



Kolar District Human Development Report 2014



**Zilla Panchayath, Kolar
And
Planning Programme Monitoring and
Statistics Department,
Government of Karnataka**

Kolar District
Human Development Report, 2014

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

District Human Development Report (Kolar)

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District Officer, Food and Civil Supplies	-	Member
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VIDHANA SOUDHA
BANGALORE-560 001
CM/PS/234/2014
Date: 27-10-2014

SIDDARAMAIAH
CHIEF MINISTER

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 Panchayath, Taluk Panchayath and Gram Panchayath 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 challenges 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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and Bagalkot District Incharge Minister

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22343807

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 preparation of these reports. I heartily congratulate the Zilla Panchayaths and the Planning Departments 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 developments in the Districts and Taluks of our State and also to bridge such deprivations by initiating suitable policy and programme interventions.


(S R Patil)



U T KHADER

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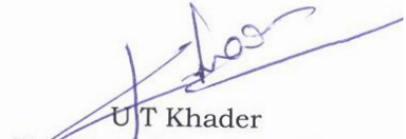
MESSAGE BY HONOURABLE DISTRICT MINISTER

The ultimate goal of development is human progress which helps people to constantly expand their capabilities to lead better and dignified lives. For this, each individual of a region has to have the opportunity to lead a long and healthy life, be educated and have adequate employment opportunities to earn sufficient income required to lead a decent life. Further, the vulnerable sections of the society –women, marginalized groups and minorities need special attention through appropriate policy interventions.

Kolar District Human Development Report provides an in-depth analysis of the various dimensions of development of Kolar. It allows us to critically evaluate the present status of development and gives 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.

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 Kolar for successfully completing this difficult endeavour. I also thank Grassroots Research And Advocacy Movement (GRAAM), Mysuru 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.


U T Khader
Health and Family welfare
Minister, Govt of Karnataka &
Kolar District Incharge Minister



Zilla Panchayat, Kolar

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MESSAGE BY PRESIDENT, ZILLA PANCHAYAT, KOLAR

It is a matter of pride to see the completion of the Kolar District Human Development Report 2014. This Human Development Report is a commendable effort in documenting all aspects of human development including education, health, income, poverty, employment, gender issues and governance. This report is going to strengthen the process of grassroots level planning and implementing the effective programs in future. The DHDR-Kolar has been successful in bringing the basic issues of development in Kolar District and its five taluks to the forefront.

The report is of considerable importance to the local-level planners, policy makers, development administrators and governmental and non-governmental institutions involved in the formulation of grassroots-level development programs. This report is particularly useful to the members of Grama Panchayaths, Taluk Panchayaths and Zilla Panchayaths since the concepts and issues discussed in this report and the wealth of information provided in the report is usually found in one book or report. Thus the report would enable them collectively formulate more meaningful and effective programme for all-round human development in the district. This report will also help the Planning Department of Zilla Panchayat, Kolar in preparing pro people development activities

I congratulate the research team of Grassroots Research And Advocacy Movement, Mysuru led by Dr. R Balasubramaniam, for bringing out this comprehensive developmental report of the district with an extensive focus on the development of five taluks of the district.

ರತ್ನಮ್ಮ ನಂಜೇಗೌಡ

(Rathnamma Nanjegowda)

President

Zilla Panchayath, Kolar



ACKNOWLEDGEMENTS

Dr.R Balasubramanian

Grassroots Research and
Advocacy Movement, Mysore

The task of preparation Kolar Human Development Report would not have been possible without the active support of many organizations and individuals. The report is an outcome of intensive intellectual processes as well as rigorous data collection and field visits.

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.AnitaKaul,I.A.S., former Additional Chief Secretary, Planning, Programme Monitoring and Statistics Department, Miss. V Manjula, IAS, Principal Secretary, Department of Planning and Statistics Government of Karnataka, Sri.RajivRanjan, I.F.S., Secretary, Planning, Programme monitoring and Statistics Department,Dr H. Shashidhar IAS (Retd), State level Consultant and Coordinator, 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 NarayanaSastri (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 Kolar 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 GraamPanchayaths where these small area studies were conducted. We thank the staff and students of the five schools which facilitated our small area study on SSLC performance. Special thanks to MYRADA and the team at Community Managed Resource Centre in Budhikote for supporting our small area study on Community Radio. We also thank the local media, students, members of self help groups and other citizens who actively participated in the 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 Kolar ZP President, Vice-President, elected members and CEO.

Dr R Balasubramaniam
Grassroots Research And
Advocacy Movement



N.M. Panali

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FOREWORD

The paradigm of human development has received much attention over the last few decades and has resulted in the regular publication of human development reports at the international levels. These reports help us to understand the status of development in its varied dimensions and figure out areas where individual nations and states need to concentrate on, in order to achieve holistic human development.

Development administration and rural governance in India are principally planned and implemented at the local level, by the Panchayath Raj Institutions. In this context, it is crucial to propagate the idea of human development at the sub-national levels and below for the nation to realistically progress in its human development. For this to happen, the abstract nature of the discussion on human development at the national and international levels have to transcend into contextual and practically visualizable series of local issues concerning the day-today aspects of health, education and livelihoods at the local level.

This kind of initiative will not only help in imbibing the principles of human development at the local level, but also build local capacities to address local problems with holistic and equitable interventions that aid in the rapid attainment of human development, through a bottom up process.

In this regard, the current endeavour of publishing the Kolar District Human Development Report is a significant milestone and we are happy to note that the report diligently documents the status of progress achieved in various aspects that affect human development in the district. This report will be of great use in the design of district and taluk action plans as well as setting departmental targets and objectives.

N M Panali
Chief Executive Officer
Zilla Panchayath, Kolar

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Abbreviations

AFPRO	Action For Food Production
AIDS	Acquired Immunity Deficiency Syndrome
ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
ARS	Agricultural Research Station
ARS	Arogya Raksha Samithi
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda Unani Siddha and Homeopathy
BEML	Bharath Earth Movers Limited
BCM	Backward Community and Minority
BIS	Bureau of Indian Standards
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
CDPO	Child Development Project Officer
CDR	Cumulative Death Rate
CEO	Chief Executive Officer
CESC	Chamundeshwari Electricity Supply Corporation
CGWB	Central Ground Water Board
CHC	Community Health Centre
CMB	Conditional Maternity Benefit Plan
CMC	City Municipal Council
CMR	Child Mortality Rate
CMRC	Community Managed Resource Centres
CPO	Chief Planning Officer
CSO	Central Statistical Organization
CTDI	Composite Taluk Development Index
DDI	Dalit 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
DOTS	Directly Observed Treatment Short course
ENT	Ear Nose and Throat
EWS	Economically Weaker Section
FRA	Forest Rights Act
FRU	First Referral Unit
FSI	Food Security Index
GDDI	Gross District Domestic Income
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
HAM	Hectare Metres
HDD	Human Development Department
HDI	Human Development Index
HH	Households
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
ICDS	Integrated child development Services
ICO	International Coffee Organization
ID	Institutional Delivery
IGNWPS	Indira Gandhi National Widow Pension Scheme
IHHLs	Individual Household Latrines
IIT	Indian Institute of Technology
IMR	Infant Morality Rate
IPHS	Indian Public Health standards
IPS	Indian Penal Code
ITDP	Integrated Tribal Development Programme
IWMP	Integrated Watershed Management Program
JE	Japanese encephalitis
JFMC	Joint Forest Management Committee
JSY	Janani Suraksha Yojana
KGF	Kolar Gold Fields
KMF	Karnataka Milk Federation
KPO	Knowledge Process Outsourcing
LLB	Bachelor of Laws
LPCD	Litres Per Capita per Day
LPG	Liquid Petroleum Gas
LPS	Lower Primary School
MBBS	Bachelor of Medicine/Bachelor of Surgery
MCI	Medical Council of India
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
MLA	Member of Legislative Assembly
MMR	Maternal Mortality Ratio
MP	Member of Parliament

MPI	Multidimensional Poverty Index
MPLAD	Member of Parliament Local Area Development
MRW	Multipurpose Rehabilitation Worker
MYRADA	Mysore Resettlement and Development Agency
NABARD	National Bank for Agriculture and Rural Development
NBA	Nirmal Bharath Abhiyan
NDDP	Net District Domestic Product
NDWSP	National Drinking Water Security Pilot Project
NER	Net Enrolment Ratio
NFHS	National Family Health survey
NGO	Non Governmental Organization
NGP	Nirmal Gram Puraskar
NLM	National Literacy Mission
NRDWP	National Rural Drinking Water Programme
NRHM	National Rural Health Mission
NSSO	National Sample Survey Organization
OBC	Other Backward Classes
PA	Prasuti Araiike
PDO	Panchayat Development Officer
PDS	Public Distribution System
PHC	Primary Health Centre
PLD	Primary Land Development Bank
PNC	Post Natal Care
PRA	Participatory Rural Appraisal Method
PRI	Panchayat Raj Institution
PPP	Purchase Power Parity
PRED	Panchayat Raj Engineering Department
PUC	Pre-University Course
PWD	People With Disabilities
RCH	Reproductive and Child Health
RDPR	Rural Development and Panchayat Raj
RGHCL	Rajiv Gandhi Housing Corporation Limited
RGSEAG	Rajiv Gandhi Scheme for Empowerment of Adolescent Girls

RIDF	Rural Infrastructure Development Fund
RMK	Rashtriya Mahila Kosh
RMSA	Rashtriya Madhyamika Shiksha Abhiyan
SAGs	Self-help Affinity Groups
SC	Scheduled Caste
SC	Sub-Centre
SDP	State Domestic Product
SDMC	School Development Management committee
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
TMC	Town Municipal Council
TP	Taluk Panchayat
TSC	Total Sanitation Campaign
UDI	Urban Development Index
UIP	Universal Immunization Program
ULB	Urban Local Body
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
VHSNC	Village Health Sanitation and Nutrition Committee
VRW	Village Rehabilitation Workers
VWSC	Village Water and Sanitation Committee
WCD	Women and Child Development
WSP-SA	Water and Sanitation Program for South Asia
ZP	Zilla Panchayat

Part 1

Executive Summary

The paradigm of human development views development as the expansion of choices, capacities and freedoms of people to lead the life they value to its fullest and thus has caught the attention of the world. It allows policy makers to go beyond a few constricted indicators of economic development and target objectives that create favourable environment for sustained overall growth of human population of a region. Thus, in the last couple of decades, there is an 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 rights, equity and social justice as well as issues related to access availability and utilization of opportunities, resources and services, specifically related to education, health and livelihood.

The United Nations Development Fund (UNDP) is a pioneer in promoting the paradigm of human development across all the countries in the world. The main contribution of UNDP has been the publishing of the annual human development reports 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, human development that has been achieved in these regions. Thus, the reports provide a common platform to assess the relative performance of nations and regions in various dimensions of human development, while at the

same time, allowing each region to understand and focus on specific development issues and bottlenecks faced by them individually.

Many nations including India have adopted the UNDPs concepts of measuring human development. They bring out national and sub-national reports that document the progress in achieving the various dimensions of development covered 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 measurement of Human Development 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.

India has experimented with sub-national human development report initiatives 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) in 2008, 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 prioritization of specific communities, taluks and districts in designing development strategies and action plans of various government agencies. 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.

In identifying the indicators of human development at the district level and below, the following strategy was used. 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 six indices were developed, that allows for multi-dimensional analysis and human development at the district level and below, keeping in mind the realities of gender, class and caste related disparities within and between the districts of the state. These indicators are: Human Development Index (HDI), Gender Inequality Index (GII), Child Development Index (CDI), Food Security Index (FSI), Urban Development Index, Composite Taluk Development Index (CTDI) and in addition Gram Panchayat level is Composite Dalit Development Index (CDDI).

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) was 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 provide analysis of the characteristics unique to the district. The lead agencies 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.

“All in all, a set of 76 indicators were identified at the taluk level, that were used for the calculation of 6 indices computed as part of the human development report. The year 2011’s data was used for formulating the indicators. Additionally the Composite Dalit Development Index was calculated based on primary data collected from one Grama Panchayat of the district”. The taluk level indicators used in the study can be grouped in 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 indicators	17
Health related	Sanitation indicators	04
	Drinking Water indicators	01
Education related	Education indicators	16

The analysis of the indicators collected and the seven 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 Panchayath of the district. This study formed the basis for the calculation of the Composite Dalit Development Index.

