KODAGU DISTRICT

Human Development Report, 2014

Kodagu Zilla Panchayat
and
Planning, Programme Monitoring and Statistics Department,
Government of Karnataka

Kodagu District
Human Development Report, 2014

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and
Planning, Programme Monitoring and Statistics Department,
Government of Karnataka

District Human Development Report (Kodagu)

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SIDDARAMAIAH
CHIEF MINISTER

VIDHANA SOUDHA
BANGALORE - 560 001

CM/PS/234/2014

Date : 27-10-2014

MESSAGE

I am delighted to learn that the Department of Planning, Programme Monitoring and Statistics is bringing out District Human Development Reports for all the 30 districts of the State, simultaneously.

Karnataka is consistently striving to improve human development parameters in education, nutrition and health through many initiatives and well-conceived programmes. However, it is still a matter of concern that certain pockets of the State have not shown as much improvement as desired in the human development parameters. Human resource is the real wealth of any State. Sustainable growth and advancement is not feasible without human development. It is expected that these reports will throw light on the unique development challenges within each district, and would provide necessary pointers for planners and policy makers to address these challenges.

The District Human Development reports are expected to become guiding documents for planning and implementation of Programmes within the districts. I urge the Members of Parliament, Legislators, Zilla Panchayat, Taluk Panchayat and Gram Panchayat Members, vis-a-vis representatives of Urban Local Bodies to make conscious attempt to understand the analysis that has been provided in the district human development reports and strive hard to ensure that the identified gaps are bridged through effective planning and implementation.

A number of people from many walks of life including administrators, academicians and people representatives have contributed in making of these reports. I commend each and every one associated with the preparation of the District Human Development Reports. I acknowledge the efforts put in by district committees headed by Chief Executive Officers and Officers of the Planning Department in completing this challenging task.

It gives me great pride to share with you that Karnataka is the first state in the country to prepare district human development reports for all the districts. I am hopeful that this initiative will spur us to double our efforts to make Karnataka, a more equitable progressive State.

Siddaramaiah

(SIDDARAMAIAH)

S.R. PATIL
Minister for Planning &
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Science & Technology
And
Bagalkot District Incharge Minister

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MESSAGE

I am happy to learn that the District Human Development Reports (DHDRs) for all the 30 districts in the State are being placed in public domain shortly. A painstaking and massive effort has gone into the preparation of these reports. I heartily congratulate the Zilla Panchayats and the Planning Department for this commendable work.

The reports, I am sure, would help policy makers, administrators, researchers, social organizations and the public at large to understand the critical concerns of human development in the Districts and Taluks of our State and also to bridge such deprivations by initiating suitable policy and programme interventions.

(S R Patil)

Shri K.J George

Home Minister
Government of
Karnataka

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Message

The preparation of Kodagu District Human Development Report 2014 is a significant initiative to analyse the overall status of development in Kodagu. This report provides an in-depth analysis of the various dimensions of development of the people of Kodagu. It also allows us to critically evaluate the different options available for progressing further in the path of development. The report is hence, a critical input for planning and implementation of various welfare schemes in the district.

While the report provides a historical perspective on human development, it also focusses on current challenges in critical dimensions of human development like education health and livelihoods. I am happy to note that the report provides particular attention to the issues concerning the development of tribal communities in the district since addressing their needs is crucial to the overall development of Kodagu.

Kodagu being an economy driven by Coffee, it is important to understand issues of productivity, profitability and complimentary livelihood options. The report provides extensive analysis of these issues as well, thus helping the district administration to focus on long term strategies to boost agricultural growth.

I am sure that the findings of the study and the recommendations made will help the district administration considerably in planning the implementation of various state and central government programmes and providing sufficient priority to issues of immediate concern.

I congratulate the ZP of Kodagu for successfully completing this difficult endeavour. I also thank Grassroots Research And Advocacy Movement (GRAAM), Mysore who provided the overall technical support in preparing this report. I hope this report serves as a starting point for a broader discussion on development in the Panchayat Raj Institutions and Urban Local Bodies of the district leading to effective implementation of government programmes and schemes.

Shri K.J George
Home Minister Government of Karnataka
And District Incharge Minister
Kodagu District

Smt. Chodumada Sharin Subbaiah
President,

Telephone No :08272 -225102
Kodagu Zilla Panchayath Madikeri

Message

It is indeed a pleasure to note that the Kodagu District Human Development Report, 2014 is being published. This report is unique and stands out on multiple counts. It was probably the first time that such an extensive coverage and analysis was made about the status of development of Kodagu as well as the details of the various government interventions in the district. The consultative process of data collection and the participatory methods of preparing the report wherein multiple line departments were intensively involved in data collection, interpretation and suggestions for way forward is another highpoint of this report. Further, this report succeeds in convincing public representatives and bureaucrats that development cannot be uni-dimensional.

The report drives home the point that wellbeing of individuals in terms of their educational status and health is as equally important as their economic wellbeing. The overall wellbeing of the society is crucially dependent on the status of development of the individual communities that make up the society. In this regard, it is appreciable that this report goes to great lengths in demonstrating the disparities in human development status of various communities in the district.

This report serves as a useful baseline to understand the extent of improvement brought by different initiatives of the government. Similarly, the report serves as a beacon for the district administration and the various government institutions within the district for prioritizing development goals and objectives within the scope of their respective departments and institutions.

I thank the CEO of Kodagu ZP under whose guidance and leadership, this report was completed. I also congratulate the efforts of the Chief Planning Officer, Kodagu ZP for taking the enormous effort of driving the data collection and validation process, spread among the numerous departments working in the district. I appreciate the efforts taken by the Lead Agency Grassroots Research And Advocacy Movement, for their technical support and in-depth analysis and preparing this document.

Sharin Subbaiah

Chodumada Sharin Subbaiah
President
Kodagu Zilla Panchayath
Madikeri

FOREWORD

The concept of human development has humanity and development as two of its main ideas. The development of people implies the improvement in the standard of living through the provision of good education and health facilities. This results in increased life expectancy, better employment opportunites and increased income level of people.

Since the last couple of decades, economists have started focussing on human capital rather than focussing only on economic growth. In the 1990s, when UNDP prepared the Human Development Index, the focus shifted to education and health, and got the attention of economists and sociologists world-wide. From there on, UNDP has been publishing yearly Human Development Reports that contain the HDI ranks of various countries.

Recently, the Indian Planning Commission in cooperation with UNDP prepared state human development reports that documents the progress in different social sectors thus helping policy making and planning processes. Karnataka published its Human Development Report twice in 1999 and 2006 respectively. Karnataka government has gone a step further and started the experiment of preparing district human development reports to capture the progress made in different stectors at the district level. For the first time, district human development reports were prepared for Udupi, Mysuru, Vijayapura and Kalaburagi districts and published in 2008.

Later on, the government decided to extend the preparation of human development reports to all districts of Karnataka based on the directions of the Planning Commission. Accordingly, the Zilla Panchayaths of each district have been given the task of preparing these reprts. Within Kodagu district, this job was taken up by the Planning Section of the Zilla Panchayath. The state's planning department conducted meetings and workshops for officials of different departments from time to time, to make them understand the expectations from the report.

Kodagu is the least populated district in the state. Because of its diverse population, geographical and environmental hardships, different lifestyles, capturing the district's human development in this report has been a challege. This work has been successfully completed by the lead agency, Grassroots Research And Advocacy Movement.

Under the guidance of its founder, Dr R Balasubramaniam, they collected all the available statistics, information and suggestions from the different departments of the district. Information was also gathered from workshops and small area studies. With the help and suggestions from experts, the team from GRAAM led by the researcher, Mr Sham N Kashyap, have completed a comprehensive report. This report will definitely be a good guide for preparation of development schemes in the district. I thank the GRAAM team for their effort.

For this type of report to come out well, the involvement, effort and commitment from the Zilla Panchayath is very important. The Chief Planning Officer of Kodagu Zilla Panchayath, Shri A Srinivas Rao's continous effort and interest has made this a good report. My heart felt thanks to him. I also thank the Deputy Director of Planning, Shri G. N Lingaraju, Assistant Statsitical Officer, Shri K Venkat Rao and all staff of the planning section for providing good support in preparing this report.

This report gives primary importance to the development and health status of tribal communities in the district. Similarly, it focuses on effective use of the available labour force of the district. Any such report becomes meaningful only when its findings and recommendations are brought into implementation. In this regard, I request all the officers of different departments to pay attention to the information and data given in this report while developing their plans for implementation, thus taking the district in the path of human development.

Mr. ANURAG TIWARI, I.A.S
Deputy Commissioner And
Chief Executive Officer (Incharge)
Kodagu Zilla Panchayath, Madikeri
Kodagu District

Acknowledgements

The completion of the Kodagu District Human Development Report would not have been possible without the direct and indirect support of numerous organizations and individuals. The report is a culmination of the collective intellectual endeavours and hard work put together by different agencies and individuals. We wish to thank the department of Planning, Programme Monitoring and Statistics Department and its Human Development Division for providing the leadership role in the preparation of this report. We thank UNDP – PCI, under their project HDBI (Human Development: Towards Bridging inequalities) for supporting this initiative.

We thank Shri.Sanjiv Kumar, I.A.S., former Principal Secretary, Planning, Programme Monitoring and Statistics Department, Smt.Anita Kaul, I.A.S., former Additional Chief Secretary, Planning, Programme Monitoring and Statistics Department, V Manjula, IAS, Principal Secretary, Department of Planning and Statistics Government of Karnataka, Sri.Rajiv Ranjan, I.F.S., Secretary, Planning, Programme monitoring and Statistics Department, Dr H. Shashidhar IAS (Retd), State level Consultant and Coordinator, Shri Subramanyam K. V, Joint Director, Dept. of Economics and Statistics, Shri H. S Ashokanand, IAS, Director Advocacy, KHPT, Dr. G .S. Ganesh Prasad, Faculty, Abdul Nazir Sab State Institute For Rural Development, Prof. T.R. Chandrashekar (Retd). Kannada University,Hampi Prof N Narayana Sastri (Retd), Urban Planning Specialist, Administrative Training Institute, and other consultants and subject specialists who helped us in conceptualizing this report.

This report wouldn't have been realized without the support of the different line departments of Kodagu ZP. Specifically, the roles of the District Statistical Officer, District Health Officer, Deputy Directors of Public Instruction, Women and Child Deputy, Social Welfare, Agriculture, Horticulture, Sericulture, Animal Husbandry, Mines and Geology and other development agencies were crucial in getting the necessary secondary data for the study. We further thank the taluk officers of these line departments and Taluk Panchayaths.

The small area studies wouldn't have been possible without the active support of the personnel, elected members and the people of the Grama Panchayaths of Margodu, Valnur Tyagattur and the villages of Yavakapadi Cheenihadlu, Ayarasuli and Katte Haadis where small area studies were conducted. We also thank the elected representatives of Zilla Panchayath, Taluk Panchayaths and Graam Panchayaths and other citizens who actively participated in the district and taluk level workshops that enriched our understanding of local issues impacting human development in the district. Finally, we gratefully acknowledge the support and encouragement of the ZP President, Vice-President, elected members and CEO of Kodagu Zilla Panchayath. Special thanks to Shri A Srinivas Rao, CPO and his team at the Planning Section of Kodagu Zilla Panchayath for supporting us throughout this endeavour.

Dr. R Balasubramaniam

Grassroots Research And Advocacy Movement (GRAAM)

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TABLE OF CONTENTS

Message from the Chief Minister		i
Message from the Minister for Planning & Statistics, IT & BT, Science and Technology		ii
Message from the District Minister Incharge		iii
Message from the President, Zilla Panchayat, Kodagu		iv
Foreword		v
Acknowledgements		vi
Editorial Committee		vii
List of Photos		xii
List of Maps		xiii
List of Graphs		xiv
List of Tables		xv
Abbreviations		xviii
PART I		
Executive Summary		xxiii
PART 2		
Chapter 1.		
Introduction		1
1.1	Concept and Methodology	2
1.2	Factors contributing to Human Development	3
1.3	Data Collection, Compilation and Validation	3
1.4	Measurement of Indices	4
1.5	Concluding Remarks	5
Chapter 2.		
Kodagu District: An Overview		9
2.1	Introduction	11
2.2	Background and Brief Regional History	11
2.3	Physiographic Divisions of the District	13
2.4	Land, Soil and Natural Resource Endowments	13
2.5	Demography and literacy	14
2.6	Industry	15
2.7	Infrastructure	16
2.8	Regional Perspectives and Backwardness	17
2.9	Concluding Remarks	17
Chapter 3.		
Computation of indices		19
3.1	Introduction	21
3.2	Human Development Index	21
3.3	Gender Inequality Index	22

3.4 Child Development Index 22
3.5 Food Security Index 22
3.6 Urban Development Index 23
3.7 Composite Taluk Development Index 23
3.8 Concluding Remarks 24

Chapter 4.
Literacy and Education 27
4.1 Introduction 28
4.2 Literacy Profile of the District 29
4.3 Enrolment 30
4.4 Attendance, Dropout rates and Out of School Children and Mainstreaming of Children 32
4.5 Transition Index for Children enrolled to 6th standard 34
4.6 Physically challenged children 35
4.7 Student-Teacher Ratio 35
4.8 Infrastructure and Access 36
4.9 Eight Basic facilities – Infrastructure Index (SSA Method) 37
4.10 School completion ratio and pass percentage 37
4.11 Post-Secondary Education 38
4.12 Schemes for promotion of literacy level 38
4.13 Per-capita Expenditure Analysis 39
4.14 Concluding Remarks 39

Chapter 5.
Health and Nutrition 41
5.1 Introduction 42
5.2 Demography of Kodagu 43
5.3 Maternal Health 48
5.4 Child Health 51
5.5 Family Welfare 54
5.6 Communicable Diseases 56
5.7 Infrastructure and Health Personnel Facility 57
5.8 Performance of various Health Schemes 62
5.9 Per-capita Expenditure Analysis on Health Sector 63
5.10 PHC-wise analysis of RCH indicators 63
5.11 Performance and Inadequacies of Health Care System 64

Chapter 6.
Income, Poverty and Employment 69
6.1 Introduction 70
6.2 District and Taluk Income 70
6.3 Agriculture: Cropping Patterns, Irrigation, and Livestock 74
6.4 Industries and tourism 82
6.5 Poverty alleviation 84

6.6 Employment and Unemployment 86
6.7 Child Labour 89
6.8 Concluding Remarks 90
6.9 Small area study: Relationships between Coffee, land use and tourism in Kodagu 91
6.10 Small area study: Socio-economic status of labourers in Coffee plantations of Kodagu 98

Chapter 7.
Standard of living 105
7.1 Introduction 106
7.2 Housing Status 106
7.3 Households and Asset Status 108
7.4 Schemes for Housing Facilities 109
7.5 Drinking Water 111
7.6 Electricity 112
7.7 Traditional Fuel and Modern Fuel 112
7.8 Sanitation 113
7.9 Concluding Remarks 115

Chapter 8.
Gender and Development 117
8.1 Introduction – Gender as Concept 118
8.2 Patterns in demography and health 119
8.3 Patterns of Literacy and Enrolment 120
8.4 Work Participation Trends 121
8.5 Trends in Political Participation 122
8.6 Gender differences in district and Community attitude, Social prejudice 122
8.7 Crime against Women: Crime Data at District and Taluk Levels 123
8.8 Role of Women's Groups and SHGs 123
8.9 Govt initiatives to secure, promote and safe guard women 124
8.10 Concluding Remarks 124
8.11 Small area study: Role of SHGs in the socio-economic empowerment of women 126

Chapter 9.
Schedule caste and Schedule tribes 131
9.1 Introduction 132
9.2 Demographic Profile 132
9.3 Education Profile 133
9.4 Health Profile 135
9.5 Occupational patterns 136
9.6 Government initiatives for development of vulnerable groups 137
9.7 Concluding Remarks 138
9.8 Small area study: Composite Dalit Development Index (CDDI) 138
9.9 Small area study: Human Development Status of Scheduled Tribes in Kodagu 142

Chapter 10.
Governance and Human Development 149
10.1 Introduction 150
10.2 Local Governance Structure 150
10.3 Panchayat Raj Institutions: Structure and Process 150
10.4 Urban Local Bodies 151
10.5 Political representation 152
10.6 Stability of political leadership and bureaucracy 153
10.7 Fiscal trends 153
10.8 Basic public service delivery infrastructure 155
10.9 E-governance initiatives for improving governance 156
10.10 Role of NGOs and other voluntary groups 157
10.11 Concluding Remarks 157

Chapter 11.
Urban Issues in Human Development 159
11.1 Introduction 160
11.2 Service Delivery Issues 161
11.3 Water Supply, and Sanitation 162
11.4 Solid waste management 162
11.5 Urban local body expenditures 163
11.6 Urban Development Index 163
11.7 Concluding Remarks 164

Chapter 12.
Way forward 167
12.1 Introduction 168
12.2 Status of Human Development in Kodagu 168
12.3 Way forward 170

SUB-COMMITTEES AND ANNEXURES
SUB-COMMITTEES 173

Annexure 1: Calculation of indices 177
Annexure 2: Indicators used for the calculation of indices 187
Annexure 3: Note on the preparation of DHDR 193
Annexure 4: Note on availability, limitation and quality of data 194
Annexure 5: Data sources and References 195
Annexure 6: Details on workshops and meetings 197
Annexure 7: Kodagu District Human Development Report Authors 200

List of Photos

Photo 1.	Nalknad palace of Chikkaveera Rajendra	11
Photo 2.	Gaddige (tombs) of Chikkaveera Rajendra and other Haleri dynasty rulers	12
Photo 3.	Field Marshal Cariyappa and General Thimmaiah	13
Photo 4.	Ainmane of Kodavas	13
Photo 5.	Tadiyandamol peak	14
Photo 6.	Abbe Falls	14
Photo 7.	Kodava youth dressed in their traditional attire	15
Photo 8.	Nagarahole National Park	15
Photo 9.	Talakaveri, the birth place of river Kaveri	15
Photo 10.	Dubare elephant camp	16
Photo 11.	Mid-day Meals in a Lower Primary School in Kodagu	32
Photo 12.	Children ready to go home after school	34
Photo 13.	A Morarji Desai residential school in Kodagu	35
Photo 14.	An old government primary school in Kodagu	36
Photo 15.	Coorg Institute of Technology, the first engineering college in Kodagu	38
Photo 16.	Computer education in government primary schools in Kodagu	39
Photo 17.	An old PHC built in 1952 in the erstwhile Coorg state	44
Photo 18.	A PHC medical officer examining a patient	48
Photo 19.	Patients at a PHC in Kodagu	50
Photo 20.	An ANM visiting a Jenu Kuruba hamlet	51
Photo 21.	An Anganwadi worker demonstrates the game of building blocks to children	52
Photo 22.	A HIV AIDS awareness programme being conducted in Kodagu	56
Photo 23.	A modern PHC in Kodagu	57
Photo 24.	A Mobile Medical Unit in Somwarpet taluk	58
Photo 25.	An In-patient ward in District Hospital, Madikeri	61
Photo 26.	Paddy cultivation in Kodagu	74
Photo 27.	Harangi dam in Somwarpet	75
Photo 28.	Chiklihole Dam in Somwarpet	76
Photo 29.	Ripe Coffee berries	76
Photo 30.	Mechanization in Paddy cultivation in Kodagu	77
Photo 31.	Pepper creepers in coffee estates	78
Photo 32.	Bee boxes to be distributed to beneficiaries	79
Photo 33.	Karnataka Milk Federation's milk processing unit at Kudige, Somwarpet	80
Photo 34.	Fish being harvested in a private lake	81
Photo 35.	Traditional dance of the Kodavas	82
Photo 36.	Raja Seat in Madikeri	82
Photo 37.	Omkareshwara temple in Madikeri	82
Photo 38.	A Homestay in Madikeri	83
Photo 39.	A road covered by coffee plantations on both sides	91
Photo 40.	A Homestay inside a coffee plantation	96
Photo 41.	Cardamom plant	97
Photo 42.	Coffee drying activity in a coffee plantation	99

Photo 43.	Line houses inside coffee estates	99
Photo 44.	A labourer picking coffee	100
Photo 45.	A housing scheme beneficiary in Hoddur, Madikeri	108
Photo 46.	Drinking water provision through cisterns in Nittur, Virajpet	112
Photo 47.	Women labourers sorting coffee in an estate	121
Photo 48.	An SHG involved in preparing nutritious food for distribution in Anganwadis	123
Photo 49.	An SHG meeting in Somwarpet taluk	126
Photo 50.	Disposable arecanut plates prepared by SHG memebrs	127
Photo 51.	Children in an Ashrama school in Virajpet taluk	132
Photo 52.	A Morarji Desai residential school in Kodagu	134
Photo 53.	A pre-matric hostel for girls in Kushalnagar, Somwarpet	135
Photo 54.	Civic infrastructure in a tribal hamlet in Kodagu	136
Photo 55.	Household interviews in Valnur-Tyagatthur as part of assessing CDDI	140
Photo 56.	Example of forest based produce (tubers) as a source of livelihood	142
Photo 57.	A Yerava household in Virajpet	142
Photo 58.	A Jenu Kuruba family	143
Photo 59.	A Kudiya family	143
Photo 60.	A Kaccha house in a Jenu Kuruba hamlet	144
Photo 61.	A young Jenu Kuruba mother and her family	145
Photo 62.	Traditional cardamom cultivation by Kudiyas	146
Photo 63.	Madikeri fort - The seat of governance in Kodagu	150
Photo 64.	A Women's Grama Sabha in Maldare, Virajpet	152
Photo 65.	Madikeri Urban water supply Chekdam at Kutuhole	162
Photo 66.	Waste Processing Unit at Madikeri City	163

List of Maps

Map 1.	Map of Kodagu	10
Map 2.	Post-independence era Coorg state (before States Reorganization Act, 1956)	12
Map 3.	Human Development Index in Kodagu	20
Map 4.	Child Development Index in Kodagu	55
Map 5.	Health infrastructure map of Kodagu	59
Map 6.	Food Security Index in Kodagu	92
Map 7.	Composite Taluk Development Index in Kodagu	93
Map 8.	Gender Inequality Index in Kodagu	125

List of Graphs

Graph 1.	Taluk performances in HDI	21
Graph 2.	Taluk performances in FSI	23
Graph 3.	Taluk performances in CTDI	24
Graph 4.	Taluk performances in different indices of development	24
Graph 5.	Literacy rate of Kodagu district	29
Graph 6.	Radar graph of dropout rates in Kodagu	34
Graph 7.	Teacher student ratio in Kodagu (2011-12)	35
Graph 8.	School infrastructure trends in Kodagu (2011)	37
Graph 9.	Population trends in Kodagu	45
Graph 10.	Age pyramids for Kodagu and Karnataka – 2001	46
Graph 11.	Age pyramids for Kodagu and Karnataka – 2011	46
Graph 12.	Trends in population sex ratio	46
Graph 13.	Proportion of 0 - 6 populations	47
Graph 14.	Proportion of ANC registered pregnant women covered by WCD nutrition programme in 2005 and 2011	50
Graph 15.	Trends in Maternal deaths in Kodagu	51
Graph 16.	Causes of Maternal death in Kodagu - 2010 - 12	51
Graph 17.	Causes of infant death in 2011 in Kodagu	52
Graph 18.	Category-wise infant deaths in Kodagu between 2010 and 2012	52
Graph 19.	Proportion of 0 - 6 population covered by WCD nutrition programmes in different census years	54
Graph 20.	Trends in HIV AIDS and Tuberculosis diseases in Kodagu	57
Graph 21.	Comparison of average rural area covered by PHCs and SCs	58
Graph 22.	Trends in average in-patients registered per month in Kodagu	61
Graph 23.	Trends in deliveries in government institutions reported in 2012-13	62
Graph 24.	Taluk-wise expenditure on health in 2011-12	63
Graph 25.	Radar graph of GTDP composition in Kodagu (2008)	72
Graph 26.	Sectoral composition of GDP in Kodagu in 2009-10	72
Graph 27.	Man-days generated in MGNREGA in 2011-12	86
Graph 28.	Patterns in Coffee area and yield in India	94
Graph 29.	Trends in international Coffee prices	95
Graph 30.	Housing Tenure in Kodagu and Karnataka 2011	107
Graph 31.	Distribution of Urban House sites in Kodagu	111
Graph 32.	Trends in population and child sex ratio	119
Graph 33.	Political representation of women in PRIs in Kodagu	122
Graph 34.	Taluk-wise crimes against women in Kodagu in 2011	123
Graph 35.	Patterns of crime against women in Kodagu in 2011	123
Graph 36.	Social category-wise proportion of maternal deaths in Kodagu	135
Graph 37.	Social category-wise infant deaths in Kodagu	135
Graph 38.	Budgetary allocations in Kodagu ZP	153
Graph 39.	Analysis of Kodagu ZP expenditures (2011)	154
Graph 40.	Share of own resources in GP receipts (2009-10)	154

List of Tables

Table 1.	Overall taluk ranks in development indices in Kodagu	xxv
Table 2.	Demographic features of Kodagu district during 2001 and 2011.	14
Table 3.	Human Development Index for taluks of Kodagu	21
Table 4.	Gender Inequality Index for taluks of Kodagu	22
Table 5.	Child Development Index for taluks of Kodagu	22
Table 6.	Food Security Index for taluks of Kodagu	22
Table 7.	Urban Development Index for towns of Kodagu	23
Table 8.	Composite Taluk Development Index for taluks of Kodagu	23
Table 9.	Overall taluk ranks in development indices in Kodagu	24
Table 10.	Taluk-wise literacy rate of Kodagu	29
Table 11.	Literacy levels in Kodagu	30
Table 12.	Year-wise enrolment from 1st to 5th standards in Kodagu	30
Table 13.	Total enrolment rates in Kodagu	31
Table 14.	Net enrolment rates in Kodagu	31
Table 15.	Out of school children in Kodagu	32
Table 16.	Child retention rates at primary level	33
Table 17.	School dropout rates in Kodagu	33
Table 18.	Dropout children mainstreamed in Kodagu (in 2011-12)	34
Table 19.	Year-wise transition from fifth to sixth standard in Kodagu	34
Table 20.	Physically challenged children reached through SSA in Kodagu	35
Table 21.	School infrastructure in Kodagu	36
Table 22.	Residential areas and school infrastructure in Kodagu	37
Table 23.	School completion and pass percentage rates in Kodagu (2011)	37
Table 24.	Higher education institutions in Kodagu (2011)	38
Table 25.	Per-capita expenditure on education in Kodagu (2011-12)	39
Table 26.	Performance of Kodagu in health	42
Table 27.	Population trends of Kodagu and decadal growth rates	43
Table 28.	Comparison of population proportions of SC and STs in 2011	44
Table 29.	Comparison of population densities	44
Table 30.	Comparison of proportion of population in the working age group	45
Table 31.	Comparison of TFR, CBR and CDR	47
Table 32.	Comparison of Infant Mortality Rates	47
Table 33.	Comparison of selected indicators of maternal health	48
Table 34.	Institutional deliveries in Kodagu in 2011	49
Table 35.	Details of ANC in Kodagu	49
Table 36.	Maternal Mortality Ratio in Kodagu - 2011	50
Table 37.	Infant and Child Mortality Ratio in Kodagu - 2011	52
Table 38.	Comparison of full immunization rates	53
Table 39.	Taluk-wise immunization rates in Kodagu in 2011	53
Table 40.	Nutrition status among children	54
Table 41.	Comparison of proportion of eligible couple using any family planning method	54
Table 42.	Taluk-wise proportion of eligible couple using any family planning method in 2011	56

Table 43.	Patients identified with major diseases in Kodagu in 2011	56
Table 44.	Patients identified with communicable diseases in 2011	57
Table 45.	Government Health Infrastructure in Kodagu	58
Table 46.	Population served by PHCs and Sub-Centres	58
Table 47.	Status of health infrastructure in Kodagu	60
Table 48.	Snapshot of vacancies in the Dept. of Health and Family Welfare (as of 05-2013)	60
Table 49.	Community health related information in Kodagu in 2011	62
Table 50.	Trends in beneficiaries of JSY and Madilu Kits in Kodagu	63
Table 51.	Per-capita expenditures on health in 2011	63
Table 52.	PHC-wise details of RCH indicators	66
Table 53.	Sector-wise growth indicators in Kodagu	71
Table 54.	Taluk-wise sectoral growth rates in Kodagu	71
Table 55.	CAGR trends in GTDP of primary sector in Kodagu	73
Table 56.	Land utilization patterns in Kodagu (2010-11) in hectares	74
Table 57.	Rainfall and rainy days for year (in mm)	75
Table 58.	Patterns of agricultural land holdings (numbers) in Kodagu (2011)	78
Table 59.	Major horticultural crops grown in the district (2011-12) in ha	79
Table 60.	Details of apiculture in Kodagu (2011-12)	80
Table 61.	Taluk-wise livestock inventory in Kodagu (2011-12)	80
Table 62.	Tourist attractions in Kodagu	83
Table 63.	FPS and Ration card details in Kodagu (2011-12)	84
Table 64.	Social categories of landholders in Kodagu (area in ha) in 2001	85
Table 65.	Agricultural wages for male and female workers Kodagu (2011)	85
Table 66.	MGNREGA in Kodagu (2011-12)	86
Table 67.	Trends in work participation rates in Kodagu (2011)	87
Table 68.	Gender-wise Work participation rates in Kodagu (2011)	88
Table 69.	Work participation Rate- total and marginal workers in Kodagu (in %)	88
Table 70.	Total workforce -main and marginal workers in Kodagu (2011, in %)	88
Table 71.	Main and marginal workers in Kodagu (2011, in numbers)	89
Table 72.	Patterns in Coffee area, yield and employment generation in Kodagu	95
Table 73.	Patterns in Coffee area, yield and employment generation in Kodagu	98
Table 74	Houseless and site less households in Kodagu	107
Table 75	Status of Pucca houses in the District	107
Table 76	Condition of houses- Category wise	107
Table 77.	Status of Household assets	108
Table 78.	Unit costs of houses constructed under different Schemes from 2000-01 to 2011-12	109
Table 79.	Cumulative number of Houses Constructed under Different Schemes till 2011-12	109
Table 80.	Houses Constructed under Urban Housing Schemes	110
Table 81.	Details of rural housing schemes in 2010-11 and 2011-12	110
Table 82.	Taluk wise Distribution of Rural house sites	111
Table 83.	Source of Drinking water in the district in 2011	111
Table 84.	Status of electrification in Kodagu	112
Table 85.	Type of cooking fuel in the district in 2011	112
Table 86.	Availability of Toilets in 2001 & 2011 in Kodagu	113

Table 87.	Number of Grama Panchayats awarded Nirmala Grama Puraskara in Kodagu	114
Table 88.	Indicators of GII in Kodagu	118
Table 89.	Ranks of Kodagu in GDI in the state	119
Table 90.	Indicators of maternal health in Kodagu	119
Table 91.	Literacy rates in Kodagu and Karnataka	120
Table 92.	Taluk-wise Literacy rates in Kodagu in 2011	120
Table 93.	Net Enrolment Rate at the primary level in Kodagu in 2011	120
Table 94.	Enrolment for higher education in Kodagu in 2011	121
Table 95.	Gender-wise Work participation rates in Kodagu	121
Table 96.	Agricultural wages for male and female workers Kodagu	122
Table 97.	Description of SHGs visited	127
Table 98.	SC and ST population in Kodagu in 2011	132
Table 99.	SC and ST Retention rates (class 8) in Kodagu in year 2011-12	133
Table 100.	Proportion of SC and ST students enrolling in government institutions	133
Table 101.	Out of school children in Kodagu in year 2012-13	134
Table 102.	Government pre matric hostels for SCs and STs for the year 2011-12	134
Table 103.	Calculation of Composite Dalit Development Index	141
Table 104.	PRI details in Kodagu	151
Table 105.	Categories of ULBs in India	152
Table 106.	ULB details in Kodagu	152
Table 107.	SC/ST and Women representatives in PRIs and ULBs in Kodagu	152
Table 108.	Number of persons serving in leadership posts in Kodagu ZP	153
Table 109.	Trends in MGNREGA in Kodagu	155
Table 110.	Public service delivery infrastructure in Kodagu (2011-12)	155
Table 111.	Summary of E-governance initiatives	156
Table 112.	Youth groups in Kodagu (2011-12)	157
Table 113.	Urban Local Bodies in Kodagu	160
Table 114.	Housing trends in urban areas in Kodagu in 2011	161
Table 115.	Essential services and safety indicators in urban areas in Kodagu in 2011	162
Table 116.	Water supply and drainage coverage in urban areas in Kodagu in 2011	162
Table 117.	Details of Solid waste in towns of Kodagu	163
Table 118.	ULB finances in Kodagu	163
Table 119.	Urban Development Index in 2011	163
Table 120.	Overall taluk ranks in development indices in Kodagu	168

Abbreviations

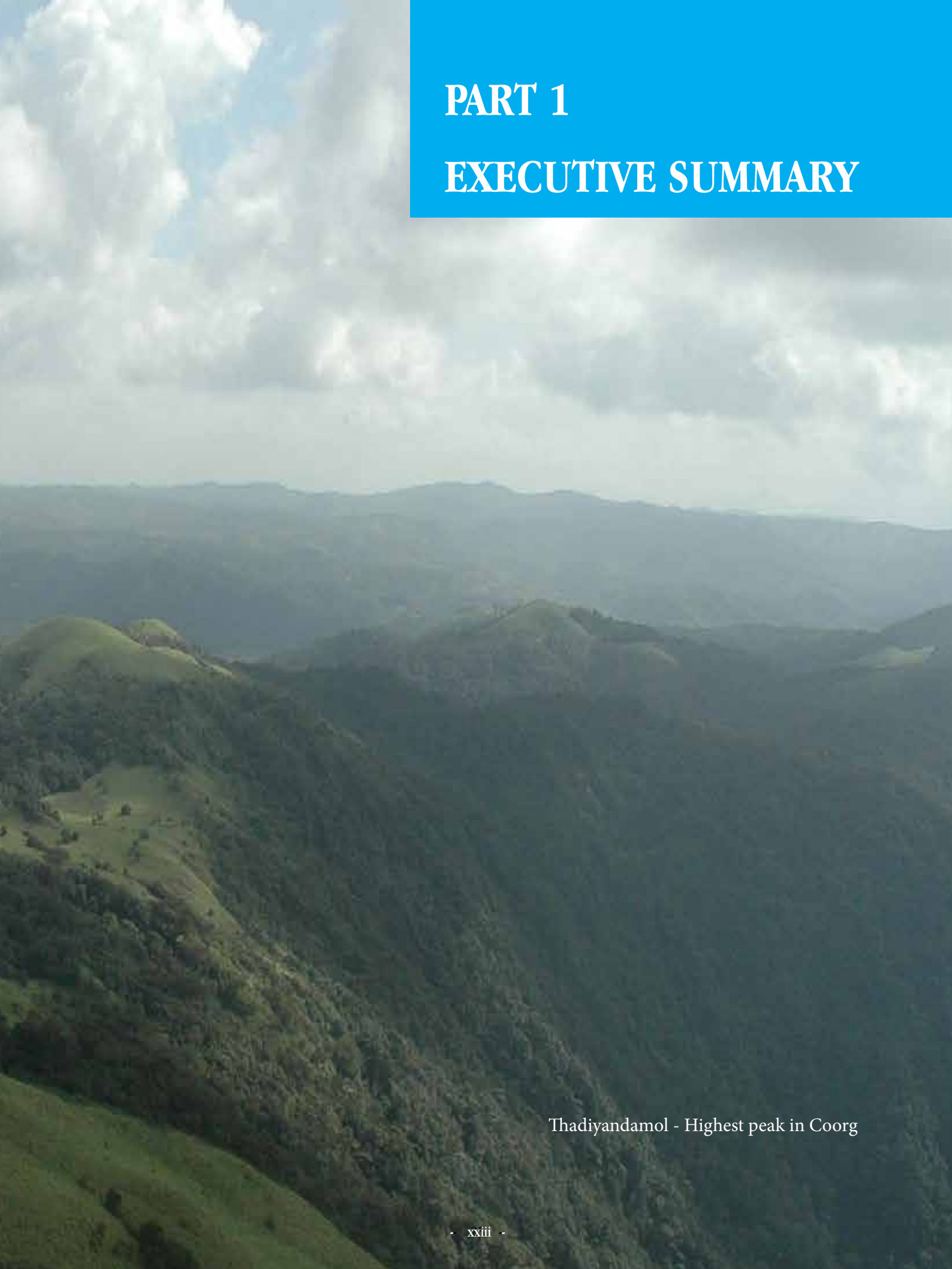
AIDS	Acquired Immunity Deficiency Syndrome
ANC	Ante Natal Care
ANM	Auxiliary Nurse and Midwife
APL	Above Poverty Line
ARS	Agricultural Research Station
ARS	Arogya Raksha Samithi
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda Unani Siddha and Homeopathy
BCM	Backward Community and Minority
BPL	Below Poverty Line
BPO	Business Process Outsourcing
CAGR	Compound Annual Growth Rate
CBR	Cumulative Birth Rate
CDDI	Composite Dalit Development Index
CDI	Child Development Index
CDR	Cumulative Death Rate
CEO	Chief Executive Officer
CESC	Chamundeshwari Electricity Supply Corporation
CHC	Community Health Centre
CMC	City Municpal Council
CMR	Child Mortality Rate
CPO	Chief Planning Officer
CSO	Central Statistical Organization
CTDI	Composite Taluk Development Index
DDP	District Domestic Product
DDPI	Deputy Director of Public Instruction
DH	District Hospital
DHO	District Health Officer
DISE	District Information System for Education
DLHS	District Level Household Survey
DS	Deputy Secretary
DSO	District Statistical Officer
FRA	Forest Rights Act
FRU	First Referral Unit
FSI	Food Security Index
GDDP	Gross District Domestic Product
GDI	Gender Development Index
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
GER	Gross Enrolment Ratio
GII	Gender Inequality Index
GoI	Government of India

GoK	Government of Karnataka
GP	Gram Panchayat
GTDP	Gross Taluk Domestic Product
HDD	Human Development Department
HDI	Human Development Index
HFW	Health and Family Welfare
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPS	Higher Primary School
HR	Human Resources
IAY	Indira Awaas Yojana
ICO	International Coffee Organization
IGNWPS	Indira Gandhi National Widow Pension Scheme
IMR	Infant Moratality Rate
ITDP	Integrated Tribal Development Programme
JSY	Janani Suraksha Yojana
KMF	Karnataka Milk Federation
KPO	Knowledge Process Outsourcing
LPCD	Litres Per Capita per Day
LPG	Liquid Petroleum Gas
LPS	Lower Primary School
MCH	Maternal and Child Health
MCTS	Mother and Child Tracking System
MDG	Millenium Development Goals
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MIS	Management Information System
MMR	Maternal Mortality Ratio
NABARD	National Bank for Agriculture and Rural Development
NBA	Nirmal Bharath Abhiyan
NDDP	Net District Domestic Product
NER	Net Enrolment Ratio
NGO	Non Governmental Organization
NGP	Nirmal Gram Puraskar
NRHM	National Rural Health Mission
NSSO	National Sample Survey Organization
PA	Prasuti Araike
PHC	Primary Health Centre
PLD	Primary Land Development Bank
PNC	Post Natal Care
PRI	Panchayat Raj Institution
PUC	Pre-University Course
RCH	Reproductive and Child Health
RDPR	Rural Development and Panchayat Raj
RGHCL	Rajiv Gandhi Housing Corporation Limited

RMSA	Rashtriya Madhyamika Shiksha Abhiyan
SC	Scheduled Caste
SC	Sub-Centre
SHG	Self Help Group
SSA	Sarva Shiksha Abhiyan
SSLC	Secondary School Leaving Certificate
ST	Scheduled Tribe
TB	Tuberculosis
TDP	Taluk Domestic Product
TFR	Total Fertility Rate
TGA	Total Geographical Area
TH	Taluk Hospital
TP	Taluk Panchayat
UDI	Urban Development Index
ULB	Urban Local Body
UN	United Nations
UNDP	United Nations Development Programme
VHSNC	Village Health Sanitation and Nutrition Committee
VWSC	Village Water and Sanitation Committee
WCD	Women and Child Development
ZP	Zilla Panchayat

PART 1

EXECUTIVE SUMMARY



Thadiyandamol - Highest peak in Coorg

PART I
EXECUTIVE SUMMARY

The Human development approach bases its premise on the basic and critical capabilities of citizens of an area, that are required for living a long and health life of dignity, to be educated to understand and utilize the opportunities the world provides and to be able to access resources needed to maintain a decent standard of living. It has led to deeper understanding of the dynamics of development and appreciation of its true complex nature. This concept is now being used, not only for assessing the status and analysing trends in its three dimensions of education, health and livelihoods, but also to address the gaps, by formulating new policies, calibrating existing schemes and changing implementation processes and procedures of government and civil society interventions, to maximize the effectiveness of such activities.

The district human development reports provide disaggregated status of human development at the district level and below, which allows for the selective and purposive prioritization of districts and taluks in framing and implementation of policies and schemes of the government. Through these reports, an attempt has been made to provide a holistic picture on the status of human development and its various dimensions and hence, a total of seven indices were developed, that allow for a broad based analysis and human development at the district level and below, that leads to suggesting changes in policy and implementation focus. These indices include: Human Development Index (HDI), Gender Inequality Index (GII), Child Development Index (CDI), Food Security Index (FSI), Urban Development Index (UDI), Composite Dalit Development Index (CDDI) and Composite Taluk Development Index (CTDI).

Multiple agencies have been involved in the development of the District Human Development Reports. At the state level, the Human Development department of the Ministry of Planning, Programme Monitoring and Statistics took the lead in arriving at indicators and the methodologies for computing the indices and provided the overall leadership in developing the reports. This team was helped with subject experts and consultants. The Zilla Panchayats of various districts were responsible for the provision and validation of data and the indicators developed. They also facilitated the data collection for the small area studies. For each district, a lead agency (academic and non-governmental institutions working the areas of social science research) were responsible for the compilation of all the data, calculation of different indices, analysis and report writing. The lead agencies also conducted the small area studies that provides analysis of the characteristics unique to the district.

The data for preparation of the seven indices mentioned above came from a variety of sources. The indicators chosen for calculation of indices had to be a) reflective of ground realities of human development in the three principle dimensions, b) reliably available in all districts at the taluk level and c) their nature should be such that district level analysis and addressing gaps should be practically feasible. The data collected for the calculation of the indicators was uniformly set for the year 2011.

Kodagu, also known as Coorg is the smallest district in the state of Karnataka. It is a picturesque, hilly district located in southwestern Karnataka, on the Western Ghats of India, and is considered as one of the most beautiful hill stations of Karnataka. The land of Kodagu blessed with exceptionally beautiful natural landscapes. The region is well suited for the cultivation of many high valued plantation crops like Coffee, black pepper and cardamom. Thus, the district is driven by a thriving rural agriculture based economy, which is supplemented by incomes from tourism.

Kodagu was a state by itself before merging with Karnataka state in the year 1956, with an elected chief minister and the legislative assembly. At present it is a part of Mysuru Lok Sabha Parliament Constituency and comprises of three taluks – Madikeri, Somwarpet and Virajpet. Kodagu has 16 hoblis and 98 Grama Panchayats. There are 296 revenue villages including 5 uninhabited villages. The district is hilly, with the peaks of Tadiandamol (1750 mts above sea level) and Pushpagiri (1715 mts above sea level) and the lowest elevation of the district is about 900 mts above sea level.

Kodagu is the least populated district of Karnataka and in

the last decade, it had negligible decadal growth rate of population (1.09%), preceded only by Chikkamagaluru district which had negative decadal growth rate of -0.26%. The decadal growth rate in population in the district has been consistently lesser than that of the state. In 2011, Kodagu's share in the total population of the state was just 0.91%.

Kodagu's economy is driven by the primary sector, specifically because of the Coffee plantations. Kodagu's produces 1/3rds of the nation's Coffee and more than 25% of the land under Coffee in India is found in Kodagu. Another developing option for livelihoods in Kodagu is tourism. Kodagu has carved itself a niche in the tourism map of India, for displaying to the world its natural beauty and the unique hospitality of the Kodavas. Together with the traditional religious tourist attractions, Kodagu attracts urban nature lovers with a unique combination of eco-tourism and homestays.

The table below presents the summary of the taluk ranks in the 5 indices relating to various dimensions of human development.

Table 1. Overall taluk ranks in development indices in Kodagu

Taluk	HDI	GII	CDI	FSI	CTDI
Madikeri	1	3	2	2	2
Somwarpet	2	2	1	3	1
Virajpet	3	1	2	1	3

Among the 5 indices, Madikeri taluk was ranked first in HDI, whereas Somwarpet was ranked first in CDI and CTDI. Virajpet was first in GII and FSI. It can be seen that though Virajpet taluk ranks first in GII and FSI, is behind the other two taluks in both HDI and CTDI, a clear indication that the taluk lags behind in overall development status, and particularly in education (since it ranked 3rd in the education dimension of both HDI and CTDI).

Madikeri taluk has the highest HDI in the district followed by Somwarpet and finally Virajpet taluk. With better health and educational infrastructure and bigger urban population, Madikeri taluk stands first in health and education index, whereas Somwarpet performs better in the livelihood dimension. Virajpet and Somwarpet perform relatively poorly to Madikeri in the health index, due to higher maternal mortality in these taluks. Virajpet performs poorly in education index, majorly because of lagging literacy rates in comparison to other taluks of the district.

Virajpet taluk has the least gender disparity in the district followed closely by Somwarpet. Madikeri taluk has the highest gender inequality in the district. The high prevalence of anemia among pregnant women and relatively less work participation rates among women in Madikeri taluk are reasons for the GII values in the taluk.

Somwarpet performs comparatively better than Madikeri and Virajpet in CDI, which perform equally in this index. Virajpet taluk performs better than the other taluks in FSI, majorly because its features of availability and accessibility of food are considerably better than other taluks. Madikeri taluk has the lowest per-capita food grain production and the highest amount of degraded land.

Among the four urban areas of the district: Madikeri CMC, Somwarpet, Virajpet and Kushalnagar town Panchayats, Madikeri town has the highest UDI value in the district. Kushalnagar has the lowest UDI value in the district.

Somwarpet ranks first in CTDI. CTDI takes a much broader perspective on development, by including 68 indicators of development, whereas the HDI included only 11 indicators. Further, several standard of living indicators of the taluk have much higher values in Somwarpet in comparison to other taluks.

While Kodagu is comparatively better-off than most other districts in the educational status, it falls slightly short of the national target of 85% literacy by 2012. There are still persisting gaps between male and female literacy rates (9%). Among the three taluks of Kodagu, Virajpet lags significantly behind the other taluks in several key process and output indicators of primary education like proportion of out of school children in primary and secondary education, availability of infrastructure and per-capita expenditure on education. Thus, improving the effectiveness of existing government schemes, improving infrastructure and prioritizing schools specifically in the tribal areas, with a focus on Virajpet could be starting points for policy and implementation improvements in the education sector in Kodagu.

The status of important health indicators in Kodagu are better in comparison to that of the state. The district has made significant strides in critical issues of health, like family planning and fertility rates, selective sex selection during birth and sex ratios, immunization and

prevalence of major communicable diseases. The higher incidences of infant and maternal deaths among the ST communities, acute alcoholism and the lack of health seeking behaviour among them are causes of concern. An integrated approach, covering aspects of sanitation, nutrition, safe lifestyles and medical services may be needed that targets the ST community specifically. Due to the higher proportion of tribal populations in Virajpet taluk, special attention can be provided to improving health infrastructure and coverage in this taluk, followed by Somwarpet and Madikeri taluks of the district.
With its impressive rural and agriculture based economy, supplemented with tourism, and relatively better standard of living indicators, the economy of Kodagu is comparatively well performing in the state. Further, the district's per-capita income is appreciably high in comparison to other districts of the state. Even with the lack of rail connectivity, Kodagu has been able to achieve high levels of income and sustain it over the past decades. However, there are causes of concern, since the growth trends in income are largely one-dimensional and less inclusive.

The non-availability of large additional lands for coffee cultivation, the stagnant yields of coffee and the related stagnant demand for agricultural labour in the district point out to the need to identify other potential activities in the district. In this regard, allied agricultural activities like fisheries, animal husbandry and floriculture have to be encouraged, keeping in mind the local environmental and social factors. Labour issues in Kodagu are relatively more acute in comparison to other districts in the state. This issue is heightened by the lack of mass -employment providing secondary and tertiary sector initiatives in the district. Thus, the district has the dual problems of unregulated in-migration of labourers due to shortage of labourers and the out-migration of educated skilled labour due to lack of opportunities for them. There is an immediate need for policy intervention to expedite the institutionalization of labour market facilitating both planters and labourers in the district.

Among the taluks of the district, Madikeri and Virajpet have scope to improve the status of drinking water supply and electricity whereas Somwarpet could primarily focus on sanitation and provision of toilets. The district also shows the common trend that urban areas have better amenities. The consequence is higher in Kodagu district since it has the highest proportions of rural residents in the state. The priority for rural housing and provision of sites should be higher, since the district trends show scope for improvement in this sector. The district trends show that both in housing and sanitation, SCs and STs fare behind other social classes. Thus, special attention is needed to improve the conditions of these marginalized groups.

Two major issues affect women's gender in Kodagu: reproductive health care and crime against women. The high rate of maternal mortality among STs and Muslims in the district is an issue to be handled immediately. Early motherhood, lack of emergency obstetric care, accessibility issues and lack of health seeking behaviour are some of the reasons for the vulnerability of the mothers in the district. The crime against women, especially the cases of missing women and dowry and related acts of crime and violence have to be taken seriously and safe environments have to be created for women, thus fostering their development and minimizing the gender inequality in the district.

There are unique and critical challenges in the district, specifically with respect to its human development status of the marginalized tribal populations. Within the education sector, retention rates and completion of primary education are the major hurdles for ST communities. Special attention needs to be paid to Virajpet taluk, which has a higher concentration of STs and wherein multiple education indicators seem to be lagging behind. The health profile of ST communities provide a grim picture of the issues related to maternal and child health, specifically, that of the ST communities. Improving health seeking behaviour, provision of accessible health infrastructure including referral transport and emergency care and emphasis on coverage of vulnerable communities through preventive and public health programmes are crucial in guaranteeing better health status of the vulnerable groups in the district.

Vulnerable communities in the district do not have a significant resource base and are predominantly dependent on agricultural labour. The socio-economic dynamics of rural Kodagu suggest that rather than exclusion based on caste, disparities based on economic categories was probably prevalent in the area. A glance of the land ownership patterns specifically that of coffee plantations shows a highly skewed distribution of assets and provides an idea on the enormity of the economic disparities in the district.

Poverty alleviation interventions, skill development, expansion of the secondary and tertiary sector are crucial

for economically empowering these communities. Further, the standard of living of the SC and ST communities in the district is considerably lower than that of the other social classes and hence, prioritization is needed in issues like housing and sanitation.

The Jenu Kuruba and Yerava tribes are still vulnerable and their development, specifically with respect to health, basic infrastructure and education have to be prioritized. Further, the addiction to alcohol among tribal communities in general and among the Jenu Kurubas in particular is a primary issue that needs to be prioritized if these tribes have to lead a healthy and productive life. The dislocation from the forest based lifestyle and the continued marginalization of these tribes from fruitful involvement in the local economy are the major hurdles that prevent an immediate and accelerated mainstreaming strategy of these tribal communities. Thus, while the efforts towards tribal development in Kodagu district needs to be amplified, the government intervention strategy in their mainstreaming requires to be focussed, long term and participatory.

The urbanization trends of Kodagu are definitely unique in comparison to other districts of Karnataka. It contrasts with other districts that have high per-capita incomes (like Bengaluru), wherein incomes are majorly driven by urban economic activities. In Kodagu, coffee production, which is necessarily a rural activity drives the economy. Analogously, it can be argued that Kodagu doesn't face urbanization pressures visible in other districts, because of its uniquely rural economy. However as discussed in a small area study in this report, tourism and its allied activities do trigger urbanization pressures and its effects are visible in the peripheries of towns in Kodagu.

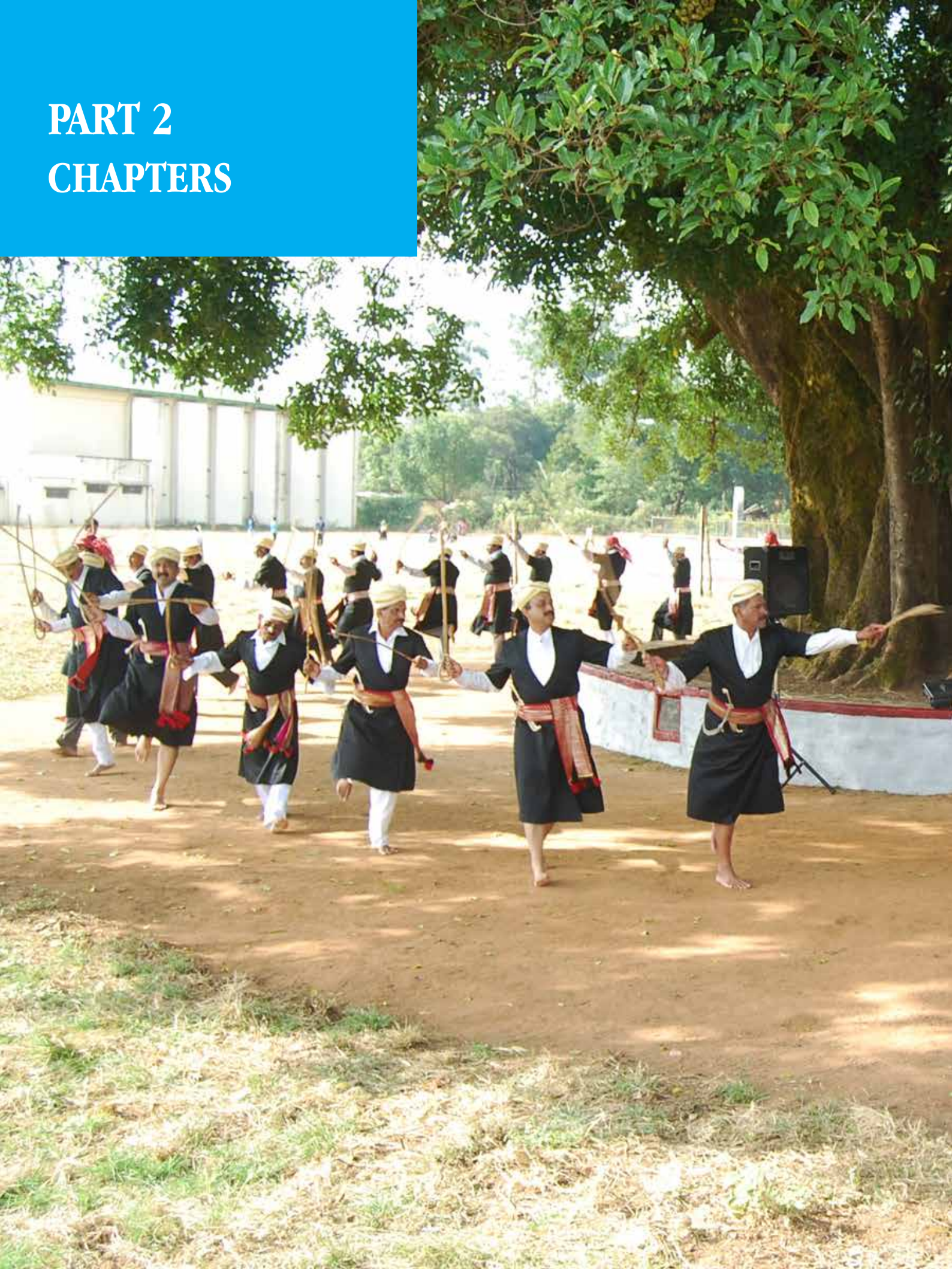
Managing urbanization and its preparatory processes (like land acquisition, conversion of land etc.) in Kodagu is going to be a difficult challenge since together with inherent issues of housing, water supply, solid and liquid waste management, environmental and socio-political issues also have to be taken into consideration. As field experience corroborates, the pressure of accelerated urbanization on Kushalnagar (which is comparatively at lesser elevation) and neighbouring areas is high where provision of basic civic amenities continues to be a major challenge, in comparison to other urban areas in the district.

Kodagu has got its own niche in tourism. Tourism and the allied activities, through the network of lodges, hotels, resorts, groceries, gift shops, private transportation agencies, accounting and other supporting activities) is a much larger enterprise in Kodagu. It could be a potential way forward to drive the economic growth in the district if the sector is well organized and executed. However, considering the delicate ecosystem of Kodagu, maintaining the right balance between economic and environmental sustainability has to be enforced in the district. Stricter regulation on the construction of buildings in ecologically sensitive areas, monitoring of the quality of homestays, hotels and resorts and better branding and marketing may help expand the tourist base of Kodagu and help in creating a viable livelihood alternative for the marginalized communities of the district.

In summary, the analysis of status of human development in Kodagu points to 4 crucial areas in which the district political and bureaucratic focus is required.

- Improving the health, education and livelihood status of tribal communities.
- Creating a platform for ezzffective labour market provision, that meets the needs of the labourers and planters that ensures a stable and secure plantation economy.
- Strengthening the allied agricultural activities, secondary and tertiary sector activities in the district.
- Using a cautioned approach towards the promotion of tourism related activities in the district with the emphasis on balancing economic, social and environmental sustainability.

PART 2
CHAPTERS



CHAPTER - 1
INTRODUCTION

Kolata, A Traditional Dance of Coorg

CHAPTER 1.
INTRODUCTION

The assertion that economic development and its measurement provides a very limited picture of human progress has now been well accepted . The holistic concept of human development, which envisions development as the expansion of choices, capacities and freedoms of people to lead the life they value to its fullest has caught the attention of the world. It has allowed us to realize that in many cases, the decades of singular attention and focus to the growth of incomes, has led to the creation of irreversible splinters of socio-economic environmental disparities in the society.

This fresh thinking has led to deeper understanding of the dynamics of development and appreciation of its true complex nature. The result of this realization is the expansion in the ways with which development outcomes are measured, and moving beyond the simplistic measures of development like the domestic product, into issues related to access, availability of resources and services and the status of disparities between different social groups, in these aspects.

The United Nations Development Fund (UNDP) is a pioneer in promoting the human development based thinking for all the countries in the world by the publishing the annual reports on human development at the global, national and sub-national levels. The UNDP has been publishing these annual reports since 1990. The UNDP's methodology of measuring the quality of human development includes assessing the status of education, health and livelihoods in any given region, in a way that is comparable with other regions, to allow the disaggregated focus on specific issues to be addressed in each of these regions, together with a uniform way of measuring holistically, the human development that has been achieved in these regions.

Many nations including India have adopted the UNDPs concepts of measuring human development and bring out national reports, that document the progress in achieving the various dimensions of development, that are encompassed under the umbrella of human development. Based on this philosophy of development, the Millennium Development Goals were formed that were agreed by the 189 member nations of the United Nations. Thus, the concept of assessing human development is now being used to drive the focus of development policy onto specific areas that were hitherto considered as issues that would be taken care of, if economic progress was ensured.

The concept of Human Development is now, not just a way of measuring the status of development, but also a useful tool to plan and address specific gaps in the different dimensions of development and devise/ calibrate policy and implementation strategies to address bottlenecks and barriers. Further, the concept can be used to identify and focus on targeting specific communities and populations that may be deprived of the development related interventions being implemented in an area.

1.1 Concept and Methodolog y

Over the decades, the UNDP's methodology for assessing human development has undergone many changes. Currently, the methodology not only includes measurement of outcome indicators of the three dimensions (education, health and livelihoods) but also consider several other indicators that provide a broad basis for the understanding and addressing of gaps in development of the particular areas of human development. Further, the methods adopted include not only the measurement of human development using the Human Development Index (HDI), but also with other indices that measure specific aspects of development like the Multi-dimensional Poverty Index (MPI), Gender Inequality Index (GDI).
The measurement of Human Development is now being used, not only for assessing the status and analysing trends in its three dimensions, but also to address the gaps, by formulating new policies, calibrating existing schemes and changing implementation processes and procedures of government and civil society interventions, to maximize the effectiveness of such activities.

Thus, sub-national human development report initiatives have been conducted and two such reports have been prepared for the state of Karnataka in 1999 and 2005.

These reports compiled enough empirical evidences to suggest the magnitude and the diversity of regional and social imbalances that exist in the state, resulting in considerable shifts in how these issues were addressed by policy and implementation at the state level. Similar experiments were carried out at the district levels in 4 districts of Karnataka (Vijayapura, Kalaburagi, Mysuru and Udupi), which provided a micro-level, disaggregated status of human development that also inherently included analysis of various development initiatives taken up in these districts.

The district human development reports provide disaggregated status of human development at the district level and below, which allows for the selective and purposive prioritization of districts and taluks in framing and implementation of policies and schemes of the government. These reports also provide a comparative empirical analysis of how different departments and different schemes are performing at the district levels and below, and provide an opportunity to rationally address such gaps.

However, preparation of district level human development reports also comes with its own set of challenges and bottlenecks, due to the non-availability of reliable disaggregated data at the grassroots level, about indicators that are traditionally used in the calculation of human development at the state and national levels. Further, district level analysis generally limits the use of sample surveys and other figures that are representative of the state when taken together, but not necessarily statistically reflective of districts' characteristics. Similarly, another challenge that emerges during the analysis of some outcome and impact indicators is the limitation of interventions at the district and taluk levels to address broad based development issues and indicators.

Thus, the methodology for preparation of state-wide district human development reports has to undergo a considerable amount of tinkering with the traditional concepts of measuring and analysing human development. The indicators chosen should be a) reflective of ground realities of human development in the three principle dimensions, b) be reliably available in all districts and c) their nature should be such that district level analysis and addressing gaps should be practically feasible. Further, for gathering the complete picture on the status of human development and its various dimensions, a total of seven indices were developed, that allows for a broad based analysis and human development at the district level and below, that leads to suggesting changes in policy and implementation focus.

1.2 Factors contributing to Human Development

In the human development approach, the basic and critical capabilities of citizens in various dimensions of day-today living are considered. These capabilities are required for living a long and health life of dignity, to be educated to understand and utilize the opportunities the world provides and to be able to access resources needed to maintain a decent standard of living . While these issues form the core of the human development approach, other features of the society, like treatment of women, marginalized communities and the disabled, the equality of socio-economic opportunities, equitable access to natural and social resources, effective and transparent governance mechanisms and active participation of women, minorities and vulberablie communities in political processes act as complimentary forces that affect the overall human development of a region. Creation and maintenance of infrastructure that ensures access to quality health care and safe living standards, education and employment opportunities also play a key role in contributing to human development.

1.3 Data Collection, Compilation and Validation

The collection of data, computation of various indices and the analysis and report writing for the district human development reports were split among multiple agencies. At the state level, the Human Development department of the Ministry of Planning, Programme Monitoring and Statistics took the lead in arriving at indicators and the methodologies for computing the indices and provided the overall leadership in developing the reports. This team was helped with subject experts and consultants. The Zilla Panchayats of various districts were responsible for the provision and validation of data and the indicators developed. The data collected for the calculation of the indicators was uniformly set for the year 2011. They also facilitated the data collection for the small area studies. For each district, a lead agency (academic and non-governmental institutions working the areas of social science research) were responsible for the compilation of all the data, calculation of different indices, analysis and report writing. The lead agencies also conducted the small area studies that provides analysis of the characteristics unique to the district. The lead agenices and the Zilla Panchayats together conducted workshops at the district and taluk levels for line departments and

public representatives sensitizing them about the need to having the human development approach to planning and decision making at their respective levels.

The data for preparation of the seven indices mentioned above came from a variety of sources. As discussed earlier, the indicators chosen for calculation of indices had to be a) reflective of ground realities of human development in the three principle dimensions, b) be reliably available in all districts and c) their nature should be such that district level analysis and addressing gaps should be practically feasible.

Thus an iterative process of the selection of indicators was used to arrive at the final set of indicators for the measurement of the indices discussed above. At different stages of this process, the Zilla Panchayat and the respective line departments were involved. Line departments were primarily responsible for the collection and provision of data. The lead agencies compiled the data and presented them back to the respective Zilla Panchayats. The Zilla Panchayats with the help of respective line departments validated the compiled data, based on which the indices were calculated. Further, the Zilla Panchayats and line departments helped the lead agencies in selection of issues to be studied under the small area studies for the report and facilitated the field visits for these studies.

