (LSGIs). KRWSA and LSGIs have been ensuring community participation in implementation of water supply schemes by sharing the financial costs and taking responsibility in management, operation and maintenance to some extent.

4.182 Government of India has classified all habitations into three categories – Not Covered (NC), Partially Covered (PC) and Fully Covered (FC)\*. Since 2009, the service level has been left to the States to decide with the condition of basic 40 litre per capita per day (lpcd) level should be achieved

for all habitations before taking up higher norms for any area. The percentage of population covered by water supply schemes of KWA as on 31.03.2012. Ernakulam is the highest with 97 percent and Kozhikode is having the lowest coverage of little over 54 percent. (Appendix 4.85 ) For rural water supply coverage, again Ernakulam is the highest of 98 percent and Kozhikode is the lowest coverage of nearly 42 percent. In urban area, Malappuram is the highest covered district with 99 percent and Wayanad is the lowest one with 50 percent.

4.183 Additional coverage during the period 2011-12 was for 5.78 lakh people. The whole additional coverage is reported from rural water supply coverage by means of 19 additional Single Panchayat Schemes and 7 Multi Panchayat Schemes. There is no change in the number of urban water supply schemes during the period 2011-12. This rural additional coverage is reported from seven districts and the remaining seven districts have been reported as zero additional coverage. Thiruvananthapuram has the highest additional rural coverage of 1.83 lakh people, followed by Malappuram as 1.52 lakh people. Kozhikode is one of the zero additional coverage districts where the rural drinking water coverage is very low in Kerala.

Fig 4.17  
Coverage of Water Supply Schemes in Kerala

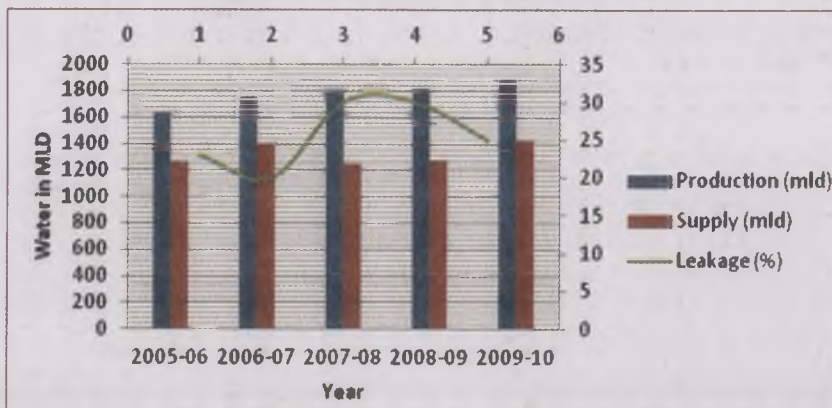


Source: Kerala Water Authority

## Production and Distribution of Water

4.184 Due to the lack of preventive maintenance and replacement of old pipes, a considerable portion of the produced water has been reported as distributional loss. As on 2009-10, Kerala Water Authority produced water at the rate of 1890.64 million litres per day (mlpd) and distributed at the rate of 1417.90 mlpd through piped water supply system. The unaccounted for water (ufw) is 543 mld, which implies that the estimated distribution loss of water produced is 25 per cent. Production and supply of water by Kerala Water Authority for the period 2005-06 to 2009-10 is given in the Fig. 4.18

Fig 4.18  
Production and Distribution of Water

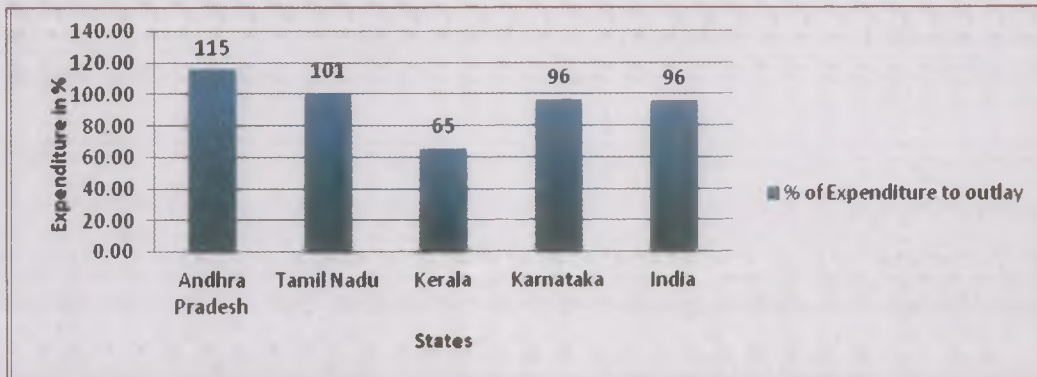


Source: Kerala Water Authority

## Plan Fund Utilization Pattern

4.185 During the XI<sup>th</sup> Plan, 10.68 percent of State Plan outlay was dedicated to water supply and sewerage development in Kerala, which is nearly 33 percent of the fund allotted to the social service sector. The State experienced barely 65 percent of expenditure against the national level of 96 percent\*. Performance of plan fund utilization of Kerala and other Southern States during the 11th Plan are given in Fig. 4.19

Fig 4.19  
XI<sup>th</sup> Plan Fund Utilisation Pattern



Source: Planning Commission, GoI

## Kerala Water Authority

4.186 Kerala Water Authority (KWA) is an autonomous body of Government of Kerala which implements various schemes by considering the need for extending the coverage of protected water supply in the State. As on 31/3/2012, there are 2188 water supply schemes operating under KWA. Of which 71 are urban schemes and 2117 are rural schemes. Among the rural schemes, 985 are Multi Panchayat schemes and 1132 are Single Panchayat schemes. Under urban water supply schemes Ernakulam holds greatest level of 14 Schemes, followed by Thrissur as 12 schemes. In rural water supply, Thrissur has the highest level of 147 Multi Panchayat schemes and 104 Single Panchayat schemes and Wayanad has the lowest level of 62 rural water supply schemes, of which 30 Multi Panchayat schemes and 32 Single Panchayath schemes (**Appendix 4.86**). Currently under NRDWP, KWA has 70 ongoing Accelerated Rural Water Supply Schemes (ARWSS) and 68 NC/PC schemes.

4.187 In decentralized planning, KWA has been undertaking deposit works from local bodies. As on 31.03.2012, there are 2270 ongoing works have been in different stages of implementation and most of these works are line extension proposals. A special package for the completion of ongoing Urban Water Supply Scheme (UWSS) was introduced by the government in 2009-10. Adding to that KWA introduced "Varsha", a rain water harvesting scheme. Since 2002, there are 4532 units of Varsha has been completed in four districts of Thiruvananthapuram, Apappuzha, Kottayam and Ernakulam.

## Expenditure Pattern of KWA

4.188 Plan fund is the major source of revenue of KWA, which accounts little over 40 percent of total receipts during the year 2011-12. Other sources of receipt for the same period are revenue from Water and Sewerage, which covers 30 percent of total receipt, the Non-Plan fund of state government coming around 17 percent, from Government of India nearly 11 percent and other sources around 2 percent (**Appendix 4.91**). Expenditure pattern of KWA shows that Plan expenditure has been decreased from 58 percent in 2007-08 to around 41 percent in 2011-12. Consequently, Non-Plan

\* FC - availability of water above 40 litre per capita per day (LPCD), PC - between 10 LPCD and 40 LPCD, NC - less than 10 LPCD.

expenditure increased from 42 percent to 59 percent. Component wise proportion of Plan and Non-Plan expenditure of KWA is given in Table 4.19. Inside Plan expenditure central assisted schemes and externally assisted schemes have obtained bigger portion in 2007-08. During 2011-2, ie. final year of the 11th Plan expenditure on State plan schemes acquired highest portion by little over 54 percent.

**Table No.4.19**  
**Plan and Non-Plan expenditure trend of KWA**

(In percentage)

	2007-08	2008-09	2009-10	2010-11	2011-12
<b>Plan Expenditure</b>					
State Plan Schemes	8.99	8.32	36.39	9.61	54.51
LIC/HUDCO	2.43				
Externally Assisted	75.83	74.25	50.57	48.43	40.50
Centrally Assisted	12.75	13.73	13.04	8.17	4.98
Others(if any)		3.70		33.78	
<b>Total Plan Expenditure</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Non-Plan Expenditure</b>					
Salary & Establishment	44.30	54.47	46.21	45.92	53.89
Power Charge	29.83	20.06	25.25	21.87	21.39
Operation & Maintenance	10.68	10.70	9.12	7.93	10.84
Interest on Loans	5.99	5.72	9.35	6.98	5.36
Repayment of Loans	7.59	7.43	8.72	16.11	7.29
Others	1.61	1.62	1.37	1.20	1.23
<b>Total Non-Plan Expenditure</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source: Kerala Water Authority

4.189 For Non-Plan expenditure salary and establishment is the major part which was 44 percent in 2007-08, which was increased to 54 percent in 2011-12. Even though expenditure on power charge has been reduced from nearly 30 percent to 21 percent, KWA is one of the major defaulters to Kerala State Electricity Board.

## JICA Assisted Kerala Water Supply Project

4.190 The JBIC assisted Kerala Water Supply Project currently known as JICA assisted Kerala Water Supply Project envisages the implementation of five water supply projects at Thiruvananthapuram, Meenad, Cherthala, Kozhikode and Pattuvam at a revised estimated cost of ₹.2987.40 crores. Twenty five contracts have been involved in the project and as on 31.08.2012, 89 percent of the work has been completed. The project covers a whole range of engineering aspects including water intakes, raw water pumping and transmission, water treatment plants, treated water pumping and transmission, service reservoirs, booster stations, distribution systems, various investigations and surveys and rehabilitation of existing treatment plants and pipelines. Allocation under JICA is the major source of plan fund for KWA. Budget provision under JICA for the year 2012-13 is ₹. 300 crore and the expenditure upto December 2012 is 49 percentage.

\* Expenditure during the period 2007-08 to 2010-11 is actual and expenditure for the year 2011-12 is anticipated.

## Jalanidhi Project

4.191 Jalanidhi is a World Bank aided rural water supply and Sanitation project. It is based on the cardinal concept of sector reform like demand responsiveness, community ownership and sustainability of investment through cost recovery. Kerala Rural Water and Sanitation Agency (KRWSA) is the implementing agency functioning under the Department of Water Resource, Govt. of Kerala. Activities under Jalanidhi are Small Water Supply Schemes, Comprehensive Water Supply Scheme, Construction of Latrine, Ground Water Recharge, Environmental Management Projects and Drainage works. There are 3694 small water supply schemes and 16 large water supply schemes commissioned under Phase one of the Jalanidhi scheme which covered 1.92 lakh of people. The second Phase of the scheme targets 18.4 lakh people from 200 grama panchayats. Physical performance of Jalanidhi project is given in the **Annexures.13.35 and 13.36.**

## 12<sup>th</sup> Plan Target

4.192 The demands of a rapidly industrializing economy and urbanizing society come at a time when the potential for augmenting supply is limited, water table is falling and water quality issues have increasingly come to the fore. The 12th Plan envisages many policy changes for providing drinking water supply schemes of both central and state governments. To achieve the ultimate goal of providing households with safe drinking water supply at the rate of 70 lpcd, 12th Plan has proposed to increase forty years service level of 40 lpcd to 55 lpcd. Participation of beneficiaries especially women, in water supply schemes will be ensured right from the conceptualization stage, spanning construction and post-scheme completion management stages. Capacity building of members of the village water and sanitation committee is of critical importance here. All government schools and anganwadls will be provided with water supply for drinking and for toilets as per the relevant quality norms by convergence of NRDWP for existing schools and through Sarva Siksha Abhiyan (SSA) for new schools set up under SSA. For private schools supply, water will be ensured by enforcement of the provision of the Right to Education Act by the Education Department. Mining activity should only be carried out at a safe distance from major drinking water sources to protect the quality and sustainability of the resources. Care will be taken to ensure that minimum distance is maintained between the toilet system and water resource to alleviate the problems of nitrate contaminations. Providing safe drinking water will be the basic priority for a healthy community all over Kerala.

## SECTION 6

### Gender Development

4.193 The Eleventh Plan placed considerable emphasis on gender auditing and gender budgeting of major development policies and programmes. Gender auditing is concerned with the assessment of the gender impact of policies and programmes not just in technical terms but also in terms of overcoming the personal and institutional biases in the culture of the relevant organizations which hinder the achievement of gender equality objectives.

4.194 The Twelfth Plan's emphasis is to increase women's employability in the formal sector as well as their asset base. It will improve the conditions of self employed women. Focus will be on women's workforce participation particularly in secondary and tertiary sectors, ensuring decent work for them, reaching out to women in agriculture and manufacturing, financial inclusion, and extending land and property rights to women.

4.195 The paradox of the status of women in Kerala lies in the confusion between 'gender equality' and 'gender equity'. The notion of gender equality assumes that the needs and interests of women and men are identical, whereas the notion of gender equity presumes they are different. Policies and plans should take this into consideration and the differential needs be addressed to achieve gender justice.

## The Status of Women in Kerala

4.196 It is widely acknowledged that women in Kerala are much better off than their counterparts elsewhere in India and development scholars point to past and current levels of female literacy and education, late age of marriage, declining fertility and greater life expectancy to establish this fact. In recent times, these 'conventional indicators' are under the scanner as various other indicators like decreasing sex ratio among 0-6 age group (male preference), work participation rate lower than the national level ratio, increasing violence against women and low political participation are becoming concerns.

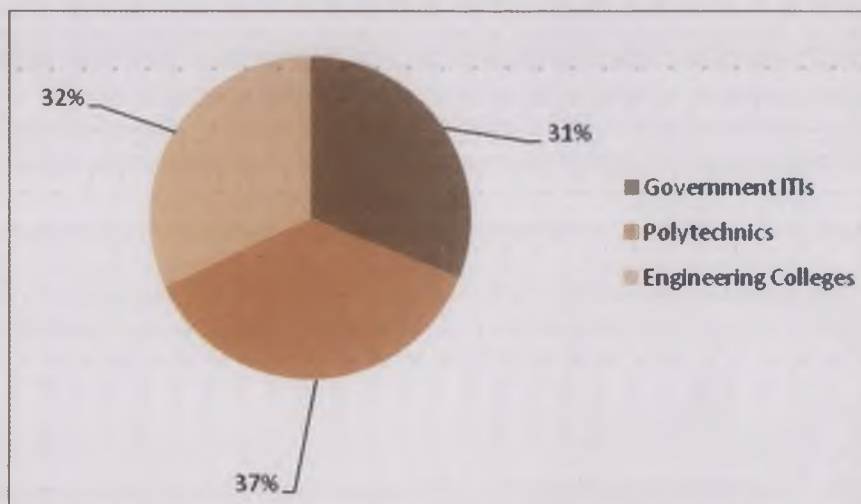
### Assets, Resources, Infrastructure

4.197 Lack of access to assets and resources is symptomatic of underlying discrimination, exploitation and exclusion. In Kerala which had a matriarchal tradition, most women do not own any property in their own names. Only 24 per cent women have operational landholdings. Women's control over and access to income from land is limited. Gender concerns should also reflect in infrastructure development as the needs and interests of men and women are different, especially in transport and urban infrastructure where it is vital to design projects with a "gender lens".

### Women in Technical Education

4.198 Rate of enrolment of women in professional and technical institutions is comparatively low. Admissions in Government ITIs cover only 29 per cent women students, Polytechnics 36 per cent women students and in Engineering it is 30 per cent. Girls from adivasi, dalit, fishing and minority communities are still lagging in education. The percentage share of women students in professional and technical institutions in Kerala is given in Fig. 4.20

**Fig. 4.20**  
**Percentage of Women Students in Professional Colleges in Kerala**



### Women in Governance

4.199 To measure women's empowerment, Gender Empowerment measurement (GEM) takes three indicators, women's participation in economic, political and professional activities. Within political power what is measured is mainly women in parliament, judiciary or in local bodies. It is also now often pointed out that women's empowerment must be seen as a process where in we must consider women's awareness, consciousness, choices with live alternatives, resources at their disposal, voice, agency and participation. These are all related to enhancement of women's capabilities and decisions they take individually or collectively for themselves.



4.200 Women representation is limited and inadequate in political parties, trade unions and in other positions of political power as well as in decision making processes in professional bodies. Among members of the legislative assembly, less than 10per cent are women. Kerala has twenty nine members in the Parliament out of which women representation is only one (only 3 per cent). Women representation both in mass organizations and high level committees of political parties is negligible. It is only because 50per cent representation for women was made mandatory to local governments, that we see so many women in local governance.

## State Women's Policy

4.201 The State Government has approved a women policy as per G.O. (MS) 13/09/SWD dated 17.02.09. The objectives of the Policy are declaring at least half of the panchayat and municipality areas in the State as zones where there are no crimes against women within two years and make Kerala as State that is free from offences against women in the next five years. To achieve this, Vigilance committee will be strengthened in every area of the State and one day and short stay homes will be established in all the cities. A Committee will be formed to examine loopholes in the laws meant to protect women and to submit its recommendations.

## Promoting Gender Mainstreaming through Gender Budgeting

4.202 Kerala has initiated the gender budgeting process at the Local Government level as far back in 1998 and mandated the Local Bodies to allocate at least 10per cent of the plan funds devolved by the State specifically for women (Women Component Plan). A Gender Budget exercise was done on the 2008-09 Kerala Budget. In Kerala, GB focuses on developing schemes that address women's specific needs and priorities and realigning other existing schemes to make them more gender responsive GRB come in to ensure that funds are made available for these schemes (or components that can contribute to gender equality within existing schemes) to the extent possible.

4.203 Gender Responsive Budgeting is mandatory for all the Departments. The mandatory allocation for women addresses the economic empowerment of women through the Self Help Groups (SHGs) and through income generation programmes under the poverty eradication mission of Government – the Kudumbasree.

4.204 Effective and equal participation in political process, representation in political bodies, legislatures, local bodies etc are the tool for ensuring participatory planning and budgeting. To facilitate women's participation in the public sphere, Gender Friendly Infrastructure has been formulated (Infrastructure used in a broad sense to include social infrastructure to facilitate women's participation in the economy as well in addition to physical infrastructure). Several departments are involved in this scheme including KSRTC, PWD, Police, Ports, Housing and also Health, Social Welfare and IT sector.

4.205 As the part of Decentralised Planning, Social Audit has been introduced in the LSGD level. It is one of the tools for effective monitoring and evaluation of the gender specific schemes. The gender budgeting tool has to be done through

- Spatial mapping of status of women and resources to ensure progressive and universal coverage
- Coordination of the flow of public resources to facilitate and ensure convergence of resources with synergy across and within various levels of Government

4.206 State government has taken certain initiatives in terms of women targeted schemes (gender responsive) through Flagship programmes in the 11th plan. These are the 1) gender awareness programmes including the implementation of the protection of women from domestic violence act 2)and the flagship programme on finishing schools for women (to enhance employability of women

through skill training. The total outlay earmarked for women accounted for only 5.5 per cent of the total state budget outlay in 2008-09, which is increased to 8.5 per cent in 2010-11 and 10 per cent in 2011-12.

## Gender Based Violence

4.207 The problem of gender based violence is getting worse. National Crime Records Bureau statistics shows that crimes against women has increased by 7 percent nationwide since 2010. There has been a rise in the number of incidents of rape recorded too. In 2011, 24,206 incidents were recorded, a rise of 9 percent from the previous year. More than half of the victims are between 18 and 30 years of age. Figures indicate that nearly 11 percent of total victims of rape were girls under the age of 14 and 18. Alarming, in almost 94 percent of cases, offenders were known to the victims and those involved included family members, relatives and neighbours. Due to "family honour" many complaints files are withdrawn and in many cases the police do not give a fair hearing.

4.208 In spite of all the positive indices of better quality of life, Kerala is ranked high in crime and suicide rates. As per the records of National Crime Records Bureau, the total rate of crimes is higher than that of the national average. The rate of violent crimes is high against children and women. Among the cities in Kerala, Kozhikode has the highest crime record followed by Thiruvananthapuram. The atrocities against women have also increased.

## Crime against Women

4.209 Violence against women is another important issue which affects the empowerment of women. To effectively deal with the problem of violence against women efforts are being made to strengthen the existing legislation through review and amendments and developing institutional mechanisms. Despite these numerous efforts, crimes against women in the country continue to rise. Although women may be victims of any of the general crimes such as 'Murder', 'Robbery', 'Cheating', etc, only the crimes which are directed specifically against women are characterized as 'Crimes against Women'. Various new legislations have been brought and amendments have been made in existing laws with a view to handle these crimes effectively. These are broadly classified under two categories.

### (1) The Crimes under the Indian Penal Code (IPC)

- (i) Rape (Sec. 376 IPC)
- (ii) Kidnapping & Abduction for specified purposes (Sec. 363 - 373 IPC)
- (iii) Homicide for Dowry, Dowry Deaths or their attempts (Sec. 302/304-B IPC)
- (iv) Torture - both mental and physical (Sec. 498-A IPC)
- (v) Molestation (Sec. 354 IPC)
- (vi) Sexual Harassment (Sec. 509 IPC)
- (vii) Importation of girls (upto 21 years of age) (Sec. 366-B IPC)

### (2) The Crimes under the Special & Local Laws (SLL)

4.210 Although all laws are not gender specific, the provisions of law affecting women significantly have been reviewed periodically and amendments carried out to keep pace with the emerging requirements. The gender specific laws for which crime statistics are recorded throughout the country are –

- (i) Immoral Traffic (Prevention) Act, 1956
- (ii) Dowry Prohibition Act, 1961
- (iii) Indecent Representation of Women (Prohibition) Act, 1986
- (iv) Commission of Sati (Prevention) Act, 1987

4.211 The rate of crime against women meant number of crimes against women per one lakh population. NCRB's "Crime in India 2011" report has ranked Kerala next to Assam with 33.8 per

cent rate of crime against woman. Andhra Pradesh and West Bengal were placed at fourth and fifth positions respectively. Andhra Pradesh has registered 33.4 per cent of crimes against women last year while West Bengal stood at 31.9 per cent. The NCRB report further said that there were 2, 28, 650 incidents of crimes against women in the country out of which Assam registered 11, 503 incidents. Nagaland has the lowest rate of crime against women among the north eastern states with only 1.9 percent. NCRB registered only 38 cases of crime against women in 2011. The crime against women for the year 2010 is given in the Table 4.20

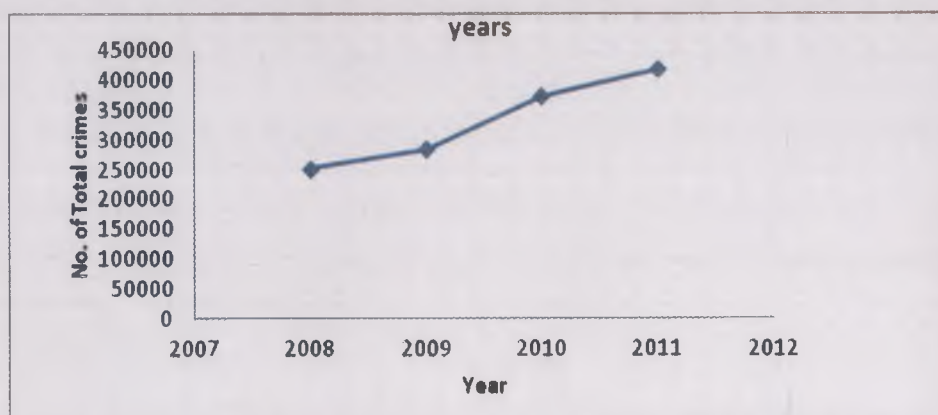
**Table 4.20**  
**Crime against Women in India 2010**

Sl. No	Crime	Case Reported	per cent to total IPC Crimes	Rate of crime	Charge sheeting rate	Conviction Rate
1	Kidnapping & Abduction of Women and Girls	29795	1.3	2.5	74.2	28.1
2	Molestation	40613	1.8	3.4	96.7	29.7
3	Sexual Harassment	9961	0.4	0.9	96.7	52.0
4	Cruelty by Husband and Relatives	94041	4.2	7.9	94.2	19.1
5	Importation of Girls	36	0.0	0.0	90.6	20.0
	Total Crime Against Women	213585	9.6	18.0	92.0	27.8

Source: Crime in India, 2010

4.212 The total number of Crime against women (both IPC and SLL Cases) in Kerala for the last four years is given in Fig 4.21

**Fig 4.21**  
**Total Number of Crimes reported in Kerala for the last 4 years**



4.213 Gender sensitivity of a society embraces a whole gamut of concerns. In fact, Gender sensitivity level of a community would include not only the status women occupied in family, work place and public sphere but also other gender equations. This could be in the form of deeply entrenched discrimination against the female sex, mirrored by the media too, the extent to which the local bodies and state governments are willing to allocate resources through gender budgeting for the upliftment of women so on and so forth. The entire issue hinges on the extent to which the society/community is conscientised (and the level of sensitisation of male is vital indicator) and that is the factor that would ultimately lead to the empowerment of women in all spheres of activity in society.

## SECTION 7

### Welfare of Scheduled Castes, Scheduled Tribes Other Backward Classes and Minorities

4.214 The upliftment of the socially and economically backward sections of the society especially the Scheduled Castes and Scheduled Tribes and Backward Communities has been a major challenge to the successive Governments since Independence. Reservation in jobs and admission to educational institutions alone are not sufficient to solve the problem. The fact that the educational and social backwardness of SCs/STs deprive them to get the benefits of the schemes announced in the plan and budget led to Governments implementing separate schemes for their welfare, which eventually resulted in the introduction of Special Component Plan and Tribal Sub Plan in its present form. Compared to the status of SCs/STs at national level, in Kerala their position regarding sex ratio poverty, literacy and number of slum dwellers is better. **Appendix. 4.96** presents comparison of the national and state level status.

4.215 As per Census 2011 Scheduled Caste Households in Kerala have much greater access to banking services, Landline Phones, Computers with Internet and Car than an average Scheduled Caste household in India **Appendix.4.97**. Compared to other Southern States of Tamil Nadu, Karnataka, and Andhra Pradesh, only SC households in Tamil Nadu have greater access to Televisions than those in Kerala. SC households in Kerala do not seem to have as much access to two wheelers as other SC households in India. While more than 22per cent of SC households in India did not have access to any of these assets, Kerala performed better as only around than 11per cent of SC households were deprived of these assets.

4.216 Similarly in the case of Scheduled Tribes, these households in Kerala have much greater access to banking services, Television, Computer with Internet, Land line and car than an average scheduled Tribe household in India **Appendix.4.98**. Compared to other southern states only Scheduled Tribe households in Tamil Nadu has greater access to Televisions, Computer with Internet, Landline Phones and Car than Kerala. Scheduled Tribes households in Kerala do not seem to have as much access to two wheelers as other Scheduled Tribe households in India. While more than 37per cent of Scheduled Tribes Households in India did not have access to any of these assets, Kerala performed better as only around 24per cent of Scheduled Tribes household being deprived of these assets.

4.217 Thus Scheduled Caste and Scheduled Tribe households in Kerala have a better standard of living than their counterparts in the rest of the country. However Tamil Nadu has shown an even better standard of living for Scheduled Tribe households than Kerala.

4.218 In Kerala there are 53 communities which belong to Scheduled Caste as per the Amendment Act of 2006 to the Constitution of India. The settlement pattern in Kerala is entirely different from that of other states and a major portion of the Schedule Caste population lives in scattered households with other people and only a small portion live in concentrated colonies, in which very limited number are isolated. The highest distribution of Scheduled Castes is in Palakkad District (13per cent) followed by Thiruvananthapuram (12 per cent), Thrissur (11 per cent) and Kollam (10per cent). 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 per cent) followed by Idukki (14 per cent) and Palakkad (11per cent) and these three districts together account for over 60 per cent of STs in the State. The coastal district of Alappuzha has the lowest percentage (0.15per cent). Details are given in **Appendix 4.99** District wise Scheduled Caste/Scheduled Tribe population details are given in **Appendix.4.100**.

## Occupational Pattern

4.219 **Appendix 4.101** shows that while only around 26 per cent of total population were main workers as per 2001 Census, the corresponding figures for SC and ST population are around 30 per cent each indicating that a moderately high proportion of the disadvantaged groups are workers. The ratio of female workers belonging to SCs and STs is almost double than that of general 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, underemployment and deprivation among the population.

4.220 An analysis of the available data indicates excessive dependence of STs on agriculture (55 per cent) for their livelihood as against just 20 per cent for the total population and for SCs the corresponding figure is 31 per cent. Other services is the source of income for 77 per cent of the total population, while this sector offers livelihood for only two third of the SC population. The above analysis of the occupational pattern shows that the SC population is closely following the general population with regard to the change in occupational structure that has been taking place in the Kerala economy while the ST population is far behind in this respect.

4.221 In Kerala, as per Rule 14(a) of the Kerala State and Subordinate Service Rules 1958, 8 per cent reservation in Public service is provided to SCs and 2 per cent to STs. It shows that SC/ST had already achieved more than 10 per cent reservation in all the three categories. But ST candidates alone had not achieved 2 per cent reservation in State service. Details of representation of SC/ST employees in Government service is given in **Appendix 4.102**

## Development Programmes for Scheduled Caste and Scheduled Tribes

4.222 Kerala Government earmarks funds for SCP and TSP from State Plan outlay in proportion to the ratio of population of Scheduled Castes and Scheduled Tribes to total population of the State. Out of the total SCP/TSP Plan outlay, a certain percentage of funds are allocated to Local Self Government Institutions for implementation of schemes under Decentralized Planning. A portion of funds was considered as Notional Flow to other departments till 2008-09. This was meant for implementing schemes exclusively for SC/ST population in the respective sectors. As this experiment was not found successful, the concept of Notional Flow was dispensed with from the Annual Plan 2009-10. A system of earmarking certain amount of SCP/TSP as pooled fund under SCP and TSP for taking up schemes adopting a project approach was introduced. This gives scope to get wide range of schemes with varied objectives and physical targets, which put together, will help the all round development of the target groups. The total plan provision set apart for the development of Scheduled Caste and Scheduled Tribes during 2012-13 was ₹ 1289.21 crore and ₹ 312.41 crore respectively. Year-wise details of SCP/TSP Outlay from 2007-08 to 2012-13 are given in **Appendix 4.95** In the first year of the 12th Plan (2012-13) there was 89 per cent increase in outlay for SCP and 125 per cent increase in outlay for TSP compared to the first year of the 11th Plan (2007-08).

Fig 4.22  
SCP/TSP-Yearwise Outlay



4.223 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

4.224 During the year 2011-12 a total of ₹ 648.44 crore was given to Local Governments as plan grant under Special Component Plan and ₹ 97.31 crore as Tribal Sub Plan. Budget provision of SCP/ TSP through LSGs during 2012-13 is given in **Appendix 4.104**

Fig. 4.23  
Budget Provision of SCP through LSGs 2012-13

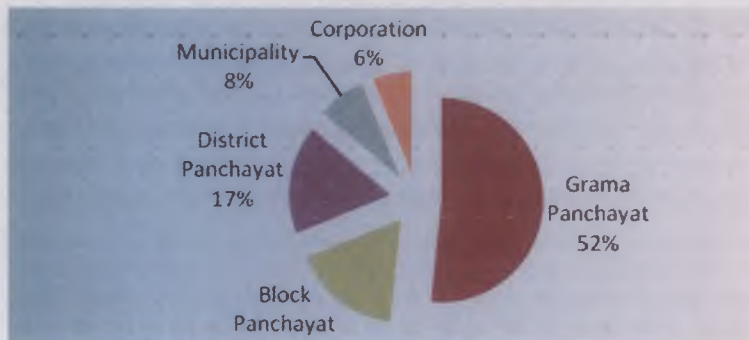
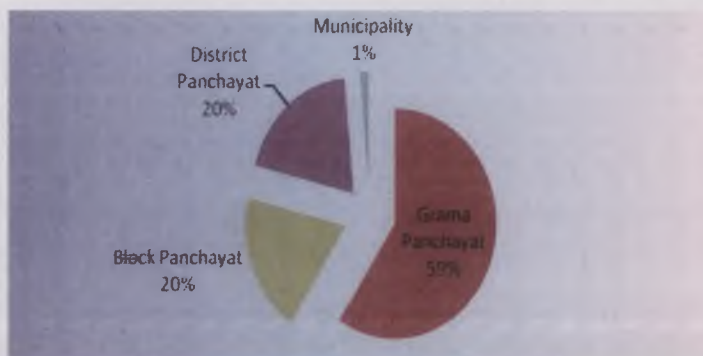


Fig 4.24  
Budget Provision of TSP through LSGs 2012-13



## Programmes of Scheduled Caste Development Department

4.225 State Schemes and Centrally Sponsored Schemes as well as the projects taken up under corpus fund and pooled fund are the programmes implemented by the Scheduled Caste Development Department for the welfare of Scheduled Castes. During 2012-13 the total State Plan provision set apart for the development of Scheduled Castes is ₹ 1289.21 crore. Out of this, ₹ 549.75 crore is earmarked as State Share for development programmes of the SC Development Department. An amount of ₹ 739.46 crore is provided as Development fund to local bodies. An amount of ₹ 17.00 crore is 100per cent CSS and the Central Share of 50per centCSS is ₹ 13.37 crore during 2012-13. In addition to this ₹ 10 crore is included in the budget as Special Central Assistance to SCP.

4.226 The State and Central government programmes cover a wide area comprising education, economic and social welfare activities for the development of Scheduled Castes which has produced favourable results in these areas. Scheme wise outlay and expenditure for welfare of Scheduled Castes for 2011-12 & 2012-13 and the physical targets and achievement are given in **Appendixes 4.105 and 106** respectively.

### Educational Schemes

4.227 The Scheduled Caste Development Department is implementing various educational schemes such as pre-matric scholarships, post-matric scholarship, running/construction of Model Residential Schools, assistance to students studying in self financing colleges etc. During 2011-12, pre-matric educational concessions to ₹ 4.51 lakh students and post-matric concessions were given to more than 1.28 lakh students. An amount of ₹ 95.39crore has been spent towards stipend and lump sum grant and an amount of ₹ 19.92 crore has been spent for providing scholarship for post matric students. The details of educational assistance given to SC students are shown in **Appendix. 4.107**

### e-Grants

4.228 One of the major achievements in education sector is the introduction of e-Grantz for the online distribution of educational concessions to the students belonging to the weaker sections of the society. As a pilot project, the web based scholarship distribution system was introduced among 3000 SC students in 52 post-matric institutions in Alappuzha district during 2008-09 in association with State Bank of India. This project was extended across the whole of Kerala during 2010 and is benefiting students of 3450 educational institutions in the State. The project helps the students for getting assistance through ATMs. During the year 2011-12, SBI eZ-pay card has been introduced for disbursement of students entitlements, which enables speedy disbursement eliminating the delay in opening individual bank account for students.

### Housing Scheme

4.229 The department is giving housing assistance @ ₹ 200000 for constructing a house from 2011-12.

4.230 The details of houses sanctioned and constructed during the period from 2008-09 to 2011-12 are given in **Appendix. 4.108** In 2011-12 3500 houses were sanctioned and 416 houses completed.

### e-Housing

4.231 The Department of Scheduled Caste Development has launched e-Housing, an online system of granting financial aid for house construction to the Schedule Castes. The e-Housing website was launched on February 27, 2011. After the successful implementation of e-Grantz, this is another step forward in e-governance for the Kerala Scheduled Caste Development Department. E-Housing will make the whole process of sanctioning and distribution of monetary assistance under the Bhavana Nirmana Dhanasahayam Scheme time-bound, efficient, transparent and easy as 90per cent of the work will be done online by the software.

## Land to Landless

4.232 The policy of the Government is that all the Scheduled Castes will be provided with land for construction of house. The scheme intends to purchase land to the poor and eligible landless Scheduled Castes for construction of house. An amount of ₹ 6827.67 lakh was provided during 2011-12 and the expenditure incurred was ₹ 6826.92 lakh benefitting 4504 persons. The amount provided under land to landless (ACA) is ₹ 1432 and the expenditure is ₹ 1432 lakh. District wise details are given in **Appendix.4.109**

## Health Scheme- Financial Assistance to Seriously Ill People

4.233 Illness assistance is granted up to ₹ 25,000/- to the Scheduled Castes, who are below poverty line and suffer from serious diseases like Cancer, Heart/kidney/brain ailments. During 2011-12, financial assistance was given to 7954 persons.

## Development Programmes for the Vulnerable Communities among Scheduled Castes

4.234 The objective of this scheme is rehabilitation of landless and homeless SCs belonging to vulnerable communities viz. Vedan, Vettuvan and Nayadi. This scheme has the following provisions.