Kolar, known as the “land of silk, milk and gold” is a district located in the south-east region of Karnataka state of India. The erstwhile integrated district of Kolar comprising of 11 taluks was divided to form the new district of Chikballapur in 2007. Kolar has one parliamentary constituency and 6 state legislative assembly constituencies.

Kolar District is classified as a semi-arid drought-prone region and lies between 13° 48' N 78° 48' E, with an average elevation of 822 Mts above sea level. The district spreads over an area of 3969 Sq. km. Among the 10 agro-climatic zones of Karnataka, Kolar entirely falls under the Eastern Dry agro-climatic zone and experiences rainfall between 600-900mm per year. The normal rainfall in the district is 724mm per year.

With a population of more than 15 lakhs and a decadal population growth of 10.77% in the last decade, Kolar's decadal growth is lesser than that of Karnataka (15.67%). Further, there was a reduction of close to 4% in the decadal growth rate of population from 2011 and 2001. An alarming feature of Kolar's demography is its decreasing Child Sex-ratio. Over the two decades, it decreased from 976.78 to 962.38.

The major sources of employment in the district are agriculture, dairy and sericulture and floriculture. The district is also known for its gold mining site the Kolar Gold Fields, situated 30 Kms from Kolar. Kolar, once well known for its lakes and tanks, is now infamous for its water contamination, fluorosis and dangerous ground water depletion levels. Although the district has ample opportunities to increase economic security by encouraging horticulture, sericulture and animal husbandry, over extraction of ground water is evident in all the villages of the district, which severely limits these prospects

The table below presents the rankings of the taluks of Kolar for the five taluk level indices relating to overall human development in the taluk. Among the 5 taluk level indices, Kolar was ranked first in HDI, FSI and CTDI. In the remaining two indices, it was ranked 4 (GII and CDI). Srinivasapur was ranked first in GII and fifth in FSI. Malur was ranked first in CDI, although its performance in other indicators was only mediocre. Mulbagal taluk took the

last place in HDI and CDI. Bangarpet had the highest gender inequality in the district.

Overall taluk ranks in development indices in Kolar

Taluk	HDI	GII	CDI	FSI	CTDI
Srinivasapur	4	1	2	5	2
Kolar	1	4	4	1	1
Malur	3	3	1	3	5
Bangarpet	2	5	3	2	4
Mulbagal	5	2	5	4	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 Kolar taluk's performance that the taluk has to focus on women and child development. Similarly, Mulbagal and Bangarpet have to focus on overall holistic development. Thus, at the district level, the analysis shows that the focus has to be first, focussed towards Mulbagal taluk followed by Bangarpet, Malur and Srinivasapur taluks.

The district is placed in 14th position, with an overall literacy rate of 74.39%, significantly below the national target. The difference in literacy rates between male and female population in the district is also significant, pointing towards continuing trend in gender inequality in education. The literacy rates of SCs and STs of Kolar are comparatively lower than that of other social categories in the district. The net enrolment rates in Bangarpet, high rates of high-school dropouts in Srinivasapur and Malur are issues that can be immediately addressed by the educational administration in respective taluks.

The proportion of students finishing 10 years of schooling is about 40% in all taluks of the district, thus underlining the focus needed for improving the transition rates from primary education to secondary education. While Kolar has performed well in the recent

years in its SSLC pass percentage, there is wide scope to improve performance, not just in the performance of students in examinations, but also in learning outcomes, as analysed in the small area study conducted on SSLC performance in the district.

The small area study on performance of the district in SSLC pass percentage found interesting insights. The district educational administration has placed high priority on examination performances and thus the schools in the district are more equipped to deliver quality examination preparation materials for their students, thereby increasing their pass percentages. The study revealed however, that the priority given for examination performance has to also translate into better learning outcomes among students. The educational environment in the district has to encourage individual schools to foster learning through personal development that promotes critical thinking and extracurricular engagement together with attaining passing percentages in SSLC examinations.

Together with the threat of major diseases like Japanese Encephalitis and Fluorosis, Kolar faces high proportions of Anaemia and malnutrition and alarming signs of declining sex-ratios in all its taluks, the highest being in Mulbagal. Mulbagal also has the highest MMR crossing 200, which in the context of the targets set by NRHM, is unacceptable. Mulbagal with highest home delivery in the district also reported the highest infant and child deaths. Similarly, Malur taluk also has high rates of maternal and child mortality. These issues are uniquely difficult to address in Kolar, in the sense that, in both cases, multiple line departments from border districts of Karnataka, Andhra Pradesh and Tamil Nadu have to work hand in hand with each other as well as the local communities if sustainable solutions have to be found.

More than 64% of the work force is involved in the agriculture sector (either as

cultivators or as agricultural labourers). However, the actual growth of agriculture and allied activities was just 3.43%, with 3 out of the 5 taluks (Kolar, Malur and Bangarpet) registering negative growth rates. The average landholding per landholder in the entire district is just under one hectare, thus largely limiting the choices of agricultural diversification thus exposing the small farmers to the risk of crop/price failure and related uncertainties associated with that crop. Asset distribution, in terms of land ownership is clearly skewed against the SC population of the district, with a disproportionately low percentage of SC households owning land in the district.

The small area study on situation of water scarcity in the district found that groundwater depletion in the district had reached a precarious situation and is visibly most likely to affect the sustenance of agriculture as a primary occupation in the district. At the same time, the health of people as a result of groundwater contamination is also a matter of concern and is only likely to worsen if not addressed immediately. Incidents of fluorosis among children are visible and interactions with the community bring to light health issues faced by them such as joint pains, etc.

While it can be argued that the ecological problems faced by the district, in terms of its alarmingly fast rates of water table depletion and ground water contamination are a result of unregulated water extraction, it is also true that this model of agricultural development triggered the growth of agriculture and horticulture sectors, on which, the majority of the people of the district are primarily dependent for their livelihoods. Immediate ways to lessen the dependence on groundwater for drinking purposes in the district is the widespread adoption of sustainable and useful rain water harvesting mechanisms. Efforts are needed to develop these rainwater harvesting systems that are suited to the needs of the district and provide both immediate and long term relief.

The presence of poverty prevents accumulation of assets and this is visible in the proportion of households in the districts not having the basic basket of assets (telephone, TV, phone/mobile two wheeler/ four wheelers). This proportion is highest in Srinivasapur and Mulbagal and denotes the low standard of living in these taluks. Access to individual household latrines is only 42% in the district. Special attention is required in implementation of NGP/NBA programmes; with focus on Srinivasapur which has the least coverage. Significantly low proportion of SC and ST households were covered in the provision of drinking water (within their premises) and access to individual household latrines that shows that even with the low coverage of basic amenities in the district, vulnerable groups are worse off than others.

The small area study on Composite Dalit Development Index conducted in Avani GP of Kolar showed that caste discrimination is still prevalent and may in general be prevalent throughout the district. Some practices of discrimination were even accepted to be continuance of tradition. However, the study also found that comparatively better educated dalits (like dalit ASHAs) are making in-roads in attaining the socio-economic status that enhances their acceptability and results in lesser discrimination for them. The small area study on discrepancies in registering PwD indicates that the neglect in information collection can be attributed to the neglect of the development of PwD itself. The case study analysed the cause of this discrepancy and found that the institutional structures for catering to the overall development of PwD was ineffective and unaccountable.

Gender based disparities distinctly exist in the district and is visible in the areas of literacy, work participation (specifically under the categories of cultivators and other employments) and political representation in PRIs and ULBs. Further, Kolar also faces

the alarming signs of declining sex-ratios in all its taluks, and very high rates of Maternal Mortality. The small area study on 'NammaDhwani' a Community Radio station in Budikote, provides a successful example of how a locally managed radio station can play a role in sustaining community empowerment. However, it also has a challenge in keeping itself relevant in the face of rapid advances in technology that give people more options to access information.

Bureaucratic and political stability in the ZP are issues of concern in Kolar since every single year seems to have multiple teams of bureaucratic and political leadership. Kolar requires stable leadership in guiding the district's development efforts towards long term economic and environmental sustainability. The analysis of fiscal trends in Kolar shows that planned expenditures in the district form 37% to 43% of the overall expenditures. Increase in planned expenditures allow the district the flexibility to prioritize issues and taluks of immediate importance. Further, the analysis of resource mobilization levels of GPs in Kolar show that there are large disparities in GPs of different taluks, with Mulbagal lagging behind significantly. MGNREGA in the district shows declining trends in expenditure as well as man-days generated till 2012-13. These trends have to be analysed keeping in view the dynamics of agricultural labour and the actual labour demanded through MGNREGA in the district.

Urbanization in the district hasn't progressed in the speed at which it has been witnessed in other districts. However, urban areas in the district haven't been able to guarantee quality infrastructure and amenities to its citizens. The problem of water, which the entire district faces also troubles the urban areas of the district. Further, the size of two urban areas: Robertsonpet and Kolar overrides the importance of urban infrastructure in

other towns of the district. Urbanization efforts in the district cannot ignore the disparities between different social categories.

Based on the detailed analysis of these issues, the report identifies crucial areas where the district can focus for immediate and long term strategies to increase the overall status of human development in the district. These issues are listed below

1. Attaining higher literacy rates and reducing gender disparities in literacy rates.
2. Improving the effectiveness in guaranteeing universal primary education, with special focus on Malur taluk.
3. Addressing the issue of declining sex-ratio and lagging indicators of maternal and child health, specifically in Mulbagal and Malur taluks.
4. A detailed study of ground water contamination's impact on health and possible intervention strategies to mitigate the damages.
5. Sustainable agricultural growth in all taluks of the state, with immediate interventions to minimize water intensive agriculture, regulation of groundwater extraction and adoption rainwater harvesting mechanisms
6. Better provisioning of basic amenities like drinking water (within their premises) and access to individual household latrines for SC and ST households.
7. Conduct scientific surveys that adopt universal definitions and criterion to identify exact number of PwD and integrate the efforts of various government agencies aimed towards development of PwD in the district.

* * * *

Part 2

Introduction

Economic development provides a narrow vision of human progress and thus, as societies evolve, there is a need for a broader paradigm to measure and understand human progress¹. The human development paradigm views development as the expansion of choices, capacities and freedoms of people to lead the life they value to its fullest and thus has caught the attention of the world. It allows policy makers to go beyond a few constricted indicators of economic development and target objectives that create favourable environment for sustained overall growth of human population of a region.

This thinking has led to exploring different dimensions of development and devising new ways of measuring development through indicators developed to understand these dimensions. Thus, in the last couple of decades, there is an 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 rights, equity and social justice as well as issues related to access availability and utilization of opportunities, resources and services.

The United Nations Development Fund (UNDP) is a pioneer in promoting the paradigm of human development across all the countries in the world. The main contribution of UNDP has been the publishing of the annual human development reports 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, human development that has been achieved in these regions. Thus, the reports provide a common platform to assess the relative performance of nations and regions in various dimensions of human development, while at the same time, allowing each region to understand and focus on specific development issues and bottlenecks faced by them individually.

The concept of Human Development is now being used to measure development in a holistic sense and using this to categorize nations/regions based on status of development in different parameters of development. Moving further, based on these findings, design, implementation and monitoring of development/welfare interventions to address these specific shortfalls would be the logical closure of thinking in this holistic paradigm. 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 that other communities seem to have utilized effectively².

Many nations including India have adopted the UNDPs concepts of measuring human development. They bring out national and sub-national reports that document the progress in achieving the various dimensions

¹ Anand, S., & Sen, A. (2000). Human development and economic sustainability. *World Development*, 28(12), 2029–2049

Ranis, G., Stewart, F., & Ramirez, A. (2000). Economic growth and human development. *World Development*, 28(2), 197–219.

² Planning and Statistics Department. (2005). *Karnataka Human Development Report - 2005*. Bengaluru: Government of Karnataka.

of development covered 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.

1.1 Concept and Methodology

Since its seminal report in 1990, UNDP's methodology for assessing human development have evolved considerably. 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 prioritization of specific communities, taluks and districts in designing development strategies and action plans of various government agencies. 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 lack of scientific management of data, the availability and reliability of disaggregated data is problematic at the district/taluk and village levels, about indicators that are traditionally used in the calculation of

human development at the state and national levels. For countries like India, at national and sub-national level, sample surveys allow the estimation of critical population indicators (like malnutrition, prevalence of diseases), where the estimated figures are valid at national and sub-national levels, but may not necessarily statistically be reflective of districts' characteristics. Similarly, the analysis of human development based on broad based indicators of development (like life expectancy at birth, gini coefficient) at the micro level has the limitation of not being effectively internalized locally or have a mechanism to address these issues through policies at the district level and below.