In some cases, specifically related to maternal and child health and nutrition, reliable taluk level data weren't available in all districts of the state. In these cases, alternative data sources were used. The taluk-wise figures for Infant and Child Mortality rates were based on estimated values using SRS 2011 data.

All in all, 76 indicators were identified at taluk level that were used for the calculation of the various indices computed as part of the human development report. The year 2011's data was used for formulating the indicators. These indicators can be grouped in to the following categories:

Categories	Sub-category	Number of indicators
Standard of Living related	Demographic indicators	10
	Livelihood and employment indicators	14
	Housing and asset indicators	09
	Participation indicators	05
Health related	Health indicators	17
	Sanitation indicators	04
	Drinking Water indicators	01
Education related	Education indicators	16

1.4 Measurement of Indices

Using the 76 indicators collected at the taluk level, the current district human development reports attempt to provide 6 types of indices that provide an overall assessment of the status of human development within each taluk and district of the state.The Composite Dalit Development Index was calculated based on primary data, in one rural area in the district.

1. **Human Development Index (HDI)**
   This index captures the status of factors that enable human development in the given region based on the three dimension of education, health and standard of living.

2. **Gender Inequality Index (GII)**
   Women undergo inequality in access to health, specifically in maternal health services, decision making (both at the levels of the household as well as in the communit and

participation in economic activities. Thus, this index captures the status of inequality between men and women in three dimension: reproductive health, empowerment and labour market.

3. **Child Development Index (CDI)**
   Human development crucially depends on the enabling factors provided to the children at an early age, thus securing better futures. These factors are associated with the health, nutrition and primary education status of the child. Thus, this index captures the status of child development in the given area, in three dimensions of health, nutrition and education.

4. **Food Security Index (FSI)**
   Provision of adequate food and nutrition is a primary requirement for humans to be able to lead a quality and fulfilling life. Thus, the food security index captures the status of a region, with respect to this crucial issue, based on three dimensions. Availability, accessibility and absorption capacities of communities.

5. **Urban Development Index (UDI)**
   Indian society is being transformed by the accelerated pace of urbanization Thus, a considerable proportion of the country now resides in urban areas.
   Urban communities need a specific set of basic amenities, crucial for their overall development. These include status of provision of safe drinking water, solid and liquid waste management, access to health facilities and status of civic security. These issues are captured in the Urban Development Index.

6. **Composite Dalit Development Index (CDDI)**
   Depravity of vulnerable groups continues to be a persistent vexing problem in development, especially in a hierarchical society like ours. Hence, understanding of these deprivations, through a set of qualitative and quantitative indicators, that provide an under standing of the existing seclusion and discrimination against dalit communities is a crucial part of analysing human development. Thus, the CDDI tries to capture these issues through a mixture of quantitative and perception based indicators, based on a study conducted in one rural area of the district.

7. **Composite Taluk Development Index (CTDI)**
   The CTDI captures the overall status of all the enabling factors and status indicators in the dimensions of education, health and livelihoods in the taluk, with specific focus on existing infrastructure in these dimensions. It also provides interesting insights that correlates and often contradicts with a taluk's position in human development.

The technical details on the computation of these indices is provided in Annexure
1. The analysis of the indicators collected and the indices was done by splitting the report into thematic chapters like education and health. The chapters also provide an in-depth analysis of the indicators connected to these themes together with discussion on district specific bottlenecks and barriers. Further, unique characteristics of each district were studied closely using 5 small area studies, based on primary data collection. Of these studies, one study mandatorily looked at the status of dalit development in one Gram Panchayat of the district. This study formed the basis for the calculation of the Composite Dalit Development Index.

1.5 Concluding Remarks

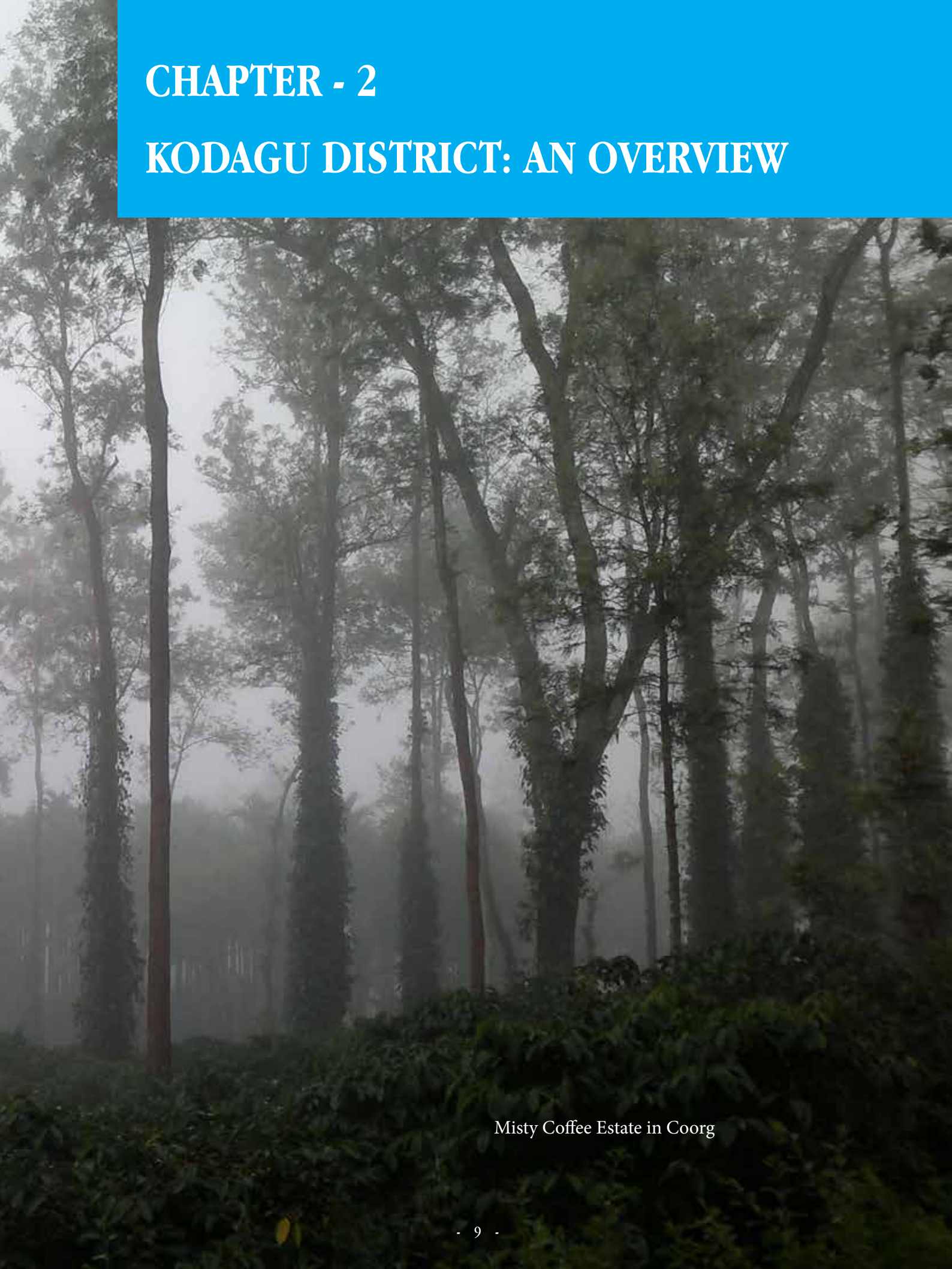
The human development paradigm has now gained widespread acceptance as a standard way of understanding and measuring development outcomes of a region. Together with the measurement of human development index, other related indices of development, that focus on specific enabling factors (like status of gender disparity and child development, food security etc.) are also considered as useful tools for analysing development status of a given region. This paradigm's full utility would be realized if national, state and local governments not only use these indices as monitoring tools for tracking their progress, but also use the analysis to derive focus and priority issues and address specific policy and implementation gaps. In this regard, the district human development reports would contribute significantly, by providing intra-district patterns of human development in such a way that they are comparable with the status of development in other districts of the state as well.

The current chapter provides the rationale for developing the district human development reports and the summary of the process of developing these reports. The chapterization of the report is arranged as follows. The

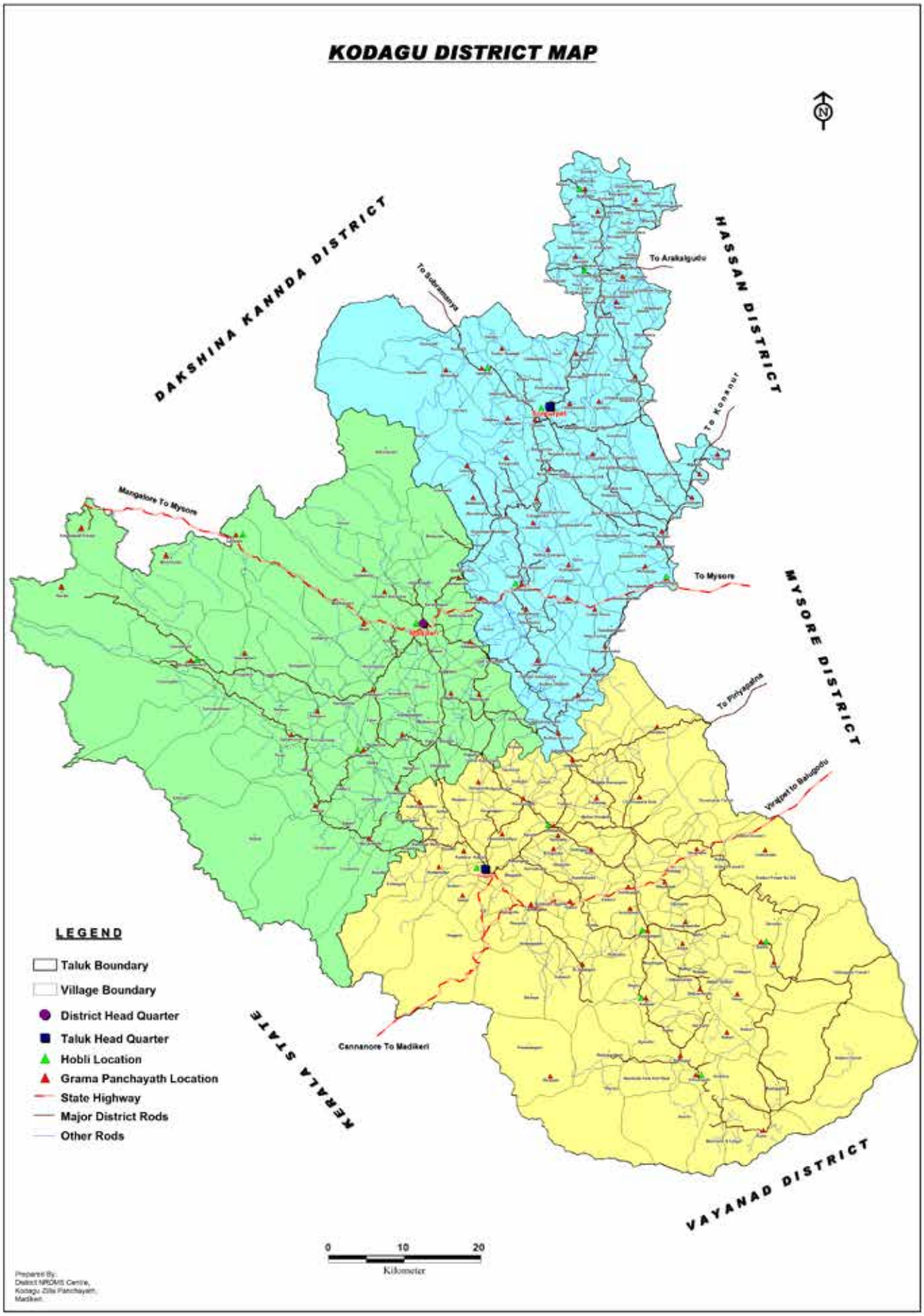
second chapter provides an overall information about the district, covering its history, geographical, socio-economic characteristics and unique aspects linked to the district. The third chapter presents the index values and ranks of the taluks of the district with respect to the 7 indices discussed above. The later chapters present the status of human development in the district by exploring its current status in areas of education, health, income and poverty, standard of living, gender development, development of marginalized and vulnerable communities, governance and urban development. The conclusion chapter summarizes the findings of individual chapters and presents the suggestions for the way forward for policy and implementation of various interventions of the government. Annexure 1 details the indicators used for the study, their sources of data and the technical details of the calculation of the 7 indices. Annexure 2 provides the taluk and district values of the all the indicators used for the computation of the indices.

CHAPTER - 2

KODAGU DISTRICT: AN OVERVIEW



Misty Coffee Estate in Coorg



Map No.:1 Kodagu District Map

CHAPTER 2.
KODAGU DISTRICT: AN OVERVIEW

2.1 Introduction

Kodagu, also known as Coorg is the smallest district in the state of Karnataka. It is a picturesque, hilly district located in south-western Karnataka, on the Western Ghats of India, and is considered as one of the most beautiful hill stations of Karnataka. It occupies an area of 4,102 square Kilometres (1,584 sq. mi) in the Western Ghats and is bordered by Dakshina Kannada district to the northwest, Hassan district to the north, Mysuru district to the east, Kannur district of Kerala to the southwest, and Wayanad district of Kerala to the south. Kodagu is considered rich with wildlife and has three wildlife sanctuaries and one national park: the Brahmagiri, Talakaveri, and Pushpagiri Wildlife Sanctuaries, and the Nagarhole National Park, also known as the Rajiv Gandhi National Park.

Photo 1. Nalknad palace of Chikkaveera Rajendra

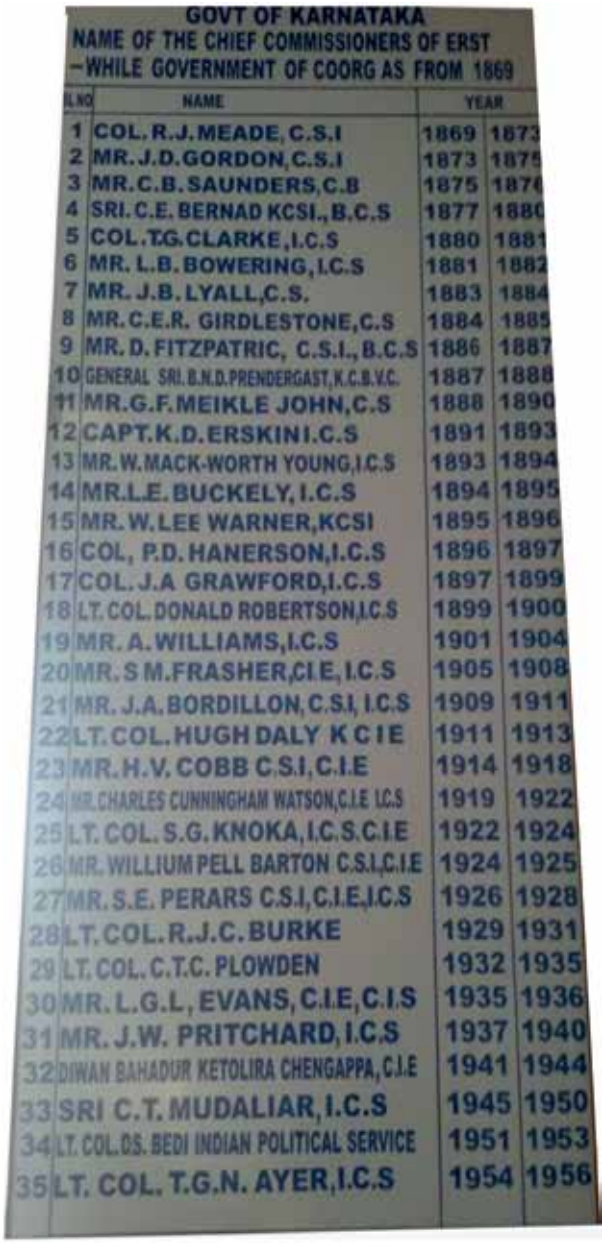
Kodagu has numerous unique characteristics that makes the analysis of its human development unique and insightful. It's the smallest district in Karnataka in terms of its population and has the highest proportion of rural population in any district. The district is known as the "Coffee-cup" of India and produces one thirds of India's coffee. The honey produced in Kodagu, famously known as "Coorg Honey" is also a household name in Karnataka. Kodagu is also one of the richest districts in the state (in terms of per-capita income) and is majorly driven by its agricultural economy.

The picturesque coffee plantations of Kodagu are the most noticeable hallmarks of the district, together with the Kodava coat of arms. Known for their pride and valour, the Kodavas have provided many brave men to the Indian army, with Field Marshal K.M. Cariappa and General Thimayya being the most famous among Kodava men in the Indian army. Kodagu was a state by itself before merging with Karnataka state in the year 1956, with an elected chief minister and the legislative assembly. At present it is a part of Mysuru Lok Sabha Parliament Constituency and comprises of three taluks – Madikeri, Somwarpet and Virajpet. This chapter presents a brief overview of the historical, geographical, and demographic and the socioeconomic features of the district to provide a background for the district's Human Development Report.

2.2 Background and Brief Regional History

While the origins of Kodagu are inter-leaved with the legend of the river of Kaveri, the authentic historical records available from 9th and 10th centuries onwards describe Kodagu being ruled by the Chengalvas who were the chieftains under the Gangas of Talakadu . Based on the inscriptions found in the region, Kodagu had a series of reigns by various south Indian dynasties like Rashtrakutas, Cholas, Gangas, Hoysalas, Kadambas, Vijayanagara Rayas, Gangas of Talakad and Pandyas, although the region managed to be under independent rule, through its vassals. (Mainly the Chengalvas and Kongalvas). After the defeat of the Vijayanagara Empire by the Deccan sultanates, the Halery dynasty came into existence in Kodagu, who ruled the region between 1600 and 1834. Later in 18th century Hyder Ali and his son Tipu Sultan invaded Kodagu frequently and thus, the kingdom allied with the British. After a period of turmoil, the British annexed Kodagu in 1834 from Chikkaveera Rajendra, the last Halery ruler of Kodagu and was brought under the East India Company.

Photo 2. Gaddige (tombs) of Chikkaveera Rajendra and other Haleri dynasty rulers



GOVT OF KARNATAKA
NAME OF THE CHIEF COMMISSIONERS OF ERST
–WHILE GOVERNMENT OF COORG AS FROM 1869

SL NO	NAME	YEAR	
1	COL. R.J. MEADE, C.S.I	1869	1873
2	MR. J.D. GORDON, C.S.I	1873	1875
3	MR. C.B. SAUNDERS, C.B	1875	1876
4	SRI. C.E. BERNAD KCSI., B.C.S	1877	1880
5	COL. T.G. CLARKE, I.C.S	1880	1881
6	MR. L.B. BOWERING, I.C.S	1881	1882
7	MR. J.B. LYALL, C.S.	1883	1884
8	MR. C.E.R. GIRDLESTONE, C.S	1884	1885
9	MR. D. FITZPATRIC, C.S.I., B.C.S	1886	1887
10	GENERAL SRI. B.N.D. PRENDERGAST, K.C.B.V.C.	1887	1888
11	MR. G.F. MEIKLE JOHN, C.S	1888	1890
12	CAPT. K.D. ERSKINI. C.S	1891	1893
13	MR. W. MACK-WORTH YOUNG, I.C.S	1893	1894
14	MR. L.E. BUCKELY, I.C.S	1894	1895
15	MR. W. LEE WARNER, KCSI	1895	1896
16	COL, P.D. HANERSON, I.C.S	1896	1897
17	COL. J.A GRAWFORD, I.C.S	1897	1899
18	LT. COL. DONALD ROBERTSON, I.C.S	1899	1900
19	MR. A. WILLIAMS, I.C.S	1901	1904
20	MR. S M. FRASHER, C.I.E, I.C.S	1905	1908
21	MR. J.A. BORDILLON, C.S.I, I.C.S	1909	1911
22	LT. COL. HUGH DALY K C I E	1911	1913
23	MR. H.V. COBB C.S.I, C.I.E	1914	1918
24	MR. CHARLES CUNNINGHAM WATSON, C.I.E I.C.S	1919	1922
25	LT. COL. S.G. KNOKA, I.C.S. C.I.E	1922	1924
26	MR. WILLIUM PELL BARTON C.S.I, C.I.E	1924	1925
27	MR. S.E. PERARS C.S.I, C.I.E, I.C.S	1926	1928
28	LT. COL. R.J.C. BURKE	1929	1931
29	LT. COL. C.T.C. PLOWDEN	1932	1935
30	MR. L.G.L, EVANS, C.I.E, C.I.S	1935	1936
31	MR. J.W. PRITCHARD, I.C.S	1937	1940
32	DIWAN BAHADUR KETOLIRA CHENGAPPA, C.I.E	1941	1944
33	SRI C.T. MUDALIAR, I.C.S	1945	1950
34	LT. COL. D.S. BEDI INDIAN POLITICAL SERVICE	1951	1953
35	LT. COL. T.G.N. AYER, I.C.S	1954	1956

Chief Commissioners worked from 1869 to 1956 (photo of D.C Office name board)

Under British rule, Kodagu was ruled by Chief Commissioners, who were subordinates of the Governor General of British India. The last Chief Commissioner of Coorg was Ketolira Changappa. Immediately after independence, Kodagu was recognized as 'C' state by the Indian Constitution and was granted a representative in the Rajyasabha. It was provisioned to elect a government and assume office in early 1950's and have its own chief minister for administration of the province. Shri Cheppudara Muthana Poonacha was elected as the first Chief Minister of the state of Coorg.

Later in November 1956, the state of Kodagu was amalgamated with the state of Mysuru under the State's Reorganization Act. Today Kodagu is recognized as a district in the state of Karnataka. The brief colonial period of Kodagu by British left behind a legacy of cultivation of coffee and spices which today has become the primary source of income for the district and identity to Kodavas. Kodavas, are the dominant community in Kodagu with culturally distinct; practices. Kodavas speak Kodava language (also known as Kodava Takk) and historically revere ancestors and worship the river Kaveri and a number of other local deities like Igguthappa and Bhagavathi besides other gods like Shiva, Bhadrakali,

Map 2. Post-independence era Coorg state (before States Reorganization Act, 1956)

Photo 3. Field Marshal Cariyappa and General Thimmaiah

Subramanya and Ayappa. The important festivals of Kodagu are Kailpodhu (in September, which signifies the transplantation of Paddy), Kaveri Sankramana (in October, signified by the Sun entering Tula raasi) and Huttari (in November, signified by the harvesting of Rice). The significance of agriculture in these festivals indicates that agriculture was the major occupation of Kodavas, with paddy being the principle crop.

Traditionally, Kodavas used to live in the form of Okka family groups which were all based in the 'Ainmane' houses, symbolizing a joint patrilineage clanship . Together with Kodavas, Kodagu Heggade, Amma Kodavas, Kodagu Gowdas, and Medars and inhabit Kodagu. Further Lingayath, Vokkaliga, Christian and Muslim community households are also present in the district. Tribal communities like like Airi, Kudiya, Jenu Kuruba, Yerava and Soliga also dwell in Kodagu. Muslim communities from Kerala and Tamilians also have settled in Kodagu for a long time. Together with Kodava Takk, other local dialects like Arebhashe and languages like Kannada, Tulu, Malayalam and Tamil are widely spoken in the district.

2.3 Physiographic Divisions of the District

After the reorganization of states, Kodagu was amalgamated into the state of Karnataka as a district, with 3 taluks: Madikeri, Somwarpet and Virajpet. Kodagu now has 16 hoblis and 98 Grama Panchayats. There are 296 revenue villages including 5 uninhabited villages. The district is hilly, with the peaks of Tadiandamol (1750 mts above sea level) and Pushpagiri (1715 mts above sea level) and the lowest elevation of the district is about 900 mts above sea level.

Photo 4. Ainmane of Kodavas

The principal town, and district capital, is Madikeri, (Known earlier as Mercara) with a population of around 33381 (as per 2011 Census). Other significant towns include Virajpet (population: 17246), Kushalanagara (population: 15326), and Somwarpet (population: 6729). Madikeri is well connected by road with Mangaluru, Hassan, Mysuru, Bengaluru and Kannur, Thalassery, and Wayanad of neighbouring state Kerala. There are three Ghat roads for reaching Kodagu from coastal regions of Kerala and Karnataka: Sampaje - Madikeri Ghat road from Mangaluru, Panathur - Bhagamandala Ghat road from Kasaragod, Kanhangad, Malom and chittarikkal and Makutta - Perumbadi/Virajpet Ghat road from Kannur and Thalassery. The nearest airports are at Mysuru and Mangaluru. The nearest seaport for Kodagu is New Mangaluru Port at Panambur in Mangaluru, 145 kilometers (90 mi) from Madikeri.

2.4 Land, Soil and Natural Resource Endowments

Kodagu is a hilly district, with a total geographical spread of 4102 Sq KMs. The highest peak, Tadiandamol, rises to 1,750 metres (5,740 ft), with Pushpagiri, the second highest, at 1,715 metres (5,627 ft). The lowest elevation in the district is 900 metres (3,000 ft) above sea-level. The main river of Kodagu is the Kaveri (Kaveri), which originates at Talakaveri, located on the eastern side of the Western Ghats and flows eastwards. Its major tributaries are Lakshmanathirtha, Harangi and Hemavathi. Other rivers like the Barpole and Kumaradhara flow westwards. From June to August, the rainfall in the district is intense, and there are often showers upto November. Yearly average rainfall in the district is 2,840mm and rainfall may exceed 4,000 millimetres (160 in) in some areas. Kodagu has an average temperature of 15C ranging from 11C to 28C with the highest temperatures recorded in the summer periods between April and May.

Within the Western Ghats, the major landscapes of Kodagu are the Subramanya hill ranges (with Pushpagiri hills in the North West), the Madikeri plateau, the Brahmagiri hill range in the south, with other smaller hill ranges like Bengunadu, Hosuru range and Perumbadi Nalknad range. The district is blessed with rich flora and fauna, due to its forest cover and there are three wild-life sanctuaries (Brahmagiri, Talakaveri and Pushpagiri) and one national park (Nagarahole National Park, also known as Rajiv Gandhi National Park). The district has different type of forests ranging from

Photo 5. Tadiyandamol peak

evergreen forests (in the west, moist and dry deciduous forests and scrubs (in the center and southern regions), and shola forests and grasslands interspersed between mountains. About 516 Sq. KMs of area of Kodagu is covered under Reserved Forests. Further, under the unique land tenur system of Kodagu, forests are also part of other land use categories like Paisari, Devarakadu, Ooruduve and private lands.

2.5 Demography and literacy

The demographic status of Kodagu is unique in comparison to other districts of Karnataka. Kodagu is the least populated district of Karnataka and in the last decade, it had negligible decadal growth rate of population (1.09%), preceded only by Chikkamagaluru district which had negative decadal growth rate of -0.26%. The decadal growth rate in population in the district has been consistently lesser than that of the state. In 2011, Kodagu's share in the total population of the state was just 0.91%.

While 62.86% of the population of Karnataka is below 35 years, this ratio is 57.39% for Kodagu.The density of population in Kodagu 135 persons per sq. km. Kodagu has the highest proportion of rural population (85.39%) in the state and is considerably higher than that of the state (61.33%).

Kodagu – The Coffee Cup of India

- Kodagu's produces 1/3rds of the nation's Coffee
- More than 25% of the land under Coffee in India is found in Kodagu.
- About half of the total Robusta Coffee production of India is from Kodagu
- The yield per hectare of Coffee (both Arabica and Robusta is higher in Kodagu than the rest of India

Table 2. Demographic features of Kodagu district during 2001 and 2011.

Description	2001	2011
Actual Population	548,561	554,519
Male	274,831	274,608
Female	273,730	279,911
Population Growth	12.31%	1.09%
Density/km2	134	135
Proportion to Karnataka Population	1.04%	0.91%
Sex Ratio (Per 1000)	996	1019
Child Sex Ratio (0-6 Age)	977	978
Average Literacy	77.99	82.61
Male Literacy	83.70	87.19
Female Literacy	72.26	78.14

Source: Census 2011

The sex-ratio of Kodagu is higher than that of the state's average, both with current population as well as 0-6 sex ratio. Further, Kodagu's sex ratio is improving (both population and 0 – 6 sex ratios, in comparison to the national figures of decreasing 0-6 sex ratio. The population sex ratio increased from 996 in 2001 to 1019 (1019 women per 1000 men) in 2011. The share of 0-6

Photo 6. Abbe Falls

Photo 7. Kodava youth dressed in their traditional attire

population of the district is 9.87% and decreasing at a faster rate than that of the state. Even in absolute terms, the 0 – 6 population of Kodagu is witnessing a decline between successive census years. Between 2001 and 2011, there was a reduction in 0 – 6 population of the district by 21.33%.

Average literacy rate of Kodagu in 2011 was 82.61% compared to 77.99% in 2001. The gender wise analysis reveals that male and female literacy was 87.19% and 78.14% respectively. The average literacy level of the district is better than the State-level literacy rate in all the categories like male-female, urban-rural, etc. However, literacy rate of the district in 2011, is 2.39% less than the state target of 85%, as specified in the 11th Five Year Plan. The Net Enrolment Rate of the district, in Government Primary schools during the year 2011-12 was about 90% and no noticeable gender difference was found in enrolment rates.

There are two technical (engineering) colleges in the district with a total enrolment of 1653 students in the year 2011-12. Though Kodagu district lacks a medical college, there is a dental college, with an enrolment of 109 girls and 191 boys. When compared to other surrounding districts number of technical and vocation education institutions in Kodagu district is less.

Photo 8. Nagarahole National Park

2.6 Industry

Kodagu is one of the richer districts of Karnataka in terms of gross per-capita (Rs 68,965 in 2008-09). The District Domestic Product (DDP) grew at the cumulative annual compound growth rate (CAGR) of 6.81% (GDDP) with the primary sector registering the highest CAGR (9.63%). The role of secondary sector (industries) in Kodagu's economy is limited and is characterized by industries complimentary to coffee cultivation.

Photo 9. Talakaveri, the birth place of river Kaveri

Agriculture and irrigation

Agriculture is the primary economic activity in the district, with most of the district's available non-forest land is used for agriculture. Characteristically and historically, paddy fields are found on the valley floors, with Coffee and pepper agroforestry in the surrounding hills. The most common plantation crop is coffee, especially Coffea Robusta variety, although Arabica variety is also grown widely. Further, the district's agro-climatic condition is conducive for cultivation of coffee, pepper, orange, Anthorium and other plantation crops. Thus, together with Coffee, Kodagu grows a considerable variety of

Photo 10. Dubare elephant camp

horticulture crops as well. Horticultural crops are grown on 34254.39 hectares in the district, covering about 22% of the total agricultural land in the district. The major horticulture crops grown in the district are cardamom, black pepper, orange, banana, ginger, areca, cocoa and cashew.

Other minor produces in horticulture include, floriculture, mango, vanilla, pineapple, sapota and jackfruit. However, agriculture in the district is majorly affected by various issues like the lack of dependable and skilled agricultural labour, market vulnerability due to exposure to the international market and high input and transaction costs (due to the lack of rail connectivity).

Partly, owing to its hilly terrain, the district is the lowest with regard to the area under irrigation. The district has two dams, across the Harange and Chakli hole, both in Somwarpet taluks. However, a very small portion of command areas of these dams fall in the district boundaries of Kodagu. About 5796 hectares of the district have canal based irrigation facilities in the total net area sown of 151749 hectares.

To promote research and extension activities within Kodagu, two Agricultural Research Stations (ARS), at Ponnampet and Madikeri operating under University of Agricultural Sciences (Bengaluru). A Krishi Vigyan Kendra is located at Gonikoppa. A Cardamom Research Center is located in Appangala, Coffee research substation and Central Horticulture Experiment station at Chettahalli.

Tourism

Kodagu has carved itself a niche in the tourism map of India, with its natural beauty and the unique hospitality of the Kodavas. Together with traditional religious tourist attractions, Kodagu attracts urban nature lovers with a unique combination of eco-tourism and homestays. The uniqueness of tourism in Kodagu is that, tourists are attracted to the district, both for its natural beauty as well as its cultural events Today, Kodagu is one of the top hill station destinations in the country and forming a sizeable portion of the Kodagu economy. There are more than a thousand homestays in the district, with numerous resorts, spas, and budget and luxury hotels.

2.7 Infrastructure

Even with its hilly terrain, Kodagu is well served by banking facilities, schools, health and road facilities. However, the lack of railway connectivity is probably the most notable feature of the infrastructure status in Kodagu.

The proportion of households having electricity connection in the district (79.95%) is significantly less in comparison to the state average (86.71%) mainly because of the lag in electricity connections in rural Kodagu, specifically in Madikeri and Virajpet taluks. In urban areas of the district, the progress in household electrification is comparable to that of Karnataka (more than 96% coverage). The electricity supply to the district is provided by Chamundeshwari Electricity Supply Corporation (CESC). The main sources from which power is drawn for Kodagu district is Sharavathi Hydro Electric Project. The taluk has 4 power receiving stations namely Ponnampet, Virajpet, Siddapura and Srimangala.184 villages are electrified in this taluk.

The district has a total of 17 regional rural banks, 111 commercial bank branches and co-operative bank branches of 114 apart from 3 PLD banks.The district is served by 5 regulated markets (including sub-markets). The district has a police station for every 34375 persons as against the state average of one police station for every 58600 persons.

2.8 Regional Perspectives and Backwardness

With its impressive rural and agriculture based economy, supplemented with tourism, the economy of Kodagu is comparatively well performing in the state. However, there are critical challenges in the district, specifically with respect to its human development status of the marginalized tribal populations. The land holding patterns of the district show a skewed asset distribution that hinders the economic growth of deprived social classes within the agricultural sector of the district. This issue is heightened by the lack of mass -employment providing secondary and tertiary sector initiatives in the district. Thus, the district has the dual problems of unregulated in-migration of labourers due to shortage of labourers and the out-migration of educated skilled labour due to lack of opportunities for them.

The status of tribal communities in the district is a cause of worry, due to low retention rates in primary and secondary education, poor maternal and child health, persistent malnutrition, addiction to alcohol and lack of housing facilities. A major stumbling block for them, is the lack of sustainable livelihoods and marginalization in the involvement of schemes like MGNREGA and job oriented skill development programmes.

Plantation labour in Kodagu has always been multi-cultural. Other than tribal and non-tribal local labourers, migrants from neighbouring states like Tamil Nadu were frequent in the area. The migration of labourers from Kerala is not a new phenomenon. However, migration of other categories of people: small land holders, petty businessman, agents, contractors etc has been increasing in the last couple of decades together with recent phenomenon of migration of labourers from North India. Many Kodavas feel that the cultural identify of Kodagu is threatened because the presence of labourers with many ethnic origins. They cite ethnic tension related crimes to support their opinion and emphasize the need for focused policies and rules for promoting Coffee growth, regulating the conversion of land (specifically that of the forest cover, river banks and land under pastures and Devarakadu) and protecting Kodagu's environment.

2.9 Concluding Remarks

This chapter provided a short description of the geographical and socio-economic features of Kodagu together with its brief history. This description provides the basic understanding for the refined analysis of the various dimensions of human development in the district. The land of Kodagu blessed with exceptionally beautiful natural landscapes. The region is well suited for the cultivation of many high valued plantation crops like Coffee, black pepper and cardamom. Thus, the district is driven by a thriving rural agriculture based economy, which is supplemented by incomes from tourism. However, the agricultural sector faces critical problems like labour shortage, volatile prices and high transportation costs. Further, asset distribution in the district is distinctly skewed, with the vulnerable populations of scheduled castes and scheduled tribes owning disproportionately less land assets. The human development status of indigenous tribes of Kodagu is in a state of alarm. The allied agricultural sector, secondary and tertiary sectors of the district have a lot of scope for improvement and have the potential to considerably address the social disparities in income and livelihoods.

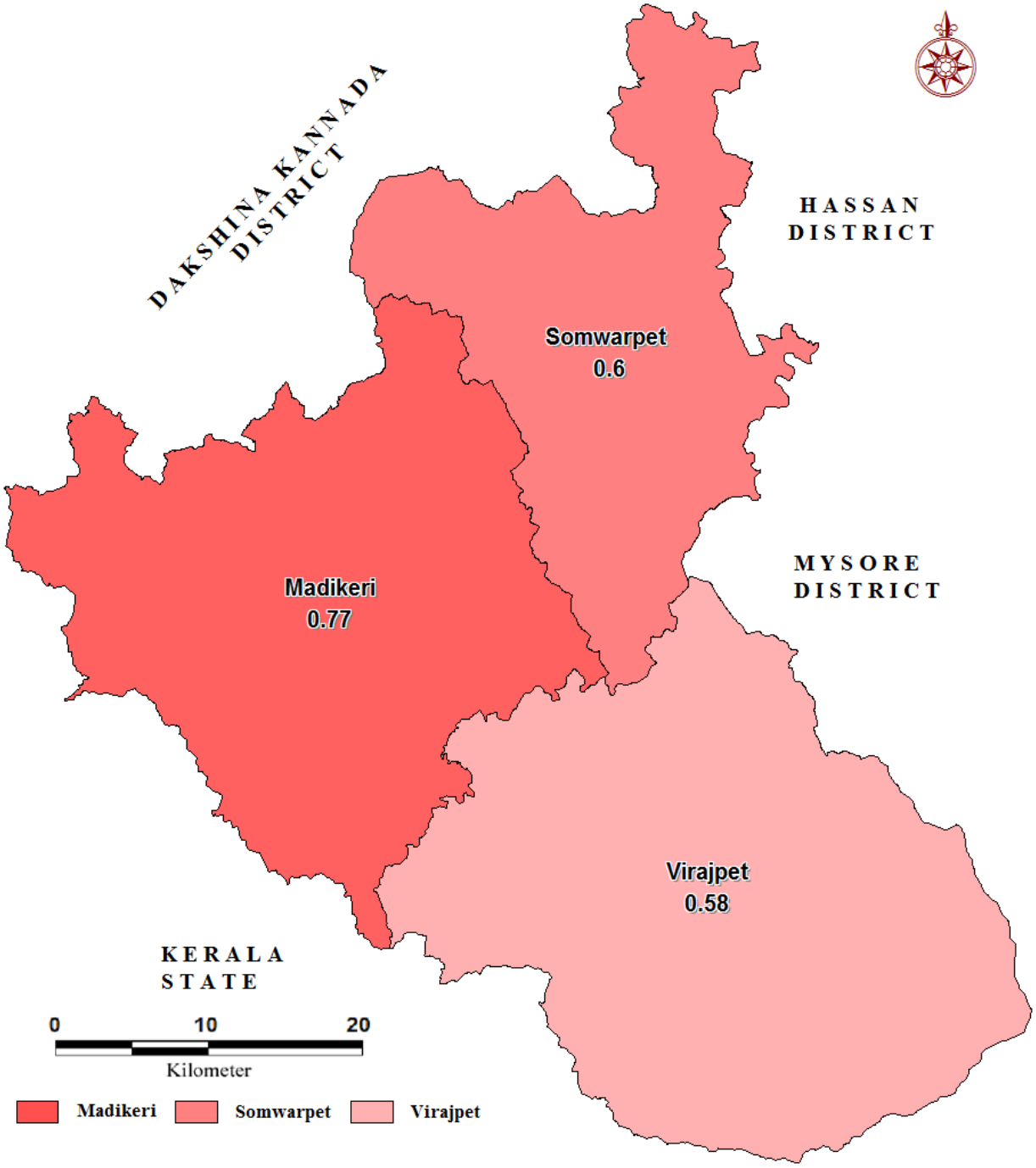
The sole dependence on primary sector, slow pace of growth in secondary and tertiary sectors and the problems associated with migration are some of the areas of policy concerns. The following chapters of this report, present the assessment of these issues and their influence on human development in its various dimensions at the taluk and district levels to distill specific policy suggestions aimed at addressing these gaps and promoting sustainable and inclusive development of the district.

CHAPTER 3.

COMPUTATION OF INDICES

A Paddy Harvesting Activity

KODAGU DISTRICT
HUMAN DEVELOPMENT INDEX MAP



Human Development Index For Taluks of Kodagu

Taluk Name	Living Std Index	Health Index	Education Index	HDI	Ranks
Madikeri	0.509	0.879	1	0.77	1
Somwarpet	0.573	0.49	0.771	0.6	2
Virajpet	0.515	0.551	0.693	0.58	3

Prepared By:
District NRDMS Centre,
Kodagu Zilla Panchayath,
Madikeri.

Map No.:2 Human Development Index Map

CHAPTER 3.
COMPUTATION OF INDICES

3.1 Introduction

This chapter presents the taluk-wise results of the computation of the 6 indices for the year 2011 namely, Human Development Index (HDI), Gender Inequality Index (GII), Child Development Index (CD), Food Security Index (FSI), Urban Development Index (UDI), and Composite Taluk Development Index (CTDI). The taluk values and ranks for these indices provide a snapshot of status of development, with respect to each the indices and the specific concepts of development the indices represent. The index values presented for each of the taluks is in comparison to other taluks in the district and hence, the status of development of a taluk within each sector and index is relative to the progress made in respective areas in other taluks.

The indicators used for the calculation of these indices and the computation methods are presented in Annexure 1. The individual indicator values are presented in Annexure 2.

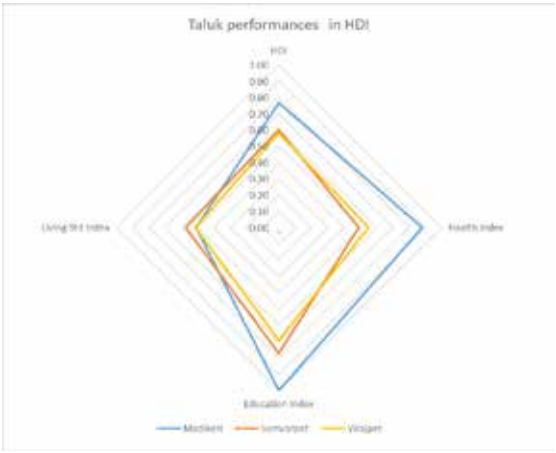
3.2 Human Development Index

The table below presents the values of HDI for the three taluks of Kodagu district. Madikeri taluk has the highest HDI in the district followed by Somwarpet and finally Virajpet taluk. With better health and educational infrastructure and bigger urban population, Madikeri taluk stands first in health and education index, whereas Somwarpet performs better in the livelihood dimension. Out of the seven indicators used for the calculation of the living standards index, Somwarpet performs better than the other taluks in 3 indicators (access to water, electricity and pucca houses), which has a high impact on the overall value of the living standards index.

Table 3. Human Development Index for taluks of Kodagu

HDI	Living Std Index	Health Index	Education Index	HDI	Ranks
Madikeri	0.509	0.879	1.000	0.765	1
Somwarpet	0.573	0.490	0.771	0.601	2
Virajpet	0.515	0.551	0.693	0.582	3

Virajpet and Somwarpet perform relatively poorly to Madikeri in the health index, due to higher maternal mortality in these taluks. Virajpet performs poorly in education index, majorly because of lagging literacy rates in comparison to other taluks of the district. The taluk performance in the different dimensions of HDI can be visualized in the radar graph above.



Graph 1. Taluk performances in HDI

3.3 Gender Inequality Index

The table below presents the GII values for the taluks of Kodagu. Virajpet taluk has the least gender disparity in the district followed closely by Somwarpet. Madikeri taluk has the highest gender inequality in the district. The high prevalence of anemia among pregnant women and relatively less work participation rates among women in Madikeri taluk are reasons for the GII values in the taluk. Somwarpet and Virajpet paint a similar picture in gender inequality.

Table 4. Gender Inequality Index for taluks of Kodagu

GII	GII	Ranks
Madikeri	0.091	3
Somwarpet	0.083	2
Virajpet	0.082	1

3.4 Child Development Index

The table below provides the CDI values for the taluks of Kodagu. It looks at three dimensions of child development: status of health (measured by Child Mortality Rate or CMR), status of nutrition (measured by % of malnourished childrenand % of children born underweight) and status of education (measured by % of dropout children in primary and secondary education that were mainstreamed). These variables together denote the status of child wellbeing in the district. Somwarpet performs comparatively better than Madikeri and Virajpet, which perform equally in this index. Due to similar index values, Madikeri and Virajpet are both ranked 2nd w.r.t child development in the district.

Table 5. Child Development Index for taluks of Kodagu

CDI	Index Values	CDI
Madikeri	0.500	2
Somwarpet	0.711	1
Virajpet	0.500	2

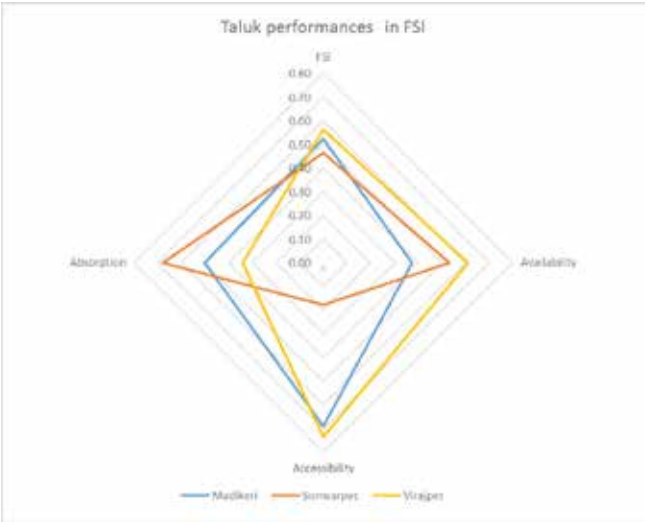
3.5 Food Security Index

The table below provides the FSI values for the taluks of Kodagu. The FSI is based on the three dimensions of availability, accessibility and absorption of food capacities of the population. Virajpet taluk performs better than the other taluks in this index, majorly because its features of availability and accessibility of food are considerably better than other taluks. That is, the taluk has higher values of per-capita food grain (paddy) production, proportion of forests % of non-agricultural workers and also has higher average land holding sizes. Madikeri taluk has the lowest per-capita food grain production and the highest amount of degraded land. Somwarpet taluk performs lower in comparison to both the taluks due to the almost stagnant net sown area, comparatively less proportion of forests higher ratio of agricultural labourers and lower per-capita income in comparison to other taluks of the district.

Table 6. Food Security Index for taluks of Kodagu

FSI	Availability	Accessibility	Absorption	FSI	Ranks
Madikeri	0.375	0.691	0.500	0.522	2
Somwarpet	0.533	0.177	0.677	0.463	3
Virajpet	0.611	0.734	0.341	0.562	1

The radar graph below displays the diversity of taluk performance in the three dimensions of FSI. It shows that although Virajpet has the overall first rank among the three taluks, the taluk's absorption capacity is the least (that is, its maternal and child health status) is low in comparison to other taluks to utilize the food availability and translate it into development outcomes.



Graph 2. Taluk performances in FSI

3.6 Urban Development Index

The table below presents the UDI values for the urban localities of Kodagu district. The four urban areas: Madikeri CMC, Somwarpet, Virajpet and Kushalnagar town Panchayats were considered for this index. As expected, Madikeri town has the highest UDI value in the district. Kushalnagar has the lowest UDI value in the district.

Table 7. Urban Development Index for towns of Kodagu

ULB	UDI Value	Rank
Madikeri CMC	0.563	1
Somwarpet Town Panchayat	0.386	3
Virajpet Town Panchayat	0.550	2
Kushalanagar Town Panchayat	0.372	4

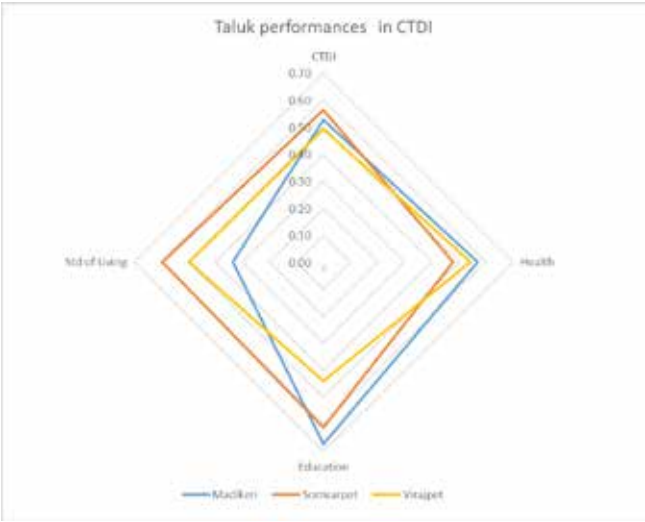
3.7 Composite Taluk Development Index

The table below presents the taluk-wise dimensional and overall values of the CTDI in the district. The table shows that Somwarpet has a higher CTDI value and hence, ranks first in comparison to the other taluks. The analysis of HDI showed that Madikeri taluk performed better than the other taluks and hence was ranked first. The discrepancy in the rankings between HDI and CTDI appears because the CTDI takes a much broader perspective on development, by including 68 indicators of development, whereas the HDI included only 11 indicators. Further, as discussed in the section on HDI, several standard of living indicators of the taluk have much higher values in Somwarpet in comparison to other taluks. The detailed values of the 68 indicators used for this computation is available in Annexure 2 of this report.

Table 8. Composite Taluk Development Index for taluks of Kodagu

CTDI	Std of Living	Health	Education	CTDI	Ranks
Madikeri	0.336	0.571	0.672	0.526	2
Somwarpet	0.597	0.479	0.612	0.563	1
Virajpet	0.498	0.542	0.439	0.493	3

The radar graph below summarizes the trends in taluk performance across the indicators of standard of living, education and health in Kodagu. The disparities in performance of the taluks along the different dimensions are clearly visible from the graph.



Graph 3. Taluk performances in CTDI

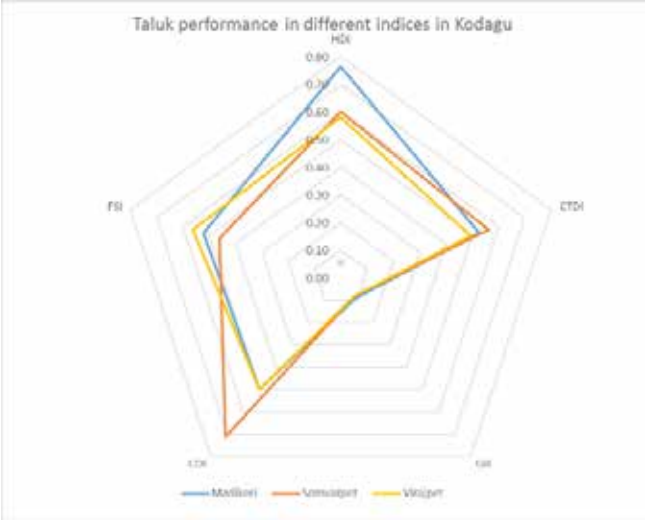
3.8 Concluding Remarks

This chapter provided an analysis of the index values and ranks of the three taluks of Kodagu, with regards to the 6 indices used in this report. Among the 6 indices, Madikeri taluk ranked first in HDI, whereas Somwarpet was ranked first in CDI and CTDI. Virajpet came first in GII and FSI. The table below presents the summary of the taluk ranks in 5 indices (ignoring UDI, since it is based on towns and cities and not on taluks).

Table 9. Overall taluk ranks in development indices in Kodagu

Taluk	HDI	GII	CDI	FSI	CTDI
Madikeri	1	3	2	2	2
Somwarpet	2	2	1	3	1
Virajpet	3	1	2	1	3

The index values and the ranks also provide insights on issues on which individual taluks can prioritize to improve their development status. It also provides a useful way to understand whether any particular taluk within the district need specific attention. It can be seen that though Virajpet taluk ranks first in GII and FSI, is behind the other two taluks in both HDI and CTDI, a clear indication that the taluk lags behind in overall development status, and particularly in education (since it ranked 3rd in the education dimension of both HDI and CTDI).

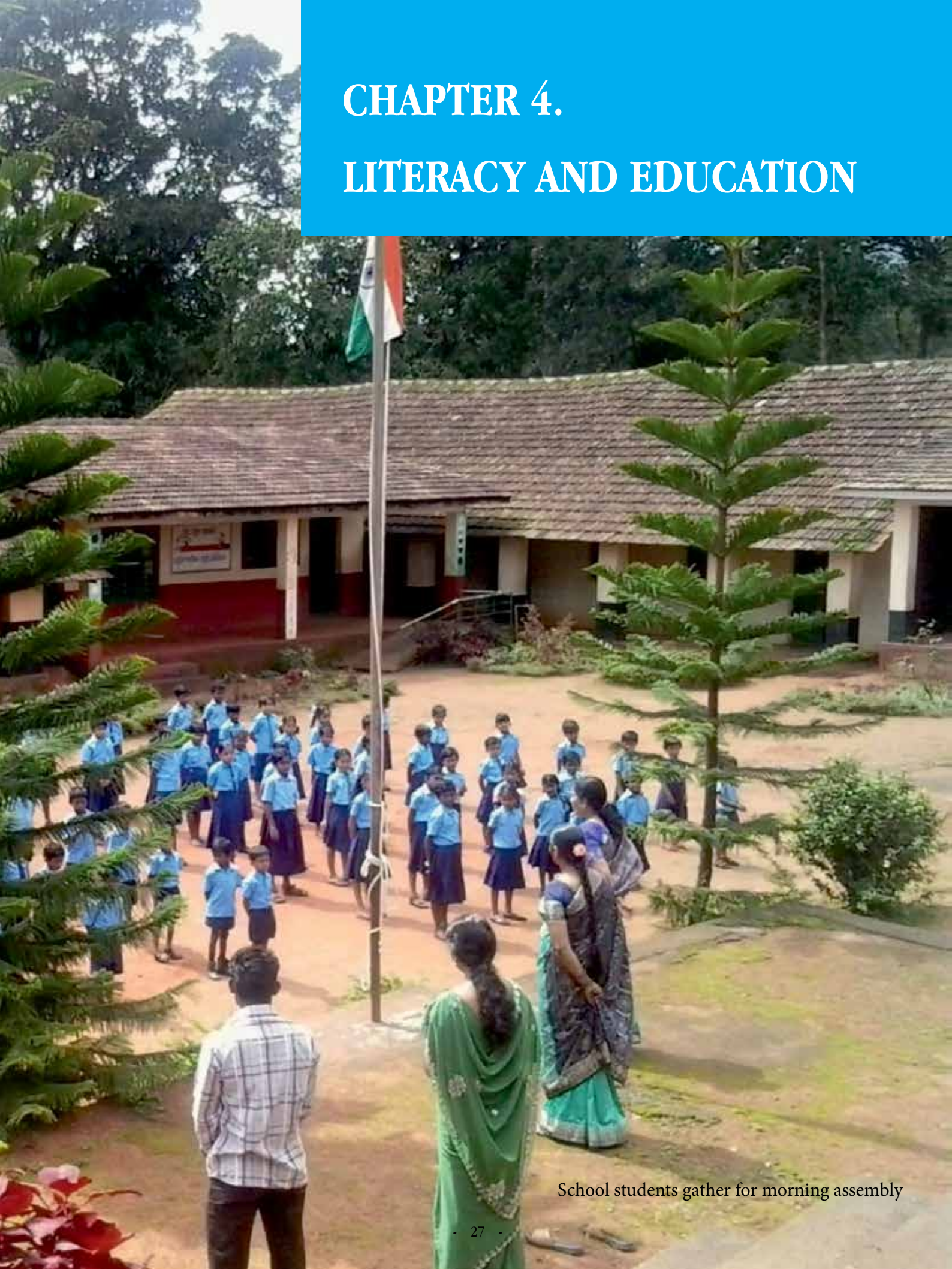


Graph 4. Taluk performances in different indices of development

Thus, at the district level, the analysis shows that the focus has to be more towards Virajpet taluk. At the taluk level, the priority has to be in improving the educational status. Similarly, the analysis of the district ranks shows that although the district performs well in HDI, in comparison to the majority of the districts of the state, there is scope for improvement on specific issues related to gender, child development and food security in the district. These issues are explored in greater detail in the following chapters of this report.

CHAPTER 4.

LITERACY AND EDUCATION



School students gather for morning assembly

CHAPTER 4.
LITERACY AND EDUCATION

4.1 Introduction

The World Conference on Human Rights has identified education as one of the basic human rights along with other essentials like food, shelter and water and hence, is a public good. The role of education as an important factor in extending the human choices for leading a decent life is important and hence, education is an important factor of human development. Thus education has become a basic human right. By universalizing primary education, Government of India has shown its commitment in reaching out the importance and uses of education to the society.

The lens through which education and literacy have been looked at, has evolved considerably in the development related discussions in the last few decades. The studies and findings of researchers like Amartya Sen, Mehboob-ul-Haq, Jean Dreeze, Martha Nusbaam and others and the efforts of organizations like UNDP, have shown that education is a vital ingredient in the process of development. Thus, achieving Universal Primary Education, within 2015, figures prominently in the United Nation's Millennium Development Goals.

Literacy includes the process of continuous learning which helps the people to achieve their aims, to improve their knowledge and efficiency and enable them to participate in their community and widespread society. Today literacy and education are considered as critical factors that determine the retention capacity and efficiency with which an individual is able to be part of the development process. Thus, development as an 'inclusive' is gaining more attention.

Free and Compulsory Education was under the directive principles of the Indian Constitution. By declaring this as a basic right in the year 1993, the Hon'ble Supreme Court has given a historical judgement. As a result, in India, today education has been included as a basic right in the Constitution. In the year 1994, the Hon'ble Supreme Court gave its judgement declaring that free education is a basic right of every child below 14 years of age and thereby it has given clear directions to the State Governments' to shoulder the responsibility of implementing Universal Primary Education.

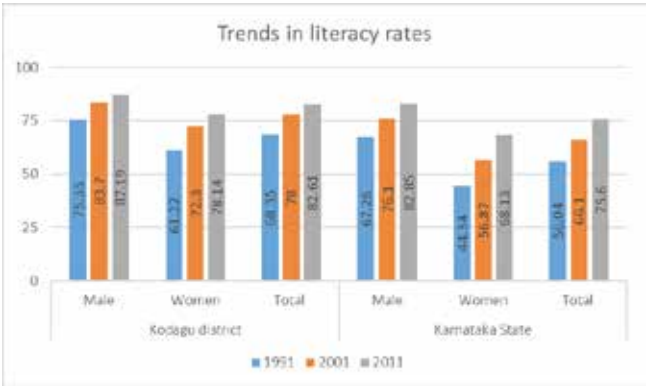
Thus it has become the duty and responsibility of Government of India and every State Government to reach out this basic right. In this context Government of India framed the Free and Compulsory Education Act, 2009 and implemented it throughout the country on April 1, 2010. In its judgement, the Hon'ble Supreme Court upheld the validity of this Act in the year 2012. Karnataka Government has also framed essential laws to implement the Right to Education Act and issued notification to implement it, on 28.04.2012.

Education for standards 1-5 and from 6 - 8 is included under Primary education. Under the Right to Information Act and the rules formed by the State Government, achieving universal primary education is the responsibility of the state government of Karnataka. Thus, the government has to guarantee (1) Universal Primary School education (2) Universal enrolment (3) retaining children in schools; and (4) achieving universal minimum learning levels of all children.

Understanding the status of education in a district depends on several key indicators. Some of these are: literacy levels, enrolment, gross enrolment rate (GER), net enrolment rate (NER), gender equality, rate of students who continue studies, dropout rate, transition rate, rate of total number of children who have completed education, improvement in number of schools, availability of teachers and basic facilities and average achievement levels of children. In this chapter effort has been made to present important dimensions of education in Kodagu district based on the above mentioned indicators. Though higher education plays a vital role in providing equity and social justice, effort has been made to provide only approximate details of higher education in this district, as it would be difficult to cover all the issues related to higher education like investing money in higher education, autonomy, administration and quality, etc., in this chapter. The Higher Education Taskforce (2004) comprehensively focuses on all the aspects of higher education.

4.2 Literacy Profile of the District

Achievements of Kodagu district in educational sector are appreciable and the district is galloping towards achieving universal education. As shown in the graph below, the literacy rate of Kodagu district has increased by 14% in two decades.



Graph 5. Literacy rate of Kodagu district

The literacy rate of Kodagu district was 82.61% during the year 2011, which is 7% more than the state average. Not only the literacy rate of girls in this district is found to have progressed rapidly compared to boys, it is also 10% ahead of the state-level women literacy rates.

Compared to other districts literacy rate of Kodagu district is better. Literacy rate of Dakshina Kannada (88.62%), Bengaluru city (88.48%), Udupi district (86.29%) and Uttara Kannada is (84.03%). It means Kodagu district stands in the fifth place in the State. But when we look at the decade-wise progress in literacy rates, performance of Kodagu district has reduced. 17.39% of the people in the district are still illiterates. The ratio of difference between male and female literacy rate is 9% and there is scope for improving female literacy rate.

Government of India aims to achieve 85% literacy rate by the year 2012 as per the 11th Five Year Plan. But only 3 districts (Dakshin Kannada, Bengaluru City and Udupi) have achieved this target. Kodagu is lagging 2.39% behind the specified target.

Table 10. Taluk-wise literacy rate of Kodagu

Taluk	1991			2001			2011		
	Male	Women	Total	Male	Women	Total	Male	Women	Total
Madikeri	82.59	70.30	76.56	88.20	79.10	83.70	91.79	84.76	88.25
Somwarpet	75.00	56.70	65.82	85.00	70.70	77.80	87.41	75.81	81.52
Virajpet	70.56	59.20	65.00	79.20	69.00	74.10	83.60	75.70	79.62
Kodagu District	75.35	61.22	68.35	83.70	72.30	78.00	87.19	78.14	82.61

Source: Census literacy rates: Census 1991, 2001 and 2011

When we look at the taluk-wise literacy rate in the above table, the literacy rate was very less in Virajpet taluk (79.62%), preceded by Somwarpet (81.52%). The literacy rate in Madikeri taluk was very high (88.25%). The difference between male and female literacy rate in Madikeri taluk was very high at 7.03% and it was 7.9% in Virajpet and 11.6% in Somwarpet. When we look at female literacy rate, Virajpet taluk recorded the lowest with 75.70%, followed by Somwarpet taluk. The female literacy rate in Madikeri taluk was higher than other taluks at 84.76%.

Table 11. Literacy levels in Kodagu

Kodagu district						Karnataka State					
Rural literacy rate			Urban literacy rate			Rural literacy rate			Urban literacy rate		
Male	Women	Total	Male	Women	Total	Male	Women	Total	Male	Women	Total
82.59	70.30	76.56	88.20	79.10	83.70	91.79	84.76	76.56	82.59	70.30	76.56

Source: Census literacy rate: 2011

The literacy levels are indicated by progress in development awareness and involving in developmental activities. The overall rural average literacy rate of the State is 68.73% and 81.09% in Kodagu district. The ratio of difference between male and female literacy is also less in Kodagu district (9.57%) compared to the State figures (19.29%). Likewise, urban literacy rate of Kodagu district is also more than the State level urban literacy rate and difference between male, female literacy rate is lesser at 5.83% than the State average. Rural literacy rate of Kodagu district is 10.39% lesser than the State rural literacy rate. The male rural literacy rate of Kodagu is 8.47% less than the urban male literacy rate. The female rural literacy rate is 12.21% lesser than the urban female literacy rate.

Summary of literacy levels in Kodagu district

The following aspects can be noticed by observing the literacy analysis of Kodagu district.

1. The average literacy level of the district is better than the State-level literacy rate in all the categories like male-female, urban-rural, etc.
2. However, literacy rate of the district is 2.39% less than the state target of 85%, as specified in the 11th Five Year Plan.
3. Special attention is required to eliminate the gap between male and female literacy rate.
4. Likewise attention is also required to increase the literacy rate in Virajpet and Somwarpet taluks of Kodagu district

4.3 Enrolment

The educational progress of citizens of any particular region depends upon the quality of educational system available. Gross Enrolment Ratio and Net Enrolment Ratios will help to assess the coverage of primary and high school level education system.

Gross Enrolment Ratio (GER) depicts the ratio of enrolment of school aged children in a particular area. This ratio may cross 100%, as it may include students who reappearing for the same class and students whose age is beyond the official age of students expected in the class among the children who are enrolled to schools. The Net Enrolment Ratio (NER) depicts the ratio of children who are in schools, in comparison to those who in the same area who have attained school going age with the same aged children.