- Assistance of ₹ 100000/- for house construction and ₹ 150000/-for purchase of 5 cents of land in Grama Panchayat area ( ₹ 1.75 lakh in municipalities and ₹ 2 lakh in corporation area). If fewer amounts are incurred for the purchase of land, the remaining amount can be utilized for the construction of houses.
- The amount provided is also meant for meeting the expenses in connection with the provision of education, treatment, drinking water, electricity etc, to the vulnerable groups.

4.235 During 2011-12, ₹ 1044.21 lakh was provided in the budget and the expenditure incurred ₹ 1045.07 lakh. Apart from this scheme, another scheme is being implemented under one time ACA for the rehabilitation of the most economically, socially and educationally backward communities viz. Vedan, Nayadi, Kalladi and Chakkilian. Majority among them are landless and living in huts in 'Purambok' area and are in starving conditions.

## Self Employment Scheme

4.236 Assistance is given under self employment projects for promoting new ventures among Scheduled Castes in the ratio of 1:2 as subsidy and loan for taking up productive service, market oriented projects. The amount provided for the year 2011-12 was ₹ 807 lakh and the expenditure was ₹ 756.30 lakh benefitting 693 person. Details of district -wise assistance given under self employment scheme from 2008-09 are given in **Appendix 4.110**

## Assistance for Marriage of SC Girls

4.237 In order to reduce the burden of marriage expenses of daughters of SC parents, assistance is given under this scheme. Priority is given to the daughters of widows, unwed mothers and impoverished parents. During 2011-12 an amount of ₹ 1607.82 was provided and the expenditure incurred was ₹ 1602 lakh benefitting 7744 persons.

## Protection of Civil Rights and Enforcement of Prevention of Atrocities Act

4.238 The activities proposed under this scheme are:



- Conducting awareness camps at Grama Panchayat level highlighting the need for protection of civil rights of Scheduled Castes and enforcement of Prevention of Atrocities Act.
- Producing documentaries highlighting the evils of untouchability against Scheduled Castes.
- Providing assistance to inter-caste married couples for starting economic and income generation activities. During 2009-10 inter-caste marriage assistance was enhanced to ₹ 50000/- from ₹ 10000/-. The expenditure incurred was ₹ 11.18 crore benefitting 3052 persons.
- Celebrating Temple Entry Proclamation day
- Conducting exhibition and procession in connection with Social Solidarity Fortnight

4.239 The number of cases of harassment/atrocities towards Scheduled Castes in the State for which compensation has been granted during the last five years are given in **Appendix 4.111**

- The nature of these harassment/atrocities are social harassment, sexual exploitation, insult, intimidation and humiliation, outraging the modesty of woman causing injury and insult or annoyance, giving false evidence, etc.
- Three Special Mobile Squads are functioning at Palakkad, Wayanad and Kasaragod to deal with atrocities towards Scheduled Castes more effectively.
- Two Special Courts function at Kalpatta and Manjery
- Atrocity Prone areas are Wayanad, Kasaragod and Attappady in Palakkad.

4.240 According to the National Crime Records Bureau, the year 2011 has witnessed an increase of 30.5 per cent in the incidence of crime committed against Scheduled Castes in Kerala. 583 cases reported in 2010 have increased to 761 cases in 2011. The rate of crime against Scheduled Castes has increased to 2.3 per cent in 2011 as compared to 1.7 per cent in 2010. Details are given in **Appendix 4.112**

#### **Box 4.14**

#### **New Initiatives in SC Department during 2012**

##### **Vijnjanvadi**

The scheme aims at providing library, reading room, computer with internet facility, dailies and periodicals and necessary furniture to each and every Scheduled Caste colonies in the State. Initially Vijnjanvadis will be started in colonies having infrastructure facilities such as community hall. In other colonies, infrastructure facilities will be provided under the scheme

##### **Toilet**

The Scheme aims at providing toilet facility to 25000 SC families who do not have hygienic toilets at their home.

##### **Modernization of Pre-matric Hostels**

In 2012-13, SC students of professional courses admitted on the basis of merit list issued by the Government will be provided with Laptop Computers. Under this scheme 450 MBBS students and 5100 Engineering students will be getting Laptop.

##### **Vision 2013**

Under this programme, all the Scheduled Caste students who have secured A+, A, B+ and B grades in 10th standard will be given special coaching for appearing for the medical and engineering entrance examination on 2013 through reputed coaching centres.

## Critical Gap Filling (Corpus Fund)

4.241 This Scheme intends to provide funds for filling critical gap in the SCP provision made under various schemes on project basis with emphasis on human resource development, basic needs, economic development etc. Two thirds of the outlay will be allocated to districts on population proportion basis. Schemes /projects up to ₹ 25 lakh will be cleared by the District Level Committee for SC/ST. Project above ₹ 25 lakh will be cleared by State Level Working Groups/ Special working Groups. Outlay and expenditure under the scheme during 11th plan period is given **Appendix 4.113. and Appendix.4.114**

**Fig. 4.25**  
**Corpus Fund Allocation from 2007-08 to 2012-13**



## Pooled Fund

4.242 A system of earmarking certain amount of SCP/TSP as pooled fund under SCP and TSP for taking up schemes adopting a project approach was introduced. This gives scope to get wide range of schemes with varied objectives and physical targets which put together will help the all round development of the target groups.

4.243 Various development departments and agencies should submit projects to State Planning Board for consideration. After vetting by Planning Board, it will be forwarded to Scheduled Caste/ Scheduled Tribe Development Department. Outlay and Expenditure under the scheme are given **Appendix.4.115**

## Special Central Assistance to Special Component Plan (SCA to SCP)

4.244 The Special Central Assistance to Special Component Plan for Scheduled Caste is provided by Government of India to States for undertaking mainly economic development programmes for Scheduled Castes. It is not on a schematic pattern. It will help to fill the gaps which the flows from the Central, State and Local body plans are not in a position to fill. Out of the total funds received under SCA to SCP, 75 percent will be distributed to the District Collectors on the basis of Scheduled Caste population in the districts. The balance 25 percent will be kept with the Director; Scheduled Caste Development. Activities that can be taken up under SCA are to assist Scheduled Caste families for taking up viable income generating activities, through a mix of institutional finance and subsidy. The families may be provided assistance under SCA in a manner similar to those admissible under Swrnjayanthi Gram Swarozgar Yojana. The outlay and Expenditure details of SCA to SCP from 2007-08 to 2012-13 are given in **Appendix 4.116**

## Scheduled Tribe Development

4.245 From Fifth Five Year Plan onwards (from 1974-75) Tribal Sub Plan is in existence in the State for the overall development of STs in the State. This strategy has undergone several changes since 1974-75 and now it reached a stage in which it has proper linkages with the present Panchayat Raj and Nagara Palika System of administration. As per the TSP strategy the state has been allocating an amount which is more than proportional to the TSP population in the State.

### Programmes of Scheduled Tribe Development Department

4.246 An amount of ₹ 186.88 crore was earmarked during 2011-12 for the development programmes of the ST Development Department and the expenditure was 143.39 crore.(76 per cent) The total state plan provision set apart for the development of Scheduled Tribes during 2012-13 is ₹ 312.41 crore. Out of this ₹ 201.43 crore was earmarked as state share for the development programmes of the ST Development Department. An amount of ₹ 110.98 crore was provided as grant in aid to local bodies. For the 50 per cent and 100 per cent CSS Schemes Central Share is ₹ 20.17 crore and ₹ 48.67 crore respectively. In addition to this ₹ 6 crore is included as Special Central Assistance to TSP with state budget. Details of Financial and Physical achievements of schemes implemented by the department during 2010-11, 2011-12 and 2012-13 are given in **Appendices 4.117, 4.118, 4.119 and 4.120**

### Educational Programmes

4.247 Educational backwardness is the main hurdle in the socio economic progress of the Scheduled Tribes and hence top priority is given for their educational development and about 50 per cent of total budget provision (both plan and non-plan) is set apart for this. The department is distributing educational concessions, scholarships and other kinds of assistance to the tribals from preprimary to post graduate level. Apart from exemption from all kinds of fee, they are given lumpsum grant meant for the purchase of books, stationery and dress materials and monthly stipend at varying rates. There are nearly 82120 pre-matric and 11383 post- matric tribal students in the State.

4.248 Educational concessions, scholarships and other kinds of assistance are provided to tribal students from preprimary level to postgraduate level. Details showing the number of ST students benefitted and amount spent during 2007-08 to 2012-13 are given in **Appendix 4.121**

4.249 With a view to provide residential education to tribal students from remote areas the ST Development Department is running 107 pre-matric hostels and 3 post matric hostels in the State for providing boarding, lodging and tuition facilities. There are 29 single teacher schools for providing pre-primary education to tribal students living in very remote and inaccessible areas. Of these 27 are in Idukki District.

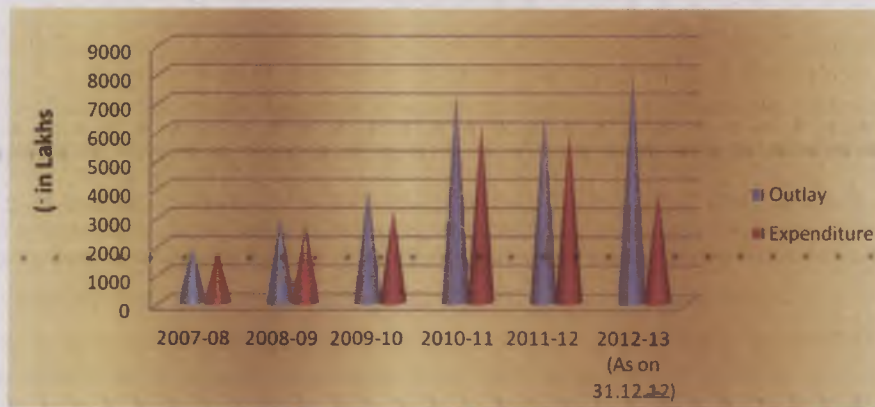
4.250 For providing pre-primary education to the tribal students, 13 kindergartens and 24 Balawadies are functioning under local self government and the ST department respectively. The nutritional requirements of the children are taken care of to a great extent in these institutions. The Department also runs 19 training centres for imparting job oriented technical training. At present 2per cent of the total seats in educational institutions are reserved for ST students.

4.251 In order to provide quality education to ST students, 18 Model Residential Schools are functioning under this department viz., 15 Ashram Schools in Tribal Sub Plan areas and 2 Ekalavya Model Residential Schools and one special Model Residential[CBSE] school (100per cent Assistance under Art. 275[1]). The Model Residential schools could achieve impressive results in the SSLC examination 2009. Also under the Ayyankali Memorial scheme, selected students from STD. IV and VIII are provided with continuous special tuition and counseling. For imparting primary education to primitive tribe children living in remote tribal settlements, 16 centres are functioning under the scheme "Peripatetic Education Centers of PTG's".

4.252 The Department provides tuition fee to ST students who got admission to professional course in self financing colleges under government quota. The plan outlay & expenditure during 2007-08 to 2012-13 in respect of educational sector are furnished in **Appendix.4.122**

4.253 The details of lumpsum grant, stipend, scholarship etc to Scheduled Tribes students are given in **Appendices 4.123 and 4.124**

**Fig 4.26**  
**Outlay and Expenditure of Education Sector for ST (Plan)**

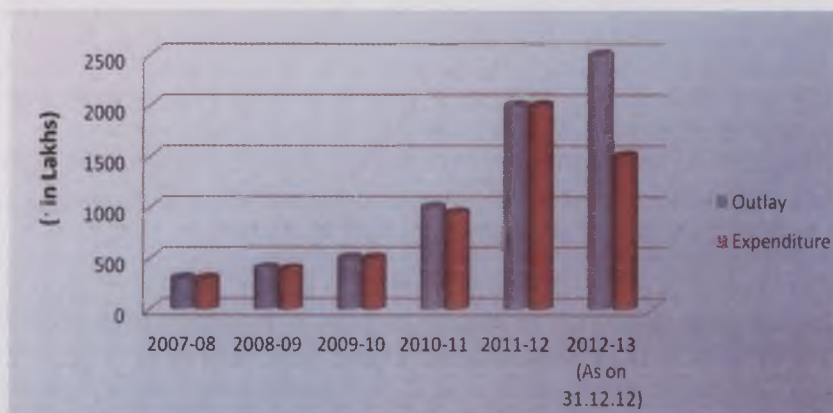


## Housing

4.253 During the XI<sup>th</sup> Five Year Plan, top priority was given for providing houses to all houseless STs in the state. In the XI<sup>th</sup> Plan, it is proposed to construct houses to all houseless families in a time bound manner. The ST Development Department, Tribal Resettlement and Development Mission, Rural Development Department [IAY Scheme] and the local bodies are the major agencies involved in the tribal housing area in the State.

4.254 The outlay and expenditure of the housing schemes under plan implemented by the Department during the period 2007-08 to 2012-13 are given in **Appendix .4.215**

**Fig 4.27**  
**Housing Programmes undertaken by ST Development Department**



4.255 District wise details of houses constructed by the ST Development Department for 2006-07 onwards are given in **Appendix 4.126**

## Health

4.256 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, 3 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 are now functioning well. Apart from the PHCs and Ayurveda Dispensaries, Homoeo Dispensaries are also functioning in tribal areas under TSP of the respective Department. 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 per cent of the tribal families in Wayanad and Palakkad Districts have traits of the genetical problem "Sickle Cell Anaemia". In order to tackle the problem, Kozhikode Medical College has set up a Sickle Cell Anaemia unit with Electrophoresis machine.

4.257 Outlay and expenditure of health programme (Plan) for the period 2002-03 to 2012-13 are given in the **Appendix 4.127**

## Resettlement of Landless Tribes

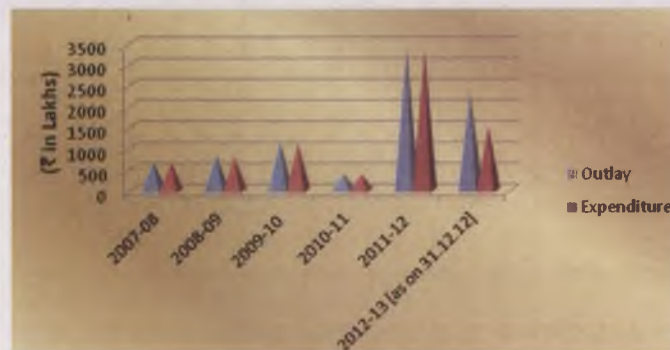
4.258 A special scheme for providing land to the landless and houses to the houseless is being implemented in the state. As part of the resettlement of landless, Tribal Resettlement and Development Mission (TRDM) has been formed to undertake rehabilitation activities based on a Master Plan. They have identified 22052 landless tribal families and 32131 families with less than one acre of land. Land distribution was inaugurated on 1/1/2002 and TRDM could so far distribute 8966.34 acres of land to 6800 tribal families as shown in **Appendix.4.128**

## Corpus Fund

4.259 An amount of ₹ 3363 lakh out of the Corpus Fund of ₹ 3355.85 lakh was expended during 2011-12 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 etc. Statement showing the outlay and expenditure under Corpus fund from 2007-08 to 2012-13 is given in **Appendix 4.129** and the details of schemes taken during 2011-12 and 2012-13 are given in **Appendices 4.130 and 4.131**

**Fig 4.28**

**Outlay and Expenditure under Corpus fund from 2007-08 to 2012-13**



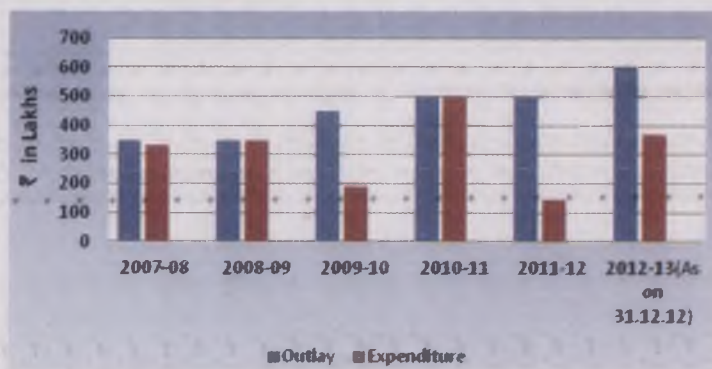
## Pooled Fund for Special Projects Proposed by Other Departments under TSFP.

4.260 During 2012-13 an amount of ₹ 1250 lakh was provided under the scheme Pooled Fund for special projects proposed by other departments. The expenditure as on 31.12.12 is ₹ 796.62 lakh.

## Special Central Assistance to Tribal Sub Plan (SCA to TSP)

4.261 The Special Central Assistance to Tribal Sub Plan released by Government of India 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. 70per cent of the fund has been utilized for implementing primary schemes supporting family/SHG/Community based income generation activities and 30per cent used for critical infrastructure in the sectors of Drinking Water, Watershed management etc.

**Fig. 4.29**  
**Outlay and Expenditure under SCA to TSP during 2007-08 to 2012-13**



## Co-operation

4.262 The SC/ST cooperatives were formed aiming at the overall improvement of the socio-economic conditions of SCs and STs. Through these societies loans are being released and other activities are done. Minor forest produce procurement and sales, other activities like Ayurdhara and Petrol pump are being undertaken by the Kerala State Federation of SC/ST Development Cooperative Limited.

## Kerala Institute for Research Training and Development Studies for SC/ST (KIRTADS)

4.263 The Institute conducts research and intensive study on Scheduled Caste and Scheduled Tribe population of the state.

4.264 Anthropological investigation on doubtful community cases as requested by Scheduled Tribe Development Department, Scheduled Caste Development Department, Revenue Divisional Officers, Tahsildars and District Collectors has also been undertaken by the wing.

4.265 The training wing of KIRTADS coordinates and conduct a large number of programmes to promote Tribal Development. This wing also conducted many orientation programmes, capacity building programmes, empowerment programmes and educational programmes.

## Welfare of Other Backward Classes

4.266 Government of Kerala created a separate department in November 2011 to look after the welfare of socially and economically backward communities of the society. Though the Directorate of this Department was created at the end of the financial year 2011-12, it implemented two major educational schemes, Pre-Matric and Post-Matric Scholarships with the help of Scheduled Caste Development Department.

4.267 During 2011-12, Pre-Matric educational concession to the students of backward Communities was a pilot scheme of the Department. The State Government contributed ₹ 49 crores for the Scheme (50 per cent CSS). An amount of ₹ 13.31 crores was disbursed for Post-Matric Scholarships (100 per cent CSS)

### Development Programmes 2012-13

4.268 During 2012-13, the total amount provide for the welfare of Backward Communities Development Department is ₹ 31.18 crores. Of this ₹ 36.84 crores was earmarked as State share for "Development Programmes" of Backward Communities Development Department.

4.269 This Department has implemented various educational schemes such as Pre-Matric (50per cent CSS) and Post-Matric Scholarship (100per cent CSS) for OBC students, OEC Pre-Matric and Post-Matric Scholarship during 2012-13.

4.270 Backward Communities Development Department has introduced e-grantz for distribution of educational concession to students belonging to Backward Communities.

4.271 Budget 2012-13 has earmarked ₹ 1 crore for giving financial assistance to traditional Pottery workers and an amount of ₹ 0.37 crores is envisaged for giving financial assistance to law graduates belonging to Backward Class facing financial difficulties for starting practice as advocates.

### Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes

4.272 The Corporation, with its Registered office at Thrissur, functions through 14 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 innovative and viable income generating activities and earn their livelihood and thereby improve their socio-economic status in the society.

4.273 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.

4.274 The scheme wise details of physical and financial achievements of the Corporation are given in **Appendix 4.132**

### Kerala State Backward Classes Development Corporation

4.275 The Corporation aims at the socio-economic upliftment of the backward classes and minorities in the state.

4.276 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. The source-wise expenditure and the physical achievements of the Corporation during 2010-11 and 2011-12 are given in the **Appendix 4.133**

## Kerala State Development Corporation for Christian Converts from Scheduled Castes and the Recommended Communities

4.277 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 year wise disbursement of State Government assisted loan schemes for the last 11 years are given in **Appendix 4.134**.

4.278 The scheme wise details of physical and financial achievements of the corporation are given in **Appendix 4.135**

## Welfare of Minorities

4.279 The Minority Welfare Department was constituted for addressing the social economic and educational backwardness of Minority Communities in the State. An amount of ₹ 2000 lakh was earmarked to Minority Welfare Department during the year 2012-13 for various programmes. The major schemes are (i) Multi sectoral Development Programme (MSDP). (ii) Empowerment of women through Women Self Help Group.

## Kerala State Minority Development Finance Corporation

4.280 The State Government constituted the State Minority Development Finance Corporation to provide financial assistance to income generating projects, housing finance educational loans, vocational training etc to minority community.

## State Minority Commission

4.281 In the model of National Minority Commission, Government of Kerala have decided to constitute State Minority Commission.

## Outlook for Social Services in Kerala

4.282 The State Plans to implement people – centric policies with care and compassion. Inclusive growth, poverty alleviation and improvement of economic and social status of marginalized sectors is the foundation of development planning in the 12<sup>th</sup> five year plan. Kerala is a beacon of hope for the rest of the country in terms of what can be achieved in the social sector. Great strides have been made in primary and secondary education, infant and maternal health, provision of social security and in the care of the marginalized and vulnerable sectors of society viz. SC, ST, Minorities, Elderly, Women and Children. Nevertheless, in order to ensure that the quality of life in Kerala continues to be high, some major concerns have to be addressed effectively through targeted Government interventions and community support. These areas are falling child sex ratio, poor alignment between higher education and employability, lack of adequate medical and paramedical personnel, growing problem of life-style diseases, special needs of a rapidly ageing population, increasing stress and mental health related problems of the people, growing insensitivity and violence towards women, and alcoholism related problems faced by the society. Access to affordable health care for all is a major priority. All these issues have been in the forefront of planning and policy making in the State but will require greater involvement of community groups to complement the initiatives of the Government.





5  
CHAPTER

INFRASTRUCTURE





# INFRASTRUCTURE

## Introduction

*Infrastructure is the backbone of all development activities. It improves the well-being of the residents and impacts their daily life directly as well as indirectly. This Chapter includes sections on Transport, Energy, Urban infrastructure, Communication infrastructure, IT, Sports infrastructure, Housing and on Information and Publicity. The critical importance of this sector in Kerala, the main accomplishments of this sector during the 11th Plan (2007 -2012), the major challenges faced by the sector and some of the major schemes introduced to tackle these challenges are brought out in this chapter.*

*In Transport sector, the main concerns brought out are lack of adequate road infrastructure primarily on account of non availability of land, increasing trend of road accidents and the pressing need to develop water transport as a complementary and environment friendly mode of transport. Major new initiatives underway include the Kochi Metro Rail System, High Speed Rail Corridor connecting Thiruvananthapuram to Kasargode and Kochi to Palakkad, Rail Coach Factory at Palakkad, Kannur airport and Vizhinjam port.*

*In Energy sector, the concerns include the growing power deficit situation and the need to increase the share of renewable energy as an alternate and viable source of power. The major initiatives recently taken to improve the power situation in the state by KSEB, ANERT, Electrical Inspectorate and Energy Management Centre have been brought out.*

*The need for providing adequate infrastructure to cater to the increasing urban population and details of major schemes such as JNNURM, KSUDP, UIDSSMT, IHSDP and the Capital Region Development Programme are discussed in detail. The features of the communications ( posts and telecom) infrastructure in the State and the catalytic role of the Government to promote IT in Kerala through institutional support is also brought out.*

*The development of Sports Infrastructure has received a boost on account of the National Games. The efforts of the State to provide public housing to the homeless through various schemes are highlighted in this chapter. The various public relations activities and information services of the Government are also discussed.*

## Transport

5.1 Transport sector plays a significant role in the overall infrastructure development of the country which enables social, culture and trade development between Countries and States. Capacity requirements in transport are expected to double every decade in the medium term. This will consequently require large step-up in investments for capacity creation. Transport infrastructure consists of fixed infrastructure necessary for transport, such as roads, railways, airways, waterways, canals ,pipelines, terminals and portable infrastructure like inland vessels , cargo & passenger transport vehicles etc.

5.2 Transportation is an integral part of all commercial and social development processes. Any improvements in the sector will set the stage for much more widespread innovation in development processes. The benefits from the investments in roads sector are indirect, long term and perhaps, not immediately visible. The road density in Kerala is 3 times that of the National average, but is inadequate for Kerala's transportation needs. The outley and expenture in Transport sector during 2010-11 and 2011-12 are given in Table 5.1.

5.3 The major development indicators of Transport and Communication Sector in the State since 2007 are given in **Appendix 5.1**.

**Table 5.1**  
**The Outlay and Expenditure in Transport Sector during 2010-11 &2011-12**

(₹ Lakhs)

Sl. No.	Sector	AnnualPlan2010-11		% f Ex-penditure	Annual Plan 2011-12		% f Ex-penditure	Annu-alPlan 2012-13 Outlay
		Outlay	Expendi-ture		Outlay	Expendi-ture		
1	Roads & Bridges	54014.00	140653.68	26	62596.00	166196.19	27	54058.00
2	Road Transport	4819.00	4359.02	90	5319.00	4811.90	90	7425.00
3	Port	17081.00	16220.85	95	23081.00	21956.45	95	22368.00
4	Inland Waterways	11433.00	1541.09	13	11163.00	1837.25	16	13339.00

### Transport Policy for Kerala 2011

5.4 NATPAC has prepared a draft transport policy with the Vision 'Shaping a modern, efficient, economical and safe transportation system, connecting various growth regions in the state, to meet the faster mobility needs of all Keralites by 2025'.

5.5 The broad policy objectives and strategies of this draft policy are:

#### (i) Public Transport

The transport policy aims to revamp public transportation system by increasing its share from existing 33% of the total passenger traffic to 80% in 2025. Dependency on personal transport will be reduced and share of railways in interstate and intercity transport and that of buses in intra state and intra city transport will be increased.

#### (ii) Urban Transport

Due to inferior public transport services and lack of reliability and connectivity, the personalized transport demand is ever increasing in urban areas. It is expected that about 55% of Keralites will live in urban centers by 2025, so urban transport is a priority.

#### (iii) Intermediate Public Transport (IPT)

The Government will encourage introduction of specially designed Intermediate Public Transport vehicles such as four-wheeler Autorikshaw, Shared taxis, motorcycle taxis, and other non motorized vehicles for improving road safety.

**(iv) Parking**

Open and Multistoried parking facilities will be constructed by the Government at important transport terminals, market centers and multimodal logistic centres to promote inter modal transportation .

**(v) Rural Transport**

The transport policy aims to ensure easy access and reliable public transport to all classes of rural society. Standards of rural roads will be improved by connecting two or more panchayaths to allow bus services.

**(vi) Goods Transport**

The transport policy aims to ensure high quality goods transport service to the consumers through inter modal freight transportation and to provide barrier free movement of long haul goods vehicles entering the State.

**(vii) Motor Vehicles.**

The transport policy has the strategy to arrest the trend for sharp rise in private vehicle ownership in the State and to improve driving skills and vehicle fitness for better road safety, to encourage cleaner, eco-friendly and energy efficient vehicles and to make issuance of driving license and vehicle inspection strict and IT based.

**(viii) Road Safety**

The transport policy aims to arrest road accidents and fatalities at 2000 level immediately and to take measures to reduce road accident fatalities to zero level by 2025 .

## Road Transport Sector in Kerala

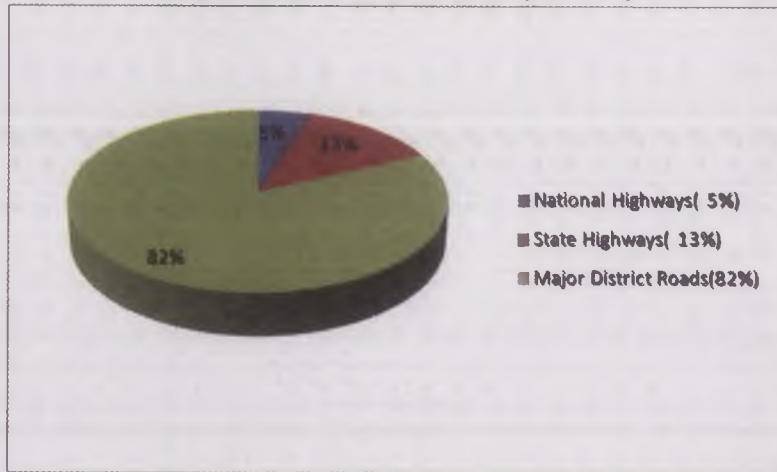
5.6 The roads in Kerala are maintained by National Highways / Public Works Department (R&B), Local Bodies, Department of Irrigation, KSEB, Department of Forests, Railways etc. Other agencies dealing with transport sector are National Transportation Planning and Research Centre (NATPAC), Motor Vehicles Department, Kerala State Road Transport Corporation (KSRTC), Kerala Transport Development Finance Corporation (KTDFC) and Roads & Bridges Development Corporation of Kerala (RBDCK).



5.7 In the State of Kerala the Public Works Department has a total road length of 31811.6 Kms of State roads and 1542 Kms of National Highways. The State roads include 4341.65 Kms. of State

Highways and 27469.95 Kms of Major District Roads. Road improvements, repair and maintenance of existing roads, development and up gradation are the major activities taken up in the sector during the year. Budgetary support, private finance and institutional supports are used for the purpose. In the road infrastructure the share by different department of PWD are shown in the figure 5.1

**Fig 5.1**  
**Roads under PWD in Kerala (2010-11)**



Source: PWD

### State Highways and Major District Roads

5.8 All major arterial roads which provide mobility is with the PWD (R and B) and consist of 4341.65Km State Highways and 27469.95 Km Major District Roads. District wise details of road length are shown in **Appendix 5.2**.

5.9 Of the 14 districts in the State, like 2011, in 2012 also Kottayam has the major share of PWD roads with the length of 3449.3 Km and Wayanad has the lowest share with 1029.3 Km. The district wise, surface wise and category wise length of road maintained by PWD (R&B) as on 31-3-2012 is given in **Appendix 5.3**. The surface wise and category wise length of PWD Roads during 2011-12 is given in **Appendix 5.4**.

5.10 Analyzing the PWD roads it reveals that only 6.66Km is cement concrete, 30744.4Km is black topped and 447.3 Km water bound macadam. The black topped surface contributes nearly 97 % of the total roads. When compared to 2011 only the length of black topped road increased from 22174.5kms to 30744.4 kms (38.6% increase). The district wise details are given in **Appendix 5.5**.

5.11 The number of bridges and culverts and number of unsafe bridges and culverts remained same during the year. There are 2179 bridges (627 on SH and 1552 on MDR) and 51422 culverts (11512 on SH and 39910 on MDR) under PWD. Of them 148 bridges and 1519 culverts are unsafe and need reconstruction /renovation and details is shown in **Appendix 5.6**.

### Railway Over Bridge (ROB) Projects

5.12 Out of 65 ROB's approved by Railways for Kerala on cost sharing basis, 48 are to be constructed by Roads and Bridges Development Corporation of Kerala Ltd. (RBDCK).The corporation was entrusted with the work of construction of 48 Railway Over Bridges spread all over Kerala including one road namely Seaport Airport Road, and a river bridge at Pulamanthole.

## Kerala State Transport Project (KSTP)

5.13 Kerala State Transport Project (KSTP) is an initiative of Public Works Department, Government of Kerala and was officially launched in June 2002 to improve 1600 Km of State Road network and 77 Km of Inland Water. The total cost of the project is US \$336 million (appx. ₹ 1612 crores). Out of this, the World Bank Assistance is US\$ 255 million (appx. ₹ 1224 crores) and the Government of Kerala share is US\$ 80.96 million (appx. ₹ 388 crores). The State PWD has received a loan amounting to US \$ 255 million for implementing the KSTP, from World Bank (IBRD).

5.14 The project comprises of Highway up gradation in two phases of 255 Kms (Phase 1) and 363 Kms (Phase II), Improvement to inland water canals in Alappuzha and Kottayam Districts (100 Kms), Road Maintenance of 1000 Kms, Road Safety engineering and Institutional strengthening in PWD. Road Maintenance, Road Safety works, Inland Water Transport works and Transport Corridor Upgrading and Institutional Strengthening of PWD are the other major components initiated under KSTP.

5.15 Transport Corridor Upgrading (Roads and Canals) 600 km roads and 77 km of canals-Up gradation of 600 km of State Highway and Major District Roads are taken up under phase I and II. But due to delay in acquisition of required land for road widening work and cost escalation, phase II up gradation work has been taken out of this project as per government decision. Also up gradation of 77 km of feeder canals has been taken up under this project and completed by reducing the scope of work. Government has accorded Administrative Sanction for ₹ 1356 crores to take up works under external funds during 2011.

## Research and Development in Road Sector

5.16 Research and Development activities play a crucial role in meeting the challenges of modernizing road system, technology up gradation, road safety, traffic control and finding cost effective solution to infrastructure problems in general. NATPAC, KHRI and DRIQ Board are the agencies engaged in Research and Development of the Road Sector.

### National Transportation Planning and Research Centre (NATPAC)

5.17 The broad area of activities of NATPAC includes Rural/Regional Transportation, Transportation Planning and Road Safety, Highway Engineering, Traffic Engineering and Management, Project Planning, Training and Extension Programmes. The Centre undertakes R&D Programmes in these areas. For further details refer Chapter 8 under Science and Technology Sector of this Economic Review.

### Kerala Highway Research Institute (KHRI)

5.18 KHRI, Kariavattom, Thiruvananthapuram is the only Research Institute under Kerala PWD. The major objectives and functions of the Institute are: to impart quality control in PWD by carrying out laboratory and field tests of all types of Building materials, undertake applied research works (R&D works), to function as a regular training institute.

5.19 The Institute functions under four divisions. They are Soil Mechanics and Foundation Division, Flexible Pavement Division, Concrete and Structure Division and Traffic Engineering Division.

### Design, Research, Investigation and Quality Control Board (DRIQ Board)

5.20 Designing and construction of Bridges, Research and Project Preparation, Quality Control and Computerisation are the major activities of DRIQ Board. Major achievements include preparation



of draft alignment plan for Ernakulam - Sabarimala road, Vattiyurkavu Junction and Karamana to Kaliyakkavila stretch of NH47. Structural Design of several bridges and a draft DPR for Vizhinjam International Container Terminal has been done.

## State Road Improvement Programme (SRIP)

5.21 The Programme aims to ensure superior riding quality, better pedestrian facilities, higher safety standards etc. The programme shall comprise of the strengthening and widening and rebuilding major bridges, minor bridges and culverts, construction of concrete drains for rain water, construction of utility ducts for carrying utility lines like drinking water, telecommunication and electric cables, installation of traffic signals, road signage and road markings, street lights, paved or unpaved footpaths for safe pedestrian movements and long term periodic maintenance of pavements and street furniture etc.

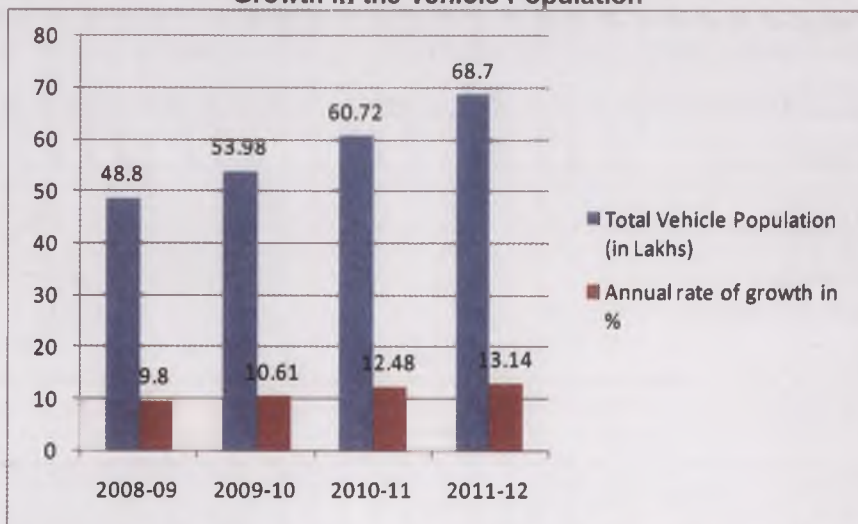
## Motor Vehicle Department

5.22 Motor Vehicles Department is one of the major revenue earning departments of the Kerala State. Towards the administration and enforcement of Motor Vehicle Laws, collection of tax on Motor Vehicles under various categories, registration of vehicles, licensing of drivers and regulation of use of motor vehicles in the State in accordance with the powers conferred on the Department, it has made remarkable achievements.

5.23 The number of motor vehicles having valid registration as on 31-3-2012 is 6865539. The District wise and category wise details of motor vehicles having valid registration as on 31-3-2012 is given in **Appendix 5.7**. The number of newly registered vehicles for the year 2011- 12 is 821295. The details are given in **Appendix 5.8**.