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 multi-dimensional analysis and human development at the district level and below, keeping in mind the realities of gender, class and caste related disparities within and between the districts of the state.

1.2 Factors contributing to Human Development

In the human development approach, the basic and critical capabilities of citizens in various dimensions of day-to-day 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 living³. 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 vulnerable 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

³ Haq, M. ul. (1996). Reflections on Human Development (OUP Catalogue). Oxford University Press.

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 agencies 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. GRAAM acted as the lead agency in preparing the Kolar district human development report.

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.

An iterative process of the selection of indicators was used in Kolar 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. GRAAM compiled the data and presented them back to the respective line departments. The Zilla Panchayat and the line departments validated the compiled data, based on which the indices were calculated. Further, the Zilla Panchayat and line departments helped GRAAM 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, Maternal and Child Mortality rates were based on estimated from SRS 2011 data"

"All in all, a set of 76 indicators were identified at the taluk level, that were used for the calculation of 6 indices computed as part of the human development report. The year 2011's data was used for formulating the indicators. Additionally the Composite Dalit Development Index was calculated based on primary data

collected from one Grama Panchayat of the district”. The taluk level indicators used in the study can be grouped in the following categories:

Table 1. Indicators used in the preparation of DHDR

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 community) 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 understanding of the existing seclusion and discrimination against dalit communities is a crucial part of analyzing 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 Panchayath 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

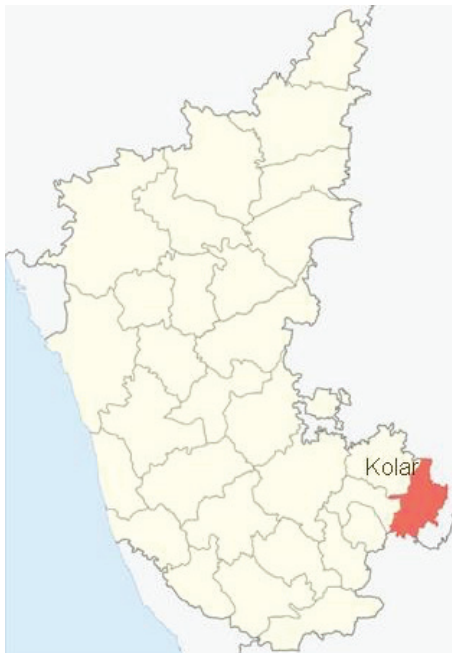
development in the district by exploring its current status in areas of education, health, income and poverty, standard of living, gender development, development of marginalized and vulnerable communities, governance and urban development. The conclusion chapter summarizes the findings of individual 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.

* * * *

District Overview

2.1 Introduction

Kolar, known as the “land of silk, milk and gold” is a district located in the south-east region of Karnataka state of India. The district is the eastern most district of the state and is bordered by Bengaluru Rural district in the west Chikballapur district in the north, Chittoor District of Andhra Pradesh in the east and Krishnagiri and Vellore districts of Tamil Nadu on the south. A district with a vast history and multiple public sector industries, a diverse set of communities reside in the district. Kannada is the major language of the district. Further, since the district is bordered by Andhra Pradesh and Tamil Nadu, together with Kannada, a wide variety of languages is spoken in the district with significant populations who speak Telugu, Urdu and Tamil.



Map 1. Location of Kolar in Karnataka

The erstwhile integrated district of Kolar comprising of 11 taluks was divided to form the new district of Chikballapur in 2007. Thus, Kolar district now comprises of the south-eastern taluks of Srinivasapur, Kolar, Malur, Bangarpet and Mulbagal with Kolar as its headquarters while Chikballapur district consists of the north-western taluks of Gauribidanur, Gudibanda, Bagepalli, Chikballapur, Shidlaghatta and Chintamani., where Chickballapur as its headquarters. Major sources of employment in the district are agriculture, dairy and sericulture and floriculture. The district is also known for its gold mining site ‘Kolar Gold Fields’, situated 30 Kms from Kolar. The gold mines in Kolar Gold Fields were closed in 2003 due to reducing gold deposits and increasing costs of production. However, the mine fields are proposed to be reopened for mining in selected units⁴. Kolar has one parliamentary constituency and 6 state legislative assembly constituencies, the details of which are provided in the table below.

⁴ The Hindu. 2013. “Apex Court Order Brings Cheer to BGML Workers,” July 10.

Table 2 Elected Representatives from Kolar

Constituency	Reservation category	Elected Representative	Political Party
MP, Kolar	Scheduled Caste	Shri K H Muniyappa	Indian National Congress
MLA, Srinivasapur	General	Shri K R Ramesh Kumar	Indian National Congress
MLA, Kolar	General	Shri Varthur Prakash R	Independent
MLA, Malur	General	Shri K S Manjunatha gowda	Janatha Dal, Secular
MLA, Bangarpet	Scheduled Caste	Shri S N Narayanaswamy K M	Indian National Congress
MLA, KGF	Scheduled Caste	Shri Y Ramakka	Bharatiya Janata Party
MLA, Mulbagal	Scheduled Caste	Shri G Manjunatha	Independent

2.2 Background and Brief Regional History

The district of Kolar has a vast and eventful history. In historic times, it had been known as Kolahalapura, Kuvalala and Kolala. It was the capital of the Gangas before they shifted to Talakad of Mysuru. Later on, in some sense, the region was the battle grounds between Chalukyas and Cholas during the middle ages. The Kolaramma temple and Somanatheshwara temple in the city of Kolar are fine representatives of the legacy of the kings who ruled the region. Other ancient temples in the district include the Ramalingeshwara temple built by the Cholas in Avani and the Someshwara temple in Kurudumale. Kolar is also known for its unique cultural practices. The Karaga in Malur, held generally between the months of April and May is a famous annual event that attracts many tourists from all over the state. The Kolaramma theppothsava is a sacred festival wherein the deity is placed in a

float and is taken into the Kolaramma tank.

Kolar is home to many eminent personalities. Shri Maasti Venkatesh Ayyangar Jnanapeetha Awardee, Shri D V Gundappa, the author of the famous Manku Thimmana Kagga, Shri K C Reddy, the first Chief Minister of Karnataka and Shri N. R. Narayana Murthy the founder of Infosys are some of the famous personalities who lead their formative years in Kolar.

2.3 Physiographic Divisions of the District

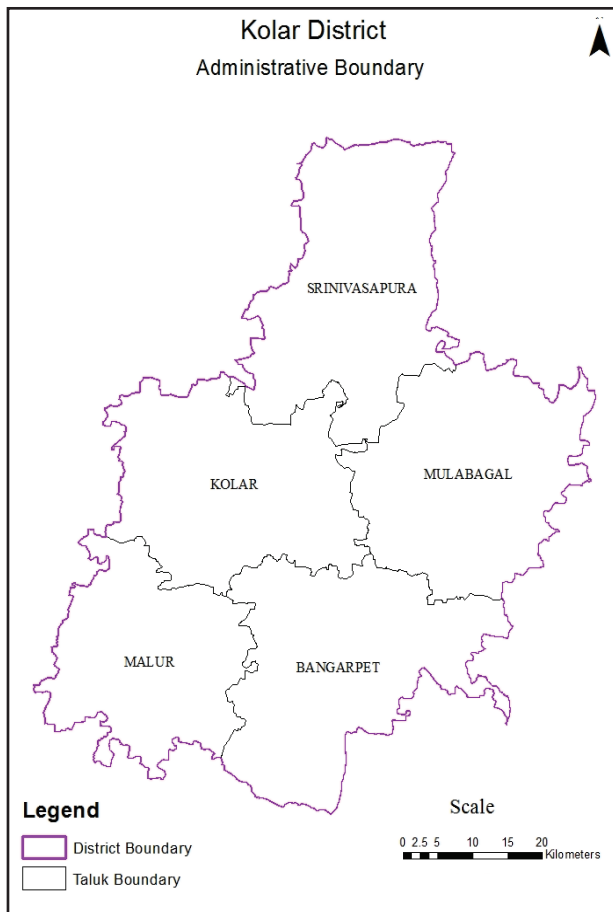
Kolar District is classified as a semi-arid drought-prone region and lies between 13.333° N, 78.1333 °E, with an average elevation of 822 Mts above sea level. The district spreads over an area of 3969 Sq. km. The table below provides a brief description of the taluks of the district.

Table 3. Taluk details of Kolar

Taluk	Geographical area (Sq. Km)	Height above sea level	Hoblis	Inhabited Villages	Towns
Srinivasapur	860	819	5	296	1
Kolar	793	822	7	328	1
Malur	645	910	4	306	1
Bangarpet	848	843	6	355	2
Mulbagal	823	827	5	314	1
Total	3969	822	27	1599	6

Source: Kolar at a Glance, 2011-12

With 860 Sq Km coverage, Srinivasapur is geographically, the largest taluk of the district followed by Bangarpet and Mulbagal. Malur is geographically the smallest taluk of the district.



Map 2. Map of Kolar

Source: Karnataka State Natural Disaster Monitoring Center

The district, at its greatest length, reaches about 135 km from north to south with almost the same distance from east to west. It occupies the table land of Mysuru, bordering the Eastern Ghats. The general plateau surface is interrupted by a hills and peaks of varying heights, particularly in the north.

2.4 Land, Soil and Natural Resource Endowments

Among the 10 agro-climatic zones of Karnataka, Kolar entirely falls under the Eastern Dry agro-climatic zone and experiences rainfall between 600-900mm per year. The normal rainfall in the district is 724mm per year. South

West Monsoon provides 55% of the rainfall whereas the North East Monsoon provides 30% of the total rainfall of the district with the remaining rainfall attributed to Pre-Monsoon rains. April to May are the hottest months in the district when temperature touches 40C. The lowest temperatures are in the month of December when temperature drops to as low as 10C.

The topography of the district is undulating to plain. The soils of Kolar district occur on different landforms such as hills, ridges, pediments, plains and valleys. The types of soils distributed range from red loamy soil to red sandy soil and lateritic soil. Soil erosion is noted to be moderate. Forest cover is about 5.5% with mostly scrub forests. Granites, gneisses, schists, laterites and alluvium underlie the soil in the district.

The area of Kolar falls under the Palar and South Pennar river basins with Palar, Uttara and Dakshina Pinakini as the major rivers (these rivers by themselves are small and seasonal). There are no perennial rivers in the district.

2.5 Demography and literacy

The following table provides the basic demographical features of Kolar district. With a decadal population growth of 10.77% in the last decade, Kolar's decadal growth is lesser than that of Karnataka (15.67%). Further, there was a reduction of close to 4% in the decadal growth rate of population from 2011 and 2001. An alarming feature of Kolar's demography is its decreasing Child Sex-ratio. Over the two decades, it decreased from 976.78 to 962.38.

Table 4. Demographic features of Kolar district during 2001 and 2011

Description	2001	2011
Actual Population	1387062	1536401
Male	701677	776396
Female	685385	760005
Population Growth	14.45%	10.77%
Density/km2	349.47	387.10
Child Sex Ratio (0-6 Age)	976.78	962.38
Average Literacy	63.14	74.39
Male Literacy	73.14	81.80
Female Literacy	52.81	65.83

Source: Census 2011, Census 2001

Average literacy rates in the district have increased considerably. However, with an average literacy rate of 74.39, the district falls significantly short of the national target of achieving 85% literacy rate. Further, as seen from the table above, there is considerable gap between male and female literacy rates in the district (with about 16% difference between the two). The district has 2 engineering colleges, 1 medical and one dental college. Bengaluru University has a Post-Graduation Centre in Kolar district as well, offering post-graduation courses in Zoology, Kannada, Economics and Commerce.

2.6 Industry

The economy of Kolar, like many other districts of the state is heavily dependent on agriculture and allied sectors, although the contribution of these sectors to the overall gross district domestic product (GDDP) is a far second to the tertiary sector. Cultivators and agricultural labourers together form

64% of the total work-force in the Kolar economy. The primary sector, which includes agriculture, its allied activities (like animal husbandry, apiculture, fishing, sericulture) and activities like mining and forestry contributes to 29% of the GDDP, whereas the tertiary sector's share of the contributes 43%.