Efforts have been made to analyse the report based on these indices. The enrolment numbers of the district from 1st to 10th standards during the year 2011-12 had crossed 89,000. Out of this the number of children enrolled from 1st to 5th standards is 43,662 (49%), 6th to 8th standards is 28,632 (32%) and 9th and 10th standards is 17,298 (19%). The enrolment rate of the district is 0.87% (less than 1%) out of the total enrolment rate of the entire State. This trend seems to be natural as the total population of Kodagu district is only 0.91%, out of the total population of the State.

The proportion of enrolment of Scheduled Caste students is 12% and that of Scheduled Tribes is 15%. These figures match with the ratio of SC and ST population of the district. The percentage of enrolment of backward caste students is 52% and that of General category are 21%. But the percentage of enrolment of ST students in 9th and 10th standards is only 6%.

The enrolment rate of children in absolute numbers in primary schools shows a reducing trend, and may be due to the decreasing fertility rate of the district and reducing number of children of the age of school enrolment.

Table 12. Year-wise enrolment from 1st to 5th standards in Kodagu

Kodagu	Total
2006-07	49,854
2007-08	48,060

2008-09	48,367
2009-10	47,378
2010-11	45,258
2011-12	43,662

Source: DDPI, Kodagu

Total enrolment rate

The total enrolment of students in the district in 2011, from 1st to 8th standards is 72,294. But, the number of children in the district, in the same age group is 71,745. Hence, the enrolment rate of the district is 100.77%. Out of this, enrolment rate of boys is 100.99% and girls 100.53%. The reason for this good enrolment rate may be because this district is located on the border of the State and due to migration of labour into the district.

Table 13. Total enrolment rates in Kodagu

Taluk	Enrolment from 1st to 8th standards			Population of children between 6-14 years			Total enrolment rate (GER) I-VIII		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Madikeri	11148	10456	21604	10933	10446	21379	101.97	100.1	101.05
Somwarpet	13198	12464	25662	13014	12431	25445	101.41	100.27	100.85
Virajpet	12743	12285	25028	12780	12141	24921	99.71	101.19	100.43
Kodagu	37089	35205	72294	36727	35018	71745	100.99	100.53	100.77

Source: DDPI, Kodagu

Net Enrolment Rate

The Net Enrolment Rate of the district, in Government Primary schools during the year 2011-12 was 89.92% and it can be noticed that there is no much difference in the Net Enrolment rate of boys and girls.

Table 14. Net enrolment rates in Kodagu

Taluk	Enrolment of children between 6-14 years (1st to 8th standards)			Total population of 6-14 years children			Net Enrolment Rate I - VIII		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Madikeri	10098	9516	19614	10933	10446	21379	92.36	91.09	91.74
Somwarpet	11631	11631	22831	13014	12431	25445	89.37	90.09	89.73
Virajpet	11302	11302	22066	12780	12141	24921	88.43	88.65	88.54
Kodagu	33031	33031	64511	36727	35018	71745	89.93	89.89	89.92

Source: DDPI, Kodagu

Photo 11. Mid-day Meals in a Lower Primary School in Kodagu

4.4 Attendance, Dropout rates and Out of School Children and Mainstreaming of Children

Factors like percentage of out of school children, dropout children, retention rate in schools, etc., are vital indicators to evaluate the efficiency of primary educational system and Human Development levels. These factors will not only help us in knowing whether the available human resource in the district would be able to reach their full potential, but also indicate the indirect socio-economic problems of the region.

Factors like dropping out of school or not attending schools depends upon a combination of complicated factors related to personal, social, institutional and structural problems in the district. Under structural problems parents cannot afford to send their children to schools and hence feel better to send them to work.

In general, reasons for school dropout among girls include child marriage, managing household works, the responsibility of younger siblings, gender related inequity, poverty, low educational levels among parents etc. Also factors related to social status and caste also could be hurdles that restrict the education of the girl child. There are instances where parents hesitate to send their girl children to schools because of absence of separate toilets in schools for girl students, improper utilization of toilets, distance of schools, etc. Low quality teaching, conducting different classes in the same classroom, absence of teachers, repetition and due to imbalance between education and market based job skills, also provokes children to stay away from schools.

However, the actual reasons for girl child dropping out may vary significantly between different regions. The following analysis captures the status of out of school children and dropout rates in Kodagu district.

Percentage of out of school children

Table 15. Out of school children in Kodagu

Taluk	Lower Primary			Higher Primary			1st to 8th standards			High school		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Madikeri	0.82	0	0.41	8.3	4.4	6.3	4.6	2.2	3.4	11.8	12.7	12.2
Somwarpet	0	0.27	0.135	8.1	5.9	7	4.1	3.1	3.6	12.6	13.7	13.2
Virajpet	12.56	12.49	12.525	13.6	18.8	16.2	13.1	15.6	14.4	21.8	22.7	22.2
Average	2.98	2.49	2.735	10	9.7	9.8	6.5	6.1	6.3	16.7	16.6	16.6

Source: DISE 2011-12

There are several reasons for children to remain out of schools in Kodagu district. As this district is a hilly region, it is a challenge to provide basic amenities like roads and transportation which are essential for education. Also, as the number of tribal people who depend upon forests for their earning and migratory labourers are more in this district, there are several hurdles in providing education to all.

The out of school children's rate in Lower Primary school level in the district during 2011-12 was 2.73%. The percentage was the highest in Virajpet taluk with 12.52% and Somwarpet recorded the lowest percentage. The out of school children's rate during the year 2011-12 at the Higher Primary School level, i.e., 1st to 7th standards was 9.8% and this percentage was more among boys, rather than girls. The out of school children's rate at Higher Primary School level is more in Virajpet taluk (16.2%) and more among girls (18.2%) than boys (13.6%). The out of school children's rate between 1st to 8th standards in the district is recorded at 6.3%. Likewise, this rate at the high school level in Kodagu district during the year 2011-12 was 16.6%. Like in other levels, this rate at High School level was also high in Virajpet taluk with 22.2%. Thus, it is clearly found that the overall out of school children's rate is high in Virajpet taluk in the district, at all the levels.

Child retention rate

Table 16. Child retention rates at primary level

Taluk	2008-09	2009-10	2010-11	2011-12
Madikeri	97.93	98.77	98.76	102.24
Somwarpet	97.94	99.09	99.91	102.06
Virajpet	97.95	98.78	95.36	87.48
Total	97.94	98.88	97.92	97.27

Source: DDPI, Kodagu

Free and compulsory education under the age of 14 mandates at least 8 years of schooling for every child. Thus, the average years spent in schools by children is used as an indicator to assess the educational levels of the children. The table above presents the percentage of children completing a minimum of 8 years of schooling. Overall, during the last 4 years, there has been a very small decrease in the proportion of children having spent an average of 8 years in schools in primary level. There is not much difference in the average years of schooling between boys and girls. However, based on the table above, it can be observed that there is a need to improve the achievement level in the district, importantly, in Virajpet taluk.

School dropout rate

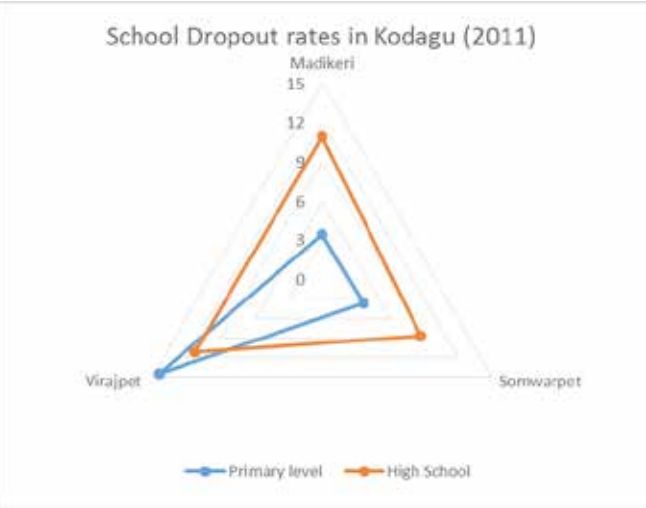
The dropout rate in the primary level in Kodagu district during 2011-12 was 6.3% and Virajpet recorded the highest. Also it is found that the dropout rate is more among boys, than girls. The school dropout rate among SC students is high in this district compared to the State level dropout rate. Especially, this rate is too high among girls belonging to Scheduled Tribes of the district, which was 14.7% during the year 2008-09. But this rate had dropped to 11.6% during the year 2010-11. When these factors are noticed it is clear that there is a need to focus more on the school dropout rate among scheduled tribes.

Table 17. School dropout rates in Kodagu

Taluk	Primary level	High School
Madikeri	3.4	10.90
Somwarpet	3.6	8.69
Virajpet	14.4	11.20
Total	6.3	10.30

Source: DDPI, Kodagu

The dropout rate of students between 1st to 8th standard primary levels is less than the state-level rate. But, the dropout rate of scheduled castes at the Lower primary level is more than the state-level percentage. The dropout rate in Lower primary school level is 5.40%. The percentage has increased this year slightly compared to last year. The dropout percentage in the district is more at the high school level than primary level and hence there is a need for the district education department to focus more on this aspect. The radar graph below captures the diversity of trends in the taluk. While Sompwarpet and Madikeri have higher dropout rates for high schools in comparison to primary schools, the situation is opposite in Virajpet.



Graph 6. Radar graph of dropout rates in Kodagu

Photo 12. Children ready to go home after school

Percentage of mainstreaming of dropout children

Table 18. Dropout children mainstreamed in Kodagu (in 2011-12)

Taluk	Total Dropouts	Dropout children mainstreamed	% of children mainstreamed
Madikeri	191	20	10.47%
Somwarpet	207	51	24.64%
Virajpet	220	63	28.64%
Total	618	135	21.84%

Source: DDPI, Kodagu

The above table provides the details of dropout children who have been brought back to school (in all levels). This ratio provides information on how successful the education system is, in bringing children who have dropped out of school, back to mainstream schooling. According to this table, the ratio appears to be less in Virajpet and Somwarpet taluks, compared to Madikeri taluk. The total rate is 22%, which means the remaining dropout children will be left out of the mainstream education process itself. Hence, there is a need to make efforts to improve this percentage (especially in Madikeri taluk) by prioritizing the detection and mainstreaming of educating the dropout children about importance of education and inspire them to enter the mainstream society.

4.5 Transition Index for Children enrolled to 6th standard

Table 19. Year-wise transition from fifth to sixth standard in Kodagu

Taluk	2007-08	2008-09	2009-10	2010-11	2011-12
Madikeri	98.00	97.78	93.15	98.01	95.21
Somwarpet	95.28	96.91	97.71	101.62	102.40
Virajpet	92.69	93.63	96.68	94.60	99.64
Total	95.32	96.11	95.85	98.08	99.21

Source: DDPI, Kodagu

The above table shows the transition of students from fifth standard to sixth standard in the taluks of Kodagu for the years between 2007-08 and 2011-12. If at all the rate of movement from 5th to 6th standards has crossed triple digits (more than 100%) the reason is because of the inter-district migration of people in the border areas of the district and migration of people from rural areas to urban areas. The movement rate during the year 2007-08 was 95.32%, which increased to 99.21% during the year 2011-12. The speed of movement has slightly increased and the reason is because efforts were made to collect complete information of every student.

When we look at the overall educational scenario of the district, we can notice that the educational condition of Virajpet taluk is poor. The Net Enrolment Rate of the taluk is the least in the entire district and the percentage of school children is alarming. The ratio of Scheduled Tribe students is more in this district and education has a vital role to play in bringing them to the mainstream. Hence, it is required to give more focus on improving the educational condition of this taluk.

4.6 Physically challenged children

Disability proves to be a major bottleneck in human development, preventing those affecting from it, in fully realizing their potential. This situation is more acute in the developing country context of India. Early detection of disability and provision of supplementary aids and appliances form a crucial link in bringing these children to the mainstream. In this regard, Sarva Shiksha Abhiyan provides supplementary aids and appliances for disabled children, to enhance their learning outcomes. The table below provides the progress in the provision of aids and appliances to disabled students in the district.

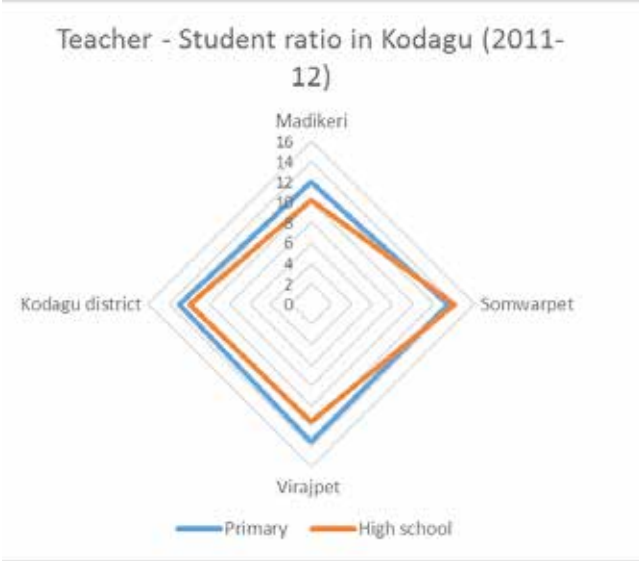
Table 20. Physically challenged children reached through SSA in Kodaguc

Year	Number of students benefitted	Expenditure (in lakhs)
2008-09	68	0.75
2009-10	177	3.93
2010-11	214	4.90
2011-12	175	3.80
2012-13	175	2.68

Source: DDPI, Kodagu

4.7 Student-Teacher Ratio

The major factor to assess the teaching level in primary school is student-teacher ratio. This ratio is defined as the number of children per available teacher in the given area. As explained in the table below, it can be seen that in Kodagu district there is one teacher for every 13 students at the primary level and one teacher for every 12 students in the high school level.



Graph 7. Teacher student ratio in Kodagu (2011-12)

Photo 13. A Morarji Desai residential school in Kodagu

4.8 Infrastructure and Access

Access to schools

A basic unit of a school system itself is a school. Access to Universal Primary Education importantly depends upon the number of primary schools present in habitation areas. This is based on the total number of residents in a particular area and availability of primary schools in that area. School education in Karnataka is classified as Lower Primary Schools (1st to 5th standards), Higher Primary Schools (1st to 7/8th standards) and High Schools (8th to 10th standards).

There are 535 primary schools in Kodagu district out of which 157 are Lower primary schools and 378 higher primary schools. The total number of high schools in the district is 171. These schools have been divided into three parts based on the type of management, namely: (1) schools which are run through Education Department, Social Welfare Department and managements of local institutions; (2) private aided schools; and (3) private unaided schools and others.

Table 21. School infrastructure in Kodagu

Category	Primary school		High school		Total	
	No.	Percentage	No.	Percentage	No.	Percentage
Education department	403	75	47	27	450	64
Aided	11	2	48	28	59	8
Unaided	96	18	66	39	162	23
Others + Central	25	5	10	6	35	5
Total	535	100	171	100	706	100

Source: DISE 2011-12

In Kodagu district out of the total number of primary schools, 75% are run by Government and 2% of them are aided schools. Private unaided schools form 18% while, schools run by Social Welfare Department, schools run by local administration and central schools form about 5% of the total schools. 89% of higher primary schools are functioning under government administration. Further, since a lot of migrant labourers from different states come to Kodagu for plantation labour, the district has 6 Urdu schools, 6 Tamil schools and 2 Malayalam schools, to facilitate learning among migrated communities.

Photo 14. An old government primary school in Kodagu

Privatisation of schools at the high school level is increasing in the district. Out of every 5 high schools, 3 schools are functioning under government aid. Thus government plays a vital role in the primary education sector in the district. Role of private institutions in this sector is less. It means the government is playing a major role in providing education to poor and other weaker section of the society.

Availability of primary schools in inaccessible areas

Along with number of primary schools, factors like accessibility to residential areas also is a good indicator for availability of education system. The government has adopted a policy to commence new primary schools in areas with more than 10 children and in every 1 km radius of area with more than 100 population. Likewise, the government has also provided higher primary schools in every 3 kms and high schools in every 5 kms radius. Schools and transportation facility is provided to small and less populated areas also. Out of the total 721 areas in Kodagu district, 715 residential areas have one primary school in 1 km radius. It means more than 99% of the residential areas have access to primary schools within 1 km radius.

Table 22. Residential areas and school infrastructure in Kodagu

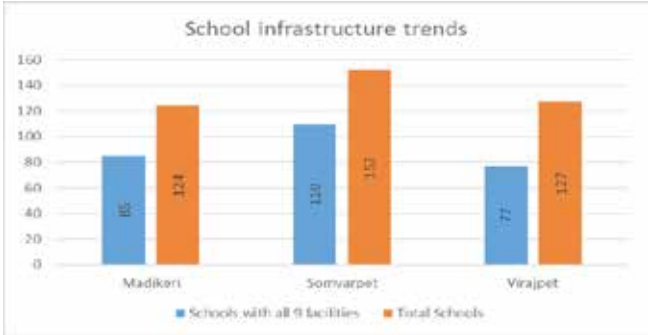
Taluk	No. of residential localities	No. of primary schools nearby these residential localities	Percentage
Madikeri	239	236	98.74
Somwarpet	339	338	99.71
Virajpet	143	141	98.6
Total	721	715	99.17

Source: DISE 2011-12

The above table shows that there are no schools available for 6 residential localities in the district. Also it explains that transport facilities have been provided to 6550 children residing in these residential localities.

4.9 Eight Basic facilities – Infrastructure Index (SSA Method)

The following figure provides the status of school infrastructure, showing the number of schools having the 8 infrastructure requirements as prescribed by Sarva Shiksha Abhiyan. These 8 basic infrastructures are the general toilets, separate toilets for girls, electricity, play ground, ramps, library, compound and drinking water. Virajpet taluk has the lowest proportion of schools having the prescribed infrastructure in the district.



Graph 8. School infrastructure trends in Kodagu (2011)

4.10 School completion ratio and pass percentage

The table below provides the trends in other important indicators of performance of the education system in the district. These indicators provide a basis for comparing the situation of education between different taluks and with other districts of the state.

Table 23. School completion and pass percentage rates in Kodagu (2011)

Taluk	School completion ratio	SSLC pass %	PUC pass %
Madikeri	48.78	78.20	77.93
Somwarpet	48.06	76.89	59.12
Virajpet	45.84	79.94	88.26
Total	47.56	78.23	73.42

Source: DDPI, Kodagu

The school completion ratio provides the proportion of total children completing 10 years of education and as evident from the table, Virajpet has the least school completion ratio in the district. The SSLC and PUC pass percentage in the district are impressive, although Somwarpet lags behind considerably in PUC pass percentage, within the district.

4.11 Post-Secondary Education

Primary and secondary education acts as a strong base for knowledge improvement and increase efficiency in the lives of every human being. Likewise, higher education prepares the student to utilize this efficiency in the knowledge based economical sector. Thus, higher education plays a vital role in a developing nation like India. As a result the National Education Policy lays more focus on vocational education system which enables the students to engage in self-employment.

Pre-university education acts like a bridge between secondary and higher education. PU education frames the future professional life of every student and hence it is a very important phase. Pre-university classes are conducted in PU Colleges and Degree Colleges. The enrolment rate in PU education has considerably decreased between the years 2011-12 to 2007-08.

Statistical details of Pre-University, vocational, technical and other higher educational institutions during the year 2011 are given in the following table. The enrolment rate of boys in PU colleges during the year 2011 was 46% and girls 54%.

Table 24. Higher education institutions in Kodagu (2011)

Details of educational institutions	No.of colleges	Male	Female	Total
PU colleges	54	4452	5165	9617
Polytechnic Colleges	2	935	251	1186
Degree Colleges	10	2293	2501	4794
Technical (Engineering) Colleges	2	1030	623	1653
Dental Colleges	1	109	191	300

Source: DDPI, Kodagu

As per the policy requirement at least 25% of the students should avail vocational training after completing secondary education. Higher education/Tertiary education system includes graduation, technical and medical education and other vocational education.

Though majority of the population in Kodagu district is concentrated in rural areas and depend upon agriculture for their living, demand for higher education has increased in the district. Financial status of the district

Photo 15. Coorg Institute of Technology, the first engineering college in Kodagu

is better than other districts of the state and utilization of financial services and facilities is also more. Coffee, cardamom and other commercial crops are grown in this district on a large scale and hence demand for related knowledge based services has also increased. Besides this there are ample opportunities for tourism in the district and higher educational institutions can tap the potential. There were 10 degree colleges in the district during the year 2011-12 with enrolment of 4,794 students, out of which 48% were boys and 52% were girls. There are two polytechnic colleges in Kodagu district to provide industrial and self-employment training. Enrolment of girls in these two vocational training colleges is very less. 1,186 students had enrolled in the year 2011-12 and 935 were boys and 251 were girls.

Presently there are two technical (engineering) colleges in the district with a total enrolment of 1653 students in the year 2011-12, out of which 1030 were boys and 623 girls. Though Kodagu district lacks a medical college, there is a dental college, with an enrolment of 109 girls and 191 boys. When compared to other surrounding districts number of technical and vocation education institutions in Kodagu district is less.

4.12 Schemes for promotion of literacy level

Various state level schemes like the distribution of free uniforms, text books, cycles and Mid-day meals program are being implemented in the district for providing additional incentives for bringing children of marginalized communities into education. Further, the participation of communities themselves in monitoring and cooperation with schools is being promoted with the forming of School Development Management Committees comprising children and parents in government schools, thus promoting a sense of ownership among them.

Photo 16. Computer education in government primary schools in Kodagu

Description of government schemes for incentivizing primary education

- School uniforms are provided for students in all government school, between standards 1 – 10.
- Text books are provided for all students in government and aided schools, upto 10th standard.
- Bi-cylcles are provided for students of eight standard in all government and aided students (excluding hostel students and those having bus passes)
- Akshara Dasoha (Mid-day meal) scheme provides afternoon lunch for all students in government and aided schools, upto 10th standard.

4.13 Per-capita Expenditure Analysis

The table below provides the district spread in the per-capita expenditure made by the government on primary and secondary education in Kodagu. Per-capita expenditure provides a useful way of comparing taluk-wise differences in resource allocation towards education. As seen from the table, Virajpet taluk, which lags behind the other taluks in other output and process indicators lags behind even in per-capita expenditure on education. The table implies that more financial allocation is needed to Virajpet, followed by Madikeri taluk in the district.

Table 25. Per-capita expenditure on education in Kodagu (2011-12)

Taluk	Per-capita expenditure
Madikeri	1526.10
Somwarpet	2325.85
Virajpet	1010.77
District	1636.73
Dental Colleges	1

Source: ZP, Kodagu

4.14 Concluding Remarks

The chapter presented an overview on the status of education in Kodagu district, with a focus on primary and secondary education. The analysis brings forth the issues related to various dimensions of education and their effects on human development. From this description, it is clear that there is scope for improvement in many areas within the broad sector of literacy and education in the district. There are still 17.39% illiterates in the district and the gap between male and female literacy is persisting at 9%. Kodagu falls slightly short of the national target of 85% literacy by 2012. Thus, improving the literacy rates of the district would be a continued priority in the district and its contributions towards mainstreaming the marginalized tribal communities would be of vital.

Further, the analysis shows that, among the three taluks of the district, Virajpet lags significantly behind the other taluks in several key process and output indicators of primary education. For example, the taluk had the highest number of out of school children in the district, at all levels of primary and secondary education (12.52% at lower primary level, 16.2% at the higher primary level and 22.2% at the high school level). Further, while the percentage of out of school children does not display any gender disparities in the other two taluks, in Virajpet, the rates for girls is higher than that of boys. These figures about Virajpet taluk in particular show the issues to be addressed in encouraging primary and secondary education, specifically among the scheduled tribe communities in the taluk. The availability of infrastructure as well as per-capita expenditure on education in the taluk are also the lowest in the district. Thus, the chapter clearly shows priority areas that need to be addressed to improve the impact of education on human development in the district. Thus, improving the effectiveness of existing government schemes, improving infrastructure and prioritizing schools specifically in the tribal areas could be starting points for policy and implementation improvements in Kodagu.

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FORCE
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CHAPTER - 5

HEALTH AND NUTRITION

Primary Health Centre, Suntikoppa

CHAPTER 5.
HEALTH AND NUTRITION

5.1 Introduction

Health is considered as one of the basic pillars of human development of any region. The status of demography, reproductive and child health and the overall health condition of the society play a major role in determining the trajectory of development of any emerging country like India. Hence, three of the eight UN Millennium Development Goals (Goals 4, 5 and 6) signed in the year 2000 are concerned about achieving specific goals in the health sector. Recognizing the importance of health in human development at the district levels, two health indicators; Child Mortality Rate and Maternal Mortality Ratio, are included in the calculation of district human development index.

UN Millennium Development Goals

1. To eradicate extreme poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empowering women
4. To reduce child mortality rates
5. To improve maternal health
6. To combat HIV/AIDS, malaria, and other diseases
7. To ensure environmental sustainability
8. To develop a global partnership for development

The health related goals of the MDGs focus on the reducing infant mortality, under-5 mortality and maternal mortality by 2/3rds and reversal in the spread of HIV and incidence of Malaria and other major diseases. To achieve these goals in the regional context, understanding the various region specific trends in the status of health infrastructure, utilization patterns and trends in expenditures become essential in improving the overall health condition of the society.

A glance of the previous human development reports shows that the Kodagu's overall human development status is high in comparison to other districts in Karnataka. The district was ranked at the 3rd position in 1991 and 4th in 2001 in HDI, according to the Human Development Report of Karnataka in 2005. However, the status of health in the district is a major cause of concern since in the same years, its health ranking of were 15 and 18. The status of health in Kodagu was lower in comparison to the average health status of the district.

Nevertheless, the Karnataka State Health Policy of 2004 classified the district as 'well performing' and placed it above districts like Dakshina Kannada and Udupi, based on the composite health index that took into account other contributing population indicators like female literacy rate, use of family planning methods etc. Thus, there is an immediate need to address the condition of health in the district, to raise its human development further.

Table 26. Performance of Kodagu in healthC

Year	Health			HDI			Composite Health Index (Karnataka State Health Policy, 2004)	
	Kodagu		Karnataka	Kodagu		Karnataka	Kodagu	
	Index	Rank	Index	Index	Rank	Index	Index	Rank
1991	0.600	15	0.618	0.623	3	0.541	NA	NA
2001	0.638	18	0.680	0.697	4	0.650	71.92	16

Source: Karnataka Human Development Report, 2005, Karnataka State Health Policy, 2004

The condition of health in Kodagu is affected by the district's unique characteristics. Often called the 'Kashmir of South India", the picturesque district is known for its interleaving swathe of forests, highlands and coffee plantations. In comparison to other districts of the state, Kodagu has seen little industrialization and urbanization, and offers a healthy, less polluted climate for its residents. Further, the demographic trends of the district are quite unique in the state. The district had a marginal decadal growth in population and has the lowest population density in the state. The district also has a higher percentage of working age population and its per-capita income is significantly higher than that of the state.

Status of health of Scheduled Tribes in Kodagu

- Between 2010-12, 42% of maternal deaths and 30% of infant deaths in Kodagu occurred among STs
- Majority of child deaths within the ST category occurred at home.
- The district has only 2 tribal mobile medical units
- Lack of transportation facilities, specialist health personnel, poor sanitation in ST colonies and hamlets, superstitious beliefs, addiction to alcohol and lack of nutrition remain major hurdles in achieving better health status among STs.
- Medical officers of the district feel that the inability to effectively bring mainstream public health interventions to STs is a major reason for such disparities.

However the district also faces unique challenges of its own, in guaranteeing good health for its residents. The hilly and thickly forested geography is a major hurdle in ensuring emergency medical transport and easily accessible government health institutions. Due to the high rural population and low density of population, penetration of private health institutions in the district is comparatively lower. Additionally, as reported in the Karnataka Human Development Report of 2005, the district also faces acute shortage of human resources in health care.

Kodagu has a sizeable population of scheduled tribes. Their maternal and child health status is lower in comparison to other social categories. Majority of the tribal population in the district is concentrated in Virajpet and Madikeri taluks. Major scheduled tribes in the district are Yerava, Kudiya, Jenu Kuruba and Kadu Kuruba. The majority of the tribal population of the district either reside within the forests or in resettled colonies in very interior rural areas. Some of them are still dependent on the forests for their livelihoods and it has been a significant challenge for the district health administration to successfully bring public health access to these communities.

In this context, this chapter explores the various dimensions of the health sector in Kodagu, with specific focus on trends in its demography, reproductive and child health, nutrition status, family planning activities, prevalence of major diseases, sanitation and analysis of accessibility and utilization of the health infrastructure in the district.

5.2 Demography of Kodagu

Decadal growth rates

The demographic status of Kodagu is unique in comparison to other districts of Karnataka. Kodagu is the least populated district of Karnataka and in the last decade, it had negligible decadal growth rate of population (1.09%), preceded only by Chikkamagaluru district which had negative decadal growth rate of -0.26%. The decadal growth rate in population in the district has been consistently lesser than that of the state. In 2011, Kodagu's share in the total population of the state was just 0.91%.

Table 27. Population trends of Kodagu and decadal growth rates

Year	Population (% share in state population)	Average Decadal Population Growth	
		Kodagu	Karnataka
1991	488455 (1.09%)	5.75	21.12
2001	548561(1.04%)	12.31	17.51
2011	554519(0.91%)	1.09	15.67

Within the district, Somwarpet taluk has the highest population and forms 37% of the district's population, followed by Virajpet taluk. Madikeri taluk has the least

Photo 17. An old PHC built in 1952 in the erstwhile Coorg state

population in the districts and contributes to 26% of the overall population of the district.

The table below presents the comparison of the proportions of SC and ST populations in the district. It shows that the proportion of SC population is lower in the district when compared to the state and national proportions. However, the proportion of STs is higher in the district, in comparison to the state and national figures. The highest proportion of ST population in the district is found in Virajpet taluk (19.61%). In other taluks, the proportion of ST population is lesser than the state average.

Table 28.Comparison of population proportions of SC and STs in 2011

Category	Kodagu	Karnataka	India
SC	13.27	17.15	16.63
ST	10.47	6.95	8.61
Others	76.26	75.90	74.76

Source: Census 2011

The trends in decadal growth rates among these categories show that ST population grew by 25.89% (the highest growth rate of 31.62% in Virajpet) in the years 2001 – 2011 whereas the SC population grew by 9.14% (the highest growth rate of 11.80% in Madikeri). There was a 2.79% reduction in the population of Others (the highest reduction of 7.06% in Virajpet) during the same period. These trends have to be taken into cognizance while planning the public health interventions activities, since there is a wide diversity in health status of various among the different social categories within the district.

Population density

Kodagu has the least population density in Karnataka. It is evident from the table below that all taluks within the district have lesser population density than the state and national figures. Within the district, Somwarpet taluk has the highest population density and Madikeri taluk has the least.

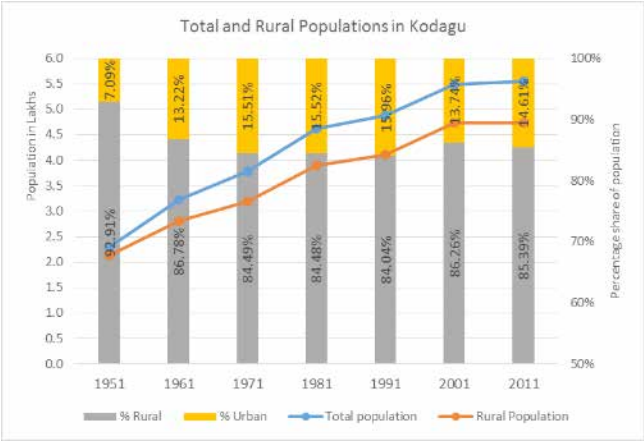
Table 29. Comparison of population densities

Year	Madikeri	Somwarpet	Virajpet	Kodagu	Karnataka	India
1991	85	184	110	119	235	257
2001	95	208	124	134	276	313
2011	98	209	124	135	319	368

Source: Census of India, 1991, 2001, 2011

Rural-Urban populations

A unique aspect of Kodagu, is its rural population. Kodagu has the highest proportion of rural population (85.39%) in the state and is considerably higher than that of the state (61.33%). The figure below plots the comparative trends in overall population growth and rural population. The stacked columns within the figure shows the trends in urban-rural population proportions within the district.



Graph 9. Population trends in Kodagu

Madikeri, being the district headquarters has the highest amount of urban population (22.77%). Somwarpet, even with the presence of two towns (Somwarpet and Kushalnagar) has the highest proportion of rural population in the district (89.32%).

Population dynamics

The figures in this section show the age pyramids of Kodagu and Karnataka, for the census years of 2001 and 2011 respectively. From the figures, it is evident that although the age structure of Kodagu's population is comparable to that of Karnataka, the proportion of 0 – 14 population is lesser in Kodagu than in Karnataka and the working population age structure is more evenly distributed in Kodagu.

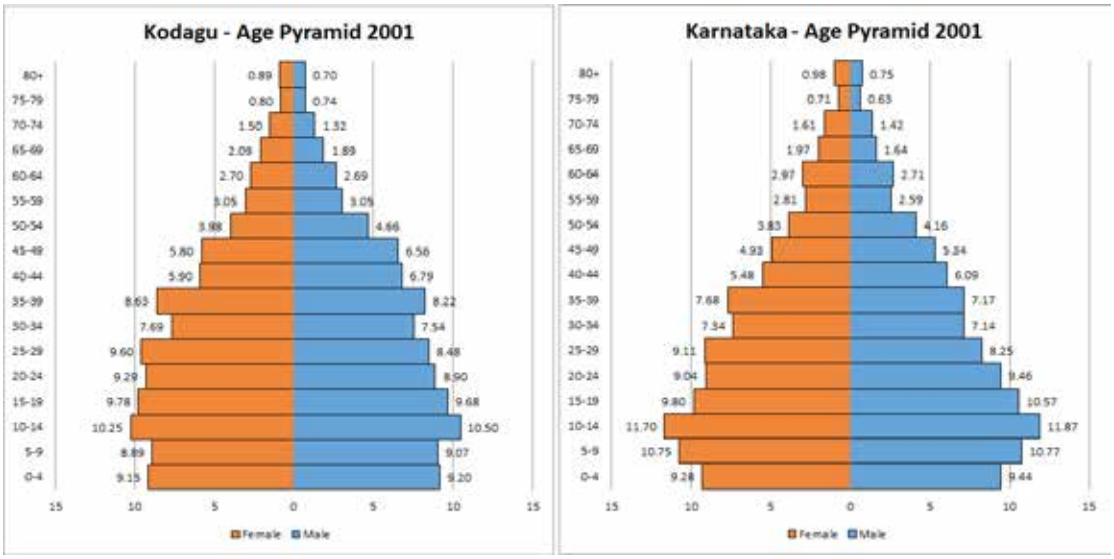
The transition of the 10 – 14 age group in 2001 to the 20-24 age group in 2011 is evident in Karnataka. However, the same may not be said of Kodagu. This may indicate a higher rate of migration of youth population of Kodagu to other areas. While 62.86% of the population of Karnataka is below 35 years, this ratio is 57.39% for Kodagu.

The table below presents the working age population trends and dependency ratio in Kodagu, Karnataka and India. For this analysis, we consider the age group of 15 to 64 as the population in working age. From the table, it can be seen that Kodagu has a higher proportion of working age population in comparison to both Karnataka and India and hence, the dependency ratio (number of dependents per 100 working age population) is also lower in Kodagu compared to that of Karnataka and India. However, this analysis also shows that the average age of the population in Kodagu is higher than the state and hence, will age earlier than the state.

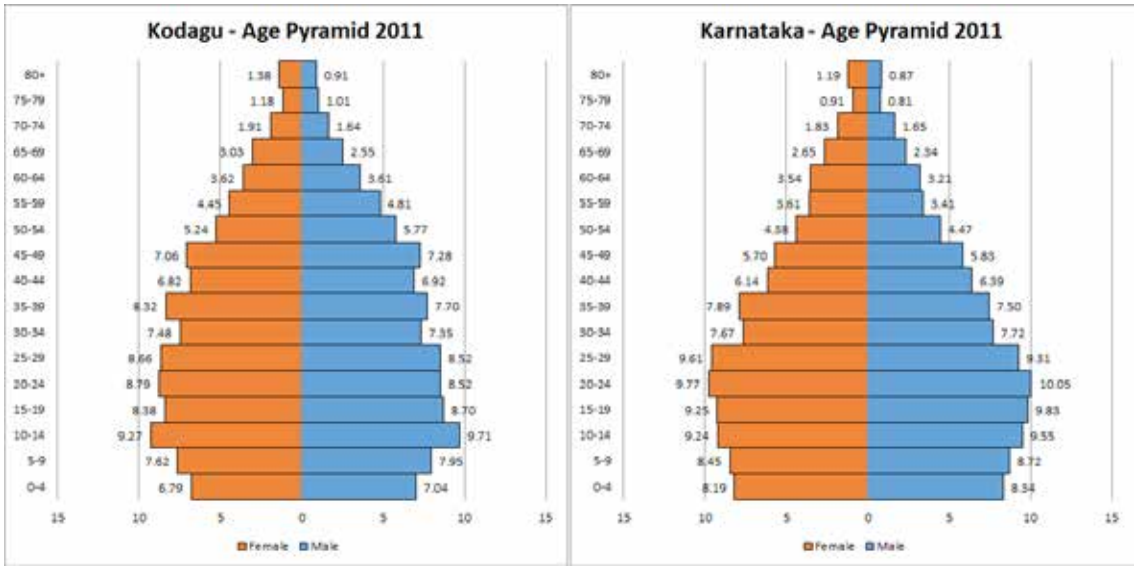
Table 30. Comparison of proportion of population in the working age group

Year	% of Working age population Dependency Ratio			% of Working age populationDependency Ratio		
	Kodagu	Karnataka	India	Kodagu	Karnataka	India
1991	75.29	72.09	58.46	32.81	38.71	71.05
2001	66.46	63.18	61.41	50.46	58.28	62.84
2011	68.97	67.59	63.57	44.99	47.95	57.31

Source: Census of India, 1991, 2001, 2011



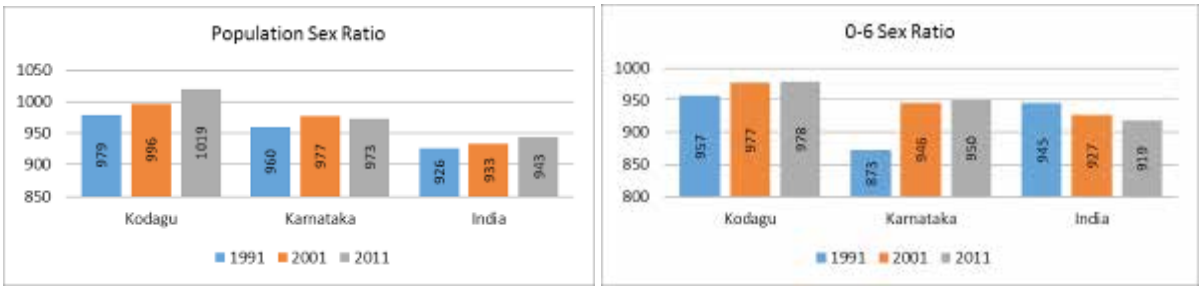
Graph 10. Age pyramids for Kodagu and Karnataka – 2001



Graph 11. Age pyramids for Kodagu and Karnataka – 2011

Sex-ratio

The sex-ratio of Kodagu is higher than that of the state's average, both with current population as well as 0-6 sex ratio. Further, Kodagu's sex ratio is improving (both population and 0 – 6 sex ratios), as displayed even by the state's figures, in comparison to the national figures of decreasing 0-6 sex ratio These statistics show that Kodagu does not show any untoward selection bias against the female child.

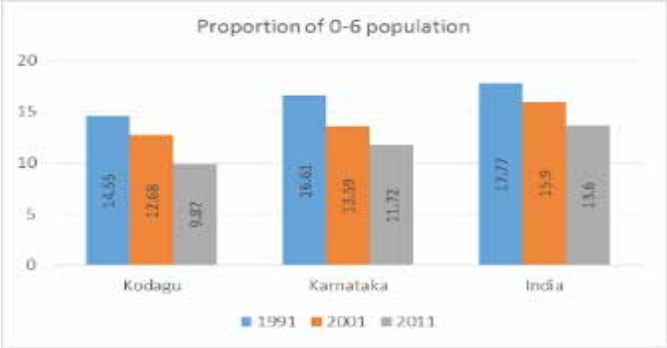


Graph 12. Trends in population sex ratio

The overall district trends are visible within the taluks as well. In 2011, Virajpet taluk had the highest 0 – 6 sex ratio of 996, whereas Somwarpet had the highest population sex ratio of 1027.

0-6 Population

The figure below shows the comparative trends in the proportion of 0 – 6 population to the total population between the three census years of 1991, 2001 and 2001. The share of 0-6 population of the district is decreasing at a faster rate than that of the state. Even in absolute terms, the 0 – 6 population of Kodagu is witnessing a decline between successive census years. Between 2001 and 2011, there was a reduction in 0 – 6 population of the district by 21.33%. This shows that the implementation of family planning activities in Kodagu has been successful in bringing sustained decrease in fertility rates.



Graph 13. Proportion of 0 - 6 populations

Vital statistics

This section presents the vital statistics of Kodagu and compares them to trends at the state and national level. Total Fertility Rate (TFR) and Cumulative Birth Rate (CBR) of Kodagu have been consistently lower than that of the state. These figures are supported by the population figures of decreasing 0 – 6 population in the district. The crude death rate (CDR) in Kodagu are comparable with that of the state.

Table 31.Comparison of TFR, CBR and CDR

Year	TFR			CBR			CDR		
	Kodagu**	Karnataka*	India*	Kodagu	Karnataka*	India*	Kodagu	Karnataka*	India*
1991	2.77	3.1	3.6	26***	26.9	29.5	10***	9	9.8
2001	2	2.4	3.1	20.1***	22.2	25.4	9***	7.6	8.4
2011	1.73	1.9	2.4	14.97****	18.8	21.8	6.41****	6.5	7.1

Source: * SRS Bulletins of various years,
** District Health Office,
*** Karnataka Human Development Report,
**** Annual report on Registration of Births and Deaths Act 1969, 2011

The table below presents the comparison of infant mortality rates. The trends show a gradual decrease in infant mortality rates at the state and national levels, while the decrease in Kodagu has been faster. Detailed analysis of infant mortality and maternal mortality will be presented in the later sections of the chapter.

Table 32. Comparison of Infant Mortality Rates

IMR	Kodagu	Karnataka**	India**
1991	86*	77	80
2001	62*	58	66
2011	29***	35	44

Sources: * Karnataka State Human Development Report 2005,

** Family Welfare Statistics in India, 2011,
***: Ram U, Jha P, Ram F, et al(2013)

Based on the above analysis of demographic indicators of the district, we can see that

1. The demography of the district displays a population concentrated in rural areas, with reducing decadal growth rates, TFR and CBR and hence decreasing proportions of 0 – 6 populations.
2. Decadal growth rates have reduced considerably and was 1.09% in the last decade. However, the SC/ST populations of the district have grown at a higher rate and are majorly located in rural areas. The share of ST population in the district is higher in comparison to the state and national figures. These trend suggest that the health system improvements within the district have to be targeted towards the rural areas of the district, with specific focus on SC/ST populations.
3. The age pyramid of the district shows that close to 70% of the population is in the working population age group in Kodagu and hence dependency ratio is lower in comparison to state and national figures.
4. Based on the above analysis, it can be seen that population growth and declining sex-ratios are not issues of serious concern in Kodagu.

5.3 Maternal Health

Maternal health is defined as the health of women during pregnancy, childbirth and postpartum period. It is a crucial indicator of the overall public health status of a region since it reflects on key performance indicators like service availability, accessibility and delivery, availability and utilization of infrastructure and efficient health management. Hence, improving maternal health is one of the primary goals of the Millennium Development Goals. In this section, three important dimensions of maternal health: Institutional deliveries, maternal mortality trends and performance in antenatal care are analysed in the context of Kodagu. The analysis also focusses on maternal health status of the ST population in the district, since they are specifically more vulnerable than other social categories.

Photo 18. A PHC medical officer examining a patient

In analysing the current status of maternal health of the district, major sources of comparison used are the District Level Household Surveys (DLHS) conducted between 2002-04 (DLHS 2) and 2007-08 (DLHS 3). The table below compares the trends in institutional deliveries and ANC coverage at the district, state and national levels. Kodagu's institutional deliveries and early registration indicators are significantly better than that of the state. Completing at least 3 ANC visits before delivery in Kodagu has scope for improvement.

Table 33. Comparison of selected indicators of maternal health

Particulars	Kodagu			Karnataka		
	DLHS 2	DLHS 3	2011*	DLHS 2	DLHS 3	2011**
Institutional deliveries (%)	75.8	81.7	99.37	58	65	97.10
At least 3 ANC visits (%)	88.8	93.8	88.48	78.6	81.3	91.98
Mothers registered in the 1st trimester (%)	82.4	94.6	98.26	67.8	71.8	62.25

Sources*: District Health Office, Kodagu
**: Karnataka state PIP, NRHM, 2013-14

Institutional deliveries

Institutional deliveries promote multiple aspects of maternal and child health. Together with better risk preparedness and availability of crucial emergency service and reduction in maternal and neonatal mortality, institutional deliveries are also linked to improved health seeking behaviour among the involved households and inclusion in various health schemes and activities. The taluk-wise breakup of deliveries reported in 2011 and the number of institutional deliveries in them is presented in the table below. All the taluks display a very high percentage of institutional deliveries and this trend is similar to the trends at the state level as well.

Table 34. Institutional deliveries in Kodagu in 2011

Taluk	Total reported deliveries	Institutional deliveries	
		Numbers	% of total registered
Madikeri	1923	1912	99.43%
Somwarpet	2617	2610	99.73%
Virajpet	2735	2707	98.98%
District	7275	7229	99.37%

Source: District Health Office, Kodagu

Antenatal care

Antenatal care (ANC) is a crucial aspect in improving maternal health. It involves preventive methods like regular check-ups and diagnosis that monitor the nutritional levels and physiological changes of the mother. Efficient ANC prevents possible reasons of pregnancy complications like Anaemia and helps in determining possible complications during delivery. Targets like 100% first trimester registration and a minimum of 3 ANC check-ups per registered pregnant women become critical in monitoring the efficient delivery of antenatal care. As seen from the table below, first trimester registration of pregnant women is very high whereas completing at least 3 ANC visits is an issue wherein improvements can be made. Among the 3 taluks, Madikeri taluk lags significantly behind in % of women receiving at least 3 ANC visits. Probable reason for this could be the significant urban population in the taluk. Further, the number of pregnant women identified with Anaemia, is highest in Madikeri taluk and lowest in Virajpet taluk of the district.

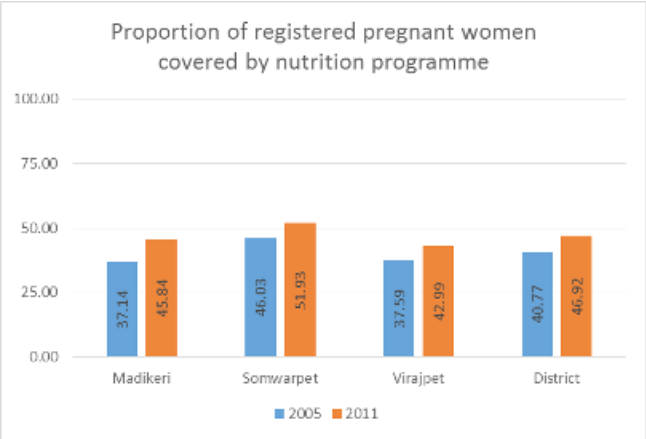
Table 35. Details of ANC in Kodagu

Taluk	Pregnant women registered for ANC*	% registered in first trimester*	% receiving at least 3 ANC visits*	% of women with Anemia
Madikeri	2225	98.05	83.60	75.79
Somwarpet	2827	98.27	90.41	57.80
Virajpet	2996	98.37	90.29	58.37
District	8048	98.26	88.48	63.99

Source: *: District Health Office, Kodagu,

The graph below provides trends in coverage of pregnant women in the nutrition programme implemented by the Department of Women and Child Welfare (WCD). While there is a gradual increase in the coverage of pregnant women between the 2 time periods but on the average, less than 50% of the total pregnant women registered are covered with

the highest coverage in Somwarpet and lowest in Virajpet taluk.



Graph 14. Proportion of ANC registered pregnant women covered by WCD nutrition programme in 2005 and 2011

The overall coverage of pregnant women in nutrition programmes of WCD is about 47%.There is scope to improve the coverage, specifically of pregnant and lactating women, considering the number of maternal and infant deaths that can be related to under-nutrition particularly, taluks may focus to increase the coverage of ST communities, since it is evident that this category of pregnant women are susceptible to nutrition connected morbidity.

Photo 19. Patients at a PHC in Kodagu

Maternal Mortality

Maternal death is defined by the WHO as the death of a women while pregnancy or within 42 days of termination of pregnancy, irrespective of duration and site of pregnancy from any cause related to or aggravated by pregnancy or its management, but not from accidental and incidental causes. Maternal mortality is probably the most important indicator of the status of maternal health of a region. NRHM had set the ambitious goal of reducing Maternal Mortality Ratio (Number of maternal deaths per 1,00,000 live births) below 100, by 2012 in India. The table below presents the taluk-wise number of maternal deaths in Kodagu in 2011. It shows that Virajpet and Somwarpet both had 4 maternal deaths during the year and since Somwarpet had lesser number of live births, has the highest maternal mortality ratio in the district.

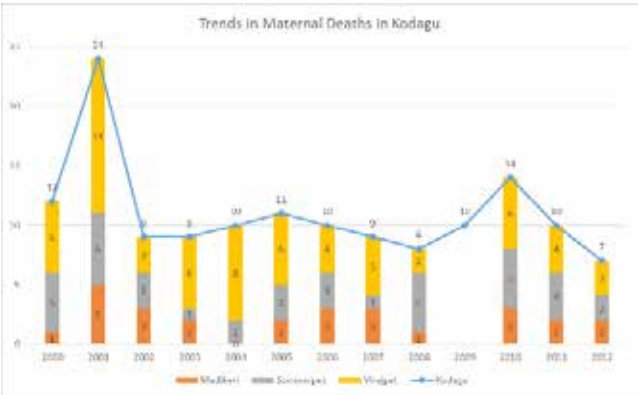
Table 36. Maternal Mortality Ratio in Kodagu - 2011

Taluk	Total reported deliveries	Live Births	Maternal death	MMR
Madikeri	1923	1915	2	104.44
Somwarpet	2617	2637	4	151.69
Virajpet	2735	2694	4	148.48
District	7275	7246	10	138.01

Source: District Health Office, Kodagu

The figure below maps the trends in maternal deaths in Kodagu district since 2000, based on the data provided by the District Health Office. It shows that historically, Virajpet had the highest number of maternal deaths in the district, followed by Somwarpet. Another troubling feature of this graph is that, there is no visible trend to suggest reduction of

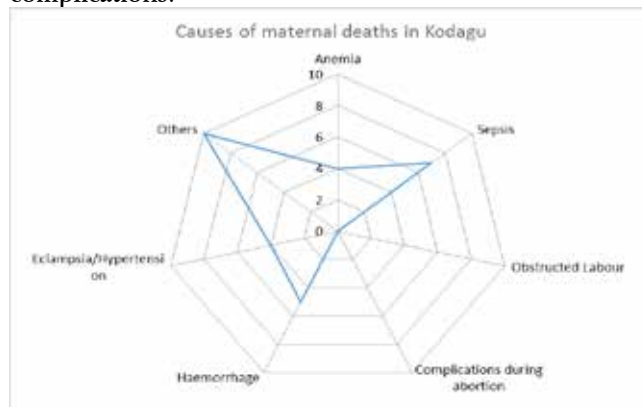
maternal deaths specifically in the taluks of Somwarpet and Virajpet.



Graph 15. Trends in Maternal deaths in Kodagu

To understand the critical issues related to maternal mortality in Kodagu, the line listing of maternal deaths in Kodagu in the years 2010-11 to 2012-13 (3 years) was analysed. A total of 31 maternal deaths occurred during this period in the district. A majority of the maternal deaths (20 out of 31) in the district happened in the age group of 20 – 31. Only 10% of the deaths (3 out of 31) happened in the age group below 20. 42% (13 out of 31) of the maternal deaths in Kodagu happened in health institutions outside the district and 26% (8 out of 31) happened at home. 8 deaths (26%) happened in health institutions within Kodagu and 2 deaths (6%) happened during transit. Among the different social categories, ST Maternal deaths were the highest and accounted for 42% (13 out of 42) of the total maternal deaths. Among the other categories of maternal deaths, Muslim maternal deaths are also a cause of concern.

The figure below analyses the immediate causes of the reported maternal deaths in the years 2010-12. It shows that about 2/3rds of the maternal deaths in Kodagu may have happened due to preventable causes like Sepsis, Anaemia, Haemorrhage and hypertension related complications.



Graph 16. Causes of Maternal death in Kodagu - 2010 - 12

The analysis of maternal mortality in Kodagu shows that the district hasn't been able to reduce MMR below 100. The maternal deaths have occurred majorly among the ST category of mothers and is concentrated in the Virajpet and Somwarpet taluks of the district. While early motherhood may not be an important reason for the maternal deaths in Kodagu, more than 2/3rds of the maternal deaths reported may have happened due to preventable reasons. The analysis of locations of the maternal deaths clearly shows that the district lacks emergency obstetric care and may have aggravated the vulnerability of mothers belonging to the ST category.

5.4 Child Health

Infant and Child Mortality

Infant mortality is defined as the death of a child within the first year of its birth. Like Maternal Mortality, infant mortality too acts as an indicator of the overall health status of a region and is dependent on multiple dimensions of human development like education, sanitation, socio-economic status, access, availability and responsiveness of the health care infrastructure.

Infant mortality rate is calculated as the number of infant deaths (deaths of children before one year of birth) per 1000 live births in the year. Medically, it denotes the levels of morbidity caused directly due to several issues like congenital malformations, maternal complications during pregnancy, infections, low-birth weights, premature births and nutritional deficiency. Child

Photo 20. An ANM visiting a Jenu Kuruba hamlet

Photo 21. An Anganwadi worker demonstrates the game of building blocks to children

mortality is defined as the death of a child within five years of its birth. Child Mortality rate is calculated as the number of child deaths (deaths of children before 5 years of birth) per 1000 live births in the year. It denotes the levels of morbidity caused due to issues like diarrhoea, respiratory infections, measles, malaria and malnutrition.

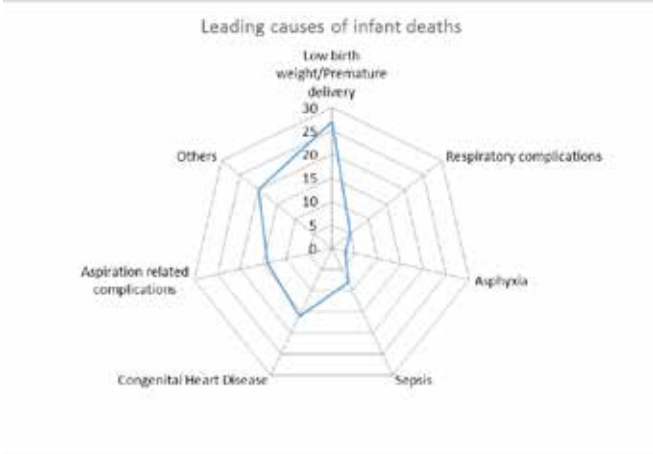
As presented earlier in the analysis of Kodagu's demographics, infant mortality rates of the district has drastically declined in the last three decades. The table below presents the taluk-wise IMR and CMR in Kodagu in 2011. It shows that Somwarpet taluk has the highest IMR, while Virajpet had the least. The CMR of Madikeri taluk is the highest. Based on these figures, while the district IMR has reached the target rates prescribed by NRHM, Madikeri and Somwarpet taluks individually are yet to reach these targets.

Table 37. Infant and Child Mortality Ratio in Kodagu - 2011

Taluk	IMR	CMR
Madikeri	31	34
Somwarpet	32	33
Virajpet	25	33
District	29	33

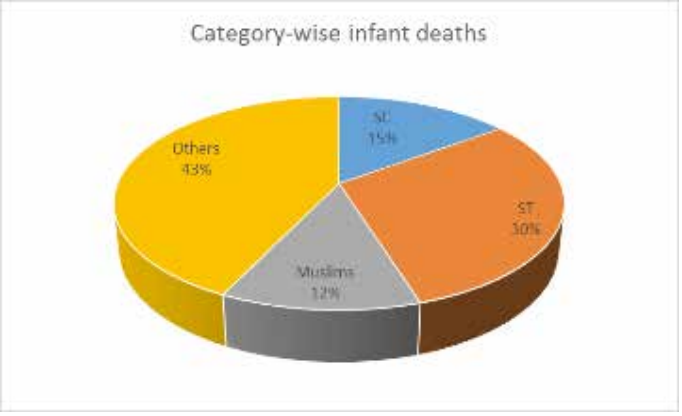
Source: Ram U, Jha P, Ram F, et al(2013)

The analysis of line listing of infant deaths yields insights on causes of infant deaths and social categories of deaths occurred. The figure below analyses the direct causes of infant deaths in Kodagu for the year 2011. Low birth weight and premature birth contributes to about 30% of the infant deaths in the district, followed by other complications contributing to 22% of the infant deaths.



Graph 17. Causes of infant death in 2011 in Kodagu

Analysis of infant deaths based on different social categories shows that after the Others category (43%), infant deaths are the highest in the ST category (30%), followed by the SC (15%) and Muslim categories (13%).



Graph 18. Category-wise infant deaths in Kodagu between 2010 and 2012

Among infant death cases in the ST category, almost half the infant deaths cases in 2011 occurred due to complications related to low birth weight or premature birth and about 1/3rds of the deaths were due to Sepsis and respiratory complications.

In summary, while Kodagu has reached the target set by NRHM to bring IMR below 30, the analysis of infant deaths show that there is large scope to reduce some of the preventable causes of infant deaths in the district. Low birth weight/premature birth is the leading cause of infant deaths in Kodagu and more than 40% of the infant deaths occurred at homes. It is also evident that, most of the emergency cases related to infants are referred to the District Hospital. Availability of emergency medical and obstetric care at the taluk hospitals and CHCs would

reduce the pressure on the district hospital, while improving access to such services in rural areas. Similar to maternal deaths, the prevalence of infant deaths is higher among STs than other social categories. Among them, majority of infant deaths have occurred at homes, and after one month of child birth, without institutional medical intervention. Solving these challenges will ensure a considerable reduction in infant mortality in the district.

Immunization

Effective immunization and vaccinations are often attributed for saving millions of lives from dreadful diseases like Smallpox, Diphtheria, Polio, Measles, Whooping Cough, Tetanus and Tuberculosis. Their contribution to enhancing life expectancies of communities and contributing to human development is enormous. Full immunization includes immunization/vaccination provided against Tuberculosis, Diphtheria, Whooping Cough, Tetanus, Polio and Measles. Rate of full immunization provides indication of the efficiency of immunization in the district. The table below presents the full immunization rates of Kodagu in comparison to the state and the nation. It shows that the DLHS 3 reported maximum immunization levels of 96.1 reached in Kodagu (in the year 2007-08). In 2011, the levels of full immunization among children in the age category 9 – 11 months was 93.15% (as a proportion of total live births in the year). The corresponding state and national figures denote significantly lower levels of full immunization achievement.

Table 38. Comparison of full immunization rates

Full Immunization	DLHS 2 (2002 – 04)	DLHS 3 (2007 – 08)	2011
Kodagu	90.4	96.1	93.15*
Karnataka	71.3	76.7	78**
India	45.9	54	61**
District	7275	7246	10

Source: *: District Health Office, Kodagu,
**: Coverage Evaluation Survey, 2009 (UNICEF)

The next table presents the taluk-wise full immunization levels reached in Kodagu in the year 2011. It shows that all taluks of the district had more than 90% success in achieving full immunization

Table 39. Taluk-wise immunization rates in Kodagu in 2011

Taluk	Children (9-11 months) fully immunized	Total live births	Percentage of children fully Immunized
Madikeri	1781	1915	93.00
Somwarpet	2489	2637	94.39
Virajpet	2480	2694	92.10
District	6750	7246	93.15

Source: *: District Health Office, Kodagu

Child Nutrition

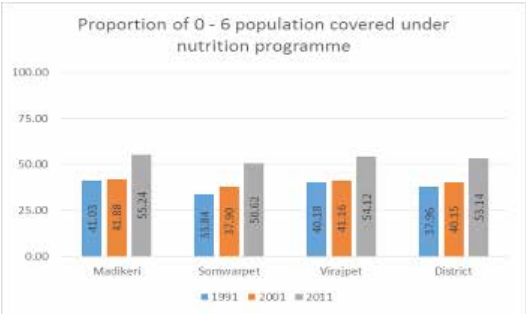
Child malnutrition remains a daunting problem in India, despite sustained economic progress and growing incomes of the vast middle class in the country. The National Family Health Survey (2005-06), found that in Karnataka, 38% of

children under five in Karnataka were underweight and more than 70% of them had Anaemia. However, as shown below the prevalence of both these factors is marginal in Kodagu, based on the information provided by the Human Development Department, Dept. of Planning.

Table 40. Nutrition status among children

Taluk	% of children born under-weight	% of malnourished children
Madikeri	5.23	15.12%
Somwarpet	10.70	16.05%
Virajpet	12.26	21.04%
District	9.39	17.58%

The table shows that Virajpet has the highest incidence of children born under-weight and malnourished children in the district. This points to the vulnerable child health status of the taluk. (specifically the ST communities)



Graph 19. Proportion of 0 - 6 population covered by WCD nutrition programmes in different census years

The above graph provides trends in coverage of 0-6 population covered by the Department of Women and Child Welfare (WCD) under its nutrition programmes. It shows that about 53% of the district's total 0 – 6 population is covered by its nutrition programme in 2011, which shows consistent, but gradual increase in its coverage status. The increase in coverage has been the highest between 2001 and 2011. Among the taluks in the district Somwarpet has the lowest coverage rate of just above 50%. The discussion in this section shows that there is scope for increasing the coverage of infants and children under the nutrition programme, thereby reducing the malnutrition levels of the district.