5.24 In Kerala Kottayam has the lowest registered vehicles followed by Wayanad in the year 2011-12. The highest vehicle population registered in 2011-12 is in Kasargod district followed by Alappuzha and Idukki. District wise growth of motor vehicles in Kerala from 2007-08 to 2011-12 is given in **Appendix 5.9** and category wise growth of motor vehicles in Kerala from 2007-08 to 2011-12 is given in **Appendix 5.10**. The growth in the vehicle population of the State for the last 4 years is given in fig 5.2.

**Fig 5.2**  
**Growth in the Vehicle Population**



Source: Motor vehicles department

## The Kerala Road Safety Authority

5.25 This authority was created by the Kerala Road Safety Authority Act, 2007. The Act has constituted the Kerala Road Safety Authority with the Minister for Transport as Chairman and Minister for Works as Vice Chairman. All key officials such as the Chief Secretary and the Director General of Police are members. The Act provides for establishment of Kerala Road Safety Fund by levying a onetime Cess for motor vehicles and taking 50% of the compounding fee collected for offences under the Motor Vehicle Act. The authority is expected to coordinate functions of different agencies besides sanctioning expenditure for various Road safety schemes and programs.

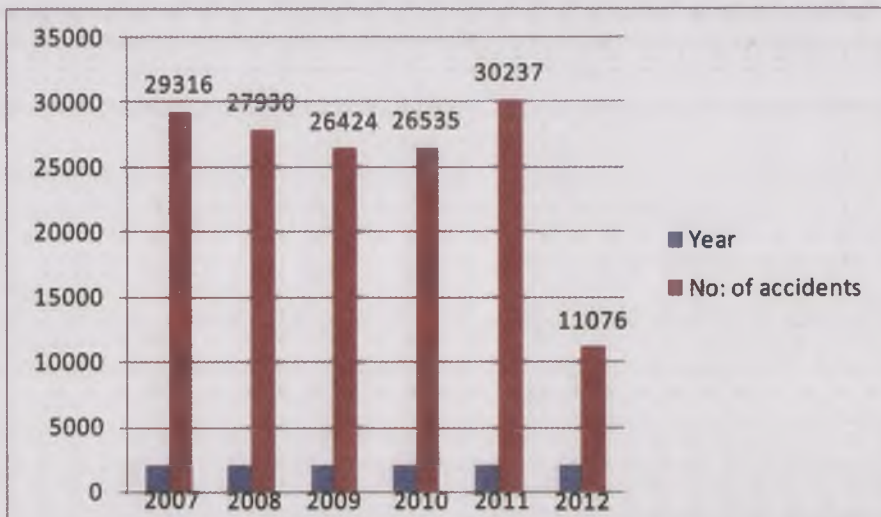
## Trends of Road Accidents in Kerala

5.26 Tremendous increase in the volume of road traffic in recent years has caused increase of road accidents. Government of Kerala has initiated Road Safety Authority and various programmes to address the alarming issues of increasing road accidents by coordinating all stakeholders of Road Safety namely Public Works Department, Motor Vehicles Departments, Police Department, KSRTC, NATPAC etc.

5.27 As vehicle population increases, road accidents also increase. It is also observed that nearly 98% of the accidents occurred due to the rash driving of motor vehicles. The district wise and category wise details of Motor Vehicle accidents are given in **Appendix 5.11**. In Kerala almost 59 percent of the accidents are by two wheelers. Details of Motor Vehicles involved in road accidents in Kerala during 2011 - 12 are given in **Appendix 5.12**. The decrease in accidents shows the effectiveness of road safety measures and regulations.

5.28 The total number of road accidents in Kerala during 2011-2012 is 11076 as against 30237 in 2010-2011 showing a decrease of 63.36 percent. The trend of motor vehicles accidents in Kerala from 2007 onwards is shown in Fig 5.3.

**Fig 5.3**  
**Trend of Motor Vehicles Accidents in Kerala**

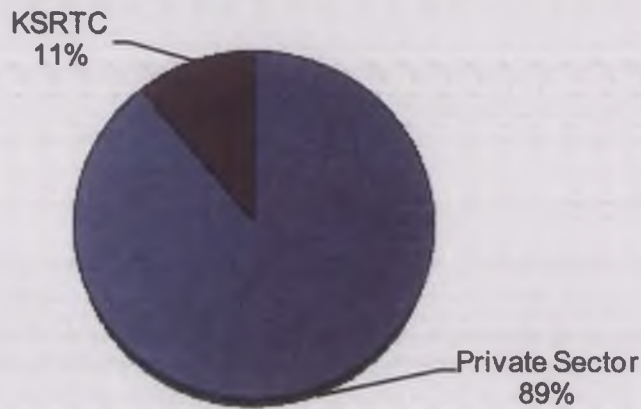


Source: Crime Records Bureau

## Kerala State Road Transport Services

5.29 Total number of Stage Carriages in the State comes to 46620 as per latest status. But KSRTC has only 5803 buses. It shows a good number of Passenger Transport Operation in Kerala is vested in the hands of private operators. The percentage of the Stage Carriages of KSRTC and private sectors can be seen in fig.5.4.

**Fig 5.4**  
**Passenger Transport Operation in Kerala (2010-11)**



5.30 Out of the 5803 buses of KSRTC 1672 buses are aged above ten years. The age wise details of KSRTC buses are given in **Appendix 5.13**.

5.31 The number of Schedules operated rose from 5249 in the previous year to 5333 in 2011-12 shows an increase of 84 operations. So also, the gross revenue collection of the Corporation increased from ₹ 1294.10 crores in 2010-11 to ₹ 1555.72 crores in 2011-12. The major indicators showing operational efficiency of KSRTC are given in **Appendix 5.14**. District wise details of KSRTC operational statistics are given in **Appendix 5.15**. The fares charged by KSRTC ranged from 55 paise per Km in ordinary and city buses, and 110 paise per Km in High-tech buses. The fare structure of KSRTC during 2007-12 is given in **Appendix 5.16**. The major performance indicators such as average Kms run per day per bus, average route length etc are given in **Appendix 5.17**.

5.32 During the review period, 209 new buses were put on road. Corresponding to the expansion of fleet the work force also got strengthened by adding 4472 recruits from PSC, and 54 dependents of employees as dying in harness. The details of buses owned by KSRTC including new buses from 2007 to 2012 are given in **Appendix 5.18**.

5.33 As part of enhancing the non-operational revenue, bus terminal cum shopping complexes are being constructed by KSRTC at commercially viable locations/depots. In addition, construction activities like development of yard, bus station building, new garages, toilet blocks etc were taken up at various depots. A new bus station building was constructed at Kanchangad depot. New garages were constructed at Mala, Pandalam, Adoor and Kanchangad bus depots. Moreover as part of providing separate toilet facilities and other facilities for women passengers, toilet block cum rest rooms exclusively for ladies were constructed at Kasargode, Nilambur, Payyannur, Kalpetta, Kayamkulam.

5.34 Training was given to 4333 employees at the Staff Training Centre, KSRTC, which includes all the newly recruited drivers, conductors and other staff and corrective training for 454 drivers with special emphasis on avoiding accidents.

### Box.5.1 Issues and Constraints Faced in the Road Sector

- Lack of Financial Resources
- No well defined Criteria for selection of roads for improvements
- Poor Vendor selection procedure
- Usage of outdated technology in construction methods
- Non existence of Quality Control System
- Delay in land acquisition process and lack of co-ordination with other department such as KSEB, KWA, TELECOM etc
- Inadequate human resource development initiatives. Poor monitoring system in the maintenance and controlling assets.

## Railways in Kerala

5.35 The State total railway route has a length of 1257 Km and covers 13 railway routes. The Railway Divisions at Thiruvananthapuram, Palakkad and Madurai jointly carry out Railway Operations in Kerala.\*Total route Km of 623.76 km of Trivandrum Division comprises of 494.76 in Kerala State and 129km in Tamilnadu State. Thiruvananthapuram Division is the largest Coaching Division of Southern Railway with coach holding of 1572 (bare) coaches. The Division maintains 40 Express trains and 53 passenger trains. \*\*

## Kochi Metro Rail System

5.36 The project is envisaged to increase citizens' mobility that will in turn boost the economic growth as well as increase quality of life for the citizens by providing them an alternate mode of public transport. The Metro Rail is safe, eco-friendly, and economical in the long run. Apart from providing connectivity, the project will bring about a more equitable allocation of road space by encouraging greater use of public transport.

5.37 The first phase is being set up at an estimated cost of ₹ 5,181 crore (US\$942.94 million). The Kochi Metro connecting Aluva-Petta will be completed in three stages and separate tenders will be awarded through bids. Each stage will be approximately 8 km. KMRL has planned to set up parking space at all metro stations based on the request from Civil Society Organizations. This project will be completed in 2016. The total amount of land required for the project is 40.409 hectares. The total land required for all stations is 9.3941 hectares, including area required for parking lots.

## High Speed Rail Corridor

5.38 The Kerala Government has decided to develop and implement High-speed rail corridor which relatively needs, less land for user development, connecting Thiruvananthapuram to Kasargod and Kochi to Palakkad. The total length of the two corridors was estimated as 900kms.

5.39 A company named Kerala High Speed Rail Corporation Ltd has been incorporated on 13.9.2011 and DMRC has prepared the feasibility study of the project.

\* *Planning Commission of India-Twelfth Five year Plan 2013-18 Report.*

\*\* *Indian Railways-Trivandrum edition October 2012. (Page No.s 68 & 74)*

## Rail Coach Factory, Palakkad

5.40 The State Government has allotted 426 acres of land at Kanjikode near Palakkad for the Rail Coach Factory. The work on the Coach factory in Palakkad is progressing. The project is being taken up as a Public Private Participation (PPP) project for which token provision has to be provided in the Railway Budget of the Central Government. The Coach Factory is expected to bring more than 100 ancillary industrial units to the area.

5.41 The coach factory entails an investment of Rs.5000 crore in the first phase and the coaches are also meant to be exported.

## Air Transport

5.42 Kerala has three airports at Thiruvananthapuram, Kochi and Kozhikode handling both international and domestic flights. Thiruvananthapuram and Kozhikode Air Ports are owned by Government of India and Kochi Air Port is owned by Cochin International Air Port Ltd (CIAL), a company set up by Government of Kerala with Public Private Participation. The details of the Flights operated by various agencies during 2011-12 at these three airports are given in **Appendices 5.19 (A), (B) and (C)**.

5.43 The major achievements of Cochin International Airport Limited (CIAL) during the review year is as follows

- CIAL registered a passenger growth of 8.7% and 0.15 % increase in aircraft movement in the financial year 2011-12. There was also a 5.25 % increase in domestic cargo movement and 4 % growth in the international cargo movement during the financial year 2011-12. During the financial year the following projects were operationalised.
- CIAL Trade Fair and Exhibition Centre.
- 110 KV hybrid sub- station ensuring un-interrupted power supply
- Aerospace Museum.
- Aircraft Maintenance and Repair and Overhaul facility

5.44 The following are the major achievements of Kozhikode International Air Port during 2011-12.

- The Airport is certified with ISO QMS 9001:2008, ISO EMS 14001:2004 for another 3 years valid up to 24-12-2014 and is committed to environmental protection, for which a BARC model Bio Gas Plant and Sewage Treatment Plant have been installed.

## Kannur Air port

5.45 The State's prestigious Greenfield airport project named 'Kannur International Airport will be coming up close to Mattannur in Kannur district of Kerala State. It is only 20 kms away from Kannur city, and 2 kms from Mattannur on Kannur – Mattannur – Mysore road. The Airport will have a runway length of 3400 meters. The orientation of the runway is 07/25, which permits obstacle free approach. The airport is expected to have an annual traffic of more than 1 million international passengers and above 0.3 million domestic passengers as per 2009-2010 estimate.

## Water Transport Sector

### Port Sector

5.46 Kerala lies in the south west corner of the Indian peninsula. It has a coastal length of 585 km and the state has an average width of about 60 km with one major port at Cochin and 17 non major ports. Government of Kerala intends to provide a boost to coastal shipping with the development of ports. The geographical location of Kerala is very close to international shipping route. Out of seventeen minor ports in Kerala three are considered as intermediate ports based on berthing, cargo handling and storage facilities available in them. These have contributed much to the development of industry, trade, commerce and agriculture in the country, but the potential has yet to be fully tapped.

5.47 The Government of Kerala has decided to develop five ports through PPP mode. These ports are Azheekal, Beypore, Ponnani, Alappuzha and Kollam and a major project of Vizhinjam International sea port is also being planned.

5.48 Presently cargo operations take place only in three ports – i.e. in Vizhinjam, Beypore and Azhikkal ports. Vizhinjam handles about 1000 tonnes. Beypore 50,000 tonnes and Azhikkal about 5000 tonnes annually. The remaining minor ports in Kerala are now defunct due to various reasons. Recognizing the need to develop the ports in a time bound manner, Government decided to encourage private sector participation in the sector. An amount of ₹ 17081 lakhs and ₹ 23081 lakhs are earmarked for this sector during 2010-11 and 2011-12 respectively.

### Box 5.2

#### The Major Initiatives of the Port sector during 2011-12

- Plans are under way to develop Beypore, Azheekal, Thankasserry, Alappuzha and Ponnani ports on PPP mode
- Bollard Pull Testing centre at Vizhinjam port
- Implementation of Kerala Inland Vessel Rules 2010
- Providing Truck mounted crane at Azheekal, Kollam and Vizhinjam ports
- Procurements of 3 speed boats
- Multi purpose forklift at Kollam port
- Coastal Shipping Projects linking the ports of Azheekal, Beypore, Kollam and Vizhinjam in the initial stage.
- E- Governance in Port department

### Cochin Port

5.49 Cochin Port is the only major port in Kerala. 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 Kollam and Kottappuram on either side is being developed by the Inland Waterways Authority of India. During the year foreign cargo traffic increased by 14 % to 122.19 lakhs tonnes from 107.58 lakhs tonnes in the preceding year. During the year 2011-12, 1386 ships called at the Port as against 1256 ships in the preceding year registering an increase of 10% in shipping activity.



## Vallarpadam International Container Transshipment Terminal

5.50 The Prime Minister of India laid the foundation stone for Vallarpadam International Container Transshipment Terminal in 1995. Completion of this prestigious project would make the Cochin Port a major hub port in the Indian Ocean region.

5.51 Regarding the construction of ICTT at Vallarpadam, Soil stabilization work with stone columns and band drains is in progress. Supporting infrastructure projects namely Stage-II capital dredging for providing 14.5 m draft at ICTT, National High Way connectivity at a route length of 17.2 kms and Rail connectivity with route length of 8.86 Km are at various stages of execution.

## Vizhinjam Deep Water International Container Transshipment Terminal

5.52 Vizhinjam International Deep Water multipurpose Seaport is a flagship project of Government of Kerala, being developed on a landlord port model. Vizhinjam International Deep Water Multipurpose Seaport limited (VISL) is a special purpose government company (fully owned by Government of Kerala) that would act as a implementing agency for the development of a Greenfield port.

5.53 Vizhinjam is a natural port, which is located close to the international ship route. So it is expected that at least 50% of the (nearly 20,000) ships that pass through the Suez Canal (per annum) will anchor at Vizhinjam Port. It is expected that with the full functioning of Vizhinjam port. the ports of Colombo, Singapore and Dubai might face serious competition from India. This will boost the trade and commercial activities not only in Kerala but also to entire India. It is estimated that India could save more than a 100 million U.S. dollars per year in terms of foreign exchange.

### Box 5.3

#### Competitive Advantage of Vizhinjam

- Located on Southern tip of Indian Peninsula
- Only 10 nautical miles from the major international sea routes and East-West shipping axis
- Natural water depth of more than 20 m within a nautical mile from coast.
- Minimal capital dredging (1 million cubic metres in Phase I).
- Least Littoral transport.
- Negligible maintenance dredging
- Central to the eastern and western coast lines of India-can cater to the needs of both west and east coast.
- Greenfield nature- flexibility in design & connectivity is possible
- No significant environmental/social issues
- Proximity to rail (10 Km), road (3Km) network & airport
- Autonomy and freedom in operations to operate competitively
- No acquisition of land needed for the Port itself
- Near to State capital city, that has an International airport, the required human resources and social infrastructure.
- Scope for tourism infrastructure due to proximity to Kovalam (Cruise Terminal, Marina)

## Institutional Support

5.54 The Government agencies involved in the development of ports in the State are Port Department, Harbor Engineering Department, and Hydrographic Survey Wing.

## Port Department

5.55 The Minor and Intermediate Ports are under the Administration of Government of Kerala. The Ports are administered directly by the Director of Ports who is headquartered at Thiruvananthapuram. There are three regional officers at Neendakara, Alappuzha and Kozhikkode. Besides the Port of Kochi (a Major Port governed by Major Port Trusts Act, 1963), there are 3 Intermediate and 14 Minor Ports in Kerala. They are Neendakara, Alappuzha, Kozhikkode (Intermediate Ports) and Vizhinjam, Valiyathura, Thankasserry, Kayamkulam, Manakkodam, Munambam, Ponnani, Beypore, Vadakara, Thalasserry, Manjeswaram, Neeleswaram, Kannur, Azhikkal and Kasaragode (Minor Ports). Most of the minor and intermediate ports in the State are seasonal in nature with insufficient infrastructure to handle even medium and small sized vessels throughout the year. Government of Kerala allowed private investment in Intermediate and Minor Ports from 1994.

- 5.56 Commodity – wise cargo handled in the non – major ports during the year 2011-12 are shown in **Appendix 5.20**. Cargo handling during 2011-12 was confined mainly to Kozhikkode, Kollam, Vizhinjam and Azhikkal ports. The number and tonnage of steamers and sailing vessels that called at intermediate and minor ports during 2012 are shown at **Appendix 5.21**. During 2011-12, 583 steamers and sailing vessels with registered tonnage of 332459 are called at non- major ports against 592 steamers and sailing vessels with 141609 tonnages in the previous year. Statement showing the revenue collection at the non-major ports during 2011-12 is shown in **Appendix 5.22**.

5.57 Major Initiatives of the Port Dept during 2012 are development of Ponnani, Azhikal, Beypore, Alappuzha and Kollam ports

## Kerala Maritime Institute

5.58 Port Department inaugurated on 3/05/2010 the first Maritime Institute at Neendakara in 11 acre campus. A sub centre of the institute started functioning on 3/09/2011 at Kodungalloor.

## Harbour Engineering Department

5.59 Harbour Engineering Department was formed in 1982 as a separate specialised department as a service department for Fisheries and Ports. Government of India has empanelled Harbour Engineering Department of Kerala as a consultant in the Coastal Engineering field for the nation as a whole. This department is the only such State Department in India. The major functions of the department are investigation, planning, design, evaluation, execution, operation, maintenance, and management and related maritime engineering and technical works for the development schemes of the Fisheries and Port department.

## Hydrographic Survey Wing

5.60 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 non major ports of Maritime State of Kerala. This wing has been conducting pre-dredging and post-dredging, pre-monsoon and post-monsoon surveys to ascertain various aspects such as requirement of dredging, data required for the construction of Fishing Harbours, Fish Landing Centers, Small ports etc. In addition to the routine pre-monsoon and post-monsoon survey at 16 non-major ports they also undertakes survey work for other departments like Irrigation, Inland Navigation, PWD and Research Institutions like Kerala Engineering Research Institute etc.

5.61 During 2011-12, 21 surveys were conducted for Port Department. Dredging surveys of Thankasserry, Beypore, Azhikal, Akkulam were also conducted during 2011-12. Hydrographic Surveys of Kappil of Kasaragod, Sedimentation study survey of Vemballur of Trissur District for KERI, Peechi and Beypore for Kerala Maritime Development Corporation Ltd were also conducted during this period. The main problem existing in the sector is lack of coordination from different departments in implementing the schemes.



## Inland Water Transport

5.62 Inland Water Transport is a fuel efficient and environment friendly mode of transportation. India is richly endowed with navigable waterways, comprising rivers, canals, backwaters, creeks, etc. It is estimated that a total of 14500 km of the waterways could be used for passenger and cargo movement. About 44 million tons of cargo is being moved annually by inland water transport. As a part of the Government's policy to optimally develop and harness the potential of Inland Waterways in the country, the 'Inland Waterways Authority of India (IWAI)' was set up under the 'Inland Waterways Authority of India Act, 1985'. The IWAI has been established for the development and regulation of Inland waterways for shipping and navigation and for matters connected therewith or incidental thereto. The Inland Waterways Authority of India Act, 1985, empowers the Government to declare waterways with potential for development of shipping and navigation as National Waterways. Currently the following three waterways have been declared as National Waterways viz. (1). National Waterway No.1:- The Ganga between Allahabad-Haldia (1629 km) in UP, Bihar, Jharkhand and West Bengal.(2) National Waterway No.2:- The Sadiya-Dhubri stretch of river Brahmaputra (891 km) in Assam; and (3) National Waterway No3:- The Kollam – Kottapuram stretch of West Coast Canal along with Champakara and Udyogmandal Canals (205 km) in Kerala.

5.63 Also, in order to provide an impetus to the development of Inland water transport modes, an Inland Water Transport Policy has been announced. It includes several fiscal concessions and guidelines for encouraging private sector participation in development of infrastructure and ownership and operation of Inland vessels. IWAI is also authorized for joint ventures and equity participation in BOT projects.

### Inland Water Transport in Kerala

5.64 The State of Kerala is endowed with numerous backwaters and it 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 2395 Kms. The main arterial waterway in the state is West Coast Canal. The West Coast Canal connects the Neeleswaram in the north to Kovalam - Thiruvananthapuram in the south and is about 595 Km including 44 Km. uncut portion from Badakara to Azheekal .The Inland Canals play an important role in the economy of the state as they interconnect the rivers and backwaters .



5.65 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).

### State Water Transport Department

5.66 During 2011-12 Kerala State Water Transport department took stringent action to replace most of the old wooden boats above 25 years old with new steel boats and timely repair were made to rest of the wooden boats by purchasing timber from the Forest Department. Repairing of wooden boats, gear box, Engine, chemical toilet etc purchased. As compared to the previous year the number of passengers decrease, accordingly number of trips reduced, but total revenue receipts increase. There are 95 boats operated with 733 trips during 2011-12. Details of operational statistics of this department are shown in **Appendix 5.23**.

### Kerala Shipping and Inland Navigation Corporation Ltd.

5.67 The Corporation was formed in 1989 by the statutory amalgamation of Kerala Inland Navigation Corporation Ltd. (KINCO) and Kerala Shipping Corporation Limited (KSC) both Government of Kerala Companies. The main objective of the company is to develop passenger and cargo transportation through Inland Waterways of Kerala, docking and repair of marine vessels, construction of boats, conducting navigation training programmes, conducting tourist cruises, providing navigational aids and maintenance in National Waterway-III. The Corporation at present has 8 barges 5 tourist boats and 2 Jhankars. The operational statistics of KSINC are shown in **Appendix 5.23**.

### Coastal Shipping and Inland Navigation Department

5.68 The main Inland Canal schemes in the State are implemented through this department. The following programmes are implemented through this department during the Eleventh Plan are:-

- Improvements and Modernization of Inland Water ways and Canals
- XIII Finance Commission has earmarked Rs.200 Crores for the development of the Inland Water ways and Coastal Zone management including construction of new sea walls and reformation of existing sea walls for 2010-2015
- Development of Feeder Canals Connecting the National Water ways III(RIDF)

#### Box 5.4

#### Problems and Issues in the Inland Water Sector

- Delay in demarcation of canal land due to various factors
- Severe obstruction from public on boundary disputes and other local issues.
- Delay in eviction of encroachment and failure of evolving a proper rehabilitation plan for dwellers and affected people near the canal boundary
- 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.
- Lack of end user incentivisation .

## SECTION 2

### Energy

5.69 Power development plays a pivotal role in the overall development of the economy. Apart from its contribution to economic development, it contributes significantly to revenue generation, employment and enhances the quality of life. Development of conventional forms of energy for meeting the growing needs of society at a reasonable cost is vested with the State. Development and promotion of non-conventional /alternative/ new and renewable sources of energy such as solar, wind and bio energy etc are getting sustained attention. Nuclear energy development is being geared up to contribute significantly to the overall energy availability in the country.

#### Power Sector in India

5.70 India is the fourth largest consumer of Energy in the world after USA, China and Russia but it is not endowed with abundant energy resources. It must, therefore, meet its development needs by using all available domestic resources of coal, uranium, oil, hydro and other renewable resources, and supplementing domestic production by imports. High reliance on imported energy is costly given the prevailing energy prices. Meeting the energy needs, achieving 8-9 per cent economic growth and meeting energy requirements of the population at affordable prices are the major challenges.

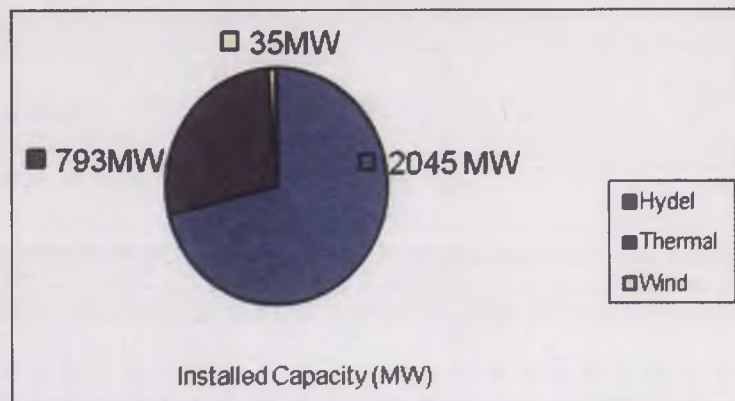
5.71 The Eleventh Plan aimed at a substantial increase with a target for additional capacity of 78700 MW. Actual achievement in the Eleventh Plan was 54964 MW (about 70 percent). Sector-wise and mode-wise capacity addition achievements are given in **Appendix 5.24**. The achievement is 30 percent lower than the original target, but at the same time it is double of Tenth Plan achievement.

#### Power Sector in Kerala

5.72 Kerala is a power deficit state which imports 60 percent of power from other states. A major achievement is that Kerala has achieved full electrification in all villages. Power crisis is a prime obstacle to start new initiatives in the industrial field. The need for power is increasing and the production of power should also be increased accordingly. Monsoon is essential to sustain the hydropower base in the state and the shortage in rainfall usually creates power crisis. Hydel energy is the most reliable and dependable source in Kerala. Of the total installed capacity of 2873 MW during 2011-12, hydel contributed the major share of 2045 MW (71 percent); while 793MW was contributed by thermal projects including NTPC at Kayamkulam (Kerala's dedicated thermal station) and Kanjikode wind farm, Palakkad has contributed 2 MW. Wind Energy from IPP is 33 MW. Additional capacity generated during 2011-12 was only 15 MW (0.53 percent) that is 2873 MW on 2011-12 against 2858 MW in 2010-11. **Appendix 5.25** shows details of energy source and its installed capacity during the Eleventh Plan period.

5.73 Fig 5.5 highlights total installed capacity in Kerala from hydel, thermal and wind sources.

Fig 5.5  
Total Installed Capacity



## Performance of Power Agencies

5.74 Power development activities in the state are carried out mainly through four agencies viz, Kerala State Electricity Board (KSEB), Agency for Non-conventional Energy and Rural Technology (ANERT), Energy Management Centre (EMC) and Electrical Inspectorate. The Outlay and Expenditure of these departments for the last two years are shown in table 5.2

**Table 5.2**  
**Outlay and Expenditure**

₹ Lakh

Sl. No.	Sector	Annual Plan 2010-11			Annual Plan 2011-12			Annual Plan 2012-13 Outlay
		Outlay	Expenditure	% of Expenditure	Outlay	Expenditure	% of Expenditure	
1	KSEB	99500	90331.95	91	103600	66927.03	65	111875
2	ANERT	4950	2313.50	47	5950	891.06	15	4226
3	MTSL	130	123.03	95	2620	1582.00	60	120
4	EMC	120	120.00	100	130	130.00	100	320
	Total	104700	92888.48	89	112300	69530.09	62	116541

5.75 The outlay earmarked for power sector during the Annual plan 2011-12 was ₹112300 lakh. The expenditure during this period was ₹69530.09 lakh (62 percent). During 2012-13, an amount of ₹116541 lakh was earmarked for Energy Sector which is 3.8 percent over the previous year.

## Kerala State Electricity Board (KSEB)

5.76 KSEB is the driving force behind development of the state of Kerala. A new Company named Kerala State Electricity Board limited has been incorporated on 14th January 2011 for the re-vesting of assets and liabilities of KSEB now vested with the Government. The Government is taking steps for re-vesting the assets and liabilities of KSEB to the new company. KSEB has been responsible for the generation, transmission and supply of electricity in the state, with particular mandate to provide electricity at affordable cost to the domestic as well as for agricultural purposes.

### Generation

5.77 Kerala generates power from four sources - hydro power, thermal power, wind power and solar power. Of these, hydel and thermal power generations account for the considerable majority whereas wind and solar power generations make only marginal additions. Growth of power system in Kerala during 11th Plan is shown in Table 5.3.

**Table 5.3**  
**GROWTH OF KERALA POWER SYSTEM AT A GLANCE - 2007-2012**

Sl. No	Particulars/Year	POSITION AS ON				
		2007-08	2008-09	2009-10	2010-11	2011-12
1	Installed Capacity -MW	2662.24	2694.75	2746.19	2857.59	2872.79
2	Maximum Demand(System)-MW	2745	2765	2998	3119	3348
3	Generation Per Annum-(KSEB Own)-MU	8703.55	6494.50	7240.38	7412.59	8350.74
4	Import Per Annum- MU	8074.62	9628.98	10199.96	10512.29	11270.71

5	Export Per Annum-MU	1346.76	463.33	53.9	130.24	201.1
6	Energy Sales within state Per Annum-MU	12049.85	12414.32	13971.09	14547.9	15980.53
7	Percentage of energy losses to energy available for sales	21.63	20.45	19.41	17.99	17.45
8	Per Capita Consumption - kWh	477.00	490.00	474	519	567
9	220 kV Lines - CT Kms	2654.00	2683.00	2701	2701	2713
10	110 kV Lines - CT Kms	3905.00	3921.00	3970	4004	4005
11	66 kV Lines - CT Kms	2987.00	2387.00	2387	2387	2387
12	33 kV Lines - CT Kms	878.00	1148.00	1348	1421	1497
13	11 kV Lines - CT Kms	38227.00	41791.11	45541	49232	51392
14	LT Lines - CT Kms	234252.00	252458.00	260670	266856	270718
15	Step Up Transformer capacity -MVA	2561.00	2561.00	2564	2684	2689
16	No of EHT Substations					
a	400 kV	2	2 *	2*	2*	2*
b	220 kV	15.00	15.00	17	17	18
c	110 kV	112.00	116.00	123	128	131
d	66 kV	89.00	85.00	82	80	80
e	33 kV	72.00	87.00	106	113	120
17	Step down transformer capacity - MVA	13300.70	13519.70	15827.9	16222.1	16556.3
18	Distribution Transformers					
a	Numbers	42401.00	46955.00	52724	58427	62726
b	Capacity -MVA	5511.00	5937.00	6708	7320	7674
19	No of villages electrified	1384.00	1384.00	1384	1467	1467
20	No of consumers (Lakhs)	90.34	93.63	97.43	101.28	104.57637
21	Connected Load-MW	12378.00	15267.44	15866.55	16681.3	17518.42
22	No of Street Lights	1049047.00	1086688.00	1148220	1196503	1218610
23	No of irrigation pumps	440958.00	431745.00	437878	446460	455078
24	Total revenue Per Annum ('Lakhs)	522714.00	609899.00	641138	692506	797804.89
25	Revenue from Sale of Power Per Annum('Lakhs)	469695.00	509749.00	495060	540376	581781.92

\*Pallipuram 400 kv Substation owned by PGCIL

Source: KSEB

5.78 The history of Hydro Power development in Kerala begins with the commissioning of Pallivasal Hydro Electric Project in 1940. Next few decades reflected the progressive developments of various hydroelectric schemes implemented in the state. Sabarigiri in 1966 and Idukki in 1976 are milestones of power development in Kerala.

5.79 As per 17th Power Survey, there was an additional generation requirement of about 1000 MW for the state during 11th Five Year Plan Period. To ensure reliability of supply as well as energy security, capacity addition in Kerala has to be geared up. KSEB had proposed to add about 610.50 MW of new hydel capacity generation during Eleventh Plan period but achieved only 210.54 MW (34 percent of target) at the end of the plan. The main reason for this shortfall is forest and environment clearance related issues including land acquisition.

5.80 Total installed capacity of power in the state as on March 2012 is 2873 MW, of which the contribution of state sector is 78 percent, central sector 12 percent and private sector 10 percent. Sector wise total Installed Capacity generated in Kerala during the Eleventh Plan is shown in **Appendix 5.26**.

## Hydel Generation

5.81 During the year 2011-12 the peak demand reached 3348 MW and there was huge gap in the availability against requirement. This was on account of various factors like the reduction in inflow due to poor monsoon, high cost of naphtha and Low Sulphur High Stock (LSHS), reduction in availability of Central Generating Stations (CGS) etc.,. The maximum demand increased from 2745 MW during 2007-08 to 3348 MW (22 percent increase) during 2011-12 and highest consumption increased from 46.26 MU during 2007-08 to 63.45 MU (37 percent increase) during 2011-12.

5.82 Under the purview of KSEB, 27 hydel projects are in the pipeline. The details of the project can be seen in **Appendix 5.27**.

## Negative Surplus Power during 2011-12

5.83 With the hike in the consumption of energy, the State's power quota from the central pool has enhanced from 900 MW to 1267.64 MW. The poor yield from hydel reservoirs, high cost for thermal power and increased demand for power created a situation of Negative Surplus Power during 2011-12. The negative situation occurred mainly due to the drastic reduction in the purchase of power from Independent Power Producers (IPPS) and decline in thermal power generation. At the same time although the total requirement increased to 18946.29 MU in 2011-12 from 17337.79 MU (9.3 percent growth) in the previous year against the power availability of 17295.54 MU resulted a negative surplus of 1650.75 MU. The details of power availability during the last five years are shown in **Appendix 5.28**.

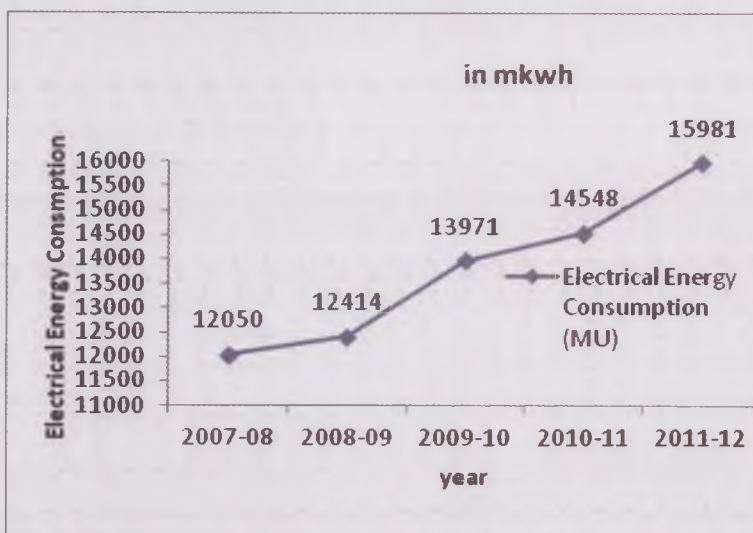
## Pattern of Power Consumption

5.84 The domestic category consumers showed a growth rate of more than 3 percent from 8063039 in 2010-11 to 8324961 in 2011-12. But Low Tension & High Tension (LT & HT) Commercial category consumers registered an increase of approximately 5 percent in 2011-12. Per capita consumption shows an increase of more than 9 percent i.e. 567 kWh in 2011-12 against 519 kWh in 2010-11. Growth of other agricultural pumping, Licensees (Bulk supply) also increased substantially over the year. During 2011-12, 16181.63 MU of energy amounting to ₹ 581781.92 lakhs was sold showing an increase of 1503 MU as compared to the previous years (14678 MU amounting to ₹ 540376 lakhs) which indicates that KSEB has increased their generation capacity during this period. The details of the pattern of power consumption and revenue collected during 2011-12 can be seen in **Appendix 5.29**.

## Electrical Energy Consumption

5.85 In Kerala, electrical energy consumption has increased to 15980.53 MU in 2011-12 from 14547.90 MU during 2010-11. The percentage of consumption increased to 9.85 percent. Electrical Energy consumption in Kerala during 2007-08 to 2011-12 is depicted in Figure 5.6.