Photo 1. Kolaramma temple in Kolar city

2.7 Agriculture and Irrigation

Agriculture is a major land use component in Kolar. Total land under agriculture forms about 51.8% of the total available land in the district. While the majority of farmers in the district are small and marginal farmers (88% of all landholders), their share of land ownership is only about 58%. The average landholding per landholder in the entire district is just under one hectare, thus largely limiting the choices of agricultural diversification. However, Kolar does not have any major dams or canals and is mainly dependent on ground water and lakes for its irrigation needs.

Kolar is known for its milk production, sericulture and more recently for its floriculture and high value horticulture. Srinivasapur is particularly known for its Mango production. These high value commercial commodities together with Ragi form the bulk of the agricultural

activity of the district. However the future of agriculture of Kolar is threatened by the alarming rate of water table depletion and increased rates of unsustainable extraction of ground water. With extremely limited possibilities of providing surface irrigation in the district, sustainable practices like rain-water harvesting and water saving mechanisms have to be invariably followed if Kolar has to handle the challenge of water in the future.

The industrial sector in Kolar has immense scope for increasing its share in the district economy. With the advent of the Bengaluru International Airport nearer to the district, the choices for expanding activities related to agricultural value addition and exports are larger and the district has to utilize this advantage that is uniquely available to it. The industrial areas established in the district, especially those that are nearer to the Bengaluru – Chennai highway have scope to increase their overall production and assembly activities, thus providing higher employment and economic growth opportunities to the people of the district.

Kolar, with its numerous temples and rocky terrain offers unique opportunities for tourism including adventure sports like trekking and parasailing. Kolar city itself with the Kolaramma and Someshwara temples and other places like Avani (Ramalingeshwara temple), Antargange, Kammasandra (Kotilingeshwara temple), Mulbagal (Someshwara and Anjaneya temples), Kurudumale (Someshwara and Ganesha temples), Guttahalli (Chikka Thirupathi) and Virupakshi (Virupaksha temple) together with numerous other temples in the district offer an exciting combination of religious as well as scenic

attractions for the tourists of Bengaluru and neighbouring districts. Further, Budikote (the birthplace of Hyder Ali), Kolar Gold Mines, Bethamangala and other places offer diverse tourism opportunities that can be more effectively packaged and promoted.



Photo 2. Someshwara temple in Kolar

2.8 Infrastructure

Kolar, although is located among the plains of Karnataka is challenged by rocky terrain in some parts of the district. With a household electricity coverage rate of above 93%, the district is ahead of the state, in guaranteeing full household electricity coverage. The district provides electricity to about 2.8 lakh connections for domestic consumption, more than 9000 connections for industries, about 38000 connections for commercial consumptions and about 60000 connections for irrigation pump sets.

The total consumption of electricity of the district in 2011-12 was 6556.72 lakh units.

The district has 75 branches of nationalized banks, 36 branches of regional rural banks and 9 branches of district cooperative central banks and offers banking services to the population of the district. However, as elaborated in the chapter on standard of living, less than half the households of the district have access to these banking facilities.



Photo 3. Kotilingeshwara temple located in Kammasanra, Kolar

The district is well connected by road and rail. The nearest airport is the Bengaluru International Airport (located about 70 Kms from Kolar). NH 4, that connects Bengaluru to Chennai passes through the district, covering the industrial area of Narsapur and the towns of Kolar and Mulbagal. Two major railway stations, Kolar and Bangarpet are located in the district under the South Western Railways.

2.9 Regional Perspectives and Backwardness

In the past two decades, Kolar's human development indices have been

consistently behind the state average. The Karnataka Human Development Report 2005 placed the district in 15th and 17th positions in overall human development in 1991 and 2001 respectively.

Kolar, once well known for its lakes and tanks, is now infamous for its water contamination, fluorosis and dangerous ground water depletion levels. Although the district has ample opportunities to increase economic security by encouraging horticulture, sericulture and animal husbandry, over extraction of ground water is evident in all the villages of the district, which severely limits these prospects. Further, area under cultivation in 3 taluks of the district (Bangarpet, Malur and Kolar) has reduced between 2010 and 2011. The per-capita income of Kolar in 2011 (Rs 41,219) is lower in comparison to the state average (Rs 53101) and more than 2/3rds of the households in the district hold B.P.L Cards. More than 60% of the households in the district do not have access to toilets. Only 9 Gram Panchayats (out of 156) in the district have won the Nirmal Gram Puraskar. More than 1/3rds of the children in the district are malnourished and about 88% of the pregnant women in the district suffer from Anaemia. Quarrying is the fastest growing primary sector industry in the district and there are apprehensions of the environmental hazards due to its unregulated spread.

2.10 Conclusion

In this grim scenario, the district's governance structure has to prioritize schemes and programmes in important sectors like watershed development, agriculture and allied sectors, rural development, health and sanitation.

Specifically, schemes and programmes related to rejuvenation of traditional water sources like Drought Prone Area Programme, Tank and lake regeneration schemes, Watershed development schemes and water conservation and drought proofing activities MGNREGA have to be specifically prioritized in the district. Since these are projects with considerable finances with geographically distributed activities, district-wide convergence of these schemes would help in achieving the overall objectives, prevention of duplication of efforts and streamlining the diverse processes of ecological restoration activities followed under different schemes and projects.

Further, there is wide scope to link these activities and to boost agricultural activities in the district by planning innovative activities in existing schemes in the departments of Agriculture, Horticulture, Sericulture, Animal Husbandry, Minor irrigation and through schemes related to alternative fuels like National Project on Biogas development.

Health and public sanitation are other crucial sectors in which Kolar lags behind. The existing schemes and programmes in these sectors (NRHM and NBA) allow for mission mode, need-based funding and activities which provide sufficient opportunity for the district administration to bring drastic improvement in these sectors as well.

Thus, the need for prioritizing specific sectors, integrating development activities in these sectors and amply financing them becomes critical. Convergent and inclusive planning, enforcing stricter environmental regulations and efficient implementation of such diversified activities are necessary. Moreover, it is clear that necessary legislations, regulatory regimes and specific schemes already exist to address these challenges. Thus, the role of governance is crucial ensure that the district achieves acceptable levels of human development.

* * * *

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 (CDI), 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

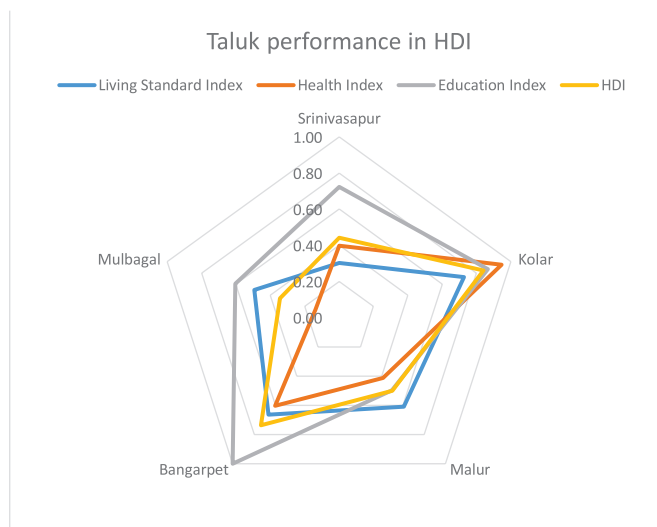
The table below presents the values of HDI for the five taluks of Kolar district. Kolar taluk has the highest HDI in the district followed by Bangarpet, Malur, Srinivasapur, and finally Mulbagal taluk. With better health and educational infrastructure, Kolar taluk stands first in living standard and health index, whereas Bangarpet performs better in

the education dimension. Srinivasapur, although has the highest taluk domestic product, due to lack of better facilities (like access to toilet, water supply, and share of non-agricultural labourers) is ranked 4th in the overall HDI ranking.

Table 5. Human Development Index for taluks of Kolar

Individual Indices	Living Standard Index	Health Index	Education Index	HDI	Rank (HDI)
Srinivasapur	0.302	0.397	0.725	0.443	4
Kolar	0.723	0.946	0.866	0.841	1
Malur	0.608	0.413	0.498	0.500	3
Bangarpet	0.664	0.602	1.000	0.737	2
Mulbagal	0.492	0.137	0.605	0.345	5

All taluks perform relatively poorly in comparison to Kolar in the health index whereas, Malur and Mulbagal perform badly in the education index.



Graph 1. Taluk performance in HDI

3.3 Gender Inequality Index

The table below presents the GII values for the taluks of Kolar. Srinivasapur taluk has the least gender disparity in the district followed closely by Mulbagal, Malur and Kolar. Bangarpet, the most urbanized taluk of the district also 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 Bangarpet taluk are reasons for the GII values in the taluk.

Table 6. Gender Inequality Index for taluks of Kolar

Individual Indices	GI	GI Rank
Srinivasapur	0.093	1
Kolar	0.117	4
Malur	0.111	3
Bangarpet	0.148	5
Mulbagal	0.098	2

3.4 Child Development Index

The table below provides the CDI values for the taluks of Kolar. 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 children and % 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. Malur performs comparatively better than other taluks in the district, with Mulbagal at the lowest of the ranking because of its high Child Mortality Rates and high amounts of malnourishment and under-weight children.

Table 7. Child Development Index for taluks of Kolar

Taluk	CDI	Rank
Srinivasapur	0.659	2
Kolar	0.393	4
Malur	0.712	1
Bangarpet	0.465	3
Mulbagal	0.116	5

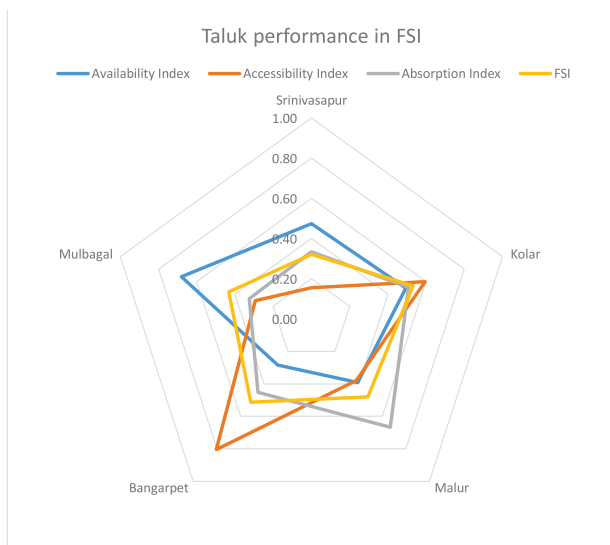
3.5 Food Security Index

The table below provides the FSI values for the taluks of Kolar. The FSI is based on the three dimensions of availability, accessibility and absorption of food capacities of the population. Kolar taluk performs better than the other taluks in this index, mainly because its features of availability accessibility and absorption are on the average, better than all other taluk. That is, although the taluk doesn't have the highest values either in availability, accessibility or absorption, it performs reasonably well on these indicators. Mulbagal performs well in availability due to high per-capita food production, Bangarpet performs well in accessibility due to higher percentage of BPL card holders and non-agricultural labourers and Malur performs better in absorption index due to higher percentage of households having access to tapped water and lower incidence of malnutrition in comparison to other taluks

Table 8. Food Security Index for taluks of Kolar

Taluk	Avail-ability Index	Access-ability Index	Absorption Index	FSI	FSI Rank
Srinivasapur	0.473	0.155	0.335	0.321	5
Kolar	0.493	0.596	0.509	0.533	1
Malur	0.392	0.381	0.668	0.480	3
Bangarpet	0.284	0.804	0.453	0.514	2
Mulbagal	0.680	0.293	0.324	0.432	4

The radar graph below displays the diversity of taluk performance in the three dimensions of FSI.



Graph 2. Taluk performance in FSI

3.6 Urban Development Index

The table below presents the UDI values for the urban localities of Kolar district. The six urban areas were considered for this index. Bangarpet has the highest UDI rank in all the urban areas, since it performs better than other urban areas in density of roads, crime and accident rates. Expectedly, Kolar takes the second position, whereas Robertsonpet (KGF) is the fourth position. Mulbagal stands last in the performance of urban areas in Kolar.