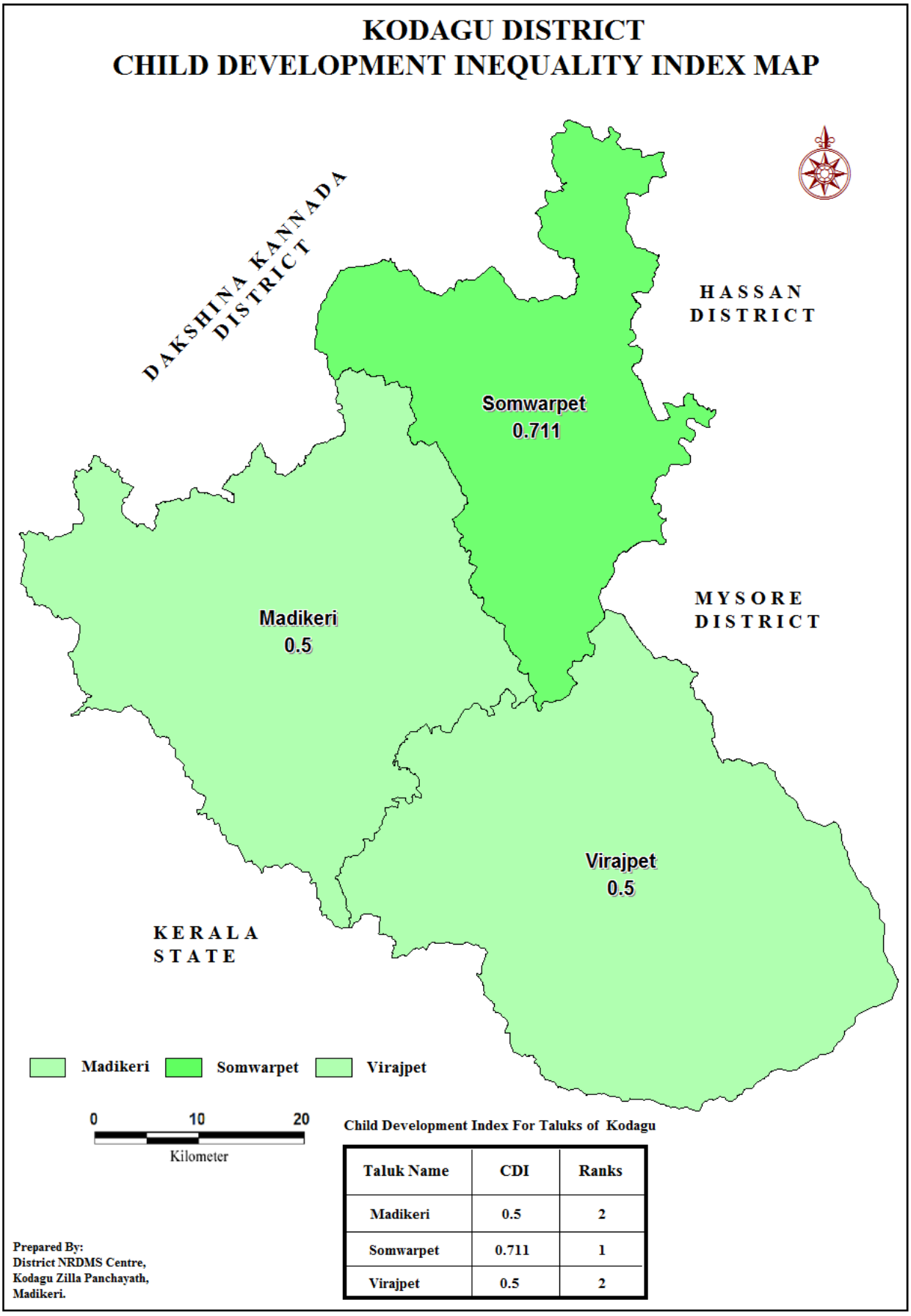
5.5 Family Welfare

The discussion on the demography of Kodagu highlighted the marginal increase in decadal population of the district and the low TFR rates achieved by the district. This section analyses the district's family planning initiatives in this context. The table below presents the proportion of eligible couples in the district using any form of family planning method. It is seen that the district has better coverage in comparison to the state and national figures. Further, DLHS 3 revealed that 7.1% of the girls in Kodagu are married before the age of 18 (the corresponding rates in Karnataka and India are 22.4 and 22.1 respectively).

Table 41. Comparison of proportion of eligible couple using any family planning method

Use of any family planning method	DLHS 2	% of malnourished children	% of malnourished children
(2002-04)	DLHS 3	15.12%	15.12%
(2007-08)	2011	16.05%	16.05%
Kodagu	64.6	62	80.37*
Karnataka	59.3	61.8	66.42**
India	52.5	54	NA

Source: * District Health Office, Kodagu
**: Karnataka Economic Survey 2011



Child Development Index For Taluks of Kodagu

Taluk Name	CDI	Ranks
Madikeri	0.5	2
Somwarpet	0.711	1
Virajpet	0.5	2

Map 4 : Child Development Index in Kodagu

The table below presents the taluk wise snapshot of family planning coverage of eligible couples for the year 2011. It shows that compared to Madikeri and Virajpet, Somwarpet taluk performs significantly better with higher coverage than the two.

Table 42. Taluk-wise proportion of eligible couple using any family planning method in 2011

Taluk	Couples using family planning methods	No. of Eligible couples	Percentage of couples protected by any contraceptive method
Madikeri	16228	21049	77.10
Somwarpet	25143	29902	84.08
Virajpet	24069	30468	79.00
District	65440	81419	80.37

The priority areas for family planning in Kodagu have to be identified keeping in mind, the context of the unique demographic trends observed in Kodagu: marginal decadal growth in population, decreasing TFR and CBR, healthy sex ratios and varied growths rates in population among different social categories, and higher infant and maternal mortalities among the ST population of the district.

5.6 Communicable Diseases

This section presents the prevalence of major diseases in Kodagu in 2011. It shows that although incidences of diseases like Diarrhoea, Gastroenteritis and Typhoid are high, deaths due to Tuberculosis and HIV are high in Kodagu. Further, accidents like Dog bite and Snake bites occurred frequently in the district which require considerable preparedness from the health infrastructure to deliver emergency care.

Photo 22. A HIV AIDS awareness programme being conducted in kodagu

Table 43. Patients identified with major diseases in Kodagu in 2011

Diseases	Identified	Deaths
Leprosy	4	-
Tuberculosis	460	37
Malaria	29	-
Diarrhea	3922	-
Gastroenteritis	576	1
Typhoid	701	-
HIV	220	51
Dog bite	3492	-
Snake bite	239	-

Source: District Health Office, Kodagu

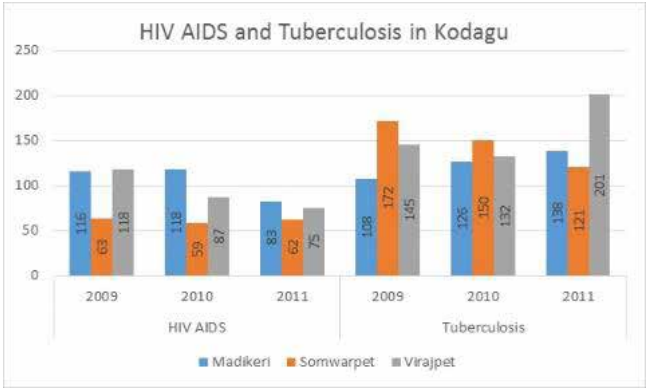
The table below presents the taluk-wise patients suffering from various communicable diseases in the district. Virajpet has the highest % of patients with communicable diseases in the district.

Table 44. Patients identified with communicable diseases in 2011

Taluk	Patient numbers	% of population affected
Madikeri	117	0.080
Somwarpet	300	0.145
Virajpet	649	0.322
Total	1066	0.19

Source: District Health Office, Kodagu

The next figure provides the taluk-wise trends in detection of fresh cases of HIV and Tuberculosis. It shows that detection of new HIV patients shows a narrow declining trend and among the 3 taluks, Madikeri taluk has the highest incidence of HIV, followed by Virajpet taluk. There are no conclusive trends at the district level in the detection of Tuberculosis cases in the district. While Somwarpet shows a declining trend in patients detected, Madikeri and Virajpet do not show declining trends.



Graph 20. Trends in HIV AIDS and Tuberculosis diseases in Kodagu

Photo 23. A modern PHC in Kodagu

Together with increasing concern about the prevalence of AIDs, medical officers in the district opine that life style related diseases like Cirrhosis and Liver failure (caused due to Alcohol abuse), Chronic Obstructive Pulmonary Disease and Cancer (caused due to excessive smoking) contribute significantly (although no quantitative documentation was available) to morbidity in the district.

5.7 Infrastructure and Health Personnel Facility

The presence of health infrastructure and its effective utilization determines the status of health of a particular region. Kodagu's unique challenges in providing better health to its citizens can be solved, provided the right health infrastructure is in place and is efficiently utilized. In this section, an analysis of the district's health infrastructure and its utilization is presented to draw inferences on areas where special focus is needed. The major issues of analysis include the presence of health institutions, accessibility, utilization, aspects of community health and health expenditures.

Health Institutions

This section provides the summary of health infrastructure in Kodagu. The district has limited private health infrastructure, with Virajpet having the highest number of private hospitals (8). Somwarpet has the least number of private hospitals (3). Together with infrastructure related to Allopathic medicine, the department of health and family welfare also provides AYUSH services (Ayurveda, Yoga and Naturopathy, Unani and Homeopathy) as well. In Kodagu, there are 11 such AYUSH clinics providing alternative health care options to the residents of the district.

Table 45. Government Health Infrastructure in Kodagu

Hospitals	District Hospital	Taluk Hospitals	CHCs	24 X 7 PHCs	PHCs	Sub Centers	Ayush Clinics	Blood Banks
Madikeri	1			3	4	43	6	1
Somwarpet		1	2	5	8	75	3	
Virajpet		1	4	2	9	78	2	
Total	1	2	6	10	21	196	11	1

Source: District Statistics at a Glance, 2011

Accessibility

An important aspect of health infrastructure is the accessibility of health institutions. To understand accessibility towards public health institutions (specifically in rural areas), we analyse the physical accessibility levels of PHCs and Sub-Centres. The table below provides the average population served by PHCs and Sub-Centres in Kodagu and contrasts with the state and national figures. Based on the table, it can be seen that Madikeri taluk has the lowest density of PHCs and sub-centres in the district whereas Somwarpet has the highest density of PHCs and Virajpet has the highest density of sub-centres in the district. In Kodagu and Karnataka, the average population covered by PHCs and Sub Centres are less than the population coverage suggested by the Indian Public Health Standards (1 PHC per 30,000 people and 1 Sub-Centre for 5000 people).

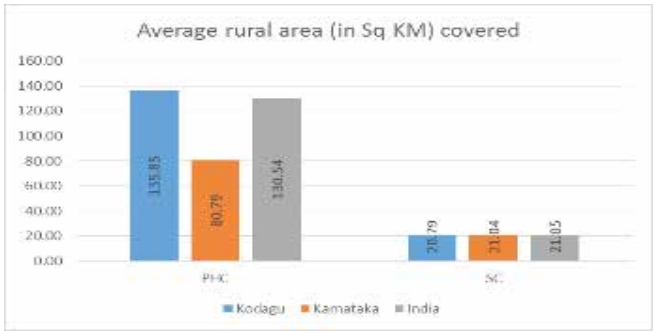
Table 46. Population served by PHCs and Sub-Centres

Taluk	Average rural population	Taluk Hospitals
Madikeri	18867	2573
Somwarpet	14188	2427
Virajpet	15989	2314
District	15784	2416
Karnataka	16257	4234
India	34876	5624

Source: District Statistics at a Glance, 2011, Census 2011

Photo 24. A Mobile Medical Unit in Somwarpet taluk

However, Kodagu being a predominantly hilly district, together with population coverage, analysis of geographical area covered by each PHC is important to understand the accessibility. The next graph shows the average geographical area covered by individual PHCs and Sub-Centres. It shows that the area covered by Sub-Centres in the district is comparable to that of the state and nation.



Graph 21. Comparison of average rural area covered by PHCs and SCs

Although the population covered per PHC in Kodagu is much lower than the state and national figures, the area covered by PHCs is higher in comparison. Thus,

Map 5. Health infrastructure map of Kodagu

patients have to cover much larger areas to reach PHCs and FRUs in the district. In such scenario, good medical transport infrastructure and the presence of mobile medical units become important. The table below provides other important aspects of accessibility of health infrastructure (including private health infrastructure) in Kodagu. Surprisingly, the data shows that the number of nurses available per thousand population in the district is lower than that of doctors. Doctors per thousand population in Madikeri taluk is the highest (due to the presence of the district hospital). Virajpet taluk has the highest ratio of nurses available per thousand population. Somwarpet taluk has the lowest bed ratio per thousand population. In government health institutions, on an average, about 2.4 beds serve a population of 1000 at the district level, with the lowest bed ratio in Somwarpet taluk. For the period in 2010 – 2012, at the national level, the beds per 1000 population ratio was close to 0.5 (in government health institutions). In Karnataka, this figure was close to 1.1

Table 47.Status of health infrastructure in Kodagu

Taluk	Doctors per 1000 population	Nurses per 1000 population	Beds per 1000 population	Beds per 1000 population (government)
Madikeri	1.10	0.29	4.13	3.42
Somwarpet	0.31	0.44	1.53	1.43
Virajpet	0.39	0.49	3.47	2.66
District	0.55	0.42	2.92	2.40

Source: District Statistics at a Glance, 2011, Census 2011

The table below provides the snapshot of the vacancies among health service providers in the district. It may be noted that 2/3rd of the specialists and 17% of Medical Officers positions in the district are vacant. Thus, due to shortage of critical health personnel, there are hurdles in utilizing the sparse health infrastructure in the district. Similarly, there is a dearth of personnel, specifically at field positions (like Male Health Assistants, pharmacists, lab technicians and group D workers) and in the administrative sections. Filling these vacancies will be crucial for increasing the utilization levels of the public health institutions and the availability of emergency services within the district.

Table 48. Snapshot of vacancies in the Dept. of Health and Family Welfare (as of 05-2013)

Position	Sanction	Vacant	Position	Sanction	Vacant
Dental Surgeons	6	2	Senior Health Asst.(Male)	24	21
Specialists /Senior Medical Officers	33	20	Junior Health Asst.(Male)	76	43
General Duty Medical Officer	35	6	Junior Pharmacist	36	24
LCDRs	2	2	OfficeS uperintendents	7	6
Micro Biologist	1	1	First Division Assistant	32	19
District Nursing Officer	1	1	Second Division Assistant	29	11

Staff Nurse	63	7	Sr.Lab.Technicians	5	5
Block Health Education Officer	6	4	Jr. Lab Technicians	32	8
Lady Health Visitor	20	4	Refractionists	4	3
Junior Health Asst.(Female)	194	20	Group D	197	108

Utilization

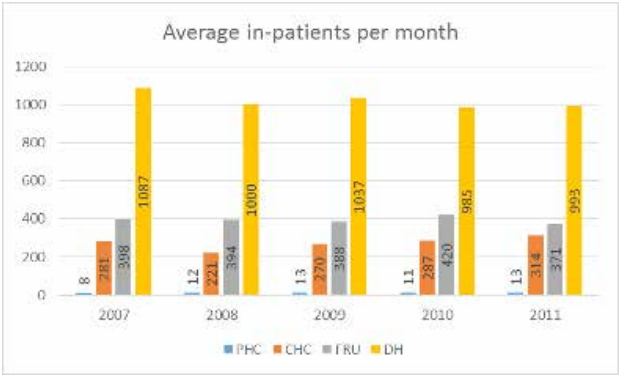
This section presents the trends in the utilization of different government health institutions in the district, based on data about outpatients, in-patients and number of deliveries reported in government institutions, provided by the District Health Office. The trends in the average outpatients registered per day in different types of government health institutions show that the load of out-patients has increased on the District Hospital whereas there is a slight decline of outpatients in FRUs and CHCs.

Photo 25. An In-patient ward in District Hospital, Madikeri

Similar analysis of trends in average in-patients registered per month in different types of government health institutions shows an overall decline in the number of in-patients registered. As expected, the District Hospital has the highest load of in-patients followed by FRUs and CHCs and lastly the PHCs. However, the heavy load of in-patients at District hospital (about 3 times that of FRUs) suggest that if infrastructure is improved at the taluk level (FRUs and Taluk Hospitals) and CHCs, the burden at the district level will be reduced and at the same time, improving accessibility at the taluk level. Further, there is scope for improving infrastructure at 24X7 PHCs for accommodating patients requiring in-patient services, rather than referring them to other FRUs.

Utilization rates of District Hospital

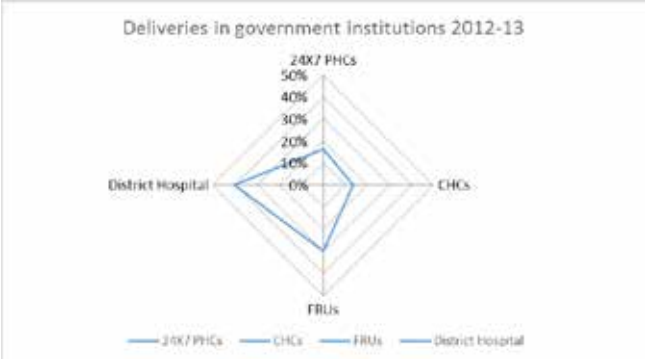
- The District Hospitalin Kodagu registered 17% of all out-patients in government institutions in the district.
- It registered 27% of all in-patients.
- On an average, the District Hospital registers 316 out-patients per day and 993 in-patients per month.
- 40% of the deliveries in government health institutions are held in the District Hospital



Graph 22. Trends in average in-patients registered per month in Kodagu

PHCs cover about 35% of the district's overall out-patients whereas CHCs and FRUs cover about 50% of the out-patients. The District Hospital alone caters to 17% of the total out-patients in the district. CHCs serve the majority of in-patients (42%) followed by the district hospital, which serves about 27% of the total in-patients. This again shows that the comparative dependence on the district hospital for serving in-patients is high in the district.

88% of the registered deliveries in Kodagu happened in government health institutions. This shows that the majority of people in the district are dependent on government health. The pie chart below presents the trends in institutional deliveries within government health facilities. About 40% of the deliveries in government health facilities happened in the district hospital whereas CHCs and PHCs together contributed to only about 30%.



Graph 23. Trends in deliveries in government institutions reported in 2012-13

5.8 Performance of various Health Schemes

Over the years, Government of India and Government Karnataka have started various schemes to create the demand for institutional health facilities among the people, especially in the rural areas. The National Rural Health Mission which started in 2005 has taken various initiatives in this regard. Besides starting various incentive schemes, it envisioned community participation in health monitoring and governance and created various positions and structures to promote it. Important among them are: a) the creation of the ASHA (Accredited Social Health Activist) is a female community health worker chosen for every 1000 people (500 in hilly and desert areas) in the rural areas to create awareness among the local community to involve in health planning and enhance the demand and accountability of health services in rural areas, b) the creation of a locally selected village level committee (a sub-committee of the local GP) to monitor, plan and implement village level health, sanitation and nutrition related activities (VHSNCs) and c) the establishment of the Arogya Raksha Samithi, a committee to monitor and implement activities of rural public health institutions like PHCs and CHCs. According to the standards defined by NRHM, the expected number of ASHAs, VHSNCs and ARS in Kodagu should have been at least 473, 296 and 36 respectively. From the table below, it can be seen that the number of ASHAs in Kodagu is significantly short of the standards prescribed by NRHM, specifically in the taluks of Virajpet and Somwarpet. It can be noted that these two taluks witness the majority of the overall maternal and infant deaths of the district. The presence of community level health workers like ASHAs in appropriate numbers may be crucial in early identification of diseases and reducing the preventable deaths in these taluks.

Table 49. Community health related information in Kodagu in 2011

Taluks	ASHAs required (Based on rural population)	ASHAs	VHSNCs	ARS
Madikeri	113	86	67	7
Somwar-pet	184	139	130	15
Virajpet	176	111	94	14
Total	473	336	291	36

Source: District Health Office, Kodagu

At the village level, another sub-committee of the GP, called the Village Water and Sanitation Committee (VWSC) is formed to address the water and sanitation issues of the village. Like the VHSNC, this committee works with the GP for creating awareness among the community towards safe sanitation practices and maintenance of safe drinking water in the village. Based on the Baseline Survey carried out by NBA in 2012, in 89% of the villages of Kodagu, such VWSCs were formed. However, only 35% were functional.

NRHM has also initiated various beneficiary schemes for guaranteeing better health outcomes as well as reducing out of pocket health expenditures. Utilization trends of these schemes provide indication of the effectiveness of such schemes in the district. The Janani Suraksha Yojana (JSY) is a cash incentive scheme and was started as part of NRHM to incentivize institutional deliveries and to reduce maternal and neo-natal mortality by providing financial help for the BPL households during the immediate days of pregnancy. Madilu kit is an initiative of the Government of Karnataka to incentivize institutional delivery and to provide essential materials (like bed sheets, sanitary pads etc.) for effective post-natal care of mothers and infants.

To be useful for the mothers and new born babies, the kit has to be distributed within 2 days of the delivery.
From the table below, it is evident that, while number of beneficiaries receiving JSY has only increased recently (about 54% of the live births), the coverage of beneficiaries under Madilu kit is lesser than JSY, but is showing increasing trends in the recent years.

Table 50. Trends in beneficiaries of JSY and Madilu Kits in Kodagu

Year	JSY	Madilu
2009	3794	2558
2010	3799	2968
2011	3699	3406
2012	3963	3696

Source: District Health Office, Kodagu

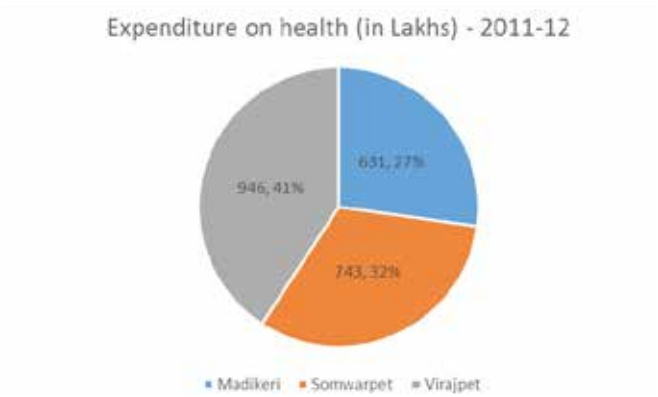
Taluk analysis shows that the number of JSY and Madilu Kit beneficiaries is higher in Madikeri taluk in comparison to Somwarpet and Virajpet taluks, wherein higher number of births as well as maternal and infant deaths are reported. Further, the number of JSY beneficiaries in Somwarpet shows a declining trend, which needs attention of the taluk health administration.

5.9 Per-capita Expenditure Analysis on Health Sector

This section presents the health related expenditures reported in the district government health facilities. The analysis in this section relates to the distribution of health expenditure benefits among the different taluks and among the different social categories in the district. The figure below presents the overall taluk-wise health expenditures in the district for the year 2011.

A state-wide study on NRHM conducted in 2011 found that Kodagu district's per-capita expenditure under NRHM in the year 2010-11 was Rs 102, and was the second highest in the state (preceded by Bengaluru Urban (Rs 110). The state average per-captia expenditure was Rs 76.

On an average, the district spent about Rs 418 per person, on health facilities. It includes all government expenditure for health, under different schemes of NRHM, expenditures by the ZP and the state (including salaries for staff, maintenance grants, and expenditure on drugs, both under planned and non-planned account heads).



Graph 24. Taluk-wise expenditure on health in 2011-12

It shows that the expenditure in Virajpet taluk is the maximum, contributing to about 41% of the total district's expenditures, followed by Somwarpet taluk. The table below presents per-capita expenditures on health in 2011 in the district. Even in terms of per-capita expenditures, Virajpet taluk showed the highest expenditure, followed by Madikeri taluk.

Table 51. Per-capita expenditures on health in 2011

Taluk	Per capita expenditure
Madikeri	430.62
Somwarpet	359.78
Virajpet	469.44
Kodagu	418.34

Source: District Health Office, Kodagu

5.10 PHC-wise analysis of RCH indicators

Improving health conditions of any region crucially depends on the availability of field level, disaggregated

and up-to-date information about status of health indicators. Kodagu district has attempted such an initiative by documenting the important indicators of health, beginning at the level of the PHC. The table below provides PHC-wise reproductive and child health statistics in the district. It allows for understanding the status of health and recognition of issues of concern at the PHC level. The table also shows the discrepancy of data, in terms of indicators used for the calculation of taluk infant and child mortality. That is, the calculations of health indicators of human development and other indices use a different methodology for estimation (as provided by the department of Human Development and planning), whereas the PHC-wise data of mortality provides a different set of indicators. Hence, the table provided below has to be used in the context of situation analysis at the local level, rather than the computation of indices. For example, Kanoor PHC in Virajpet registered the highest number of pregnant women suffering with Anaemia and had the highest number of infant deaths in the district. Similarly, Surlabbi and Hebbale PHCs in Somwarpet had the lowest full ANC coverage percentages, thus shedding light into the probable local issues affecting the overall health status in these areas.

5.11 Performance and Inadequacies of Health Care System

This chapter presented the status and trends in Kodagu's health, based on the analysis of its demographic characters, child and maternal health, nutritional issues, family planning and disease prevalence. The next sections presented analysis of the health infrastructure and expenditures in the district.

The analysis shows that the status of important health indicators in the district are better in comparison to that of the state. However, the chapter also highlighted the diversity in health condition of the different social categories of the district. Specifically, the higher incidences of infant and maternal deaths among the ST communities and the lack of health seeking behaviour among them are causes of concern. An integrated approach, covering aspects of sanitation, nutrition, safe lifestyles and medical services may be needed that targets the ST community specifically. Further, related aspects of coverage of target populations through various schemes related to nutrition, maternal and child health schemes were discussed. From these discussions, it emerges that special attention has to be provided to improving health infrastructure and coverage in Virajpet taluk of the district.

Fortunately, critical issues in health, like family planning, selective sex selection during birth, immunization, sanitation and prevalence of major communicable diseases can be treated as low priority issues in many areas of the district and hence, higher priority may be given to improving the overall health status of ST communities and reducing the incidence of maternal and infant deaths due to preventable causes.

The analysis of health infrastructure and their utilization highlights the gaps in infrastructure, medical transport and human resources in Kodagu. This seems to have resulted in burdening the District Hospital more than other referral units. Specifically, minimizing the acute shortage of HR in health and providing emergency care at Taluk Hospitals and CHCs should be the priority since this allows for better utilization of existing infrastructure and has maximum impact on improving the health status of the people of Kodagu.

Government Hospital, Madikeri

Table 52. PHC-wise details of RCH indicators

No.	PHC	Registered Pregnant Women	Pregnant women receiving full ANC	% of Full ANC	Registered women identified with Anemia	Total Deliveries	De
1	Sampaje	249	182	73.09	0	238	
2	Napoklu	398	296	74.37	2	363	
3	Murnad	323	294	91.02	2	312	
4	Cheyyandane	261	190	72.8	0	242	
5	Cherambane	282	250	88.65	2	250	
6	Bhagamandala	224	223	99.55	3	215	
7	Madikeri Urban	488	425	87.09	6	303	
	Madikeri	2225	1860	83.6	15	1923	
1	Surlabbi	49	31	63.27	0	47	
2	Hebbale	161	102	63.35	0	137	
3	Alursiddapura	174	139	79.89	0	149	
4	Biligeri	135	124	91.85	0	124	
5	Chettalli	280	263	93.93	5	283	
6	Kudige	501	463	92.42	3	472	
7	Kodlipete	389	379	97.43	0	351	
8	Gowdalli	191	182	95.29	0	182	
9	Madapura	157	129	82.17	0	152	
10	Nanjarayapatna	170	162	95.29	3	162	
11	Shanthalli	192	184	95.83	0	168	
12	Shirangala	118	100	84.75	0	103	
13	Suntikoppa	310	298	96.13	0	287	
	Somwarapet	2827	2556	90.41	11	2617	
1	Maldare	264	248	93.94	2	224	
2	Thithimathi	251	231	92.03	3	228	
3	Kuttandi	418	386	92.34	1	386	
4	Srimangala	137	137	100	6	136	
5	Kanoor	332	287	86.45	9	287	
6	Hudikeri	306	304	99.35	0	279	
7	Kakotuparambu	192	150	78.13	1	175	
8	Channayyanakote	263	218	82.89	1	241	
9	Balele	304	232	76.32	6	284	
10	Birunani	209	192	91.87	0	195	
11	Kannangala	320	320	100	0	300	
	Virajpet	2996	2705	90.29	29	2735	
	District	8048	7121	88.48	55	7275	

eliveries in Health Institutions	Live Births	Newborn children weighing less than 2.5 KG	Number of Children Fully Immunized	% of Full Immunization	Child Deaths	Maternal Deaths
238	238	8	201	84.45	4	0
361	357	18	405	100.00	5	0
312	312	2	311	99.68	4	0
242	242	1	220	90.91	4	1
248	250	4	242	96.80	4	0
208	215	17	135	62.79	3	0
303	301	4	267	88.70	7	1
1912	1915	54	1781	93.00	31	2
47	47	0	45	95.74	1	0
137	136	6	129	94.85	6	0
143	146	4	146	100.00	1	0
124	124	3	124	100.00	2	0
283	283	7	278	98.23	2	0
472	472	7	459	97.25	7	1
351	384	11	325	84.64	6	1
182	178	10	168	94.38	2	0
152	150	8	145	96.67	6	0
161	162	2	160	98.77	2	0
168	168	6	140	83.33	2	0
103	103	2	107	103.88	0	1
287	284	3	263	92.61	2	1
2610	2637	69	2489	94.39	39	4
210	218	15	204	93.58	5	1
228	227	15	246	100.00	3	0
386	386	8	378	97.93	4	0
136	133	0	126	94.74	3	0
287	282	10	284	100.00	10	1
279	279	3	264	94.62	3	1
171	174	6	38	21.84	2	0
236	224	9	213	95.09	7	1
284	275	14	269	97.82	6	0
195	195	1	194	99.49	0	0
295	301	6	264	87.71	5	0
2707	2694	87	2480	92.06	48	4
7229	7246	210	6750	93.15	118	10

CHAPTER -6

INCOME, POVERTY AND EMPLOYMENT

Green and Ripe Coffee Berries

CHAPTER 6.
INCOME, POVERTY AND EMPLOYMENT

"Development can be seen… as a process of expanding the real freedoms that people enjoy."

-Amartya Sen

6.1 Introduction

The third main component of Human Development after attaining better health and education is to lead an improved 'standard of living'. The component by itself is multi- dimensional, multi- sectoral making analysis and measurement of it, complex in nature. An attempt is made in this chapter to make an inquiry into various aspects of standard of living- income, employment, food security and poverty these aspects with reference to Kodagu district. This chapter analyses the structure of the district economy and the nature and patterns of livelihood that it offers to the people. It includes the analysis of district income, work participation rates and the occupational structure, food security status of the district. It also brings out the nature and extent of state intervention in labour market to generate adequate livelihood for the people.

Income levels as a livelihood indicator

Income is the total of all the salaries, wages, profits, interests, rents and interests, payments and any other form of money earned by an individual within a specified time period. Income is the function of consumption and savings capability of an individual. Income levels and the income distribution patterns have direct impact on the health, education and nutrition opportunities. The measurement of income is through the concepts of per capita income and gross domestic product (GDP). This indicator alone is not adequate to capture the development process as it does not account for the health, education, equitable distribution of income within a country, improving the longevity of human life and environmental issues such as degradation and pollution. However, higher per capita income levels are still very essential to enlarge capabilities, choices and well-being. Access to sufficient incomes helps to avoid starvation, escape preventable morbidity or premature mortality and undernourishment. The situation of income deprivation along with low longevity and educational attainment limit human freedom and choices and human dignity.

Measurement of income

Since independence, the Central Statistical Organization (CSO), Government of India has been estimating and publishing the national income and per capita income every year. Karnataka has been a pioneer in estimating district income and the first estimates were made available in 1960-61. The district domestic product (DDP) estimates at the district-level are, however, derived from the State-level GDP estimates. The present study has attempted to estimate the GDP for Kodagu district at the taluk-level. The data for the same have been gathered from the official records of the Kodagu district office of the State Directorate of Economics and Statistics. Compound annual growth rates (CAGR) were computed using the data available for the year 2004-05 and 2008-09. For estimating the taluk-level GDP (TDP) the same conventional classifications as adopted by the CSO and the State Directorate of Economics and Statistics have been adopted.

The taluk economy is classified into three sectors namely 1) primary, 2) secondary and3) tertiary sectors. The primary sector covers agriculture, animal husbandry, forestry, fishing, mining and quarrying. The secondary sector includes all manufacturing – both registered and unregistered, construction, electricity, gas and water supply. The tertiary or service sector comprises transport, communication, marketing including storage, hotels and restaurants, banking and insurance, real estates, ownership of dwellings and business services, public administrations and other services. Data on the important service sector activities namely health and education are not available individually but they are included in the "other services" category.

6.2 District and Taluk Income

The growth of the economy of Kodagu district and its taluks can be measured in terms of District Domestic Product (DDP) and Taluk Domestic Product (TDP) at current prices. The growth of the DDP in Kodagu district during the period 2004-05 to 2008-09 is presented in the

table below. It presents the sector wise Compound Annual Growth Rates of Gross and Net District Domestic Product (in Rs. lakhs) across the years 2004-05 and 2008-09 at current prices in Kodagu. In Kodagu, the total income namely District Domestic Product (DDP) grew at the annual compound growth rate of 6.81% (GDDP) and 6.91% (NDDP). Sector-wise, the primary sector's income registered the highest Compound Annual Growth Rate (CAGR) followed by secondary sector with 5.22% growth and tertiary sectors grew at the rate of 4.69%.

Table 53. Sector-wise growth indicators in Kodagu

Sl. No	Particulars	GDDP (in Rs. lakhs)		CAGR (%)	NDDP (in Rs. lakhs)		CAGR (%)
		2004-05	2008-09		2004-05	2008-09	
1	Primary sector	121586	192552	9.63	112862	180493	9.85
2	Secondary sector	32848	42364	5.22	28307	36938	5.47
3	Tertiary sector	153181	192638	4.69	141444	177353	4.63
4	Total	307615	427554	6.81	282613	394784	6.91

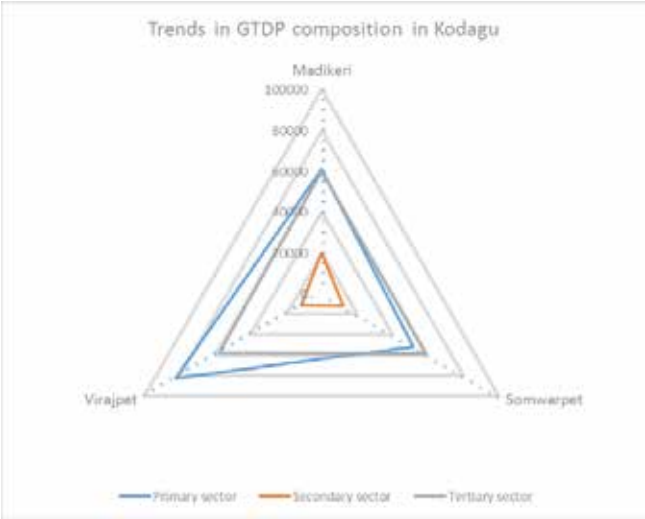
Source: Karnataka Human Development Report, 2005, Karnataka State Health Policy, 2004

This proves that Kodagu district is agrarian based economy. The taluk wise details of three sectors of the economy during the year 2008-09 at current prices revealed interesting facts as shown in the next table. It gives the taluk wise Sectoral Composition of Gross District Domestic Income for the year 2008-09 at Current Prices (in Rs. lakhs). This gives a comparative picture of the growth rates of the economies of Karnataka State, Kodagu district and taluks thereof. All three taluks of the district- Madikeri, Somwarpet and Virajpet's primary sector contributed profoundly (43%, 42% and 54% respectively) to the economy. Tertiary sector contributes on- par with the primary sector followed by lowest contribution from secondary sector in the district.

Table 54. Taluk-wise sectoral growth rates in Kodagu

Sl. No	Taluks	Primary sector	Secondary sector	Tertiary sector	Total (GTDP)	Gross per capita income (in Rs.)
1	Madikeri	61018 (43.38)	19985 (14.21)	59660 (42.41)	140663 (100)	90370
2	Somwarpet	51626 (42.16)	12394 (10.12)	58429 (47.72)	122449 (100)	54253
3	Virajpet	82424 (54.39)	11347 (7.49)	57772 (38.12)	151542 (100)	68914
4	District	195068 (47.04)	43726 (11.00)	175861 (42.00)	414654 (100)	68965
5	Karnataka state	5476376 (17.00)	8983274 (30.00)	16299999 (53.00)	30759652 (100)	53101

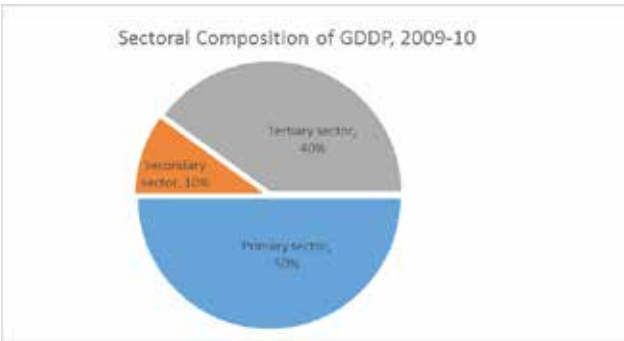
Source: DAG 2011
Note: Figures in parentheses indicates percentages to the total.



Graph 25. Radar graph of GTDP composition in Kodagu (2008)

The radar graph above depicts the GTDP (in lakhs) composition of the three taluks of Kodagu in 2008. From the figure, it is evident that the primary sector is the biggest contributor to GTDP in Virajpet and Madikeri taluks whereas, in Somwarpet, it is marginally lesser than the tertiary sector's contribution. In all taluks, the contribution of the secondary sector to the GTDP is very less in comparison to that of the other two sectors. Virajpet's contribution to the overall primary sector's GTDP is highest (Rs 82,424 Lakhs) whereas Madikeri's contribution to the tertiary sector's GTDP is highest (Rs 59,660 Lakhs) closely followed by the other two taluks.

These figures are in complete contrast with the state figures. Contribution from tertiary sector to the state's economy ranked first with 53%, followed by secondary sector with 30 % and least contribution from primary sector with 17%. This clearly indicates the declining growth of agriculture and allied activities at state level. In Kodagu district however, agriculture and allied activities have remained to be at the top priority for the economy.



Graph 26. Sectoral composition of GDP in Kodagu in 2009-10

Sectoral growth in the district- primary, secondary and tertiary

Kodagu is a rural region with most of its economy based on agriculture, plantations and forestry, as well as one of the more prosperous parts of Karnataka. This is due primarily to coffee production and other plantation crops. Paddy and other crops are cultivated in the valleys. Coffee processing is also becoming a major economic contributor. In recent years tourism has also begun to play a role in the economy. Eco-tourism, such as walking and trekking tours, takes advantage of lush scenery, numerous waterfalls and together with the concept of Home-stays is particularly very popular among the nation-wide urban nature lovers. Sectoral growth of the district can be studied through analysing subsectors i.e. primary, secondary and tertiary individually. The table below reveals interesting taluk-wise and sub-sector-wise trends in income generation in Kodagu district during the period of study.

Primary sector: As far as growth of the agricultural sector is concerned, Madikeri and Virajpet taluk has witnessed a remarkable growth of the 14.43% per annum. Major commercial crops of this district namely coffee, cardamom, Arecanut, banana which have contributed for growth of agriculture sector in the taluk as shown in the table below. It presents the Compound Annual Growth Rates of GTDP in the Primary Sector of Kodagu District 2004-05 and 2008-09

Table 55. CAGR trends in GTDP of primary sector in Kodagu

Taluk	Agriculture and Animal Husbandry	Forestry & Logging	Fishing	Mining & Quarrying	Total
Madikeri	14.43	7.66	15.88	-21.95	12.50
Somwarpet	8.51	8.25	14.45	-12.34	8.51
Virajpet	13.77	4.08	2.63	-36.21	12.67
Total	12.27	6.65	10.46	-18.48	11.43

Source: DAG 2011

Optimistic growth rates were noticed in the income generated in fishing sector. The district being home for rivers, waterfalls, many lakes and ponds, water bodies, fisheries is being sensed as a potential strategy for growth of primary sector in the district. It is a healthy development to study that mining subsectors during the period 2004-05 and 2008-09 were negative in the district as well as in all the taluks.

Secondary Sector: The secondary sector in Kodagu district has grown at the rate of 12.51% during the period 2004-05 and 2008-09. The secondary sector grew at the highest rate (18.1%) in Virajpet taluk and at the lowest rate (4.94%) in Somwarpet taluk. Among the sub-sector of the secondary sector, in the district the construction industry grew at the highest rate of 14%, followed by the registered manufacturing (13.85%) and unregistered manufacturing (9.57%) in that order. Electricity generation had lowest rate of growth, 4.61%.

The Importance of Railways to Kodagu

A long lasting and long- pending demand since many years to central and state governments by Kodava people is getting connected to other parts of the state through railways. To fulfill the necessities of improved high technology health facilities and higher education, people of Kodagu need to travel to Mysuru or Mangaluru. Therefore, introduction of railway lines between these triple cities could ease the commuting of several students and patients. Alongside, the migration of educated mass seeking jobs out of the district is increasing as there are few employment opportunities in secondary and tertiary sectors. To check permanent migration in the district, railway lines are essential facilitating travel of workers to nearby urban centers.

Additionally, the district produces the highest quantity of coffee in the state and contributes one lakh ton to the total 3 lakh ton production of the country and draws Rs. 2500 crores as foreign exchange. The well-established rail connections can boost coffee transportation to the main marketing terminals, airports and seaports at Mangaluru or Bengaluru cities. Presently, coffee is transported to Kochi or Bengaluru with considerable transportation overheads.

One more important aspect is the relationship of railways with tourism. Kodagu is popularly known as the Kashmir of South India and Switzerland of India due to its beautiful landscape. Tourism in the district contributes significantly to economy and employment generation and expecting further growth in future. The introduction of train in the district is capable of drawing national and international tourists in more numbers. The train connections help visitors to travel safe and comfortable and plan well their schedule.

Tertiary Sector: Taluk wise look at the growth of the tertiary sector showed that there was great variation in growth rates of the sector among the taluks, Somwarpet witnessing the highest growth rate of 13.44% and Virajpet the least (11.98%). The growth of public administration was highest in comparison with other subsectors in all the taluks of the district and the ratio ranged between 18.93% in Virajpet taluk and 11.85% in Madikeri taluk. This growth pin points to the recent trends in increased expenditure on public administration and development

Photo 26. Paddy cultivation in Kodagu

works. The real estate sector, ownership of dwelling & business services grew at high rates in the district (13.72%) irrespective of the taluks. This could be attributed to raising land prices and the booming growth of tourism in the district. Trade, hotels & restaurants and banking & insurance subsectors are growing almost at the same rate, 12.96% and 12.56% respectively in the district. Vital growth observed in growth of hotels and restaurants can be attributed again to the growth of tourism in the district. In summary, the tertiary sector of the district is growing at considerably high CAGR of 12. 52%.

In spite of good growth rates in the three sectors within the district, the district's contribution to SDP has declined from 1.41% to 1.35% over the years from 2004-05 to 2008-09. Except primary sector which shows a slight increase (from 3.43% to 3.56%) other two sectors- secondary (0.50% to 0.49%) and tertiary (1.15% to 1.08%) have shown declining contribution to SDP of Karnataka state.

6.3 Agriculture: Cropping Patterns, Irrigation, and Livestock

Land utilization pattern

The table below provides the status of land use patterns in the district. About 32.76% of the total geographical area in the district is covered with forests (1,34,597 hectares). Total land under agriculture forms about 37% of the total available land in the district. There are four major forest areas located within Kodagu: Rajiv Gandhi National Park (Nagarahole), Pushpagiri, Talakaveri and Brahmagiri Hills Wildlife Sanctuary. The forest belt of Kodagu is part of the Nilgiri Biodiversity Reserve and forms a crucial link in carbon fixation, regulating rainfall and weather patterns in the entire South Karnataka region.

Table 56. Land utilization patterns in Kodagu (2010-11) in hectares

Sl. No.	Particulars		Madikeri	Somwarpet	Virajpet	Total
1	Total geographical area		145045	99999	165731	410775
2	Forest area		47514	20849	66234	134597
3	Land not available for cultivation	Non-agricultural	4425	16278	3497	24200
		Barren	13550	8923	8537	31010
		Total	17975	25201	12034	55210
4	Other uncultivated land	Cultivable waste	7490	908	708	9106
		Permanent pasture	4109	3520	6255	13884
		Trees and groves	15469	1890	3675	21034
		Total	27068	6318	10638	44024
5	Fallow land	Current	1108	1344	1480	3932
		Others	1050	1225	1222	3497
		Total	2158	2569	2702	7429

6	Area sown	Net area sown	50330	45062	74123	169515
		More than once	5003	3056	6988	15047
		Total	55333	48118	81111	154562

The forested hilly terrain of Kodagu is ideally suited to Coffee which is the major source of agricultural income and a major driver of land use in the district. Further, the Coffee coverage area itself offers a unique green cover since Coffee requires extensive tree coverage. Kodagu's cultural traditional promotes forest and biodiversity conservation uniquely by the promotion of 'Devara Kadu', which is an auspicious piece of land, void of any human or cattle entry. Thus, it serves as a hotspot of local biodiversity, thus benefitting the nearby forests, plantations and paddy fields.
Cultivable waste in the district is about 2.2% of the total geographical area and is considerably less in comparison to other districts of the state. It denotes that the opportunity for further expansion of agriculture will be difficult to obtain in the district.

Kodagu's annual rainfall averages are presented in the table below. Kodagu's agriculture is solely dependent on rainfall. Farmers grow various types of crops depending on the amount of rainfall they receive in their region. Taluks of Madikeri and Virajpet grow similar crops while the crop diversity in Somwarpet is larger. The agricultural land use in the district is dependent on rainfall patterns as summarized in the table below.

Table 57. Rainfall and rainy days for year (in mm)

Sl. No.	Taluk	Actual annual average rainfall		
		2001	2006	2011
1	Madikeri	4191	4609	4514
2	Somwarpet	1184	2560	2333
3	Virajpet	1879	3082	2484
4	Total	2418	3418	3110

Source: Deputy Director, Agriculture, Kodagu

Agriculture is the main occupation of the Kodagu population and covers highest area in Kodagu. Coffee is the major commercial crop in the district, spread over an area of about 1 lakh hectares. Paddy is the principle food crop and traditional crop of the region, cultivated on an average of 37,000 hectares every year in the district. Th we cultivation of leguminous crops is practically nil. Somwarpet taluk is the only region in Kodagu district blessed with two water reservoirs- Harangi and Chakli Hole dams under the jurisdiction of Cauvery irrigation board. During 2011-12, these two projects irrigated around 2255 hectares of paddy in the taluk. Hence, the irrigation intensity in the district is very low.

Photo 27. Harangi dam in Somwarpet

Photo 28. Chiklihole Dam in Somwarpet

Land-holding patterns

As per 9th agricultural census data done during the year 2010-11, there are a total of 68881 agriculture landholders in the district cultivating in a total of 167861 hectares of agriculture land. The details on marginal, small, semi medium, medium and large land holding farmers are presented in the table below. Majority of the farming community in the district is marginal landholders (41%) and minor portion of large farmers (3.14%). The interesting point here is to observe that a meagre percentage of large farmers hold 22.55% of the cultivated area while high number of marginal farmers hold 8.33% of the total area. Small and marginal farmers together constitute 65.40% of the total landholders who own a total of 22.49% of the area.

Photo 29. Ripe Coffee berries

Coffee in Kodagu

Coffee is a plantation crop whose contribution to economy, employment, lifestyle and livelihoods of the Kodavas is immense. Kodagu is the second highest producer of Coffee, especially Coffea robusta variety in the state and country next to Baba Budangiri hills in Chikkamagaluru district. It is grown on an area of 1 lakh hectares in the district comprising 28,303 hectares of Arabica variety and 75277 hectares of Robusta variety. Revenue from coffee plantations took Kodagu high in the graph of richness in the country. Coffee Arabica variety is grown majorly in Somwarpet of the district whereas Robusta is grown prominently in Virjapet and Madikeri taluks. Coffee is taken up as a mixed crop or agroforestry with black pepper and cardamom.

Coffee crop cultivation practices require high precision and perfection making coffee plantations very sophisticated. For instance, frequent weeding is essential to get quality coffee seeds. The crop should be grown under the shade for which it is grown along with silver oak, fig and other forest tree species, and pepper crop as intercrop. The concept of agro-forestry system in Kodagu is very interesting as it covers 270 shade tree species making it one of the richest agroforestry systems in the world. The other major forest products of the district include fresh, pure and natural forest honey (Coorg Honey), Coorg oranges, famous for its distinctive taste and shrunken nature. Other major plantation crops grown are teak, rubber and cocoa.

Coffee cultivation in the district is also tied with the cooperative society movement in the district, which dates back to the pre-independence days. The district has numerous thriving cooperative societies that not only help coffee planters, but also helps other farmers, tribal communities and multipurpose initiatives.
Two small area studies in this report look at issues connected with Coffee cultivation.

There is acute shortage of agricultural labourers in the district which has led to elevated labour wages to get the farm work done. One more crucial issue is the lack of railway connections in the district which hinders the low cost transportation of agriculture inputs (fertilizers, seeds) and output (coffee, banana, spices) supply in and out of the district. These all factors contribute towards high cost of cultivation per hectare in the district thus making agriculture a costly affair.

Photo 30. Mechanization in Paddy cultivation in Kodagu

Table 58. Patterns of agricultural land holdings (numbers) in Kodagu (2011)

Taluk	Marginal (< 1 ha.)		Small (1-2 ha)		Semi medium (2-4 ha)		Medium (4-10 ha)		Large (10 ha)		Average land holding
	No	Area	No	Area	No	Area	No	Area	No	Area	
Madikeri	7083	3789	5542	4605	4605	12638	12638	7798	496	9025	2.39
Somwarpet	13549	6591	6226	3376	3376	9125	9125	8676	594	11055	1.93
Virajpet	7469	3611	5177	5474	5474	15009	15009	7302	1076	17773	3.05
Total	28101	13991	16945	13455	13455	36772	36772	23777	2166	37854	2.44

Source: Agriculture census 2010-11

Horticulture

Kodagu has a considerable variety of horticulture crops. Horticultural crops are grown on 34254.39 hectares in the district, covering about 22% of the total agricultural land in the district. The table below lists the major horticulture crops and their acreage in Kodagu in 2011-12. The major horticulture crops grown in the district are cardamom, black pepper, orange, banana, ginger, areca, cocoa and cashew. Other minor produces in horticulture include, floriculture, mango, vanilla, pineapple, sapota and jackfruit. Many of these crops are grown as mixed crops with coffee. Rubber crop can be seen only in some belts of Madikeri and Virajpet taluks.

Oil palm plantations can be seen more in Virajpet taluk and the area under this crop is getting extended day by day. It is replacing the area earlier used for paddy cultivation in the taluk, majorly due to raising prices and shortage of agricultural labour.

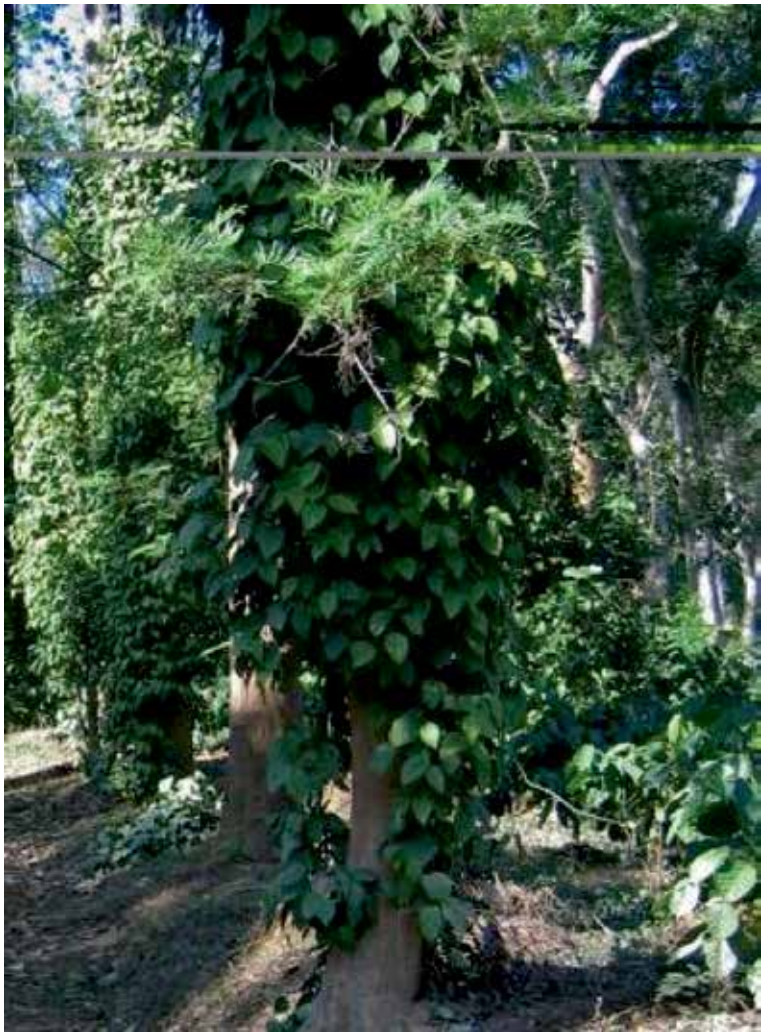


Photo 31. Pepper creepers in coffee estates

Table 59. Major horticultural crops grown in the district (2011-12) in ha

Taluk	Cardamom	Black pepper	Areca	Cashew nut	Banana
Madikeri	6016	3311	2275	1941	544
Somwarpet	2097	1794	276	-	567
Virajpet	263	5538	1287	52	830
Total	8376	10643	3838	1993	1941

Taluk	Orange	Lemon	Anthorium	Oil Palm	coconut	Ginger
Madikeri	416	184	22	25	771	335
Somwarpet	416	67	3	93	341	1241
Virajpet	444	42	-	478	505	471
Total	1276	293	25	596	1617	2047

Source: Deputy Director, Horticulture, Kodagu

District has got state's one and only certificate issuing apiculture training institute in Bhagamandala which is parting 'honey bee keeping' trainings to farmers across the state. It provides technical training to farmers and tourists who visit the district. There are 11 honey bee keeping centres in the district- Korangala, Bhagamandala, Gaalibeedu, Karike, Kopatti, Shanthalli, Maadapura, Jakkanahalli, Birunaani, Kedamulluru and in B. Shettigeri which fetches practical experience about bee keeping to farmers. The district is blessed with rich natural endowments, diversified flora and fauna creating an ideal environment for bee keeping. Bee keeping is a profitable additional farming activity to rural people which contributes to increase their income level.

Photo 32. Bee boxes to be distributed to beneficiaries

Table 60. Details of apiculture in Kodagu (2011-12)

TALUK	Production (Kgs)	Value (Rs/ Kg)	Income (in lakhs)
MADIKERI	40000	180	72.0
SOMWARPET	32000	180	57.6
VIRAJPET	15327	180	27.5
TOTAL	87327	180	157.2

Source: Deputy Director, Horticulture, Kodagu

Dairy and animal husbandry

As per the 2012 livestock census, there are 177378 different types of livestock in Kodagu district and there is a decline of 66109 animals in the district from 2007 census. Within the livestock population, cattle population is high (89131) followed by dogs 46724, pigs 17352, buffaloes 14443, sheep and goat 9386. Within the cattle population, 59926 animals are local breed and remaining 33205 are hybrid varieties. Taluk-wise analysis reveals that Somwarpet taluk has highest livestock population in the district.

For the care and protection of the above discussed livestock population, the district has got 75 veterinary institutes in which there are 7 veterinary hospitals, 28 dispensaries, 20 primary veterinary centres, each taluk has got one mobile veterinary clinic and 17 artificial insemination centres. Taluk wise analysis shows that Madikeri taluk has 17 veterinary care institutes; Somwarpet has 25 and Virajpet having highest of 33 institutes.

Table 61. Taluk-wise livestock inventory in Kodagu (2011-12)

Taluk	Cattle	Buffaloes	Sheep & Goats	Pigs	Rabbits	Dogs	Poultry
Madikeri	22133	3355	1360	8149	118	21758	87759
Somwarpet	41486	5504	4121	3475	237	19096	82637
Virajpet	25512	5584	3905	5728	195	24167	129125
Total	89131	14443	9386	17352	550	65021	299521

Source: Deputy Director, Animal Husbandry and Veterinary Services, Kodagu

Department of animal husbandry conducted model survey in the year 2011-12. It estimated that annually, 49.70 tons of milk is produced in the district in which 10.4 ton from local breeds, 24.5 ton from hybrids and 14.08 ton from buffaloes. As per this survey, average daily milk production from in milk local breed cattle is 1.94 kgs, from hybrids it is 5.46 kgs and from buffaloes it is 2.38 kgs. In comparison with state it is 2.22, 5.90 and 2.47 respectively. When dry animals are included in the analysis the average daily milk production comes down to 1.03 kgs from local breeds, 3.75 kgs from hybrids and 1.42 kgs from buffaloes. This survey reveals that Kodagu is lowest milk producing district in the state. Milk collection, storage and marketing in the district is carried out by Karnataka Milk Federation (KMF) and through many number of local supply chains. KMF has got 30 cooperative milk federations in the district, collecting around 40000 litres of milk daily and marketing around 35000 litres. KMF is operating a processing unit in Kudige village in Somwarpet taluk. Within 30 KMF milk cooperatives, 27 are operating in Somwarpet and 3 in Madikeri and none in Virajpet with 5400 registered members throughout the district.

Photo 33. Karnataka Milk Federation's milk processing unit at Kudige, Somwarpet

Photo 34. Fish being harvested in a private lake

Fisheries

Kodagu is rich with natural resources creating an ideal situation for fisheries farming in the district. The rivers flowing in the district namely Kaveri, Lakshmanatheertha, Barapole, Kootuhole are well known for fish farming. The district has two water reservoirs- Harangi, covering 1886 hectares and Chaklihole, covering 105 hectares of water area. The fish farming rights in these reservoirs are vested with the Department of fisheries and it is responsible for distribution of these rights to farmers. Along with these, there are 571 lakes of total 373 hectares area belonging to Zilla Panchayat Raj Engineering and 2500 private lakes with 248 hectares of water area in the district. With these many water bodies in the district, fisheries has got ample full of opportunities for farmers to generate additional income.

Department distributes 30,89,00 fish seeds (of 5 different varieties: Common Carp, Grass Carp, Katla, Rohu and Mrigal) to the growers annually and by yea-rend 2199.09 metric tons of fish production, worth Rs 879.64 lakhs is achieved. There are 395 full time, 1374 part time fish farming families in the district. At present there are three fish nursery centres across the district and one fish production centre in Harangi which are satisfying fish demands of the district. The only fisheries cooperative body named Shri Kaveri Fishers cooperative society (Ltd) Harangi is operating in the district with 165 members in the society. There are a total of 26 fish markets in the district. Promotion of fisheries is carried out by the department for increasing fish farmers and their income levels thus sustaining their livelihoods.

Animal husbandry in the district

Coorg is well known for its non-vegetarian culinary tradition. Pork, meat and fish are consumed and are part of the history, culture and tradition of Kodavas. Hunting of wild animals in forests was a tradition in Kodagu long back. Presently,, hunting is restricted to animals like wild pigs and rabbits. Pork forms an integral part of non-vegetarian gastronomy. Although the district has high demand for dairy and meat products, it stands last in cattle milk production and below average with meat production. Pigs, goats and poultry are not being grown on commercial scale at all. Most of the meat is imported from neighbouring districts and states to satisfy the demand of the district. There lies huge untapped potential for farmers to diversify their farming systems with animal husbandry.

Fisheries can be taken up in paddy fields. The abundance of natural grazing lands and fodder (through paddy) can be tapped for commercial cattle rearing. The major hurdles in the way of successful animal husbandry are the inadequate number of veterinary hospitals and improper veterinary care. The problem of marketing of the milk persists as the district lag behind in number and distribution of milk cooperatives. There were just 30 milk production cooperatives in Kodagu, including 27 in Somwarpet taluk and threein Madikeri taluk. One farmer felt that, due to undulations in the land topography, the Karnataka Milk Federation is not setting up extensive chain of collection points throughout the district. Timely effective intervention by Veterinary department is required to bring the district in the map of state animal husbandry.

Photo 35. Traditional dance of the Kodavas

6.4 Industries and tourism

Industrial enterprises

As per the economic census of 2005, there are a total of 17,222 enterprises in the district. When compared with state figures, this constitutes a meagre of 0.68% of the total enterprise in the state, thus identified as a 'low enterprise presence' district in the state. Around 64% of the enterprises (10943) operate in rural areas and remaining 36% (6279) operate in urban areas. High number of enterprise in rural areas is a good point to note here in terms of rural development and empowerment. Within the total enterprises, 3% of them are agriculture based with 39730 employees working in 48% of the rural based enterprises.

The contribution of industrial sector to GDDP of Kodagu district accounts to just 9.5%. Industrial sheds are established only in Kushalnagar area of Somwarpet taluk. A total of 1620 small industrial units are registered in the district providing employment for around 8639 members. Medium and large sized industries are completely absent in the district. Within taluks, Somwarpet recorded highest number of small scale industries (reason being Kushalnagar industrial area in the taluk) whereas Virajpet recorded lowest industries. Within the registered industries, food and narcotics production enterprises comprises 28% of the total enterprises registered and employs about 50% of the workers. Readymade clothing and garment enterprises is the second leading type of industry in the district.

The survey revealed that in Karnataka state there are a total of 25.38 lakhs enterprises while in Kodagu district it is as low as 0.73% of state enterprises recording Kodagu district as the lowest enterprise in the state. For every 1000 population, the enterprise density in the district is recorded to 31 while in state it is 48.

According to 4th economic census conducted during the year 1998, the district had a total of 15580 enterprises (8773 rural and 6807 urban) and when compared with 2005 census, growth rate of 10.5% in the total enterprise can be observed. At state level, there were 16.52 lakhs enterprises till 1998 and then up to 2005, the enterprise number has increased by 53%.

Tourism

As discussed earlier, the picturesque locale of Kodagu and its cultural lineage has recently begun to attract large number of tourists, interested in exploring various facets of the district. Tourism directly contributes to the growth of the economy, specifically in the tertiary sector including the trade, hotels and restaurants and the real estate subsectors. Due to the boom in tourism within the district, these subsectors grew at a high pace rate, thus accelerating the economic growth in the tertiary sector.
The uniqueness of tourism in Kodagu is that, tourists are attracted to the district, both for its natural beauty as well as its cultural events. The table below lists some of the major tourist spots as well as cultural attractions in the district.

Photo 36. Raja Seat in Madikeri

Photo 37. Omkareshwara temple in Madikeri

Table 62. Tourist attractions in Kodagu

SCENIC ATTRACTIONS	Cultural Attractions
KAVERI NISARGA DHAMA	Omkareshwara temple
DUBARE ELEPHANT CAMP	Talakavery and Bhagamandala
RAJA SEAT	Igguthappa temple
ABBI FALLS	Madikeri Fort
BRAHMAGIRI HILLS	The Kodava Family Hockey Tournament
PUSHPAGIRI WILDLIFE SANCTUARY	Kodagu Dasara
MALLALLI FALLS	Kaveri Sankramana
NAGARAHOLE NATIONAL PARK	Huttari festival
HONNAMMANA KERE	Nalknadu Palace
IRRUPPU FALLS	
CHELWARA FALLS	

At the micro-level, tourism, specifically, the concept of 'homestay' provides considerable supplementary income to coffee planters and profitable part time wages for the labourers of the district. However, better marketing and infrastructure, monitoring and regulation of restaurants, resorts and homestays can help in capitalizing the tourist demand in the district.

Homestays- a budding concept in Kodagu tourism picture

It is a form of tourism where a visitor rents a part of the house/ a room from a local household family. This facilitates the visitor to get familiar with the local lifestyle and long term stays also helps in improving the language skills. In the case of Kodagu, the busy routine of urban dwellers from metropolitan cities like Bengaluru is creating demand for homestays. During 2013, only 249 home stay units were registered in the district. It is estimated that there are more than 1000 unregistered homestays in the district. Homestay owners have to mandatorily maintain registers of the visitors by documenting their address, telephone numbers, vehicle registration numbers, PAN card and driving license details. Also they should compulsorily live on the premises and the number of rooms in the home stay should not exceed five. The activities would be considered as commercial. Those classified in the 'gold' category would have to pay an annual fee of Rs. 15,000 and those categorized under the 'silver' category Rs. 10,000 per annum to the district municipality.

Photo 38. A Homestay in Madikeri

6.5 Poverty alleviation

Poverty is a situation when a person is unable to get choices and opportunities, violating human dignity and lack access to basic facilities of life-overall an antagonistic situation to human development. The employment opportunities for the poor are also limited without any owned land to produce food for subsistence or having any paid job, and no possibility of getting any form of credit. All these factors indicate exclusion, powerlessness and insecurity faced by individuals, households and communities at large. These factors make them susceptible to vulnerability and violence making them to live in marginal environments and slums, without access to basic necessities of housing like clean water and sanitation (United Nations).

Poverty in Karnataka continues to be highest among the southern States. Incidence of poverty based on Planning Commissions poverty line, yields poverty ratio of 15.82 percent with 5.87 million poor in rural areas and 23.54 percent with 5.09 million poor in urban areas and 18.52% with 10.87 million poor for Karnataka as a whole in 2009-10. The district of Kodagu is better placed than many other districts in the state, in terms of overall existence of poverty. Though the district has a higher per capita income and lower incidence of poverty in the state, there are many areas of concern, which require immediate policy intervention.