Fig 5.6  
Electrical Energy consumption in Kerala



## Power Purchase Agreement (PPA)

5.86 KSEB has entered into a PPA with various Central Generating Stations of NTPC, NLC, NPCIL etc. envisaged for Southern Region. In addition to this, power is being purchased from Rajiv Gandhi Combined Cycle Power Plant of NTPC at Kayamkulam, BSES Kerala Power Ltd, Kochi and Kasaragod Power Corporation Ltd., Mylatti. As a measure to encourage non-conventional sources of energy, KSEB has executed PPAs for purchase of power from Wind Energy Projects, Agali (18.6 MW) & Ramakkalmedu (14.25MW) and from 2 small Hydro Projects (Meenvallam-3MW & Iruttukkanam -3MW). Power is also being purchased from Ullunkal Small Hydro Projects (7MW) and a co-generation plant of MPS steel, Kanjikode (10MW) and Philips Carbon Black Ltd., Kochi (10MW). The capacity allocated from various stations for which the PPAs have been executed is given in the **Appendix 5.30**.

5.87 Kerala is planning capacity addition through hydel and non-conventional sources during the 12th plan. Allocation of 232MW power from the projects viz. Neyveli Lignite Corporation Expansion (70MW), Simhadri Thermal Power Station (unit II-40.45 MW), Vallur (49MW) and Tutucorin 72.5 MW) are expected. Further KSEB has requested share of power from Kayamkulam Expansion (500MW).

5.88 KSEB had shown interest in sharing a total of 1200 MW power from the proposed Ultra Mega Power Projects (UMPP) such as Tadri (400 MW) in Karnataka, Akalthara (200MW) in Chattisgarh, Krishnapatnam (400MW) in Andhra Pradesh and Orissa (200MW). But only a tentative allocation of 200 MW power from proposed Tadri, Karnataka has been obtained by Kerala. Kerala has received allocation from Ministry of Power for 300 MW from cheyyur UMPP in Tamilnadu, 190MW from Orissa UMPP and 75 MW from APUMPP.

5.89 PGCIL is entrusted with the work of construction of Thirunelveli-Madakkathara 400 KV line for evacuation of power from Koodamkulam nuclear power plant. The work in Edamon- Kochi sector of this line is held up due to public protest



## Transmission

5.90 Transmission of Electricity means a bulk transfer of power over a long distance at high voltage, generally of 132 KV and above. A good transmission system is necessary to the effective distribution and to bring power from outside the state. The transmission network was scaled up by adding 385 Circuit kms of Extra High Tension (EHT) lines from 2007 to 2012 and 79 substations were commissioned during the period. In the Transmission sector, many planned works could not be taken up due to land acquisition and right of way related issues. Kerala's Transmission system consisting of substations and its connected lines are given in **Appendix 5.31**.

5.91 It is evident that the performance of the construction of substation with various capacities has not achieved the desired target. Out of the target of 13 numbers of 110 KV substations, only 5 substations are completed and in the case of 33 KV substations, 7 substations are completed against the target of 30 numbers. In the case of 220KV and 66 KV substations, nothing has been achieved. The present status of transmission facilities set up in state and upgradation and construction of transmission lines are shown in **Appendix 5.32**.

## Renovation, Modernisation and Uprating (RMU) of old Generating Stations

5.92 As part of increasing the generation capacity of existing stations, several measures are being taken. The renovation and modernization and uprating of Sabarigiri Power Station has been completed. The rectification work of Unit 4 of Sabarigiri Power Station is in progress. The system installed capacity increased by commissioning of Neriamangalam Extension Scheme, Kuttiyadi Tail Race Scheme, Kuttiyadi additional extension scheme, Poozhithodu SHP, Ranni-perinad SHP and renovation of 5 units of Sabarigiri HEP.

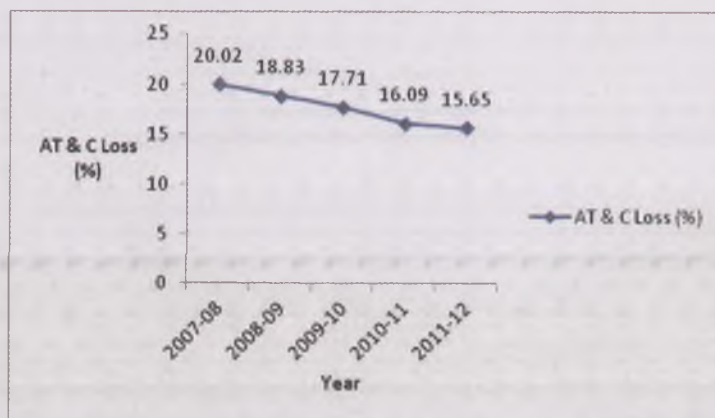


## Aggregate Technical and Commercial (AT & C) losses

5.93 A unit of power saved is equal to a unit of power produced. Energy conservation is as important as energy production. However certain amount of power is bound to be lost in the process of its transmission and distribution across the State.

5.94 During 2011-12 AT&C loss has come down to 15.65 percent from 16.09 percent in 2010-11. KSEB made significant achievements in the field of reducing AT&C loss. From 2003-04 onwards AT&C loss was considerably reduced by way of faulty meter replacement, intensification of theft detection, installation of new substations and lines, up gradation and modernization of sub transmission and distribution network through APDRP Scheme. The impact of AT & C loss reduction during the last five years is shown in **Appendix 5.33**. It can be seen in the Fig. 5.7.

**Fig.5.7**  
**Aggregate Technical and Commercial (AT & C) losses**  
**(in percentage)**



## Distribution

5.95 Distribution Sector is a profound area, which provides electricity to all consumers in Kerala. In the distribution segment, 13501 Circuit Kms of 11 KV lines, 47348 Kms of LT lines, 22854 nos of distribution transformers and 219011 street lights were added during the 11th plan period. Service connections aggregating 17.44 lakhs were effected during the years 2007-2012. Out of which 2572 kms of 11 KV lines, 4089 kms of LT lines and 4375 nos of distribution transformers were setup during the period under review. KSEB has given great attention to strengthen the distribution backbone by introducing new ventures of Restructured- Accelerated Power Development and Reforms Programme (R- APDRP) and Rajiv Gandhi Grameen Vidyuthikaran Yojana (RGGVY). The power consumption comes to all time high. As on 2010-11, total number of consumers has increased to 1,04,57,640 nos against 1,01,27,946 during 2010-11. The details of pattern of power consumption and revenue collected are shown in the **Appendix 5.29**. The target and achievement of the distribution infrastructure during 2011-12 is given in the **Appendix 5.34**.

## Tariff

5.96 The overall average realization rate from tariff has been decreased to 347.39 paise per unit in 2011-12 as against the 354.24 paise per unit in 2010-11. The details can be seen in **Appendix 5.35** and **Appendix 5.36**. Tariffs are regulated by Electricity Regulatory Commission.

## Restructured Accelerated Power Development and Reform Programme (R-APDRP)

5.97 The focus of the Restructured Accelerated Power Development and Reform Programme (R-APDRP) is on actual demonstrable performance in terms of sustained loss reduction i.e. 15 percent AT & C loss reduction on a sustained basis for a period of 5 years. Projects under the scheme are taken up in two Parts. Part A of the project includes collection of accurate base line data and adoption of Information Technology in the areas of energy accounting, networking, MIS, consumer indexing, etc. and enable objective evaluation of the performance of utilities before and after implementation of the programme. Part B of the project includes regular distribution strengthening projects.

- Under Part A of APDRP, the Ministry of Power had approved detailed project reports for an amount of ₹ 214.38 crore submitted by KSEB for 43 town schemes. First installment of loan amounting to ₹ 64.31 crore has been disbursed by the Power Finance Corporation.
- Under Part A Supervisory Control and Data Acquisition/Data Monitoring System, 3 cities of Kerala viz. Thiruvananthapuram, Kochi and Kozhikode are eligible for SCADA/DMS project. An amount of ₹ 83.15 crore was sanctioned for these towns by PFC and disbursed ₹ 24.945 crore as loan.
- Under Part B of R-APDRP, Ministry of Power had approved 42 schemes at an estimated cost of ₹ 872.16 crore.
- As on April 2012 work amounting to ₹ 91.15 crore has been executed.

## Rajiv Gandhi Grameen Vidyuthikaran Yojana (RGGVY)

5.98 Under the Rajiv Gandhi Grammeen Vidyuthikaran Yojana (RGGVY), sanction has been obtained to implement the scheme in 7 districts of Kerala, namely, Kasargod, Kannur, Kozhikode, Wayanad, Malappuram, Palakkad and Idukki for an amount of ₹ 221.75 crore. Implementation of the Scheme in Idukki District has been completed. REC issued sanction on revised DPR for Kasargod, Kannur, Kozhikode, Wayanad, Malappuram and Palakkad for a total amount of ₹ 114.57 crore.

5.99 The details of the financial and physical progress of implementation of RGGVY as on 30-09-2012 are shown in the **Appendix 5.37**.

## Non – Conventional Sources of Energy

### Agency for Non-Conventional Energy and Rural Technology (ANERT)

5.100 The major programmes targeted by Agency for Non-conventional Energy and Rural Technology (ANERT) during 2012 comprise of baseline studies on energy demand, renewable energy potential and energy conservation potential, implementation of renewable energy and energy conservation programmes and infrastructure development for sustaining interactive energy planning and development programmes with local governments. The major achievements during 2011-12 are the following:

- 3050 numbers of Biogas Plants were installed
- 6000 nos of Improved Chulha
- Two wind monitoring stations in Kanjikkode and Vandiperiyar with 80m anemometry for estimating the wind power potential had been installed and commissioned.
- Under Jawaharlal Nehru National Solar Mission (JNNSM), 13 Solar Photovoltaic power plants were installed in different institutional and domestic applications, totaling 124 KW

### Energy Management Centre

5.101 Energy Management Centre- Kerala (EMC) is an autonomous body under Department of Power, Government of Kerala, devoted to the improvement of energy efficiency in the state, promotion

of energy conservation and encouraging development of technologies related to energy through research, training, demonstration programmes and awareness creation. The centre is networking with institutions within and outside the state for research and training activities.



5.102 Government of Kerala, with the concurrence of Bureau of Energy Efficiency, Ministry of Power, Government of India designated EMC as the State Designated Agency to enforce, regulate, co-ordinate and to implement the provision of the Energy Conservation Act 2001. The United Nations Industrial Development Organization (UNIDO) has opened its first Regional Centre for Small Hydro Power Development in EMC in the year 2003.

### Achievements of EMC during 2011-12

- A study was carried out to understand the real pros and cons of large-scale penetration of induction cookers in Kerala market. It has been found that, when the electricity cost is taken as ₹ 3/kWh, the price of useful heat derived from LPG stove and induction cooker are the same, which indicates that the lesser the electricity cost or if the consumer falls in the less tariff slab, cooking cost using induction cooker is least. If the consumer falls in the 151-200kWh or above tariff slabs, cooking cost is higher in induction cooker than LPG stoves.
- EMC has developed an electronically controlled switching device for switching on and switching off street lights. The switching device is capable of carrying 16 Ampere current.
- Prepared Energy Conservation Policy for the State and submitted to Government for approval.
- Energy Smart School- is a project in association with Education Department and KSEB with the help of teachers, parents and local community to conserve energy.

### Electrical Inspectorate

5.103 The Electrical Inspectorate is a department of the Government of Kerala. Safety inspections are carried out and sanction for energisation for all HT / EHT and other medium voltage installation

in the State are issued by this department. Enquiry of all electrical accidents occurring in the state and forwarding the enquiry report to the Government and taking actions against responsible person / authority are also done by this department.

## Activities and Achievements of Electrical Inspectorate

- By the implementation of the office automation, The Department achieve the prestigious 'SEVOTHAM CERTIFICATION' (SQMS Certification) as per IS 15700: 2005 from the Bureau of Indian Standards. It is the first department in the country, which bags this certification.
- The department has received the first E- Governance Award from the Honorable Chief Minister of Kerala.
- The Department procured certain equipments/instruments for the scope of enhancement of National Accreditation Board for calibration and Testing Laboratory (NABL) accreditation incorporating energy parameter. A 3 phase Automatic Energy Meter Test Bench has been procured during the year 2010-2011. National Accreditation Board for calibration and Testing Laboratory accreditation for the parameter was also received during July 2011. The Meter Testing and Standards Laboratory, Thiruvananthapuram is the only lab in the state with this facility as per the new Central Electricity Authority Regulations.
- By calibrating, Servicing, error-corrections, replacement of faulty equipments/instruments/ Reference Standards/ Calibrators of the Meter Testing and Standards Laboratory and participating in Inter laboratory Comparison, Proficiency Testing, attending Training and Workshops as per National Accreditation Board for calibration and Testing Laboratory criteria, the Department could maintain the National Accreditation Board for calibration and Testing Laboratory Accreditation for the last 5 years.

## Kerala State Electricity Regulatory Commission (KSERC)

5.104 The KSERC is a statutory organization of quasi-judicial nature constituted under the electricity established in the year 2002. During this period, this statutory body has taken all efforts to set up a fair, transparent, modern and objective electricity regulatory process in the State of Kerala.

### Mission of the Commission

- To promote competition, efficiency and economy in the activities of the Electricity Industry within the State of Kerala.
- To regulate the power purchase and procurement process of the distribution licensees for sale distribution and supply of electricity within the State of Kerala.
- To determine the tariff for generation transmission, wheeling and supply of electricity, wholesale bulk or retail, as the case may be within the State of Kerala.

### Box 5.5

#### Challenges in the Energy Sector

- Inadequate capacity addition over the years leading to massive in-house demand supply gap.
- Hydel power dominated supply scenario,
- Negligible share of Renewable Energy in the Energy mix,
- High Aggregate Technical & Commercial (ATC) Losses,
- Gap between energy conservation potential and its realisation,
- Limited presence of Independent Power Producers (IPPs) and Co-Generating Stations (CGS),
- Limited penetration of star labeled products,
- Insufficient interventions/incentives to promote energy conservation and thereby manage demand,
- No coal based plant, no gas based plant,
- Energy price volatility.

## 12<sup>th</sup> Plan Approach for Energy Sector in Kerala

5.105 During 12th Plan, the target will be to double the installed capacity through installation of new Gas based and Super Critical Plants. The Independent Power Project concept will be encouraged to provide more resources for development of capacity of hydel power other than Small Hydro Projects (300 MW) and Renewable Energy (RE) (700 MW) and also from Energy Conservation measures.

5.106 It is targeted to reduce AT & C losses to a sustainable level of 13 percent by the end of 12<sup>th</sup> Five Year Plan period largely through timely implementation of RGGVY and R-APDRP flagship schemes. 'Energy saved is equivalent to energy produced' concept will be aggressively pursued during the 12th Plan. Managerial efficiency and productivity of KSEB will be sought to be enhanced with the help of management institutions. The possibility of massive exploitation of solar energy will be encouraged during the 12<sup>th</sup> Plan.

## SECTION 3

### Urban Infrastructure

5.107 Urbanization and Economic Development have long been recognized as co-existent. 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 In Infrastructure

5.108 The major Urban Development Programmes implemented at the state level are given below

#### Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)

5.109 The Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) is a centrally sponsored scheme launched by GOI during the year 2005-06 to improve the infrastructure in small and medium towns in the country in a planned manner. The scheme is for a period of seven years. In Kerala, 61 urban local bodies (excluding Thiruvananthapuram and Kochi Corporations, Thrippunithura and Kalamasseri Municipalities) are eligible for getting financial assistance under the scheme. 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. Details of projects approved under UIDSSMT are given in **Appendix 5.38**

#### Capital Region Development Project

5.110 The Capital Region Development Project (CRDP) was introduced in 2002 to improve the quality of life of people in the capital city by strengthening and improving the critical infrastructures like roads, water supply, solid waste management, surface water drainage, city beautification and bus terminals. Details of projects under taken by Capital Region Development Programme are given in **Appendix.5.39**

## Development Authorities in Urban Infrastructure

### Thiruvananthapuram Development Authority (TRIDA)

5.111 Thiruvananthapuram Development Authority (TRIDA) was constituted for the implementation of projects for planned and scientific development of Thiruvananthapuram city and adjoining areas. The jurisdiction of TRIDA extends to Thiruvananthapuram Corporation and 10 grama panchayaths covering an area of 293.65 square kms. TRIDA has been appointed as the nodal agency for the land acquisition related works as a part of the Capital Region Development Programme. Under this programme, 12 roads totaling to a distance of 42.6 Km have been taken up for improvements. The land acquisition of the project, widening of roads, has been completed and the land was handed over to the Kerala Road Fund Board (KRFB) for road widening works. The construction of a flyover at Bakery Junction was completed. Details of major projects under taken by TRIDA are given in **Appendix 5.40**.

### Greater Cochin Development Authority (GCDA)

5.112 Greater Cochin Development Authority (GCDA) is an autonomous body constituted under the Local Self Government Department of the Government of Kerala. The GCDA aims at formulating and implementing various urban development schemes and projects for the welfare of the general public in the area coming under its jurisdiction. The jurisdiction of this authority covers an area of 732 sq.kms consisting of Cochin Corporation, 9 Municipalities and 29 Panchayaths. GCDA activities are generally non-remunerative and welfare oriented public utility services benefiting the urban residents and neighbouring population. The details of major programmes under taken by GCDA are given in **Appendix 5.41**.

### Kerala Sustainable Urban Development Project (KSUDP)

5.113 The Kerala Sustainable Urban Development Project is an externally aided project funded by the ADB for addressing the challenges thrown up by urbanisation. KSUDP deals with the improvements, upgradation and expansion of existing urban infrastructure facilities and basic urban environmental services in five Municipal Corporations of the state viz; Thiruvananthapuram, Kollam, Kochi, Thrissur and Kozhikode.

5.114 The project components are:

- Promote good governance in municipal management.
- Develop and expand urban infrastructure like urban road transport, water supply, sewerage and sanitation, storm water drainage and solid waste management.
- Formulate, support programmes for improving urban social services for the elderly, destitute, women and street children.

5.115 Details of major projects included under KSUDP are given in **Appendix 5.42**.

### Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

5.116 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 was launched in 2005 and continued till 2012. Corporations of Thiruvananthapuram and Kochi were selected as mission cities from Kerala State.

5.117 Admissible components included in the mission are redevelopment of inner city areas, water supply and sanitation, sewerage and solid waste management, construction and improvement of drains/storm water drains, urban transport including roads, highways/expressways/MRTS/metro projects, parking lots/spaces on Public Private Partnership basis, development of heritage areas, prevention and rehabilitation of soil erosion/landslides only in case of special category states where such problems are common and preservation of water bodies. Details of projects approved for implementation under JNNURM are given in **Appendix 5.43**.

5.118 Most of the state level reforms, urban local body level and optional reforms which are conditions under the scheme have been successfully achieved in the state.

## Integrated Housing & Slum Development Programme (IHSDP)

5.119 Integrated Housing and Slums Development Programme (IHSDP) was launched during 2006-07. The basic objective of the scheme is to strive for holistic slum development with a healthy environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas. The programme was formulated by combining two erstwhile schemes viz. 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).

5.120 The components for assistance under IHSDP include all slum development/ improvement/ relocation projects including new house construction/improvement of houses and infrastructural facilities. The financing pattern of the scheme is in the ratio of 80:20 by Central and State Governments. Beneficiary share (12% for General and 10% for SC/ST) is stipulated for projects for individual beneficiaries like housing. Out of 20% State share, the balance fund after deducting beneficiary share will be borne equally by the ULB and State (Maximum state share is 10% of the total Project Cost). The achievements of the scheme are summarized in **Appendix 5.44**. The details of project approved by GOI and Fund released to 53 ULBs are given in **Appendix 5.45**

## Rajeev Awas Yojana

5.121 This is a new scheme under JNNURM aiming at slum free cities in India. Each State has to prepare a slum free city plan of action (SFCPOA). Government of India had given sanction to prepare Slum Free City Plan of Action of five corporations (Thiruvananthapuram, Kollam, Kochi, Trissur and Kozhikode) of Kerala. At present the main work in Kudumbashree under RAY is preparation of Slum Free City plan by conducting detailed MIS based socio economic survey and GIS based geo-referenced mapping including total station survey.

## Other schemes for urban development

Various poverty reduction and employment generation programmes for the urban sector in Kerala include:-

### Swarna Jayanthi Shahari Rozgar Yojana (SJSRY)

5.122 Swarna Jayanthi Shahari Rozgar Yojana (SJSRY) is a Centrally Sponsored Scheme launched in December 1997. The fund is shared on 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 self employment ventures and taking up wage employment in public works. The programme is being implemented by the Urban Local Bodies through Community Based Organization of the poor.

5.123 Kudumbashree has organized community based organization (CBOs) of the poor in all the 65 urban local bodies in the state. There are 20157 Neighbourhood Groups (NHGs), 2310 Area Development Societies (ADSs) and 96 Community Development Societies (CDSs) under Kudumbashree working as Community Based Organisations in the urban areas. The CBOs in the urban areas act also as Thrift and Credit Societies and facilitate savings and credit to the poor. District wise details of NHGs, ADSs, CDSs and thrift fund mobilized are given in **Appendix.5.46**.

5.124 During the period 2007-08 to 2012-13 8150 individual enterprises (USEP) and 1341 group enterprises (UWSP) were set up in SJSRY scheme. **Appendices 5.47 and 5.48** show the financial and physical achievements of SJSRY (2007-08 to 2012-13). Details of micro enterprises and group enterprises created under the schemes are given in **Appendices 5.49 and 5.50**. The activities of group enterprises vary from solid waste management to the computer hardware assembling.

## Basic Services to the Urban Poor (BSUP)

5.125 Basic Services to the Urban Poor (BSUP) is a sub-component of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and implemented through Kudumbashree. The duration of mission is seven years beginning from 2005-06. Only two corporations in the state, Thiruvananthapuram and Kochi come under the scheme. The objective of the scheme is to provide basic services and civic amenities with a view to provide utilities to urban poor.

5.126 The total allocation under BSUP to the State during the mission period is ₹ 250 crore. Projects are sanctioned based on the Detailed Project Report submitted by the mission cities. The Central Share will be released in 4 instalments (25% each) based on submission of Utilization Certificate for 70% expenditure of the funds released. The fund sharing pattern for Thiruvananthapuram is 80:20 by Central and State Governments. The State's share is borne equally by the State and Local Governments. For Kochi Corporation the sharing pattern is 50:50 by Central and State Governments. Out of 50% of State Share, 30% would be born by the State Government and the balance amount after deducting beneficiary share would be born by the respective ULBs.

5.127 Four phases of projects worth ₹ 208.01 crores and 3 projects worth ₹ 135.66 crore was sanctioned for Thiruvananthapuram and Kochi Corporation respectively. Details of projects sanctioned under BSUP for the two Corporations are given in **Appendices 5.51 and 5.52**.

5.128 The physical achievements of the scheme are summarized in **Appendix 5.53**.

## Ayyankali Urban Employment Guarantee Scheme

5.129 Ayyankali Urban Employment Guarantee Scheme started during 2009-10 in the state is considered as a unique initiative in the State. It is intended to address the unemployment and under-employment problems in the urban society. The objective of the scheme is to enhance livelihood security in urban areas by providing at least 100 days of guaranteed wage employment to every household whose adult members are willing to do unskilled manual labour. Creation of durable community assets and strengthening the livelihood resource base of the urban poor is also envisaged in the scheme. The scheme is structured in the pattern of Mahathma Gandhi National Rural Employment Guarantee Scheme. While providing employment, priority shall be given to women in such a way that at least 50% of the beneficiaries shall be women who have registered and requested for work under the scheme. Since the scheme is its initial stage of implementation no financial or physical achievement has been reported.

## SECTION 4

### Communication Infrastructure

#### Postal Network of Kerala

5.130 Kerala Postal Circle includes the entire state of Kerala, the Union Territory of Lakshadweep islands and Mahe under the Union Territory of Pondicherry, Kerala is the only postal circle where every village has at least one post office. On 30/11/2012 there were 5067 Post Offices in Kerala postal circle of which 1505 are Departmental post offices and the remaining 3562 are Extra Departmental post offices (which function for at least minimum of 3 hours and a maximum of 5 hours depending on the work load). These include on an average each post office in the state serves an area of 7.69 sq.km and a population of 6587 as against the national average of 21.21sq.km and a population of 7175 people. 83 % of these post offices are in rural areas.

5.131 District Wise Distribution of post offices in the State is given in Table 5.4.



**Table 5.4**  
**District wise Distribution of Post Offices**

Sl. No	Name of District/ Union Territory	Post office	Sl. No	Name of District/ Union Territory	Post office
1	Kasargod	234	9	UT of Lakshadweep	10
2	Kannur	381	10	Ernakulam	392
3	Wayanad	163	11	Idukki	294
4	UT of Podichery (Mahe only)	4	12	Kottayam	409
5	Kozhikode	412	13	Alappuzha	300
6	Malappuram	435	14	Pathanamthitta	317
7	Palakkad	455	15	Kollam	362
8	Trissur	485	16	Thiruvananthapuram	414
<b>Total</b>					<b>5067</b>

*Source: Chief Post Master General*

5.132 Given the vast reach of the network in the state, continuous efforts are being made to increase access to postal facilities in newly developed urban/rural areas by opening new post offices or by upgrading existing Extra Departmental Post Offices (EDBOs) to full time post offices by reallocating the existing post offices which do not fulfill the distance norms. The department temporarily closed one departmental post office towards achieving this goal and hence the number of post offices has come down to 5067 in August 2012. 7 speed post delivery hubs have been established in Trivandrum city exclusively for delivery of speed post articles. 1506 Departmental post offices have been computerized by March 2012.

5.133 Another important initiative that has been introduced from the point of view of customers is the track and trace facility available for registered, insured, speed post, EMO and foreign accountable articles. This facility can be availed through the web address the India Post at [www.indiapost.gov.in](http://www.indiapost.gov.in) and it enables customers to track their articles from the time of booking to the point of delivery.

5.134 Express Parcel Post, a variant of the registered parcel service with the value addition of track and trace facility and direct dispatch by train to destination with no handling enroot, is available from 43 centers for bulk customers.

## Services of Post Offices-Postal Banking and Insurance

5.135 In Kerala Circle Savings Bank facility is available in all the 5067 Post Offices. Schemes under SB include the Monthly Income Scheme, the Senior Citizens' Savings Scheme, Time Deposit, the Public Provident Fund, 5 Year Recurring Deposit Scheme and the 5 and 10 Year National Savings Certificates extended by the Ministry of Finance, Government of India. As on 31.03.2011, the Circle has nearly One Crore live accounts.

5.136 Growth of Post Offices in Kerala is given in **Appendix 5.54**. Division wise and category wise post offices under Kerala circle is given in **Appendix 5.55**. Urban / Rural split of post offices as on 31.03.12 is given in **Appendix 5.56**. District wise details of area and population served by one post office during 2011-12 are given in **Appendix 5.57**.

## Bharat Sanchar Nigam Limited (BSNL)

5.137 Kerala has an impressive record of performance in Telecom Sector. It was in this State that all the telephone exchanges were made automatic for the first time in the whole country, way back in 1990. In 1992, we become the first state to provide Public Telephone facilities in all panchayat Head Quarters. Kerala is also the first State to provide public telephone in every village, by 1995. Again it has the unique status of providing STD facility to all telephone exchanges.

5.138 All the panchayats and all the villages in the circle have been provided with public telephones .There is a wide network of over 56115 Public Telephones. Public Grievance cell is working at Circle level with 12727 and district level with 12728 other than computerized 198 fault repair services. Call centre 1500 is fully functioning for Kerala. Call Centre for Mobile service is 9447024365. Internet helpline is also working at 12678 for Kerala Circle. District wise details of Telephone network in Kerala during 2011-12 is shown in **Appendix 5.58**.



#### Box 5.6

#### Achievements of Bharat Sanchar Nigam Ltd (BSNL) in 2011-12

- The total number of telephone connections working is 101.78 lakhs
- There are 826910 Broad band customers are available in the circle.
- 166944 3G connections provided
- 19778.6 RKM OF cable laid.
- 8913 WiMax connections provided
- About 7991 broadband connections have been provided in colleges under NME (National Mission for Education) project.
- BB connectivity to 1403 Akshaya Centres are provided
- BB Kiosks have been provided at 240 locations under USOF
- About 4480 broadband connections have been provided in schools under 'IT at school' project.

### All India Radio

5.139 All India Radio (AIR) has been serving to inform, educate and entertain the masses since its inception, truly living up to its motto – 'Bahujan Hitaya : Bahujan Sukhaya'. One of the largest broadcasting organizations in the world in terms of the number of languages of broadcast, the spectrum of socio-economic and cultural diversity it serves, AIR's home service comprises 326 stations today located across the country, reaching nearly 92% of the country's area and 99.19 % of the total population. AIR originates programming in 23 languages and 146 dialects.

## SECTION 5

### Information Technology

5.140 The exponential growth witnessed during the past 10 years in the IT/ITES industry has influenced the growth of the service sectors. The Indian IT/ITES industry has been growing at a very healthy rate of 30 percent per annum. The industry has helped in creating large scale employment opportunities for technically qualified professionals as well as non-technical personnel in low end activities like back office operations, call centres, transcription services etc. This industry helps to protect environment and can attain goal with low investment. Today this industry is providing employment to over 1.6 million people across the country, grossing total revenue of Rs.1, 60,000 crores per year, from exports and domestic sales put together.

5.141 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. 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 percent there is enough opportunity available for the State to capture a fair share of the growing IT/ITES business.

5.142 Kerala State Information Technology Mission (KSITM), Indian Institute for Information Technology and Management-Kerala (IIITMK), Technopark, Infopark, Cyber Park and Kerala State Information Technology Infrastructure Ltd. (KSITIL) are the major agencies involved in the implementation of Information Technology schemes in the State. The details of Plan Outly and expenditure table are given in Table 5.5.

**Table 5.5**  
**Plan Outlay and Expenditure**

Sl. No	Agency	Annual Plan 2010-11		Annual Plan 2011-12		Annual Plan 2012-13
		Outlay	Expenditure	Outlay	Expenditure	Outlay
1.	KSITM	5164.00	4271.91	5039.00	2166.50	7307.00
2.	IIITM-K	675.00	675.00	900.00	900.00	1200.00
3.	Technopark, Infopark and Cyberpark	7000.00	15618.08	7850.00	8171.13	11769.00
4.	KSITIL	2000.00	2000.00	2400.00	2400.00	1700.00
5.	Others		200.00	1000.00	500.00	
	Total	14839.00	22764.99	17339.00	14137.63	21976.00

5.143 The Annual Plan outlay during 2012-13 for Information Technology is 27 percent higher than the outlay for 2011-12.

#### Kerala State Information Technology Mission (KSITM)

5.144 Kerala State Information Technology Mission (KSITM) is a Society registered under the Travancore Cochin Literary Scientific and Charitable Societies Registration Act. It is an autonomous nodal IT implementation agency for Department of Information Technology, Government of Kerala which provides managerial support to various initiatives of the Department.

5.145 The Kerala State Information Technology Mission is formed to take over the existing facilities, equipments and other assets of the Mission Group on Information Technology (IT) which has been set up by the Government. All the activities of the Mission Group namely, assisting the IT Department in the implementation of the IT policy declared by the Government, initiate efforts at e-governance by providing effective and citizen friendly government interfaces, promotion of the State as an IT destination for industries and use of IT as a tool to upgrade the standard of living of the people in all walks of life, shall be carried out by the Mission. The Government of Kerala acknowledges the critical importance of Information Technology as an instrument for the State's overall development and remains deeply committed to its dissemination, both as a crucial engine of economic growth and as a tool for increasing productivity, speed & transparency in governance and improved quality of life for the common man.

### Box 5.7

#### Major Responsibilities of Kerala State Information Technology Mission

1. Interfacing between the Government and the industry
2. Interacting with potential investors
3. Strengthening the IT/ITES Industry base
4. Holding promotional campaigns
5. ICT dissemination to bridge the digital divide
6. E-Governance
7. Developing Human Resources for IT and ITES
8. Advising the Government on policy matters

Source: KSITM

#### Indian Institute of Information Technology and Management –Kerala (IIITM-K)

5.146 The Indian Institute of Information Technology and Management – Kerala (IIITM-K) is an autonomous research and teaching institution set up by the Government of Kerala. The Mission of the Institute is to grow into an institution of excellence in teaching, training and research in applied Information Technology and Management and a leader in educational networking and IT services provider to Industry, Institutions and the Government.

5.147 The Institute has conducted the various Post-Graduate Programmes affiliated to the Cochin University of Science and Technology and the Post-Graduate Diploma awarded by the Department of Technical Education, Government of Kerala. The details of various programmes, duration and strength are given in Table 5.6.

**Table 5.6**  
Details of Programmes Conducted by IIITMK

Programme	Duration	Class Strength
Master of Science in Information Technology	2 years	74
Master of Science in Computational Science	2 years	23
Master of Science in Geoinformatics	2 years	21
M.Phil in Eco-Informatics	1 years	7
Post-Graduate Diploma in e-Governance(PGDeG)	1 years	36

5.148 The Post-Graduate Diploma Programme in e-Governance is a Government of Kerala sponsored programme to build capabilities and skills in managing e-governance in Government. The majority of participants are sponsored employees of the Government.

5.149 During the year 2011-12, the Institute has entered into collaboration with the Sree Chitra Tirunal Institute of Medical Sciences & Technology, Thiruvananthapuram to carry out research and conduct doctoral programmes in Medical Imaging Technology. The Institute's application at the University of Kerala to recognize the Institute as a Research Centre for doctoral studies and research is under active consideration of the University.

5.150 The work on development of open courseware for Information Technology courses using free and open source software progressed. Once completed, courseware on IT courses will be available for colleges, universities and IT industry of Kerala. The course will lay the foundations for generating high quality graduates from Kerala who can compete and innovate in the fast moving field of Information Technology.

5.151 During 2011-12, the project has been initiated to design and develop multimedia course syllabus and content in areas of design, management, computer generated imagery with a view to offer Masters, Diploma and Certificate level programmes.

5.152 The faculty – driven research agenda of Institute continue to be in the areas of Artificial Intelligence and Soft Computing, Machine Intelligence and Pattern analysis, Networking and Security, Natural Language Processing, Software Engineering and Object Modelling, Computational Sciences, Ecological Informatics Information Systems and Services and Agri-informatics. The work programme of 'KISSAN Kerala ' sponsored by the Government and developed by the Institute as a farmer centric agricultural information system has expanded with the decision to kiosks at various locations in the State to decentralize its dissemination programmes.

## Technopark

5.153 Technopark, Trivandrum is an autonomous Society under Travancore, Cochin Literary, Scientific and Charitable Societies Act established on July 1990, promoted by the Government of Kerala for providing infrastructural facilities of world class quality for IT and ITES Industries. It is India's first technology park and among the three largest IT parks in India today. This is the first CMMI level 4 assessed Technology Park. Spread over 330 acres, and about 4 million sq. ft of built-up space, Technopark hosts over 267 IT and ITES companies, including several CMMI Level 5, CMMI Level 3 and ISO 9000 certified companies with around 37000 employees.

5.154 The total land available with Technopark is about 771.54 acres. Total investment during 2011-12 is ₹ 3000 crores and corresponding turnover is ₹ 2850 crore. Total export during 2011-12 is ₹ 2800 crore. Details of physical achievements of Technopark are given in **Appendix 5.59**



## Infopark

5.155 Infopark Kerala is a society registered under Travancore Cochin Literary Scientific and Charitable Society Act XII of 1955 and fully owned by government of Kerala. The main objectives include creation of state-of-art infrastructure facilities such as space for IT/ITES companies, supply of power, water, connectivity etc. Since its inception in 2004, Infopark has created over 34 lakhs sq. ft of IT space and has provided employment to over 18000 professionals through around 125 IT companies who have taken space in the Parks.

5.156 Total investment as on March 2012 is ₹ 1500 crore and the turnover upto March 2012 is ₹ 1150 crore. The export upto March 2012 is ₹ 1100 crore. At present Infopark has the following IT Parks

Infopark Kochi – Phase I	- 100 acres in Kakkanad, Ernakulam
Infopark Kochi – Phase II	- 160 acres in Kunnathunad, Ernakulam
Infopark, Thrissur	- 30 acres in Koratty
Infopark, Cherthala	- 66 acres in Pallipuram, Alapuzha

5.157 The physical achievements of Infopark are furnished in **Appendix 5.60**

## Cyberpark

5.158 Cyberpark is registered as a society under the Societies registration Act XXI of 1860, on 28th January 2009, promoted by government of Kerala under the Information Technology Department and governed by a General Body. The purpose of Cyberpark is to provide a friendly, cost effective and top of the line infrastructure to the IT/ITES investors, there by acting as a catalyst for the social and infrastructure development of the region with a vision to provide employment opportunities and a substantial contribution to economic development of the state especially the Malabar Region.

5.159 The total land available for Cyberpark is about 167.52 acres. The total investment upto March 2012 amounts to Rs. 5.58 crore. The physical achievements of Cyberpark are given in **Appendix 5.61**

## SECTION 6

### Sports Infrastructure

5.160 Kerala is a state renowned for its commendable achievement in sports both at national and international levels. Kerala is one of the few states in the country which has legislated a bill (Kerala Sports Act 2000) and thus provide an impetus to the growth of sports and games in the state.