Table 9. Urban Development Index for towns of Kolar

Town	UDI	UDI Rank
Kolar	0.558	2
Robertsonpet	0.415	4
Srinivasapur	0.409	5
Malur	0.512	3
Bangarpet	0.612	1
Mulbagal	0.390	6

3.7 Composite Taluk Development Index

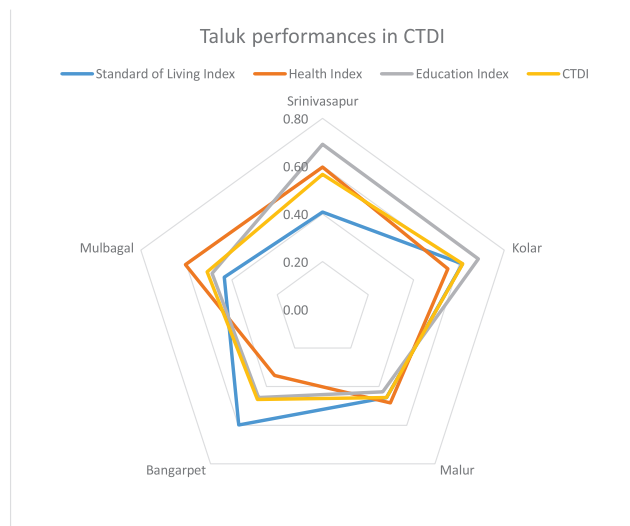
The table below presents the taluk-wise dimensional and overall values of the CTDI in the district. The table shows that Kolar has a higher CTDI value and hence, ranks first in comparison to the other taluks. The analysis of HDI showed that Kolar taluk performed better than the other taluks in standard of living and in health index and hence was ranked first. However, in CTDI, Kolar is placed 1st, 3rd and 2nd in standard of living, health and education respectively. Srinivasapur which performs well in education index is ranked overall second in CTDI. It was ranked 4th in HDI. 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 CTDI is calculated using arithmetic averages whereas HDI is calculated as geometric mean of the dimensional indices. The detailed values of the 68 indicators used for this computation is available in Annexure 2 of this report.

Table 10. Composite Taluk Development Index for taluks of Kolar

Taluk	Standard of Living Index	Health Index	Education Index	CTDI	Rank
Srinivasapur	0.407	0.596	0.691	0.565	2
Kolar	0.616	0.551	0.686	0.618	1
Malur	0.456	0.484	0.428	0.456	5
Bangarpet	0.598	0.342	0.458	0.466	4
Mulbagal	0.434	0.604	0.488	0.508	3

The radar graph below summarizes the trends in taluk performance across

the indicators of standard of living, education and health in Kolar. The disparities in performance of the taluks along the different dimensions are clearly visible from the graph.



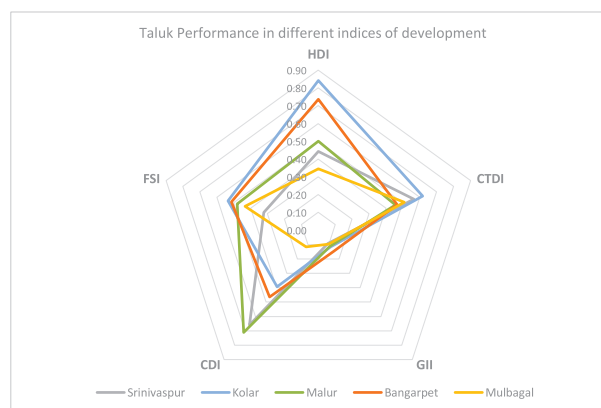
Graph 3. Taluk performance in CTDI

3.8 Conclusion

This chapter provides an analysis of the index values and ranks of the five taluks of Kolar, with regards to the 6 indices used in this report. Among the 5 taluk level indices, Kolar was ranked first in HDI, FSI and CTDI. In the remaining two indices, it was ranked 4 (GII and CDI). Srinivasapur was ranked first in GII and fifth in FSI. Malur was ranked first in CDI, although its performance in other indicators was only mediocre. Mulbagal taluk took the last place in HDI and CDI. Bangarpet had the highest gender inequality in the district.

Table 11. Overall taluk ranks in development indices in Kolar

Taluk	HDI	GII	CDI	FSI	CTDI
Srinivasapur	4	1	2	5	2
Kolar	1	4	4	1	1
Malur	3	3	1	3	5
Bangarpet	2	5	3	2	4
Mulbagal	5	2	5	4	3



Graph 4. Taluk performance of Different indices

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 Kolar taluk's performance that the taluk has to focus on women and child development. Similarly, Mulbagal and Bangarpet have to focus on overall holistic development. Thus, at the district level, the analysis shows that the focus has to be first, focussed towards Mulbagal taluk followed by Bangarpet, Malur and Srinivasapur taluks.

* * * *

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. Due to positive externalities, education has become a public good. The Human Development paradigm looks at education as an important factor in extending the human choices of leading a decent life. Thus education has become a basic human right. By universalizing primary education, Government of India has exhibited its commitment to use education for the welfare of the society. The way education and literacy are viewed in the context of development have changed in the recent academic and policy discussions. The studies and findings of researchers like Amartya Sen, Mehboob-ul-Haq, Jean Dreeze, Marthanusbaam and others show that education plays a vital role in overall human development.

Literacy includes 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. Literacy is considered as a deciding factor to assess the development of human resources of any region, according to the policy analysts. This argument is based on the consideration that it is much easier and lesser to provide training to literates rather than illiterates. Generally, the socio-economic status of literates seems to be better compared to illiterates, and they also possess better health status and employment expectations. Literacy increases employment opportunities and opportunity to avail higher education,

according to the policy makers. Literacy not only leads to better wealth but also helps in easy admission to schools and education. More than triggering knowledge among the people, education helps the people to share and understand their experiences.

It is agreed that literacy plays a significant role in making the lives of people more meaningful. According to contemplations, literacy is essential for human development and also to eliminate poverty and illiteracy. Thus, literacy plays a very important and significant role in everybody's lives. Today, literacy education is considered as peoples' retention efficiency deciding factor and part of development process. Thus, considering development as a concept of 'participation of people' is gaining more attention. Benefits of literacy, among the people and country are multi-dimensional and multi-faceted. Education also provides people the ability and freedom to make necessary choices from the opportunities available in the society. Literacy education is integrated parts of development, without which development is incomplete. Literacy, education is required if people are to be included in developmental process.

While lack of income indicates poverty, illiteracy and deprivation of education are reasons of poverty. Education is a tool for the people to be free from ignorance and exploitation and this way it creates awareness among the people about their rights and responsibilities, available laws for a decent life in the society, concealed reasons for their backwardness and issues. Apart from quenching the

knowledge thirst and provide a better position in the society, education also provides a dignified life. It leads to increased productivity by providing basic and special skills and enables economical growth by confirming increased per capita income. It increases the employment opportunities to the people and provide them capability to utilize the available opportunities, which leads to improved livelihood, resulting in better understanding, human relationship, good civilization and makes education universalized resulting in establishing equality and human development based on social justice. Education provides people the strength to make proper choices of their lives and their rights by being citizens of democracy. Education makes women aware of their work capabilities and increases their self-respect, which in turn provides proper justice to gender inequality. Increased educational status assures progress in health status of the people. It prevents child mortality and leads to women development through achieving self help and self-dependency. Above this, education opens the ways of knowledge and awareness, which is a very strong aspect compared to others. The outcome of this is considered to be very valuable.

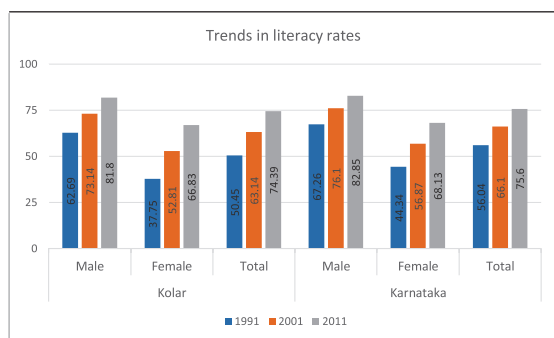
When the educational progress of pre and post independence period of Kolar district is analyzed with other districts of the State, though it appears that Kolar district has not achieved complete educational development, it has achieved considerable progress in the educational sector in recent decades. The contribution of the district in this sector is noticeable. The literacy and educational levels has progressed and the district also enjoys

the pride of providing several State and National level intellectuals. The district has also set a good example of being multi-linguistic as it shares its borders with Andhra Pradesh and Tamil Nadu States. Achievement of the district in literacy and educational sectors and its probable outcomes on human development is discussed in this chapter.

4.2 Literacy profile of the district

As literacy enjoys a positive relation with the social, economic development growth index and population related indices, it proves that it plays a vital role in human development process. By being literates, knowledge and skill foundations of the people become strong, which increases their income and improves their productivity. The literacy levels of Kolar district appears to be low till the year 1941. A literacy level of 8.1% can be noticed during 1941, which gained considerable progress between the years 1941-51 and 1951-61. The literacy level of Kolar district is 74.39% as per 2011 census, out of which the male and women literacy levels are 81.8% and 66.83% respectively. The average literacy levels of the state is 75.60% out of which male and literacy levels is 82.85% and 68.13% respectively. While, at the national level the total literacy level is 74.04%, the male literacy level is 82.14% and women literacy level is at 65.46%.

When the literacy level of Kolar district is compared to the State-level literacy level, it shows 1.21% less. The difference of literacy level among males is 1.05% and 1.3% among women. The literacy level of the district is 0.35% more than national average. It is 0.34% less among males and 1.37% more among women.



Graph 5. Literacy levels of Kolar district

Source: 1991, 2001 and 2011 census

When compared to Bengaluru Urban (88.48%) and Bengaluru Rural (78.29%) the literacy level of Kolar district (74.39%) is lesser. While the literacy rate of Kolar is better than Chikkaballapur (70.08%) and Tumkur (74.32%). Among the total number of districts of the State, Kolar stands in the fourteenth place. While the district stands in the 16th place among male literacy, it stands in 14th place among women literacy. The literacy level of Kolar district which stood in the

fifteenth (15th) place during the year 2001, improved its position by identifying itself to the fourteenth (14th) place during the year 2011.

While Kolar district has achieved 11.25% in literacy levels in the decade 2001-2011 (63.14% to 74.39%), the state has registered 8.72% progress and the progress at National level is 8.66%. This way it is clear that Kolar district has registered better growth in literacy levels during the decade, when compared to State and National levels. About 25.61% people of the district have still remained illiterates. The Government of India has aimed to attain 85% literacy by the year 2012. But in our State only three districts, viz., Dakshin Kannada, Bengaluru Urban and Udupi districts have achieved this target. In this context Kolar district has not achieved the National Literacy target. It lags 10.61% behind the National target.

Table 12. Rural and Urban literacy levels of Kolar district

Year	Rural Literacy rate				Urban literacy rate				Total			
	Male	Female	Total	Difference	Male	Female	Total	Difference	Male	Female	Total	Difference
1991	56.79	29.06	43.16	27.73	81.63	66.15	74.09	15.48	62.69	37.75	50.45	24.94
2001	69.22	45.93	57.75	23.29	84.96	73.57	79.36	11.39	73.14	52.81	63.14	20.33
2011	78.11	59.81	69.08	18.3	90.04	82.18	86.12	7.86	81.80	66.83	74.39	14.97

Source: 1991, 2001 and 2011 census

Growth in literacy level indicates improvement in awareness and engagement in development. While the rural literacy rate at the National level is 68.73%, it is 69.08% in Kolar district. In this context the district is in a better position in the year 2011, when compared to 2001. The gap in literacy rate between male and females is lesser than that of the State average. While it is 19.29% at the State level, it is 18.3% in Kolar district. Likewise, the urban literacy rate

at the State level is 85.78% and 86.12% in Kolar district. The gap between male and female literacy rates in the district is lesser than that of the State rates. While it is 12.07% at the State-level, it is 7.86% in Kolar district. The urban literacy rate in the district is 17.04% lesser than the State-level urban literacy rates. The rural male literacy rate in the district is 11.93% lesser than urban male literacy rate. Likewise, the rural women literacy rate is 22.37% lesser than urban women literacy rate.