BPL Households

Although the number of BPL cards is not an accurate indication of below poverty households in an area (due to the magnitude of inclusion and exclusion errors), it is an easy and homogenous indicator that can be used throughout the state for comparison of proportion of below poverty households. Hence, we use this approximate indicator for understanding the presence of BPL households within the district.

Table 63. FPS and Ration card details in Kodagu (2011-12)

TALUK	Anthyodaya cards	BPL Cards	% of Anthyodaya and BPL Cards	APL Cards	Total	Rural PDS Centres
MADIKERI	1312	21539	47.20%	22778	45629	57
SOMWARPET	1955	39638	60.09%	24366	65959	137
VIRAJPET	2351	42783	60.98%	25029	70163	99
DISTRICT	5618	103960	57.20%	72173	181751	293

Source: Food, Civil Supplies and Consumers Affairs Department, GoK

The above table gives a detailed inventory about the public distribution system in the district. There are a total of 293 fair price shops in the district covering all the villages in the district. There are 181751 ration card holders, out of which 103960 are BPL and Anthyodaya card holders (57.20%) and 72173 APL (39.70%) card holders in the district.

Land ownership

Poverty is closely related to ownership of assets, employment status and caste. In Kodagu poverty is primarily a rural phenomenon since more than 85% of the people in the district reside in rural areas. In rural areas, land is the main income generating asset. This proves a considerable handicap for the landless since only labour and its price (wage rate) determine their income status. The pattern of landholding distribution is different in all taluks.

The previous analysis of landholding patterns in the district shows that nearly 64.6 percent of farmers in the district are marginal and small farmers cultivating land holdings below two hectares. While 19 percent of them cultivate land holding between 2 to 4 hectares as semi medium farmers. Thus nearly 65 percent of the farmers in the district are comparatively resource disadvantaged small and marginal farmers. Somwarpet taluk has the highest percentage of marginal farmers (52%) along with very low average land holding (1.93 hectares) within the taluks. Virajpet is characterized with higher average landholdings followed by Madikeri taluk. The table below provides classification of landholdings based on social classes of the land holders. It shows the inequality of land

distribution among the different social classes, with the scheduled tribes owning the least amount of resource base in the district (both in terms of number of landholders and the area of land held). SC and ST communities in the district amount to 13.27% and 10.47% of the total population of the district respectively. However, in terms of land ownership, they together form about 5.75% of the total landholders in the district, totally owning about 1.75% of the total agricultural land in the district.

Table 64. Social categories of landholders in Kodagu (area in ha) in 2001

TALUK	Scheduled caste		Scheduled caste		Scheduled caste		Scheduled caste	
	Count	Area	Count	Area	Count	Area	Count	Area
MADIKERI	339 (1.68%)	240.10 (0.50%)	497 (2.47%)	577.74 (1.20%)	19325 (95.85%)	47370.43 (98.30%)	20161	48188.27
SOMWARPET	2012 (7.76%)	1488.61 (2.97%)	363 (1.40%)	250.89 (0.50%)	23560 (90.84%)	48379 (96.53%)	25935	50118.50
VIRAJPET	472 (2.07%)	289.10 (0.42%)	281 (1.23%)	152.34 (0.22%)	22032 (96.70%)	69113.53 (99.37%)	22785	69554.97
DISTRICT	2823 (4.10%)	2017.81 (1.20%)	1141 (1.66%)	980.97 (0.58%)	64917 (94.25%)	164863 (98.21%)	68881	167861.74

Source: District Statistics at a Glance, 2011.
Note: Total includes jointly owned and institutional holdings
Figures in parentheses indicates percentages to the total

Agricultural Wages

The analysis of land ownership in Kodagu shows a skewed resource distribution and hence, agricultural wages become a crucial element in the analysis of poverty in the district. With the perceived shortage of labour in Coffee plantations, agricultural labour opportunities in the district seem to be abundant with shortage of labour evident during the peak seasons. During such seasons, there is noticeable temporary migration of agricultural labour from neighbouring districts. Agricultural wages for non-permanent plantation workers in Kodagu goes through varied phases depending on the coffee cultivation cycle and the type of work. During the picking season, while agricultural wages raise to more than Rs 500 per day, while skilled labour wages reach up to Rs 1000 per day. However, considerable amount of agricultural land is also involved in cultivation of paddy and other non-plantation crops in the district. Thus, the average agricultural wages in the district is considerably lesser than the peak wage rates. The table below reports the average agricultural wage rates as reported by the department of statistics. It shows that the variation in wage rates received between male and female workers is very less. This is evident in the unique nature of agricultural labour employed in the district.

Table 65. Agricultural wages for male and female workers Kodagu (2011)

Taluk	Female	Male
Madikeri	216.0	220.0
Somwarpet	225.0	229.0
Virajpet	200.0	204.0
Total	213.64	217.78

Source: CPO, ZP, Kodagu

MGNREGA

To tackle the complicated problem of poverty in the country, central and state governments have implemented various schemes. The schemes broadly include programs to promote broad based growth and specific targeted initiatives to reach the poor. It is important to study the critical programs which are active till date and successfully implemented in the district. In this regard, the Mahatma Gandhi National Rural Employment Guarantee Act is probably the most important intervention. In 2011, MGNREGA was successful in creating 2.14 lakhs man-days for rural people in which 1.44 lakhs are utilized by men and 0.70lakhs by women.

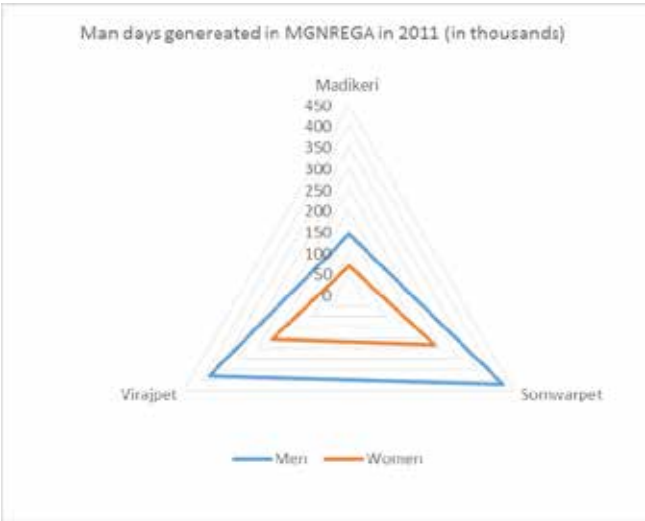
Table 66. MGNREGA in Kodagu (2011-12)

SL. NO.	Particulars	Madikeri	Somwarpet	Virajpet	Total
	MGNREGA				
A.	Men (man-days generated in thousands)	144	420	379	943
	Women (man-days generated in thousands)	70	234	209	513
	Total man-days generated in lakhs	214	654	588	1456
b.	Job cards issued	16618	21221	20844	58683
	Household demanded employment	4849	8556	7921	21326
	No. of persons/ households worked under MGNREGA	4710	8477	7900	21087
	No. of families availing 100 days of employment	92	339	295	726

Source: ZP, Kodagu

The number of rural households issued with job cards form about 35.30% of the total rural households. The highest job card coverage of households is in Somwarpet, followed by Virajpet taluk. Madikeri taluk has the least coverage of job cards. Somwarpet also leads in terms of employment provided to households, among the households having job cards.

The radar graph below captures the taluk trends in the provision of labour for men and women in Kodagu for the year 2011-12. While women have consistently procured less days of work in comparison to men in all taluks of the district, Somwarpet taluk has been more successful than other taluks.



Graph 27. Man-days generated in MGNREGA in 2011-12

6.6 Employment and Unemployment

Income generation through adequate and remunerative employment is essential to make a direct attack on poverty. Adequate income is essential to ensure a decent standard of living and record economic growth. Availability of Income and employment is largely influenced by the structure of the economy. A diversified structure is able to generate alternative employment opportunities for a growing labour force.

Trends in Work Participation

Population pressure on employment is low in Kodagu since the decadal population growth rate (2001-2011) in Kodagu was as low as 1.1%. Decadal growth rate in employment in the district was 4.52%, which shows that there are considerable job opportunities for the existing population in the district. Further, as noted earlier, with high demands for agriculture labour, provision of labour (especially agricultural and plantation labour) in the district is comparatively easier. However, whether employment leads to accumulation of income and expansion of opportunities for human development is something to be explored at a deeper level. For this purposes, this section begins with understanding trends in different categories of employment in the district. In all, employment can be classified on the basis of the nature of work, namely, main workers represented by cultivators, agricultural labourers, artisans, other workers and marginal workers.

The table below gives work participation rate in Kodagu district and state during the years- 1991, 2001 and 2011. Work participation rate has always remained higher than the state average in the district which indicates high rate of employment in the district. It is been increasing across the years from 1999 (47.11 %) to 2011 (50.30 %). The percentage of marginal workers within the total population is also increasing but far lower than the state averages. While share of agricultural labourers is decreasing in Kodagu, "Other labourers" which also includes plantation workers has remained high.

Table 67. Trends in work participation rates in Kodagu (2011)

Particulars	District			State		
	1991	2001	2011	1991	2001	2011
Work participation rate	47.11	48.55	50.30	42.01	44.51	45.62
Percentage of total workers within total population	45.11	45.11	46.66	38.51	36.61	38.27
Percentage of marginal workers within total population	2.01	3.41	7.24	3.51	7.91	16.00
Percentage of agricultural labours within total workers	14.42	4.31	5.43	29.91	26.51	25.67
Percentage of home based industries within total workers	0.55	0.91	0.50	1.91	4.11	3.28
Percentage of other workers within total workers	65.98	86.8	86.42	42.81	40.21	47.44

Source: Census of India, 1991, 2001 and 2011

Employment in Indian army

The Kodavas contribution to the Indian armed forces is something noteworthy. Field Marshal K.M. Cariappa and General Thimayya are probably the most famous among Kodava men in the Indian army. There was the well known Coorg Regiment in the army as a mark of respect to the contribution of Kodavas. The usage of guns, arms is not very new to Kodavas. They grow up with guns at their homes. When a child is born, a gun is fired in the air to pass the message on to friends and neighbors. Similarly, when there is demise of a Kodava they fire two bullets at air passing the message. The Kodavas are allowed by law to carry guns either with license or with the use of exemption certificate. They actually worship their guns during the festival 'KeilPoldu'. The people's right to carry arms was originally granted by the Kodagu kings, who did not maintain a standing army, but called on the people to fight when an invasion threatened. This right was formalized by the British when they exempted the Kodavas from the Arms Act.

Even today, a large number of aspirants from the district participate in the Army and Airman recruitment rallies held in the state. Special recruitment drives and coaching for National Defence Academy entrance examinations etc are given high priority and support within the district. There is a sainik school in Kudige, Sompwarpet, as well. While there is no Indian army regiment housed in Coorg, it is the long standing wish of the region to establish one, to recognize the valiant efforts of the district in the noble task of nation protection.

The next 4 tables depict the workforce available in the district across the taluks with specific information on main and marginal workers. It is very interesting to note that in rural areas, female workforce is higher than male workforce in all the three taluks and vice versa in urban areas. In Madikeri taluk, total working population in rural areas is 31% of male and 41% of female. In urban areas it is 28% of male and 23% of female work population available. In case of Somwarpet taluk, total working population in rural areas is 31% of male and 42% of female. In urban areas it is 30% of male and 20% of female work population available. In Virajpet taluk too, the trend continues same as in Somwarpet taluk.

Table 68. Gender-wise Work participation rates in Kodagu (2011)

Taluk	Male	Female	Total
Madikeri	68.720	40.340	54.42
Somwarpet	69.510	42.210	55.66
Virajpet	70.600	43.660	56.99
Total	69.69	42.25	55.81

Source: Census 2011

Thus, Kodagu district has higher percentage of female work force than the state average.

Table 69. Work participation Rate- total and marginal workers in Kodagu (in %)

Particulars	Total and main workers			
	2001		2011	
	Total	Main	Total	Main
Kodagu district	48.56	92.94	50.30	92.76
Karnataka State	44.53	82.28	45.62	88.30

Source: Census 2011

The proportion of main and marginal workers within the total workers revealed interesting facts. The main workers constitute nearly 93% of the total workers which is a good indication of the employment levels in the district. Within the main workers, the cultivators accounted for 10 percent. The labours working in plantations are considered under employment in other activities.

The proportion of female workforce within the main workers is around 35 to 37% in all the taluks. In case of marginal workers, the highlighting point is to note that proportion of female workers within the total workers is above 50%. Most of the part time works are attended by female working population in the district.

Another useful indicator of gender-wise participation in the economy is the proportion of working age population involved in employment. Among the total working population of men, about 70% are either main or marginal workers whereas this ratio is about 42.25% among women. The highest work participation rates within the district is observed in Virajpet, both among men and women.

Table 70. Total workforce -main and marginal workers in Kodagu (2011, in %)

Taluk	Main Workers				Marginal Workers				Total working Population			
	Rural		Urban		Rural		Urban		Rural		Urban	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Madikeri	28.96	34.77	25.50	20.99	2.52	5.89	2.81	2.69	31.47	40.66	28.32	23.68
Somwarpet	29.28	37.90	28.65	18.57	1.74	3.75	1.23	1.21	31.02	41.65	29.88	19.77
Virajpet	30.39	39.30	28.83	20.38	1.10	3.35	1.86	2.26	31.48	42.64	30.69	22.64
District	29.61	37.66	27.41	20.13	1.69	4.12	2.08	2.15	31.30	41.78	29.49	22.28

Source: Census 2011

Table 71. Main and marginal workers in Kodagu (2011, in numbers)

Taluk	Main Workers					Main Workers			
	Male/ female	Cultivators	Agricultural labourers	Household activity	Other activity	Male/ female	Cultivators	Agricultural labourers	Household activity
Madikeri	Male	2122	1469	219	38103	153	467	64	3105
	Female	1052	1245	146	21275	310	567	21	2875
	Total	3438	2714	365	59378	463	1034	85	5980
Somwarpet	Male	9534	4545	350	46774	414	472	62	2541
	Female	4409	4789	146	28025	486	862	49	2137
	Total	14394	9334	496	74799	900	1334	111	4678
Virajpet	Male	2139	1622	265	57043	143	117	29	2114
	Female	1015	1483	119	34295	221	122	79	2775
	Total	3342	3105	384	91338	364	239	108	4889
District	Male	13795	7636	834	141920	710	1056	155	7760
	Female	6476	7517	411	83595	1017	1551	149	7787
	Total	21174	15153	1245	225515	1727	2607	304	15547

Source: Census 2011

A cross sectional data over the years 2001 and 2011 revealed that within the 48.56% of the total population, 93% of them are main workers in 2001. The trend has remained almost same with minimal change of 2% in the total working population. When compared to state figures, main workers population is higher than state average of 82% in 2001 and 88% in 2011.

6.7 Child Labour

The problem of child labour has impeded the development of human resource in the country. Child labour is another facet of human vulnerability in Kodagu district. According to legislation, child labour refers to those labourers who are working in hazardous or non-hazardous occupations in the age group of 5-14 years. The major reasons for child labour are the existence of poverty and lack of adequate employment opportunities for the adult workers. They work to fill up the income gap of the family. Poor economic status had made the parents to engage their children in child labour. Poverty had driven children to take to labour with meagre sums to supplement their family incomes.

As per 2005 reports, Zilla Panchayat of Kodagu had instructed all the concerned authorities to take necessary steps to eradicate child labour as per the observations of the Supreme Court and laws enacted by the government. Despite laws; rules and regulations child labour continue to exist in the district. Child labour being the most serious social evil, a fresh review was recommended to end the problem in the district. A serious stand taken by courts towards child labour was hoped to bring a new dimension to curb the problem. The child labours are mainly found in plantations and in domestic helps at the houses of rich planters in the district.

There is one rehabilitation school in Murnad, Madikeri taluk. From 2003 to 2013-14, 125 children were rehabilitated to this school, with the majority of the children rehabilitated from work places in Madikeri taluk (75), followed by Virajpet (32). The school is closed from Feb 2014, due to lack of child labourers in the school.

There were 96 hazardous work places each in Madikeri and Virajpet taluks and 132 in Somwarpet taluk. The owners of the units had declared that they would not employ child labourers. A serious concern about the reporting aspect of child labour is that, they do not take into account the child labourers engaged as domestic

help. Similarly, children engaged in construction sector are hardly reported. Their constant migration also becomes a barrier in effective reporting.

The discussion here points to the fact that it is not possible for the Department of Labour to eradicate child labour on its own. Therefore, a collective effort on the parts of all concerned is needed. Teachers and parents too have responsibility to eradicate child labour. While higher literacy rate could help the district in curbing child labour, eradicating this social evil depends on the social consciousness of the citizens.

6.8 Concluding Remarks

The analysis in this chapter points to specific gaps in the social, economic and environmental areas in the district, which needs the attention of policy makers. Though Kodagu district ranks third in per capita income in the state, the growth trends in income dimension in recent years is not quite inclusive and holistic. Some of the major points for consideration are listed here.

Railway Connectivity: While establishing rail routes can meet the long standing demand of the region, yielding to reduced transportation costs, increased connectivity and mobility leading to spur in economic activity, this has to be cautiously decided, based on the extent of biodiversity and natural resource loss and the feasibility of equitable economic gains.

Issues with agriculture: Cultivation of paddy seems difficult financially, mainly because of the increased input costs, shortage of labour, shortage of farm yard manure, and wild animal menace (elephant attacks). The shift of farmers from organic to conventional (high use of chemicals and fertilizers) is also a contributing factor for increased cost of cultivation. Thus, the cultural ties associated with traditional agricultural practices over the years are vanishing gradually. The noteworthy are the chorus songs of paddy transplantation workers, the 'NatiVota' known as wetland sprint, in which youth would take part with great elation.

Farm mechanization is still in nascent stage in the district due to limitations with land topography/ undulations which limit the operation of machines in fields. These factors raise the concerns of local land owners about the sustainability of their agriculture; thus imposing the idea of selling/contracting out their land or converting the farm to residential plots. The department of agriculture should consider these local issues in their strategies to implement agricultural policies.

Strengthening secondary and tertiary sector: Kodagu's economy is driven by the primary sector. Though it is true that the district is blessed with agriculture congenial environment, it is equally important to develop other sectors for a healthy and stable economy. Fluctuations in the coffee crop in terms of production problems, marketing and price variations can shake the entire economy. Therefore, the need to identify other potential activities which can be taken up in secondary and tertiary sectors in the district helps to balance the sector dependencies within the economy. In this regard, allied agricultural activities like fisheries, apiculture, animal husbandry, dairy development and floriculture (Anthorium) etc have to be encouraged, keeping in mind the local environmental and social factors. Further, with its temperate climate and comparatively well connected telecommunications, Kodagu is an ideal location for the promotion of Business Process Outsourcing (BPO Units) and Knowledge Process Outsourcing (KPO) units.

Strengthening the other sectors of the Kodagu economy is also of primary concern to guarantee equitable human development in the district. The analysis of land holding patterns shows an extremely skewed asset distribution that hinders the economic growth of deprived social classes within the agricultural sector of the district. Further, Kodagu is also known for its complicated land tenure practices. Thus, land redistribution in the short run will not be a feasible option for the upliftment of deprived classes. Hence, from the perspective of social equity, improving the secondary and tertiary sectors should be of immediate concern for policy makers.

Improvement of infrastructure can help in the establishment of more industrial areas in the district. Equally, developing the service sector of the district can be given importance for creating employment opportunities to the qualified youth in the district. With raising number of educational and professional institutions in the district, job opportunities created within the district can prevent migration of skilled professionals from the district as well boost the local economy.

Labour structure in the district: The declining employment potential in the district is equally an important area of concerns. Employment in the district is still primary sector oriented, with secondary and tertiary sectors contributing relatively negligible proportions. Further, the district displays migration of skilled labourers and in-migration of plantation labourers. In this direction, monitoring of the inward and outward migration, period of stay of migrants in the district, problems encountered by both labours and planters need to be assessed.

The policy effort should expedite institutionalization of labour market facilitating both planters and labourers in the district. A standard fare should be established and labour record to be maintained both by planters and labours. The intermediary role played by maistries/ jeep drivers in getting labours to and from the estates should be well defined. Informal labour sharing mechanisms can be encouraged with incentives through SHGs and other forms of group organizations. Issues like mechanization in coffee plantations, given the hilly terrain of the district need to be taken up by coffee board and other research institutes.

Poverty: Though incidence of poverty in Kodagu district is considered as one of the lowest in the state, there are a total of 69578 families who are below poverty line. Since poverty in Kodagu district is more a rural phenomenon, it is largely concentrated among marginalized rural communities, such as marginal farmers, agricultural labourers, SC and ST communities. Also the district has got considerable tribal population who lack access to basic necessities like education, health, nutrition, proper housing and sustainable livelihoods. This resource poor population should be considered in the vision while framing the policy and target overall upliftment of them. The high per capita income of the district cannot be considered for assessing poverty situation since plantation incomes can heavily skew these figures.

Tourism: Kodagu has got its own niche in tourism. It could be a potential way forward to drive the economic growth in the district if the sector is well organized and executed. It is possible to generate substantial employment and income by development of tourism sector. Now a days, mushrooming of homestays throughout the district can be assessed in both positive and negative terms as most of them are not registered and not conducting business as per the regulations. The tourism of the district needs appropriate advertisement and publicity as well as stricter monitoring for quality standards to further its development. The intervention is needed in the form of maintaining these historical/ tourist places in terms of cleanliness and visitor safety would be an added advantage. There is tremendous demand for luxury hotels as well as budget hotels. There is also demand for well-trained tourist –guides.

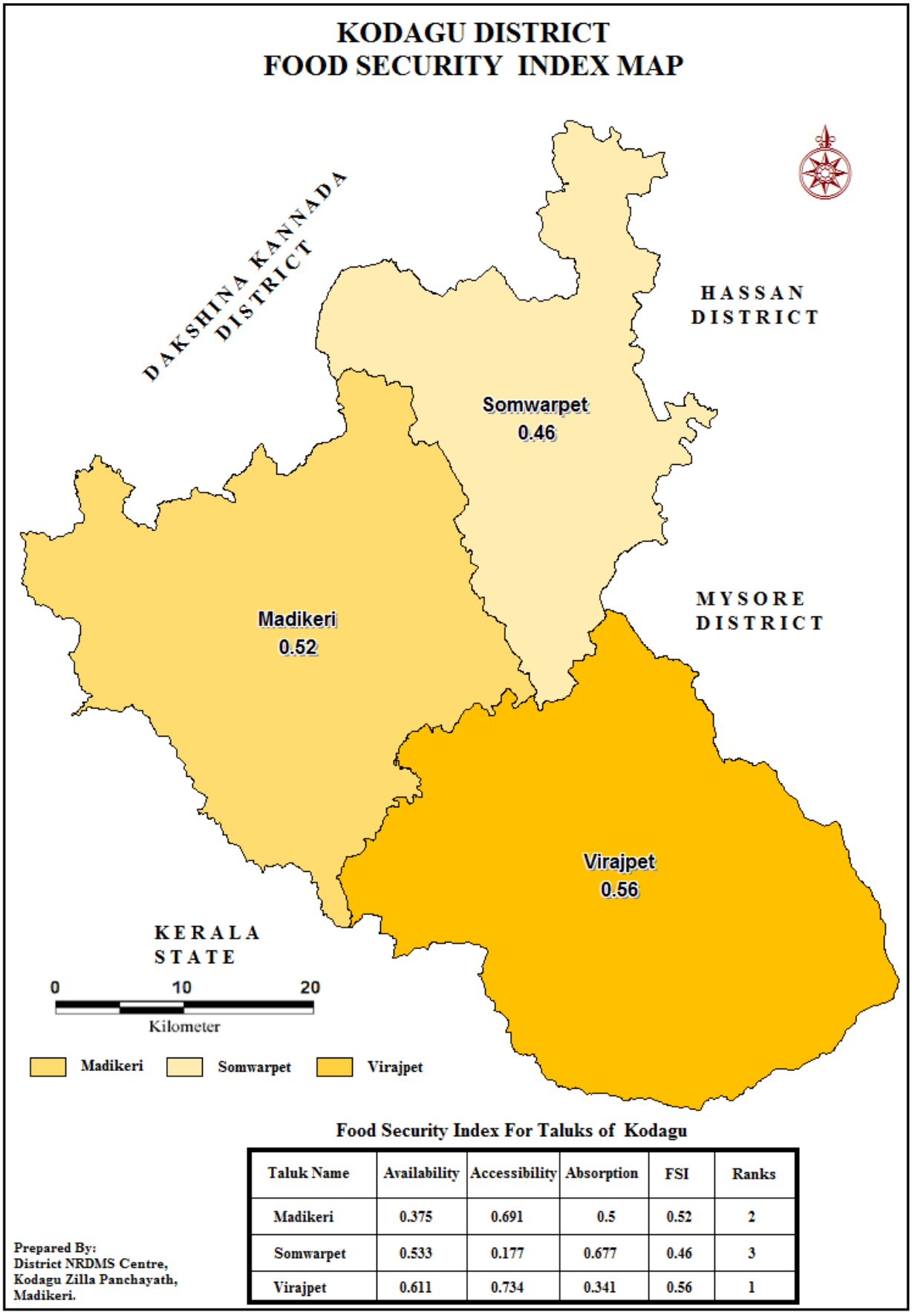
6.9 Small area study: Relationships between Coffee, land use and tourism in Kodagu

Introduction

Kodagu is a region with immense natural beauty and cultural diversity. The picturesque coffee plantations of Kodagu are the most noticeable hallmarks of the district, together with the Kodava coat of arms. In the recent decades, Coffee has also transformed the socio-economic dynamics of the district and is organically linked to Kodagu's growing tourism sector, serving as ubiquitous image of Kodagu in the nation.

Thus, the economy of Kodagu and the associated socio-political processes that trigger development are all basically driven by coffee production and its prices. Hence, this small area study looks at the dynamics of coffee growing in Kodagu and analyses its impact on land use and tourism in the district. The small area study analyses the trends in Coffee production and prices and qualitatively links these trends to other related processes like changes in land use and the growth of tourism and homestays in the district. Data for this study comes from database on Coffee of various years, published quarterly by the Coffee Board of India. Qualitative primary data for the study was collected through semi-structured interviews with Coffee planters and homestay owners.

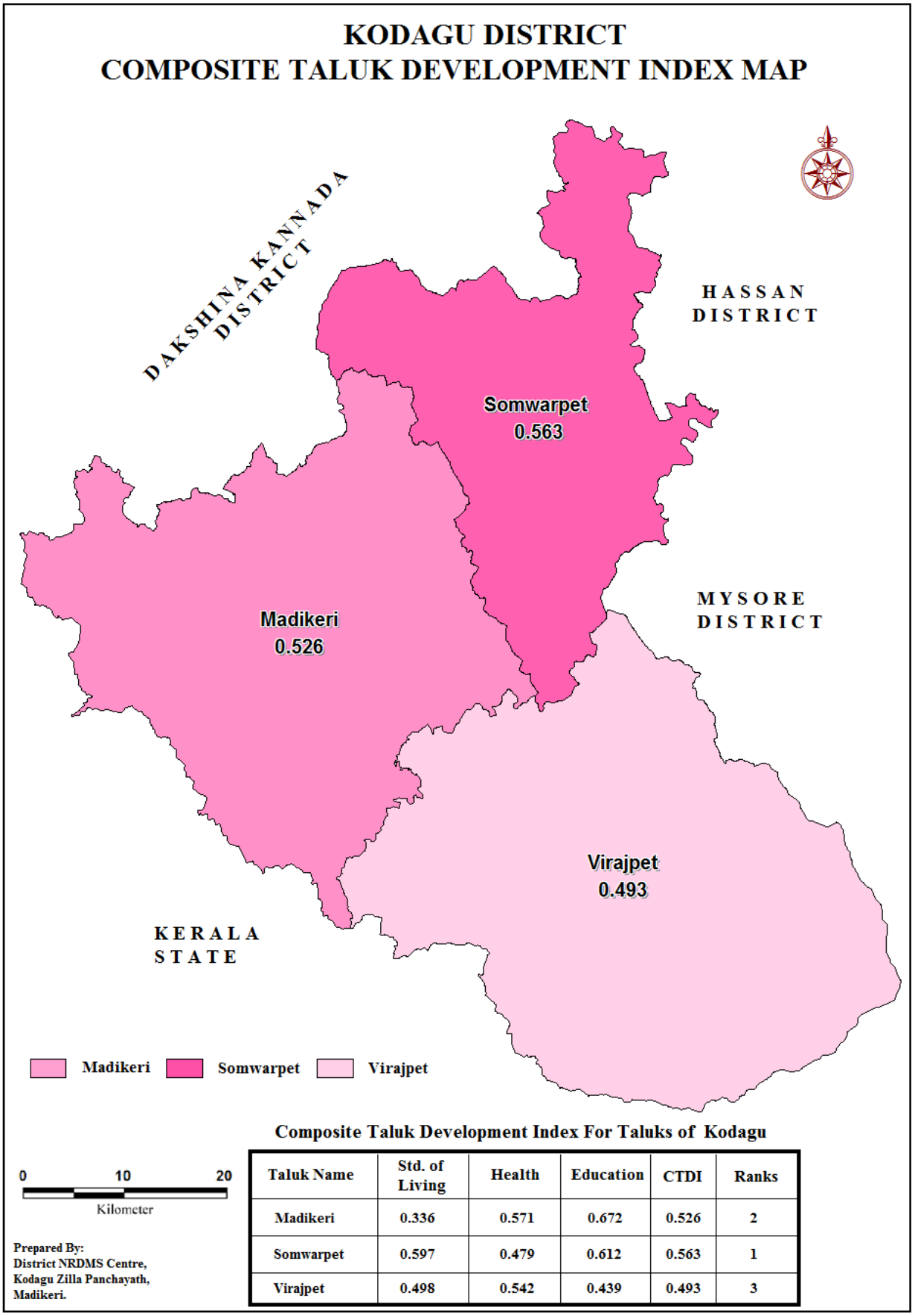
Photo 39. A road covered by coffee plantations on both sides



Food Security Index For Taluks of Kodagu

Taluk Name	Availability	Accessibility	Absorption	FSI	Ranks
Madikeri	0.375	0.691	0.5	0.52	2
Somwarpet	0.533	0.177	0.677	0.46	3
Virajpet	0.611	0.734	0.341	0.56	1

Map 6. Food Security Index in Kodagu



Composite Taluk Development Index For Taluks of Kodagu

Taluk Name	Std. of Living	Health	Education	CTDI	Ranks
Madikeri	0.336	0.571	0.672	0.526	2
Somwarpet	0.597	0.479	0.612	0.563	1
Virajpet	0.498	0.542	0.439	0.493	3

Map 7. Composite Taluk Development Index in Kodagu

Coffee cultivation in Kodagu

The Muslim saint Baba Budan brought Coffee to India through a pilgrimage to Mecca in the seventeenth century and planted it in Bababudangiri in Chikkamagaluru . Coffee plantations were started in Kodagu by the British in the 1800s and from then on, Coffee has transformed the Kodagu landscape permanently making it the "Coffee cup of India". Today, the revenue from coffee production has transformed Kodagu into one of the richest districts of India (based on per-capita income).

Traditionally, two varieties of Coffee: Arabica and Robusta are grown widely. Among them, Arabica is more valued than Robusta. Arabica grows in higher altitudes only while Robusta (robust) grows in lower altitudes and is resistant to pests and weather. Robusta plant lasts for about 30 years and starts to fruit earlier, whereas Arabica takes long time to yield, but lasts more than 60 years. Arabica yields are lesser in comparison to Robusta. Cultivation is easier in the case of Robusta, in comparison to Arabica. Initial costs of cultivation is higher for Arabica. Once the plantations start yielding (after 4 – 5 years of planting), labour requirement stabilizes. It requires at least 7 – 8 years before a new plantation starts yielding substantially. Coffee was grown in 4,09,690 hectares in India , out of which 56.1% (2,29,658 ha) was grown in Karnataka. About 50% of this total cropping area is located in Kodagu (1,04,780 ha) accounting to about 25% of the total cropping area of coffee in the country.

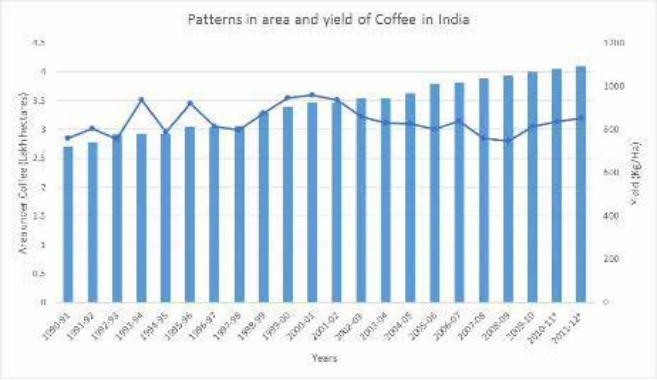
Since 2010, about 3 lakh metric tons of Coffee is produced in India annually, of which 70% (more than 2 lakh metric tons) is produced in Karnataka. More than 50% (more than 1 lakh metric tons) of this produce comes from Kodagu, amounting to 1/3rds of the total coffee production in the country. About 73% (76727 Ha) of Kodagu's coffee plantation area has Robusta. In the remaining 27% (28053 Ha) of the Coffee planted area, Arabica is grown. In contrast, percentage share of Arabica plantations is more in Chikkamagaluru and Hassan. About 75% of the total coffee area is held by small land holders (< 10 ha), in which marginal land holders (< 2 ha) own 37% of the total coffee area in the country. However, in Karnataka and Kodagu, the largest share of land under coffee is under land holdings between 4 – 10 ha (about 25%) with 68% of the total land under coffee held by small land holders (< 10 ha).

Kodagu's coffee yields are higher than that of the national average. While productivity depends on amount of fertilizers used, cultivation practices, labour, local biodiversity, rainfall and other ecological factors, profits are largely decided by the largely un-regulated international coffee market.

Coffee production of India forms a small share (3.89%) of the total world coffee production. India's contribution to the total world export of coffee also is a small share of 5.16%. India's annual turnover in Coffee exports is about Rs 4500 crores (since 2011) and between Rs 1,30,000 – Rs 1,50,000 per metric ton. Including re-exports, at least 2/3rds of the Coffee produced in India is exported. About 3 lakh metric tons are exported annually from India, of which about 30,000 – 40,000 metric tons are imported from other countries in various forms. Italy, the Russian federation and Germany are the leading importers of Indian coffee in the recent years.

India's coffee consumption in 2011 was about 1 lakh metric tons and is growing at a rate of 4% - 5% annually. South India's share is more than 70% of the total coffee consumption in India.

The price of Coffee is decided internationally at the London and New York Stock exchanges. Arabica futures are decided in the New York stock exchange. Robusta futures are decided in London. An analysis of coffee acreage, production and yield throws interesting insights about the dynamics of the coffee economy and its impact on Kodagu.



Graph 28. Patterns in Coffee area and yield in India

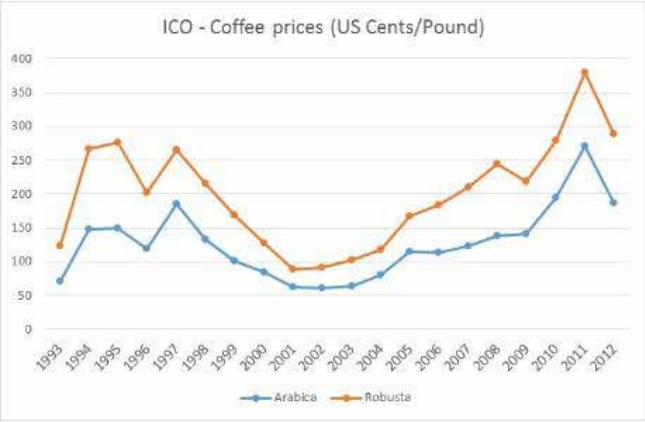
The figure shows that while there are slight increases in the total area put under Coffee in India, the yield per hectare has mostly remained stagnant since the 1990s. Further, as the table below shows, Kodagu's picture is not drastically different. Although the yield per hectare in Kodagu is higher than the national average, the area under coffee as well as its yield do not show large increasing trends.

Table 72. Patterns in Coffee area, yield and employment generation in Kodagu

Year	Area (ha)	Yield (Kgs/ha)	Average daily employment
2007-08	103325	1000	254001
2008-09	103325	1030	254001
2009-10	103580	1139	254628
2010-11	103580	1057	254628
2011-12	104780	1098	257578

Source: Database on Coffee, Coffee Board

The table also shows another important component of the coffee production which is labour usage. Coffee plantations in the district provide employment to about 2.5 lakh people (about 46% of the population). Growing coffee in Kodagu is largely dependent on labour since mechanization is not feasible in its hilly terrain. Since area under coffee hasn't shown large increases, daily employment provided in the district because of coffee also does not show positive/negative trends.



Graph 29. Trends in international Coffee prices

The graph above shows the fluctuation of coffee prices in the international market (Based on the data from International Coffee Organization). While coffee prices had plunged between 1998 and 2005, they had shown remarkable increase till 2011, when the prices fell once again.

From the above analysis of coffee production, the following issues emerge for the economy of Kodagu. The land under coffee, production and yield per hectare do not suggest increasing trends. Thus, the profitability of coffee is fully dependent on the market prices. Further, since at least 2/3rds of the coffee is exported, the local production is exposed to and affected by international prices. Since India's share in production itself is very low, Indian planters are price receivers and hence are vulnerable to fluctuations in the market. Coffee generates labour to nearly half the population of the district, but is also restricted to an almost constant demand of 2.5 lakh labour employments per day. Thus, the economy of Kodagu as well as its socio-economic fabric is considerably dependent on the coffee economy.

Socio-economic impacts of coffee markets

Individual coffee planters who are exposed to the above vulnerability say that this aspect of coffee cultivation is difficult for the traditional Kodavas to cope because they see coffee growing as a way of life. One planter commented: "We don't know anything else, other than growing Coffee".

Terms like profit margin, value addition, niche markets, cost reduction, increase in productivity etc are not fully practical in the hilly cultivation tracts of Kodagu, where other critical issues like labour migration, losses incurred due to labour debts, uncertainties of monsoon and elephant attacks require more attention and planning. Further, the traditional Kodava life is more close and friendly to nature, accepting things the way they are and making a life out of it. The exposure to world markets, opening of the economy, the diversity of economic activities are new things and Kodavas are coping to understand and adopt to these changes.

Organic Coffee, although known widely is not experimented much in Kodagu. One planter's wife tried to grow organic coffee in a small patch in their plot, but cannot make her labourers understand the importance of not using chemical fertilizers and pesticides. Further, planters are vary of the certification process, pricing and niche markets available for organic coffee.

The static nature of the coffee economy has forced migration of young educated Kodavas to seek better opportunities abroad and in cities like Bengaluru and Mysuru. However, land ownership is retained with them. Hence there is a growing trend of absentee landlord-ship (seen with the numerous Estate Managers who maintain other people's estates together with their own). One planter mentioned an interesting aspect of such migrating

Photo 40. A Homestay inside a coffee plantation

generation. He said that when the price of Coffee is high, the young Kodavas suddenly take a lot of interest not only about their plantations, but also about nature and tourism and make plans to invest money around the plantation. However, when the price falls or when the production is hit, they cannot withstand the uncertainty and the absentee landlord-ship continues.

Thus, while coffee still is the major driver of the Kodagu economy, various experiments have been made to generate supplementary incomes to withstand the loss and sustain until a better price/better year comes along.

The rise of tourism and home-stays in Kodagu

The origins of the sudden raise of tourism in Kodagu had to do with the dangers of going in the Chamarajanagar/ Gundlupet route to Ooty, during the days when Veerappan was active in those forests. As tourism developed, people of Kodagu began to recognize that it could be a sustainable supplement to their incomes, affected by the fluctuation in coffee markets. Further, tourism in Kodagu was also benefitted by the growing IT industry and the resulting pressures of the modern workplace in Bengaluru.
Historically, homestays began to crop up from 1994 when there was a price crash in Coffee and although having guests pay for the hospitality offered to them is against the Kodava culture, the planters have grown used to it.

The structure and regulations of the homestay business can be summarized below.

- Homestay is essentially a house where the owner stays.
- Homestays have to be registered with both 'Coorg Homestay Association' and the Karnataka Dept of Tourism. They have to renew registration every 3 years.
- Homestays should provide only local cuisine. They should not sell/provide liquor.
- Homestays should have clean rooms, bathrooms and toilets and have all safety precautions against fire and animal attacks.
- The homestay has to be inspected regularly and licenses have to be renewed.
- The guests' information and registration records have to be maintained diligently.
- Homestays with more than 5 rooms aren't treated as a home-stay but as a commercial operation. Homestay owners pay a lump sum 'homestay tax'. Homestays are exempt from luxury taxes as well.

Since Homestay regulations are strict, there are only about 150 homestays that are actually registered with the Coorg Homestay Association, while more than 1000 odd illegal homestays are active in Kodagu. Seeing the success of the homestay model of tourism, there are other numerous lodges and hotels that claim to be homestays. Further, high end resorts and luxury hotels have started their businesses, whose range of services are inspired from the homestays.

Homestays have complimented and are complimented by the lodges and restaurants. Routinely, both of them refer tourists to each other, during peak seasons. Further, homestays have contributed to the development of complimentary services like Taxi and Cab services, hospitality services etc. Homestay owners now employ various methods to attract niche clientele for their businesses. Some homestays market solely by word of mouth and personal networks, whereas some operate through social networking sites like Facebook. Some homestays don't advertise on all websites and prefer to maintain relationships with previous customers, thus guaranteeing that illegal activities within the homestays can be prevented.

A planter from Virajpet explained that for most planters, homestays are only a way supplementary incomes since most guests come during holidays and weekend alone. The income from homestays, though substantial, can never match the income from Coffee, during its good years. In troublesome years, homestays and other supplementary crops can help the planter to bear the losses in Coffee. Thus, a planter mentioned that homestay construction activities were initially noticeable only in years where there was a drop in coffee prices and now, all since planters recognize the additional benefits

Photo 41. Cardamom plant

of having homestays in their plantations, more and more homestays are beginning to appear in the district.

Changes in land use patterns

From the perspectives of the people interviewed in this study, land use in Kodagu is changing in three aspects.

1. Land use changes related to urbanization and tourism in the periphery of towns and main roads.
2. Agricultural land use changes related to prices and labour situation.
3. Changes in specific types of land: Encroachment of forests and land notified as Devara Kadu

Urbanization is proceeding at a rapid pace in and around Madikeri town, other small towns and on the road sides (mostly on the high-ways), since planters are preferring to shift from plantation homes to houses in town vicinities. Because of such urbanization and constructions related to tourism related activities (land conversion for sites, restaurants, villas and commercial uses), there is fear of loss of ecological balance. One planter mentioned that, it was unheard off, that, in a place like Madikeri, water tanks have to haul water ('from below') in summer for these buildings. He asserted that a situation like that of Uttarakhand is waiting to happen in Madikeri as well, due to rampant building activities in hilly areas of the town.

Within agriculture, the major changes in agricultural land use happening over the course of the last couple of decades are as a result of fluctuation in Coffee prices and labour issues. The following changes are the most dominant changes observable in agriculture in Kodagu.

1. Inter-cropping of pepper, cardamom and citric fruits to cope up with uncertainty in coffee prices.
2. Reduction in paddy growing areas (Wet-lands) due to the perceived shortage of labour, elephant attacks and non-profitability of paddy cultivation.
3. Higher density of citric fruit (Oranges, Lemon etc) cultivation, principally as a supplementary income strategy. However, the acreage of citric fruits fluctuate heavily due to the frequent disease attacks against these plants that may wipe them out.

The inter-cropping of other plants (like pepper and cardamom) is mostly to deal with price fluctuations in Coffee. Pepper and Cardamom form considerable part of the planters' income in Kodagu today. Wet-lands are now being converted to Rubber, Acacia and Arecanut. Further, traditional rearing of cows is getting reduced, because of labour issues and cultivation costs. This also affects the prospects of cow rearing in the district and hence, plantations depend on other districts to get farmyard manure.

Conversion of pastures and reserved areas near villages for housing sites is a controversial issue in Kodagu. The influx of migrants – labourers, petty businessmen, agents and middlemen has created population pressures on the available non-agricultural land in Kodagu. Together with this, the stringent laws on forest lands puts additional pressures.

Conclusion

The small area study on coffee production and the related issues in Kodagu yielded interesting insights into the inter-relationships between different aspects of the Kodagu economy. While policy makers concentrate on developing tourism within the district, the homestay owners see tourism as mainly a supplementary activity. However, tourism itself (through the network of lodges, hotels, resorts, groceries, gift shops, private transportation agencies, accounting and other supporting activities) is a much larger enterprise in Kodagu.

Maintaining the right balance between economic and environmental sustainability, the showcase of authentic

Kodava culture and modern tourist facilities, creation of inclusive and sustainable opportunities while maintaining the supplementary nature of hospitality business in the economy are issues where deep insights and participatory processes are needed in the process of devising tourist policy and related regulatory processes.

The non-availability of additional land for coffee cultivation, the stagnant yields of coffee and the related stagnant demand for agricultural labour in the district point out to difficult times ahead for continued inclusive economic growth in the region. The study thus reiterates the need to innovate and diversify the economic growth activities in Kodagu, beyond agriculture and allied activities and the related tourism activities.

6.10 Small area study: Socio-economic status of labourers in Coffee plantations of Kodagu

Introduction

Coffee cultivation is the mainstay of Kodagu's economy. Over the decades, the area under this crop has increased considerably and today, more than 1 lakh hectares of land in the district is under coffee cultivation. Coffee cultivation in Kodagu is unique in the sense that, it is largely dependent on labour since mechanization is not feasible in its hilly terrain. Thus, labour issues play a critical role in the production of coffee as well as the economy of Kodagu. Further, as seen from other chapters in this report, the availability of dependable labour in the district, the social and health aspects related to the plantation labourers are vital from the aspect of overall human development of the region.

This small area study tries to examine the issues connected to plantation labourers in Kodagu using key informants and analyses the structure of labour in Kodagu and the inter-relationships between the coffee economy, asset ownership and the socio-political processes of the district to derive insights into devising sustainable livelihoods for the population of the district.

Labour in Coffee cultivation in Kodagu

The table below shows the area under Coffee in Kodagu, its yield and average daily employment provided through coffee cultivation. Coffee plantations in the district provide employment to about 2.5 lakh people (about 46% of the population). Further, since area under coffee hasn't shown large increases, daily employment provided in the district because of coffee cultivation also does not show large variations.

Table 73. Patterns in Coffee area, yield and employment generation in Kodagu

Year	Area (ha)	Yield (Kgs/ha)	Average daily employment
2007-08	103325	1000	254001
2008-09	103325	1030	254001
2009-10	103580	1139	254628
2010-11	103580	1057	254628
2011-12	104780	1098	257578

Source: Database on Coffee , Coffee Board

Structure of labour in coffee plantations

Although mechanization has started in coffee plantations around the world (specifically in Robusta plantations), due to the undulations in Kodagu, mechanization has not succeeded here. Hence, from the perspective of plantation owners, dependence on labour for critical activities of coffee production is inevitable in the district. Planters say that at least in the peak season, they are at the mercy of the labourers.

Hence, Kodagu displays a complicated system of incentives and opportunities for almost year-round labour to encourage labourers to be available for the planters whenever they need, and at the same time, create a level playing field among different types of labourers. Further, for the sake of clarity in this chapter, plantation owners can be classified informally into three categories: private plantation companies, medium-large coffee planters and small coffee planters. These 3 categories of plantations operate by employing labourers using two types of labour arrangements.

Labour arrangements

The first type of arrangement is the permanent labour, wherein, the labourers stay inside the plantation itself, in what are called 'line houses'. In this arrangement, all labourers are paid a fixed daily wage of Rs 195 per person (during 2013-14) and are provided with all basic amenities and job security like Group Insurance, Provident Fund, specified yearly holidays, fixed timings for work etc. The minimum wage rates, the mandatory deductions, savings and employer contributions are based on the Plantation Labour Act. Labourers recruited in this process are termed as plantation workers and are not considered as agricultural labours according to the Census definitions. Further, in some cases, this sort of

Photo 42. Coffee drying activity in a coffee plantation

formal registration of labourers may not be implemented and still labourers may be taken as permanent labourers through other formal and informal contracts. The education of the children of the labourers, the provision of food through the public distribution system (through BPL cards) and regular health check-ups of the working labourers are to be covered by the planter himself.

The second type of labour arrangement is the on-demand labour. This is also called Changuli locally. In this arrangement, the planter does not have to pay extra benefits to the workers and gets them to work only when required. The labourers are free to negotiate the work and wage patterns in this arrangement. Thus, the labour wages, work arrangements and other incentives for this type of temporary employment varies according to seasonal demand and skill of the labour. It ranges between Rs 300 to Rs 1000 (during peak season and for works that involve pruning the trees etc).

The large private company plantations seem to adopt the permanent model of labour arrangement since it provides a better way of planning and investing among different plantations. Further, the plantation managers in individual plantations are given the responsibility of labour management. These plantations use the on-demand labourers only when required (and during the peak season mostly) and hence, on-demand labour is not available in these plantations throughout the year.

Medium-large planters generally choose a combination of permanent and temporary labourers, with a minimum set of permanent labourers. This strategy reduces the administrative burden of the planter and allows them to provide a more regular employment for temporary labourers. Further, medium-large planters may not officially enrol all of their permanent labourers under the Plantation Labour Act, thus allowing more flexibility in labour operations.

Small planters generally do not have a choice but to opt for temporary labourers or informal permanent labourers since the overhead costs of maintaining plantation labourers may be too expensive for such farmers. In terms of exposure to uncertainties of labour availability, this group is the most vulnerable. This category of planters may lose out to attract labourers since they cannot provide the same wages, incentives and the number of days of employment as much as the company plantations and medium-large plantations,

Most inter-state migrant labourers seem to prefer permanent labour (formal and informal) arrangement and are common in private company plantations. Further, field visits confirmed that the recent migration of North Indian labourers into Kodagu prefer this kind of labour arrangement. This allows them immediate social security, food and shelter and the planters prefer them because they are new and may not be as costly as the labourers of other social classes. More recently, even local planters have begun employing these labourers.

The local/native labourers and temporary migrants from neighbouring districts usually find the temporary labour arrangement a better option for them because they have the liberty to choose between different plantations and the wages vary according to the type of work and the demand for labour in the specific time of the year. The temporary labourers are connected to a Maestri, who arranges for work and for travel of the labourers and acts as a middle-man between the labourer and the planter.

Photo 43. Line Houses inside coffee estates

Photo 44. A labourer picking coffee

The role of the Maestri

The Maestri is generally, a senior labourer or an elder person who does not work as an actual labourer. He is generally also the transporter of labour. The Maestri system has existed since several decades in Kodagu. The ubiquitous Jeep is used for transportation of labour from the place of their residence to the plantation. The Maestri acts as the middle-man between the planter and the labourer. It is the responsibility of the Maestri to arrange for labour for which he/she gets commission, and often times from both the planters and labourers. Labourers are brought from neighbouring districts (from taluks like Hunsur, H D Kote and Periyapatna in Mysuru district) as well during peak seasons.

The small area study did not find sufficient evidence to conclude whether the Maestri system was benign or problematic for labourers; although some studies have documented cases where Maestries exploit both the labourers as well as planters. The labourers interviewed in this study said that labourers aren't bound to a Maestri and can work with any planter/Maestri directly. However, labourers usually continue to work with one Maestri because he/she generally groups labourers from a neighbourhood together. The interview with a Maestri revealed that although the Maestri gets commission from both the planter and the labourers, he had the responsibility of taking care of the labourers as well and make up for absentee labourers by searching for additional labourers. Further, he explained that increasing competition among Maestries also means that he cannot charge exorbitant commission rates.

The transportation of labourers from their residence to the plantation can be dangerous since the jeeps generally pile labourers and some times travel long distances to arrive at far away plantations within the district.

Shortage and Uncertainty of labour availability

The planters perceived multiple reasons for shortage and uncertainty of labour supply in the district. The widespread prevalence and addiction to alcohol among the labour class, lack of willingness to do manual labour, the provision of alternative petty employment opportunities, government welfare schemes and migration to cities were the often cited reasons for labour shortage and the lack of dependability on labourers. Planters complained that the current generation of labourers are not dependable and are prone to lying, petty stealing and eloping without repaying loans. Further, the planters identified that labour availability is getting scarce in particular plantation operations like shade trimming, pruning and weeding. Planters are also concerned about the influences of different social groups involved in plantation labour, petty trade and other services.

> One planter explained his woes with labourers. Labourers demand for hefty loans from planters, that they can never repay through their salary. Due to the lack of choice, the planters provide such loans and engage the labourer. Usually, such labourers leave in the middle of the loan period and join a different planter. In such cases, the loan becomes the problem between the old and the new planters rather than the labourer.

Although tribal labourers are much more efficient and skilled than any other labourers, they suffer majorly from alcoholism. A tribal family cannot be expected to work for more than 3 days in a week irrespective of the wages given to them, since they would be inebriated during the rest of the days. However, even this situation is not problematic since the quality of their labour when they are actually working is much better than the others. Tribal labourers are a must for some operations like 'pruning of trees' and 'shade trimming'. Planters acknowledge that their skills cannot be matched in climbing trees and honey collection. New and unskilled labourers have to be watched closely because they may accidently clean up healthy coffee plants/trees as well.

However, labourers take a different stance on this issue. The interviewed labourers agreed that labour availability has reduced and is uncertain. However, they felt that the current generation of labourers definitely cannot work along the same lines of their previous generations due to the lack of nutrition in their current lifestyle. Similarly, they feel that some of the migrant labour (especially the North Indian migrants) did not have the skills to work efficiently in the plantations.

Further, some labourers felt that plantation labour is a dead end job in itself because, although the wages are pretty good, the labourers do not see any growth and possibility of moving up in the social ladder. For example, although working as permanent labourers provides job security, at the end of 20 years of work, the family can hardly save enough to own a piece of land for themselves. The complex land rights regime in Kodagu, the booming real estate prices and the challenges faced by small farmers in Kodagu provide significant obstacles for labourers to 'move out of their class'.

A plantation labourer works under MGNREGA since labour is provided near her house and on days when the planters don't provide labour. She also mentioned that ration provision from PDS reduces cost of living considerably and helps her save more money than before.

Based on their different perceptions, planters use different strategies to find temporary labour for each year of cultivation in Kodagu. Medium-large farmers have a basic set of permanent labourers and another set of on-demand temporary labourers. Some planters agree to provide long term loans (of 1 – 2 years) with labourers so that the labourers become answerable to them. Some planters provide higher wages, whereas some planters commit to provide other perks, like regular provision of non-vegetarian food and alcohol to their labourers.

The small and marginal farmers have the greatest problem of arranging for labourers because are fully dependent on temporary labourers alone and need them only on specific days. Hence, they usually have to wait for holidays for labour among big planters or snatch the labour from them, by paying the labourers more than the bigger planter or by topping of the wages with more perks. A large majority of such farmers have left coffee cultivation and have migrated to cities looking for better opportunities. In their place, a new breed of plantation managers have taken over, who manage multiple such plantations.

Some planters try to optimize the cultivation practices by reducing different steps of cultivation (like pre-pruning activities, multiple weeding cycles etc). In most cases, planters also plan ahead and provide advances to labourers and Maistries to reserve them for their plantations. A planter interviewed for this study said that although not strictly necessary, he provides yearlong labour for a big set of labourers so that he keeps his connection with them throughout and thus discourage them to opt for labour in other plantations. This kind of panic responses from multiple planters in an area creates competition among and may conjure artificial scarcity for labourers.

Socio-political aspects of plantation labour

Labour in Kodagu has always been multi-cultural. Other than tribal and non-tribal local labourers, migrants from Tamil Nadu and neighboring states were frequent in the area. This is also connected to the fact that Kodagu was under the Madras Presidency during British rule and during the brief period of Kodagu as in independent state, it had close-knit relationship with Madras. The migration of labourers from Kerala is not a new phenomenon. However, migration of other types of people: small land holders, petty businessman, agents, contractors etc has been increasing in the last couple of decades. These days, there are migrants from West Bengal, Bihar and Assam as well, mostly because of the un-rest in those areas rather than demand from Kodagu. These people find Kodagu as a safe-nest in comparison to their home-lands.

The residences of the interviewed labourers (both line houses and villager houses) had access to basic amenities. All the houses visited had electricity supply, toilets and tiled roofs. Houses of non-permanent labourers had space for kitchen gardens where coffee was grown and this was a supplementary income for them, together with wages. The labourers living in line houses did not state anything wanting, about their places of residence. However, considering that the small area study was based on key-informants methodology, the inference on housing conditions of the labourers should not be generalized to the entire district.

Many people in Kodagu feel that the cultural identify of

Kodagu is threatened because the presence of labourers with many ethnic origins. They cite ethnic tension related crimes to support their opinion. But at the same time, many of them are comfortable with the diversity. They assert that Kodagu has been multicultural for a long time and culture and customs don't seem to collide with each other. They cite the fact that most people in Kodagu are multi-lingual and don't see a problem with that.

One planter felt that because of the influx of migrant labourers from places like Assam (who hardly know Kannada/English/Hindi), it is very difficult to understand their needs and especially medical problems when they require medical treatment.
The issue of alcohol addiction among tribal communities were highlighted by many planters. While they acknowledge that planters condone this vice and in some cases perpetuate it to attract labourers, this issue is critical and felt that something has to be done immediately.

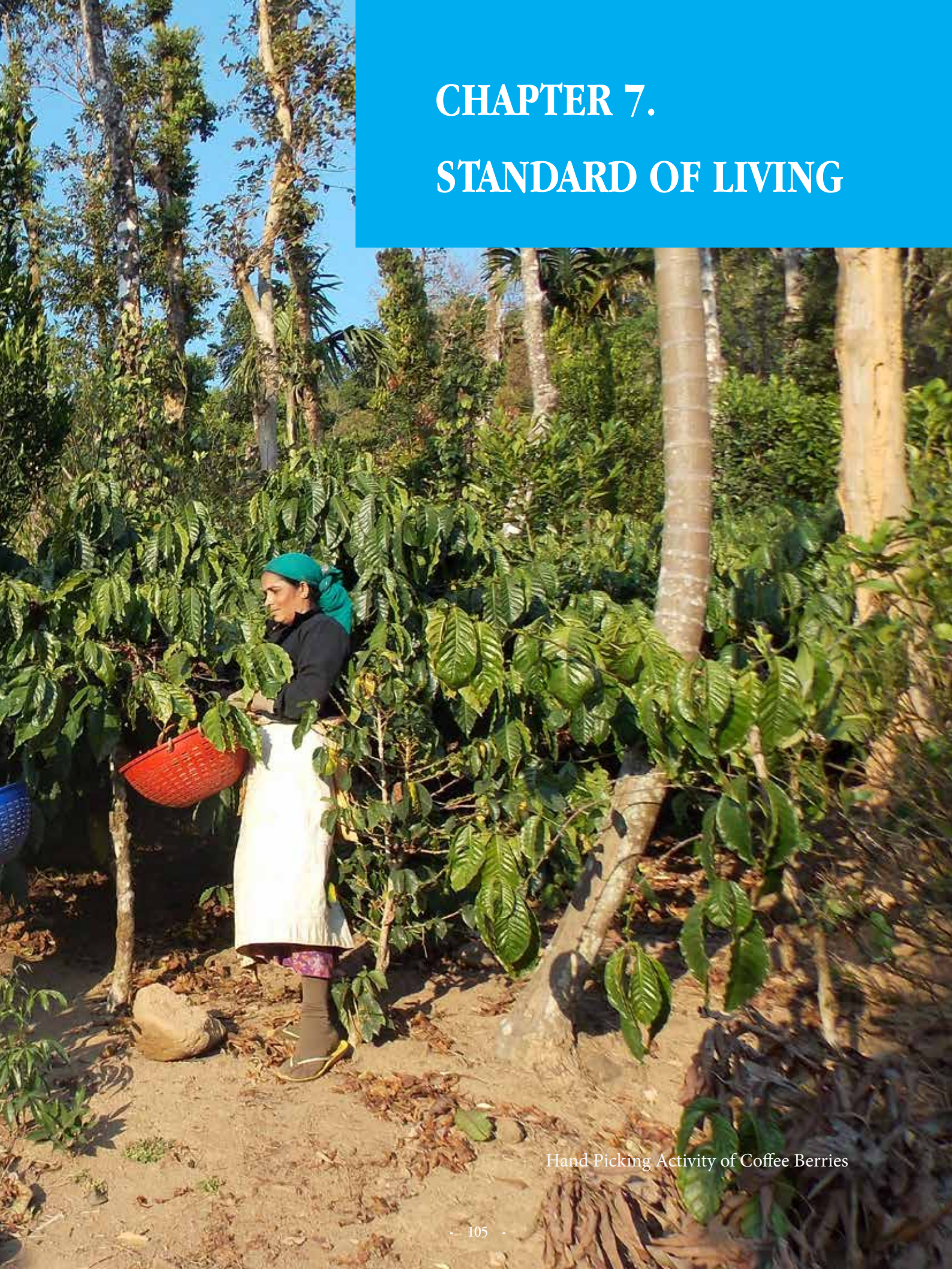
Majority of the planters interviewed felt that the current welfare and social security schemes of the government that focus on increasing the safety nets of the deprived, are in conflict with the welfare of coffee planters and farmers. They cited that the Public Distribution System, fraudulent implementation of MGNREGA and other targeted welfare schemes disrupt the agricultural ecosystem of the district. While the small area study did not specifically address the controversial question of individual Kodagu statehood, references were made to the possibilities of having a government with local bureaucracy that framed its policies and rules focusing on the long term vision of promoting Coffee growth, regulating the conversion of land and protecting Kodagu's environment (by the enforcement of traditional environmental conservation methods – Devara Kadu, and banning any activities near river banks).

Conclusion

The labour issues in Kodagu seem to intensively depict the existing labour problems in agriculture (and generally in other sectors as well) all over the state. While Kodagu can boast of providing much better working environments and wages for agricultural labourers and their families in comparison to other parts of the state, it is only natural since coffee cultivation is comparatively much more profitable than other crops. Even with higher wage rates in plantation labour in Kodagu, plantation labour does not offer growth prospects for labourers. There is considerable 'class difference' between planters and labourers. The distribution of land in the district is highly skewed against the Schedule Caste and Scheduled Tribe populations.

Within the planters the small and marginal plantation own-ers are especially vulnerable and similarly, among labourers, the local tribal labourers seem to be most negatively affected by the competitive strategies of labour procurement in the district. The vulnerability of these groups have to be addressed immediately in order to maintain the sustainability of coffee production in the district.

CHAPTER 7.
STANDARD OF LIVING



Hand Picking Activity of Coffee Berries

CHAPTER 7.
STANDARD OF LIVING

7.1 Introduction

For human beings to lead a life of dignity, there are several basic needs that must be fulfilled. Among them housing, access to safe drinking water and sanitation form the core needs without which the quality of life or standard of living cannot be improved. While housing provides shelter, safety and security to men, women and children, access to drinking water, sanitation and hygienic environment impacts the health and well-being of people in various ways. Further, there is a strong correlation of income, education, social status and development with the living conditions of the people.

In this chapter, we assess people's standard of living in Kodagu district with a focus on their housing and living conditions, availability of drinking water and sanitation facilities, and assets. We observe the discrepancies in the living conditions among the different social groups including people belonging to the Scheduled Tribes and Scheduled Castes. Measures taken by the Government through various schemes and programs for providing these basic facilities are also documented in this chapter. Standard of Living Indicators contribute significantly to the computation of Human Development Index. The computation of District Human Development Index encompasses 5 out of a total of 11 indicators that are linked to Standard of Living, thus emphasizing the importance of living conditions to human development. These indicators measure the percentage of houses within the region, having access to a) cooking fuel, b) pucca houses, c) toilets, d) water and e) electricity.

A significant feature of these indicators is that the values can be linked directly to the implementation outcomes of various Government policies and schemes.

7.2 Housing Status

This section describes the status of housing in Kodagu – the housing tenure status, people without houses and sites, condition of houses and also touches upon the housing schemes implemented by the Government. According to 2011 census, Kodagu district has 138,303 households of which 118,509 rural Households and 19,794 urban households. Across the district 67.50% of the population live in owned houses, 15.27% live in rented houses and 16.21% live in 'other' houses.