5.161 The Kerala State Sports Commission had recommended the integration of sports and physical education into the school curriculum from the academic year 2009-10 onwards. The syllabus for introducing Physical Education as a part of school curriculum has been approved. The programme has been initiated in the academic year 2010-11.

### 35<sup>th</sup> National Games

5.162 The National Games is the most important sporting event in the country. It has its origin in the Indian Olympic Games movement in the first few decades of the last century. The movement culminated in the 9th Indian Olympic Games at Lahore in 1924. The event was known by this name until 1940 when it was held at Bombay as National Games.

5.163 Kerala is going to hold the 35<sup>th</sup> National Games for a second time in November - December 2013. The first occasion was in 1987 when the 27th National Games was held at Thiruvananthapuram, Kozhikode, Alappuzha, Kochi, Thrissur and Kollam. National Games will certainly boost the sports ethos of the people of the State, especially the younger generation. It will cause a churning in the sporting population resulting in the discovery of new talents. National Games will certainly improve the sports infrastructure in the State. It will create awareness among the sporting youth that training under modern facilities can create the required talent for competing in national or international events. The present status of infrastructure development in sports infrastructure is given in Table 5.7.

The main objectives of the National Games are

- The Games are to be organised economically with administrative and technical efficiency by providing decent accommodation & catering facilities to the participants, besides providing international standard competition venues and sports equipment.
- To bring awareness among the State about the necessity for creating sports infrastructure of international specifications for raising the standard of sports.
- To enable the State to organize national and international competitions.
- To attract the youth in large numbers for participation in sports activities.
- To improve the organizational skills of the sports administrators for staging multidiscipline games in India.

- To inculcate sports culture among the people of all walks of life and educate the people about the importance of sports to build a healthy society.
- To develop and strengthen the marketing of sports in a professional way and to make the sports organizations at national, state and district level self-sufficient.

Table 5.7

## Present Status of the Infrastructure Development in Sports Infrastructure

SI no	Name of project	Percentage completed	Estimated date of completion
<b>I</b>	<b>New Infrastructure Projects</b>		
1	New football stadium at medical college ground, Kozhikkode	70%	31-03-2013
2	New hockey stadium at Kollam	30%	31-03-2013
3	Shooting range at Vattiyoorkkavu, Thiruvananthapuram	20%	31-03-2013
4	New multipurpose hall, Kannur	2%	30-09-2013
5	Kariavattom main stadium, Thiruvananthapuram	3%	31-12-2013
<b>II</b>	<b>Renovation Projects</b>		
1	University stadium, Thiruvananthapuram	95%	Finishing stage
2	Jimmy George Indoor stadium, Thiruvananthapuram	85%	Finishing stage
3	Corporation stadium, Kollam	80%	Finishing stage
4	IRC Sanghumugham	92%	Finishing stage
5	V.K.N. Indoor hall, Thrissur	85%	Final finishing
6	VKK Menon Stadium, Kozhikkode	65%	31-12-2012
7	Rajiv Gandhi Indoor Stadium, Kochi	20%	31-03-2013
8	Agriculture College Indoor Stadium, Vellayani, Thiruvananthapuram	80%	Final finishing
9	Chandrasekharan Nair (CSN) Stadium, Thiruvananthapuram	25%	Final finishing



5.164 National Games Secretariat has been constituted as a charitable society to carry out all the works needed for the successful conduct of the games. As the time available is limited, it has been decided to conduct the games in 24 stadia which are to be renovated. Four Greenfield stadiums are also proposed at Karyavattom, Vattiyoorkavu, Central Stadium in Thiruvananthapuram and Kozhikode and the project is envisaged to be taken up under Design Build Operate and Transfer mechanism with the participation of private entrepreneurs. A Games Village is also to be made available, where all about 5000 athletes and team officials are to stay during the Games. Roads leading to the stadium are being upgraded and other facilities like water supply, games equipments has to be ensured. The financial progress of national games infrastructure is given in Table 5.8.

**Table 5.8**  
**Financial Progress of National Games Infrastructure (Rs in crore)**

Sl no	Projects	Total estimate amount	Expenditure as on 30/11/2012	Total release GOI&GOK as plan fund
1	Construction/up gradation of stadia	231.78	46.24	88.23
2	Purchase of equipment	35	2.02	
3	Opening and closing ceremonies	15	0	
4	Conduct of Games	80	2.55	
5	Games village	60	0.54	
6	Miscellaneous overhead charges	28.55	10.39	
7	Green field stadia	161	1.82	
TOTAL		611.33	63.56	

## Sports Policy 2012

5.165 In order to achieve excellence in sports, both at the National and International level, there is the need to streamline the functioning of the Sports Department, Kerala State Sports Council and the Directorate of Sports & Youth Affairs and adopt a uniform policy in consultation with the Departments of Education, Health and Local Self Government so that activities of sports and games are broad based across the State. Further, keeping in tune with the principle of 'Sports for All and 'Health for All' as enshrined in the Kerala Sports Act 2000, it will be the endeavour of the Government to utilise sports as a vehicle to promote healthy living among all sections of people of the State.

5.166 The vision is to make Kerala a vibrant, leading-edge State in the sports arena duly recognising the athlete as the central character of all sporting activities; to create adequate sports infrastructure; raise the standard of sports in the State.

The main objectives of the policy are

- To provide equal opportunities to all citizens of the State of Kerala for participation in sports;
- To promote excellence in sport with the athlete as the central character;
- To develop, maintain and optimally utilise high quality sports infrastructure;
- To encourage, train and support talented sports persons in large numbers;
- To lay special emphasis on strengthening of infrastructure in educational institutions including Universities;

## Sports for All, Health for All

5.167 Sports activities would be spread throughout the length and breadth of the State by creating the requisite sports facilities to obtain maximum results under the objective of helping sportspersons of the State realise the latent talent in them. All schools in the State would have sports and physical education as a regular activity by 2014-15 as part of the integration of sports into the educational curriculum. Importance of physical fitness and good health would be disseminated to all sections of society through the 'Total Physical Fitness Programme'. As a follow up to the test results of the TFPF, which has shown the physical fitness levels of the students in poor light, a new scheme, 'Play A Game – Play For Fun' would be introduced at schools across the State in a phased manner.



## Sports for Excellence

5.168 In each district one Government school having requisite sports facilities and land will be converted as a Centre of Excellence for sports training. Existing Sports Hostel and Sports Division schemes would be revamped. Sports disciplines would be prioritised on the basis of performance at National and international level, with emphasis given to the disciplines included in the Olympic Games, Commonwealth Games, Asian Games and the National Games. Sports Academies at the School level for prioritised disciplines would be established in each district. Centres of Excellence would be opened at selected Colleges in all the three identified regions of the State - Malabar, Kochi and Travancore.

## SECTION 7

### Housing

5.169 Safe and secure shelter is one of the basic needs of a human being and right to adequate housing is a fundamental human right. Investment in housing has a multiplier effect on the economic growth of the country. The construction sector is directly benefited through housing projects.

5.170 The State Government is providing support through its various programmes to fill the gap between demand and supply of houses with special focus on weaker sections of the society. Kerala has been a pioneer in the housing sector with the historic One Lakh Housing Programme launched in 1972. This was followed by the programme such as SASH, Maithri, Kairali, Thanal etc which support and shelter for poor.



### Demand for Housing

5.171 The housing situation in Kerala is far better than in the rest of the country. With three times the average national density of population and considering the present trend in increase in population and housing, the population in 2011 is a little over 3 crore while the number of households are only around 83 lakh. It is also estimated that housing needs for the additional requirement for new population during the 12th plan period is 6.5 lakh. In addition to this there is a need for reconstruction of 5.5 lakh units of dilapidated houses. The State has to undertake a task of completing 12 lakh Housing units of which around 60 % are the needs of the Economically Weaker Sections of the society, as envisaged in the State Housing Policy 2011 .

## Agencies in Housing Sector

5.172 Several agencies which are implementing housing schemes in the state include 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 Kudumbashree, which implements Ashraya housing scheme for the destitute etc. Non-governmental agencies such as COSTFORD and Habitat Technology group, co-operative societies and corporation such as Kerala State Co-operative Housing federation, Kerala Police Housing & Construction Corporation etc have also helped in constructing houses. Several NGOs also have contributed significantly. These Agencies / departments have provided assistance to construct about 7 lakh houses from the period from 2007-08 to 2012-13 up to 30/9/2012. Year wise details are given in following table 5.9 and these agencies implemented various schemes during 2011-12 as given in the following Box 5.8

**Table .5.9**  
**Houses Constructed by Various Agencies**

Year	Houses Constructed
2007-08	163374
2008-09	158499
2009-10	138611
2010-11	146240
2011-12	110124
2012-13(up to 30.9.2012)	25412
Total	742260

**Box. 5.8**

### Housing Schemes and Implementing Agencies

Agencies	Schemes /Activities	Achievement during 2011-12
Kerala State Housing Board	M.N. Laksham Veedu Punar Nirmana Padhathi	During 2011-12, 1139 houses were renovated with an expenditure of amount Rs13 crore.Up to 31/8/2012 Board renovated 284 houses for an amount of Rs 3 crore.
	Innovative Housing Scheme	During 2011-12 Board has constructed 48 flats with the budgetary support of 400 lakh and in 2012-13, up to 31/8/2012, 40 flats are being constructed with an amount of Rs 400 lakh.
	Housing Scheme for Government Employees in Government land	During 2011-12, 18 flats are being constructed with the budgetary support of Rs 400 lakh.
Kerala State Nirmithi Kendra	Cost effective and environment friendly technology	KESNIK took up the construction of 100 houses for tribals at Wayanad.
Kerala Police Housing & Construction Corporation limited	Construction activities related with Police Head Quarters and women police cell.	142 projects were completed during 2011-12.
Kerala State Co-operative Housing Federation	Provide financing facilities for the primary co-operative housing societies for the construction of houses.	During 2011-12 up to 30/9/2012, an amount of Rs 3747 lakh has been disbursed for constructing 1316 housing units among EWS,LIG,MIG. MIG is the largest beneficiary group.

5.173 During 2012-13 an amount of ₹ 5800 lakh was earmarked for housing sector, and up to 30/12/2012 an amount of ₹ 810 lakh has been spent. The expenditure is nearly around 15%. A huge amount of ₹ 1700 lakh has been allotted for the housing subsidy scheme Saphalyam, but due to revision of the estimates, the schemes has been delayed.

5.174 Some initiatives under rural housing are given in Box.5.9 and an account of financial institutions is given in Box.5.10

### Box 5.9

#### Centrally Sponsored Scheme for Rural Housing

The Government of India has targeted social housing as one of its primary focus areas and stress special attention to the needs of the slum dwellers and housing for the weaker sections. Rural Housing is one of the components of Bharat Nirman , launched in 2005-06 for building infrastructure and basic amenities in rural areas, under the scheme Indira Awas Yojana (IAY).

- Indira Awas Yojana (IAY):- IAY is being implemented to help rural BPL Houseless families in construction of houses. Over time, many new initiatives have been taken to make the implementation of the scheme efficient and result oriented. Efforts are also made to improve the quality of houses and provision of civic amenities .IAY is a housing programme implementing through Local Self Government Institutions. The beneficiaries are selected from BPL list. Funding for IAY is shared between the central and state Governments in a ratio of 75:25.

### Box 5.10

#### Financial Institutions in Housing Sector

A large number of financial institutions have been providing assistance for house construction along with the Government agencies in the state .Financial institutions in this respect are Nationalized Banks, HUDCO, HDFC, LIC Housing Finance Limited, Sundaram home finance, GIC Housing Finance, HOUSEFED etc .Consequent to the growing competition among these agencies in bank deposit and lending rates, the rates of housing loans are also changing within short spells of time .However counter cyclical policies announced by the Government of India and Reserve Bank of India are likely to stabilize the effective interest rates on housing loans .

- HUDCO:-

HUDCO has made steady and significant in the field of housing in the state, providing assistance to institutions as well as individuals. Besides housing finance ,HUDCO is funding the construction of sanitation units ,development of plots and urban infrastructure projects .Kerala State Housing Board, Kerala State Development Corporation for SC/ST ,Kerala Urban and rural Development Finance Corporation,Housefed,Kudumbashree,etc are the institutions which received assistance from HUDCO.In addition to this, the institution sanctions loans to individual scheme named HUDCO Niwas.Up to march 2012 it sanctioned loans to 3810 houses under HUDCO Niwas.HUDCO also functioned as an appraisal agency for extending central Government grant assistance in housing sector under BSUP, IHSDP, JNNURM, ILCS etc. HUDCO gives loans for the Economically Weaker Section housing and Low Income Group housing projects with low interest rate, ie 8.75% and 9% respectively.

- LIC Housing Finance Limited :-

LIC Housing Finance Limited is one of the largest housing finance companies in India having one of the widest networks of 205 offices across the country and representative offices at Dubai and Kuwait.In Kerala, LIC Housing Finance Ltd has five branches located at Kochi, Kottayam, Kozhikode, Thiruvananthapuram and Thrissur. During 2012 up to September, the company disbursed loans of Rs 5716 crores in the individual loan registering a growth of 21% over the previous year .For the year company's total income was Rs 1862 crore as against Rs 1515 crores during the same period last year registering a growth of 23% .Net profit during this period was Rs 243.06 crores as compared to Rs 98.39 crores in the corresponding period last year showing a growth of 147 %.

5.175 The focus areas in Kerala's Housing sector during XII<sup>th</sup> plan are given in Box. 5.11

### Box 5.11

#### Focus Areas in Housing Sector during XII<sup>th</sup> plan

- To provide adequate and affordable housing for all on a rights based approach
- Accelerated efforts will be taken to meet the housing needs of landless tribals, fisherman, traditionally employed and poorest of the poor.
- Envisage promotion of adequate flow of funds to the housing sector from national and international financial institutions, Non Resident Indians etc.
- To recognize the needs for cost effective, environment friendly, energy efficient technology, locally available building materials, its standardization and acceptance by the general public.
- To recognize the issue of acute shortage of river sand, which is an essential material for building construction and necessary steps, will be taken for research work for identification of alternate materials.
- To address the gap in infrastructural facilities and supply of quality basic services on a regional development framework.
- During the Twelfth plan, a comprehensive habitat and housing policy will be implemented in the state.
- A housing regulatory authority will be set up to regulate building activity and to settle dispute.
- The Plan will aim at construction of 12 lakh housing units during the 12<sup>th</sup> five year period ,of which 60 %will be for economically Weaker sections .This project will be funded by converging resources under Indira Awas Yojana ,Rajiv Awas Yojana, funding from HUDCO and other financing institution.
- The effectiveness and reach of Kerala State Housing Board will be improved with the help and support of HUDCO and identified management and consultancy services.

## SECTION 8

### Information & Publicity

5.176 State's public relation activities and information services are envisaged under information and publicity. Information and Public Relations Department is the nodal department which undertakes such activities. It involves Press Information Services, Field Publicity, Display Advertisement, Information Centres, Films and Publications, Maintenance of Government Website and Setting up of Mail Server. Kerala Press Academy and Centre for Development of Imaging Technology (C-DIT) are the other two autonomous institutions functioning in this area.

### Sutharya Keralam

5.177 Sutharya Keralam is the automation of the Hon'ble Chief Minister's grievance redressal cell with support of IT enabled feedback system and convergence of communication to redress the grievance of the public. The programme is being aired on Doordarshan on every Sunday at 7.20 pm. The radio format of the programme is broadcast over All India Radio on every Sunday at 8.30 am. The programme is designed in such a way that the selected complaints received have been brought to the notice of the Hon'ble Chief Minister, who in turn takes up the issue with the Senior Officers like Secretaries or Heads of Departments, directly or over video conference and a firm decision on the complaint is arrived. The Chief Secretary also attends this programme along with the Hon'ble Chief Minister. As on March 31, 2012, a total of 23 episodes have been telecasted. During the period under report, 116 complaints were taken up by the Hon'ble Chief Minister and 114 complaints were redressed.

## e -Governance

5.178 Web streaming of the Chief Minister's office, whistle blowers facility in the C M's site, vision 2030 idea box and 24x7 call center are the new initiatives under e-governance. A novel move to ensure transparency in administration, the 24 hour live webcasting from the official chamber of CM at the state secretariat was inaugurated on July 1st 2011. The people can watch live meetings, press conferences and cabinet briefings by logging on to [www.keralacm.gov.in](http://www.keralacm.gov.in). In addition to the above facilities, toll free numbers would be functional round the clock, for citizens to lodge petitions and tracking petitions to the CM. People can submit complaints or suggestions through the call centre which can be accessed from all over the world. The call centre will function in three shifts. It can be reached on the toll free number 1800 425 1076. BSNL subscribers accessing the number locally need dial only 1076 while those dialling from abroad should add the STD code (0471 - 1076). Complaints can also be submitted in writing through the website [www.keralacm.gov.in](http://www.keralacm.gov.in)

## Government Web Portal and Maintenance of Mail Server

5.179 The official website of Government of Kerala ([www.kerala.gov.in](http://www.kerala.gov.in)) was launched in July 1999 at the initiative of the Information Technology Department. It provides general information about the State including the structure of the Government, functions of various Government departments and agencies, details of ministries, members of the Legislative Assembly and other elected representatives. It also provides entry to other website [www.prd.kerala.gov.in](http://www.prd.kerala.gov.in), [www.rti.kerala.gov.in](http://www.rti.kerala.gov.in), [www.cmkerala.gov.in](http://www.cmkerala.gov.in), [www.sabarimala.kerala.gov.in](http://www.sabarimala.kerala.gov.in) and maximum links were established in the web portal to provide easy access of information regarding function, services, tenders and Government orders etc. SSLC, higher secondary and entrance examination results were made available in the official and PRD web portals. More than 22 lakh people had visited those portals on the date of publication of the SSLC results. All information required for the sabarimala pilgrims were uploaded in the website. About 2.74 crore pilgrims visited the website during the first fortnight of the pilgrimage period. The Government official website has been transformed into the content management framework. Now the PRD website is in the final stage of transformation to the content management framework. A website with address-[www.pa.kerala.gov.in](http://www.pa.kerala.gov.in) has been created and added to the portal to publish the property details of ministers and Government officials.

## Janapatham

5.180 Janapatham is a weekly radio documentary on developmental initiatives of the Government. Till March 31, 2012, a total number of 25 episodes have been broadcasted by all stations of All India Radio in the State. Major initiatives covered under this programme are One Kilogram rice for One Rupee, One Year Programme of the Government, State Budget, E-Procurement initiative, Cochlear implantation project for hard of hearing children etc.

## Co-ordinating News Desk

5.181 Government programmes are covered by the visual media team and is uploaded to the Clip mail website for feeding the TV channels and web portals. In the year 2011-12, the department uploaded 4211 news video clips in the Clip mail Website for various news channels and websites.

## Press Release & Media Relations

5.182 Press release including special features through the print and electronic media, release of video news clips to T.V media, convening press meets, providing better facilities to reporters for easy reporting etc are coming under press releases. 2112, press releases including photographs were uploaded in the PRD website and e-mailed to print and electronic media. Further, 1200 news photographs were uploaded in the PRD website.

## Modernization of Tagore Theatre

5.183 The project aims the renovation and development activities of the Tagore Centenary Hall, Vazhuthacaud, Thiruvananthapuram for conversion into a multipurpose cultural complex for facilitating various cultural and entertainment activities. About 20% of the outlay in the Information & Publicity sector during the 11th plan has been provided for the project. As a proportion to the total expenditure in the sector during the period, the achievement of the programme is only 7%. It is noted that the modernization process had been started in the beginning of the 10th plan period and not completed.



## Publications

5.184 The editorial wing is bringing out publications of reference books, magazines, newsletters, pamphlets etc. on various subjects like culture, education, history, contemporary events, books on eminent individuals and traditional arts. The prominent print media publications are "Janapatham" (Malayalam) and "Kerala Calling" (English). "Kerala Interface" (English) and "Vikasana Samawayam" (Malayalam) are the two major monthly newsletters. The details of publications of the department during 2011 are given in **Appendix 5.65**

## Kerala Press Academy

5.185 Kerala Press Academy established in 1979 is a joint venture of the GOK, Kerala Union of Working Journalists and Indian Newspaper Society. The main objective of the academy is to promote and coordinate study and research in the field of journalism in the state and its impact on other spheres of publicity activity. It offers Post Graduate Diploma courses in Journalism, Mass Communication, Public Relations and Advertising.

## Outlook for Infrastructure Sector in Kerala

5.186 All aspects of infrastructure will be given priority during the XII<sup>th</sup> plan as both growth and well being are greatly affected by the quality and quantity of infrastructure. Emphasis will be on dedicated funding for road development, coastal shipping and inland water. Solar and other renewable energy sources will be exploited and energy conservation will also be undertaken. Simultaneously, urban infrastructure, with special thrust to solid waste management, will also be given due priority. Both budgetary as well as extra budgetary sources of funding will be tapped to provide high quality infrastructure in Kerala. Close monitoring of key infrastructure projects is required to ensure timely take-off and to prevent cost over-runs.



# EXTERNAL SECTOR







# EXTERNAL SECTOR

## Introduction

*In this chapter, three important sectors mainly Trade, Tourism and Welfare of Non Residential Keralites are grouped together to provide an insight into Kerala's dependence on the global economic situation.*

*The fragile global economic recovery following the major slow down in global production and trade has resulted in prolonged phase of uncertainty, primarily in advanced countries. Low growth and consequently low demand in advanced economies, which are our major trade partners, have affected Indian trade as well as Kerala's trade, adversely. In 2011-12 high export growth at the National level was observed in petroleum products, chemical & related products, agricultural & allied products, marine products and leather goods (Mid Year Economic Analysis 2012-13). Kerala has considerable presence in India's export basket of Agricultural goods as well as marine products*

*The prospects for trade in 2012 are expected to be even lower than it was in 2010. World trade in goods and services is projected to grow only by 3.2 per cent in 2012 compared to 5.2 per cent in 2011. Imports of emerging and developing economies are expected slow down and grow by only 7 per cent in 2012 as compared to 8.5 per cent in 2011. Similarly the projected growth for exports from emerging and developing economies is expected to be only 4 per cent in 2012 as compared to 6.5 per cent in 2011 (IMFS World economy outlook update of October 2012).*

*Growing uncertainty has dampened the prospects of non residential Keralites, who are a major source of remittances for the State. There is some concern that Kerala's outward migrants may face some instability of employment. There is thus a need for providing returning migrants viable employment opportunities in their mother State.*

*Kerala is known as an attractive global tourist destination and tourism is a major source of income for the people of Kerala. Once again this sector is also dependent on global growth and therefore has an inbuilt vulnerability which needs to be carefully mitigated through appropriate policy measures.*

## Trade

Low growth and an atmosphere of uncertainty in advanced economies have affected trade prospects in emerging market and developing economies in 2012-13. This is evident from slower growth in import demand in most advanced economies corresponding with weaker export growth in most of emerging and developing economies. India's export growth also showed concomitant decline and in fact was more pronounced than some of other emerging market and developing economies. Fiscal cliff (increased taxes and expenditure cuts in the US), persisting low business expectations in other advanced economies, downswings in Chinese real economic activity etc may further adversely affect commodity exporters like Kerala.



6.2 Cross-country comparison of export performance indicates that India was one of the few economies in Asia which has shown decline in exports in the first quarter of 2012-13. However, India's share in world export remained stable during the period. Going forward, downward risks to India's exports are likely to remain on account of weak import demand in advanced countries and slowdown expected in China.

6.3 Being the major gateway to Kerala, the lion's share of trade operations in the State is being conducted through Cochin Port. Items of trade include pepper, cashew, coir and coir products, tea, cardamom, ginger, spices and spices oil and marine products. Total traffic handled by the Cochin Port during 2011-12 was 200.91 lakh MT and that of 2010-11 was 178.72 lakh MT, registering an increase of 12.4 per cent.

6.4 Total quantity of exports through Cochin Port during 2011-12 increased to 43.11 lakh MT from 34.04 lakh MT in 2010-11, a rise of 27 per cent in quantitative terms and 22 per cent in value terms. All commodities, except tea and coir products, exported through the Cochin Port showed an increasing trend during 2011-12. Exports of cashew kernels increased by 11 per cent, sea foods by 22 per cent, spices by 41 per cent and coffee by 36 per cent. Exports of tea decreased slightly (by 0.21 per cent) and that of coir products by 6.5 per cent (see **Appendix 6.1**).

6.5 Imports through Cochin Port continued to increase and reached a level of 157.80 lakh MT in 2011-12. The main items of import include fertilizers and raw materials, food grains, iron and steel and machinery, newsprint and raw cashew nut. Import of iron and steel and machinery which increased by 82.5 per cent in 2010-11 sharply decreased by 78.6 per cent in 2011-12. Import of fertilizers and raw materials decreased by 30.5% during 2011-12. Decline in the import of the above items adversely affects the production sector (see **Appendix 6.2**).

6.6 Exports of Cargo, both coastal and foreign, from Cochin Port increased in 2011-12 by 23.4 per cent and 28 per cent respectively. Coastal exports increased to 14.86 lakh MT in 2011-12 from 12.04

lakh MT in 2010-11 while foreign exports marked an increase from 22.00 lakh MT in 2010-11 to 28.25 lakh MT in 2011-12. Both coastal and foreign imports increased by 7.3 per cent and 10 per cent respectively during 2011-12 (see Table 6.1)

**Table 6.1**  
**Cargo Handled at Cochin Port during 2007-08 to 2011-12**

(In Lakh MT)

Traffic	Export					Import				
	2007-08	2008-09	2009-10	2010-11	2011-12	2007-08	2008-09	2009-10	2010-11	2011-12
1	2	3	4	5	6	7	8	9	10	11
Coastal	14.92	9.81	12.83	12.04	14.86	36.60	38.17	42.65	48.21	51.74
Foreign	19.99	17.29	23.13	22.00	28.25	86.04	89.67	95.68	96.47	106.06
<b>Total</b>	<b>34.91</b>	<b>27.10</b>	<b>35.96</b>	<b>34.04</b>	<b>43.11</b>	<b>122.64</b>	<b>127.84</b>	<b>138.33</b>	<b>144.68</b>	<b>157.80</b>

Source: Cochin Port Trust

## Marine Products

6.7 Contribution of Kerala towards India's marine exports in 2011-12 showed a markable increase over the earlier period both in quantity and value, an increase by around 18 per cent. Marine exports of Kerala during 2011-12 stood at 155714 MT with a value of ₹ 298833 lakh as against 124615 MT valued at ₹ 200210 lakh in 2010-11. Export details of Marine Products of Kerala compared to all India in Quantity and Value for years 2007-08 to 2011-12 are given in Table 6.2.

**Table 6.2**  
**Export Trend of Marine Products – India & Kerala 2007-08 to 2011-12**

Year	INDIA		KERALA		KERALA'S share %	
	Quantity (Tonnes)	Value(Rs Lakh)	Quantity (Tonnes)	Value(Rs Lakh)	Quantity	Value
2007-08	541701	762092	100318	143091	18.52	18.78
2008-09	602835	8607.94	100780	157218	16.72	18.26
2009-10	678436	1004853	107293	167002	15.81	16.62
2010-11	813091	1290147	124615	200210	15.33	15.52
2011-12	862021	1659723	155714	298833	18.06	18.00

Source: The Marine Products Export Development Agency (MPEDA)

6.8 Item wise details of exports of marine products from Kerala during 2010-11 and 2011-12 are given in **Appendix 6.3**.

## Cashew

6.9 The percentage share of Kerala in cashew kernel export of India, both in value and quantity had been declining since 2006-07. Of the total exports of cashew kernels from India in 2011-12 Kerala's contribution in quantitative and value terms stood around 52 per cent. This was 53.5 per cent and 52.5 per cent respectively in 2010-11 (see Table-6.3). The major markets for Indian Cashew Kernels during 2011-12 were USA, UAE, Netherlands, Japan, Saudi Arabia, UK, France, Spain and Germany.

**Table 6.3**  
**Export of Cashew Kernels – Kerala & India (2007-08 to 2011-12)**  
 (Qty:MT, Value :Rs.crore)

Year	KERALA*		INDIA		Share of Kerala (%)	
	Quantity	Value	Quantity	Value	Quantity	Value
2007-08	69298	1395.02	114345	2289.02	60.60	60.94
2008-09	63730	1716.52	109523	2988.4	58.19	57.44
2009-10	61698	1635.79	108120	2905.82	57.06	56.29
2010-11**	56578	1478.67	105755	2819.39	53.50	52.45
2011-12**	69149	2299.67	131760	4390.68	52.48	52.38

\*Export through Cochin Port.

Source: The Cashew Export Promotion Council of India

6.10 The export of cashew nut shell liquid/cardanol from India during 2011-12 was 13575 MT, valued at ₹ 59.46 crore (US \$12 Million). There was an increase of 12.7 per cent in quantity, 76 per cent in Value in Rupee terms and 67.3 per cent in US \$ terms compared to the export of 12051 MT of cashew nut shell liquid valued at ₹ 33.77 crore (US \$ 7.4 Million) during 2010-11 (see **Appendix 6.4**).

6.11 Import of cashew nuts into India during 2011-12 was 809371 MT valued at ₹ 5337.76 crore and that of 2010-11 was 529370 MT having a value of ₹ 2649.56 crore. Import through Cochin Port during 2011-12 was estimated as 252771 MT, a decline of 20.3 per cent against 2010-11 (see **Appendix 6.2**).

## Coffee

6.12 Coffee Production in India during 2011-12 was estimated at 320000 MT. Though this amounts only to 4.5 per cent of the World's coffee production, India exports 70-80 per cent of its output. Indian coffee exports in quantity terms was 324052 MT valued at ₹ 4544 crore in 2011-12.

6.13 Kerala produced 68350 MT of coffee during 2011-12 (while neighbouring states like Karnataka produced 226355 MT and Tamilnadu 18390 MT) and exported 115359 MT valued at ₹ 1146.29 crore. This export through Cochin Port, registered an increase of 36 per cent over 2010-11. Export of coffee in 2010-11 was 84792 MT valued at ₹ 689.20 Crore.

## Tea

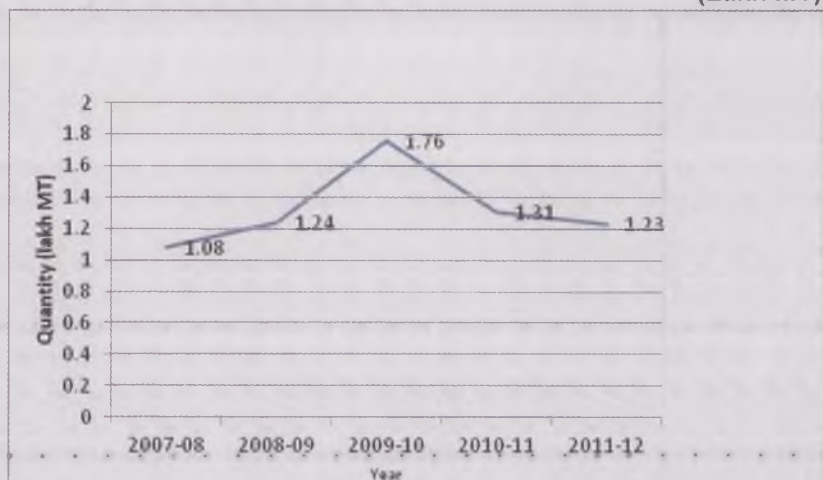
6.14 Exports of tea through Cochin Port during 2011-12 was 111137 MT valued at ₹ 464.7 Crore. The quantity of export is less than that of 2010-11, (111366 MT). However, due to a fall in the price of tea in 2011-12, the value earned was only ₹ 436.2 crore.

## Coir and Coir Products

6.15 Exports of Coir and coir Products from India recorded an increase of 28 per cent in quantity and 30 per cent in value during 2011-12. This is a very high level of exports and the highest that has ever been achieved. The total export was 410853.90 MT valued at ₹1052.63 crore.

6.16 However, exports of coir and coir products through Cochin Port continued to decrease in 2011-12 also. Quantity of exports in 2010-11 was 131046 MT valued at ₹ 406.9 crore. This decreased to 122521 MT valued at ₹ 400.5 crore in 2011-12. Items of export include coir mat, coir yarn and other coir products. The export trend of coir products through Cochin Port for the period from 2007-08 to 2011-12 is shown in the graph. (Fig 6.1)

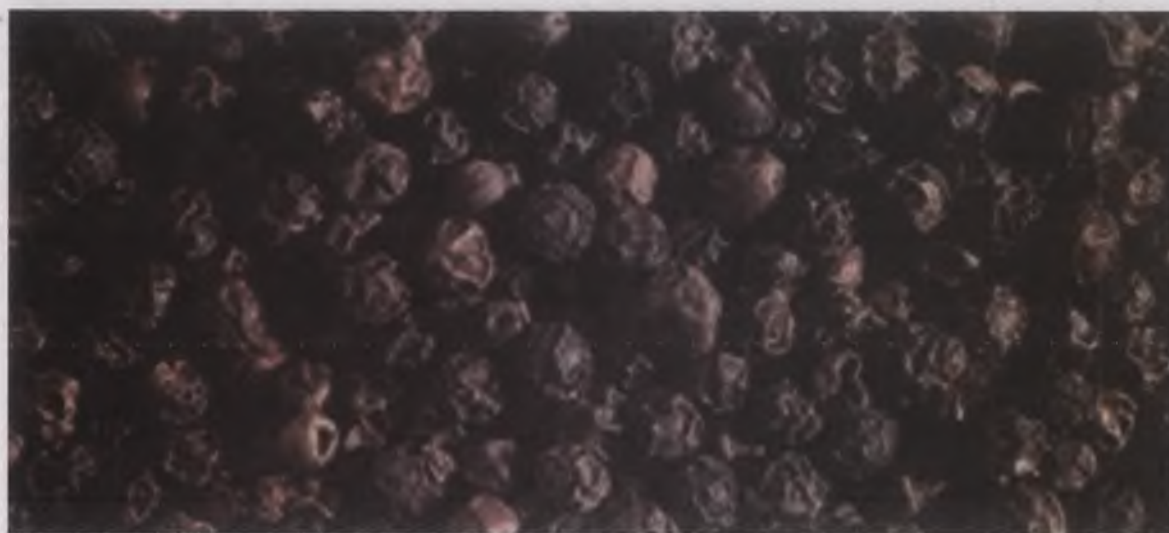
**Fig.6.1**  
**Export Trend of Coir and Coir Products from Cochin Port**  
**(Lakh MT)**



Source: Cochin Port Trust

6.17 China is the major importer among 112 countries for coir and coir products from India, its share being 30.2 per cent.

## Spices



6.18 Export of spices from India during 2011-12 has registered an increase of 9 percent in quantity and 43 percent in value. Exports which was 525750 MT with value of ₹ 6840.71 crore (US\$1502.85 million) in 2010-11 reached a level of 575270 MT and ₹ 9783.42 crore (US\$2037.76 million) respectively in 2011-12.

6.19 Kerala exports spices mainly through Cochin and Thiruvananthapuram ports. During 2011-12 spices exports through Kerala ports was 97079.26 MT valued at ₹ 3200.32 crore. Compared with 2010-11, there is an increase of 23345.88 MT in quantity (32 per cent) and ₹1315 crore in value (70 per cent). This rate of increase in quantity as well as value is an all time record . Pepper, cardamom, chilli, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, other seed spices, garlic, tamarind, nutmeg & maize, other miscellaneous spices, curry powder/mixture, spice oils and oleoresins and mint products are main items exported through the ports of Kerala.

6.20 During 2011-12 export of all spices except celery, other miscellaneous spices, spice oils & oleoresins and mint products have recorded increase, both in quantity and value, over the previous year. Export of pepper increased from 16294.97 MT (valued at ₹330.61crore) in the year 2010-11 to 24016.94 MT (valued at ₹797.10 crore) in 2011-12. Export of pepper which was declining since 2008-09 began to revive in 2011-12. About 90% of pepper export from India is contributed by Kerala both in quantity and value. Item wise export of spices through ports in Kerala from 2007-08 to 2011-12 is furnished in **Appendix 6.5**.

### Cochin Special Economic Zone (CSEZ)

6.21 CSEZ was set up in 1981 as a multi product export processing zone to boost exports from the State. Spread over an area of 103 acres, the zone has 123 working units and 7 units under implementation as on 31.03.2012 in sectors including electronic hardware, software, engineering, gem & jewellery, food processing, readymade garments, plastics and rubber products. Both multinational corporations and domestic corporations have set up their units in the zone.