Table 13. Kolar district's talukwise literacy rate

Taluk	2001			2011		
	Male	Female	Total	Male	Female	Total
Srinivasapur	71.28	46.12	58.87	80.15	62.29	71.29
Kolar	84.18	63.62	73.90	83.1	69.15	76.21
Malur	71.66	53.01	62.33	77.92	62.47	70.37
Bangarpet	70.47	46.11	62.80	84.98	71.87	78.49
Mulbagal	69.62	44.39	57.09	79.22	61.89	70.61
District	61.20	42.20	63.14	81.8	66.83	74.39

Source: 1991, 2001 and 2011 census

When we look at the talukwise literacy rate, Bangarpet taluk is in the first place with 78.49%, followed by Kolar taluk (76.21%) in the second place and Srinivasapur taluk (71.29%) in the third place and Mulbagal (70.61%) in the fourth place. The literacy rate of Malur taluk is less (70.73%) and stands in the last place of the district. The difference in male-female literacy rates is highest in Srinivasapur (17.86%). While Mulbagal taluk (17.33%) stands in the second place, the least difference between male and female literacy rates is in Bangarpet taluk (13.11%).

In order to understand the educational progress of the district, indicators that provide a multi-dimensional understanding of the status of education in the district are considered. In the following sections, indicators like Gross Enrolment Rate (GER), Net Enrolment Rate (NER), out of school children, retention rate, attendance rate, rate of children who have finish 10 years of schooling, growth in the number of schools, availability of teachers and basic facilities and achievement levels of the children are analysed. In this chapter efforts have been made to present the

important educational dimensions of Kolar district through the above indices.

In view of providing equality and social justice, though the role of higher education is important, it is very difficult to discuss the aspects of higher education in larger detail in the current context. Aspects with respect to providing grants to higher education, autonomy, administration and quality are covered in their report of the Higher Education Task Force (2004).

4.3 Enrolment

Total enrolment, Gross Enrolment Rate, Net Enrolment Ret, number of out of school children, retention rate, genderwise, social equality, classroom wise enrolment and transition rate based on population of the district are important enrolment indices. Efforts are made here to analyse based on these indices.

Primary School level

The number of students enrolled to the Junior Primary schools in the district during the year 2011-12 is 125414, out of which 64330 (51.29%) are boys and 61084 (48.71%) are girls. It contributes 2.32% to the Gross Enrolment Rate of the State and 75829 children are enrolled into Higher Primary schools (from 6th to 8th standards), out of which 38545 (50.83%) are boys and 37284 (49.17%) are girls. The Gross Enrolment Rate of children from 1st to 8th standards in the district is 201243, which includes 102875 (51.12%) boys and 98368 (48.88%) girls. It contributes 2.39% to the total number of students enrolled in the State.

Table 14. Talukwise enrolment of children (Primary level)

Name of the Taluk	Class 1 – 5		Class 6 – 8		Class 1 – 8
	Total	District ratio (%)	Total	District ratio (%)	District ratio (%)
Srinivasapur	17488	13.94	10970	14.47	7.07
K.G.F.	16804	13.4	10705	14.12	6.83
Kolar	31648	25.23	18514	24.42	12.46
Malur	18320	14.61	11249	14.83	7.35
Bangarpet	19837	15.82	12159	16.03	7.95
Mulbagal	21317	17	12232	16.13	8.34
Total	125414	100	75829	100	100

Source: (DICE 2011-12)

The enrolment rate of boys from 6th to 8th standards was found to be decreasing from 2008-09 to 2011-12. While 41321 boys were enrolled during 2008-09, 38545 boys were enrolled during the year 2011-12. There is a decrease of 2776 children (3.48%). Likewise, the enrolment rate of girls has also decreased from 2008-09 to 2011-12. The enrolment rate which was 40352 in the year 2008-09 decreased to 37284 during the year 2011-12, which is 3068 (3.96%) less.

Table 15. Enrolment to Junior Primary Schools (1st to 5th Standards)

Year	Enrolment (Junior Primary)			Percentage increase/decrease		
	Male	Female	Total	Male	Female	Total
2011-12	64330	61084	125414	-1.57	-1.84	-1.70
2010-11	65357	62231	127588	-4.57	-4.56	-4.56
2009-10	68486	65201	133687	-2.17	-2.54	-2.35
2008-09	70002	66899	136901	-3.43	-3.88	-3.65
2007-08	72486	69597	142083			

Source: (DICE 2011-12)

During the year 2007-2008, 142083 students enrolled to Junior Primary schools in Kolar district, out of which

72486 are boys and 69597 are girls. Out of the total 125414 enrolment during the year 2011-12, 64330 were boys and 61084 were girls. The 2011-12 annual enrolment rate of the district showed 6% less enrolment rate.

Table 16. Enrolment to Higher Primary Schools (6th to 8th standards)

Year	Enrolment (Higher Primary)			Percentage increase/decrease		
	Male	Female	Total	Male	Female	Total
2007-08	31361	30387	61748			
2008-09	41321	40352	81673	31.76	32.79	32.27
2009-10	39471	38133	77604	-4.48	-5.50	-4.98
2010-11	38429	37440	75869	-2.64	-1.82	-2.24
2011-12	38545	37284	75829	0.30	-0.42	-0.05

Source: (DICE 2011-12)

While, there has been 3.65% reduction in the enrolment figures between 2007-2008 and 2008-09, during 2011-12 the enrolment figures have decreased by 1.70%. Due to the efforts of the government in making education compulsory for children upto 5th standard, it is expected that the retention rate of the students in higher primary schools will improve. The gender equality and equality, both are coming close to them.

During 2008-2009, a total 81673 students were enrolled into higher primary schools in Kolar district, out of which 41321 were boys and 40352 were girls. During 2011-12, 75829 students enrolled into higher primary schools, out of which 38545 were boys and 37284 were girls. Between 2008-2009 and 2011-12, the enrolment rate of the district has decreased by 3.72%.

From 2007-08 to 2008-09 the enrolment rate at the primary education level (from 1st to 8th standards) in the

district has seen an annual growth of 7.23%. While the growth rate among boys is 7.20%, it is 7.27% among girls. It can also be noticed that the annual enrolment rate has decreased from 2008-09 to 2011-12. The growth rate has decreased by 3.33% from the year 2008-09 to 2009-10. The decrease in growth rate is 3.02% among boys and 3.65% among girls. The enrolment rate of girls during this year is 0.63%. The enrolment rate has registered a decrease of 3.71% between the years 2009-10 to 2010-11. The decrease in enrolment rate among boys is 3.86% and 3.54% among girls. It can be noticed that the decrease in enrolment is more among boys with a gap of 0.32%. Between the years 2010-11 and 2011-12 the annual enrolment rate has decreased by 1.09%. While, it is 0.88% among boys, it is 1.31% among girls. Between 2008-09 to 2011-12, the decrease in annual enrolment rate is 4.12%. It is 3.94% among boys and 4.32% among girls. It can also be noticed that the enrolment rate in the district was decreasing from 2008-09 to 2009-10.

High School level

Table 17. Talukwise enrolment of children (High School level)

Taluk	Standard 8-10				
	Male	Percentage	Female	Percentage	Total
Bangarpet	5505	51.37	5211	48.63	10716
K.G.F.	5310	51.55	4990	48.45	10300
Kolar	8497	50.48	8334	49.52	16831
Malur	5431	50.94	5230	49.06	10661
Mulabagilu	5338	49.86	5369	50.14	10707
Srinivasapur	5113	49.86	4714	50.14	9827
Total	35194	50.97	33848	49.03	69042

Source: R.M.S.A 2011-12

In the year 2011-12, a total 69042 students were enrolled into high schools in Kolar district, out of which 35194

(50.97%) are boys and 33848 (49.03%) are girls. As per the available information regarding enrolment of students at taluk level, enrolment of boys is more (51.55%) in KGF educational taluk, followed by Bangarpet (51.37%). When we look at enrolment of girls, it is more in Mulabagilu and Srinivasapur taluks (50.14%), followed by Kolar (49.52%) and Malur (49.06%). Enrolment of students to high schools in the district during the year 2010-11 was 72121 which decreased to 69042 during the year 2011-12, which shows a decrease of 2.18% in annual growth rate.'

Gross Enrolment Rate and Net Enrolment Rate

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.

Based on the age limit criteria matrix, if all the children in the state are enrolled into schools, i.e., if every child who is 6 years old is enrolled to first standard and children above 6 years of age are enrolled into higher standards, the ratio which we derive from this will be 100.

The Gross and Net Enrolment ratios have multi-dimensions of education. This helps in knowing the difference between the concept of Gross Enrolment Ratio and Net Enrolment Ratio. Generally the

Gross and Net Enrolment Ratios are used to assess the Educational levels of school children. Enrolment rate is derived by dividing the total number of children enrolled to schools, from the total number of children of the same age group. There are possibilities that the Gross Enrolment rate (GER) is more or less number of children in a specific educational level compared to the total number of children in the same age group. GER is divided from the total number of children enrolled into a specific standard, from the total number of children belonging to the same age group. The Net Enrolment Rate is derived by dividing total number of children of a specific age group, enrolled to a specific standard, by the total number of children of the same specific age group in the taluk or district. Hence, the Gross Enrolment Rate should not cross 100%.

Table 18. Talukwise Gross Enrolment Rate

Taluk	Gross Enrolment Rate		
	Junior Primary School (1 st to 5 th Standard)	Higher Primary School (6 th to 8 th Standards)	Primary School (1 st to 8 th Standards)
Srinivasapur	111.99	88.86	100
Kolar	99.94	90.47	97.95
Malur	92.27	90.71	91.95
Bangarpet	102.12	95.29	100
Mulabagilu	97.56	89.96	95.89
Total	100	91.65	98.57

Source: (DICE 2011-12)

When we analysed the talukwise Gross Enrolment Rate of students from 1st to 5th Standards in the district we found that the GER of two taluks (Srinivasapur and Bangarpet) had crossed 100% and we could see that the Gross Enrolment Rate of Junior Primary School level of the

district is 100%. Least enrolment rate can be seen in Malur taluk (92.97%).

When we look at the talukwise Gross Enrolment Ratio of the district from 6th to 8th standards, the highest Gross Enrolment Ratio is in Bangarpet taluk and the least rate is in Srinivasapur. The Gross Enrolment Rate of the district at the Higher Primary School level is 91.65%, which is visible in the table mentioned above. On a whole the Gross Enrolment Rate at the primary level (1st to 8th Standards) in two taluks (Srinivasapur and Bangarpet taluks) has crossed 100% and it is 91.95% in Malur taluk.

The Net Enrolment Ratio at the Primary School level for the year 2011-12 is shown in the next table.

Table 19. Primary school level Net Enrolment Ratio (NER), 2011

Taluk	Primary School (1 st to 8 th Std)
Srinivasapur	97.27
Kolar	95.54
Malur	94.36
Bangarpet	90.86
Mulabagilu	95.43
Total	95.15

Source: DICE information

During the educational year 2011-12 Srinivasapur taluk has registered the highest Net Enrolment Rate in the talukwise figures (97.27%) and Bangarpet taluk registered least enrolment rate (90.86%). Though the attendance rate has crossed 100% in Bangarpet taluk (including Bangarpet and KGF educational blocks), it is visible that Net Enrolment Rate is the least. Likewise, The Net Enrolment Rate of the district

has not achieved 100% as per Universal education availability and enrolment rate. Hence, more attention is required to bring back children to schools and retain the children who are already enrolled into schools, attendance and levels of quality learning.

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

The school dropout rate shows the functioning capability of the schools. These rates reflect on the mis-utilization of available human resources of a country since sections of the society are deprived of attaining fruits of education. Not attending classes or dropping out of schools in the middle are joint results of personal, institutional and structural issues. Structurally, poverty results in parents not being able to bear the educational expenses and hence parents restrict their children to stay at home and look after household works or send them to work for somebody else. When it comes to education of girls, they face several problems like household chores, looking after younger siblings and poverty. Along with this gender inequality issue also forces the girl children to stay away from schools.

Out of school children

About 758 children are remaining out of school in the district, out of which 450 (59.37%) are boys and 308 (40.63%) are girls. When we look at the talukwise details Malur has the highest number of out of school children, i.e., 0.64%, followed by Mulabagilu (0.43%). It can be noticed that among the out of school children, number of boys is more.