Rural v/s Urban Households: The percentage of rural households in 2011 is 85.69% as against 86.49% in 2001. The corresponding figures for urban households is 14.31% and 13.51% respectively. This indicates a marginal rise of less than 1% in the number of urban households over the decade. It is a significant departure from the Karnataka state trend where the number of urban households has increased by 5.57% over the decade.

The figure below provides a comparative analysis of housing tenure in Kodagu and Karnataka, in urban and rural contexts. It may be noted that the percentage of rented accommodation in rural Kodagu is higher than that of Karnataka and this trend is consistent over the decade. At the same time, the percentage of people living in 'other' houses is significantly higher than the State. This may be attributed to the high number of migrant labourers who live in line houses within coffee estates.

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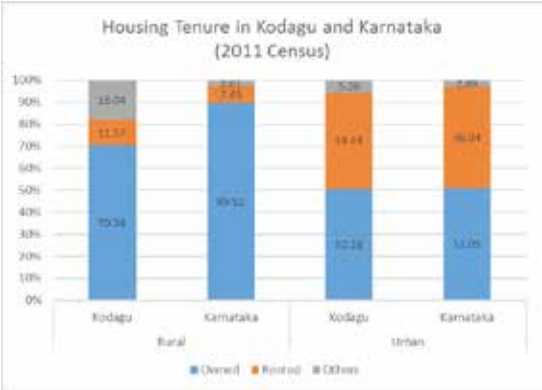


Graph 30. Housing Tenure in Kodagu and Karnataka 2011

Between 2001 and 2011, there is no significant change in the housing tenure, with only 2% increase in the total number of owned houses, 1% increase in rent houses and 4% decrease in other houses in the district. During the same period, the state trend indicates a decrease of approximately 4.22% in people living owned houses and an increase of 4.35% in rented accommodation.

Site-less Households

Table 74 Houseless and site less households in Kodagu

Taluk	Houseless	Site less
Madikeri	2672	2105
Somwarpet	6609	6464
Virajpet	5129	5905
District	14410	14474

Source: Zilla Panchayat, Kodagu

A survey conducted by Zilla Panchayat in the year 2009 reveals that 14410 households were identified as houseless and 14474 as site less in the District. Highest number of houseless families and site less families were found in Somwarpet taluk. Madikeri taluk, with the highest levels of urbanization in the district had the least number of households without houses and sites.

Condition of houses

Mere access to housing facility and its occupancy does not convey complete information on the standard of living. The quality of houses matters as well and hence the percentage of people living in Pucca houses is a component of the Standard of Living indicator. The following table gives the information of the percentage of population having access to Pucca houses.

Table 75 Status of Pucca houses in the District

Taluk	Urban	Rural	Total
Madikeri	62.42	34.65	41.14
Somwarpet	75.05	55.77	57.81
Virajpet	57.31	42.79	44.53
Kodagu	64.34	45.99	48.63
State	84.41	55.84	67.40

Source: Census 2011

As expected, the table shows higher percentage of pucca households in urban areas than in rural areas. Among the taluks in the district, Somwarpet has the highest percentage of households living in Pucca houses in both urban as well as rural areas, while Madikeri has the lowest percentage of Pucca houses. The substantial difference in pucca houses in Kodagu could be due the hilly terrain of the district and the higher percentage of rural households in the district.

Housing conditions across the different social groups constituting the population are further analysed below. The housing conditions are classified as good, liveable and dilapidated as per the Census data 2011.

Table 76 Condition of houses- Category wise

2011	SC			ST			Total		
Kodagu	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Liveable	52.83	43.23	51.72	56.11	42.62	55.67	39.99	33.4	39.04
Dilapidated	6.74	10.35	7.16	10.63	3.38	10.39	4.55	3.2	4.36
State	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Good	45.45	61.68	50.23	45.79	63.28	50.14	51.73	72.39	60.06
Liveable	47.88	34.13	43.83	47.15	32.85	43.71	42.96	25.67	35.99
Dilapidated	6.66	4.18	5.93	7.04	3.85	6.27	5.29	1.93	3.94

Source: Census 2011.

Good houses account for 56.58% of the total houses of district, whereas the percentage of liveable houses and dilapidated houses are 39.04% and 4.36% respectively. These are comparable to the state figures for the same time period. Similarly the percentage of good houses in rural areas (55.45%) are lesser than in the urban areas (63.32%), but the percentage of liveable and dilapidated houses are more in the rural areas than in the urban areas. It may be noted however that the difference in housing conditions in the rural and urban areas of the state are starker than the district.

Photo 45. A house constructed under housing scheme in Hoddur village, Madikeri

Housing conditions of SCs and STs.

A close analysis of the housing conditions across social groups reveals that the percentage of SC and ST households who live in good houses are well short of the overall district figures. 41.1 % of the SCs have access to good households while only 33.92 ST households have access to good houses compared to the district average of 56.58%, a shortfall of approximately 15% and 23% respectively. On the other hand the percentage of dilapidated houses among SCs and STs exceed the district average by 2.8% and 6% respectively.

This indicates that more focus on housing amenities for SCs and STs are required. Further, it may be seen that rural SCs are better than rural STs in terms of percentage of households living in good houses. But, in urban areas, there are a higher percentage of STs who live in good houses compared to the SCs. A special feature of Kodagu are the primitive tribal groups that constitute part of the district's population and who live in the rural areas and the forest fringes. Field visits and interaction with tribal groups indicated that there are a significant number of tribal households who are yet to get the "hakku pathra' (title-deeds) for their land and the data shows that more than 10% of the tribes in rural areas are living in dilapidated houses.

7.3 Households and Asset Status

Ownership of assets indicate the standard of living of the household and also provides an easy way to compare and contrast living conditions across regions. The table below provides the asset status of Kodagu and compares them with that of the state, as recorded through the Census in 2011. It reports the percentage of households in the specific region, having the asset specified in the column. The last column displays the percentage of households that do not have any of the assets (specifically, Television, Radio, Computers, Telephone, Mobile, Bicylce, 2 wheeler and 4 wheeler vehicles).

Table 77. Status of Household assets

Taluk	Television	Bicycle	2 wheeler	4 wheeler	Mobile phone	Banking services	No assets (Telephone,TV, 2 wheelers and 4 wheelrs)
Madikeri	61.39	13.30	15.31	13.26	64.79	75.48	6.620
Somwarpet	61.92	16.24	18.14	9.02	60.60	70.77	12.20
Virajpet	57.13	13.61	14.36	14.87	55.90	63.38	13.75
Kodagu	60.02	14.52	16.02	12.27	59.96	69.27	11.32
Karnataka	60.02	33.88	25.60	6.32	64.59	61.11	14.25

Source: Census 2011

The asset status of Kodagu is quite different from that of Karnataka. It has higher percentage of people having access to banking facilities and people owning 4 wheelers. Further, the percentage of the population in the district with none of the assets mentioned in the above table is less in comparison to that of the state. However, in ownership of assets like Bicycles, 2 wheeler and Mobile phones, the district lags behind that of the state. This trend could be due to the hilly terrain of the area (which makes bicycles and 2 wheelers less practical, and makes mobile network coverage difficult).

7.4 Schemes for Housing Facilities

The Centre as well as the State Government have launched several schemes and programs to provide housing for the citizens. The Rajiv Gandhi Housing Corporation Limited (RGHCL) was established in the year 2000 by Government of Karnataka to implement all the State and centrally sponsored housing schemes for economically weaker sections of the society both in Rural and Urban areas.

The following major schemes that have been operational in Kodagu.

- **Indira Awaas Yojana (IAY):** A centrally sponsored scheme introduced in 1989-90, this scheme is implemented for rural BPL houseless families. 60% of the target is earmarked for SCs/STs, 15% for religious minorities and the remaining for others.

- **Ambedkar Rural Housing Scheme:** This scheme was launched in 1991-92 by Government of Karnataka to provide housing to houseless poor belonging to SCs/STs.

- **Rural Ashraya Scheme:** Introduced in the year 1991-92 by Government of Karnataka to provide houses to the rural houseless poor. 50% of the target is reserved for SCs/STs.

- **Urban Ashraya Scheme:** Introduced in the year 1991-92, this is a state sponsored scheme implemented for the urban poor. During 2010-11 the scheme was renamed as Vajpayee Urban Housing Scheme.

In addition to the above, housing has been provided under Basava Indira Awaas Yojana and Special Rural Housing schemes based on occupation of beneficiaries. Support for housing is provided in the form of subsidy, loans or a combination of the two. The state government has increased the unit cost over a period of time. The unit costs under various schemers are provided in the below given table.

Table 78. Unit costs of houses constructed under different Schemes from 2000-01 to 2011-12

Unit Costs (Rs) of houses constructed under different Schemes				
Year	Rural Ashraya	Ambedkar Rural	IAY/Basava Indira Awaas Yojana	Urban Ashraya
2010-11	63500	63500	-	130000
2011-12	-	-	63500	-

Source: Economic Survey of Karnataka 2011-12

Until 2011-12 the cumulative number of houses provided through various schemes is depicted below.

Table 79. Cumulative number of Houses Constructed under Different Schemes till 2011-12

Taluk	Rural Ashraya	Ambedkar Rural Housing	Indira Awaas Yojana	Total
Madikeri	5804	943	779	7526
Somwarpet	3000	1076	725	4801
Virajpet	1596	248	657	2501
District	10400	2267	2161	14828

Source: District at a Glance 2011-12

Status of Urban Housing schemes

No houses under urban housing schemes were sanctioned in the years 2005-06 to 2009-10. In the year 2010-11, 60 houses were constructed under Vajpayee Urban Housing scheme out of 421 sanctioned indicating an achievement of only 14.25%. Among the Town Panchayats and City Municipal Corporations, Virajpet Town Panchayat fares the worst with achievement of only 4.1% and while Kushalanagar Town Panchayat's achievement stands at nearly 28%, it must be noted that only 18 houses were sanctioned, out of which 5 were constructed. The following table gives details of the same.

Table 80. Houses Constructed under Urban Housing Schemes

Town Name	Scheme	Year	Sanctioned	Achievement
Kushalanagar TP	Vajpayee Urban Housing Scheme	2010-2011	18	5
Madikeri CMC		2010-2011	163	31
Somwarpet TP		2010-2011	143	20
Virajpet TP		2010-2011	97	4
District			421	60

Source: Rajiv Gandhi Housing Corporation Limited, GoK

Status of Rural housing schemes

The table below provides the status of rural housing schemes in Kodagu district between 2010 and 2011. It shows that implementation under Basava Indira Awaas Yojana has been lesser in comparison to the other schemes, although in physical achievement, the former has been able to contribute much more to the rural housing sector. The operational difficulties in the schemes (like provision of sites, submission of valid documents from beneficiaries etc) are the major stumbling blocks in realizing higher progress rates in these schemes.

Table 81. Details of rural housing schemes in 2010-11 and 2011-12

Rural Housing Schemes in Kodagu		2010-11		2011-12	
Taluk	Scheme	Target	Achievement	Target	Achievement
Madikeri	Basava Indira Awaas Yojana	2368	1164	-	-
	Indira Awaas Yojana	14	10	507	297
	Ambedkar Rural Housing Scheme	-	-	32	13
	Rural Special Housing Schemes	21	19	-	-
Somwarpet	Basava Indira Awaas Yojana	3099	896	-	-
	Indira Awaas Yojana	-	-	717	319
Virajpet	Basava Indira Awaas Yojana	4502	428	-	-
	Indira Awaas Yojana	-	-	590	356
	Ambedkar Rural Housing Scheme	-	-	36	4
Kodagu	All schemes	10004	2517 (25.16%)	1882	989 (52.55%)

Source: Rajiv Gandhi Housing Corporation Limited, GoK

Sites for houses

Rajiv Gandhi Rural Housing Corporation Limited has also undertaken the distribution of house sites for EWS houseless beneficiaries under Ashraya – Rural and Ashraya – Urban House site schemes.

Distribution of rural house sites in the district during 2005 to 2012 is shown in the figure below. Though the targets have been set every year from 2005 onwards, there is no distribution of sites in 2006-07, 2007-08 and 2008-09. The highest achievement of 75% was seen in the year 2005-06, when 50 out of 66 sites were allocated. In the years 2009-10, 2010-11 and 2011-12 an achievement of 28%, 7% and 8% were seen respectively. It may be noted that the targets set in 2010-11 and 2011-12 were quite high, but the distribution has been poor. The Taluk wise break-up of the site distribution in the district is given below.

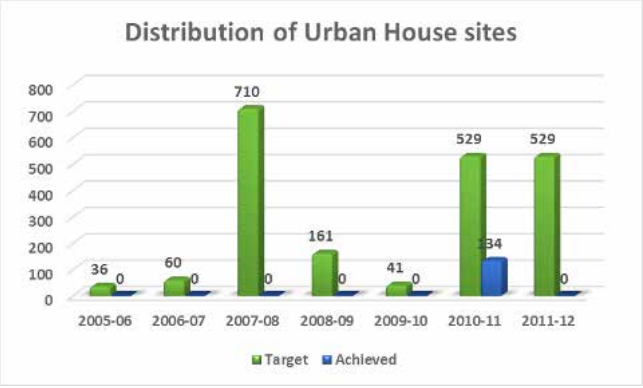
Table 82. Taluk wise Distribution of Rural house sites

Taluk	2009-10	2010-11	2011-12
Madikeri	50	0	187
Somwarpet	0	0	0
Virajpet	0	253	28

Source: Rajiv Gandhi Housing Corporation Limited, GoK

Urban house site distribution

The following figure gives information of the urban house sites distributed in Kodagu. As per the information available, targets were set for all years for Madikeri CMC and Kushalnagar TP from 2005-06 to 2011-12. Excepting for the distribution of 134 house sites in Madikeri in the year 2010-11, there has been no distribution of house sites. No targets were set for Somwarpet and Virajpet TPs.



Graph 31. Distribution of Urban House sites in Kodagu

7.5 Drinking Water

Table 83. Source of Drinking water in the district in 2011

Taluk	Distribution of households by sources of drinking water				
	Tap	Hand pump	Tube well	Well	Others
Madikeri	41.33	1.04	5	36.88	1.62
Somwarpet	69.96	3.92	16.32	7.16	0.46
Virajpet	30.98	2.04	6.5	57.4	0.33
Kodagu	48.24	2.49	9.79	33.29	0.71
State	66.06	5.53	15.94	8.97	1.39

Source: Census 2011

The table above shows access to drinking water through different sources. According to 2011 census, about 48% of the population of the district has access to drinking water through piped water supply, with the highest percentage of households reported in Somwarpet taluk. This percentage is understandably higher in the urban areas.

The data provided shows that in all villages of the district, households receive 55 lpcd water. 32 villages supply 55-60 lpcd, 66 villages supply 60-80 lpcd and 42 villages in the district provide 80-100 lpcd and 151 villages provide more than 100 lpcd of water supply. Although the percentage of households having piped water supply in the district is

Photo 46. Drinking water provision through cisterns in Nittur, Virajpet

considerably lower than that of the state, a significant portion of the population of the district has access to open wells. However, the quality of water supply is a matter of concern in some areas, due to the high iron content in drinking water in the area.

7.6 Electricity

Table 84. Status of electrification in Kodagu

Taluk	2011		
	Rural	Urban	Total
Madikeri	75.32	97.85	80.54
Somwarpet	83.99	97.81	85.46
Virajpet	78.61	94.75	80.53
Kodagu	79.95	96.89	82.38
State	86.71	96.41	90.63

Source: Census 2011

The proportion of households having electricity connection in the district is significantly less in comparison to the state average mainly because of the lag in electricity connections in rural Kodagu, specifically in Madikeri and Virajpet taluks. In urban areas of the district, the progress in household electrification is comparable to that of Karnataka. More than 20% of the rural households in the district still do not have access to electricity. This would be a challenge since some human habitations in the district are extremely isolated and are in geographical locations that are difficult to reach.

7.7 Traditional Fuel and Modern Fuel

Table 85. Type of cooking fuel in the district in 2011

Taluk	Households using traditional fuel			Households using modern fuel		
	Rural	Urban	Total	Rural	Urban	Total
Madikeri	86.63	14.33	69.88	13.2	85.30	29.9
Somwarpet	75.21	23.99	69.81	24.54	75.73	29.94
Virajpet	74.36	26.88	68.70	25.34	72.58	30.97
Kodagu	77.54	20.83	69.42	22.21	78.78	30.31
State	87.70	34.02	66.05	12.01	65.33	33.52

Source: Census 2011

Census data of 2011 shows that 69.42% of households in the district are dependent on traditional fuel (firewood, crop residue, cow dung, coal, kerosene) for cooking, which is slightly more than the state average of 66.05%. Analogously the percentage of the households having access to modern fuels is slightly less than that of the state average of 33.52%.

During the field visit to tribal haadis Cheenihadlu, Ayarasuli, Paaldala, Kumabara katte, Kolangeri haadis in Virajpet taluk, Kerehaadi of Somvarpet taluk it is observed that Yarava and Jenu Kuruba community don't have access to toilets. Very few houses of Kudiya tribes in Madikeri Taluk have access to Toilets.

Whereas in taluk's both Madikeri (69.88%) and Somwarpet (69.81%) has similar percentage of households depending on traditional fuel whereas Virajpet has 68.70%. More or less the same percentage of households is depending on Modern fuel (LPG/PNG, Electricity, bio gas) for cooking. Large number of rural households depending on traditional fuel and more number of urban households depending on modern fuel for cooking. Kodagu district (69.42%) total is petite more than the state (66.05%) traditional fuel user's households whereas Modern fuel district total (30.31%) is less than the State (33.52%).

We can see that still more number of people are using traditional fuel for cooking purpose. If we see the difference between urban and rural cooking fuel practice, 77.54% of rural households are using traditional fuel, Madikeri (86.63%) stands first in using traditional fuel, and Somwarpet (75.21%) and Virajpet (74.36%) of households are using traditional fuel in the district.

7.8 Sanitation

Sanitation and human development are deeply interconnected since the condition of sanitation has a direct bearing on other parameters of development such as health, education, participation of women, etc. The spread of communicable diseases, hygiene level of children, environmental issues arising out of poor waste management and handling practices, are just a few of the problems connected to sanitation.

Access to toilets

While improved sanitation is not restricted to more people having access to toilets, the lack of toilets leading to a practice of open defecation remains one of the biggest challenges that policy makers as well as NGOs contend with in India. As per statements issued by the Ministry of Rural Development itself, roughly 65% of Indians still defecate in the open, thus leading to several problems as mentioned earlier. As a way of recognizing its importance in development, access to toilets is one of the indicators under Standard of Living indicators which are used to compute the Human Development Index.

The table below gives information on the percentage availability of toilets in households in the census years of 2001 and 2011.

Table 86. Availability of Toilets in 2001 & 2011 in Kodagu

Taluk	Availability of Toilets					
	2001			2011		
	Rural	Urban	Total	Rural	Urban	Total
Madikeri	40.68	68.25	47.04	82.64	98.75	86.37
Somwarpet	46.40	82.80	50.05	76.52	95.95	78.57
Virajpet	55.32	76.33	57.52	78.87	95.63	80.87
Kodagu	48.54	74.60	52.06	78.83	97.02	81.43
State	17.40	75.23	37.50	28.41	84.93	51.2

Source: Census 2001 & 2011

- A state-wide evaluation of NGP awarded GPs in the state found that among the GPs visited, only 17% actually had 100% toilet coverage.
- In Kodagu, among the 5 GPs visited, none had 100 % toilet coverage.
- Average toilet coverage in the surveyed households was about 80%. Among SC/ST households, IHHL coverage was 66%.
- In one NGP awarded GP in Virajpet, more than 55% of the surveyed households did not have toilets.
- Field visits to tribal colonies and hamlets confirmed that most tribal households did not have IHHLs. However, public sanitation had not deteriorated due to the low density of houses in such hamlets.

The availability of toilets is consistently lower in the rural areas than in the urban areas. However, Kodagu district fares much better than the State in terms of percentage availability of toilets against the total number of households with 81.43% of households having toilets while the State figure is just 51.2%. Even in rural areas, 78.83% of Kodagu households have access to toilet, whereas the State figure is a paltry 28.41%. Within the district, Madikeri (86.37%) has highest number of toilets in Households followed by Virajpet (80.87%) and Somwarpet (78.57%). Between the two census years the access to toilets grew the highest in Madikeri rural (41.96%), while the district recorded a percentage increase of 30.29%. In the urban areas as well Madikeri recorded a percentage increase of 30.5% while the percentage increase in the district was 22.42%. The overall rise in percentage access to toilets for the district is 29.37%, while the State recorded a growth of only 13.7%.

Practice of Open defecation

The practice of open defecation is a major health and sanitation challenge faced by the country. World Bank estimates say that nearly 53% of Indians defecate in the open. This practice not only has health implications, but is also a concern from privacy and safety perspective, especially for women. As part of the Nirmal Bharath Abhiyan, considerable priority has been placed in the state, for the construction of toilets in rural areas, with specific time bound targets set for each Gram Panchayat (GP). The secondary data provided by NBA shows that Kodagu has already met its target of building 56933 toilets. Karnataka has achieved 80% of its target in this category. Further, all schools and Anganwadis in the district are reported to have toilets available within their premises.

As per data from Census 2011, the practice of open defecation is very high in the State with 44.96% of households. In Kodagu district, 17.55% of households do not have access to toilets. This is lower than the state percentage; the district has the 4th lowest percentage of open defecation in Karnataka after Bengaluru Urban, Dakshina Kannada and Udupi. Within the district, Somwarpet Taluk has the highest number of households practicing open defecation (20.72%) followed by Virajpet (17.79%) and Madikeri (12.61%).

NGP awarded Grama Panchayats

Government of India has launched intensive programs leading towards sanitation coverage to ensure better health and quality of life for people in rural India. Once such initiative is the launching of an award called "Nirmala Gram Puraskar" in 2003 given to those "Open defecation free" Gram Panchayats, blocks and districts that have become fully sanitized.

Table 87. Number of Grama Panchayats awarded Nirmala Grama Puraskara in Kodagu

Taluk	Total No.of Grama Panchayat's	No.of NGP awarded Grama Panchayat's	Percentage of NGP awarded Grama Panchayat's
Madikeri	22	16	72.72
Somwarpet	40	25	62.5
Virajpet	36	19	52.77
Kodagu	98	60	61.22

Source: Zilla Panchayat, Kodagu

GoI has been promoting sanitation coverage to ensure better health and quality of life for people in rural India and it has launched an award called "Nirmala Grama Puraskar" in 2003 is an award based incentive. It is given to those "open defecation free" Nirmal Gram Panchayats, blocks, and districts which have become fully sanitized. Table 4.10 shows totally 61.22% of Grama Panchayat's have won NGP in Kodagu, with the highest percentage in

Madikeri, followed by Somwarpet. About 38 GPs (39%) are yet to declare their GPs "open defecation free".

7.9 Concluding Remarks

This chapter analysed the status of some of the very basic amenities like housing, electricity, sanitation and assets required for humans to lead a productive life. Among the taluks of the district, Madikeri and Virajpet have scope to improve the status of drinking water supply and electricity whereas Somwarpet could primarily focus on sanitation and provision of toilets. The district also shows the common trend that urban areas have better amenities. The consequence is higher in Kodagu district since it has the highest proportions of rural residents in the state. The priority for rural housing and provision of sites should be higher, since the district trends show scope for improvement in this sector. The efficiency in implementing in distribution of houses and house site in the district can be improved. The district trends show that both in housing and sanitation, SCs and STs fare behind other social classes. Thus, special attention is needed to improve the conditions of these marginalized groups. Specifically, in the context of Kodagu, the provision of amenities to forest based tribes has to be prioritized since they are the most vulnerable groups within the district.

CHAPTER - 8

GENDER AND DEVELOPMENT

SHGs Members Involved in Different Activities

CHAPTER 8.
GENDER AND DEVELOPMENT

8.1 Introduction – Gender as Concept

Women constitute almost half of the total population of the country. Hence measurement of development of the country becomes incomplete if we don't assess the status of women's human development. To understand the level of women's empowerment, different tools have been developed over the period of the last couple of decades. Gender Inequality Index (GII), is used to measure the existing gender disparities and gender inequality in a society, Gender Development Index (GDI) and Gender Empowerment Measure (GEM) were introduced by the UNDP (United Nations Development Program) to analyse gender specific wealth and well-being patterns within society. Different aspects like life expectancy of women compared to men, educational attainment, income, political participation, etc. are taken into consideration to understand the level of gender disparity or development in a society.The analysis of previous chapters, specifically in health, education, income and livelihood and standard of living have pointed out various issues affecting human development in Kodagu. In this chapter, we analyse how these issues affect the women population of the district.

The current report uses Gender Inequality Index (GII) to analyse the gender disparities in development. GII mainly takes three component into account i.e., reproductive health, empowerment and political participation of women. According to UN GII report 2012, India stands in 132nd place in the whole world's rank. Countries like Norway, Australia, USA, Netherland and Germany are the top 5 countries in this aspect.In general, the India's GII is majorly affected by many conditions including our traditional patriarchal system, social evils against women and preferential treatment for the male child. This bias manifests in social evils like female foeticides persist, resulting in complex problems like declining child sex ratio. The opportunities for development of women are further hampered by their poor health and nutritional status, reflected by high maternal mortality ratio (MMR), low participation in politics and economy reflected in women representation in politics and work participation rates. While the larger analysis of societal discriminations against women is beyond the scope of this report, this chapter focus on other measurable determinants of women's development.Eight indicators are used for the calculation of GII in this report. The values for these indices for the three taluks of Kodagu are listed below.

Table 88. Indicators of GII in Kodagu

Taluk	Madikeri	Somwarpet	Virajpet
Maternal Mortality Ratio	104	152	148
Share of Institutional deliveries	99.44	96.78	98.99
Anemia among pregnant women	75.79	57.80	58.37
% of Female elected representations in PRIs	46.99	50.45	47.91
Share of females in 0-6 population	48.65	49.53	49.89
Female literacy rate	84.76	75.10	75.72
Female work participation rate	40.34	42.21	43.66
Female Non-agri workers in total female workers	90.47	75.88	93.28
Female agricultural wage rates	216	225	200
GII	0.091	0.083	0.082

Source: Compiled from various sources, listed in previous chapters

For all possible indicators listed above, the corresponding values for male population of the district are also used to assess the 'disparities' between men and women in each such indicator to arrive at the total inequality against women. The last row of the table above provides the taluk–wise GII in Kodagu district. According to this analysis, Virajpet has the lowest inequality within the district whereas Madikeri taluk has the highest gender inequality.

Kodagu has performed fairly well in gender development, based on the 1991 and 2001 state human development reports. The table below presents the ranking of the district in the Gender Development Index during 1991 and 2001 (based on the Karnataka State Human Development Index, 2005)

Table 89. Ranks of Kodagu in GDI in the state

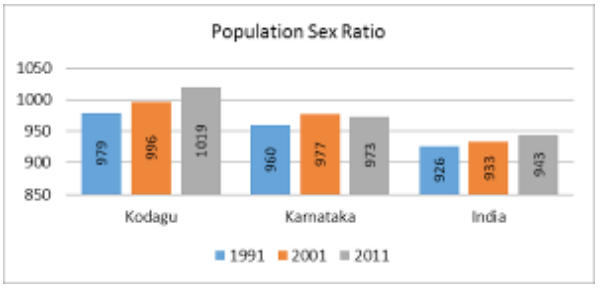
Sector	1991	2001
Health	18	15
Education	3	4
Livelihood	3	1
Overall	4	3

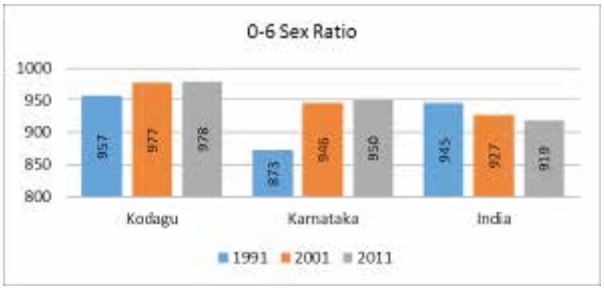
It shows that Kodagu's performance is good in the livelihood sector, whereas it performs badly when it comes to the health of women, a matter of concern, specifically since the disparities in reproductive and child health within the different social classes was evident in previous chapters.

This chapter summarizes the current status of disparities in gender specific development in the district and explores them specifically in the sectors of health, education and livelihoods.

8.2 Patterns in demography and health

Declining sex-ratio, especially within the 0 – 6 age group has been a growing concern in India. However, the analysis of sex-ratio of Kodagu shows that the district performs much better than the state's average, both with current population as well as 0-6 sex ratio. Kodagu shows an increasing trend in sex ratio and hence, does not show any untoward selection bias against the female child. This trend is universally visible in all taluks of the district.





Graph 32. Trends in population and child sex ratio

Another social evil, child marriage is prevalent in the district as reported in the District Level Household Survey (DLHS) 3, conducted in 2007-08. 7.1% of the respondents in the district said that they were married before 18 years of age. While this ratio is lesser than the state average of 22.4%, Kodagu recorded an increase of 5% in the proportion of child marriages between DLHS-2 (2002-04) and DLHS-3.

Maternal health is another key indicator of women's development since it captures the status of health of women during pregnancy, childbirth and postpartum period. Three specific indicators of maternal health are % of institutional deliveries, % of pregnant women suffering with anaemia and MMR. The table below captures the status of Kodagu in these specific aspects

Table 90. Indicators of maternal health in Kodagu

Taluk	% of institutional deliveries	% of anemic pregnant women	MMR
Madikeri	99.43%	75.79	104.44
Somwarpet	99.73%	57.80	151.69
Virajpet	98.98%	58.37	148.48
District	99.37%	63.99	138.01

Source: District Health Office, Kodagu,

The table above shows that while Kodagu performs exceedingly well in institutional deliveries, the number of anemic women is high (about 2/3rds of all pregnant women), with the highest proportion in Madikeri taluk. All taluks are yet to reach the NRHM target of MMR below 100. As reported in the chapter in health, the maternal health aspects of the district show large variations among different social classes, with the women of ST and Muslim communities particularly vulnerable. About 2/3rds of the

reported maternal deaths in the district could be traced to preventable causes well.

8.3 Patterns of Literacy and Enrolment

Transformation of age old patriarchal society to equitable society is possible through effective participation of women in economic, political sphere. Education of the girl child is the foundation based on which, this transformation is possible. To understand the status of women in the education sector, the chapter looks at gaps in literacy rates, net enrolment rate at the primary level, pass percentages in SSLC and enrolment in higher education. These statistics provide an empirical way to understand the status quo in educational facilities received by the girl child. Detailed study of the gender-wise utilization of educational facilities of the district is beyond the scope of this chapter.

Table 91. Literacy rates in Kodagu and Karnataka

Year	Kodagu			Karnataka		
	Male	Female	Total	Male	Female	Total
1991	75.35	61.22	68.35	67.26	44.34	56.04
2001	83.70	72.30	78.00	76.10	56.87	66.10
2011	87.19	78.14	82.61	82.85	68.13	75.60

Source: Census of India 1991, 2001 and 2011

While Kodagu has attained high literacy rates and outperforms the state in this issue, the gap between male and female literacy rates persist in the district, and is visible from the above table. These trends are also visible at the taluk level as shown from the table below.

Table 92. Taluk-wise Literacy rates in Kodagu in 2011

Taluk	Male	Female	Total
Madikeri	91.79	84.76	88.25
Somwarpet	87.41	75.81	81.52
Virajpet	83.60	75.70	79.62
District	87.19	78.14	82.61

Source: Census, 2011

The Net Enrolment Rate of the district, provides the proportion of children in the district who are in schools to the total number of children who are in the school going age, in the district. In Kodagu, within the net enrolment rate during the year 2011-12 was 89.92% and it can be noticed that there is not much difference in the Net Enrolment rate of boys and girls. This analysis shows that there is no substantial gender gap in the enrolment ratio of children for primary education. Similarly, the education chapter shows that the trends in dropout and out of school children do not show diverging trends between boys and girls in the district.

Table 93. Net Enrolment Rate at the primary level in Kodagu in 2011

Taluk	Net Enrolment Rate I - VIII		
	Male	Female	Total
Madikeri	92.36	91.09	91.74
Somwarpet	89.37	90.09	89.73
Virajpet	88.43	88.65	88.54
District	89.93	89.89	89.92

Source: DDPI, Kodagu

Analysis of SSLC performance shows that although the overall pass percentage of students in Kodagu is 69%, the passing percentage of female students was 73% while 64 % of boys passed the exam. Among the students belong to SC/ST communities, the total pass percentage was 48 to 49% respectively and among them female students performing better compared to male students. The pass percentage of girls was 48 to 52% in SC and ST communities respectively. Whereas pass percentage of boys was 47% in both the communities.

The table below presents the number of students enrolling for post-secondary school institutions in Kodagu in 2011. It shows that enrolment of female students is more in comparison to male students. Female students outnumber male students in PU, degree colleges and dental colleges, while they are outnumbered in other professional courses. Thus, the analysis indicates (with some caveats) that there are no substantial gender gaps in primary education in Kodagu.

Table 94. Enrolment for higher education in Kodagu in

2011

Detials of educational institutions	No.of colleges	Male	Female	Total
PU colleges	54	4452	5165	9617
Polytechnic Colleges	2	935	251	1186
Degree Colleges	10	2293	2501	4794
Technical (Engineering) Colleges	2	1030	623	1653
Dental Colleges	1	109	191	300

Source: DDPI, Kodagu

8.4 Work Participation Trends

Involvement of women in income generation activities or participation in work is an important aspect of women empowerment. Increase in purchasing power helps women to care about their health, access to nutritious food, provide education for their children and very importantly it increases the opportunity to make livelihood decisions. Working opportunity (especially in the organized sector) gives an opportunity to increase the level of awareness about various important aspects of life like health, education, law or legal aspects etc. However, work participation for women is also difficult, given the traditional responsibilities of women within the household. Thus, while it is expected that the work participation rates of women are not as high as men in any economy, the goal would be to increase the work participation of women and minimize the gaps between the work participation rates of men and women.

As discussed earlier, Kodagu fares much better in the district with regards to gender development. This is visible in the various issues related to work participation as well. Out of the total working population 38% of are women and 62% of are men. Women comprise of 37% of total population involved in the main sector of employment (comprising of cultivators, agricultural labourers, household businesses or other organized labour). Whereas in the marginal employment sector (comprising of any temporary work that does not last not more than 6 continuous months), 52% of the workers are women. Thus, the analysis shows that the quality of work participation of women in the district is more biased towards marginal work, which does not help them to contribute to household income as much as the main sector. The table below presents the proportion of working population men and women who are involved in main and marginal categories of work in Kodagu in 2011. It shows that in all the taluks, women's work participation rates are consistently lesser than that of men, with Virajpet taluk having the least gap in work participation between men and women.

Table 95. Gender-wise Work participation rates in Kodagu

Taluk	Male	Female	Total
Madikeri	68.720	40.340	54.42
Somwarpet	69.510	42.210	55.66
Virajpet	70.600	43.660	56.99
Total	69.69	42.25	55.81

Source: Census 2011

Photo 47. Women labourers sorting coffee in an estate

Further, even within different employment segments, traditionally, women are subjected to wage discrimination. This wage difference is generally most visible in the agricultural labour wage rates. The taluk wise wage difference between men and women for the year 2011 is listed in the below table.

Table 96. Agricultural wages for male and female workers Kodagu

Taluk	Female	Male
Madikeri	216.0	220.0
Somwarpet	225.0	229.0
Virajpet	200.0	204.0
Total	213.64	217.78

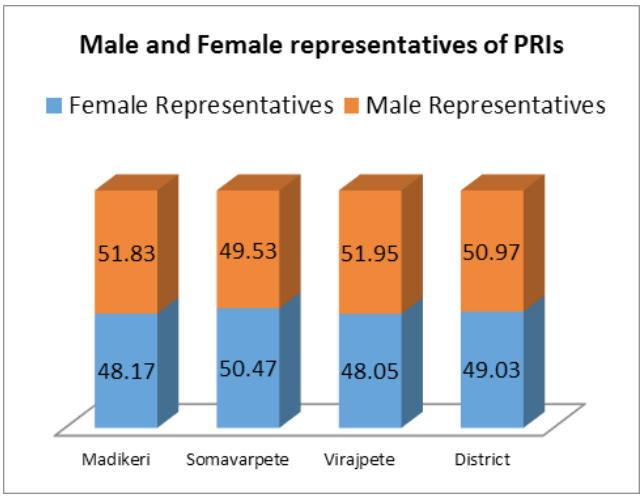
Source: CPO, Kodagu ZP

The table shows that although wages for men and women exist in Kodagu, the difference is very less when compared to some of the other districts. However, agricultural wages for non-permanent plantation workers in Kodagu goes through varied phases depending on the coffee cultivation cycle and the type of work and hence, the true wage differentiation against women may be hidden.

8.5 Trends in Political Participation

Women's participation in politics is one of the important indicators for the empowerment of women. Effective political participation of women can turn out to be a tool for empowerment not just for the women involved in politics, but for women in the area as well. Increasing women's representation in government is necessary to achieve gender parity. Shift from private life (family life) to public life brings lot of exposure, strength to think about community, bring development to the region. While the debate exists on how effectively can women utilize their political positions and work for the empowerment of women, the human development approach treats this as possible avenues created for women to be able to utilize these opportunities for their empowerment.

The participation of women in Panchayat Raj Institutions is fostered by 50% reservations for women in all the tiers of the PRIs. In Kodagu, there are 1344 total elected members from all three levels of Panchayat Raj Institutions (PRIs) and out of that 49% of them are women elected representatives. The graph below show that women are indeed equally represented in the PRIs of Kodagu district.



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Graph 33. Political representation of women in PRIs in Kodagu

Out of 49% of women representations 32% of women belong to SC/ST communities. The overall participation (both including men and women) of SC/ST community people in the district is 25%. However, women participation in urban local bodies (ULBs) vary from 35 to 50%. Among all other taluks Madikeri has a less number of women representatives whereas Somwarpet has 50% of women representation in urban local body.

8.6 Gender differences in district and Community attitude, Social prejudice

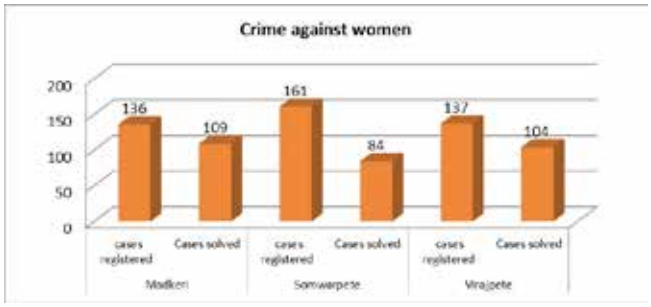
The analysis in the above section shows that gender based differences, although not as prominent as that in the state level, do actually exist in the district in levels of literacy and work participation. The political representation of women in PRIs is higher in Kodagu than in ULBs. Further, appreciably, sex-ratio of all taluks of the district is healthy and does not indicate gender discrimination. In essence, these issues indicate that there is less social prejudice against women and community attitude towards women in the district is relatively more progressive. However, persisting gaps in literacy rates, lesser work participation among women and reproductive health are issues that need to be improved, specifically among the tribal populations of the district.

8.7 Crime against Women: Crime Data at District and Taluk Levels

The UN states that "violence against women is a manifestation of historically unequal power relations between men and women" and that "violence against women is one of the crucial social mechanisms by which women are forced into a subordinate position compared with men".

The United Nations General Assembly in its resolution on the declaration on the elimination of violence against women, defines "violence against women" as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of, whether occurring in public or in private life".

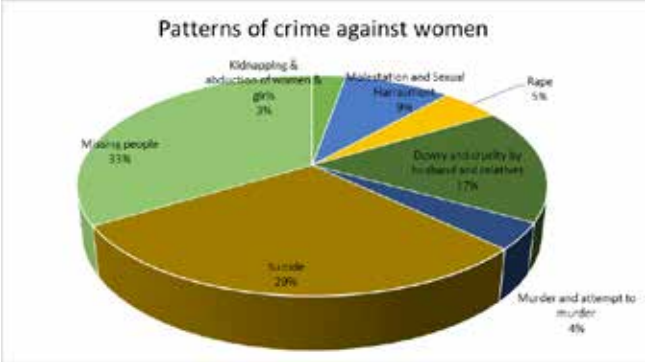
Due to societal pressures and fear of exposure, it is difficult for all cases of crime/violence against women to get registered and eventually for the culprits to get implicated. The following graph shows the cases of crimes reported against women in Kodagu. The data is obtained from the office of the Superintendent of Police,Kodagu.



Graph 34. Taluk-wise crimes against women in Kodagu in 2011

In Kodagu, highest cases of crime against women have been reported in Somwarpet Taluk with 161 cases registered and 84 are solved. Virajpet is the second highest crime reported taluk in the district with 111 cases registered 91 are solved.

An analysis of registered cases in Kodagu shows that missing women and suicides are the most common cases of crime against women. Incidents of dowry and cruelty by husbands and relatives form the next common cases of crime against women. Molestation, sexual harassment and rape forms about 14% of the crime against women. Missing people and kidnapping related crimes together form 36% of the crimes against women in Kodagu and is a matter of concern. While vigilance committees to prevent these crimes need to be formed at all levels in the PRIs, field experience suggests that such committees are hardly functional.



Graph 35. Patterns of crime against women in Kodagu in 2011

8.8 Role of Women's Groups and SHGs

SHGs were developed to reduce poverty, improve skill especially among women and bring equality by reducing the patriarchal, domination of men in a society. As majority women lack assets that help contribute to their empowerment and well-being, economic independence through self-employment and entrepreneurial development must be paid attention to. So, the Government of India started the concept of Self-Help Groups (SHGs). Many research studies, evaluation studies has shown that, SHGs has played an important role in not just reducing the poverty but also empowering the rural women.

Photo 48. An SHG involved in preparing nutritious food for distribution in Anganwadis

There are around 139983 SHGs functioning in Karnataka and 1852067 people are members in the SHGs. Out of which 405477 are SC women and 160032 ST women are active SHG member. Around 6% of the state's women population is part of SHG group. The total saving of these SHGs in Karnataka is up to 1080 crores. Around 6% of the population can save and turnover of Rs 1080 crores says that people can manage their available resources well and improve their life by the changed pattern of saving the earned money.

In Kodagu there are 1152 well-functioning SHGs among these SHGs 938 SHGs have taken loan from Bank and banks have lent around 9.8 crores to these SHGs. By using these loans women are engaged in several income generation activities like pig, cow farming, poultry, agriculture etc activities. Out of 1152 SHGs there is a saving of 15.7 crores.

It's been proven time and again that, women's involvement in income generation activities has helped the family to improve their life economic condition, children avail education and very importantly women's exposure to outside world has led to increase decision making power, get access to different choice etc has enabled women to empower.

8.9 Govt initiatives to secure, promote and safe guard women

Many schemes have been introduced by the Centre as well by the State Govt to improve the status of women. Schemes like Mother and child tracking system (to improve the health status of pregnant women and children), Indira Gandhi Matritva Sahyog Yojana, Conditional Maternity Benefit plan known as (CMB), and the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls - Sabala or otherwise referred to as (RGSEAG). The Rashtriya Mahila Kosh (The National Credit Fund for Women) referred to as (RMK), Priyadarshini – SHGs development etc was introduced at the National level where as at the State level important programs like Bhagyalakshmi scheme, attendance scholarship for girls from rural areas, crèches for the children of working women, Housing scheme for women (Indira Awas Yojana), widow pension scheme, Ujjawala (for the Prevention of Trafficking and Rescue, Rehabilitation and Re – integration of victims of trafficking and Commercial Sexual Exploitation) are some of the schemes implemented in Karnataka to improve the status of women. Snapshots of two importance schemes: Bhagyalakshmi and Social pension schemes are provided here.

Bhagyalakshmi Scheme

The Bhagyalakshmi Scheme was launched by the State Government in 2006 with the aim of reducing imbalance of sex ratio. The benefits of the scheme are restricted to two girl children from below poverty line (BPL) families. Till August 2008, the amount was restricted to 40619 but it was revised again and increased the amount to 100000. At the time of birth, Rs 19300 is deposited in the name of girl child and after girls turn18, Rs 100000 is given to them. In Kodagu since the inception of the scheme 9106 girl children have been provided with the Bhagyalakshmi bond. 519 children are provided with bond in the year 2011.

Social Pension schemes

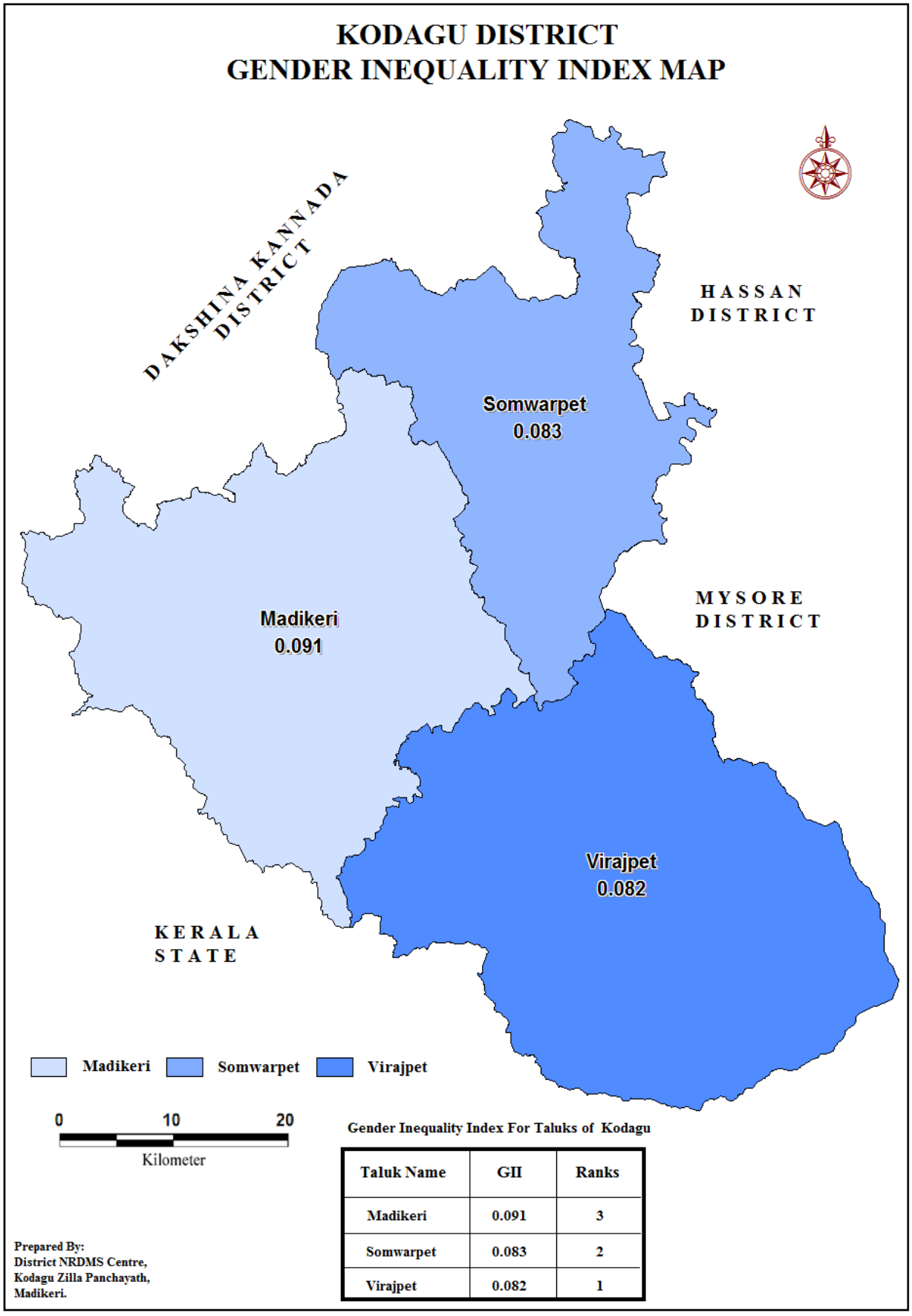
Pension schemes like Indira Gandhi Old age pension scheme, Widow pension schemes are the important programs initiated by the centre and state governments to protect the life of aged and widows in Karnataka. Widow Pension: Indira Gandhi National Widow Pension Scheme (IGNWPS) is implemented by Ministry of Rural Development, Government of India. The pension is given to the widows aged between 45 and 64 years of age and widow belong to below poverty line. The pension amount is Rs. 400, half of equal contribution made by both Central and State Govt. Currently 10,445 women in Kodagu are receiving widow pensions.

8.10 Concluding Remarks

This chapter presented different facets of gender development in Kodagu. While it is commendable that Kodagu outperforms majority of districts in Karnataka in gender equality, there are major issues that the district has to prioritize in order to provide women in the district, the maximum opportunity for their empowerment. These issues are summarized below.

Health Concerns: The high rate of maternal mortality among STs and Muslims in the district is an issue to be handled immediately. Early motherhood, lack of emergency obstetric care, accessibility issues and lack of health seeking behaviour are some of the reasons for the vulnerability of the mothers belonging to the ST category.

Crime against women: The crime against women, especially the cases of missing women and dowry and related acts of crime have to be taken seriously and safe environments have to be created for women.



Gender Inequality Index For Taluks of Kodagu

Taluk Name	GII	Ranks
Madikeri	0.091	3
Somwarpet	0.083	2
Virajpet	0.082	1

Map 8. Gender Inequality Index in Kodagu

Photo 49. An SHG meeting in Somwarpet taluk

8.11 Small area study: Role of SHGs in the socio-economic empowerment of women

Introduction

In 1969, the nationalization of banking system in India brought lot of systemic changes in enabling the access to institutional credit for the poor masses of the country. This helped people to come out of the clutches of local money lenders and paying the high rate of interest. The pioneering effort made by the NABARD (National Bank for Agriculture and Rural Development) which framed the appropriate policies, systems and procedures to meet the need of rural poor especially to the women is truly commendable. Together with these, there were various government schemes in existence that tried to create financial inclusion and participation of rural communities (especially women) in the local economy, through micro-credit and self-employment schemes.

In 1991, the Government of India merged various micro credit programs together and launched a new program called Swarna Jayanthi Graam Swarozgar Yojana. This program continued to provide credit to the poor through the banking sector to generate self-employment through a self-help group approach.

According to the data released by Reserve Bank of India the SHG-Bank linkage was done to 34 lakh groups by the end of March 2008. Cumulatively, these SHGs have accessed credit of Rs. 22,268 Crore from banks. Further, about 4.1 Crore poor households have gained access to the formal banking system through the programme.

Description of the study

Various studies and literature have recognized that SHGs have not just influenced in the life of women but also have positively impacted their social life. SHGs play a vital role in creating accessibility for credit facilities and hence develop the source for income generation activities thus playing a crucial part in the empowerment of women. Kodagu district, with its long standing history of cooperative societies, considerably less gender discrimination and inequitable land ownership trends provides an interesting case for understanding the status of SHGs and their impact on the socio-economic aspects and empowerment of women. Further, the current socio-economic context of Kodagu: the driving force of Coffee as a major commercial crop, migration and social dynamics related to coffee cultivation, the advent of tourism and its related livelihood opportunities, labour and migration issues, tribal issues, issues related to health and substance abuse makes it an important region to be studied in detail to understand crucial issues related to inclusive growth, gender empowerment and socio-economic sustainability of diverse livelihood options.

In order to explore these issues, a small area study using case study method was conducted with 4 SHGs in Kattemadu village of Maragodu Graam Panchayat in Madikeri taluk. Field visits were conducted to Kattemadu village, where each of the SHG was met as a group, followed by personal interviews of selected members. Secondary data regarding the SHGs were procured from the department of Women and Child Welfare. Three of these SHGs were active and functioning well whereas one SHG was not fully functional. The major issues explored in the study were, status of these SHGs, reasons for success and failures and the role of the SHGs in the socio-economic empowerment of women and their families. The details of the four SHGs interviewed during the visit are provided below.

Description of SHGs

The table below summarizes the activities of the four SHGs interviewed in this study. Only one SHG was actively involved in a group activity while the other SHGs focussed on individual activities for which the individual loans were procured. Three SHGs: Sridevi, Mookambika and Chandana were found to be very active and the members felt that the SHG had become an important part of their life. Most members in the groups have remained in the SHG from the initial stages and there is close bonding and unity among the members. The main economic occupation of the women in the SHG was plantation labour. The SHG economic activities provide additional income and also acts as a platform the members to seek social support from each other.

Table 97. Description of SHGs visited

Name of the SHG	Sridevi	Mookambika	Chandana	Dandina Mariyamma
Year of starting	2000	2001	2004	2003
Total members	17	14	15	15
Social categories of members	SC: 0 ST: 2 Others: 15	SC: 1 ST: 2 Others: 11	SC: 2 ST: 5 Others: 8	SC: 15 ST: 0 Others: 0
Group activities	Phenyl production	None (Agarbatthis initially)	None (Phenyl production initially)	55.81
Individual activities (from loan amount)	Piggery, Poultry, Milk Production	Piggery, Poulty	Turmeric, Tamarind collection, Papad making	None
Main occupation	Plantation labour	Plantation labour	Plantation labour, Tailoring, Agriculture	None
Meetings held per month	3	3	3	Plantation Labour
Monthly savings per member	Rs 100	Rs 100	Rs 100	1
Total Savings	Rs 2,47,400	Rs 1,75,000	Rs 1,94,300	-
Internal loan provided so far	Rs 17,74,500	Rs 22,98,200	Rs 11,54,500	-

The loans procured by individual members of the SHG have helped them transform their own lives as well as that of their families. The SHGs prioritize educational and health related loans for their members. One SHG member expressed how the SHG's loan helped her son get into an MBA programme

Photo 50. Disposable arecanut plates prepared by SHG memebrs

There is unity among the different SHGs in the village and this has helped them to fight for social evils. The SHGs from this village were successful in the eviction of an arrack shop from their village, since their own husbands were addicted to alcohol.

The SHG groups are involved in the joint celebration of village festivals, national and state festivals and have represented their village at the taluk and district levels: The SHGs also take responsibilities in village festivals by taking responsibilities like preparation and serving food, felicitation of newly elected Panchayat members, participating in programs of Kannada Sahitya Sammelana, singing and dancing during Ganesha festivals. Further, the SHG members regularly attend the GP Grama Sabhas and are involved in activities like Swachata Andolana, blood donation camps and school scholarship programmes.

SHGs have played a vital role in providing social security to the members and their family by providing financial and moral support during times of crisis and sickness. The SHGs have raised voice against violence

against women in the village, in spite of threats. While this created a sense of caution against violence against women in the village, the SHG members have a sense of camaraderie and empowerment. Further, some of the SHG women have collectively given complaints against the poor quality of roads for their village and to get the tap-water connection etc and these collective efforts has yielded the positive results.

Unique characteristics of successful SHGs

1. Equality among SHG members and their sense of togetherness, even when there was class and caste difference.

2. The SHG identity of the women not only empowers them, but also builds on to provide a sense of security and motivation to work other social causes as well.

3. SHG members weren't dependent fully on the SHG for their financial needs. The financial access created by the SHG served as security nets for them.

4. The SHGs prioritized loans for education and health purposes, thus reaffirming the faith of the members that the SHG serves as a vital social and financial support mechanism.

5. Rapport of women with Anganwadi worker and the officials of the Women and Child Welfare department was the key driving force for people to join SHGs and continue being in the SHGs members.

Bottlenecks and barriers for the SHGs

1. The SHG members feel that self-employment activities are not that profitable due to competition in the market. Products produced by the SHGs lack quality when compared to other available products in the market. Hence the SHGs preferred to take up supplementary economic activities using the loans available from the SHG.

2. Similarly, the group activities suggested and taken up by SHGs were hard to sustain by themselves, since these group activities seemed to be new and expected the SHGs to learn new skills, in regards to production and marketing. The group initiatives failed to sustain because the SHG members could not master these skills and remain competitive.

3. The SHG that was not fully functional seemed to lack unity among its members due to variety of reasons like unpaid loans from some members, mistrust and mismanagement of funds etc.

4. In some areas, competing SHGs and SHGs promoted from different sources (like Women and Child Department, local NGOs etc) may result in members of SHGs opting out of previously functional SHGs.

SHGs and Women's empowerment

1. The women from successful SHGs had over the years, learnt by experience, the skills of efficient accounting and documentation, the advantages of disciplined saving and financial forethought. This not only sustained their SHGs, but also helped them in their own personal financial management.

2. Consistent financial contribution of women to family affairs yielded respect and dignity for the women in their own family circle and thus provided them power of decision making.

3. The involvement of SHGs for social causes created within them awareness about social evils, which they were earlier facing without protest. SHGs served as a platform for women to seek solutions for such problems as well as building the collective capacity to demand for changes.

4. The success of the SHGs in brining social changes, provision of social security and the sense of identity provided the women involved, the conviction towards collective action, equality and unity and the motivation to further improve and build on their success

Conclusion

The study demonstrated that the involvement of women in SHGs have opened up many avenues of women empowerment, beginning with the creation of financial awareness, disciplined saving and record maintenance, judicious investment of money, further resulting in the creation of a unique identity, respect and decision making space within the family, and finally leading towards collective action against social evils. However, the success of the SHGs in this study also seemed to be dependent on crucial factors like relatively less financial dependence of the members on SHGs, the complex socio-economic ecosystem of Kodagu that created unity and equality among the members and the personal interest and

conviction of the SHG members. The study also points to possibilities for further financial inclusion and local economic activities promoted through SHGs within the district that not only help the local economy, but also aid in inclusive growth, gender equality and empowerment of vulnerable communities.

CHAPTER - 9

SCHEDULE CASTE AND SCHEDULE TRIBES

Bamboo Basket Weaving Activity

CHAPTER 9.
SCHEDULE CASTE AND SCHEDULE TRIBES

9.1 Introduction

Vulnerable groups or marginalized groups are defined as those who are subjected to unfair treatment or are, sections of society, more dependent on others and therefore, find it difficult to maintain their subsistence on their own and protect their rights. Vulnerable groups in society are also subjected to discriminatory treatment and feel marginalized. They need special attention to avoid exploitation. This chapter discussed the status of these vulnerable groups in the district based on the broad categorization into three social groups: backward classes and minorities (BCM), Schedule Castes (SC) and Schedule Tribes (ST) and throws light on the nature and issues concerning these vulnerable groups, and the efforts towards their development. However, the focus of the chapter is on the Scheduled Tribes of the district, who are generally considered to be the most vulnerable among the three groups. The major findings of the section are described briefly below.

Kodagu is home to tribes such Yerava, Kudiya, Jenu Kuruba, Kadu Kuruba, and Soliga who are believed to be the original settlers of the area. The majority of the tribal population of the district are either leaving within the forests or in resettled colonies in very interior rural areas. Some of them are still dependent on the forest substantially for their livelihoods. Kodagu also has dispersed settlements of three specific nomadic communities: Golla, Haavaadiga and Hakki-pikki.

Together with discrimination and other social oppressions prevalent against these social groups elsewhere in the state and the nation, the isolated locations where these populations exist also prove to be a challenge in government interventions reaching them and effectively helping them in coping with their vulnerabilities. In this context, this chapter explores the status quo of such marginalized communities within the district and highlights issues and areas of importance that the district has to focus on, for improving the quality of their lives.

9.2 Demographic Profile

There are many communities in Kodagu district with Kodavas being the main ethnic group of this land. There are other communities like Gowdas, Brahmins, Muslims, Christians and Jains along with these communities Schedule Caste and Scheduled Tribe population also forms a sizeable community.

Table 98. SC and ST population in Kodagu in 2011

Social Class	Households	Total Population	Rural Population	Urban Population	Sex-Ratio
SC	17806	73584 (13.27%)	64618	8966	1057
ST	15433	58054 (10.47%)	56298	1756	1036

Source: Census 2011

A total of 17806 SC families and 15433 ST families live in Kodagu district. Most of the SC and ST populations in the district are concentrated in the rural areas of the district. SCs form 13.27% of the population whereas STs form about 10.47% of the district's population. The proportion of SC population is lower in the district when compared to the state and national proportions. However, the proportion of STs is higher in the district, in comparison to the state and national figures. The highest proportion of ST population in the district is found in

Photo 51. Children in an Ashrama school in Virajpet taluk

Virajpet taluk (19.61%). In other taluks, the proportion of ST population is lesser than the state average. The sex-ratio among the SC and ST populations of the district shows a healthy ratio and is higher than the population average sex ratio in the district.

The trends in decadal growth rates among these categories show that ST population grew by 25.89% (the highest growth rate of 31.62% in Virajpet) in the years 2001 – 2011 whereas the SC population grew by 9.14% (the highest growth rate of 11.80% in Madikeri). There was a 2.79% reduction in the population of Others (the highest reduction of 7.06% in Virajpet) during the same period. These trends have to be taken into cognizance while planning the public health interventions activities, since there is a wide diversity in health status of various among the different social categories within the district.

9.3 Education Profile

Education is a crucial platform for marginalized communities to attain the opportunities provided by the welfare state and plays an important part in empowering them. With the advent of Sarva Shiksha Abhiyan, enrolment drives and compulsory admission of children above 6 to schools, admission and enrolment of SC and ST children is not as difficult an issue as retention. The table below presents the retention rates at class 8 (number of children enrolling in class 9 as a proportion of children enrolling in class 1 seven years ago).

Table 99. SC and ST Retention rates (class 8) in Kodagu in year 2011-12

Taluk	SC			ST			General		
	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls
Madikeri	91.55	92.3	90.8	89.25	89.8	88.7	95.3	96.3	94.3
Somwarpet	92.35	93.2	91.5	87.35	87.8	86.9	96.1	97.1	95.1
Virajpet	92.95	93.1	92.8	90.15	90.7	89.6	95.8	95.3	96.3
District	92.3	92.9	91.7	88.9	89.4	88.4	95.7	96.2	95.2

Source: DDPI, Kodagu

The table shows that although retention rates of SC and ST students is more than 85% in all taluks in the district, the retention rates of these classes are lesser in comparison to students of general category. Retention rates of ST students is comparatively lower than that of SCs. Thus, as seen in the table below, the proportion of ST students in the enrolment in higher primary and high schools progressively decreases. However, the proportion of ST students enrolled in different levels seems to be constant.

Table 100. : Proportion of SC and ST students enrolling in government institutions

School levels	SC	ST
Lower Primary	14	16
Higher Primary	15	10
High school	15	6

Source: DDPI, Kodagu

The next table shows the trends in out of school children identified in Kodagu during the academic year of 2012-13. It shows that ST boys and girls form the majority of the out of school children in the district with the highest number of out

of school children identified in Virajpet taluk (which also contains the highest density of rural tribal population in the district).

Table 101. Out of school children in Kodagu in year 2012-13

Taluk	SC		ST		Total		
	Boys	Girls	Boys	Girls	Boys	Girls	Total
Madikeri	2	3	5	1	13	10	23
Somwarpet	11	5	9	9	34	20	54
Virajpet	6	4	66	56	83	66	149
Total	19	12	80	66	130	96	226

Source: DDPI, Kodagu

In summary, it can be seen that there are significant challenges for students of ST community in the district is finish 10 years of schooling. Thus, the dropout rates of ST students is highest in the district. Similarly, SSLC pass percentage of SC (48%) and ST category (49%) students is considerably less than the district average of 69% (in 2007). To aid the education of these vulnerable groups, hostel infrastructure has been created. The next section analyses the status of educational infrastructure for vulnerable groups.

Educational Infrastructure

The district has a total of 14 Ashrama schools for ST children spread in all the three taluks where a total of 1685 (sanctioned, 504B, 497G: 1001, 2013-14 data) children are enrolled among which 715 are boys and 770 are girls. Madikeri has 3 Ashrama schools where 82 children have enrolled with 41 boys and 41 girls, Virajpet has 8 Ashrama schools where 1134 children have enrolled with 558 are boys and 576 girls and Somwarpet has 3 Ashrama schools where 269 children have enrolled with 116 boys and 153 girls.

There are 4 Morarji Desai schools in the Somwarpet taluk of the district where SC children are given preferences in admission. There are 921 children among whom 455 are boys and 466 are girls.

The provision of government pre matric hostels for SCs and STs is shown in table below. There are a total of 17 pre-matric hostels for SCs in the districts while there are only 8 for STs spread in all the three taluks, enrolling 229 (110 Boys,119 Girls) students in 2013-14.