6.22 Export from CSEZ during 2011-12 was for ₹ 29961.62 crore as against ₹18311.97 crore during 2010-11, registering a growth of 63 per cent over the previous year. During 2011-12, the number of Export- Oriented Units (EOUs) operating in Kerala was 79, with another 7 units under implementation. These EOUs have made an investment of about ₹ 647 crore and provided employment to 5234 persons as on 31.03.2012. Industry-wise Export performance of units in CSEZ from 2007-08 to 2011-12 is given in **Appendix 6.6**.



## SECTION 2

### Welfare of Non Resident Keralites (NRKs)

6.23 Non Resident Keralites are major assets to the State as their remittance increase the disposable income of their families. The principal destination of Kerala emigrants have remained more or less unchanged over these years, with 90 per cent of the Kerala emigrants going to one or other of the Gulf Countries. Migrants especially external migrants, from Kerala are predominantly males. The number of Kerala migrants living in Other States of India (OMI) in 2011 is estimated to be 9.31 lakh up from 9.14 lakh (2 per cent increase) in 2008. The number of out-migrants who returned and are now living in Kerala (Return out Migrants) in 2011 is estimated to 5.11 lakh compared to 6.86 lakh in 2008 (26 per cent). A major concern is the fact that the global slowdown is likely to result in large numbers of emigrant Keralites returning to the State. They will need to be rehabilitated with gainful employment befitting their skill sets. In the 12 th Plan, existing schemes will be converged and new schemes, including appropriate entrepreneurship avenues will be evolved to address their problems.

6.24 Non Resident Keralites and their relatives in the state have experienced both the positive and negative influences of global migration. Kerala is the first state in India to set up a separate department (NORKA) for the welfare of Non-Resident Indians hailing from the state. NORKA makes efforts to solve the grievances of migrants Keralites and takes remedial action on threats to the lives and property of those who are left at home. Tracing of missing persons abroad, claiming compensation from sponsors, taking action on harassment from sponsors and cheating by recruiting agents and provision of educational facilities for children for NRKs are part of NORKA's mandate.

6.25 The total remittance in Kerala in 2011 was estimated to be approximately ₹ 55,000 crore compared with ₹ 43,228 crore in 2008. This is more than 20 per cent of the State's NSDP and 1.8 per cent more than the revenue receipts of the State. Among the 14 districts in the State, Malappuram received the largest amount of remittance. In general, the southern districts experienced a decline in their share of remittances and northern districts experienced an increase. Considering the significant contribution of Non Residential Keralites to the economy the total allotment to NORKA Department has increased from ₹172 lakh in 2007-08 to ₹1151 lakh in 2011-12 (an increase of over 7 times).

6.26 An amount of ₹11.51 lakh has been provided to the Department during the year 2011-12 and the expenditure reported was only a little 6 crore ( 53 per cent). A new scheme Pravasi Legal Aid Cell was introduced during the year but the scheme was not implemented by the Department due to some technical problems.

6.27 NORKA ROOTS is the field agency of the department of NORKA. It acts as an interface between the Non-resident Keralites and the Government of Kerala and also is a forum for addressing the NRKs' problems, safeguarding their rights and if required for rehabilitation of returnees. Attestation of educational certificates prior to their attestation in the Ministry of External Affairs is being done the NORKA ROOTS. During the period under review 68763 certificates have been attested and an amount of ₹ 15.46 crore has been collected as registration fees. The Santhwana scheme, is providing financial assistance to NRKs whose annual income is below ₹ 25000/- for cases like medical treatment, marriage of daughters, purchase of wheelchair, crutches etc and 636 persons benefited during 2011-12.

6.28 Under the scheme, KARUNAYAM – funds are provided for meeting the expenditure incurred on repatriation of mortal remains of the NRKs who die abroad or those who die outside the state. Two such cases were assisted during the period under review. The Skill Upgradation programme was implemented through leading technical training institutions in the district and the objective of the scheme is to upgrade the skill of young Keralites to meet challenges in the overseas employment market.



6.29 Pravasi Bharatiya Divas (PBD) is celebrated on 9th of January every year to appreciate the contribution of Overseas Indian Community in the development of India. These conventions provide a platform to the overseas Indian community to engage with the Government and people of the land of their ancestors for mutually beneficial activities. These conventions are also useful in networking among the overseas Indian community residing in various parts of the world to enable them to share their experiences in various fields. During the event, individuals of exceptional merit are honoured with the prestigious Bharathiya Samman to appreciate their role in India's growth and also provide a forum for discussing key issues concerning the Indian Diaspora. Several Keralites participate in this event.

## SECTION 3

### Tourism

6.30 Tourism with its Super brand 'God's Own Country', has made Kerala a household name among global tourists. With the Arabian Sea in the west, the Western Ghats in the east and networked by 44 rivers, Kerala enjoys unique geographical features that have made it one of the most sought after tourist destinations in Asia. Kerala is blessed with varied geographical features like beaches, hill stations, backwaters, national parks & wild life sanctuaries. The centuries- old holistic medicine of Ayurveda, the unique boat races ,the ride through the winding waterways in a cosy houseboat or the colourful and exotic festivals, with all this Kerala offers a multitude of experiences to the tourist. Tourism industry in Kerala helps in balanced and sustainable regional growth by generating income and creating employment opportunities especially in trade ,transport and hospitality sectors, thus contributing significantly to the State's GDP.



## Box.6.1

## Kerala's Model for Success in Global Tourism

- Strong brand positioning
- Product differentiation
- Model public private partnership
- Tremendous political support
- Public acceptance
- Vibrant Private sector
- Safety and security for tourists

6.31 Kerala has an active tourism industry which is accepted as an appropriate industry for Kerala. In 1986 tourism had gained industry status in Kerala. By the early 2000s, tourism had grown into a fully fledged, multi-billion dollar industry. Over the last five year plan period priority has been given to the development of Responsible Tourism with the objective of improving the standard of life of the locals. It is for the implementation of this project in Kumarakom that the State Tourism Department won the Central Government's award.

## Box.6.2

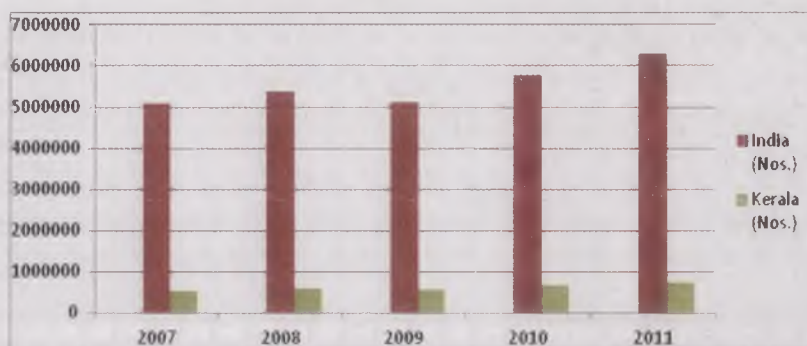
## Performance of Kerala Tourism during 2011-12

- Foreign Tourist arrivals to Kerala during the year 2011-12 were 732985, an increase of over 11percent compared to the previous year.
- Domestic Tourist arrivals to Kerala during the year 2011-12 were 9381455, an increase of over 9 per cent compared to the previous year.
- Foreign exchange earnings for the year 2011-12 were ₹ 4221.99 crores, an increase of over 11percent over the previous year.
- Total Revenue (including direct & indirect) from Tourism during 2011-12 was ₹19037 crores, an increase of around 10 per cent over the last year's figure.

## Foreign Tourist Arrivals

6.32 The year 2011-12 has recorded an impressive growth in tourism sector. International Tourist arrival had declined due to the impact of Global Economic crisis in the previous years. But the year 2012 marked a significant improvement. The number of foreign tourists in Kerala in the year 2011-12 is 732985 against 659265 in 2010-11. It shows an increase of around 11 per cent over the previous year. Which was higher than the percent growth recorded by foreign tourist in India over the previous year. During 2011-12 Kerala has the distinction of nearly 12 per cent of the total foreign tourist arrivals to India. **Appendix 6.7** gives the details of foreign tourist arrivals in Kerala and in India from 2007 to 2012. Fig 9.1 gives a comparison of growth of foreign tourist arrivals in Kerala.

Fig 6.2  
Year Wise Foreign Tourists Arrivals



Source : Dept of Tourism

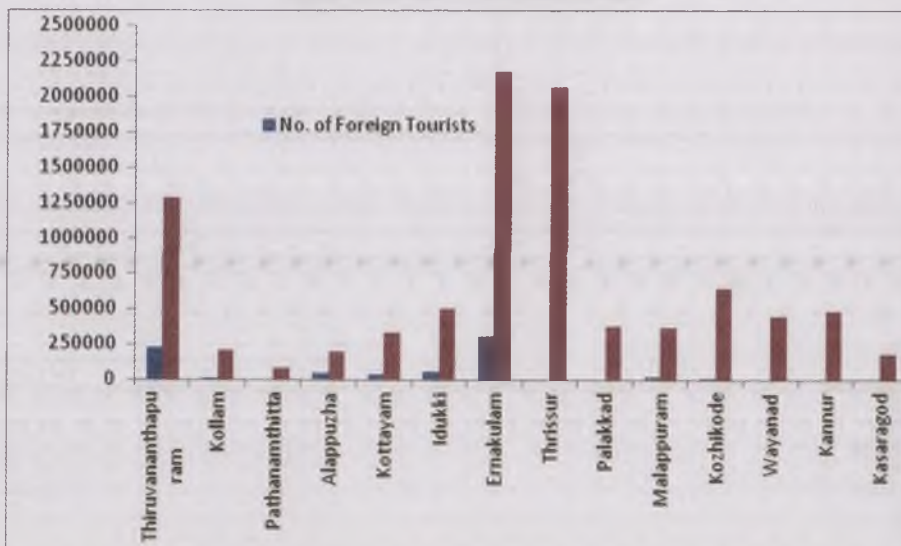
## Domestic Tourist Arrivals

6.33 The number of domestic tourists in Kerala in the year 2011-12 was 9381455 against 8595075 in 2010-11. It shows an increase of over 9 per cent over the previous year. **Appendix 6.8** gives the details of domestic tourist arrivals to Kerala from 2006 to 2011.

## District wise Arrival of Foreign and Domestic Tourists in Kerala.

6.34 Thiruvananthapuram and Ernakulam are the two leading districts recording foreign tourists arrivals to Kerala for the last few years. For the domestic tourists' arrival to Kerala, Ernakulam and Thrissur are the leading districts. Ernakulam is the leading district in domestic and foreign tourists' arrival while as Pathanamthitta is the least attractive destination among tourists. The district wise arrival of foreign and domestic tourists for the year 2011-12 is given in **Appendix 6.9**. Figure 6.3 gives the comparison of District wise arrival of foreign and domestic tourists in Kerala.

**Fig 6.3**  
**District Wise Tourist Arrivals**



Source: Dept of Tourism

## Economic Impact of Tourism

6.35 Tourism contributes 9 percent of State's GDP. Tourism industry is a major contributor of foreign exchange earnings of the State. The details are given in **Appendix 6.10**. The foreign exchange earnings during the year 2011-12 is 4221.99 crore. The total revenue generated during the same period is ₹ 19037 crore (direct and indirect). It provides considerable employment opportunities for semi skilled workers in the trade, hospitality and transport sector. It indirectly encourages local manufacture of traditional goods. It stimulates ayurvedic practices in the state and serves to showcase Kerala's environment friendly and high human development indicators to the rest of the world.

### Box.6.3 Plan Outlay and Expenditure

During the period 2010-11 the state plan allocation to the tourism sector was ₹ 90 crore and the Department utilised 93% of the plan allocation. In 2011-12 the total plan allocation to the sector was ₹ 153 crore (₹ 50 crore additional central assistance) and the Department utilised 93.5 per cent

## Responsible Tourism

6.36 Responsible Tourism is a Tourism Management Strategy embracing planning, management, product development and marketing to bring about a positive economic, social, cultural and environmental impact to the local community. Kerala Tourism has been piloting the responsible tourism initiatives at 4 destinations viz Kovalam, Kumarakom, Thekkady and Wayanad with active support of the local self Governments, Tourism Industry, Kudumbasree, NGOs and the local community as a whole. The remarkable feature of Responsible Tourism is that it provides better living conditions to the local community, extra income generation, emergence of new entrepreneurs, micro enterprises, large area brought under cultivation.

6.37 Priority has been given to the development of Responsible Tourism with the objective of improving the standard of life of the local people. The Government is all set to implement Responsible tourism across the State.

## Priorities of the State

6.38 Kerala Tourism will be able to grow beyond expectations if only it is able to position Kerala as a global tourism brand for which basic infrastructure is not sufficient at present. The government is giving priority to bridge this gap and is committed to creating an investor-friendly atmosphere to welcome private investors. Ensuring quality visitor experience is one of the main objectives of the newly declared Tourism Policy. As the major strength of tourism in the state of Kerala is its natural attractions, a clean and pollution free environment with minimum basic facilities at the destinations are required to increase the tourist flow to the state. But, waste management has become a serious concern in the state of Kerala, which is now being tackled on a war footing.

6.39 Kerala Tourism has decided to create new marketing strategies for countries like Russia, Australia and West Asia. As a part of this, the Tourism Department has decided to organize extensive promotional programmes.

6.40 The New Tourism policy is envisaged to help convert tourism into an industry that strongly supports the comprehensive development of the State and provides the roadmap for Kerala's tourism development.

### Box.6.4

#### Kerala Tourism Policy 2012

##### Objectives

- To ensure quality visitor experience
- To focus on benefits for the community from tourism
- To create enabling environment for investment
- To market Kerala as a visible global brand in domestic and international markets
- To develop quality human resources in tourism and hospitality

A Cabinet Committee on Tourism will be formed with Chief Minister as Chairman, Minister for Tourism as Vice Chairman and Ministers of related line departments as members to oversee the implementation of infrastructure plans. A new campaign on 'Kerala Waste Free Destination' will be launched with the active participation of local bodies, NGOs and Self Help Groups.

6.41 As per the recent amendment of the Kerala Land Reforms Act 1963, five per cent of land in all plantations can be used for other purposes including tourism and this will have a positive impact on hill and plantation tourism development in the State.

## Awards and Recognitions

6.42 Kerala Tourism won 13 awards in total in 2011-12 including national and international awards as well as two Central Government awards. PATA Grand, PATA Gold, World Travel Market (London) - Best Stand Award, ITB (Berlin) - Das Golden, CNBC, Outlook Traveller, Times Travel, Travel & Leisure, Conde Nast Traveller are a few of them. These awards were received for the exemplary performance by Kerala Tourism in various fields

### Tourist Accommodation

6.43 The hotel sector forms one of the most important drivers of tourism industry. Kerala has to its credit a total of 14276 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 2011 and 2010 are given in **Appendix 6.13**

## Supporting Organisations

### Kerala Tourism Development Corporation (KTDC)

6.44 KTDC is a commercial agency, which is actively participating in building up basic infrastructure needed for the development of tourism in the State. KTDC is running hotels and wayside amenity centers in almost all tourist destinations. Presently they own 8 classified hotels, 7 budget hotels, 13 motels, 13 YatriNivas/Tamarind Hotels, 20 Restaurants & Beer parlour, 4 Restaurant and 4 Boat Clubs. In total there are 706 rooms.

### District Tourism Promotion Councils (DTPCs)

6.45 The District Tourism Promotion Councils have undertaken the responsibility of creating and marketing local tourism products and opportunities. They are constantly improving the quality standards of these tourism products and services through surveys and other data collection means. The DTPCs also monitor and supervise the levels of sanitation in tourist destinations. Other related activities of the DTPCs are the creation of awareness of the facilities and services in their specific area, development of tourism clubs, dissemination of tourism specific information, Home stay scheme and development of local basic infrastructure.

### Kerala Tourism Infrastructure Limited (KTIL)

6.46 Tourist Resort (Kerala) Ltd is the agency meant for joint venture projects. Presently there are 4 hotels at Varkala, Kumarakom, Thekkady and Ernakulam sharing with TAJ group. It also oversees the Land Bank Scheme. Investment development at tourism Sector, conducting of Investors Meet and formation of consultancy cell for tourism development are other major achievements.

### Bekal Resort Development Corporation (BRDC)

6.47 Bekal Resorts Development Corporation Ltd. is a company formed for the development of Bekal and surrounding tourist attractions. The main focus is to provide marketing resources and to be actively involved in local, regional and state wide marketing promotions.

### Kerala Institute of Tourism and Travel Studies (KITTS) and Food Craft Institutes (FCIs)

6.48 Kerala Institute of Tourism and Travel Studies is a pioneer organization offering quality education and training in tourism in the state. These institutes are actively involved in the recruitment, and placing of quality staff in the tourism site throughout Kerala. All aspects of Human Resources Development for the tourism and hospitality sectors are impacted by KITTS and FCIs by establishing and

monitoring the quality regulations of the Tourism and Travel Training Institutes.

## Eco - Tourism

6.49 Kerala is famous for its ecotourism initiatives.

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.

## Muziris Heritage Tourism Project

6.50 Muziris is an ancient port in Kerala. Muziris Heritage Project was developed to utilise the State's immense potential in the Heritage tourism sector. Muziris Heritage project today, one of the most successful projects undertaken by Kerala tourism and the project is being completed in different phases. The first phase will be finished in a few months and is being dedicated to the country.

## Kerala Sea plane Project

6.51 Kerala is blessed with abundance of water bodies which are mostly in areas of tourist interest. Kerala government is rolling out seaplane project for providing connectivity by air to its destinations across the state. The plan is to provide the service initially in a prioritised circuit consisting of Ashtamudi, Punnamada, Kumarakam, Bolgatti and Bekal with the three airports as base stations.



## Box.6.5

**Major Tourism Projects Approved in 2011-2012**

- Varkala Tourism Plaza – ₹ 1 crore 35 lakhs
- Development of beaches at Thalassery and Kannur – ₹ 1 crore 20 lakhs
- Beautification of Fort Kochi, Vypeen – ₹ 1 crore 65 lakhs
- Development of tourist facilities at Pookodu lake in Wayanad – ₹ 2 crores 97 lakhs
- Development of Resting facilities at Aakkulam Tourist centre – ₹ 2 crores 25 lakhs
- Landscaping and other facilities at the houseboat terminal complex – ₹ 4 crores 99 lakhs
- Construction of biogas plant at Kovalam – ₹ 1,18 lakh
- Manpower development for Tourism industry - ₹ – 250 lakh
- Development of Karappuzha dam site and surroundings into a major tourist spot – ₹ 492 lakhs
- Tourism Facilitation cum Information Centre at Kabanitheeram (Panamaram) – ₹ 75 lakhs
- Nehru Trophy Boat Race Pavilion in Alappuzha - ₹ 15 Crores
- Basic infrastructure development for adventure tourism at Vagamon – ₹ 98 lakh

6.52 Kerala Tourism is now focussing on activities that fully utilise the immense possibilities of tourism in the state. It will also emphasize on the development of more tourist centres in co-operation with other agencies like Forest Department, Local Self Governments etc. It is with the objective of ushering in total development in this area that awards and incentives are being offered for novel and practical ideas. Kerala Tourism is a major development segment and a well known global brand. To sustain tourism in the highly competitive market, there is a need to ensure quality experience to the visitors while benefiting society and industry. Non availability of land, poor infrastructure and need for environment conservation can act as barriers to tourism development in the State. Responsible and eco tourism can be developed by having closer co-ordination between related departments in the State and Local Governments, so that projects can be completed in the planned time frame and within the estimated cost. The full protection of forests, Hill, Plantation, Water and cultural tourism will be developed during XI<sup>th</sup> plan without hampering the environment.

### Outlook for External Sector in Kerala:

Kerala has long been and will continue to be a globally connected economy. Over dependence on horticulture and marine exports is risky as global commodity prices are beyond Kerala's control. Diversification of exports to include high value knowledge based goods and services will spread the risk as well as improve inward flows to the State. Similarly, Kerala is known more for semi – skilled emigrants, the one major exception being highly skilled nurses. Efforts should be made to increase the skill and employability of all Keralalites so that they may benefit from global opportunities. The benefits gained in being a globally sought after tourist destination can be further enhanced through a variety of measures which ensure that Kerala remains a clear, eco – friendly and safe destination, with not only a rich historical and cultural tradition but a State which offers tourists world class recreation facilities.

# CAPACITY BUILDING







# CAPACITY BUILDING

## Introduction

*This Chapter includes Science and Technology and Training and Skill Development, which lay the foundation for a knowledge intensive high valued added economy. Kerala has significant accomplishments in the field of human and social development and this dividend can be enhanced through appropriate and focused policies and schemes to develop scientific breakthroughs in health care, agricultural production, plant pest management, animal husbandry, pisciculture, water management etc. It can lead to innovations and adaptation of appropriate technology in industry and infrastructure sectors such as logistics, renewable energy and world class design. The educated young in Kerala could benefit through high tech high value adding capacity building programmes. Skill development is required not only for the educated but for all of Kerala's labour force so that productivity of labour increases and value of output remains high, even during times of labour shortages. Identification of different levels of skills required by agricultural, industrial and service sectors and ensuring that local labour is trained to match these requirements will create a skilled and highly employable manpower base in Kerala. The critical importance of capacity building in Kerala, the main accomplishments of efforts made during the 11th Plan (2007 -2012) and some of the major schemes introduced to tackle these challenges are brought out in this chapter.*

## Scientific Services & Research

Advancements in science and technology have driven developments in the different spheres of human activity. Scientific research and innovations affect the society in many ways and have revolutionized human life. It holds the power to bring about rapid growth and address the challenges facing mankind. Hence the sector has been accorded priority by successive Governments at the Centre and the State.

7.2 A new growth momentum has been witnessed in the Indian Science sector during the recent years. India's science output has reached 3 per cent of global output in 2010. With respect to scientific publications, the relative position of India has improved from 15th in 2003 to 9th in 2010. During the last three years of the Eleventh Plan, the average growth rate of publications from India in scientific journals is about 14 per cent against the global average of 4.1 per cent for the same period. The share of scientific publications emanating from universities increased from 15 percent in 2003 to 31 percent in 2012. However we have to strive harder to achieve global standards in many areas. This is indicated by the fact that India's share of top 1 percent publications is only 0.5 percent, as of 2006, less than other Asian countries like China and South Korea. India's Innovation system ranking varies between 50 and 60 among the nations, and Inventiveness in our basic sciences as indicated

by creation of Intellectual Property is low. Productivity gains from a hike in R&D spending could be huge for a country of the size of India, with a robust scientific infrastructure and a vast pool of trained scientific manpower. Many developed and emerging economies have been investing 2 per cent and more of their GDP in the R&D sector for quite some time now. And it is now well understood that India has to invest much more than 1% of GDP in R&D.



7.3 S&T in Kerala contributes to not only enhanced economic development through high value addition, but also balanced and sustainable growth by generating income and employment opportunities. R&D activities in the Government sphere are undertaken not only by dedicated institutions but also by the line Departments. Rural Industrialisation of the non-traditional kind and self employment were two critical areas identified in the Approach Paper of Kerala's 11th Plan. Energy, water management, farm production, medical research, waste disposal, health care, and communications are some areas where S&T inputs and innovations can bring a significant change in Kerala's growth as well as social well being.

7.4 The Annual Plan allotment to 'Science, Technology & Environment' in Kerala has increased from ₹ 150.25 crore in 2007-08 to ₹ 340.40 crore in 2011-12 (226.5 per cent increase). During 2012-13, the allocation is ₹ 446.52 crore. A brief comparison of Year wise Plan Outlay and expenditure for the period from 2007-08 to 2011-12 is provided in **Appendix 7.1**

7.5 Kerala State Council for Science, Technology and Environment (KSCSTE), Regional Cancer Centre (RCC) and Kerala State Pollution Control Board (KSPCB) receive Government funding under 'Scientific Services and Research' in Kerala.

7.6 The year wise Plan outlay and expenditure of KSCSTE and RCC during the 11th Plan is indicated in Table 7.1

**Table 7.1**  
**Year wise Plan Outlay and Expenditure**

Annual Plan	KSCSTE		RCC		Total	
	Plan Outlay	Plan Expenditure	Plan Outlay	Plan Expenditure	Plan Outlay	Plan Expenditure
2007-08	4253	1619 (38.06)	950	500 (52.63)	5203	2119 (40.72)
2008-09	4325	2620 (60.57)	1000	1000 (100)	5325	3620 (67.98)
2009-10	4390	4410 (100.4)	1115	1565 (140.3)	5505	5975 (108.5)
2010-11	4900	2058.32 (42)	2000	2400 (120)	6900	4458.32 (64.6)
2011-12	4900	3558.58 (72.6)	2500	2500 (100)	7400	6058.58 (81.8)
Total	22,768	14,265.9 (62.6)	7,565	7,965 (105.2)	30,333	22,230.9 (73.2)

*\*figures in the parantheses show percentage*

*Source: Budget (Programme Book) 2012-13; and CPMU, Government of Kerala*

7.7 During 2012-13 the total plan Outlay to KSCSTE & RCC together was ₹ 10020 lakhs. Funds allocated to KSCSTE and RCC during 2011-12 were mainly used for the following categories of expenditure:-

- 1) Research and Development
- 2) Expansion, Augmentation and Up gradation of Infrastructure
- 3) Promotion of Science & Scientific Research, Dissemination of Knowledge, Up gradation of Human Resource capabilities.

## Kerala State Council for Science, Technology and Environment

7.8 The Kerala State Council for Science, Technology and Environment (KSCSTE) was established in 2003 to promote excellence in science and technology through learning, research and development with the involvement of academia, industry, research organizations and to benefit the society through science and technology interventions with the involvement of user agencies and beneficiaries. 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 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. The Council also intends to revamp and streamline the science and technology programmes to make them more responsive to the development needs of the State, and help in the transformation of Kerala as a knowledge economy.

7.9 There are six Research & Development Centers 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), Jawaharlal Nehru Tropical Botanic Garden and Research Institute (TBGRI), and Kerala School of Mathematics (KSM). The Council also supports three grant-in-aid institutions namely, Sophisticated Test and Instrumentation Centre (STIC), Integrated Rural Technology Centre (IRTC) and Malabar Botanical Garden Society (MBGS). The council also undertakes co-ordinates and oversees many research programmes through the Universities and other R&D facilities established by the State and Central Governments.

## Activities and Achievements of KSCSTE during 2011-12

- 101 Projects were selected for grants under the Science Research Scheme (SRS).
- 58 Projects sanctioned under the Student Projects Scheme.
- Model laboratories were established in two Government High Schools under the Sastraposhini Scheme.
- The 24th Kerala Science Congress was held at Rubber Research Institute of India, Kottayam from 29–31 January 2012. The special theme was 'Climate Change: Plantation Crops and Spices of Kerala'.
- 190 Project proposals were received and 88 projects were sanctioned under the Scheme for Promotion of Young Talents In Science (SPYTiS)
- 4 Eminent scientists were awarded the KSCSTE Emeritus Scientist Scheme (ESS)
- 10 Projects were approved for financial assistance to carry out research under the Ecology and Environment Programme.
- Environment awareness campaigns, nature study trips, competitions, seminars, rally, teachers training, support to Eco clubs under the National Green Corps (NGC) programme.
- KSCSTE along with CWRDM is implementing the Programme on Water Quality for the state.
- KSCSTE along with CWRDM, Soil Survey Department and KFRI are implementing the Programme on Soil Quality monitoring for the state.
- KSCSTE prepared the State of Environment Report for Lakshadweep which was a project from the MoEF, Govt of India.
- Special functions to mark important days like World Environment Day, World Earth Day, International Day for Preservation of Ozone Layer etc.
- 9 proposals were evaluated and 6 were provisionally approved under Engineering & Technology Programme (ETP)
- 7 out of the 19 proposals received were recommended for funding under the Rural Technology Programme (RTP)
- Revamping and updating content on the Environmental Information System (ENVIS) website.
- The Patent Information Centre (PIC) conducted 31 awareness programmes. 85 patent applications were received. Patent database search was conducted in all applications and reports sent to inventors. 7 patent applications from Govt Organisations / Institutions were forwarded for further patent filing procedures. 5 patent applications from the grass root innovators were filed through the Official Patent Attorney of KSCSTE.
- The Wetland Technical Unit co-ordinated the preparation of Management Action Plans(MAP) for the Sasthankotta and Vellayini lakes in the state. Ramsar Information sheets for Kavvayi wetland has also been prepared and forwarded.
- 60 candidates were offered KSCSTE Research Fellowship.
- 8 projects under the Young Investigators Programme in Biotechnology(YIBP), 1 Project under the Industry Linked Biotechnology Research Scheme(IBRS), 3 projects under the Biotechnology Innovation for Rural Development(BIRD) scheme and 2 projects under the Biotechnology Training and Workshop Scheme(BTW) were sanctioned by the Kerala Biotechnology Commission.

## Activities and Achievements of R & D Centers under the Council

- **Kerala Forest Research Institute (KFRI):** Over 100 research / training projects were undertaken 2011-12 and upto August 2012. Of these, 62 projects are continuing as ongoing schemes and 46 have been completed or in various stages of completion.
- **Kerala School of Mathematics (KSM):** The Centre organized 3 workshops, an orientation programme and a School on Algebra Analysis & Topology. 4 Papers were published. An MoU has been signed with the Chennai Mathematical Institute(CMI) for collaborative research and academic programmes.



- **National Transportation Planning and Research Centre (NATPAC):** the major activities and achievements of NATPAC during the reference period includes preparation of Price Index for Stage Carriage Operations in Kerala, Safety Audit of Public Transport systems in Kerala, Study on Gender issues of Mobility of Working women, Use of waste plastic in road construction, Feasibility study for setting up Monorail in Thiruvananthapuram, Resource mapping of road construction materials, preparation of material for training and awareness on Road Safety etc.

- **Jawaharlal Nehru Tropical Botanic Garden and Research Institute (TBGRI):** During the reference period the institution has made allotments for 54 research projects. 24 papers were published, 3 PhDs were awarded, 66 PhDs are being supervised, one patent was filed and 20 outreach programmes were conducted by the institute.

- **Centre for Earth Science Studies (CESS):** the major activities and achievements of CESS during the reference period includes efforts to set up a modern Geo Fluids Research Laboratory, detailed geophysical survey in the special Security Zone in and around Sri Padmanabha Swami Temple, Shoreline Management Plan studies, Tsunami inundation mapping, project on soil piping, studies on coastal erosion and depletion of mineral content, preparation of cadastral level Coastal Regulation Zone maps, study of the build up of Urban Heat Islands in Kochi and Trivandrum city, Environmental Management Plan of Kayamkulam Thermal Plant, water conservation activities in Chadayamangalam Block, sand audit of rivers in Idukki District etc.



7.10 The relatively low level of expenditure of the Plan outlay in this sphere (Table 7.1) is an area of concern as scientific research could transform Kerala into a high value added economy.

## Regional Cancer Centre, Thiruvananthapuram

7.11 Regional Cancer Centre, Thiruvananthapuram (RCC), is an autonomous scientific institution sponsored jointly by the Government of Kerala and the Government of India. The centre was established in the year 1980 as a tertiary referral centre for the diagnosis and treatment of cancer. RCC rated amongst the top three of the 28 Regional Cancer Centres in the country. It is the only comprehensive, dedicated centre for diagnosis, treatment and control of cancer in Kerala. There are almost 40,000 new cancer patients every year in the state and out of this more than one third come to RCC for treatment.

7.12 RCC has 17 divisions divided into Cancer Therapy divisions, Diagnostic divisions & Supportive divisions.

7.13 Major Achievements of RCC during the period 2011-12

### Infrastructure Development

- Construction of a new 11 floor building is progressing.
- Upgradation of elevators and implementation of Disaster Recovery Plan.
- Purchase of equipments like Defibrillator, Multi-parameter monitors, Infusion Pumps, Portable X-ray, Image magnifier for FISH Microscope, Automated Stainer, Microtome, Automatic Cover Slipper, Equipments for ICU, Surgical Theatres, Blood Bank and Clinical Lab.

### Patient Care facilities

Many patients have benefitted from

- RCC initiatives like Cancer Care For Life (CCL), Akshaya Pathram (Poor Patient Welfare Fund), Kinginicheppu (Children's Welfare Fund)
- Government Sponsored Schemes like Cancer Suraksha Scheme, Thaalolam, Comprehensive Health Care Programme for Scheduled Tribes, Aid from Society for the Poor, Karunya Benevolent Fund, Prime Ministers National Relief Fund, Rastriya Arogya Nidhi, Cancer Pension, Railway and Airway concession to patients etc
- Support from NGOs like Indian Cancer Society, Aasandha Insurance for Male Patients.

### Cancer Control Activities

- Training to trainers, doctors, volunteers, student representatives & teachers, paramedics, health supervisors & workers, lay public and NGOs.
- Screening clinics for early detection of cancers
- Tobacco cessation clinics
- Cancer detection camps & cancer awareness programmes

### Research and Training

- Upgradation of facilities in Cancer Research Division and the Library Information Systems Division
- Conducted Super specialty, post graduate, post doctoral, fellowship, graduate and diploma level academic programmes.
- Training to students from various Universities, rotation postings and project training.
- 60 ongoing & 4 completed Extramural Research Projects
- 31 ongoing & 4 completed Pharma / Industry Sponsored Research Projects
- 35 ongoing & 6 completed In-house Research Projects
- 54 International and 27 National publications in Journals by the faculty & students.

### Some Other significant achievements

- 14287 new cancer cases registered
- 178523 cases reviewed
- 642 patients per day
- 1538 telemedicine consultations
- 8301 Radiotherapy treatments
- 7670 surgical procedures



7.14 Details of leading sites of Cancer and Patients treated during 2011-12 are provided in **Appendix 7.2**

### 7.15 Science and Technology in the Twelfth Five Year Plan (2012-17)

❖ The 12th Plan seeks to continue and consolidate the gains and momentum the sector has gained during the previous Plans. Efforts are to be directed to improve the relative position of India in the sphere of S&T in order to make India one of the major economies of the world over the next 20 years.

#### • Issues and challenges –

- ❖ Increase investment in R&D sector from 1% to 2% and more.
- ❖ Bring a paradigm shift in the S&T landscape. Evolve new delivery mechanisms for innovative deployment of technologies – business models for financing deployment of innovations.
- ❖ Ensuring that the corporate sector place a much larger role in building research capability.

#### • Approach

- ❖ Evolve a new science, technology and innovation policy to bring in more resources from both public and private sector for R&D for socially and strategically relevant projects.
- ❖ Refocusing the efforts of the designated departments/agencies with national focus, organizational focus and leadership focus.
- ❖ Build technology partnerships with states through new models of technological solutions,



design, development and delivery.

- ❖ Strengthening the interconnections of research competencies and resources.
- ❖ Initiate Grand Challenge Programmes and launch PAN – India Missions to address national priorities in developmental sectors like energy and water.
- ❖ Encourage large Indian industries to establish globally bench marked R&D centres.
- ❖ Create new R&D institutions in trans-disciplinary science and engineering.
- ❖ Create inter university centres and inter institution centres in chosen areas.
- ❖ Create an independent institutional arrangement for Technology Assessment capability.
- ❖ Create new financial appraisal and audit mechanism and a new personnel policy based on best global practises.
- ❖ Partner with high value mega projects like Neutrino Observatory, 30 mtr telescope, square kilometre array, next generation synchrotrone etc.
- ❖ Enhance collaboration with reputed foreign universities/agencies.
- ❖ Leverage the spin-offs from defence, space and atomic energy for civilian benefits.
- ❖ Create and provide high performance computing facilities.
- ❖ Provide greater flexibility to the scientific community in R&D
- ❖ Increase the volume of research and ensure high quality.

#### • Specific Focus Areas

1. Enrichment of knowledge base
2. S&T Human Resource Development and University interaction
3. Aligning S&T to developmental needs.
4. Implementation of national missions – involving interdepartmental and inter ministerial collaborations in areas such as agriculture, water, energy, environment and health.
5. Mega science projects.
6. Strategies for transformational changes within S&T sector.
7. Performance measurement systems.

*Source: Planning Commission, Government of India*

7.16 Various R&D institutions under the Central and State Governments have developed a wide range of technologies. However their full potential remains untapped. This indicates the existence of major gaps in production, dissemination and application stages. Science along with R&D has to be demand driven and need based. The knowledge emerging from research must be able to provide solutions to many of the developmental concerns affecting Kerala's society. Hence greater emphasis has to be placed on the delivery mechanisms in this sphere.

## SECTION 2

### Skill Development

7.17 Skill development is critical for achieving faster, sustainable and inclusive growth on the one hand and for providing decent employment opportunities to the growing young population on the other. Given the high social and human indicators, Kerala is in a position to meet the requirement of technically trained manpower not only for its growing economy but also of the advanced economies of the world. There is need for skilling and reskilling the persons entering the labour force to harness the demographic dividend that India enjoys. Even though the enrolment in technical higher education has grown, there is still non availability of requisite number of skilled persons. This challenge needs to be addressed at the All India level as well as the State Level in a mission mode. Skill enhancement also leads to increased wages for the people and a higher growth trajectory of value added for the economy. The National Skill Development Policy, 2009 is being implemented in Kerala as well.