Table 20. Out of primary school children (2011-12)

Total	Boys	Percent-age	Girls	Percent-age	Total	Dropout Rate(%)
Srinivasapur	49	46.67	56	53.33	105	0.40
Kolar	70	62.5	42	37.5	112	0.23
Malur	96	52.75	86	47.25	182	0.64
Bangarpet	97	62.58	58	37.42	155	0.39
KGF	56	87.5	8	12.5	64	
Mulabagilu	82	58.57	58	41.43	140	0.43
Total	450	59.37	308	40.63	758	0.40

Source: DICE information

The percentage of out of school children at the high school level is shown in the next table. Accordingly, the highest number of out of school children is found in Bangarpet, Srinivasapur and Malur taluks. Kolar taluk has the least percentage of out of school children (3.59%). The district average at high school level is 9.16%, which is alarming.

Table 21. Percentage of Out of school children at high school (2011-12)

Taluk	No. of Out of school children	Percentage of out of school children
Srinivasapur	748	11.68
Kolar	431	3.59
Malur	858	11.68
Bangarpet	2312	14.71
Mulabagilu	788	9.04
Total	4597	9.16

Source: DICE information

From all the above discussions, it is clear that 758 (0.40%) children at the primary school level and 4597 (9.16%) at the high school have dropped out of schools. It can also be noticed that the percentage of children dropping out of

schools by the time students reach high school level, from primary level, has increased.

Mainstreaming of out of school children

The below table shows the details of number of out of school children, who are mainstreamed. Among the out of school children at primary level, highest number of children have been brought back to mainstream schools in Srinivasapur taluk.

Table 22. Details of Percentage of out of school children mainstreamed

Taluk	Primary level	High school level	Total
Srinivasapur	54.29	9.89	15.35
Kolar	2.68	5.11	4.60
Malur	29.12	6.29	10.28
Bangarpet	18.72	5.02	6.20
Mulabagilu	24.29	4.95	7.86
Total	24.8	6.64	9.20

Source: DDPI office, Kolar

Malur taluk had the highest number of out of school children out of which, the education department has been successful in bringing back 29.12% children to mainstream schools. Overall 25% of the out of school children have been mainstreamed in the district. But, the percentage of mainstreaming is less at the high school level, with only 6.64%. The percentage of students dropping out of schools at high school level is also more and hence the education department should pay more attention in bringing back out of school children at the high school level.

4.5 Transition Index for Children enrolled to 8th standard

“The below table shows the proportion of drop out school children, that were mainstreamed. Among the different taluks, the highest proportion of children have been brought back to mainstream schools in Srinivasapur taluk.”

Table 23. Gross transition rates from seventh to eight standard (2011)

Taluk	Passed 7 th	Admitted to 8 th	Gross Transition rate
Srinivasapur	3525	3419	96.99
Kolar	6093	5906	96.93
Malur	3643	3887	106.70
Bangarpet	7397	7462	100.88
Mulbagal	4103	3936	95.93
District	24761	24610	99.39

Source: DDPI, Kolar

4.6 Teachers and students ratio

Teachers vs. students ratio is an important deciding factor to know the standard of teaching at the primary school level. The teachers-student ratio is the specific number of students which a teacher should handle. As shown in the table below, in Kolar district there is one teacher for every 33 students at the primary school level and one teacher for every 23 students at the high school level. At the primary school level this ratio is more in Bangarpet and Kolar taluks and at high school level it is more in Bangarpet and Malur taluks.

Table 24. Student-teacher ratio

Taluk	Primary level	High school level
Srinivasapur	28.15	21.12
Kolar	34.79	19.05
Malur	27.90	24.66
Bangarpet	40.51	25.27
Mulabagilu	28.90	22.89
Total	32.76	22.42

Source: DDPI, Kolar

4.7 Infrastructure and access

**Photo 4. Distribution of notebooks by GP in HPS, Chikkatirupathi**

There has been considerable growth in admissions to schools in the district over the years. The district has adopted the concept of opening new primary schools in one km area having more than 100 population and more than 10 children. Likewise, higher primary schools have been opened in 3 kms and high schools in 5 kms. Care taking schools and transportation facilities are provided to small and lesser populated areas. Primary schools are opened in 1 km radius of all the areas having 100 or more population. At places where there are no high schools in 3 kms radius, the higher primary schools were upgraded to high schools

and 8th standard is included. There are 2783 populated areas in Kolar district. The ratio of Lower and Higher Primary schools is 1:2.0 and when private junior and higher primary schools are also taken into account the ratio is 1:1.53. The district enjoys the credit of having one primary school in every 1 km radius in all the 2783 villages of the district.

The school education of the district is classified as Lower Primary Schools (from 1st to 5th standard), Higher Primary Schools (1st to 7th/8th standards), and high schools (8th to 10th standards). These schools are further classified into three divisions based on its management, viz; (1) government schools run by Education Department, Social Welfare Department and local organisations; (2) private aided schools; and (3) private unaided schools. Apart from this there are schools which belong to other categories. There are 1283 primary education, 930 higher primary and 316 high schools (2011-12).

Availability of schools

Table 25. School details of Kolar district

Category	Lower Primary Schools		Higher Primary Schools		Primary school		High Schools		Total Primary + High Schools	
	No.	%	No.	%	No.	%	No.	%	No.	%
Education Department	1249	97.35	631	67.85	1880	84.95	119	37.66	1999	79.04
Aided	1	0	38	4.10	39	1.76	43	13.61	82	3.24
Unaided	31	2.41	243	26.13	274	12.38	139	43.99	413	16.33
Others (Central)	2	0.24	18	1.93	20	0.90	15	4.75	35	1.38
Total	1283		930		2213		316		2529	99.99

Source: DICE information

There are 1283 Lower Primary Schools, out of which 1249 schools (97%) are run by Education Department which has 87.08% share. We can notice a difference of 10%.The Government Lower Primary Schools in the district is run by the government itself. The share of unaided schools is 31 (3%). This clarifies that the Education Department is playing a major role in the district with respect to lower primary school education. The statistics for the state in this category is 11.37%.

Compared to the state-level the government is playing a significant role in primary education the district. It is also good that the role of private sector in primary school education level is less in the district. But at the Higher Primary School level, while there are 631 (68%) schools run by Education

Department, the share at the State-level is 67.26%. While there are 243 (22.0%) private unaided higher primary schools in the district, the percentage of private unaided schools in the state is 23.83%. But the presence of private schools at the high school level is less and 38% of the high schools are run by the government. The number of lower primary schools which was 1300 during the academic year 2010-11 appears to have decreased to 1283 schools by the year 2011-12, out of which seven schools have been shut down and one out of these seven schools has been reopened. While one school has been upgraded to higher primary school, two higher primary schools have been converted into lower primary schools. The remaining 12 lower aided schools were upgraded as higher primary schools.

Table 26. Talukwise/managementwise lower and higher primary schools

Taluk	Government schools				Govt. aided schools	Unaided schools	Other management schools	Central Schools	Total no. of schools
	Education Dept	Social welfare Dept	Local management	Total					
Srinivasapur	325	2	0	327	2	40	0	1	370
Kolar	382	4	0	386	10	82	0	0	478
Malur	321	2	0	323	2	34	0	0	359
Bagarpet	329	2	0	331	4	45	1	0	381
K.G.F.	133	2	0	135	17	38	0	1	191
Mulabagilu	390	5	0	395	4	35	0	0	434
Total	1,880	17	0	1,897	39	274	1	2	2,213

Source: DICE 2011-12

4.8 Eight basic facilities – School infrastructure index

Major reasons to drop out of schools are lack of basic infrastructure or improper infrastructure. No classrooms in schools, absence of separate toilets for boys and girls, lack of clean drinking water

are also among the major reasons. The basic infrastructure index is arrived by considering the factors including availability of electricity, water, public toilet, separate toilets for girls, in schools which are functioning from own buildings, 'kuchha/pucca' buildings and

absence of buildings. Sarva Shiksha Abhiyan is an ambitious national level project under the Universalisation of Primary Education scheme, under which much emphasis has been given to provide basic infrastructure to the schools, like providing school buildings to schools, additional classrooms, minor and major repairs of the school buildings, etc. Eight basic infrastructures have been identified for schools including general toilets, separate toilets for girls, electricity, play ground, ramps, library, compound and drinking water. When the available basic infrastructure in the school buildings were assessed it was found that increase in enrolment and retention rates of schools, increase in number of students in classes, increase in the ratio of students in classrooms, student-teacher ratio, movement rate, enrolment and gender disparity rates are good. As per the below table shows, the district has achieved 100% progress in providing general toilets, separate toilets for girls, drinking water, library and electricity.

Table 27. Talukwise basic infrastructure available in primary schools (1st to 8th standards)

Taluk	Schools	Toilets (%)	Girls' toilets (%)	Drinking water (%)	Library (%)
Srinivasapur	325	100	100	100	100
Kolar	382	100	100	100	100
Malur	321	100	100	100	100
Bangarpet	329	100	100	100	100
K.G.F.	133	100	100	100	100
Mulabagilu	390	100	100	100	100
Total	1,880	100	100	100	100

Taluk	Electricity (%)	Play ground (%)	Ramps (%)	Compound (%)	School infrastructure index
Srinivasapur	99.69	28.92	88.92	77.85	0.88
Kolar	100	41.36	61.52	77.49	0.88
Malur	100	46.73	93.77	57.01	0.82
Bangarpet	100	33.43	86.93	62.61	0.85
K.G.F.	100	45.86	93.98	42.86	NA
Mulabagilu	100	95.38	98.21	93.33	0.80
Total	99.95	50.27	86.12	72.29	0.85

While Mulabagilu taluk enjoys maximum basic infrastructure facility, 28.92% of the schools in Srinivasapur taluk lack playgrounds. Compared to other taluks, Kolar taluk has very less ramp facilities in schools, with only 61.52%. In KGF taluk only 42.86% of the schools have compounds. Accordingly all these factors are leading the students away from school system.

4.9 School completion ratio

The below table explains the important indices of the educational system of the district. Based on these factors the taluk and district wise educational results can be assessed.

Table 28. Details of the students who have completed school education and promoted (2011)

Taluk	Percentage of completion of school education	SSLC pass percentage	PUC pass rate
Srinivasapur	41.05	88.27	65.48
Kolar	42.07	87.29	68.67
Malur	38.00	84.67	77.37
Bangarpet	39.64	76.07	61.29
Mulabagilu	39.01	86.96	58.61
Other	40.06	83.65	66.59

Source: DDPI Office, Kolar

The percentage of completion of school education provides the ratio of children who have completed 10 years of education in the district. As seen in the above table, this ratio is only 40% and there is a need to increase this. Malur taluk has remained most backward in the entire district and Kolar taluk has the maximum percentage. Though the pass percentage in SSLC appears to be good, the percentage in Bangarpet is least and the highest is registered in Srinivasapur taluk. The pass percentage of the district in PUC is lesser compared to SSLC results and Mulabagilu taluk has the least pass percentage in PUC.

4.10 Post Secondary Education

Pre University Education

Pre University education is a bridge between Secondary and Higher education. After completing two years of Pre University education one can avail opportunity to take up any other general education, medical, engineering, agriculture or other higher education. Thus PU education is very important, as it creates the future professional life of the students. PU classes are generally held in Junior Colleges and Degree Colleges.

PU education is a significant phase of education between school and higher education and thus it is considered as very important. The Pre University Education Board has been established under educational sector separately to look after PU education. This helps in monitoring the structure of PU education, planning, implementation and other activities. The role of Government in PU education is also significant. The number of girls is more

in government PU colleges. This indicates the requirement of increasing the number of colleges in the future. NABARD-RIDF and development programme funds are being utilized to meet the necessities of basic infrastructure of these PU colleges. Identifying the taluks with low results, the Department is organizing introductory programmes to increase the knowledge level of the lecturers and obtain better results. In the future, PU education will become high school level education, as per the State and National guidelines.

There were 84 Pre-University Colleges in Kolar district in the year 2011-12. Table below shows the number of PU colleges and students. Accordingly, the number of PU colleges is more in Kolar and Bangarpet taluks and the number of students is more in Bangarpet taluk.

Table 29. Details of enrolment of PU education

Taluk	Colleges	Boys	Girls	Total
Srinivasapur	16	1952	2427	4379
Kolar	22	3045	3815	6860
Malur	15	1674	1811	3485
Bangarpet	21	4560	4880	9440
Mulabagilu	12	1925	1911	3836
Total	86	13078	14844	27922

Source: Overview of the district statistics, Kolar 2011-12

The gross enrolment in the PU Colleges in the district during the year 2011 was 27922, out of which the proportion of boys was 46.84%, and that of girls was 53.16%. This shows that the enrolment rate of boys is less compared to girls.