Table 102. Government pre matric hostels for SCs and STs for the year 2011-12

Taluk	SC			ST		
	Boys	Girls	Total	Boys	Girls	Total
Madikeri	2	1	3	1	-	1
Somwarpet	4	3	7	-	1	1
Virajpet	4	3	7	3	3	6
District	10	7	17	4	4	8

Source: Dept of Social Welfare, Kodagu

Photo 52. A Morarji Desai residential school in Kodagu

Photo 53. A pre-matric hostel for girls in Kushalnagar, Somwarpet

Among the 17 pre matric hostels for SCs 10 is for boys and 7 is for girls. There are a total number of 870 sanctioned, 576 admitted (246 Girls, 330 Boys) students enrolled in the hostels. For the STs 8 hostels 4 are for boys and 4 are for girls. A total of 231 students have been enrolled among them 121 are boys and 110 are girls. It may be noted that Madikeri and Somwarpet taluks do not have pre matric hostels for ST girls and boys respectively. There are 2 government post matric hostels for SCs in the district one in Madikeri and one in Somwarpet. A total of 300 students have been enrolled out of which 150 are boys and 150 are girls.

Educational scholarships

Scholarships for SCs and STs for the year 2011-12, according to the available data D S W has given scholarships for SC students. 4324 primary school, 1667 high school, 850 pre university, 725 bachelors, 2 masters, 85 professionals, 209 technical students have been given the scholarships for the year 2011-12 by D S W. ST students were also given scholarships as well by ITDP, 4237 primary school, 871 high school, 340 pre university, 158 bachelors, 62 professionals, 79 technical students were given the scholarships for the year 2011-12 by ITDP.

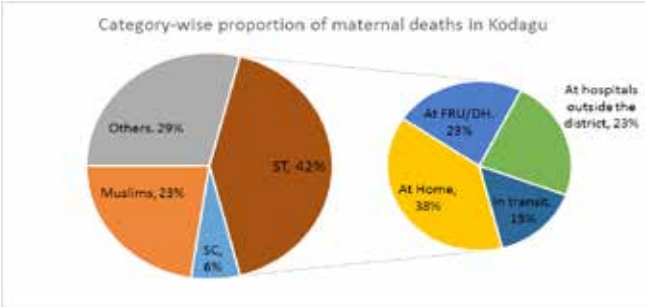
9.4 Health Profile

The health profile of vulnerable groups is a matter of concern since ill-health and malnutrition not only hampers economic activities, they also stalls the overall growth of the individual as well as that of the household. Frequently, out of pocket expenditure on health puts the household in a position of vulnerability and insecurity. Further, it is a well-known fact that the SCs and STs are in the bottom of the ladder when it comes to health and sanitation indicators.

Maternal and Child health

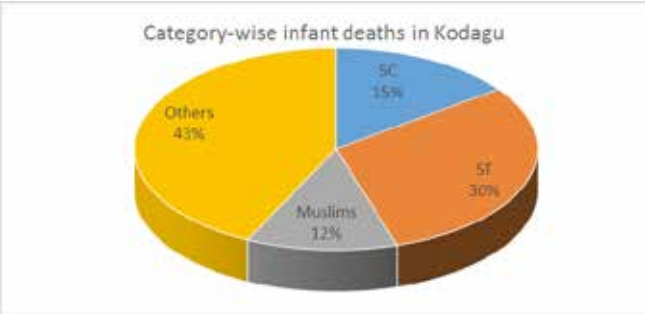
While it is difficult to access social category based status of health in a study like this, the analysis of maternal and child health data, specifically the maternal and child mortality data reflects the vulnerability of these groups.

Based on the line listing of deaths provided by the District Health Office, Kodagu, between 2010 and 2012, 31 maternal deaths were reported in the district. The figure below presents a social class breakup of these deaths. It shows that close to half the maternal deaths within the district were attributed to SC and ST classes. The ST category witnessed the largest number of maternal deaths. Among them, 53% of the deaths occurred either at home or during transit.



Graph 36. Social category-wise proportion of maternal deaths in Kodagu

Similarly, the next graph analyses the infant deaths reported in the district between 2010 and 12. 348 infant deaths were reported during this period. The graph shows that 45% (157 out of 348) of the infant deaths in the district happened among SC and ST categories.



Graph 37. Social category-wise infant deaths in Kodagu

The vulnerability of the ST communities w.r.t infant mortality is accentuated by the fact that low birth weight and premature births (both of which are preventable causes) account for 30% of the infant deaths in the district.

challenges related to maternal and child health requires efforts to improve health seeking behaviour among tribal communities, efficient ante-natal care and the enhanced availability of emergency medical and obstetric care at the taluk hospitals and CHCs.

Together with these health concerns, private medical doctors and government medical officers in the district opine that life style related diseases like Cirrhosis and Liver failure (caused due to Alcohol abuse) are becoming more and more alarming among ST and SC communities leading to distress for the entire household.

The scope to improve coverage of nutrition programmes among infants and pregnant/early mothers exists and can contribute largely to prevent under-nutrition among these vulnerable communities. Sanitation facilities for ST colonies and hamlets are considerably worse-off in comparison to other social classes of the district.

Solving these challenges involve sustained prioritization of the district administration in improving health seeking behaviour among STs, provision of accessible health infrastructure including referral transport and emergency care and emphasis on coverage of vulnerable communities through preventive and public health programmes. These measures require immediate attention to ensure a considerable reduction in maternal and child health related vulnerability of SC and ST communities in the district.

9.5 Occupational patterns

The analysis of the economy of Kodagu provides two insights that have an acute bearing on the livelihood options of vulnerable communities: a. Agriculture and allied activities are the backbone of the economy, contributing roughly 50% of the gross domestic district product (in 2009-10) and b. With a combined population of 24% of the total population of the district, SC and ST communities own roughly about 1.78% of the total agricultural land and form about 5.7% of the total agricultural land owners in the district. Thus, it is clear that majority of the SC and ST population in the district is directly dependent on agricultural wage labour for its livelihood.

While Kodagu provides ample opportunities for agricultural labour, the wage rates in the district are also dependent on the cultivation cycle of Coffee, status and availability of migrated labour as well as the health condition of the household. Hence, social schemes

Photo 54. Civic infrastructure in a tribal hamlet in Kodagu

Nutrition and Sanitation

The analysis of coverage of infants and mothers through the nutrition programmes of the Dept. of Women and Child Development shows that these programmes cover roughly about 53% and 47% of the population of infants and mothers respectively. Increasing the coverage of these services, especially in the tribal areas, specifically of pregnant and lactating women is vital for ST communities, considering the number of maternal and infant deaths that can be related to under-nutrition. While Virajpet shows expected trends (in terms of higher proportion of ST beneficiaries among the overall beneficiaries of the nutrition programmes), the other taluks, particularly, Madikeri taluk may focus to increase the coverage of ST communities.

While sanitation coverage in Kodagu is impressive in comparison to other districts in the state (based on number of GPs winning Nirmala Grama Puraskars), field visits to tribal colonies and hamlets confirmed that most tribal households did not have access to individual household latrines. Further, a recently conducted state-wide evaluation of sanitation status found that, in an NGP awarded Grama Panchayat, close to 80% of the visited ST households did not have access to individual household latrines.

Summary of health profile

The analysis of health situation of SCs and STs brings forth critical issues concerning the health condition of ST communities in particular.

Similar to maternal deaths, the prevalence of infant deaths is higher among STs than other social categories. Among infant deaths in STs, majority of infant deaths have occurred at homes, and after one month of child birth, without institutional medical intervention. Solving the

and poverty alleviation programmes are of immense importance for the vulnerable groups of the district.

Field visits for various small studies show that while social discrimination is not typically a major hurdle for the development of SC and ST communities in the district, asset ownership (in terms of agricultural land) is a major bottleneck for the empowerment of these marginal groups.

The analysis of housing conditions of SC and ST households in the chapter on standard of living showed that the percentage of SC and ST households who live in good houses are well short of the overall district figures. 41.1 % of the SCs have access to good households while only 33.92 ST households have access to good houses compared to the district average of 56.58%. Field visits and interaction with tribal groups indicated that there are a significant number of tribal households who are yet to get the "hakku pathra' (title-deeds) for their land and the data shows that more than 10% of the tribal households in rural areas are living in dilapidated houses.

9.6 Government initiatives for development of vulnerable groups

The department of Backward Classes and Minorities (BCM) and D. DevarajaUrs Backward Classes Development Corporation work for the upliftment of backward classes and minorities. The department of Social Welfare and Dr B R Ambedkar Development Corporation work for the development of schedule caste populations. Recognizing the vulnerability of the tribal communities in the district, special focus has been made to the issue of tribal development in the district. The Integrated Tribal Development Project is the nodal agency for implementation of government interventions for the development of tribal populations in the district and works for the cause of bringing tribal communities to the mainstream, by targeted social, economic and educational interventions.

The main interventions of the department of BCM includes provision of hostel facilities for education of students of BCM communities, provision of scholarships and incentives, skill development and vocational training programmes and encouraging self-employment of youths by subsidizing the purchase of commercial vehicles. The department has also been successful in rehabilitating nomadic communities by creation of colonies and provision of housing and basic amenities (for the Haavadiaga and Hakki-pikki communities in Dundahalli GP, Somwarpet taluk).

The Devaraj Urs Backward Classes Development Corporation and Dr B R Ambedkar Development Corporations work towards social and economic development of BCM and SC communities respectively by provision of loans and subsidies to individuals and

ITDP interventions for Jenu Kuruba Tribe

The Jenu Kuruba community lives in scattered hamlets in southern parts of Karnataka (Kodagu, Mysuru and Chamarajanagar districts) and is a Scheduled Tribe, classified under 'Particularly Vulnerable Tribal Groups (earlier called Primitive Tribal Groups). The ITDP interventions provide special focus is given for the development of Jenu Kuruba community in the district.

Understanding that education is the key to mainstreaming these tribes, together with Hostel facilities and Ashram Shalas, financial incentives is given to Jenu Kuruba students. Jenu Kuruba student passing 7th standard is given a prize of Rs 2500 and a student passing 10th standard receives Rs 5000. Under the Culture Conservation and Development Plan, medical reimbursement of upto Rs 15 lakhs is provided for Jenu Kuruba families.
Special housing schemes (with a unit cost of Rs 1,75,000 in the year 2014-15) are being implemented for Jenu Kurubas, with a total of 1250 units sanctioned in Virajpet and Somwarpet taluks.

Although a lot more needs to be done to bring this vulnerable tribe to mainstream and provide them with sustainable livelihoods, there are cases of success, visible in these communities. Neetu JM, a Jenu Kuruba girl hailing from Chincona Colony in Kutta, Virajpet has been accepted to a Masters degree programme in Technology (M-Tech), after completing a bachelor degree in Engineering. There are success stories of political leadership among Jenu Kurubas as well, with Mr J K Ramu, a Taluk Panchayat Member in Virajpet providing political voice to the community.

groups, both in urban and rural areas, with regards to self-employment, micro-irrigation, micro-credit education and skill development activities. These schemes are designed at the state level, with district specific targets set, which are implemented by the district authorities.

Major intervention sectors of the ITDP in Kodagu include education (provision of hostels and scholarships), Housing and water supply for tribal hamlets and colonies, agriculture and allied activities (including soil conservation, animal husbandry and horticulture), provision of food and nutrition security and forest based activities. There are three LAMPS (Large sized Adivasi Multi-Purpose Co-operative Societies) in the district that aim towards the improvement of economic and financial conditions of the tribal communities.

Together with the provision of Anthyodaya cards for tribal communities, special nutritious food is provided to tribal families (Jenu Kuruba, Yerava, Kadu Kuruba, Soliga and Kudiya tribes) during the rainy season. Special tribal development schemes for backward tribes are implemented to provide infrastructure like roads and drainages to tribal hamlets and colonies.

While tribal communities have been subject to numerous socio-economic difficulties of resettlement, the provision for ownership of land for tribal communities through the Forest Rights Act (FRA) has been an important legislation towards recognizing tribal rights and guaranteeing sustainable livelihoods and ownership of resources for them. In Kodagu, a total of 3524 applications claiming ownership of forest land have been received out of which 1189 individuals have been provided land deeds.

9.7 Concluding Remarks

This chapter analysed the situation of vulnerable groups; SC and ST communities in the context of education, health and livelihood opportunities in Kodagu. The analysis of educational status shows that retention rates and completion of primary education as the major hurdles for ST communities. Special attention needs to be paid to Virajpet taluk, which has a higher concentration of STs and wherein multiple education indicators seem to be lagging.

The health profile of SC and ST communities provide a grim picture of the issues related to maternal and child health, specifically, that of the ST communities. Improving health seeking behaviour, provision of accessible health infrastructure including referral transport and emergency care and emphasis on coverage of vulnerable communities through preventive and public health programmes are crucial in guaranteeing better health status of the vulnerable groups in the district.

The analysis of livelihood options reveals that these communities do not have a significant resource base and are predominantly dependent on agricultural labour and although agricultural labour is in demand in the district, the benefits may not directly reach these vulnerable communities, due to various issues related to the agriculture sector of the district. In this regime, poverty alleviation interventions, skill development, expansion of the secondary and tertiary sector are crucial for economically empowering these communities. Further, the standard of living of the SC and ST communities in the district is considerably lower than that of the other social classes and hence, prioritization is needed in issues like housing and sanitation.

9.8 Small area study: Composite Dalit Development Index (CDDI)

Introduction

Inclusive development is a concept that's widely used in the discussions on development but is persistently ignored in practice. The human development paradigm is crucially dependent on the equitability of development processes and outcomes and hence true human development cannot be envisioned without addressing these disparities. However, the development experiment in India, after the liberalization reforms has unfortunately enhanced the divide that existed between the haves and have not's, and the developed and the marginalized. Further, the continued existence of a hierarchical social system manifested by the castes and untouchability has meant that a level playing ground for utilizing the opportunities for social and economic development has never existed in the country. Thus, even with consistently high growth rates of the Indian economy, the socio-economic status of communities in the lower rungs of the Indian society (the Scheduled Castes and Scheduled Tribes) have continued to be far from satisfactory .

The Constitution of India abolished untouchability (Article 17) and guarantees social, economic and political inclusion of such marginalized communities through article 46 of the Directive Principles. The system of reservation for Scheduled Castes, Scheduled Tribes and Backward Classes is a major attempt to set aside specific

percentage of seats in the electoral process, central and state government bureaucratic and service delivery positions and higher education courses, through which disadvantaged groups are brought into the mainstream. This system of affirmative action has existed since independence. Further, there are targeted schemes designed for specific social categories (as described in this chapter) that help these communities with additional financial and skilled assistance to utilize the opportunity and gain social and economic development.

However, both these methods of affirmative action have been criticized for perpetuating the 'divide' between upper and lower castes, since availing these benefits boils down to differentiating that someone is a 'dalit' or a person of 'backward class' and someone else is 'upper caste'. Thus, although there are definite gains towards equality and equity due to the affirmative actions of the State, discrimination still exists, in some places, through blatant infringement of rights and equal treatment and in some cases, at a psychological level that prevents the bridging of gaps between dalits and non-dalits.

This present study tries to understand this discrimination in one rural area of Kodagu, both in terms of inequality in resource and asset distribution as well the perception of discrimination experienced by dalits. Thus, this small area study complements the efforts to understand the status of human development in the district, through the rest of the chapters by providing an understanding of existing inequity between dalits and non-dalits in the district from a micro, perception based approach. Thus, the study is not generalizable to the entire dalit population of the district and certainly not applicable for all the vulnerable groups of the district. However, as previous chapters have shown, within the particular context of Kodagu, the status of development (in health, education and livelihoods) of Scheduled Tribes, is far worse in comparison to other social categories.

Description of the study

The field data collection of the Dalit Development Index was conducted in Valnur – Tyagatthur Grama Panchayat of Somwarpet Taluk in Kodagu district. According to the Nanjundappa Report on status of taluk development, Somwarpet taluk lags behind the other two taluks of Madikeri and Virajpet, within the district of Kodagu and hence, was chosen for the study. Based on the criteria mentioned for the study, Valnur-Tyagatthur GP was selected for this study.

A GP member belonging to the land holding upper class mentioned that the dalits in his GP were not discriminated against and the study was unnecessary. He jokingly said that plantation owners are forced to take good care of their labourers, since the labourers may not provide their labour otherwise.

Field work, was conducted and interviews of 50 households were held in 2 revenue villages of the GP, based on the questionnaire provided by the Human Development Department, Dept of Planning. The GP had a SC population of 714, out of which, 122 people resided in Valnur village and the rest (514) in the village of Abhyath Mangala. In Abhyat Mangala village, most of the SC families resided within coffee plantations owned by private companies. A total of 22 households were interviewed in the villages and the remaining 28 families were selected from the line-houses within the coffee plantations.

The Dalit households in the GP are mostly from the Mogaveera community. These households migrated from Dakshina Kannada about 40 – 50 years ago. Most households still have contacts with Dakshina Kannada (Nurses work there, brides are brought from DK etc). Their native tongue is Tulu, although they speak Kannada, Kodava, Tamil and Malayalam as well. However, we interviewed a couple of households that were comfortable mainly in Tulu since they had recently migrated from Dakshina Kannada. All the households we interviewed were working as a daily wage labourers in Coffee plantations. There was considerable variation in the wages given to men and women, permanent labourers and temporary labours and between different seasons (paddy transplantation season, coffee picking season etc) and type of work involved (pruning the tree, picking coffee, planting saplings etc).

Calculation of Dalit Development Index

Institutional inclusion

There was in general no evidence of discrimination against dalits in terms of inclusion within existing institutions like membership in GP, SDMCs and VHSCs. However, the GP did not have committees like Joint Forest Management Committee, Water and Finance Societies.

Perception of social exclusion, discrimination and protest against discrimination

There were very few cases wherein perception of social exclusion and discrimination were experienced by the interviewed households. The most common social exclusion perceived was that of entering someone else's house. However, most respondents felt that they would feel uncomfortable to go into someone else's house irrespective of caste. There were no perceived discrimination against dalits when it comes to temples and hotels, distribution of drinking water, health and economic aspects.

One of the respondents for the interview was a female GP member. She was the local school's cook before becoming the member of the GP. She talked about how another Brahmin cook in the school wouldn't eat at the school, since dalit students were attending the school. After she became GP member, she scolded the Brahmin cook to not differentiate and eat the food cooked for the students. The new cook now eats the school food. The other few cases of perception of discrimination and protest against the same were more related to neighbouring households having differences of opinions that were sorted out based on discussion and compromise. There was no evidence to suggest that such incidences were result of discrimination against particular castes of people.

The interviewed households also in general felt that they had the freedom to question and protest (only 4 people perceived that they did not have sufficient freedoms). They did not find any hurdles in mobility, getting employment or participating in the cultural activities of the village.

Standard of living and access to basic amenities

There was a glaring difference between dalit and upper caste houses in the village in terms of land ownership. Dalits, Schedule tribes and other marginal groups hardly had any land ownership in the GP. Among the 278 land holders in the GP, only 6 were SCs. While 27% of the non-dalit households had land holdings, land ownership was about 7% among dalits.

None of the interviewed households had any land. Among the households interviewed, those living in the villages had own houses and home gardens where Coffee was grown. The condition of houses, sanitation and electrification status of dalit households was comparable to that of non-dalits. Further, lesser percentage of dalit households possessed 2 wheelers in comparison to non-dalits.

Photo 55. Household interviews in Valnur-Tyagatthur as part of assessing CDDI

The access to basic amenities; supply of drinking water, toilets and drainage facilities did not show differences between dalits and non-dalits. For example, drinking water was supplied only to colonies having dalit and ST households. Upper caste households did not generally depend on drinking water supplied by the GP. Drainages were not constructed in the households surveyed, since the houses were sparsely dispersed in the habitations.

The GP had two schools (one in each village) wherein most students enrolled were from dalit, backward class and ST backgrounds. Within these children, there was no noticeable difference in trends of enrolment, attendance and rate of transition between dalits and non-dalits.

Gender dimension of dalit development

The gender dimension of dalit development also did not show major untoward trends of discrimination. The institutional delivery rates among dalit households was similar to that of the district average and the households felt that there was no perceivable discrimination against them by the health visitors. The awareness levels of dalit households regarding reproductive and child health support was equivalent to their neighbours. The local

One household that we interviewed stayed in a rented, dilapidated house inside a plantation. This house was rented by the plantation owner to an SC household. Hence, although in this context, 'house rental for SCs' is allowed, it did not capture the full picture. The house was dilapidated and one wouldn't bother who stays there.

nurse said that about 3 months of rest after child delivery was the norm in the area. However, majority of the dalit households felt that the rest provided for a pregnant mother after delivery would be more than 3 months.

Composite Dalit Development Index

Based on the information collected from the dalit households, the perception indicators for various dimensions were formed and the CDDI values were calculated.

Table 103. Calculation of Composite Dalit Development Index

Description	Value
Institutional inclusion	0.42
Social inclusion	1.00
Perception of discrimination	1.00
Protest against discrimination	0.40
Conflict Resolution	0.40
Standard of living	0.20
Perception of freedom	1.00
Gender dimension	0.60
Access to Basic facilities	0.50
Access to Education	0.50
CDDI	0.60
DDI	0.40

The table above presents these values for Valnur-Tyagatthur GP. The values range between 0 (absolute discrimination) and 1 (no discrimination). Some of the perception indicators like institutional inclusion, protest against discrimination and conflict resolution are low for the GP since there were less number of valid cases found for these categories.

Analysis of Dalit Development in Kodagu

The social dynamics in the village and the experience from the interviews seemed to suggest that rather than exclusion based on caste, disparities based on economic categories was probably prevalent in the area. A glance of the land ownership patterns, specifically that of coffee plantations provide an idea on the enormity of the economic disparities that exist in the GP. Further, as the study team gathered from the GP service providers, a lot of the services provided by the government and its agencies (government schools, public health centres, GP's toilet constructions etc) were simply not accessed by upper class population of the GP, since they could afford their own/private services. The only communities that were left compete and access the existing services were those of the economically backward class; belonging to SCs, STs and backward classes. Discrimination among them, in the context of Kodagu was found to be minimal. This was also visible in the small hotels in the GP, wherein the only customers that visit the hotel were the labour class

Further, the dalits found in the GP were all migrated from Dakshina Kannada and did not have roots and experiences of past discriminations against them in this area. Hence, there was no traditional hierarchical relationship between upper classes of the area and the dalits in the area. If at all such relationships exist, it exists between upper classes and tribal communities of Kodagu. Field experience in other areas suggest that tribal communities do sometimes face discriminations in this context.

Further, the plantation labour class of Kodagu is a melting pot of cultures. Families working in plantations have migrated from various places including Dakshina Kannada, Mysuru, Kerala, Tamil Nadu and in some cases, from North East as well. The Bill Collector said that in this part of Kodagu, most people are 'pentalinguals': Kannada, Kodava, Tamil, Malayalam and their native tongue. Such diversity can often blur caste identities and enforce a more generic class hierarchy.

The opportunities for economic empowerment of dalits in Kodagu do not seem to be hampered due to caste discrimination alone. However, just like other poor households, considerable class disparity exists for dalits in Kodagu to break away from the poverty trap and reap the benefits of growth and development opportunities in the district. Specifically, land ownership related inequity is a major indicator for socio-economic disparities in the district. These unique social dynamics of the district have to considered, in policy formulation that focusses on equity and inclusive growth.

Photo 56. Example of forest based produce (tubers) as a source of livelihood

9.9 Small area study: Human Development Status of Scheduled Tribes in Kodagu

Introduction

India has several socially disadvantaged communities and Scheduled Tribes are the most deprived ones. The tribes of India constitute 8.2% of the total population of the country with varying proportions in different states. Tribal communities are isolated from general population and are socially and economically vulnerable. They are 'at risk' due to geographical isolation, primitive agricultural practices, socio-cultural taboos, lack of formal education, poor infrastructure facilities, improper health seeking behaviour, malnutrition, lack of safe drinking water and hygienic conditions, poverty and the like. In India, each state is practically equivalent to a country with its own specific socio-economic level, different ethnic groups, food habits, health infrastructures and communication facilities. Tribal communities are acknowledged to have very close association with the ecosystem and the environment because of their fulfilment of daily nutritional requirements with food foraged from nature.

As discussed in other chapters and in this chapter, Kodagu is home to many tribal communities with diverse ethnic origins, such as Yerava, Kudiya, Jenu Kuruba, Kadu Kuruba, and Soliga. Just like other areas, the tribal communities in the district, especially, the forest based tribes are vulnerable and significantly lag behind other social categories in the issues of education, health and livelihood opportunities. Further, with a large area covered with forests, three wildlife sanctuaries; the Brahmagiri, Talakaveri, and Pushpagiri Wildlife Sanctuaries and one national park: the Rajiv Gandhi National Park, tribal rights and resettlement of tribes are other major issues that affect the development of these tribes.

Further, there is a lack of segregated tribe-wise data on the status of development, utilization of various government schemes and the impact of such interventions on the lives of the specific tribes. Thus, this small area study tries to gather qualitatively the current status of development of 3 different tribes and compare and contrast between them the factors that determine their current development status. The study was conducted through primary data collection, consisting of individual interviews and group discussions. The interviews documented socio-cultural practices, status of education, health and livelihoods and awareness and utilization of government schemes. The field sites were: Yavakapadi Cheenihadlu (Yerava Hamlet, Virajpet Taluk), Ayarasuli and Katte Haadi (Jenu Kuruba Hamlets, Somwarpet taluk) and Haadi (Kudiya Hamlet, Madikeri Taluk).

The Yerava also live in adjacent Kerala, where they are known as the Adiya, and are primarily fishermen and farm-labourers. They speak their own Yerava dialect. The Kurbas were forest hunter-gatherers who are now farm-labourers. They speak their own dialect and belong to two subcastes – Jenu, who are honey-gatherers, and Betta, who are hill-dwellers and good elephant captors, trainers and mahouts. The Kudiya are of Malabarese tribe origin, they were toddy-makers. All these groups speak the Kodava language and conform generally to Kodava customs and dress.

The three tribes

Yerava Tribe

Photo 57. A Yerava household in Virajpet

The Yerava are divided into four subgroups, viz., Pani Yerava, Panjari Yerava, Badaga Yerava and Kage Yerava. They are distributed in the border area of the three southern states, viz., Karnataka, Kerala and Tamil Nadu. The numerically dominant sub-groups of the Yerava viz., Pani and Panjari are considered to be two distinctive communities spread over the adjoining area of the three southern states. Yeravas speak their own dialect known as Pani and Panjari. These dialects are mixture of Malayalam and Kannada, while the Badaga speak Kannada. They use the Kannada script. The Yerava women wear the Sari in a distinctive fashion, which is very specific to the Yerava and similar to the Coorg women wearing the Sari along with blouse. The Yeravas have oral tradition of folk-songs and folk-tales. Percussion musical instruments accompany during their singing and dancing. Both men and women participate in dances. Most of the upper castes such as the Brahman and Kodava do not accept food or water from the Yeravas.

Jenu Kuruba Tribe

Jenu Kuruba tribes of Karnataka are the original residents of the forests regions of the western ghats of south India. In the kannada language, the term "Jenu" signifies honey and "Kuruba" stands for caste. Therefore their name suggests that these Jenu Kuruba Tribes have adapted the profession of honey gathering. According to anthropologists after the downfall of the pallava dynasty several Jenu Kuruba tribes have taken refuge in different places of the southern state of Indian subcontinent. Jenu Kuruba tribes also have settled down in several forests hideouts, quite naturally these tribal people embraced the natural habitat of the forest region. Due to elongated alienation the Jenu Kuruba tribes have developed their own culture and ethnicity.

The Jenu Kuruba tribes lead a semi-nomadic lifestyle adapting to various occupations like conventional food collectors and shifting cultivators. The Jenu Kuruba tribals inhabit the forest area that forms a conclave of the 3 states: Karnataka, Tamil Nadu and Kerala. Jenu Kuruba tribe is distinct in its appearance and cultural practices. They have negroid features. They are of short stature, have curly hair and are dark complexioned. They are shy and timid by nature.

Kudiya Tribe

Kudiya tribes are of Malabarees origin. They are inhabited in the high hilly regions of Western Ghats of Karnataka and Kerala. They live on the peak of the hills. They are originally toddy makers and grow Cardamom with their own traditional way of planting. They speak the Kodava language and have adapted to Kodava customs and dress. Kudiya tribe has settled down in several hilly forests areas and encompass the natural environment of the forest region. They have voiced custom of folk-songs and folk-tales, thumping musical instruments complement during their singing and dancing.

Photo 58. A Jenu Kuruba family

Photo 59. A Kudiya family

Profile of the three tribes

Demography

Demographic background of the selected tribes indicates that all tribes follow patri-local society and follow patrilineal decent. Monogamy is the norm. Both consanguineous (within close relatives) and non-consanguineous

marriages are practiced. In consanguineous type of marriage, one's father's sister's daughter and mother's brother's daughter are performed. Endogamy is also present, wherein the marriage rule is at the group level. Early marriage prevails among Yeravas and Jenukurubas like boys and girls are married off around 16 to 20 years and 12 to 16 years, respectively. Kudiyas do not prefer early marriage; they usually get their girls married at or after 25 years and men around 28 years of age.

The age at menarche (first menstrual cycle) among girls is found to be between 12-14 years. Majority of the families are nuclear and only few extended families were found among all the tribes. Family size extends from 4 – 10 members. All tribes were aware of family planning. Tubectomy as a family planning method was adopted among some households. The study revealed that there were recent infant and child deaths reported among the tribes recently (within one year), although maternal mortality was not reported recently.

Socio economic conditions

There have been changes in all walks of life like social, cultural, economic, education and health. Specially, in the social and economic life of the tribes, many of these tribes have undergone serious transition in their life style. Earlier their economy was based on fishing for Yeravas, honey collection, hunting and gathering of minor forest produces for Jenukurubas and toddy making and agriculture for Kudiyas. However, these traditional occupations have changed drastically, at least in the case of Yeravas and Jenu Kurubas.

All Yeravas and Jenukurubas interviewed in the study were working as daily wage labourers in estates, forests and horticulture departments. However, Kudiyas were both daily wage labourers as well as land holders who cultivate their own agricultural lands. It is well understood that the main source of income for Yeravas and Jenukurubas is daily wage and Kudiyas earn through daily wage and cultivation. Further, it was unclear whether Kudiyas actually had documented land rights to the full extent of land they are using for agriculture. Kudiyas have the concept of savings, they are aware about banking and have saved their income in banks but Yeravas and Jenukurubas do not save any money as they are completely depended on daily wage which is a hand and mouth condition.

Living conditions

The living conditions of Yerava and Jenu Kuruba tribes were not satisfactory since most of them lived in Kaccha

Photo 60. A Kaccha house in a Jenu Kuruba hamlet

houses, made of temporary materials. Yeravas lived in huts constructed with hay, Jenukurubas had huts, as well as tarpaulin roofs. However, the Kudiyas we visited have tiled houses. Kudiyas live in sparse hamlets, where each houses are generally far away from each other. Their houses have separate kitchens and are well lit. All of them depend of fire wood for cooking only a few countable numbers of families use LPG. For drinking water they depend on well and rivers/streams.

There was no toilet and drainage facility for Yeravas and Jenukurubas in their habitations and they practice open defection. A few families of Kudiyas have toilet facilities but since they live in widely dispersed surroundings, there were no drainage facilities available for them. They do not have electricity connections and use oil lamps, whereas a few families use solar lamps.

Yerava and Jenu Kuruba households did not possess any household assets or furniture's except for some Kudiya families who possessed televisions and furniture. Kudiyas possessed agricultural lands and grew Coffee and Cardamom. Some of the Yerava households visited had paddy fields. However, the Jenukurubas had arable agricultural lands, but did not cultivate them. Household poultry rearing was visible in the households of all the tribes.

The tribal households were aware of Widow Pension and Anthyodaya cards and many possessed them.

Health condition

All the three tribes were aware of different health schemes. They did not perceive the need for regular health check-ups. They use neem twigs or other roots to clean the teeth and some of them use tooth brush and paste. Yeravas and Kudiyas kept the surroundings of their households clean whereas Jenukurubas did not perceive

Photo 61. A young Jenu Kuruba mother and her family

this as necessary. All most all Jenukurubas and Yeravas interviewed consumed alcohol and majority had the habit of smoking. Kudiyas expressed that they too consume alcohol but are stated that they are not addicted as the other two tribes and smoking is uncommon among them. Further, Kudiyas stated that these days they depend on allopathic medicine and very rarely follow their traditional medicine, except for Jaundice, for which, they prefer Ayurvedic medicine. Kudiyas use auto/Jeep for transportation to health centeres and clinics while the other two tribes have walk all the way to reach the health center.

Breast feeding is given normally for 12 to 18 months among all the tribes, they start preventing after 6 months and are aware of primary immunization. As reported earlier, there were cases of infant and child mortality reported recently in all the tribes. However, maternal deaths weren't reported recently.

Food and diet pattern

The food patterns of the three tribes included Rice, various roots and tubers, fruits like mangoes, Licchi, Berries, and Jackfruit that are available in the forests. The non-vegetarian foods they consume included wild-boar, forest cat and birds and is consumed based on availability. The three tribes expressed that they never consume beef. Consumption of cereals (Rice and Ragi) and pulses is common and Turdal is used more frequently than other pulses.

The meal pattern of include Rice and Ragi balls with Sambhar along with commonly available vegetables and green leaves. The common pulses that are used are Tur dal, cowpea, horse gram, green gram and occasionally Bengal gram. Chapathi, roti, idly and dosa are consumed but rarely. Coconut is not used frequently for the preparation.

Eggs are distributed by the government along with rice, ragi, and dhal. Hence they consume eggs once a week. Non-vegetarian food is consumed once in a week or fortnight and depends largely on the wages and money saved by the households. Chicken is preferred as it is cheaper than mutton. Fish is also consumed based on availability. Milk and milk products are occasionally used since they are not available near-by and are also expensive. They usually drink black coffee and black tea twice a day with Jaggery instead of Sugar. The commonly used oils are palm oil and ground nut oil for cooking.

They eat two meals a day and have irregular meal timings. The calorie requirement is high since most work as agricultural labourers in the estates. They do not consume any supplementary foods or tablets. It was found that both male and female members consume alcohol and in the case of Jenukuruba households, addiction was also noticed. The usage of addictive substances like liquor, local toddy and Beedi and several types of Gutka was high.

Cultural practices

All the tribes perform the major lifecycle ceremonies, like birth, puberty, marriage and death. Post-delivery pollution is observed for four days. At the onset of menstruation, the girl is scheduled for 11 days. She is not allowed to enter the house or touch any house-hold articles, but is provided with nutritious food. Ganga puja marks the end of 'pollution'. They follow funeral rites, practice burial and perform elabourate ceremonies from the seventh to the twelfth day.

They celebrate all the festivals of Kodagu like Huttari, Kailpoudh etc. The one common practice among all the three tribes is worshiping a God called Pashanamurthy (considered as a form of Shiva among other social categories), whose temple is near Ponnampet. The deity is usually worshipped by placing a stone under a tree in the forest.

In the current days, inter-caste marriage is allowed among all the tribal group. Marriage ceremony takes place either at bride or grooms place among Kudiyas and Jenukurubas and at brides place among Yeravas.All the tribes believe in

Photo 62. Traditional cardamom cultivation by Kudiyas

black magic and practice several of them.

Status of Women

Tribal women enjoy good status as they are involved in all the activities on par with men and contribute towards the family income by doing agriculture wage labour. Both men and women have the right to divorce on grounds of adultery, barrenness or disputes. Widows, widowers, male and female divorcees are all allowed to remarry.

Summary

The above discussion confirms that tribes have now been settled for a mainstream lifestyle. While tribes like Kudiya have been able to absorb some of the aspects of such a lifestyle easily, it can be seen that tribes like Jenu Kuruba and Yeravas have a long way to go, if these communities have to sustain themselves independent of government support. While all the three tribes seemed to be aware of the various government schemes and benefits, the behavioural and attitudinal change required to survive in the mainstream society (absorbing education, modern agricultural practices, healthy lifestyles, utilizing government benefits to move up the social ladder etc) seemed to be largely missing among the Jenu Kuruba and Yerava tribes. The ownership and successful cultivation of lands, the production of commercial crops and the assimilation into the local culture seems to be the defining differences between the Kudiya and the other two tribes that could probably explain the difference in the mainstreaming processes between these tribes.

The Jenu Kuruba and Yerava tribes are still vulnerable and their development, specifically with respect to health, basic infrastructure and education have to be prioritized. Further, the addiction to alcohol among tribal communities in general and among the Jenu Kurubas in particular is a primary issue that needs to be prioritized if these tribes have to lead a healthy and productive life. The dislocation from the forest based lifestyle and the continued marginalization of these tribes from fruitful involvement in the local economy are the major hurdles that prevent an immediate and accelerated mainstreaming strategy of these tribal communities. Thus, while the efforts towards tribal development in Kodagu district needs to be amplified, the government intervention strategy in their mainstreaming requires to be focussed, long term and participatory.

CHAPTER - 10

GOVERNANCE AND HUMAN DEVELOPMENT

General Thimmaiah circle appeared Misty Monsoon Day

CHAPTER 10.
GOVERNANCE AND HUMAN DEVELOPMENT

10.1 Introduction

According to the World Bank governance refers broadly to how power is exercised through a country's economic, social, and political institutions. Good governance has eight major characteristics: it is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. Thus, while responding to the current and future needs of the society, good governance ensures that vulnerable, marginal and minority communities are provided a fair voice in decision making. Contrastingly, bad governance can be regarded as one of that does not serve the aspirations of the people it governs and can be considered as an important causes of deprivation in our societies.

The Government is one of the major actors of governance and is a crucial determinant of human development. The Karnataka Human Development Report 2005 elucidates the importance of governance by linking operational characteristics of good governance like effectiveness of fund utilization, patterns of service delivery, accountability and inclusiveness to end results like development outcomes in sectors like health, education and livelihoods and increasing the overall quality of life of the people.

10.2 Local Governance Structure

Photo 63. Madikeri fort - The seat of governance in Kodagu

A well-developed mechanism for decentralized governance and planning ensures inclusive decision making, responsiveness to local needs and transparency and accountability in achieving development outcomes. Hence, it is an important mechanism of ensuring good governance; which, sustained in the long run, results in higher levels of human development.

Panchayat Raj Institutions (PRI) and Urban Local Bodies (ULB) form the major decentralized governance structures in India. Recognizing that decentralized governance is a practical approach towards guaranteeing effective and inclusive development, Karnataka has strived hard to evolve a practical model of decentralization and has had a commendable past in introducing effecting political and fiscal decentralization structures and mechanisms.

The history of local governance dates back to the pre-independence days in the state, when the Mysuru state experimented with the idea of local governance through various administrative structures. After various experiments in decentralization during the post-independence period, the state passed the Karnataka Zilla Parishads, Taluk Panchayat Samithis, Mandal Panchayats and Nyaya Panchayats Act in 1983. It was critically acclaimed for its extent of devolution of power, and importance given to participation of women (25% reservation) and SCs and STs (15% and 3% reservation respectively) and in institutionalizing a stable decentralized governance mechanism in Karnataka.

10.3 Panchayat Raj Institutions: Structure and Process

The Constitution of India was amended in 1992, through the 73rd amendment, to bring a uniform three tier structure to PRIs across the country. This structure comprises of the Zilla Panchayats (ZP) at the district level, Taluk Panchayats (TP) at the taluk or block level and Gram Panchayats (GP) at the village (lowest) level. Karnataka passed the Karnataka Panchayat Raj Act in 1993, to restructure its PRI system in compliance with the constitutional amendment. Karnataka is one of the first states that have managed to devolve all the 29 issues as prescribed in the 73rd amendment.

In further strengthening the PRI system and enabling its involvement in governance and monitoring of local government institutions, Karnataka passed the Belur Declaration in 2004. This declaration sought to advance the scope of PRIs by bringing primary schools, rural libraries, adult education centres, Anganwadis, ANM Sub-centres and fair price shops within the administrative ambit of Gram Panchayats.

In summary, the state has had varied successes through these experiments in decentralization and local governance in achieving the twin goals of effective service delivery and inclusive decision making, which in essence are also crucial determinants of Human Development, specifically in the context of rural communities. Thus, today, a majority of development related initiatives of the government are implemented through the PRI structure, by devolving funds, functions and functionaries to them.

However, achieving true devolution of powers to PRIs has had various constraints as presented in the Karnataka State Human Development Report, 2005. Some of these critical constraints include: restrictive fiscal pressures, reduced scope for decision making at the local levels due to a plethora of schemes with inflexible guidelines, steady reduction in 'planned expenditures ' in the 'district sector' in comparison to state sector schemes and varied levels of political interference in implementation of schemes and programmes. Further, although funds and functions were devolved successfully to PRIs, the functionaries of the PRIs are still principally attached to the vertical 'line departments' of the state government. They are expected to implement both 'district sector schemes' (under the jurisdiction of the PRIs) as well as state sector schemes (under the jurisdiction of the state government).

In this context, the levels of human development achieved by a district are directly influenced by the efficiency of its decentralization mechanisms; specifically at the ZP, TP and GP levels. Key indicators of the efficiency of decentralization at the district level and below are: equitable political representation in decentralized structures like ZP, TP and GP, political and bureaucratic stability, effectiveness and efficiency of fund utilization and progress in important development schemes and initiatives.

Kodagu district has the following PRI structures and elected members

Table 104. PRI details in Kodagu

Zilla Panchayat	Kodagu
Taluk Panchayats	Madikeri, Somwarpet and Virajpet
GPs	Madikeri: 22, Somwarpet: 40, Virajpet: 36
Total ZP members	29
Total TP members	49
Total GP members	1266

Source: District Statistics at a Glance 2011, Kodagu

Important aspects of PRIs are the processes of participatory planning and accountability built into the structure, especially at the GP level. The Grama Sabha, is a constitutionally empowered public meeting mechanism that implements participatory planning, selection of works and beneficiaries for various schemes and discussion on various development issues at the GP level. It also is empowered to carry out social audits of the work of the GP and direct suitable follow up actions. The Grama Sabha is assisted by ward level public meetings that help generate public opinion on various development issues within the geographical boundaries of the village/ward. Together with Grama Sabhas, other public meetings like MGNREGA social audit and Jamabandi initiatives help create social accountability and transparency in decentralized governance. However, effective community participation in such initiatives need the proactive participation of GP elected members, bureaucrats of the GP and other vertical departments and the interest of communities to be part of these participatory governance mechanisms.

10.4 Urban Local Bodies

Urban local bodies (ULBs) form the urban counterparts of PRI systems in India. Major types of urban local bodies are: Municipal Corporations, City Municipalities, Town Municipalities and Town Panchayats. The 74th amendment to the Constitution of India provided constitutional sanctity to these ULBs and provided uniform structure to them based on population of the locality. This classification is provided below.

Photo 64. A Women's Grama Sabha in Maldare, Virajpet

Table 105. Categories of ULBs in India

Urban Local Body	Population
Town Panchayat	10000 – 20000
Town Municipal Council	20000 – 50000
City Municipal Council	50000 – 300000
Municipal Corporations	Above 300000

Accordingly, Kodagu district has the following ULBs.

Table 106. ULB details in Kodagu

Area	Type of ULB	Population	Council members
Madikeri	City Municipal Council	33381	23
Somwarpet	Town Panchayat	6729	11
Kushal-nagar	Town Panchayat	15326	13
Virajpet	Town Panchayat	17246	16

Source: Respective ULBs and Census 2011

Similar to Gram Panchayats, ULBs have the power to levy taxes and user fees. They also receive grants and funds from Centre and State governments together with special schemes for ULBs. Provision of physical infrastructure, solid and liquid waste management and sanitation provision, health, education, social security programmes and development programmes are the major activities of ULBs.

10.5 Political representation

Equitable representation of all social categories in the PRI and ULB structures is crucial determinant of inclusive decision making. For this reason, the Indian democratic system mandates the reservation of seats for marginalized communities and women at all levels of governance. This principle applies to the PRI structure and ULBs as well. The reservation roaster of seats within the district for marginalized classes and women is proportionate to their population in the region and is pre-decided during the elections itself (and is influenced by other factors like rotation of reservations as well). However, the analysis below is based on the data of actual serving members in 2011 (Based on District at a Glance, 2011).

Table 107. SC/ST and Women representatives in PRIs and ULBs in Kodagu

Taluk	% of SC and ST elected representatives		% of women elected representatives	
	PRIs	ULBs	PRIs	ULBs
Madikeri	19.27	35.48	48.17	35.48
Somwarpet	24.29	50.00	50.47	50.00
Virajpet	28.52	43.75	48.05	43.75
District	24.78	42.25	49.03	42.25

Source: District Statistics at a Glance 2011, Kodagu

10.6 Stability of political leadership and bureaucracy

The stability of any governance structure derives from the stability of its political and bureaucratic leadership. A stable governance regime in the PRI structure is a precursor to understand contextual needs of development and for sustained prioritization of district specific development issues. While stable political leadership provides vision and direction towards development, bureaucratic stability at the ZP level is critical since it also guides the administration of the TPs and GPs as well. If political leadership and bureaucrats in the PRI structure of the district are able to fully use their respective terms in office, opportunity for a stable governance regime in the district can be expected. To analyse the stability of the governance regime of the PRI structure in the district, the terms of office of key political and bureaucratic positions of the ZP serve as useful indicators. The tables below present the terms of office of the ZP's political leadership (President and Vice President, both having a term of office of two years) and its top bureaucratic positions: Chief Executive Officer (CEO) of ZP, Deputy Secretary (DS) and the Chief Planning Officer (CPO), all of which are senior positions in the state bureaucracy. Specifically, these tables present the number of people serving in these positions in a given financial year (based on successive annual reports of the ZP, Kodagu).

Table 108. Number of persons serving in leadership posts in Kodagu ZP

Year	Presidents	Vice-Presidents	CEO	Deputy Secretary	CPO
2008-09	1	1	5	4	4
2009-10	3	2	2	1	3
2010-11	2	2	4	1	1
2011-12	1	1	1	1	3
2012-13	2	2	2	2	1

Source: ZP Administrative reports of various years

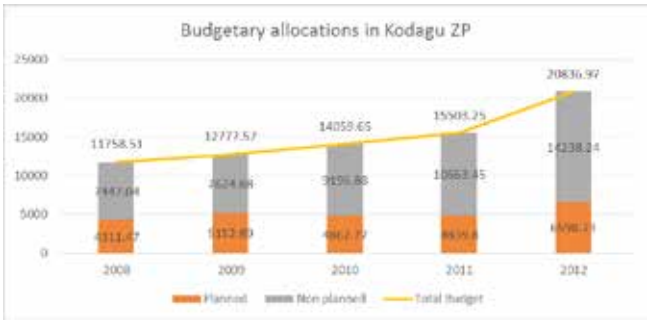
The table above shows that the political leadership of the ZP is much more stable than the bureaucratic leadership. Specifically, it can be observed that in the 5 years between 2008 and 2012, there has not been a single year where an unchanged team of political leaders and bureaucrats have lead the administration the Kodagu ZP.

10.7 Fiscal trends

As discussed earlier in the chapter, even with increased devolution of funds PRIs face several financial constraints that limit the scope of their activities, to foster human development at the local level. The current analysis uses budget data of Kodagu ZP and its TPs as reported in the successive administrative reports of the ZP.

ZP and TP budgetary allocations

The graph below provides an example of one such limitation: the restricted role of the ZP in decision making related to its own expenditures. The graph presents the trends in planned and non-planned budgetary allocations to Kodagu ZP. It shows that although the budgetary allocations to Kodagu ZP has increased gradually in the last 5 years, the budgetary allocations for 'planned activities' of the Kodagu ZP have varied between 30% and 40%.



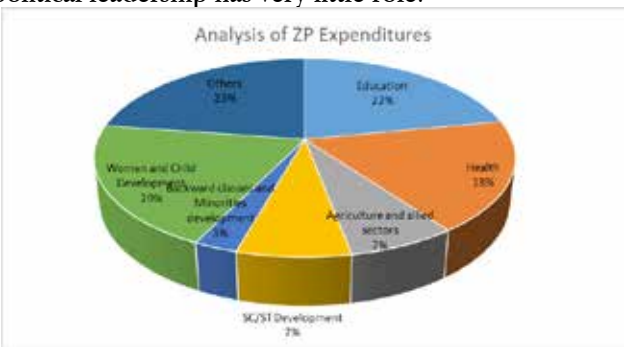
Graph 38. Budgetary allocations in Kodagu ZP

In comparison, budgetary allocations for non-planned activities (wherein there is very narrow scope for local decision making) have continued to be substantial. The situation is similar at the Taluk Panchayat level as well. The

planned expenditure component in overall expenditures of the TPs of the district in 2009-10 ranged between 16% (Somwarpet) to 24% (Madikeri).

Sectoral composition of ZP budgets

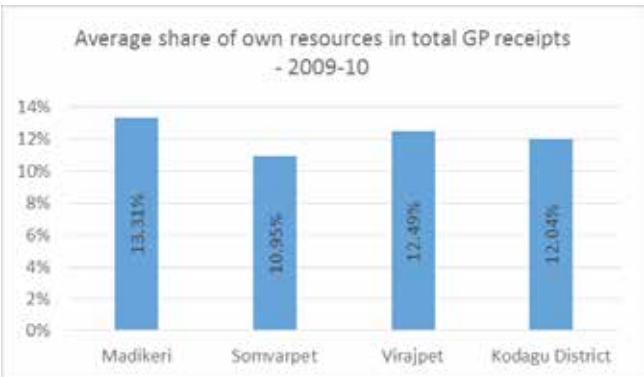
The graph below presents the sectoral composition of the Kodagu ZP budget in 2011. It shows education, women and child development and health are the major departments on which budgets are allocated with the ZP. However, as discussed earlier, a majority of these allocations are non-planned expenditures in which the political leadership has very little role.



Graph 39. Analysis of Kodagu ZP expenditures (2011)

GP fiscal trends

As mentioned earlier, Gram Panchyats, the last tier in the PRI structure have the powers to raise their own resources by taxation and mobilizing local assets. Higher the share of such own resources in the overall receipts of the GP, higher is its ability to autonomously address its local development issues. The graph below presents the taluk averages of share of own resources in total receipts of the GPs in the taluk. The data used in this analysis was taken from the Decentralization Analysis Cell of the Dept of Rural Development and Panchayat Raj, Govt of Karnataka.



Graph 40. Share of own resources in GP receipts (2009-10)

The data shows that on an average, the share of own resources in Kodagu's GPs range between 10% - 14% of the total funds received by the GP. Within the district, the average own resource mobilization of Somwarpet taluk is the least (about 10.95%) and the highest in Madikeri taluk (13.31%). In 2009-10, the state-wide GP average of share of own resources in total receipts was 7.3%, with the district with the highest proportion being Bengaluru Urban (35%) followed by Udupi (25%) and Dakshina Kannada (22%). The district where GPs had the least share of own resources was Bidar (1.4%) followed by Kalaburagi (2.2%) and Davanagere (2.5%). Other major sources of funds for GPs include: MGNREGA, Development Grants from the state government, funds from finance commissions, Housing and sanitation schemes (like Ashraya and Nirmal Bharath Abhiyan respectively) and other local GP level schemes. Among these schemes, MGNREGA, a flagship programme of the central government forms a sizeable share of the total GP receipts. Progress of the district in regards to this scheme is provided below.

Progress under MGNREGA

The Mahatma Gandhi National Rural Employment Guarantee Act was introduced in 2005 and mandates the local Gram Panchayat to provision 100 days of unskilled labour for any household in its boundary. The scheme was started in 2005 and was introduced in Kodagu in 2008. Recognized as a major initiative to alleviate the problem of rural poverty and for the creation of long term natural assets, the scheme since its introduction has had significant impact on rural communities. It is also controversial due to reported cases of wide-spread corruption in its implementation.

The structure of the scheme directs that the different activities of the scheme like selection of work, implementation, payment and monitoring and social audit of the scheme, are all implemented at the GP level, with participation from the local community. A major portion of these activities are expected to be carried out by the GP personnel and the involvement of Contractors is banned in the scheme. The scheme also involves considerable amount of pre-implementation planning and e-governance modules like Management Information System (MIS) to track progress of works and attendance of individual labour, e-remittance of payments etc.

Hence, successful implementation of MGNREGA has the potential to build a strong social security for rural communities and the creation of sustainable natural assets. However, it also demands efficient execution of the scheme at the GP level, with constructive support

from other tiers of the PRI.

From the table below, it can be seen that there is a reducing trend in creation of opportunities for unskilled labour for rural households. This is reflected in the gradual decrease in the man-days generated and the number of households that have availed the benefits of the scheme. However, these trends could also denote stricter enforcement of scheme regulations, leading to efficient utilization of funds.

Table 109. Trends in MGNREGA in Kodagu

Progress indicators	2010	2011	2012
Households provided with employment	27442	21326	15500
Total man-days generated	1569561	1456443	631145
Average number of man-days per household	57	51	41
Number of households with 100 days labour	1887	726	426

Source: HMIS reports of MGNREGA in successive years for Kodagu (http://nrega.nic.in)

The number of rural households issued with job cards form about 35.30% of the total rural households. The highest job card coverage of households is in Somwarpet, followed by Virajpet taluk. Madikeri taluk has the least coverage of job cards. Somwarpet also leads in terms of employment provided to households, among the households having job cards.

10.8 Basic public service delivery infrastructure

Provision of public service infrastructure is an essential component in guaranteeing effective service delivery. Public service infrastructure includes combination of infrastructure and human resources that realize government policy and scheme objectives into actions and results. Thus, together with effective planning and governance, the presence of public service infrastructure is a crucial link in guaranteeing interventions that result in human development. This section summarizes the basic public service delivery infrastructure in the district that enable the effective implementation of government schemes and programmes. The broad focus of the issues covered here are health, education and livelihoods.

Table 110. Public service delivery infrastructure in Kodagu (2011-12)

Details of infrastructure	Madikeri	Somwarpet	Virajpet	District
Average population served by Primary Health Centres	18867	14188	15989	15784
Average population served by sub- Centers	2573	2427	2314.	2416
Availability of doctors per 1,000 population	1.098	0.310	0.387	0.55
Average health expenditure	430.616	359.778	469.436	418.34
Percentage of villages having Anganwadis within a km. distance	100.000	96.296	100.000	98.31

Percentage of villages having PDS outlets with in the Village	85.075	100	100	96.56
Student – teacher ratio for elementary education	11.947	13.490	13.475	12.9777
Student - teacher ratio for secondary education	10.180	14.100	11.550	11.89
Percentage of villages having a Primary School within 1 km. distance	98.74	99.71	98.60	99.17
Average education expenditure	1526.100	2325.850	1010.770	1636.73

Source: Compiled from various tables from previous chapters.

10.9 E-governance initiatives for improving governance

The advent of information technology enabled tools is believed to critically contribute in improving governance systems. Decentralized governance largely depends on accurate bottom up planning and devolution of decision making. Hence, analysis of such decentralized information and the creation of accountability mechanisms is a huge challenge in governance. E-governance has shown the promise to address these needs. At the district level and below, many e-governance modules have been put in place by the Centre and State governments in various departments to help planning, dissemination of up-to-date information and creation of accountability mechanisms for decentralized decision making systems. Below is the list of important e-modules used by the various departments of the government in Kodagu district.

Table 111. Summary of E-governance initiatives

Department, e-governance initiative	Short description
Dept of Health, Health Management Information System (HMIS)	Documenting health indicators, process and utilization indicators of public health facilities
Dept of Health, Mother and Child Tracking System (MCTS)	Tracking the provision of appropriate health care during pregnancy, child birth and post-natal period
Dept of RDPR, Panchatantra, Panchamitra	Office automation and information dissemination of GP related works and activities
Dept of RDPR, MGNREGA Management Inforation System (NREGA MIS)	Automation and tracking of MGNREGA related processes including job card queries, work progress, billing and work related payment
Rajiv Gandhi Housing Corporation Ltd, Dept of RDPR, Housing schemes	Tracking progress of housing schemes and online transfer of funds for beneficiaries
Dept of Primary education, SSA Management Information System	Efficient monitoring and accountability mechanisms for tracking scheme and fund utilization
Dept of Revenue, Bhoomi Software	Online delivery and management of land records

While the use of e-governance definitely helps in better planning and accountability of service delivery, current e-governance initiatives also suffer major drawbacks. Some physical drawback issues are related to broadband connectivity, absence of reliable hardware in isolated locations of the district and the tolerance of the system towards peak hour traffic loads. Other systemic issues include the lack of training and spurious data entry which render such initiatives inefficient and unreliable. Further, the coverage of different e-modules overlap with each other and physical pen-paper based documentation which

results in confusion and loss of efficiency due to duplicity of efforts. The use of e-governance modules in planning and decision making still remains untapped due to the relative novelty of these systems and the other systemic issues mentioned earlier.

Thus e-governance policies have to focus on creating simple, sustainable and seamless integration of various activities of government departments.

10.10 Role of NGOs and other voluntary groups

Civil society organizations include voluntary groups, non-governmental organizations and community based organizations and form the 'third sector' (as opposed to public and private sectors) of the society. These organizations play a vital role in forwarding the interests of marginalized and opporessed groups and shed light on unique development issues that can often be ignored by the other two sectors. A healthy third sector in any region indicates a balanced and equitable view of development, an established social accountability framework and multiple stakeholders involved in the process of translating development initiatives into fruitful outcomes. The continuous involvement of non-governmental organizations and community based organizations in planning, implementation and monitoring is known to improve the quality and equitable distribution of benefits of public service delivery initiatives, especially at the grassroots level. Thus, these organizations play a vital role in the efforts to further human development objectives.

In this aspect Kodagu has multiple non-governmental organizations, working in the areas of agriculture, environmental conservation, tribal issues, governance and labour issues.Similarly, community based organizations like youth and women groups, cultural groups and farmers groups also play an important role in providing a collective voice for individuals. These organizations need to be carefully nurtured, to improve the effectiveness of governance in the district. Kodagu has a vibrant set of youth and cultural groups that are regularly engaged in sports and cultural events. The table below provides the number of Yuvaka and Yuvathi Mandals existing in the district in 2011-12.

Table 112. Youth groups in Kodagu (2011-12)

Taluk	Yuvathi Mandals	Yuvaka Mandals
Madikeri	54	153
Somwarpet	38	186
Virajpet	28	123
Total	120	462

Source: District Statistics at a glance, 2011-12.

10.11 Concluding Remarks

This chapter analysed important characteristics of governance in the district, in the context of the various development related structures within the government at the district level. The linkages between good governance and human development are evident since governance structures and their performance determine the extent to which policies fostering human development are actually implemented at the grassroots level. Hence, improving the effectiveness of governance and simultaneously developing stable and accountable governance mechanisms will be crucial in order to utilize the full potential of the human capability.

UDDA BAZ

CHAPTER - 11

URBAN ISSUES IN HUMAN DEVELOPMENT

A view of Madikeri Town

CHAPTER 11.
URBAN ISSUES IN HUMAN DEVELOPMENT

11.1 Introduction

Urbanization is an inevitable end product of economic growth and modernization . It results from three simultaneous processes: population growth in urban areas, migration of population from rural areas to urban areas and the conversion of rural areas to urban areas. The world has been witnessing increasing rates of urbanization and according to United Nations, since 2008, more people are living in urban areas than rural areas.

Urbanization brings with it unique opportunities like increased avenues for economic growth, diversified livelihood options, access to better infrastructure services and hence, better chances for overall human development. However, erratic urbanization may also led to erosion of safety nets, unsafe living conditions leading to poor quality of life, environmental pollution and health hazards. Thus, the impact of urbanization on human development cannot be conclusive unless issues related to health, education, livelihoods and standard of living in the urban context are understood.

India is traditionally seen as a nation made of its villages. The urban population in India was about 11% of its population in 1901 and according to the latest census in 2011, urban population in India forms about 31.16%. Between 2001 and 2011, the proportion of urban population increased by 2.63%. Urbanization in India can be traced mainly after independence, but its pace has increased in the recent years due to increased livelihood opportunities and economic growth in the secondary and tertiary sectors in the urban areas.

Karnataka is comparatively more urbanized than India, with about 38.57% of the population of the state residing in urban centres. In absolute proportions, between 2001 and 2011, the growth rate of urbanization in the state was 4.58% (of the total population of the state). Growth of urbanization in Karnataka is mainly fuelled in the districts of Bengaluru, Mangaluru, Mysuru and Ballari.

The urbanization scenario in Kodagu is quite different from that of the state. Kodagu has the lowest proportion of urban population in the state (14.60%). The district saw the least increase in urban population in the state (an absolute increase of 5606 between 2001 and 2011, an increase of 7.44%). Analysis of various census documents show that since 1961, the overall proportion of urban population in the district has varied between 13% - 15%.

Kodagu has 4 towns, namely Madikeri, Somwarpet, Kushalnagar and Virajpet. Administration of these localities is the responsibility of the respective urban local body. Madikeri is administered by a city municipality whereas the remaining urban localities are administered by town pancayaths, the lowest population units within urban local bodies. The details of these urban local bodies are provided in the table below.

Table 113. Urban Local Bodies in Kodagu

Area	Type of ULB	Population (2011)	Council members	% of urban population to total taluk population
Madikeri	City Municipal Council	33381	23	22.77
Somwarpet	Town Panchayat	6729	11	3.26
Kushalnagar	Town Panchayat	15326	13	8.56
Virajpet	Town Panchayat	17246	16	7.42

Source: Census 2011, ULB Websites

Madikeri, being the district headquarters has the highest amount of urban population (22.77%). Somwarpet, even with the presence of two towns (Somwarpet and Kushalnagar) has the highest proportion of rural population in the district (89.32%).

11.2 Service Delivery Issues

Housing

One of the issues affecting human development in the context of urban areas is the quality of housing provided to the residents. Massive expansion of cities and urban areas sometimes create vast swaths of slums that are sometimes deprived of basic amenities like supply of electricity, water, health and sanitation services. Slum residents also face issues to ownership and forceful eviction. Thus housing related issues in urban areas affect the growth opportunities significantly. The table below presents the status of ownership of houses and proportion of the population of urban areas living in slums. It shows that Somwarpet and Kushalnagar towns have the highest proportion of households not owning houses, within the district. Virjapet has the highest proportion of households having own houses.

Table 114. Housing trends in urban areas in Kodagu in 2011

Town	% of households without own houses	% of households without electricity	% of population living in slums
Madikeri	19.22	2.15	20.61
Somwarpet	32.00	2.19 (including Kushalnagar)	30.18
Kushalnagar	26.40	NA	1.57
Virajpet	0.80	5.25	14.51

Source: Census 2011, respective ULBs

Most urban households in Kodagu district have access to electricity. However, more than 5% of households in Virajpet town do not have access to electricity. About 2% of households in Somwarpet taluk (both Somwarpet and Kushalnagar towns included) do not have access to electricity. Somwarpet also has the highest percentage of population living in slums, whereas Kushalnagar has the least proportion of population living in slums. As indicated earlier, slums are also areas that are underserved with regards to services pertaining to health, sanitation and other basic amenities, the urban locality administration of Somwarpet and Madikeri towns could concentrate on their slum populations since they are sizeable in number.

Other services

The table below provides snapshot of two important essential services and two indicators of urban safety in the urban localities of the district. These include availability of hospital beds per 1000 urban population, roads per square KM of geographical area, crime rates and rate of road accidents (both per 10,000 population).

Table 115. Essential services and safety indicators in urban areas in Kodagu in 2011

Town	Hospital beds per 1000 population	Road length per sq KM	Crime rate (per 10,000 population)	Road accident rate (per 10,000 population)
Madikeri	15.43	6.75	47.82	7.03
Somwarpet	19.32	2.67	40.85	9.67
Kushalnagar	4.57	2.72	41.85	9.90
Virajpet	24.01	2.75	30.63	7.25

Source: District Statistics at a Glance, 2011, Dept of Police and respective ULBs

Virajpet has the highest beds per 1000 population ratio, whereas Madikeri being the district headquarters has the highest density of roads. Crime rate is also highest in Madikeri whereas Kushalnagar has the highest road accident rate. Density of roads in all towns of Kodagu (except Madikeri seem to be sparse), showing the challenges of accessibility, even in urban locations located within geographically difficult hilly and forested terrains. With increase in tourism, the vehicle density and traffic in the district has also increased, leading to higher accident rates, especially in the busy roads like Mysuru – Madikeri and Madikeri – Mangaluru. Urban planning has to essentially take these issues into consideration in the district.