7.18 As per 66th NSSO round 2009-10, 84 percent of the total workforce in India was in the unorganised sector and 92 percent were in informal employment. This indicates the need for training

them so that they can get better employment. However, there is a shortage of Trainers. Training of trainers is a key component of the skill development. There is an acute shortage of trainers not only in the existing trades but also in the proposed new trades. There is an urgent need for improving the quality and size of trainer resource. Skill Upgradation of trainers, their quality assurance and improvement of their status in society are important to improve the quality of training.



7.19 The National Skill Development Policy has envisaged re-engineering of National Council of Vocational Training (NCVT) to play a greater role in the field of skill development. Now, NCVT is the apex advisory body looking after various functions like trade testing and certification, prescribing standards in respect of syllabi and so on for training provided by the ITIs, Government and Private. State Council for Vocational Training (SCVT) is the Council corresponding to the National Council for Vocational Training (NCVT) to deal all matters relating vocational training at the level of the State. The State Council which is affiliated to the National Council advises the State Government in carrying out the training policy lay down by the National Council and co ordinates the Vocational Training Programme throughout the State. In Kerala, a 21 member State Council for Vocational Training has been constituted under the chairmanship of the Hon'ble Minister for Minister for Labour & Rehabilitation as per the G.O.(Rt) No.557/12/LBR dt 10.04.2012.

7.20 With the objective of expanding the outreach of the training facilities to school dropouts /and recognising the need for prior learning of workers in the unorganised sector, 'Modular Employable Skill' (MES) programme has been initiated by Ministry of Labour and Employment wherein short duration courses are provided to prospective trainees using both government and private infrastructure.

7.21 At present, 60 Government ITIs and three Government ITIs under SC Development Department are imparting training in 34 trades under SCVT with a sum total seating capacity of 4077 per year. Based on the guidelines of Directorate General of Employment & Training, New Delhi, action is in progress to register SCVT as a society under the Travancore – Cochin Literary, Scientific & Charitable Societies Registration Act 1955. Similarly action is in progress to introduce a new Act namely

"Kerala State Vocational Training Regulation and Control Act 2012" to regulate and control the functioning of institutes which are conducting vocational training courses in the State.

7.22 The State Skill Development Mission has already been constituted under the section 25 of the Companies Act 1956. To address the problem of educated unemployment an action plan and project has been prepared in Colleges with the Higher Education Department. Additional Skill Acquisition Programme (ASAP) is meant for those studying in various Colleges in the State. Additional Skill Enhancement Programme (ASEP) is for the students of ITIs and Registrants of Employment Exchanges is also envisaged. Along with this Modular Employable Skill Programme is also being run with the support of Vocational Training providers in the State.

7.23 Government has accorded in principle approval for the Preliminary Project Report of the State Skill Development Project. An empowered Committee headed by the Chief Secretary, was also constituted to implement the Additional Skill Acquisition Programme (ASAP). Government has approved an incentive Fee Linked Fee Structure for ASAP. Under the scheme, for students from BPL, SC/ST, other economically backward classes (OEBC) and physically disabled will be entitled for studying without any payment. However, if they do not successfully complete the course, they will have to repay the entire fee to Government within three years for Undergraduate students and five years for Plus II students. In the case of students from Non-BPL families, 75% of the fees will have to be paid by the student. On successful completion, they will be entitled for an incentive of the balance 25%.

7.24 Programme Managers for the proper management of the programme have been selected from the vocational Teachers of Government VHSE. Recruitment of 200 Programme Managers (on working arrangement basis from Government as well as from other professionally qualified persons) has been approved. The next batch of 75 Program managers will be put in a position by December 2012. Skill Development Executives to impart training on Communicative English and Information Technology were selected through the NAC test of NASSCOM and business interviews in which experts from industry also participated. For handling 1,00,000 students at its peak, there is a requirement of 3000 Skill Development Executives. Training has been launched in 37 institutions (Higher Secondary Schools selected by the Hon'ble MLAs from their respective constituencies) and also in Government Colleges. An amount of ₹ 250.00 lakh is provided in the Budget 2012-13 for ASAP scheme. The scheme is to be implemented jointly by the General Education and Higher Education Department and equipped students currently enrolled in the Higher Secondary and under graduate courses in Arts and Science Colleges with industry/business relevant skills. The target is One Lakh of students in the Twelfth Five Year Plan. In the first phase the scheme will be open to students of Higher Secondary Schools/Vocational Higher Secondary and Government Colleges. In the second phase, which commences in the third year of the programme. Students studying in Private/Aided schools as well as Arts and Science Colleges will be allowed to become beneficiaries of ASAP.

7.25 An amount of Rs 1300.00 lakh was provided under the head of account 2230-03-001-96 Skill Development Programme to set up an apex institution "Kerala Academy for Skills Excellence" (KASE) to promote skill development initiatives during 2012-13. This will act as an apex body to set up world class institutes for skill development on PPP mode. Internationally recognized certification and accreditation will be provided by this Institute. KASE will be involved in the following areas viz.

(a) Skill Gap Analysis (b) Identification of Target Group (c) Training of mentors (d) Curriculum Design (e) Training (f) Testing and Certification (g) Database preparation and management to work in future as an online employable persons repository (h) Placement Services (i) Quality Control and Audit of Modules with industry participation etc

7.26 KASE (Kerala Academy for Skills Excellence) is going to establish a Construction Academy at Chavara on PPP mode. A multidimensional Skill Development Centre is also proposed to be set up with the help of Smart City at Cochin for the Hospitality Sector; initiatives have been started in the ITIs, Pallickathodu and Kalpetta as part of Centres of Excellence. Around 1000 students per year are currently being trained in these institutes. Also Vocational Training Providers registering for Skill Development Initiative schemes under Modular Employable Scheme are giving training to students in the hospitality sector.

7.27 An amount of ₹ 1100.00 lakh is provided in the Budget 2012-13 for Skill Development Programme under Higher Education sector. The main objective of the project is to create employment opportunities for the unemployed youth and to enhance the skill sets of the populace with industry linkage. In 2012-13, 5000 students will be provided with training with a cost of ₹ 10,000/- per student. The other components included in the project are equipping facilities in public sector institutions, upgrading facilities in VHSE schools with two resources centres per district, Training of Trainers in HSE, VSHSE and Colleges etc.

7.28 Women skill development would also be promoted through opening of new Regional Vocational Training Institutes which would enable them to earn decent employment and gain economic independence. There is also need to set up training institutes for SC/ST, minority and weaker sections of the society to facilitate their participation in the skill development for enhancing their employability. These institutes should be located close to where they live for better accessibility.

## Outlook for Capacity Building in Kerala

7.29 Kerala has a wealth of human resources. However, the present system of education, as well as the conservative mind set of most of the people, prevent adequate exploration of new and productive avenues of employment, which are high value added and in great demand at the State, National and Global level. In fact, Kerala has the potential to become a knowledge hub, were not only can there be more effective linkage between basic science and all walks of life but creative and innovative technical applications can be developed and used to add value in Agriculture, Manufacturing and Service sectors. This calls for increasing opportunity and access to skill development for not only educated youth but for all sections of the population, including those who have retired from fulltime work. Greater awareness about global demand trends and a programme of continuous training and skill development to traditional artisans, fisherfolk, agriculturists, small entrepreneurs, and so on can not only improve their standard of living but can give them more fulfilling livelihood options.



# LOCAL GOVERNMENTS AND DECENTRALISED PLANNING IN KERALA



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# LOCAL GOVERNMENTS AND DECENTRALISED PLANNING IN KERALA

## Introduction

*A new feature that has been introduced in this year's Economic Review is a theme paper. This was a recommendation of the K.P. Kannan Committee, which looked into ways in which the Review could be made more meaningful. While other chapters in this Review deal with the current/recent status of various economic phenomena, this chapter is an analytical paper bringing out the unique features of Kerala's LSGIs, its historic evolution, the major strides made in participatory governance through effective devolution of powers to panchayats, municipalities and municipal corporations. The paper will provide the reader a narrative account of the significant strides that Kerala has achieved while the rest of the country has yet to implement the 73rd and 74th amendment to the Constitution.*

Decentralized Planning is an integral component of national planning and they complement each other. The major rationale of decentralization is to generate financial efficiency and quality gains by devolving resources and decision-making powers to local governments for the delivery of services and thereby produce and provide locally relevant public goods efficiently (Robinson 2003). Decentralisation is one of the most important subjects which has been debated over the years after independence. One of the basic reasons for this is that the Panchayats and urban local bodies could not function as democratic self governments due to lack of power and resources. Moreover, the inadequate mechanism to conduct elections at regular intervals diluted the democratic nature of the system. Understanding thoroughly the weakness of the system, the Central Government constituted various committees to get proper guidance to empower Local Governments. In 1958, on the basis of Balwanth Rai Mehta Committee Report, the three tier Panchayat Raj System was accepted by the Government. But it could not get a unique status as it is part of the state list and so many states have not implemented it in true spirit. Later, the Hanumantha Rao Committee suggested District Level Planning as part of decentralization in 1984 which was accepted by the Government. Later on the VKRV Rao Committee recommended that local level planning should be made participatory and that resources may be provided for the same. In 1988 the parliamentary consultative committee headed by Mr.Thungon recommended constitutional provision for the Panchayati Raj system. Ultimately in 1992, 73rd Amendment bill was introduced in the Parliament and in 1993, it was enacted.

8.2 In Kerala, following the recommendations of the Administrative Reforms Committee, Kerala Panchayat Bill and District Council Bill were placed in the Assembly in 1958 and 1959 respectively. But these bills could not be enacted into Law. Later on, in 1960, Kerala Panchayat Act was framed. Based on the Act, elections were held in 1963 and 922 village Panchayats came in to existence in 1964. In 1979, the State enacted the Kerala District Administration Act. In 1990, elections were held to District Councils in Kerala and District Councils came in to existence in February 1991. But the Districts councils were dissolved later on. It was at this point that the Historic 73rd and 74th



Amendments came in to existence. Now Kerala is the torchbearer not only among Indian states but also internationally, for the way in which it has devolved powers and resources to local governments and the methods and processes it has followed in implementing decentralization.

## Trajectory of Decentralised Planning in Kerala

8.3 Once the Panchayats and urban local bodies got the constitutional status through 73rd & 74th Amendment Acts of the Constitution, it was the responsibility of the states to implement it. But unfortunately there were no Laws and Rules in place. At this stage Kerala has adopted a separate model of its own. It has initiated a 'reversal process against the traditional style of implementation by a campaign mode. As an entry point activity, local level planning was accepted and powers, functions and responsibilities have been devolved to lower levels. Simultaneously all efforts were taken at the Government level to make it a process to empower local bodies as Local Self Government having adequate power and resources to plan and implement projects with people's participation.

8.4 Kerala initiated this revolutionary process of Democratic Decentralization and Decentralized Planning at the beginning of 9th Five Year Plan in 1996 in accordance with the 73rd & 74th amendments to the Constitution. This was a follow up of the legislations like the Panchayat Raj and the Municipality Acts of 1994. At present there are 1209 local bodies in Kerala. This includes 1144 rural local bodies (978 Grama Panchayats, 152 Block Panchayats and 14 District Panchayats) and 65 urban local bodies (60 Municipalities and 5 Corporations). The decentralized planning process in the state has now successfully been followed. It was initially launched in a campaign mode named as the 'Peoples Plan Campaign' deliberately since the concept of participatory planning was new to the people, people's representatives and officials in local self governments (hereafter LGs). People's Plan Campaign progressed with institutionalization at different levels. As a result, the powers were decentralized and the responsibilities of planning at local level were transferred to the local self-Governments. Under the 10th Plan (2002-03 to 2006-07) the decentralized programme in Kerala was restructured and named 'Kerala Development Plan' (KDP) after analyzing the experience of Peoples Plan Campaign. A number of innovative steps were taken under KDP to strengthen and institutionalize decentralization in the state. During 11th Plan, Government revamped the entire process giving stress to the concept of 'People's Planning' focusing on completion of the process of institutionalization of decentralization (Working Group Report on LSGD, 2012).

## Important Aspects of Decentralisation in Kerala

### Administrative Decentralization

8.5 Decentralization methodology basically emphasises autonomy, role clarity, uniformity, people's participation, accountability and transparency. Autonomy has the basic aspects of Functional autonomy, Financial autonomy and Administrative autonomy. In all these aspects, Kerala has given sufficient success. Kerala has taken keen initiatives right from the beginning to provide necessary administrative provisions for the smooth functioning of the local institutions. Certain functions and functionaries of different departments have been transferred to local bodies. Similarly constitutional safe guards have been taken from time and various amendments have been made to Panchayati Raj and Municipality Acts to empower LGs.

### Development Decentralization

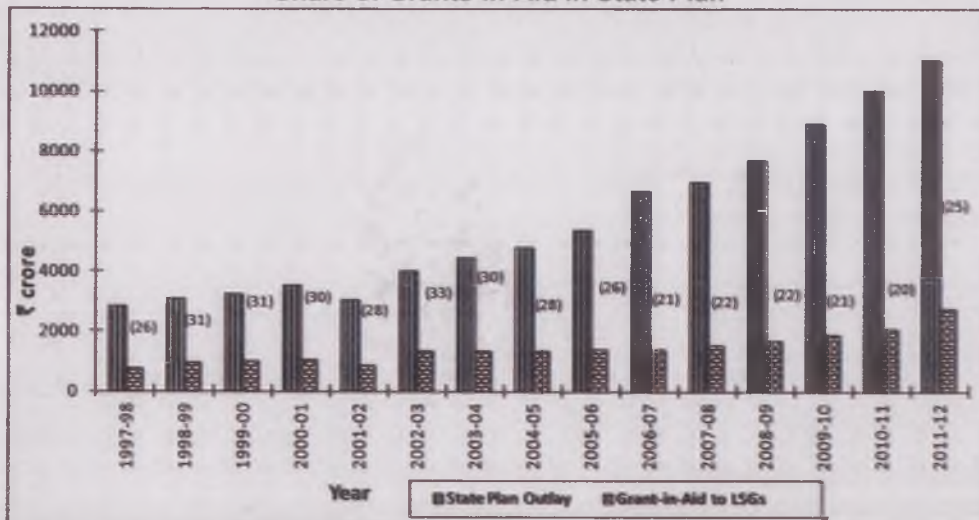
8.6 The significant aspect of Decentralisation in Kerala is the transfer of well defined development responsibilities to Local Governments. Many activities relating to agriculture including micro watershed development, dairy development, minor irrigation, inland fisheries, animal husbandry etc have been assigned to LGs. Similarly, most of the responsibilities related to human and social development infrastructure development, welfare schemes etc have also been transferred to LGs. In terms of poverty alleviation and rural development, Local Governments play a predominant role. Participatory planning with peoples' participation and with the help of different participatory support systems like Grama/Ward Sabhas, Working Groups/Technical Support System etc are worth mentioning.



## Fiscal Decentralization

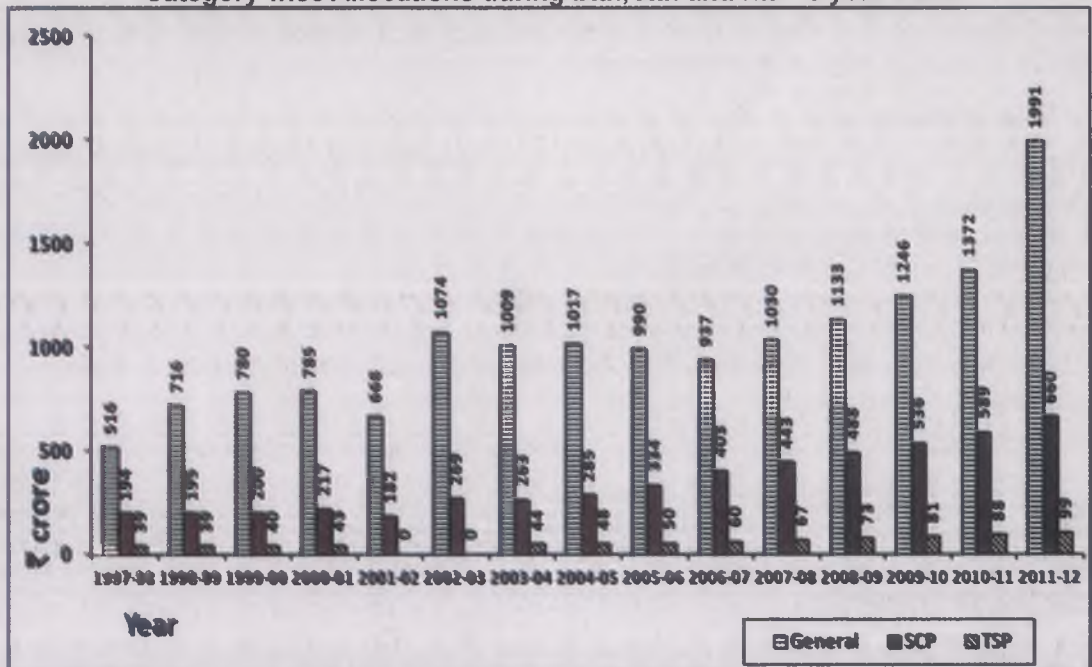
8.7 Devolution of sizable amount of plan funds to the Local Bodies is a historical land mark in Development Planning in the State. Finance Commissions were set up periodically to study various aspects of State Finance and to provide recommendations to the Government in order to support the LGs financially. As per recommendations of State Finance Commissions, untied Funds are devolved to the Local Governments in three streams viz: General Purpose Fund for meeting the expenditure on traditional functions and establishment expenses, Maintenance Fund for maintaining the assets of Local Governments including those transferred as part of decentralization and Development Fund for development functions. Maintenance Fund is divided into two categories; one for the maintenance of Roads and the other for the maintenance of other assets. Development Fund comprises of three categories viz; General Sector, Special Component Plan and Tribal Sub Plan. The allocations for each category of funds are based on the indicators developed by the State Finance Commissions. The state plan allocations and LG share from 1997-98 is given in figure 8.1 and category wise allocations of Development Fund in figure 8.2.

**Fig 8.1**  
**Share of Grants-in-Aid in State Plan**



*Note: Figures in parenthesis are Grants-in-Aid as percent to State Plan*  
*Source: Annual Plan Document & Budget Documents, various issues*

Fig 8.2  
Category wise Allocations during IXth, Xth and XIth 5 year Plans



Source: Annual Plan Documents and Budget Documents, various issues

8.8 Apart from the grant from the Government, the Village Panchayats have their own funds consisting of property tax, profession tax, entertainment tax, advertisement tax etc. Further non tax revenues of Village Panchayat consists of rent from building, license fee etc.

## Auditing

8.9 There are three types of auditing in the state. One is the auditing undertaken by the Director of Local Fund Audit. Secondly, the Accountant General audits about 10% of the Local Governments every year as part of the Technical Guidance Scheme. Third is the Performance Audit done by the State Performance Audit set up under LSGD. Apart from these audits, Finance Inspection Wing conducts checking of accounts.

## Support Systems

8.10 In order to strengthen the Local Government system and to reduce government control, the Amendment Acts provide provisions to create separate institutions for specific purposes. They are given below:

### i) The State Election Commission (SEC)

As per the provision of the Act, Kerala has constituted the State Election Commission with powers for control of the staff on election duty, preparation of voters list, verification of accounts, disqualification of candidates not submitting accounts in time and conduct of elections of President/Vice President of Local Bodies. Perhaps SEC of Kerala is one of the most powerful SECs in the country.

### ii) Delimitation Commission

It is an independent body under the State Election Commission to carry out delimitation of wards of the Local Bodies for election.

### iii) State Finance Commission

State has already constituted four State Finance Commissions in regular intervals; ie in 1994, 1999, 2004 and 2009 and the state has implemented practically every recommendation accepted by the Government. This is a tremendous achievement as other states lag far behind.

**iv) Ombudsman**

This is a high power institution to check malpractices in local bodies. Initially it was a seven member institution and later on it was made a one member institution by amending the law. Ombudsman is manned by a High Court Judge with vast powers.

**v) Appellate Tribunals**

It is a judicial setup in the state head quarters with a District Judge as Tribunal to consider appeals by citizens against decisions of Local Governments taken in exercise of their regulatory functions like issue of licenses, grants of permits etc.

**vi) State Development Council (SDC)**

SDC is set up in the State as a body like National Development Council at the centre. The council is headed by the Chief Minister and consists of the Cabinet, Leader of Opposition, Vice-Chairman of State Planning Board, Chief Secretary, DPC Chairpersons and representatives from LGs etc.

**vii) District Planning Committees (DPCs)**

The DPCs are constituted in each district to co-ordinate the preparation of plans by LGs, approval of Local Plans, providing suggestions to LGs, monitoring of Plan implementation etc. The DPC consists of 15 members headed by the District Panchayat President and District Collector is the Member Secretary. Twelve of the fifteen members are elected representatives from District Panchayat and Urban Local Governments in the ratio of rural -urban population in the District. One member is an expert nominated by the Government. All MPs and MLAs are permanent invitees of DPC and all the district level officers are ex-officio Joint Secretaries. The DPCs are fully functional in the State.

8.11 During the XIth plan, Kerala's LGs have acquired some remarkable characteristics. In the last five years, the minimum ceiling prescribed to productive sector from the General Sector plan grant was increased from 30 per cent in the Xth plan to 40 per cent thus increasing capital asset creation. In the case of beneficiary oriented projects, it was prescribed that 3 per cent of beneficiaries would be disabled people with a view to ensure social security to them. Importantly, the Anti-poverty Sub Plan was included in the LGs plan as a mandatory item. The Asraya Project for destitutes has been extended to both rural and urban areas from 2007-08 onwards. Also the total Energy Security Mission was launched for implementing energy security through integrated energy plans of LGs.\*

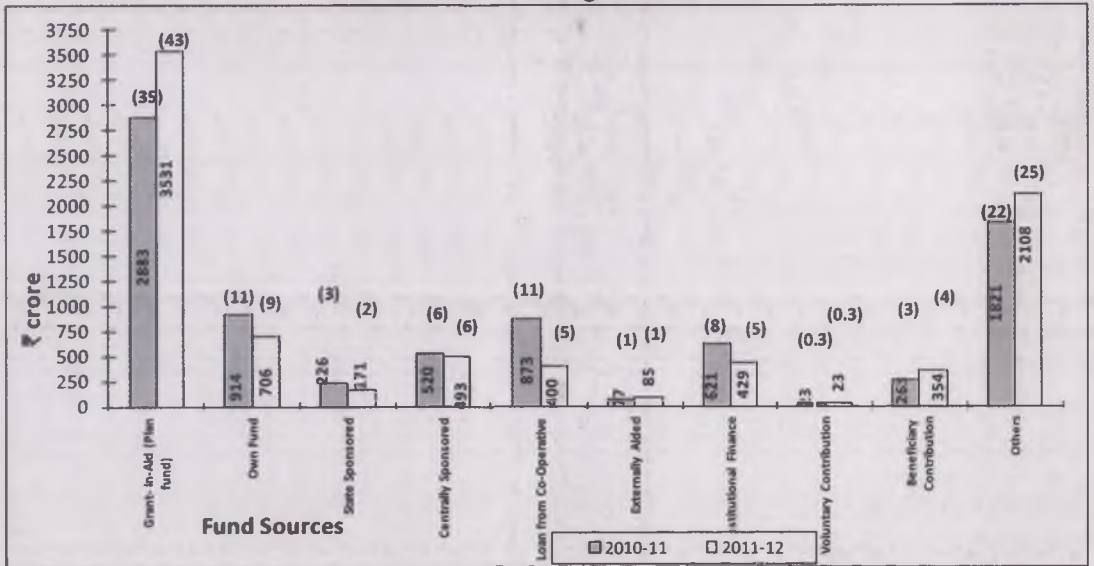
**Financing of LGs plans**

8.12 Financial devolution which is an important element of Kerala's decentralization process has enabled the LGs to receive the required resources from various sources for their plan. LGs raise the resources for the local development activities from the state's plan allocation as well from its own revenue. LGs are provided plan allocation from the state plan for two purposes<sup>1</sup>. While the first one is for implementing LGs own schemes for local development (Development Dund or grants-in-aid) the second is to implement centrally sponsored and state sponsored schemes transferred to LGs. Figure 8.3 shows that LGs receive a major chunk of their financial resources in the form of grants-in-aid from the State.

\* These Project have been detailed in Chapters 4 and 5

<sup>1</sup> The LGs are provided transfers based on the recommendations of the State Finance Commission. The fourth State Finance Commission (see Report Part I -IVth SFC) has recommended a vertical transfer system to LGs in which funds are distributed on the basis of criteria formulated by the SFC.

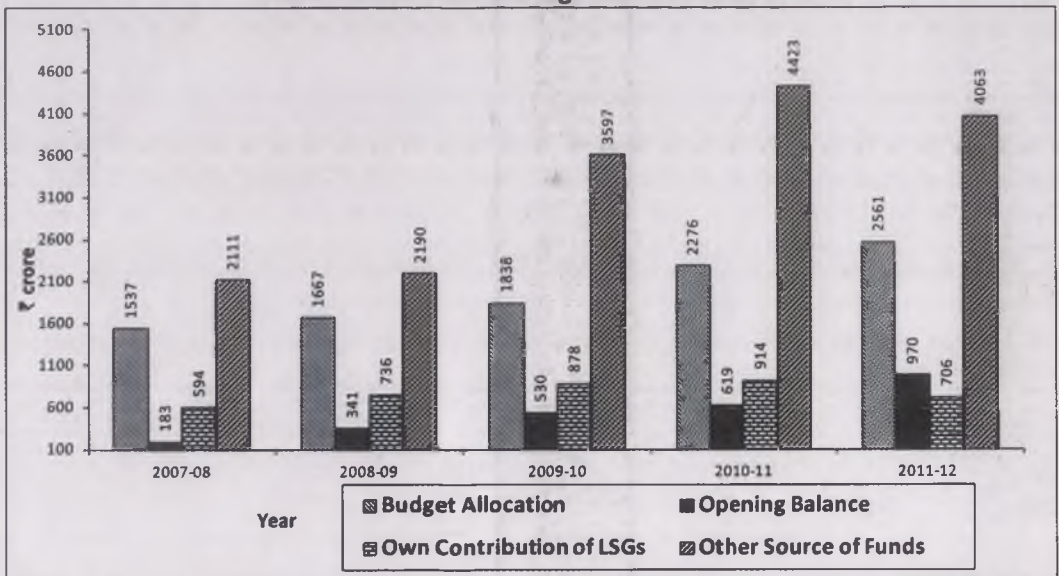
**Fig 8.3**  
**Sources of Financing the LGs Plan**



Note: Figures in parenthesis are percent of respective sources to total allocations  
Source: Information Kerala Mission 2012

8.13 Compared to 2010-11, it can be seen that there is an increase in allocation in grants-in-aid with respect to other sources in 2011-12<sup>2</sup>. However, Other Sources of funds for LGs declined in the same period. Notably, there is a decline in the own fund mobilization by the LGs. This phenomenon is not limited to the last year, but has been happening for quite some time. This can be seen from the figure 8.4 provided below. It shows the share of various components to LGs plan for the last five years.

**Fig 8.4**  
**Share in LGs Plan during 2007-08 to 2011-12**

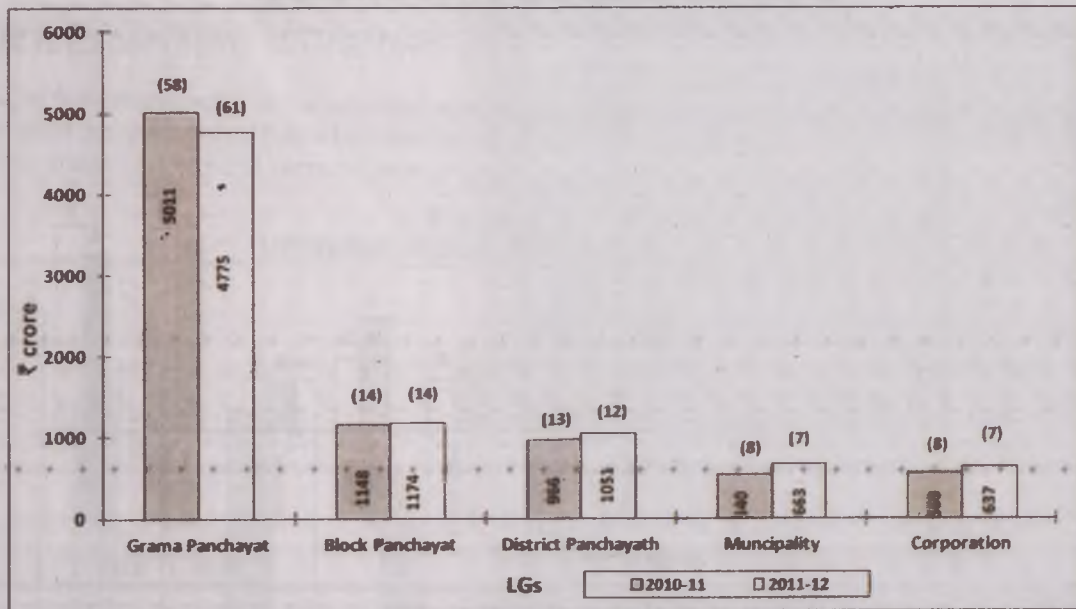


Source: Information Kerala Mission 2012

8.14 Among the various tiers of LGs, the lower tier, i.e., the Grama Panchayats receives majority of funds. However, there has been a decline in the total funds received by the Grama Panchayats in 2011-12 compared to 2010-11 (Figure 8.5). All the other tiers have improved overall fund mobilization.

<sup>2</sup> Data is provided in Appendix 8.1.

Fig 8.5  
Funds to Various Tiers of LGs from all Sources



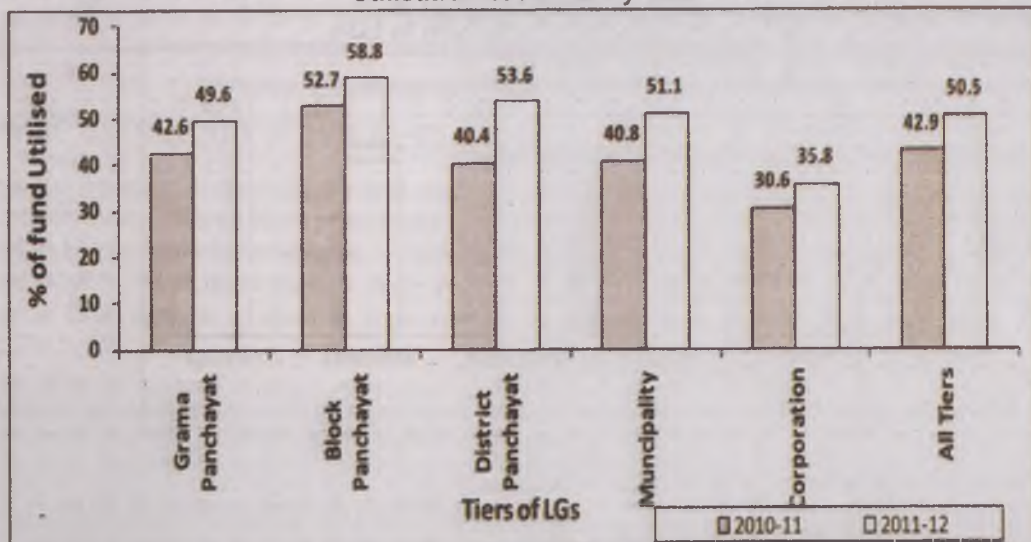
Note: Figures in parenthsis are percent to total funds received

Source: Information Kerala Mission 2012

## Performance of LGs

8.15 Figure 8.6 shows utilisation of funds by LGs. Compared to 2010-11, the performance of the LGs has improved in 2011-12. However, it can be seen that all the tiers of the LGs are utilising only less than 60 percent of allocations to them.

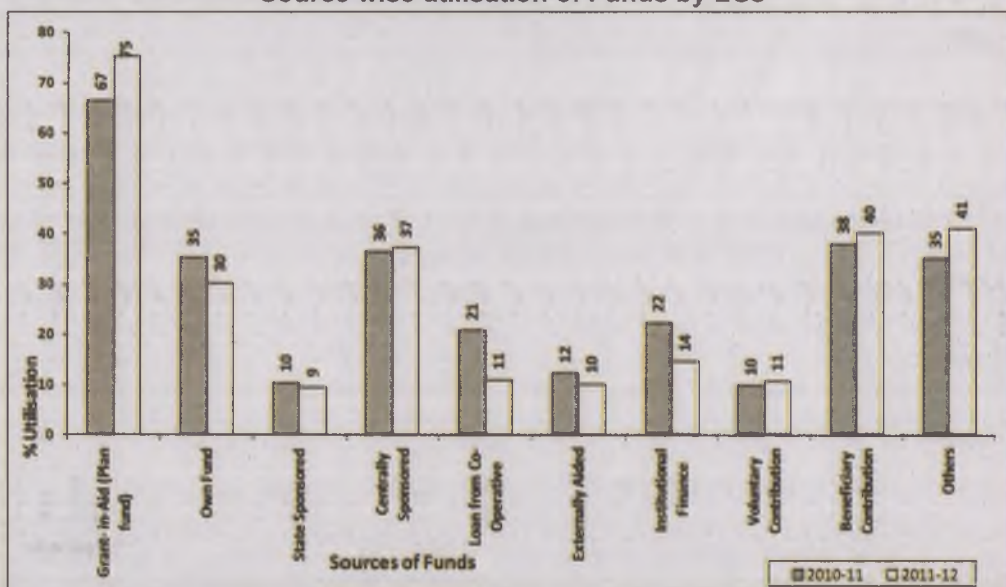
Fig 8.6  
Utilisation of Funds by LGs



Source: Information Kerala Mission 2012

8.16 A glance over source wise utilisation of funds is provided in figure 8.7. It shows that there has been an increase in the utilisation of grants-in-aid, beneficiary contribution and other sources in 2011-12 compared to 2010-11. However, low percent of utilization is a glaring feature. Efforts have to be made to improve utilisation of resources.

Fig 8.7  
Source wise utilisation of Funds by LGs



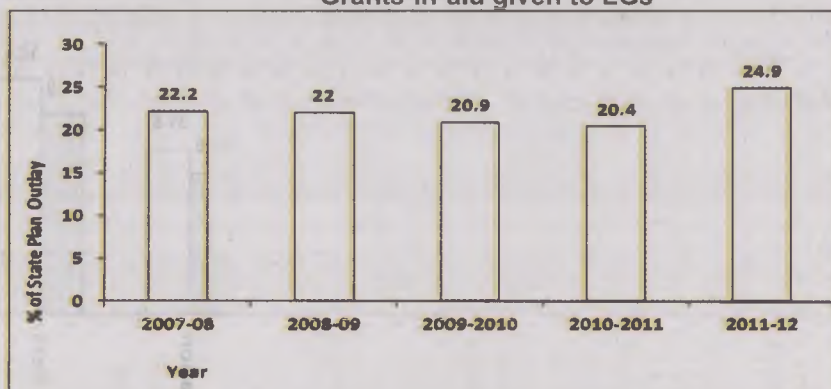
Source: Information Kerala Mission 2012

8.17 The importance of grants-in-aid in the LGs plan allocation has been brought out in the preceding analysis. A more in-depth analysis of the Grants-in-aid is given in the following sections.

## Grants-in-Aid and its Utilisation

8.18 A fund is provided from the state plan to LGs in the form of un-tied plan grants (grants-in-aid) for implementing projects for local development. As noted earlier, it occupies a significant percent of the State's plan outlay<sup>3</sup>. Figure 8.8 shows state plan outlay and Grants-in-aid given to LGs for the last five years.