11.3 Water Supply, and Sanitation

The table below presents the status of water supply and drainage coverage in the towns of Kodagu. It shows that Somwarpet and Kushalnagar towns provide the highest proportion of water tap connections followed by Madikeri. Similarly, these two towns have the highest household drainage coverage as well. Both Madikeri and Virajpet towns lag considerably in both these indicators.

Photo 65. Madikeri Urban water supply Chekdam at Kutuhole

Table 116. Water supply and drainage coverage in urban areas in Kodagu in 2011

Town	% of households with tap connections	% of households covered with drainage
Madikeri	80.65	91.32
Somwarpet	94.29	96.36
Kushalnagar	92.97	93.92
Virajpet	64.36	88.64

Source: Data provided by respective ULBs

11.4 Solid waste management

Solid waste management is one of the basic civic amenities to be provided by an urban local body. Scientific solid waste management requires considerable financial and physical resources, meticulous planning, awareness building and efficient programme implementation. Unscientific and unplanned solid waste management leads to dire environmental and health hazards. The urban poor are the most affected due to such mismanagement since their residential areas generally lack efficient solid waste management infrastructure. Solid waste generated in cities include organic waste, inorganic waste and medical wastes. Waste is usually disposed in land-fills, deep burial sites and incineration facilities. The table below presents the quantity of solid waste generated and proportion of wards covered through door-to-door collection of solid waste in the ULBS of the district. The table shows that Kushalnagar, Virajpet and Madikeri have to prioritize the complete coverage of their respective wards through door-to-door collection of solid waste.

Photo 66. Waste Processing Unit at Madikeri City

Table 117. Details of Solid waste in towns of Kodagu

ULB	Solid Waste generated per day (tonnes)	Proportion of wards covered through door-to-door collection
Madikeri	15	45%
Somwarpet	3	100%
Kushalnagar	6	23.07%
Virajpet	5	43.75%

Source: Websites of respective ULBs

11.5 Urban local body expenditures

The analysis above shows that despite geographical difficulties, towns in Kodagu have provided considerable coverage in basic amenities like drinking water, electricity, sanitation facilities. However, the towns have considerable scope in improving these facilities, providing housing amenities and improving the safety of the residents. As discussed in the chapter on governance, the quality of the administration of ULBs determines the efficiency of such coverage of basic amenities. Two indicators of the quality of governance are provided below to compare the effectiveness of urban local bodies in the district. These indicators are a) proportion of own resources in total receipts of the ULB and per-capita expenditure on development works. These indicators provide information on the effectiveness of the ULB in raising funds from local resources (based on taxes levied and user fees provided for the provision of services) and amount of expenditures made for improving facilities and services of the urban area.

Table 118. ULB finances in Kodagu

Urban local body	% of own resources to total Receipts	Per capita expenditure on Development Works
Madikeri	20.19	835.12
Somwarpet	4.92	1589.76
Kushalnagar	28.16	771.61
Virajpet	21.17	443.37

Source: Income and Expenditure statements 2011, respective ULBs

The table shows that other than Somwarpet, all other ULBs have at least 1/5ths of their total receipts mobilized from own resources. Kushalnagar has the highest proportion of own resources in its total receipts while Somwarpet has the least. Conversely, Somwarpet has the highest per-capita expenditure on development works whereas Virajpet has the least per-capita expenditure on development works. It can be noted that Virajpet also had the least coverage in household tap connections, drainage coverage and provision of electricity. Thus, while Somwarpet ULB could prioritize own resource mobilization, Virajpet ULB may prioritize coverage of basic.

11.6 Urban Development Index

The above sections touched upon various issues related to human development in the context of towns in Kodagu. Based on these parameters the Urban Development Index (UDI) is calculated. The UDIs of the 4 towns of Kodagu is presented in the table below and provides a comparative performance of these towns.

Table 119. Urban Development Index in 2011

ULB	UDI	UDI Rank
Madikeri	0.563	1
Somwarpet	0.386	3
Kushalnagar	0.372	4
Virajpet	0.550	2

11.7 Concluding Remarks

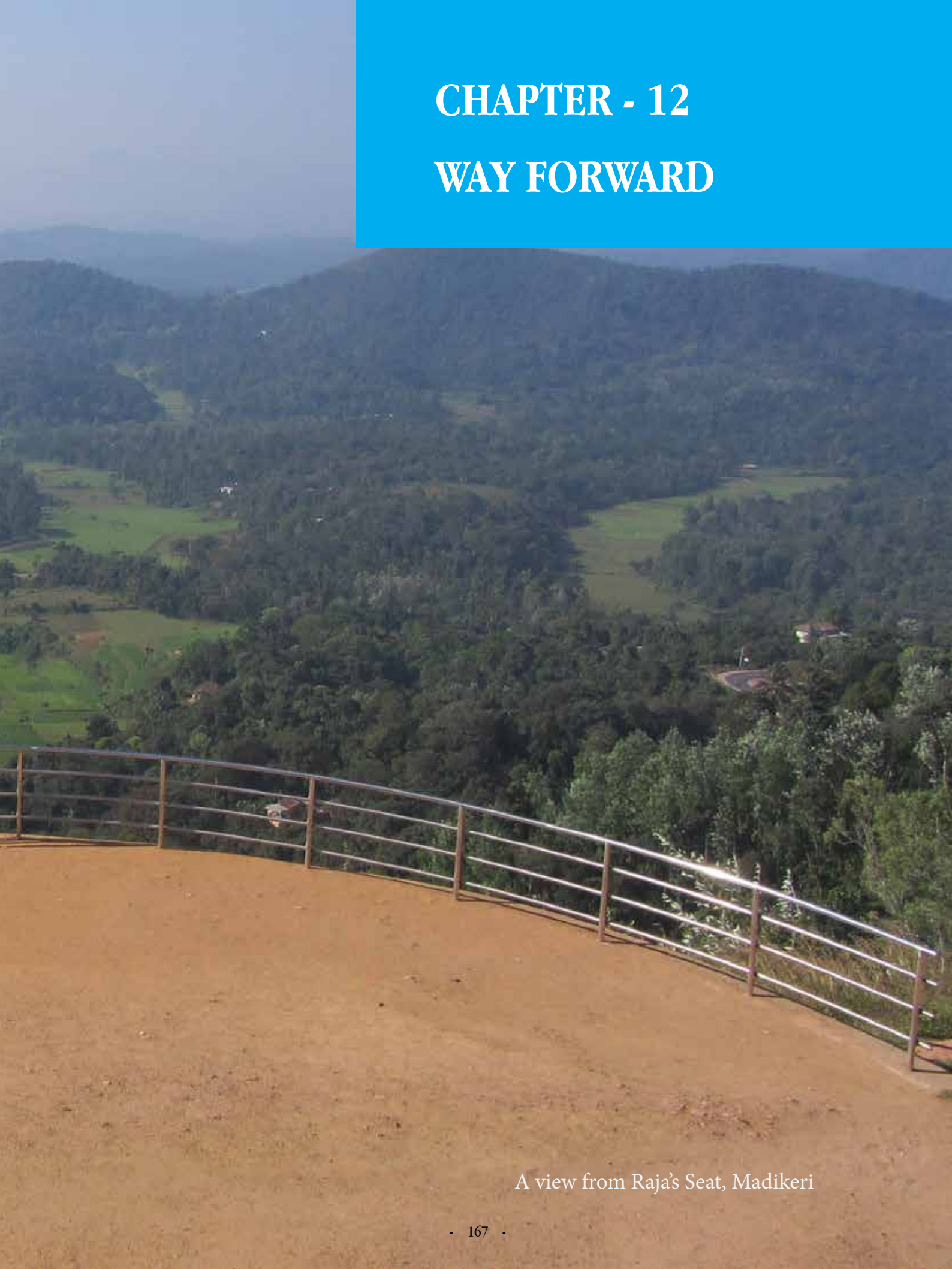
The urbanization trends of Kodagu are definitely unique in comparison to other districts of Karnataka. It contrasts with other districts that have high per-capita incomes (like Bengaluru), wherein incomes are majorly driven by urban economic activities. In Kodagu, coffee production, which is necessarily a rural activity drives the economy. Analogously, it can be argued that Kodagu doesn't face urbanization pressures visible in other districts, because of its uniquely rural economy. However as discussed in a small area study in this report, tourism and its allied activities do trigger urbanization pressures and its effects are visible in the peripheries of towns in Kodagu.

All towns in the district (except for Kushalnagar to some extent) are located on hilly terrains, surrounded with thick forests, traditional Devarakadus, coffee plantations and river banks. There are difference of opinions and conflicts related to the formation of layouts and sites (not just in urban areas, but in rural belts as well), in these delicate locations. Thus, managing urbanization and its preparatory processes (like land acquisition, conversion of land etc) in Kodagu is going to be a difficult challenge since together with inherent issues of housing, water supply, solid and liquid waste management, these environmental and socio-political issues also have to be taken into consideration. Otherwise, being in very sensitive ecological spots, landslides, floods, long term detrimental effects like loss of biodiversity and forest cover and other environmental mishaps are a definite possibility in these areas if urbanization related activities aren't managed with the utmost care and caution. Consequently, and as field experience corroborates, the pressure of accelerated urbanization on Kushalnagar (which is comparatively at lesser elevation) and neighbouring areas is high where provision of basic civic amenities continues to be a major challenge, in comparison to other urban areas in the district.

Another important aspect with respect to urbanization that to be considered in Kodagu, is the strengthening of the secondary and tertiary sectors, which is vital for balancing the economic growth of the district as well as ensuring inclusive growth. Other than the real estate sector, most other activities related to the promotion of the secondary and tertiary sectors require an urban setting. Thus, urban planning in Kodagu has to go hand in hand with promotion of income and employment opportunities in these sectors.

CHAPTER - 12

WAY FORWARD



A view from Raja's Seat, Madikeri

CHAPTER 12.
WAY FORWARD

12.1 Introduction

Kodagu district provides a unique case for the analysis of human development in Karnataka. Considered as a rich plantation district and a tourist hub with a unique culture, the development of the district is also challenged along different fronts. The health, education and livelihood status of tribal and other vulnerable communities, skewed asset distribution, limited alternative choices of livelihood in the secondary and tertiary sectors and the need to enhance ecological sustainability while fostering development initiatives are indeed significant challenges the district faces, in order to improve its status of human development. Further, it is clear that, in many of these situations, the intervention of the government (at all levels, including PRIs) is needed, either in terms of modification of existing policies and schemes or prioritization and focus on specific issues, areas and communities.

The preceding chapters have discussed these issues in detail and have summarized the specific issues that the policy and implementation processes of the government have to focus in Kodagu to enhance its development outcomes. These issues are summarized in this chapter to provide a holistic understanding of the status of human development in Kodagu.

12.2 Status of Human Development in Kodagu

The table below presents the summary of the taluk ranks in 5 indices used for assessing overall human development in the taluks of the district.

Table 120. Overall taluk ranks in development indices in Kodagu

Taluk	HDI	GII	CDI	FSI	CTDI
Madikeri	1	3	2	2	2
Somwarpet	2	2	1	3	1
Virajpet	3	1	2	1	3

Education

Among the several positive aspects related to education in Kodagu, a major aspect was that, there were no gender disparities in rates of dropout children and retention rates in education. However, Kodagu falls slightly short of the national target of 85% literacy by 2012. There are still persisting gaps between male and female literacy rates (9%). Improving the literacy rates of the district should be a continued priority in the district and its contributions towards mainstreaming the marginalized tribal communities would be of vital. Though the status of higher education was not analysed in detail in this report, Kodagu falls short of its neighbouring districts in the number of technical and vocation education institutions.

Among the three taluks of Kodagu, Virajpet lags significantly behind the other taluks in several key process and output indicators of primary education like proportion of out of school children in primary and secondary education, availability of infrastructure and per-capita expenditure on education. Thus, improving the effectiveness of existing government schemes, improving infrastructure and prioritizing schools specifically in the tribal areas, with a focus on Virajpet could be starting points for policy and implementation improvements in the education sector in Kodagu.

Health

The district has always been ranked lower in the health dimension of HDI at the state level, in comparison to other dimensions. Critical issues in health, like family

planning and fertility rates, selective sex selection during birth and sex ratios, immunization and prevalence of major communicable diseases can be treated as low priority issues in many areas of the district. The focus of implementation could be rather on disparities in health condition of the different social categories of the district. Specifically, the higher incidences of infant and maternal deaths among the ST communities, acute alcoholism and the lack of health seeking behaviour among them are causes of concern. An integrated approach, covering aspects of sanitation, nutrition, safe lifestyles and medical services may be needed that targets the ST community specifically. Due to the higher proportion of tribal populations in Virajpet taluk, special attention can be provided to improving health infrastructure and coverage in this taluk, followed by Somwarpet and Madikeri taluks of the district.

The analysis of health infrastructure and their utilization highlights the gaps in infrastructure, medical transport and human resources in Kodagu. This seems to have resulted in burdening the District Hospital more than other referral units. Specifically, minimizing the acute shortage of HR in health and providing emergency care services at Taluk Hospitals and CHCs should be the priority since this allows for better utilization of existing infrastructure and has maximum impact on improving the health status of the people of Kodagu.

Income Poverty and employment

Kodagu district's per-capita income is appreciably high in comparison to other districts of the state. Even with the lack of rail connectivity, Kodagu has been able to achieve high levels of income and sustain it over the past decades. However, there are causes of concern, since the growth trends in income are largely one-dimensional and less inclusive.

Kodagu's economy is driven by the primary sector, specifically because of the Coffee plantations. However, the non-availability of large additional lands for coffee cultivation, the stagnant yields of coffee and the related stagnant demand for agricultural labour in the district point out to the need to identify other potential activities in the district. In this regard, allied agricultural activities like fisheries, animal husbandry and floriculture have to be encouraged, keeping in mind the local environmental and social factors. Further, Kodagu can be an ideal location for the promotion of service sector initiatives like Business Process Outsourcing (BPO Units) and Knowledge Process Outsourcing (KPO) together with other industries like food processing and garments. Strengthening the other sectors of the Kodagu economy is also of primary concern to guarantee equitable human development in the district since asset distribution in the district is extremely skewed.

Labour issues in Kodagu are relatively more acute in comparison to other districts in the state. There is high degree of in-migration of labourers due to shortage of local plantation labourers and at the same time, there is outmigration of skilled labourers due to lack of opportunities in other sectors. While Kodagu can boast of providing much better working environments and wages for agricultural labourers and their families in comparison to other parts of the state, there is a large class difference between labourers and planters. Further, some Kodavas feel that the cultural identify of Kodagu is threatened because the presence of labourers with many ethnic origins. They cite ethnic tension related crimes to support their opinion.

To overcome the problem of labour shortage and uncertainty, various competitive strategies of labour procurement exists in the district. Due to this, among planters, the small and marginal plantation owners are negatively affected. The susceptibility of these groups have to be addressed immediately in order to maintain the sustainability of coffee production in the district. The policy effort should expedite institutionalization of labour market facilitating both planters and labourers in the district. The intermediary role played by maistries/ jeep drivers in getting labours to and from the estates should be well defined. Informal labour sharing mechanisms can be encouraged with incentives through SHGs and other forms of group organizations.

Kodagu has got its own niche in tourism. It could be a potential way forward to drive the economic growth in the district if the sector is well organized and executed. It is possible to generate substantial employment and income by development of tourism sector. While policy makers concentrate on developing tourism within the district, the homestay owners see tourism as mainly a supplementary activity. However, tourism itself (through the network of lodges, hotels, resorts, groceries, gift shops, private transportation agencies, accounting and other supporting activities) is a much larger enterprise in Kodagu, that is operated predominantly by non-kodavas and migrated communities. Stricter regulation on the construction of buildings in ecologically sensitive areas,

monitoring of the quality of homestays, hotels and resorts and better branding and marketing may help expand the tourist base of Kodagu and help in creating a viable livelihood alternative for the marginalized communities of the district.

The trends in analysis of MGNREGA shows a gradual decrease in the man-days generated and the number of households that have availed the benefits of the scheme. However, these trends could also denote stricter enforcement of scheme regulations, leading to efficient utilization of funds. But, field evidence also suggests that vulnerable groups like STs weren't involved in the scheme and had not availed its benefits. Thus, the scope of MGNREGA to provide sustainable livelihoods to these communities, and more importantly to bring them to the mainstream (by participation in Gram Sabhas, understanding and utilizing the different government interventions etc) has to be tapped effectively.

Vulnerable groups

The status of human development among vulnerable groups specifically that of forest based scheduled tribes in the district is a cause of concern. The analysis of educational status shows that retention rates and completion of primary education as the major hurdles for ST communities. Their health profile provides a grim picture of the issues related to maternal and child health, alcoholism and general lack of health seeking behaviour. These issues are further amplified due to the problems of accessibility to emergency health infrastructure.

The analysis of livelihood options reveals that these communities do not have a significant resource base and are predominantly dependent on agricultural labour. In this scenario, effective poverty alleviation interventions, skill development activities, expansion and the creation of demand in the secondary and tertiary sector are crucial for economically empowering these communities. Further, the standard of living of the SC and ST communities in the district is considerably lower than that of the other social classes and hence, prioritization is needed in issues like housing and sanitation.

12.3 Way forward

The findings and analysis of the different dimension of human development in Kodagu have been presented in the preceding chapters. This chapter crystalized the main findings from these chapters and summarized the policy and implementation recommendations for the relevant authorities to consider. The future stratigies in the different sectors of human development are summarized below.

Education Sector

Within the district, the status of primary education in Virajpet taluk, specifically in its tribal areas needs immediate attention. Indicators like proportion of out of school children, availability of infrastructure and per-capita expenditure on education are specific issues in which the administration has to concentrate.

Health Sector

Improving the status of tribal health, specifically with respect to maternal and child health and alcohol addiction related issues could be the priorities in the health sector for Kodagu district. Health seeking behaviour of various tribal communities needs to be understood first, to devise an integrated approach, covering aspects of sanitation, nutrition, safe lifestyles and medical services may be needed in the district. Virajpet taluk, can be the focal point in this area since it has the highest tribal population in the district. Improving the status of health in general in the district also depends on improving health infrastructure, specifically in emergency care and health related human resources.

Livelihood and standard of living

Kodagu's economy is driven by its Coffee plantations. However, the non-availability of large additional lands for coffee cultivation, the stagnant yields of coffee and the related stagnant demand for agricultural labour in the district point out to the need to identify other potential income generating activities for the labour class within the district. Allied agricultural activities like fisheries, animal husbandry and floriculture can be encouraged. The feasibility of establishing service sector initiatives like Business Process Outsourcing (BPO Units), Knowledge Process Outsourcing (KPO) garments and food processing industries has to be explored.

Considering the various issues related to labour usage in coffee plantations, institutionalizing the labour market facilitating both planters and labourers has to be explored together with feasibility analysis of SHGs and other similar forms of group labour engagement.

Kodagu's immense potential as a niche tourist centre has to be utilized for its human development. However, considering its sensitive ecological and social fabric, the approach towards the promotion of tourism related

activities in the district has to proceed with extreme caution, with the emphasis on balancing economic, social and environmental sustainability.

Vulnerable groups

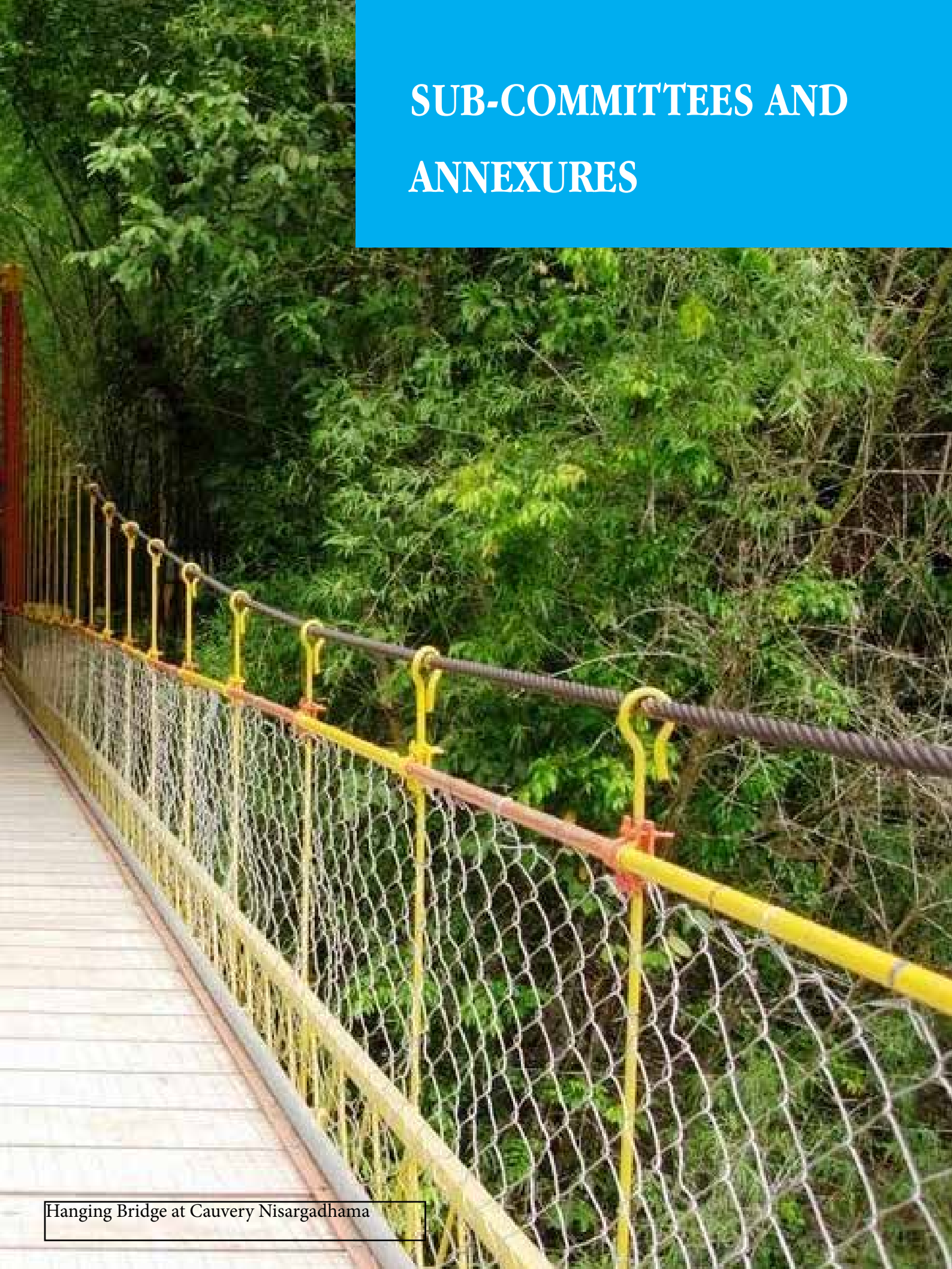
The report demonstrates that the status of human development of forest based scheduled tribes in the district is a cause of concern. Their issues are further amplified due to the problems of accessibility to emergency health infrastructure.

Provision of adequate health, sanitation and educational infrastructure that suits the needs of the tribal communities of the district has to be prioritized together with exploring ways of augmenting sustainable livelihood options for these communities. In this regard, diversified economic activities using their inherent skills have to be explored, together with building their competency in areas like skilled plantation labour and the hospitality sector, where labour demand exists in the district.

In summary, the report identifies 4 crucial areas in which the district political and bureaucratic focus is required.

1. Improving the health, education and livelihood status of tribal communities.
2. Creating a platform for effective labour market provision, that meets the needs of the labourers and planters that ensures a stable and secure plantation economy.
3. Strengthening the allied agricultural activities, secondary and tertiary sector activities in the district.
4. Using a cautioned approach towards the promotion of tourism related activities in the district with the emphasis on balancing economic, social and environmental sustainability

SUB-COMMITTEES AND ANNEXURES



Hanging Bridge at Cauvery Nisargadhama

SUB-COMMITTEES

Health Sub-Committee

District Health and Family Welfare Officer	-	Coordinator
District Surgeon	-	Member
All programme officers	-	Members
District AYUSH Officer	-	Member
Deputy Director, Women and Child Welfare	-	Member
District Health Education Officer	-	Member
Head of Dept, Statistics Dept, F.M.C College, Madikeri	-	Member

Education Sub-Committee

Deputy Director, Public Instruction	-	Coordinator
Deputy Director, Pre-University Education	-	Member
District Adult Education Officer	-	Member
Project Coordinator, Sarva Shiksha Abhiyan	-	Member
Nodal Officer, Akshara Dosaha	-	Member
Principal, F.M.C College, Madikeri	-	Member
Principal, District Training Institute, Madikeri	-	Member

Scheduled Caste and Scheduled Tribes Development Sub-Committee

District Social Welfare Officer	-	Coordinator
District Officer, Backward classes and minorities department	-	Member
Project Coordinator, ITDP	-	Member
Managers of Scheduled Caste, Scheduled Tribes		
Backward classes and Minorities Corporations	-	Members
3 Taluk Social Welfare Officers	-	Members
Head of Dept, Economics, Kaveri College, Gonikippa	-	Member

Income Sub-Committee

Joint Director, Agriculture	-	Coordinator
Deputy Director, Horticulture	-	Member
Deputy Director, Animal Husbandry	-	Member
Joint Director, District Industries Centre	-	Member
Deputy Director, Khadi and Gramodyoga	-	Member
Deputy Conservator of Forests, Madikeri Division	-	Member
Assistant Director, Fisheries	-	Member
District Officer, Watershed Development	-	Member
Deputy Registrar of ooperative Societies	-	Member
District Labour Officer	-	Member
Principal, Agricultural Training Institute, Kudige	-	Member
District Employment Exchange Officer	-	Member
Head of Dept, Economics, F.M.C College, Madikeri	-	Member
Lead Bank Manager, Madikeri	-	Member

Women and Child Welfare Sub-Committee

Deputy Director, Women and Child Welfare	-	Coordinator
District Disabled Welfare Officer	-	Member
Taluk Child Development Programme Officers	-	Member
Principal, Anganwadi Training Institute	-	Member
District Health and Family Welfare Officer	-	Member

Zilla Panchayath Kodagu

Shri A Shrinivas Rao, Chief Planning Officer, Kodagu Zilla Panchayath, Madikeri

Shri G N Lingaraja,(Rtd) Planning Appraisal and Evaluation Officer, Kodagu Zilla Panchayath, Madikeri

Shri T R Rajagopal, Planning Appraisal and Evaluation Officer, Kodagu Zilla Panchayath, Madikeri

Shri K Venkata Rao, Assistant Statistical Officer, Kodagu Zilla Panchayath, Madikeri

Shri K Kiran Raj, NRDMS Centre, Kodagu Zilla Panchayath, Madikeri

Scrutiny Committee

Shri Suresh, District Officer, Backward classes and Minorities Welfare Department, Madikeri

Shri Lingaraj, Deputy Director (retd) Planning Officer, Kodagu Zilla Pancahayath, Madikeri

Smt. Parvathi Appaiah, Professor, FMC College, Madikeri

Shri T.D Thimmaiah, HOD, Department of Economics FMC College, Madikeri

Smt. Bhagirathi, Professor, First Grade College, Madikeri

Shri Dayanand, Professor, Women's Degree College, Madikeri

Annexure 1: Calculation of indices

A major hurdle in arriving at multidimensional indices of development is that the indicators used for the computation reflect status of development in different sectors, and are assessed at different levels. Thus, the indicators used for the computations are heterogeneous and cannot be used directly for the computations, since it would result in indicators with higher unit values bias the calculations of indices. For example, it is hard to take the per-capita income (usually in thousands of Rupees) and literacy rates (in %) as it is and use them in the computation of human development with the rest of the indicators. Thus, to enable a level platform and uniform interpretation of these indicators, the indicators were converted into index values, that are unit-less. Thus, the index values of all indicators could be treated homogeneously in the computation of indices. The indicators were converted to index values using the following transformation.

For positive indicators

$$Index\ value_i = \frac{Actual\ Value_i - Minimum\ Value_i}{Maximum\ Value_i - Minimum\ Value_i}$$

and for negative indicators

$$Index\ value_i = \frac{Maximum\ Value_i - Actual\ Value_i}{Maximum\ Value_i - Minimum\ Value_i}$$

where, is the index value of the ith indicator used in the computation of the indices.

Indicators used for the computation of indices

Human Development Index (HDI)

Dimensions	Indicators (and index values in brackets)	Source of information
Living Standards	% of HHs having access to cooking fuel (l1)	Census
	% of HHs having access to toilet (l2)	Census
	% of HHs having access to water(l3)	Census
	% of HHs having access to electricity(l4)	Census
	% of HHs having access to Pucca house(l5)	Census
	% of non-agricultural workers(l6)	Census
	Per-capita income (l7)	District Statistics at a Glance
Health	Child Mortality Rate(h_1)	Estimated
	Maternal Mortality Ratio (h_2)	Estimated
	Literacy rate (e1)	Census
Education	Gross enrolment rate at schools (Primary and Secondary) (e2)	Census

The human development index computation uses 11 indicators across three dimensions. The Living Standards dimension had 7 indicators, the Health dimension used 2 indicators and the education dimension used 2 indicators. The human development index was calculated as the geometric mean of the dimensional geometric means. As shown in the below, the HDI is calculated as the geometric mean of the dimensional geometrical means L, H and E. The HDI value ranges between 0 (minimum human development) to 1 (maximum human development). HDI values are calculated for each taluk using the equations shown below.

$$L = ((l_1 l_2 l_3 l_4 l_5 l_6 l_7)^{1/7}$$

$$H = (h_1 h_2)^{1/2}$$

$$E = (e_1 e_2)^{1/2})$$

$$HDI = (L.H.E)^{1/7}$$

Gender Inequality Index (GII)

Dimensions	Indicators (and index values in brackets)	Source of information
Reproductive Health	Maternal Mortality Ratio (MMR)	Estimated
	Share of institutional deliveries (ID)	District Health Statistics
	Share of pregnant women with Anemia (ANE)	District Health Statistics
Empowerment	Share of female and male elected representatives in PRIs and ULBs (PRF, PRM)	District Statistics at a Glance
	Share of female and male children in the age group 0 – 6 years (CHLDF, $CHLD_M$)	Census
	Share of female and male literacy(LITF, LIT_M)	Census
Labour market	Share of female and male work participation rate (WPRF, WPR_M)	Census
	Share of female and male workers in the non-agricultural sector(NAGF, NAG_M)	Census
	Female and male agricultural wage rate(WAGEF, $WAGE_M$)	District Statistics at a Glance

The Gender inequality index measures gender based disadvantages faced by women along three dimensions: reproductive health, empowerment and labour market. It shows the loss in human development for women, due to gender based discriminations in various sectors. There are 3 indicators in each of these dimensions and a total of 9 indicators used for the calculation of GII. The computation of the index is similar to the methodology adopted by UNDP. The index is calculated in three major steps. The gender inequality between men and women is assessed using geometric and harmonic means. A reference standard is estimated using arithmetic and geometric mean. The ratio of the two shows the proportion of equity between the genders. Subtracting this ratio from one gives the value of gender inequality. The index varies between 0 (no gender inequality) to 1 (absolute inequality). GII values are calculated for each taluk using the equations shown below.

Step 1: Gender inequality between women and men

$$G_F = \sqrt[3]{\left[\left(\frac{1}{MMR}\right).ID.ANE\right]^{1/3}.[PR_F.CHLD_F.LIT_F]^{1/3}.[WPR_F.NAG_F.WAGE_F]^{1/3}}$$

$$G_M = \sqrt[3]{1.[PR_M.CHLD_M.LIT_M]^{1/3}.[WPR_M.NAG_M.WAGE_M]^{1/3}}$$

$$HARM\,(G_F,G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1}$$

Step 2: Calculation of the reference standard

$$\overline{health} = \left[\frac{\left[\frac{1}{MMR}.ID.ANE\right]^{1/3} + 1}{2}\right]$$

$$\overline{empowerment} = \frac{\left[[PR_F.CHLD_F.LIT_F]^{1/3}\right] + [PR_M.CHLD_M.LIT_M]^{1/3}}{2}$$

$$\overline{LFPR} = \frac{[WPR_F.NAG_F.WAGE_F]^{1/3} + [WPR_M.NAG_M.WAGE_M]^{1/3}}{2}$$

$$G_{\bar{F},\bar{M}} = \sqrt[3]{\overline{health}.\overline{empower}.\overline{LFPR}}$$

Step 3: Calculation of GII

$$GII = 1 - \frac{HARM\,(G_F,G_M)}{G_{\bar{F},\bar{M}}}$$

Child Development Index (CDI)

The Child Development Index (CD) combines the performance measures specific to the development dimensions of children: education, health and education. The methodology is adopted from the "Save the Children" campaign in UK, in 2008 and uses 4 indicators. The indicators chosen are clearly indicative of child well-being, easily available and commonly understood.

Dimensions	Indicators	Source of information
Health	Child Mortality Rate (CMR)	Estimated
Nutrition	Percentage of malnourished children(PMAL)	District Health statistics
	Percentage of children born under-weight	District Health statistics
Education	Percentage of dropout children (Primary and Secondary)that were mainstreamed	District Education statistics

The CDI is calculated as the arithmetic mean of the index values of the four indicators above. The CDI value ranges from 0 (min. child development status) to 1 (max. child development status). CDI values are calculated for each taluk.

Food Security Index (FSI)

Dimensions	Indicators	Source of information
Availability	Cropping intensity	District Statistics at a glance
	% change in Net Sown Area (2001-2011)	District Statistics at a glance
	Per capita food grain production	District Statistics at a Glance
	Proportion of forests	District Statistics at a Glance
	Irrigation intensity	District Statistics at a Glance
	% of area degraded in total geographical area	District Statistics at a Glance
	% of agricultural area under leguminous crops	District Statistics at a Glance
Accessibility	% of BPL families in the taluk	Revenue Department
	Per capita income	District Statistics at a Glance
	% of non-agricultural labourers to total workers	Census
	Average size of land holdings	District Statistics at a Glance
	% of agricultural labourers to total workers	Census
	% of villages having access to PDS outlets to total number of villages	Revenue Department
Absorption	Child Mortality Rate	Estimated
	% of households with access to safe drinking water	Zilla Panchayat
	% of pregnant women with Anemia	District Health statistics
	% of malnourished children	District Health statistics
	% of children born underweight	District Health statistics
	Female literacy rate	Census

There are a total of 19 indicators using which the FSI is calculated. FSI is based on three major parameters: availability (7 indicators), accessibility (6 indicators) and absorption (6 indicators). The different indicators used in the calculation of FSI based on these parameters are presented above. Their index values are calculated for all indicators and the average of the index values of indicators for each parameter are obtained. The FSI is the arithmetic mean of the parameter averages. FSI values range between 0 (lowest food security) to 1 (maximum food security in the district). FSI values are calculated for each taluk.

Urban Development Index (UDI)

The UDI is calculated by taking the average of the index values of the 11 indicators that describe the status of development in urban areas of the district and is calculated for each urban location of the district.

Indicators	Source of information
% of urban population to total population	Census
% of Households without Own Houses	Urban Local Body statistics
% of Slum Population to Total Population	Urban Local Body statistics
% of HHs with Tap water connection	Urban Local Body statistics
% of HHs Sewerage and Drainage	Urban Local Body statistics
No. of Hospital Beds per 1000 population in urban area	District Health Statistics
% of Own Resource Mobilization to Total Receipts	Urban Local Body statistics
Per capita expenditure on Development Works	Urban Local Body statistics
Length of Roads in Kms per Sq. Km of geographical area	Urban Local Body statistics
Crime Rate per 10000 Population	Urban Local Body statistics
Road accidents per 10000 population	Urban Local Body statistics

Composite Dalit Development Index (CDDI)

The CDDI is a perception based index, calculated based on 10 different parameters that describe discrimination against dalits in a given locality. The perception of 50 dalit households were captured on a total of 47 factors and were grouped into these 10 parameters. The overall perception (and quantitative information in the first parameter of institutional inclusion) of the respondents were rated into three ranges that graded the inequality between dalits and non-dalits. These ranges included "better than non-dalits, equal to non-dalits or similar to prescribed norms and less than non-dalits and were given values of 2, 1 and 0 respectively.

Dimensions	Indicator
Institutional Inclusion	Panchayath membership
	SDMC membership
	JFMC membership
	Water Societies membership
	Finance Societies membership
Perception of Social Inclusion	Residence
	Address
	Festivals
	Temples
	Hotels

Perception of Discrimination	Drinking Water
	Education
	Health
	Social Discrimination
	Economic Discrimination
Protest against Discrimination	Water discrimination
	Education discrimination
	Health discrimination
	Social discrimination
	Economic discrimination
Conflict Resolution	Water problems
	Health problems
	Education problems
	Social discriminations
	Economic discriminations
Perception of Freedom	Of questioning
	Of protesting
	Of mobility
	Of getting employment
	Of participating in cultural activities
Standard of living	Land holding
	Non-agri establishments
	Pucca houses
	Electrification
	2-wheeler ownership

Gender dimension of Dalit development	Rest prior to delivery
	Rest after delivery
	Rate of Institutional Delivery
	Health Assistant visits
	Reproductive health support
Access to Basic facilities - Water, Toilets, Drainage	Drinking Water
	Toilets
	Drainage
Access to Basic facilities - Education	Enrolment
	Attendance
	Rate of transition

For each parameter, the level of depravity was calculated as the ratio of the summation of the actual points received for each indicator and the summation of maximum points possible for each indicator. The Dalit Depravation Index (DDI) was calculated as the average of these 10 parameter indices. The Composite Dalit Development Index (CDDI) was calculated by subtracting the DDI from 1. The CDDI values range from 0 to 1. A CDDI value of 0 means that there is high depravation of dalits and a value of 1 means that there is no depravation of dalits. The CDDI value was calculated for one Gram Panchayath selected in the district.

Composite Taluk Development Index (CTDI)

The CTDI as the name suggests, provides a composite picture of the development status of a taluk. It consists of a total of 68 indicators, grouped in eight categories of standard of living (10 indicators), livelihood and employment indicators (11 indicators), housing and asset indicators (9 indicators), participation indicators (5 indicators), health (15 indicators), sanitation indicators (3 indicators), drinking water indicator (1 indicator), and education (14 indicators). The eight categories are grouped into 3 dimension averages (standard of living, health and education) and are calculated as the average of the index values of all the indicators grouped in the respective dimensional categories. The CTDI is calculated as the average of the dimensional averages and ranges from 0 to 1. The CTDI is calculated for all taluks of the district.

Dimensions	Indicators	Source of Information
Demographic indicators	Decadal population growth rate	Census
	Population Density	Census
	Population sex ratio	Census
	% of Slum Population in the taluk to Total population in the taluk	Census
	% of Population in the age group of 0-6	Census
	Child sex ratio	Census
	Infant Mortality Rate	Estimated
	Child Mortality Rate - CMR	Estimated
	Maternal Mortality Ratio	Estimated
	% of women headed households	Census
Livelihood and employment indicators	% of BPL Cards issued to Total Ration Cards	Revenue Department
	Cropping Intensity	District Statistics at a Glance
	Irrigation Intensity	District Statistics at a Glance
	% of Households provided employment under MGNREGS	Zilla Panchayath
	Ratio of average agricultural wage to Minimum wages prescribed by the State	District Statistics at a Glance
	Work Participation Rate	Census
	Decadal Growth rate of Employment	Census
	% of Cultivators to Total workers	Census
	% of main workers to total workers	Census
	% of workers in Household Industries	Census
	% of Agriculture labourers to Total workers	Census
Housing and asset indicators	% of HHs having Pucca Houses	Census
	% of Site less Households	Zilla Panchayath
	% of Households provided with house sites	Zilla Panchayath
	% of Houses constructed for houseless poor families	Zilla Panchayath
	% of households with cycles	Census

	% of households with two-wheelers	Census
	% of HHs with no Assets	Census
	% of HHs having access to Electricity	Census
	% of HHs having access to Modern Cooking Fuel	Census
Participation indicators	% of women elected representatives in rural local bodies	District Statistics at a Glance
	% of elected SC/ST representatives in rural local bodies	District Statistics at a Glance
	% of women elected representatives in urban local bodies	District Statistics at a Glance
	% of elected SC/ST representatives in urban local bodies	District Statistics at a Glance
	% of active SHGs	Dept of Women and Child Welfare
Health	% of pregnant women receiving full ANC	District Health Statistics
	Share of Pregnant Women with Anaemia	District Health Statistics
	Share of Institutional deliveries	District Health Statistics
	% of children fully Immunized	District Health Statistics
	% of Children born under-weight	District Health Statistics
	% of Mal-nourished Children	District Health Statistics
	% of people affected by major communicable diseases	District Health Statistics
	Average Population served by sub-centres	District Statistics at a Glance
	Average Population served by Primary Health Centres	District Statistics at a Glance
	Availability of Doctors per 1,000 population	District Statistics at a Glance
	Availability of nurses per 1000 population	District Statistics at a Glance
	Average population served by Anganwadi centres	Dept of Women and Child Welfare
	% of villages having Anganwadis within a km. distance	Dept of Women and Child Welfare
	% of couples protected by any contraceptive method	District Health Statistics
	Per capita Health Expenditure	District Health Statistics

Sanitation	% of Gram Panchayats Selected for Nirmal Gram Puraskar Awards	Zilla Panchayath
	% of HHs having access to Toilet	Census
	% of Households with drainage facility	Census
	% of HHs having access to Water	Census
Education	% of Literacy	Census
	Gross Enrolment rate – Elementary School	District Education Statistics
	Net Enrolment rate – Elementary School	District Education Statistics
	Dropout rate in Elementary education	District Education Statistics
	% of Drop-out Children Mainstreamed	District Education Statistics
	Student – Teacher ratio for elementary education	District Education Statistics
	Secondary school Gross Enrolment Rate	District Education Statistics
	Drop-out rate in secondary education	District Education Statistics
	SSLC pass %	District Education Statistics
	Student - Teacher ratio for secondary education	District Education Statistics
	PUC pass %	District Education Statistics
	School Infrastructure Index	District Education Statistics
	Per capita Education Expenditure	District Education Statistics
	% of villages having a Primary School within 1 km. distance	District Education Statistics

Annexure 2: Indicators used for the calculation of indices

Taluk and district Data for Indicators					
No	Indicator	Madikeri	Somvarpet	Virajpet	Kodagu
Indicators for Human Development Index (HDI)					
1	Percentage of HHS having access to modern cooking fuel	29.901	29.940	30.970	30.31
2	Percentage of HHS having access to Toilet	86.372	78.572	80.870	81.43
3	Percentage of HHS having access to Water	45.68	83.46	46.14	59.98
4	Percentage of HHs having access to Electricity	80.542	85.455	80.535	82.38
5	Percentage of HHs having access to Pucca house	41.139	57. 812	44.527	48.63
6	Percentage of Non agricultural workers (main+marginal)	91.451	77.143	93.751	86.98
7	Per-capita income (GDP at taluk level at current prices)	90370.30	54252.95	68914.31	68965
8	Child mortality rate CMR (0-5 years)	34	33.00	33.00	33
9	Maternal Mortality Rate	104	152	148	138
10	Literacy Rate	88.251	81.518	79.616	82.61
11	Gross enrolment rate (Primary+secondary) schools	101.05	100.85	100.43	100.77
Indicators for Gender Inequality Index (GII)					
		Madikeri	Somwarpet	Virajpet	Kodagu
12	Maternal Mortality Rate (MMR)	104	152	148	138.01
13	Share of Institutional deliveries (ID)	99.440	96.780	98.990	99.30
14	Share of pregnant women with Anemia ANE - (Excluding Normal)	75.79	57.80	58.37	63.99
15	Share of female and male elected representatives in PRIs and ULBs (PRF)	46.990	50.450	47.910	48.69
16	Share of male elected representatives in PRIs and ULBs PRM	53.010	49.550	52.080	51.31
17	Share of female children in the age group 0-6CHILDF,	48.650	49.530	49.890	49.43
18	Share of male children in the age group 0-6,CHILDM	51.350	50.470	50.110	50.57
19	Share of female literacy LITF,	84.760	75.100	75.720	78.14

20	Share of Male literacy LITM	91.790	87.400	83.590	87.19
21	Share of female work participation WPRF	40.340	42.210	43.660	42.25
22	Share of male work participation WPRM	68.720	69.510	70.600	69.69
23	Share of female workers in the Non agricultural sector NAGF	90.470	75.880	93.280	86.06
24	Share of male workers in the Non agricultural sector NAGM	92.030	77.930	94.050	87.45
25	Female agricultural wages rate WAGEF,	216.0	225.0	200.0	213.64
26	Male agricultural wages rate WAGEM)	220.0	229.0	204.0	217.78
Indicators for Child Development Index (CDI)					
		Madikeri	Somwarpet	Virajpet	Kodagu
27	Child mortality rate CMR (0-5 years)	34	33	33	33
28	a Percentage of malnutrition children (Excluding Normal)	15.12	16.05	21.04	17.58
	b Percentage of children born underweight	5.23	10.7	12.26	9.39
29	Percentage of Drop-out Children mainstreamed	10.471	24.638	28.636	21.84
Indicators for Food Security Index (FSI)					
		Madikeri	Somwarpet	Virajpet	Kodagu
30	Cropping Intensity	109.940	106.782	109.428	108.88
31	Percentage change in NSA(Net Sown Area) over the years (2001-2011)	26.811	5.512	14.855	15.37
32	Per-capita food grain production	144.480	222.190	237.950	207.9
33	Percentage of forest cover to total geographical area	32.760	20.850	39.960	32.77
34	Irrigation Intensity	100.000	101.011	100.000	100.89
35	Percentage of area degraded (cultivable waste) to total Geographical area (TGA)	5.164	0.908	0.427	2.22
36	Percentage of leguminous crops in the GCA	0.000	0.983	0.000	0.26
37	Percentage of BPL card holder to total card holder	47.205	60.095	60.977	57.20
38	Per-capita income (GDP at taluk level at current prices)	90370.300	54252.950	68914.310	68965
39	Percentage of Non agricultural workers (main+-marginal)	91.451	77.143	93.751	86.98

40	Average size of holdings (Total area of holding / total number of holdings	2.390	1.930	3.050	2.44
41	Percentage of Agricultural labourers to total workers	3.772	8.991	3.010	5.43
42	Percentage of Villages having PDS outlets with in the Village	85.075	100	100	96.56
43	Child mortality rate CMR (0-5 years)	34.000	33.000	33.000	33
44	Percentage of HHS having access to Water	46	83	46	59.98
45	Share of pregnant women with Anemia	75.79	57.80	58.37	63.99
46	Percentage of malnutrition children (Excludinf Normal)	15.12	16.05	21.04	17.58
47	Female Literacy Rate	84.76	75.10	75.72	78.14
Indicators of Urban Development Index					
	Indicator	Madikeri	Somwarpet	Virajpet	
48	Percentage of Urban population to total population	22.773	3.259	8.562	
49	Percentage Households without own houses	19.218	32.004	0.799	
50	Percentage of Slum population to total population	20.614	30.183	14.514	
51	Water supply	80.646	94.289	64.360	
52	Sewerage / drainage	91.318	96.361	88.641	
53	No. of Hospital Beds per 1000 population in urban area	15.428	19.319	24.006	
54	Growth rate of own resource mobilization	20.189	4.920	28.164	
55	Per-capita expenditure on development works	835.125	1589.759	771.612	
56	Road Kms per sq. Km	6.749	2.673	2.748	
57	Crime Rate per 10000 Population	47.823	40.854	30.631	
58	Road accident per 10000 population	7.027	9.666	7.248	
Indicators for Composite Taluk Development Index (CTDI)					
		Madikeri	Somwarpet	Virajpet	Kodagu
59	Decadal population growth rate	3.219	0.284	0.400	1.09
60	Population Density	98.246	208.591	124.340	135.18
61	Sex ratio	1,009	1,027	1,019	1,019

62	Percentage of Slum Population	4.694	0.409	1.243	1.84
63	Percentage of Population in the age group of 0-6	9.789	9.681	10.124	9.87
64	Child sex ratio	947	981	996	978
65	Infant mortality rate(IMR) (0-1 year)	31	32	25	29
66	Child mortality rate CMR (0-5 years)	34	33	33	33
67	Maternal Mortality Rate	104	152	148	138
68	Percentage of Women headed households	16.220	17.496	16.152	16.67
69	Percentage of BPL HHs provided with BPL ration cards	47.200	60.090	60.970	57.19
70	Cropping Intensity	109.940	106.782	109.428	108.88
71	Irrigation Intensity	100.000	101.011	100.000	100.89
72	Percentage of Households provided employ-ment to total number of households registered under MGNREGS	28.682	38.757	37.044	35.30
73	Ratio of average agricultural wage to minimum wages prescribed by the state	1.090	1.140	1.010	1.08
74	Work participation rate	54.42	55.66	56.99	55.81
75	Decadal growth rate of employment	6.833	4.677	2.884	4.52
76	Percentage of Cultivators	4.778	13.865	3.239	7.59
77	Percentage of Main workers	89.491	93.235	94.572	92.76
78	Percentage of workers in household industries	0.625	0.585	0.477	0.56
79	Percentage of Agricultural labourers to total workers	3.772	8.991	3.010	5.43
80	Percentage of HHs having access to Pucca house	41.139	57.812	44.527	48.63
81	Percentage of Site less households	7.467	13.652	12.713	11.87
82	Percentage of Households provided with house sites	20.523	1.500	1.338	4.20
83	Percentage of houses constructed for houseless poor families	59.656	31.790	18.269	32.14
84	Percentage of households with cycles	13.298	16.242	13.614	14.52
85	Percentage of households with Two- wheelers	15.312	18.143	14.364	16.02
86	Percentage of households without other assets such as Telephone,TV, 2 wheelers and 4wheelrs	6.620	12.200	13.750	11.32

87	Percentage of HHs having access to Electricity	80.542	85.455	80.535	82.38
88	Percentage of HHS having access to modren cooking fuel	29.901	29.940	30.970	30.31
89	Percentage of women elected representatives in rural local bodies	48.173	50.471	48.047	49.03
90	Percentage of elected SC/ST representatives in rural local bodies	19.269	24.294	28.516	24.78
91	Percentage of women elected representatives in urban local bodies	35.484	50.000	43.750	42.25
92	Percentage of elected SC/ST representatives in urban local bodies	16.129	20.833	18.750	18.31
93	Percentage of active SHGs	93.548	95.876	97.354	95.68
94	Percentage of pregnant women receiving full ANC	83.596	90.414	90.287	88.48
95	Share of pregnant women with Anemia (ANE)	75.79	57.80	58.37	63.99
96	Share of Institutional deliveries (ID)	99.440	96.780	98.990	99.30
97	Percentage of children fully Immunized	93.003	94.388	92.056	93.15
98	Percentage of Children born underweight	5.230	10.700	12.260	9.39
99	Percentage of malnutrition children	15.120	16.050	21.040	17.58
100	Percentage of people affected by major communicable diseases	0.080	0.145	0.322	0.19
101	Average population served by sub- centers	2572	2426	2314	2415
102	Average Population served by Primary Health Centres (PHCs)	18867	14188	15989	15784
103	Availability of Doctors per 1,000 population	1.098	0.310	0.387	0.55
104	Availability of nurse per 1000 population	0.290	0.440	0.490	0.42
105	Average population served by Anganwadi centres	53.797	63.329	51.327	55.94
106	Percentage of villages having Anganwadis within a km. distance	100.000	96.296	100.000	98.31
107	Percentage of couples protected by any contraceptive method	77.096	84.085	78.998	80.37
108	Per Capita health expenditure	430.616	359.778	469.436	418.34
109	Percentage of gram panchayats selected for nirmal gram purskar awards	72.727	52.778	62.500	61.22
110	Percentage of HHS having access to Toilet	86.372	78.572	80.870	81.43

111	Percentage of villages with drainage facility	68.710	58.920	66.070	64.08
112	Percentage of HHS having access to Water	45.680	83.460	46.140	59.98
113	Percentage of Literacy	88.251	81.518	79.616	82.61
114	Gross enrolment rate- elementary school	101.05	100.42	100.87	100.77
115	Net enrolment rate	91.74	89.73	88.54	89.92
116	Dropout rate in Elementary education	3.4	3.60	14.40	6.30
117	Percentage of Primary and secondary school out of children mainstreamed	17.391	66.667	37.584	42.48
118	Student – Teacher ratio for elementary education	11.947	13.490	13.475	12.9777
119	Secondary school gross enrolment rate (15-16 years)	105.18	101.72	100.86	102.46
120	Drop-out rate in secondary education	10.9	8.69	11.20	10.30
121	SSLC pass percentage	78.2	76.89	79.94	78.23
122	Student - Teacher ratio for secondary education	10.18	14.100	11.550	11.89
123	PUC pass percentage	77.93	59.120	99.260	73.42
124	School infrastructure index	89.3	91.900	89.500	90.200
125	Per Capita education expenditure	1526.1	2325.850	1010.770	1636.73
126	Percentage of villages having a Primary School within 1 km. distance	98.74	99.71	98.60	99.17

Annexure 3: Note on the preparation of DHDR

The District Human Development Reports in Karnataka were prepared under the guidance and leadership of the Human Development Division, Planning, Programme Monitoring and Statistics Department, GoK, by lead agencies that were appointed for each district of the state. A team of expert consultants also helped the preparation, by providing technical help, monitoring quality of the data collected and helping in drafting the report.

Training on the concept of human development, on the various aspects to be considered on priority, indicators to be used in the report and the technical training on the calculation of human development indices were provided to the lead agencies through two rounds of training workshops, conducted at Administrative Training Institute, Mysore. Further, training and orientation were also provided for selected district and taluk level officers on the concept of human development and the indicators from their respective departments that will be used for the calculation of indices of various dimensions of human development. These workshops helped the lead agency and the planning personnel of the district in getting clarity on the concept of human development, measuring it and understanding the human development status of the district.

District and taluk level workshops were also organized to create awareness about the human development approach. Elected members of Panchayat Raj Institutions and personnel of different development departments participated in these workshops enthusiastically. These workshops also served as platforms for understanding unique human development issues affecting the district and its socio-economic and governance dimensions.

A challenging aspect in the preparation of the district human development report was the non-availability of reliable data at the taluk level and below. Since the quality of data from different districts varied widely, there were frequent changes in the sources of data, multiple data collection exercises, reinterpretation of the meaning of indicators and in 9 cases, the indicators themselves had to be dropped. The finalized values for 126 indicators across the taluks were thus obtained after considerable efforts. This iterative process of data collection aptly exposed the vulnerability of data consolidation and reporting mechanisms at the grassroots levels of governance in the state.

In this context, the collection of data was given special priority. Specifically, information related to health, nutrition, and the health of women and children were collected from the grassroots. Information emanating from different sources were reviewed at the lower levels based on which accurate information was collected. The lead agencies appointed for each district then began the process of drafting of the report. The team of experts provided significant help in making sure that the report aptly captures the human development situation of the district. They also helped to retain homogeneity in the use of language and a common structure for the report, so that the status of human development could be compared among the districts of the state. The drafts of the reports were rechecked and validated by the Human Development Department before being finalized.

Annexure 4: Note on availability, limitation and quality of data

The preparation of the District Human Development Report critically hinges on the quality of disaggregated data provided by the various government agencies at the district level and below. As discussed in the first chapter, the data and indicators used in the study should be a) reflective of ground realities of human development in the three principle dimensions, b) be reliably available in all districts and c) their nature should be such that district level analysis and addressing gaps should be practically feasible.

The process of data collection for the preparation of the indicators was challenged on two fronts. The first challenge was the availability of the required data and its reliability at the taluk levels. The second and the more problematic issues, was that of relative ease of availability of the same data/indicator at the taluk level in other districts of the state, so that a comparable set of indicators are used for measuring the development status of the districts. These two challenges sufficiently delayed the process of data collection. Further, some of the indicators used in the report, specifically relating to health, nutrition, education and poverty were relatively more difficult to get, due to the sensitive nature of the data and its implications.

The data on maternal and child health and nutrition, specifically, that of IMR, CMR and MMR had to be estimated, rather than obtained from government sources and records since the data provided by the department of health and family welfare were unbelievably low in many districts. Further, the department of Women and Child Welfare had vastly differing figures for the same data. Some indicators like share of below poverty households could not be assessed/estimated at taluk levels and hence, had to be reinterpreted as proportion of BPL cardholders to total ration cards, which resulted in high proportion of poor households in the taluks. The data on number of landless households in a taluk, school completion ratios, coverage of Anganwadis had to be dropped in the final calculation of the indicies since uniform availability in all districts was rather difficult. In summary, 9 indicators were dropped from the original set of 135 indicators to be used in the calculation of indices. Further, as indicated above, the sources of data, ways of computation and interpretation of the indicators have changed considerably through the process of preparation of the report.

While state and central governments can rely on sample surveys that provide statistically valid results for measuring the status of development, local agencies have to rely on aggregated information generated from their respective grassroots level offices. The absence of a uniform process of data collection, validation and storage and the lack of coordination between the different government departments at the district level and below is a serious cause of concern, if need based planning has to be meaningfully realized in these government agencies.

Annexure 5: Data sources and References

Data Sourees

1. Administrative Reports of Kodagu Zilla Panchayath
2. Agricultural Census, 2011, GoK
3. Census of India, GoI
4. Coverage Evaluation Survey, 2009 UNICEF
5. Database on Coffee, published by the Market Research and Intelligence Unit, Coffee Board, GoI.
6. District Information System for Education, National University of Educational Planning and Administration, New Delhi
7. District Level Household Survey, International Institute of Population Sciences, Mumbai & GoI
8. District Statistics at a Glance, Kodagu Zilla Panchayath
9. Family Welfare Statistics in India, Ministry of Health and Family Welfare, GoI
10. Food, Civil Supplies and Consumers Affairs Department Databases, GoK
11. Health Manangement Information System, Ministry of Health and Family Welfare, GoI
12. Income and Expenditure Statements and Balance Sheets of ULBs
13. Indian Economic Census, GoI
14. Karnataka Project Implementation Plan (PIP), National Rural Health Mission, Ministry of Health and Family Welfare, GoI
15. National Health Profile, Ministry of Health and Family Welfare, GoI
16. Office of the Chief Planning Officer, Kodagu Zilla Panchayath (Photos and Maps)
17. Office of the Deputy Director of Agriculture, Kodagu Zilla Panchayath
18. Office of the Deputy Director of Animal Husbandry, Kodagu Zilla Panchayath
19. Office of the Deputy Director of Horticulture, Kodagu Zilla Panchayath
20. Office of the Deputy Director of Public Instruction, GoK
21. Office of the District Health Officer, GoK
22. Offices of the Urban Local Bodies in Madikeri, Somwarpet, Kushalnagar and Virajpet
23. Sample Registration System, Census of India, GoI

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13. Ranis, G., Stewart, F., & Ramirez, A. (2000). Economic growth and human development. World Development, 28(2), 197–219.

14. Srinivas, M. N. (1952). Religion and Society among the Coorgs of South India. Asia Publishing House.

Annexure 6: Details on workshops and meetings

Sl.NO	Meeting / Workshop	Date	Meeting details
1	Basic training Workshop	11-12-2012 – 15-12-2012	4 day basic training for preparation of DHDRs for all lead agencies
2	Technical training workshop	23-07-2013 – 27-07-2013	3 day technical training workshop for calculation of indicies
3	District Level workshop	1-10-2013	District level workshop was presided by Zilla Panchayat President
4	Taluk Level workshops	3-10-2013	Taluk level workshop was presided by Madikeri Taluk Panchayat President
5		5-10-2013	Taluk level workshop was presided by Somwarpet Taluk Panchayat President
6		10-10-2013	Taluk level workshop was presided by of Virajpet Taluk Panchayat President
7	Core committee Meetings	26-6-2013	Core committee meeting was presided by Chief Planning Officer involving the core committee members
8		16-7-2013	
9		6-8-2013	
10		24-9-2013	
11		26-11-2013	
12		31-12-2013	
13		24-1-2014	
14		3-3-2014	
15		9-4-2014	
16		23-4-2014	
17		9-7-2014	
18		19-1-2013	
19		22-3-2013	
20		7-5-2013	
21		30-5-2013	
22		11-8-2014	
23		21-8-2014	

24	District Level Meetings	7-1-2013	Data Coordination committee meeting was presided by Chief Planning Office.
25		13-9-2013	Good Governance meeting was headed by Chief Planning Office.
26		22-10-2013	Good Governance meeting was headed by Chief Planning Office.
27		7-6-2014	The preparation of Human development report was discussed with Graam Panchayat and Taluk Pachayat Officers. This meeting was presided by Chief Planning Office.
28		15-7-2014	With the support of Taluk and district level officers different places were visited to collect the photographs required for the development of human development report.
29	Sub Committee Meetings	9-1-2013	Income generation committee meeting was held in the presence of Joint director, Agriculture
30		1-2-2013	Health and women and Child Development committee meeting was held in the presence of District Health Officer and Deputy Director of Women and Child Development Office
31		8-2-2013	Schedule Caste and Schedule Tribe development committee meeting was presided by District Social Welfare officer.
32		12-2-2013	Education committee meeting was held in the presence of Deputy Director and Public Education officer
33		25-2-2013	Health and women and Child Development committee meeting was held in the presence of District Health Officer and Deputy Director of Women and Child Development Office
34		9-5-2013	Health and women and Child Development committee meeting was held in the presence of District Health Officer and Deputy Director of Women and Child Development Office
35		17-6-2013	Health committee meeting was held in the presence of District Health officer
36		18-6-2013	Education committee meeting was held in the presence of Deputy Director and Public Education officer
37		19-6-2013	Income generation committee meeting was held in the presence of Joint director, Agriculture
38		20-6-2013	Schedule Caste and Schedule Tribe development committee meeting was presided by District Social Welfare officer.
39		21-6-2013	Gender development meeting was held in the presence of Deputy Director of Women and Child Development Office
40		13-8-2013	Health and women and Child Development committee meeting was held in the presence of District Health Officer and Deputy Director of Women and Child Development Office

41	Consultation with local subject experts	26-8-2013	Income generation committee meeting was held in the presence of Joint director, Agriculture. Local subject experts were consulted.
42		7-10-2013	Health and women and Child Development committee meeting was held in the presence of District Health Officer and Deputy Director of Women and Child Development Office. Local subject experts were consulted.
43		9-10-2013	Schedule Caste and Schedule Tribe development committee meeting was presided by District Social Welfare officer. Local subject experts were consulted.
44	Chapter drafting meetings	21-10-2013	Health and Gender Development meeting was presided by Chief Planning Officer.
45		23-10-2013	Social justices and Deprived development committee meeting was presided by Chief Planning Officer.
46		17-7-2014	Education committee meeting was held in the presence of Deputy Director and Public Education officer Schedule Caste and Schedule Tribe development committee meeting was presided by District Social Welfare officer.
47		24-7-2014	Health and women and Child Development committee meeting was held in the presence of District Health Officer and Deputy Director of Women and Child Development Office

Annexure 7:

Kodagu District Human Development Report Authors

Main Author: Sham N Kashyap

Sl.No	Name of the chapter	Name of the author
1.	Introduction	Sham N Kashyap
2.	District overview	Sham N Kashyap
3.	Computation of Indices	Pushpa C O, Divyashree H R, Sham N Kashyap
4.	Literacy and Education	Dr. Rajendra Prasad, Sham N Kashyap
5	Health and Nutrition	Sham N Kashyap
6.	Income, Poverty and Employment	Rajeshwari M
	Small area study: Relationships between coffee, land use and tourism in Kodagu	Sham N Kashyap
	Small area study: socio economic status of labourers in coffee plantations of Kodagu	Sham N Kashyap
7.	Standard of living	Divyashree H R, Sham N Kashyap
8.	Gender and Development	Chandrika Shetty
	Small area study: Role of SHGs in the socio economic empowerment of women	Chandrika Shetty
9.	Schedule Caste and Schedule Tribe	DrDoreraj, Sham N Kashyap
	Small area study: Composite Dalit Development Index	Sham N Kashyap, Chandrika Shetty, Pushpa C O
	Small area study: Human development status of Schedule Tribes in Kodagu	DrDoreraj, DrRajendra Prasad
10.	Governance and Human Development	Sham N Kashyap
11.	Urban issues in human development	Sham N Kashyap
12.	Way forward	Sham N Kashyap

Kodagu District Human Development Report, 2014