Fig 8.8  
Grants-in-aid given to LGs



Source: Budget documents 2010-11, 2011-12

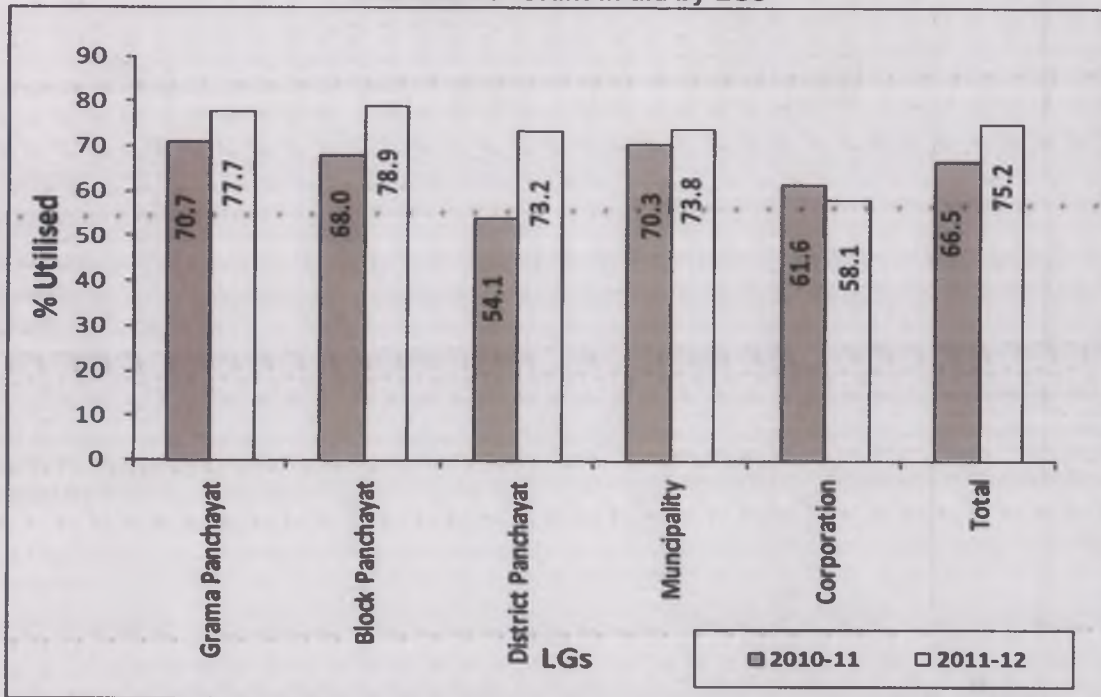
<sup>3</sup> For distribution of Grants-in-aid to LGs, a criterion was followed from 2006-07 onwards on the basis of the III<sup>rd</sup> State Finance Commission (SFC). Since the state's plan allocation to LGs have declined in the last five years, the IV<sup>th</sup> SFC has recommended for an increase in the amount of grants-in-aid allocated to LSG's to about 25% of the State Plan Outlay during 2011-12. It has further recommended for a gradual increase based on historical trends in the state's plan allocation to LGs in the succeeding years (see Report Part I-IV<sup>th</sup> SFC). The historical break up of state plan outlay and grants-in-aid given to LGs are given in Appendix 8.2.

While there has been a gradual decline of the plan allocation to LGs in the last four years, it can be seen that during 2011-12 there is spike in the state's allocations to LGs in the form grants-in-aid<sup>4</sup>.

## Outlay and Expenditure of Grants-in-aid

8.19 A look at the performance of the Grants-in-aid by the LGs shows that there has been a marked improvement in the utilization of funds by most tiers of LGs barring the Corporations<sup>5</sup>. The tier wise details of outlay and expenditure of various types of LGs for the last two years are provided in figure 8.9.

Fig 8.9  
Utilisation of Grant-in-aid by LGs



Source: Economic review 2011 and Information Kerala Mission 2012

## Category-wise distribution of Grants-in-Aid and its Performance

8.20 LGs have full freedom in formulating and implementing schemes after deciding their priority subject to a general over all frame work prescribed by Government. from time to time. The allocation of grants-in-aid to LGs is in three categories – General Sector, Special Component Plan (SCP) and Tribal Sub Plan (TSP)<sup>6</sup>. The outlay for each category is fixed on the basis of the recommendations of the State Finance Commission<sup>7</sup>. Figure 9.10 provides the category wise allocations of grant-in-aid to LGs during 2011-12<sup>8</sup>.

<sup>4</sup> Details of last years grants-in-aid, opening balance, etc are given in Appendix 8.2A.

<sup>5</sup> Details of tier wise Outlay and Expenditure are provided in Appendix 8.1.

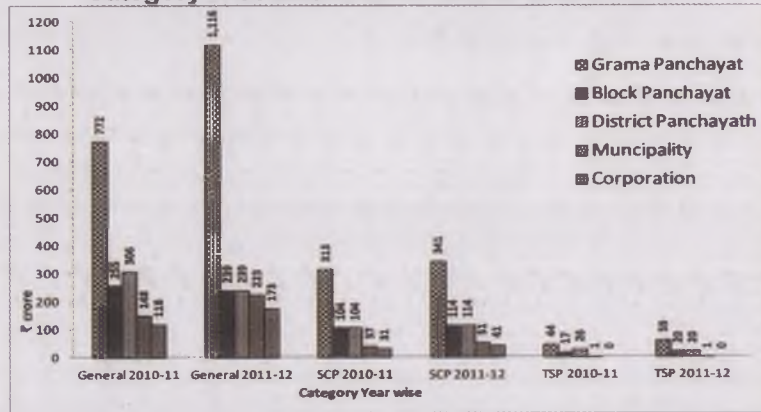
<sup>6</sup> Special Component Plan (SCP) and Tribal Sub Plan (TSP) are plan fund allocations aimed at improving the social and economic status of SCs and STs respectively. Conscious efforts have to be made at government as well as LGs levels to the effective implementation of the SCSP/TSP (Working Group Report on Local Governments, 2012).

<sup>7</sup> During the 11th plan the following norms were adopted, (i) 9.81% state plan outlay has been earmarked for SCP and 2% for TSP. Of the total outlay for SCP, almost 2/3rd is set apart for LGs. As regards to TSP, the share of outlay between LGs and state plan scheme is nearly 50:50. (ii) Once the total outlay for the LGs is fixed, the general sector share is earmarked by deducting the SCP and TSP shares of the LGs (Working Group Report on LG, 2012).

<sup>8</sup> Detailed category wise allocation and expenditure of grant-in-aid to various tiers of local bodies is given in Appendix 8.3.



Fig 8.10  
Category wise Allocation of Grant-in-Aid to LGs



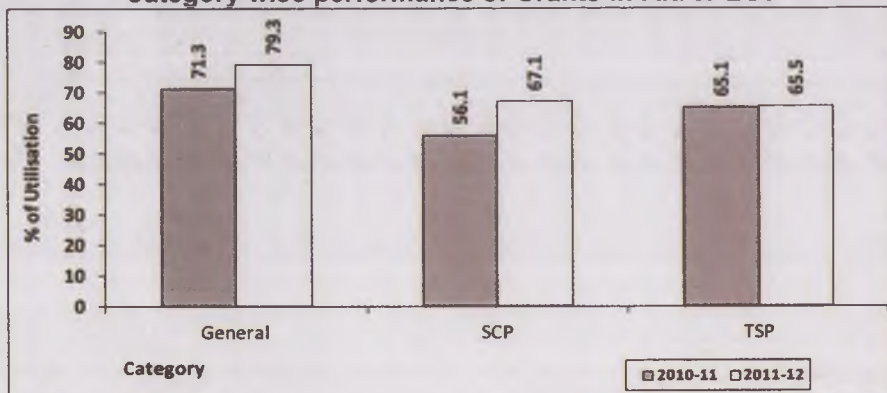
Source: Appendix IV of Budget 2010-11 & 2011-12

8.21 Figure 8.10 reveals the quantum of funds received by each of the tiers of the LGs through various categories during 2010-11 and 2011-12. While Grama Panchayats received a lion's share in all the categories of grants-in-aid, there was a tremendous increase in the General Category. Interestingly, TSP allocations to all the tiers of LGs remained the same in 2011-12 as in the previous year.

## Utilisation

8.22 Table 8.11 provides the category wise utilization of grants-in-aid. While the performance has improved for both categories of General and SCP, the TSP recorded only a minor progress. This has to be seen in the backdrop that there was only a small increase in the fund allocation to TSP during this period (see figure 8.10).

Fig 8.11  
Category wise performance of Grants-in-Aid to LGs



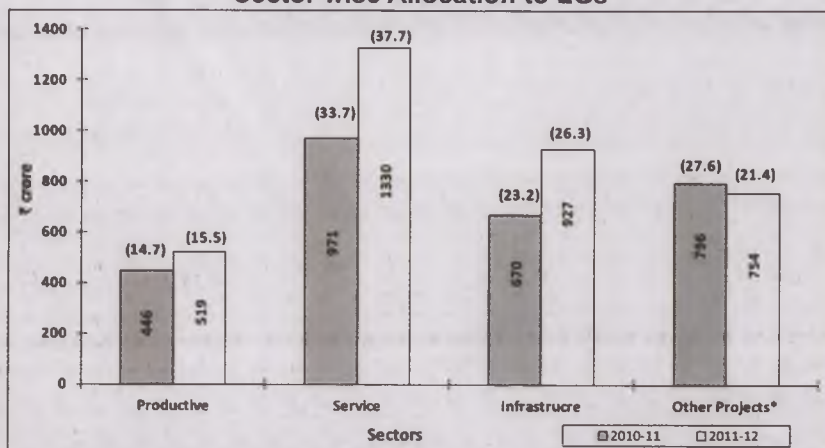
Source: Information Kerala Mission 2012

## Sectoral Allocation and Performances

8.23 The LGs allocate their plan funds mainly in three sectors viz Productive, Service and Infrastructure<sup>9</sup>. As far as the LGs are concerned, they have a vital role in eradicating poverty at the local level by achieving increased production, productivity, income and employment generation (Working Group Report on LSGD, 2012). The sector wise allocation and expenditure details in 2010-11 are given in figure 8.12.

<sup>9</sup> While the Productive Sector includes agriculture and allied sectors, soil and water conservation, irrigation and industries, the Service Sector consists of education and allied sectors, health and allied services, women and children development, labour and labour welfare. The Infrastructure Sector includes energy, transportation and buildings.

**Fig 8.12**  
**Sector wise Allocation to LGs**



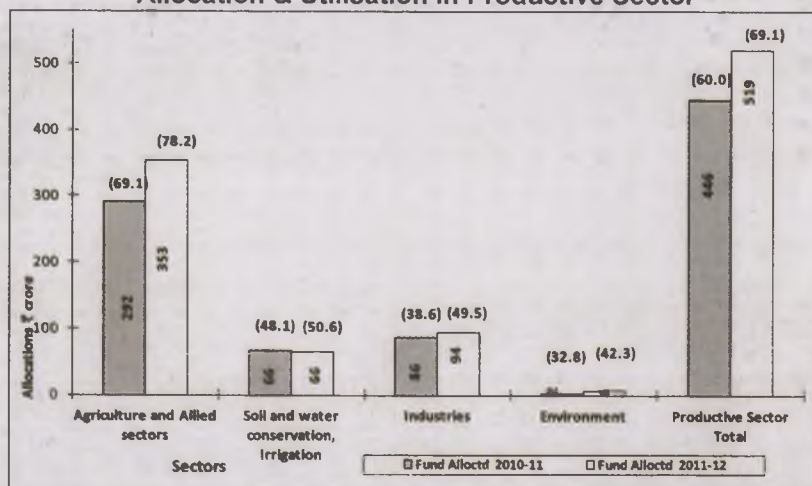
Note: Figures in parenthesis are percent of total allocations to each sector  
\* are project excluded from sectoral ceilings  
Source: Information Kerala Mission 2012

8.24 While it can be seen that allocations to all sectors have increased in 2011-12 compared to 2010-11, the quantum of increase in the service sector is much higher than others. The service sector also occupies a major share compared to others in allocations. However, there is a decline in allocations to projects that are excluded from sectoral ceilings<sup>10</sup>. Detailed sector wise allocation and utilization is attempted in the following sections.

### Productive Sector

8.25 Figure 8.13 shows the sub-sectoral allocations in the productive sector. There is increase in both funds allocated as well as utilization of funds in 2011-12 compared to 2010-11. It can be seen that allocations to agriculture as well as its utilization has notably recorded an increase in 2011-12. Glaringly, allocations to the environment sector, though it has recorded a jump in 2011-12 is meagre<sup>11</sup>.

**Fig 8.13**  
**Allocation & Utilisation in Productive Sector**



Note: Figures in parenthesis are percent of utilisation of each sector  
Source: Information Kerala Mission 2012

<sup>10</sup> Details of the sectorwise allocations and expenditure across various tiers of LGs are given in Appendix 8.4.

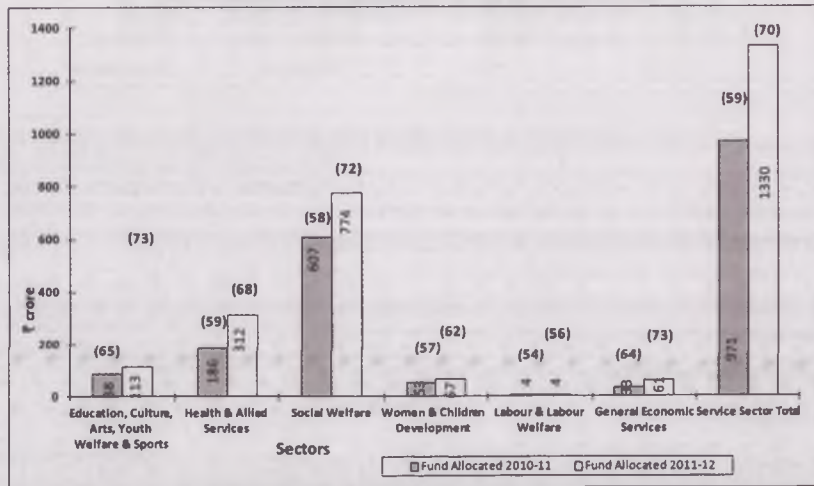
<sup>11</sup> Tier wise details of allocations and expenditure in the productive sector is given in Appendix 8.5 and at a disaggregated level at Appendix 8.5A.

However, it can be seen that the utilisation pattern of these sub sectoral funds are very poor in the productive sector. While the overall utilisation shows a less than 70 %, all sub sectors other than agriculture lags way behind in utilizing their allocation.

## Service Sector

8.26 Figure 8.14 shows the allocation and utilisation in detail in the service sector. Overall there has been a spike in both allocations and utilization to the service sector in 2011-12 compared to 2010-11. It reveals the importance of social service sector and health. Compared to other sub sectors in the service sectors it also has recorded substantial increase in allocations. Allocations to labour and Labour welfare received meagre funding<sup>12</sup>.

**Fig 8.14**  
**Allocation & Utilisation in Service Sector**



Note: Figures in parenthesis are percent of utilisation of each sector  
Source: Information Kerala Mission 2012

8.27 In the fund utilisation scenario, the service sector has better fund utilisation than the productive sector. Here the social welfare and health sectors are seen to have more efficient in utilizing their funds. However, the level of spending is seen to be the major issue in service sector also (less than 71percent).

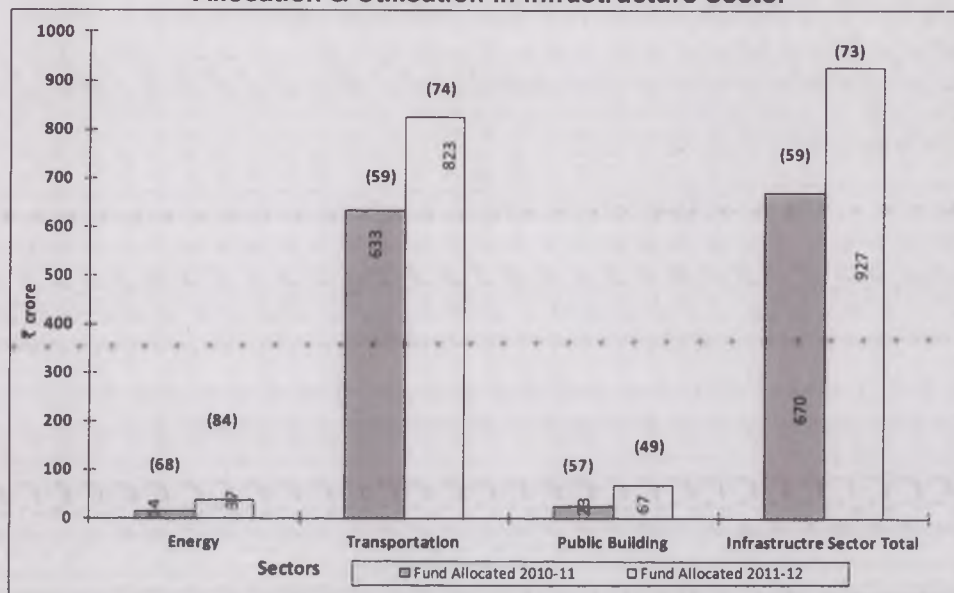


<sup>12</sup> Tier wise details of allocations and expenditure in the service sector is given in Appendix 8.6 and at a disaggregated level at Appendix 8.6A

## Infrastructure Sector

8.28 The infrastructure sector has also shown a considerable rise in allocations. Figure 8.15 shows the allocation to the Infrastructure sector in detail.

**Fig 8.15**  
**Allocation & Utilisation in Infrastructure Sector**



Note: Figures in parenthesis are percent of utilisation of each sector  
Source: Information Kerala Mission 2012

8.29 The transportation sector which is largest beneficiary has recorded an increase in allocations in 2011-12 compared to 2010-11. Allocations to the energy sector have been low<sup>13</sup>. In the fund utilisation scene, it can be seen that there is improvement in the infrastructure sector as a whole. The transportation sector has also shown improvements in utilising the funds.

## Performance under Special Sector Plans

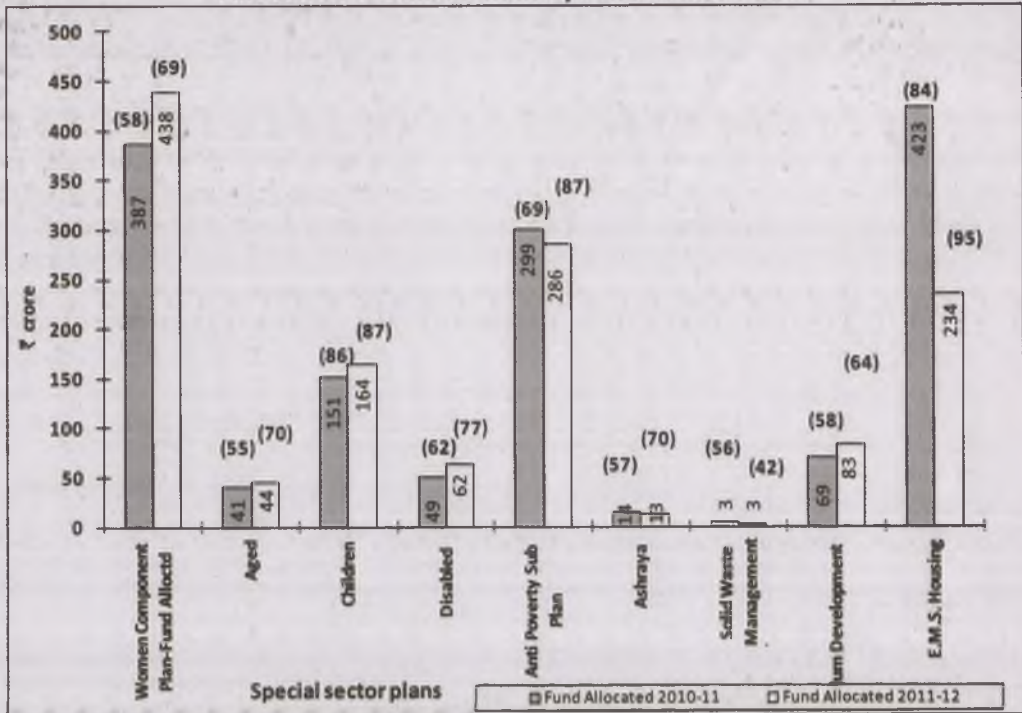
8.30 From the Xth plan period onwards, the Women Component Plan and Plan for Disadvantaged groups (Aged, children and disabled) has been introduced in the plan of LGs<sup>14</sup>. Figure 8.16 shows the allocation to the Special sector plans in detail. In the Special Sector Plan, overall allocations as well as allocations to some sub-sectors have declined in 2011-12 compared to 2010-11. While there is an increase in allocation to most of the plans under this sector, plans such as EMS and Anti-Poverty have shown a decline in allocations<sup>15</sup>.

<sup>13</sup> Tier wise details of allocations and expenditure in the Infrastructure sector is given in Appendix 8.7

<sup>14</sup> As per guidelines, the LGs should earmark a minimum of 10% of their total plan outlay exclusively for projects which address the special problems of women and 5% for disadvantaged groups (Economic Review 2011).

<sup>15</sup> Tier wise details of allocations and expenditure in the special sector plan is given in Appendix 8.8

Fig 8.16  
Allocation & Utilisation in Special Sector Plans



Note: Figures in parenthesis are percent of utilisation of each sector  
Source: Information Kerala Mission 2012

8.31 It can be seen that there is an improvement in utilisation of funds in 2011-12 compared to 2010-11. There has been higher allocation for women component plan, for the aged, children and for the disabled. In all these cases, despite increased allocation, fund utilization improved, showing greater efficiency.

## Achievements and Challenges



## Achievements

Experience in decentralized planning has some unique as well as notable achievements which are given below.

1. The methodology adopted in local level planning is in full spirit of the 73rd & 74th Amendment Acts. Planning process has been made highly participatory with the involvement of local people.
2. Devolution of funds to the local bodies for plan implementation has been ensured. This has brought out enormous enthusiasm for local level development and public satisfaction.
3. Decentralised planning could facilitate the provision of minimum needs in infrastructure, housing, road connectivity, water supply etc. at the block and village levels.
4. There has been a noted improvement in service delivery especially in the field of education, health anganwadies etc.
5. The process and procedures have become more transparent.
6. Improved capacity building among elected representatives as well as officials.
7. Replicable development models emerged in different places.
8. Remarkable achievements in formation of women-self help groups and their involvement in different development activities.
9. Women participation in local level development administration.

## Challenges

The Decentralised Planning process is facing some challenges too. Some of the observations are placed below:

1. The enthusiasm shown by the people in the initial years is slightly decreasing in different levels.
2. Participation in Grama Sabhas/Ward Sabhas is not showing an encouraging trend as the better off section of the society mostly do not participate in Grama Sabhas.
3. Local bodies have been given the freedom to prepare projects and plans independently. In many cases this leads to lack of integration of projects and plans.
4. Local bodies tend to take small schemes/projects instead of integrated larger projects.
5. Local bodies are concentrating more on annual plans without having long term vision.
6. Experiences show that the projects aimed at the local economic development are not getting much attention in local planning.
7. Though decentralisation has brought about attention to inclusive development, more efforts need to be taken to include some extremely marginalized sections in the society like tribals and destitutes.
8. The tendency of spreading resources to too many small projects results in resource constraints for selection of better and larger projects.
9. Grama Panchayat being the lower tier has highest number of works to be carried out. Unfortunately it has the lowest level of capacity in terms staffing pattern of officers.
10. LGs have a weak statistical system to collect the data base and a weak monitoring mechanism.

## CONCLUSION

8.32 Kerala has been a leader in participatory and decentralised development and the model is being highly appreciated both nationally and internationally. The formulation of district plans with long term vision after involving the co-operation of all LSG's, periodic conducting of social audits, revitalising of Grama sabha/Ward sabha and greater community participation in local level planning can take the current accomplishment in local level planning and development to even greater heights.

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# GLOSSARY

## **Aam Admi Bima Yojana(AABY)**

*It is meant for the rural landless households in the country. As per the scheme, the head of the rural landless families or one earning member in each family will be insured.*

## **Current Daily Status (CDS)**

*In the employment and unemployment survey, there are four concepts - CDS, CWS, UPS and UPSS - used to measure the activity status like employed or unemployed or outside labour force of those covered by the survey. In the CDS approach the activity status is determined for each day of the reference week (i.e 7 days preceding the date of survey). A person who worked at least for one hour but less than four hours was considered having worked for half a day. If worked for four hours or more during a day, he was considered as employed for the whole day.*

## **Comprehensive Health Insurance Scheme (CHIS)**

*It extends to all families other than the BPL families (absolute poor) as per the Guidelines of Planning Commission who come under the RSBY.*

## **Consumer Price Index (CPI)**

*Consumer Price Index (CPI) is designed to measure the changes overtime in the level of retail prices of a fixed set of goods and services (consumption basket) consumed by an average family of a defined population group at a particular place. The index number of industrial and agricultural workers is referred.*

## **Content Management**

*Term used to refer to system that manages the content objects which form documents and it can be used to differentiate compound document management systems from simple document management systems.*

## **Current Weekly Status (CWS)**

*Here the activity status is determined with reference to a period of seven days preceding the date of survey. A person who reports having worked at least for one hour on any day during the reference period of one week while pursuing a gainful occupation was deemed to be employed. A person who did not work even for one hour during the reference period of one week but was seeking or available for work was deemed to be unemployed.*

## **Density of Population**

*Density of population is one of the important indices of population concentrations. It is defined as the number of persons per sq. kilometer. The geographical unit is ward, town, district, state etc.)*

## **E- procurement**

*It is the business to business purchasing of goods and services through the internet.*

## **E-inclusion**

*It focuses on participation of all individuals and communities in all aspects of the information society. E-inclusion policy, therefore, aims at reducing gaps in ICT usage and promoting the use of ICT to overcome exclusion and improve economic performance, employment opportunities, quality of life, social participation and cohesion.*

## **Gross Domestic Product (GDP)**

*It is the total market value of all final goods and services currently produced within the domestic territory of a country in a year.*

## **Gross National Income (GNI)**

*It is GDP less net taxes on production and imports, less compensation of employees less property income payable to the rest of the world plus the corresponding items receivable from the rest of the world (in other words, GDP less primary incomes payable*



to non-resident units plus primary incomes receivable from non-resident units); an alternative approach to measuring GNI at market prices is as the aggregate value of the balances of gross primary incomes for all sectors; (note that gross national income is identical to gross national product (GNP) as previously used in national accounts generally).

### **Gross National Product (GNP)**

Gross National Product is the total market value of all final goods and services produced in a year. GNP includes net factor income from abroad whereas GDP does not.

### **Infant Mortality**

Death of a baby before his or her first birthday is called infant mortality. The infant mortality rate is an estimate of the number of infant deaths for every 1,000 live births.

### **Janasree Bima Yojana (JBY)**

Exclusively for the Spouses of SHG members who are not covered under AABY and who are under the age group 18 to 58 years.

### **JJ Act 2000**

The Juvenile Justice (Care and Protection of Children) Act, 2000 is the primary legal framework for juvenile justice in India. The Act provides for a special approach towards the prevention and treatment of juvenile delinquency and provides a framework for the protection, treatment and rehabilitation of children in the purview of the juvenile justice system.

### **Labour force Participation Rate (LPR)**

Labour force participation rate is the ratio between the labour force and the overall size of their cohort (national population of the same age range).

### **Literacy Rate**

Literacy rate is defined as the percentage of population aged 6 years and over who can both read and write with understanding a short simple statement on his/her everyday life.

### **National Family Health Survey**

The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India.

### **Net National Product (NNP)**

Net National Product at factor cost or National Income is the sum of wages, rent, interest and profits paid to factors for their contribution to the production of goods and services in a year.

### **Parity Index**

Parity Index is a relative measure as to the gains or loss to farmers as a consequence of the price fluctuations in the economy. The index is a function of cost of farm cultivation, domestic expenditure and market rate of farm products.

### **Persons with Disability Act 1995**

The Act has been enacted under Article 253 of the Constitution read with item No. 13 of the Union List (WORD - -1) It effect to the proclamation on the full participation and equality of the persons with disabilities in the Asian & Pacific Region and provides for their education, employment, creation of barrier free environment, social security, etc.

### **Preraks**

Preraks are the authoritative of the continuing education centres for giving leadership to the informal education and local development activities.

### **Proxy Indicator**

Indirect measure or sign that approximates or represents a phenomenon in the absence of a direct measure or sign. Number of female members of a chamber of commerce, for example, is a proxy indicator of the percentage of female business owners or executives.

### **Rashtriya Swastya Bima Yojana (RSBY)**

It is a Health Insurance Scheme launched by Union Government for BPL workers as defined by the Planning Commission and their families in the unorganized sector.

### **Retail Price**

Retail Price of a commodity is defined as the price which the ultimate consumer pays for relatively small transactions of the commodity.

### **School Management Committees (SMC)**

It comprises of local officials, parents, guardians and teachers. The SMCs will monitor utilization of govt grants and the school environment.

### **Sex Ratio**

The Sex ratio is one of the basic demographic characteristics of the population. It is defined as the number of females per 1000 males. The sex ratio of the population is affected by the differentials in the mortality conditions of males and females, sex selective migration and the sex ratio at birth.

### **Usual Principal Status (UPS)**

Here the activity status is determined with reference to a relatively longer period during a reference period of 365 days. Unemployment Rate as per this method indicates the numerical magnitude of the persons unemployed for a relatively longer period. Thus it is an indicator of chronically unemployed.

### **Usual Principal and Subsidiary Status**

Unemployment Rate as per this method also indicates the numerical magnitude of the persons unemployed for a relatively longer period during a reference period of 365 days. However, here the number of unemployed is arrived at excluding those employed in a subsidiary capacity during the reference period. The number arrived as per this method will be lower than the UPS approach as some persons

categorized as unemployed according to the UPS approach might be working in a subsidiary capacity and this persons are excluded in the UPSS method.

**Unemployment Rate**

The percentage of the total labor force that is unemployed but actively seeking employment and willing to work.

**Wholesale Price Index (WPI)**

Wholesale Price Index measures the average change overtime in the wholesale prices of 17 important agricultural commodities produced and transacted in the state (Kerala) with the agricultural year 1952-53 as the base. These indices are computed every month. Weights are assigned to the commodities in proportion to the value of production to make the index fully representative.

**Work Participation Rate**

Work participation is a measure of the proportion of economically active individuals within an economy. It is defined as the ratio of the employed and unemployed (or the workforce) to the working age population. (those aged 15 years and over)



# ABBREVIATIONS

<b>AABY:</b> <i>Aam Admi Bima Yojana</i>	<b>GATE:</b> <i>Graduate Aptitude Test in Engineering</i>
<b>ALP:</b> <i>Agriculture Labour Pension</i>	<b>GB:</b> <i>Gender Budgeting</i>
<b>APL:</b> <i>Above Poverty Line</i>	<b>GDI:</b> <i>Gender Equality Index</i>
<b>ASAP:</b> <i>Additional Skill Acquisition Programme</i>	<b>GEC:</b> <i>Government Engineering College</i>
<b>ASEP:</b> <i>Additional Skill Enhancement Programme</i>	<b>GEM:</b> <i>Gender Empowerment Measurement</i>
<b>AVTS:</b> <i>Advanced Vocational Training System</i>	<b>GOI:</b> <i>Government of India</i>
<b>BPL:</b> <i>Below Poverty Line</i>	<b>GRB:</b> <i>Gender Responsive Budgeting</i>
<b>BSNL:</b> <i>Bharat Sanchar Nigam Limited</i>	<b>HDFC:</b> <i>Housing Development Finance Corporation</i>
<b>BSUP:</b> <i>Basic Services to the Urban Poor</i>	<b>HDI :</b> <i>Human Development Index</i>
<b>CAT:</b> <i>Common Admission Ticket</i>	<b>HSC:</b> <i>Higher Secondary Course</i>
<b>CBSE:</b> <i>Central Board of Secondary Education</i>	<b>HUDCO:</b> <i>Housing and Urban Development Corporation</i>
<b>C-DIT:</b> <i>Centre for Development of Imaging Technology</i>	<b>ICPS:</b> <i>Integrated Child Protection Scheme</i>
<b>CDS:</b> <i>Centre for Development Studies</i>	<b>ICSE:</b> <i>Indian Certificate of Secondary Education</i>
<b>CHIAK:</b> <i>Comprehensive Health Insurance Agency, Kerala</i>	<b>ICT:</b> <i>Information &amp; Communications Technology</i>
<b>CHIS:</b> <i>Comprehensive Health Insurance Scheme</i>	<b>ICTP:</b> <i>Information and Communication Technology Persons</i>
<b>Coirfed:</b> <i>The Kerala State Co-operative Coir Marketing Federation Ltd.679</i>	<b>IGMSY:</b> <i>Indira Gandhi Matritva Sahyog Yojana</i>
<b>DCRCs:</b> <i>District Disability Rehabilitation Centres</i>	<b>IHSDP:</b> <i>Integrated Housing and Slum Development Programme</i>
<b>DDRS:</b> <i>Deen Dayal Disabled Rehabilitation Scheme</i>	<b>IISc:</b> <i>Indian institute of Science</i>
<b>DGE&amp;T:</b> <i>Director General of Employment and Training</i>	<b>IIT:</b> <i>Indian Institute of Technology</i>
<b>DRDO:</b> <i>Defence Research and Development Organisation</i>	<b>ILC:</b> <i>Indian Labour Conference</i>
<b>FOMIL:</b> <i>Foam Matting's India Ltd</i>	<b>ILCS :</b> <i>Integrated Low cost Sanitation Scheme</i>
	<b>ILO:</b> <i>International Labour Organisation</i>
	<b>IPC:</b> <i>Indian Penal Code</i>

- IPOP:** *Integrated Programme for Older*
- ISM:** *Interstate Migrant*
- ISRO:** *Institute of Space Research Organisation*
- IT:** *Information Technology*
- ITI:** *Industrial Training Institutes*
- JBY:** *Janasree Bima Yojana*
- JNNURM:** *Jawaharlal Nehru National Urban Renewal Mission*
- KASE:** *Kerala Academy for Skills Excellence*
- KCHR:** *Kerala Council for Historical Research*
- KILE:** *Kerala Institute of Labour and Employment*
- KSACC:** *Kerala State Agency for the Expansion of Cashew Cultivation*
- KSCC:** *Kerala State Coir Corporation*
- KSCWWFB:** *Kerala State Coir Workers Welfare Fund Board*
- KSRTC:** *Kerala State Road Transport Corporation*
- KSSEDM:** *Kerala State Entrepreneur Self Development Mission*
- LED:** *Light Emission Diode*
- LPG:** *Liquefied Petroleum Gas*
- LPR:** *Labour force Participation Rate*
- PS:** *Lower Primary School*
- LSGs:** *Local Self Governments*
- MAH:** *Major Accident Hazard*
- MCC:** *Malabar Cancer Centre*
- MDG:** *Millennium Development Goal*
- MES:** *Modular Employable Skill*
- MGNREGA:** *Mahatma Gandhi National Rural Employment Guaranty Act*
- MGNREGS:** *Mahatma Gandhi National Rural Employment Guarantee Scheme*
- MLA:** *Member of Legislative Assembly*
- NAC:** *National Accreditation Council*
- NCEUS:** *National Commission for Enterprises in the Unorganized Sector*
- NCRB:** *National Crime Records Bureau*
- NCRMI:** *National Coir Research & Management Institute*
- NCVT:** *National Council for Vocational Training*
- NFHS:** *National Family Health Survey*
- NGOs:** *Non-government Organizations*
- NORKA:** *Non Resident Keralite Affairs*
- NPRPD:** *National Programme for Persons with Disabilities*
- NRKs:** *Non Resident Keralitese*
- NSSO:** *National Sample Survey Organisation*
- NUALS:** *National University of Advanced Legal Studies*
- NUEPA:** *National university of Educational Planning and Administration*
- PAC:** *State Plan of Action for Child*
- PBD:** *Pravasi Bharathiya Divas*
- PMEGP :** *Prime Ministers Employment Generation Programme*
- PPP:** *Public Private Partnership*
- PRD:** *Public Relations Department*
- PTA:** *Parent Teachers Association*
- PWD:** *Public Works Department*
- PWDs:** *Persons with Disabilities*
- RCC:** *Regional Cancer Centre*
- REACH:** *Resource Enhancement Academy for Carrier Heights*
- RIT:** *Rajiv Gandhi Institute of Technology*
- RSBY:** *Rashtriya Swasthya Bima Yojana*
- RSETI:** *Rural Self Employment Training Institutes*
- RTE:** *Right to Education*
- SASH:** *Single family Affordable Solar Housing*
- SC/ST:** *Scheduled Caste/Scheduled Tribes*
- SCTIMST:** *Sree Chithira Thirunal Institute of Medical Sciences and Technology*
- SCVT:** *State Council for Vocational Training*
- SDI:** *Skill Development Initiative*
- SEGP:** *Special Employment Generation Programme*
- SHGs:** *Self Help Groups*
- SJD:** *Social Justice Department*
- SLL:** *Special & Local Laws*

**SMC:** School management system

**SSLC:** Secondary School Leaving Certificate

**STD:** Subscriber Trunk Dialling

**TCPC** Training, Councelling and Placement Cells

**TTI:** Teacher Training Institute

**UPS:** Upper Primary School

**UT:** Union Territory

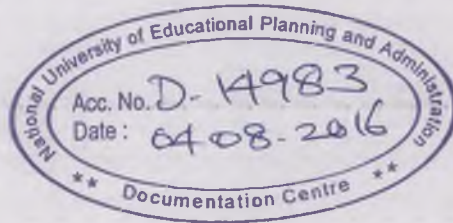
**VAMBAY:** Valmiki Ambedkar Awas Yojana

**VHSE:** Vocational Higher Secondary Education

**VTP:** Vocational Training Providers

**WFB:** Welfare Fund Board

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