There has been significant change in enrolment rates at PU education level during the year 2011-12. The demand for PU education is directly related with the pass percentage of students in 10th

standard public examinations. By the end of the year 2010, the pass percentage of the district in 10th standard was 57.83%. The pass percentage after 2011 has registered a steep increase with 81.46%. The enrolment rate to PU education can be improved if efforts are made to provide proper guidance and counselling to the students who pass 10th standard. During the year 1966, the Education Commission had limited the enrolment rate to Arts courses to 30-35%. Accordingly, the percentage of enrolment during the year 2011-12 for Arts courses in the district is registered at 34%. There has been no significant change in PU level. This has led to decrease in enrolment for science course. The demand for professional science courses is more. But generally there will be no pressure of demand for Arts and Commerce courses. But in Kolar district 39% of the students have enrolled for Commerce. The percentage of enrolment in science category is 27%. It is noticed that due to demand for professional courses, enrolment rate for science courses is decreasing. The PU level science courses will be the foundation to contribute teachers for high schools in the future. Thus PU science courses are considered as kindergarten, for people who become high school teachers in the future. The post graduation and research courses are foundation for creation of scientists in the district. In order to identify the suitable courses as per demand after completion of PU education and continue them, there is a need to increase the science category.

Graduate Education

The First Grade College in Kolar was commenced in the year 1948, as

intermediate college. In the year 1961 it was upgraded to First Grade College level. There were 224 students at that time. The courses imparted included History, Economics and Philosophy under Arts; Physics, Chemistry and Mathematics (PCM) under Science along with Sanskrit, Kannada, English, Telugu, Tamil, Urdu and other languages. When PU education commenced here during the year 1957-58, History, Economics and Commerce; Chemistry, Botany and Zoology subjects were introduced as optional subjects. There were 370 students during the year 1960-61, out of which 90 students were studying in Arts and 280 in Science subjects. There were only 19 lecturers. The first batch of students for BA, BSc degree courses offered by Mysuru University appeared for the exams in the year 1964. By the year 1967 there were 980 students out of which 141 (106 boys, 35 girls) were in PU Arts, 343 (302 boys, 41 girls) in PU Science and 94 (75 boys, 19 girls) in Arts subjects and 330 (283 boys, 47 girls) were studying in Degree science category. During the same year there were 31 lecturers, four demonstrators along with one principal. There was educational opportunity here till the year 1984. The institution was divided during 1984 and a First Grade College for girls was opened in Kolar was established separately. Karnataka State's well known poet Thi. Nam Srikantaiah has also served here as a Principal during 1950's. By the year 2004 August, 1888 students were studying here. The Government First Grade College for girls is functioning in Kolar. In the remaining places aided and unaided first grade colleges are functioning. The details of general graduate colleges in the district are as follows.

Table 30. First Grade Degree colleges in Kolar

Taluk	Colleges	Boys	Girls	Total
Srinivasapur	1	707	484	1191
Kolar	4	2115	2739	4854
Malur	1	1073	1121	2194
Bangarpet	4	1642	1668	3310
Mulabagilu	1	1112	458	1570
Total	11	6649	6470	11903

There were 7 general degree colleges in the district during the year 2007-08, which increased to 11 in the year 2011-12, out of which one is unaided college and most of the colleges are located in Bangarpet and Kolar taluks. The enrolment rate of degree courses are noticed to be increasing constantly, with 11903 students enrolling into various degree courses by the year 2011-12.

Professional Education

With a view of developing technical education, the government commenced the K.G.F. School of Mines under the second five year plan. As per the orders of the Government of India, The School of Mines Polytechnic College was commenced in the year 1957, at Urgaon in K.G.F., with a view of providing technical education in mining technology. Later it was shifted to Coromandel. Three year mining and mines surveying diploma course was offered from this institution. Admission was provided to 40 students in the beginning. A similar course was also being offered at the Sri Jayachamarajendra Polytechnic College in Bengaluru. But it was cancelled in the year 1967-68 and hence the admission limit at the K.G.F mines polytechnic was

increased to 60 seats. As the demand for mining course decreased, in the year 1996, Community Polytechnic College was commenced here under the Government of India's, Ministry of Human Resource. Courses like tailoring, embroidery, Kannada typing, wiring, motor rewinding and agarbathi production are being imparted here. Apart from these two year duration mechanical and computer science post graduate diploma courses are also offered.

During the year 2004-05, 40 students enrolled for mechanical and 60 students enrolled to computer courses. Admissions are provided to 120 students in the hostel run by this institute. Other unaided polytechnic institutes in the district include the Pavan Polytechnic in Kolar, Ramakrishna Polytechnic in Srinivasapur, SVIT Polytechnic in Mulabagilu, Anandamarga Polytechnic in Malur and Bharat Polytechnic in Bangarpet. In order to fulfil the desire of students who intend to pursue higher technical education there are two engineering colleges in the district. The Golden Valley Educational Trust was established in K.G.F. in the year 1986. The institution was offering various engineering courses in the year 2004-05 including mechanical, electrical and electronics, mining engineering, electronics and communications, computer science. About 1,300 students are pursuing various engineering courses here.

The first ITI College was established in the district at BEML Nagar, in the year 1958. As many as 26 ITI institutes run by Employment Exchange and Training

Department were functioning in the district during the year 2004-05, out of which 22 belonged to State Sector and 4 District sectors. Out of this five colleges were government, 7 private aided and 14 private unaided colleges. In the year 2011-12 there were 9 polytechnic colleges in the district with 3502 students' enrolment. Out of this more than half of the colleges (5) and students (1824) were in Bangarpet taluk alone. There are 2 Engineering colleges in the district in the year 2011, with a total number of 1882 students.

Medical Education

R.L Jalappa established the Devraj Urs Medical College in Kolar in the year 1986. This college is five kms away from Kolar and is recognised by the Medical Council of India (MCI). This college is also affiliated to the Rajiv Gandhi Institute of Medical Sciences. The college offers admission to 150 students every year for the five-and-a-half year MBBS course. The three year duration clinical course was commenced in the year 1997. Later post graduate courses in General Medicine, General Surgery, Pediatrics, ENT, Obstetrics and Gynaecology, Orthopedics, Ophthalmology, Dermatology, Venerology and Leprosy, Anaesthesia, Orthopedics, Radio Diagnosis were introduced. The 550 bed R.L. Jalappa Hospital and Research Centre, 330 bed Narasimharaja Hospital and 75 bed Kamala Nehru Tuberculosis and Cardiology Hospitals are attached to this college. Also one Dental College is functioning at Bangarpet taluk and there were 211 students in the year 2011-12.

Higher education

The Post Graduate College in Kolar was commenced in the year 1994, affiliated

to the Bengaluru University. It was offering post graduate courses Zoology, Kannada, Economics and Commerce in the beginning. The college offers 25 seats (five payment seats) for Zoology and 35 seats (five payment seats) for Commerce course. Kannada and Economic departments are also functioning here. Reservation is provided as per State Government rules and specifications.

Law colleges

In Kolar, the Law College was commenced the year 1996. This college which is functioning under the Directorate of Collegiate Education offers five year LLB degree, with 10 semesters, duration of six months each. Admission criteria are just a pass in PUC. Admissions are provided to 100 students every year. During the year 2004-05 there were 500 students and 26 teaching (three permanent, 23 visiting lecturers) staff.



Photo 5. ZP members visiting school in Doddashivaara, Malur

4.11 Schemes for promoting literacy levels

Various government programmes like distribution of free uniforms, text books, midday meal, formation of school development committees comprising parents and teachers, distribution of free bicycles to students whose place of residence is far from schools, etc.,

have enabled and ensured increase in attendance of students at the primary education level. Along with this the efforts to ensure participation of the community functioning of the schools also has led to generation of concern about schools among the community and create a feeling of ownership.

Overview of the government programmes to motivate primary education.

- * Distribution of uniforms for 1-10th standard students of government schools.
- * Distribution of text books to 1-10th standard students of government and aided schools.
- * Distribution of bicycles to students (except those who are staying in hostels and possess bus pass) upto 8th standards in government and aided schools.
- * Midday meals to 1-10th standard students of government schools under 'Akshara Dasoha' scheme.

4.12 Analysis of per capita educational expenditure

The below table describes the talukwise per capita educational expenditure of the district (Total expenses of the government towards primary and high school education). The analysis of per capita educational expenses has helped in analysing the resources being spent for education in various districts and taluks of the State and to assess the difference between them. As seen in the table there are more number of students in Kolar and Bangarpet taluks. But, compared to

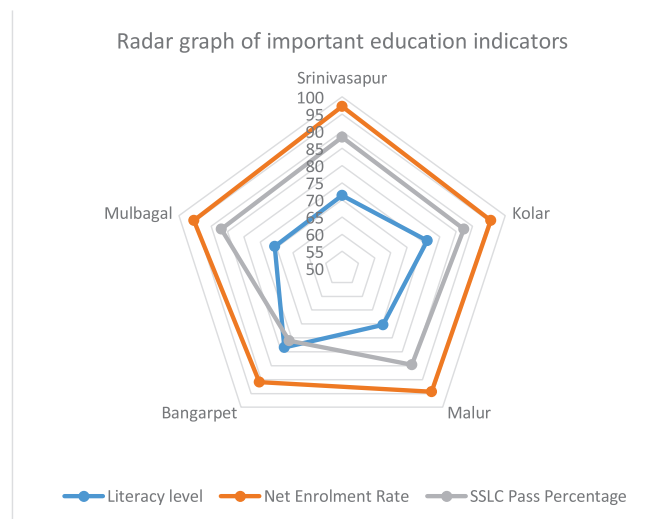
other taluks, it lags behind with respect to per capita educational expenditure.

Table 31. Talukwise percapita expenditure on Education

Taluk	Per capita educational expenditure
Srinivasapur	197.74
Kolar	124.49
Malur	170.99
Bangarpet	128.88
Mulabagilu	190.19
District	153.67

Source: Kolar Zilla Panchayat

4.13 Radar analysis of important indicators of education



Graph 6. Radar graph of important education indicators

The graph above shows the status of three important indicators of the status of education in the district: Literacy levels, net enrolment rate and SSLC pass percentages. The graph shows most taluks (except Bangarpet) perform well in net enrolment rates, whereas the performance among taluks varies significantly in literacy levels (with the lowest in Malur taluk) and in SSLC pass percentage (with the lowest in Bangarpet).

4.14 Overview of persisting educational gaps in the district

The literacy level of the district is lesser than the State average and is in the 14th place in the State. As much as 25.61% people of the district are still illiterates and thus the district has failed in reaching the National target of achieving 85% literacy rate by the year 2012. Malur taluk has remained most backward in this aspect. When we look at the primary school level attendance analysis, though the total attendance percentage has crossed 100 percent in Bangarpet taluk (including Bangarpet and K.G.F. educational block), the Net Enrolment Rate (NER) is the least in the entire district. Likewise, it is also visible that the Net Enrolment Rate has not achieved 100 per cent as per the availability of Universal Education. Though the percentage of children who have remained out of schools at the primary school level in the district is less, the average at the high school level is at 9.16% which is quite disturbing. The district has a long way to go in mainstreaming out of school children. Especially the percentage is low at the high school level at just 6.64%. When we look at the basic infrastructure availability in the schools, the lack of play grounds takes stands out.

The ratio of students who have completed 10 years of school education in the district is 40% and there is a need to increase this ratio. Malur taluk is again in the last place in this aspect. Though the pass percentage of the district in SSLC is good, the percentage in Bangarpet taluk is low. Likewise the pass percentage of the district in PUC is low when compared to the SSLC pass

percentage and Mulabagilu taluk is in the last place.

4.15 Concluding Remarks

This chapter provides an overview of the education system of in Kolar district and its impact on human development. In general, it can be said that in comparison to many other developed districts of the state, Kolar has many areas where to improve upon, within the education sector.

According to this analysis, it is seen that though the position of various taluks of the district varies in various aspects, Malur taluks has generally remained backward in several important aspects, like literacy levels, Gross Enrolment Rate, rate of out of school children, percentage of children who have completed school education, etc. Thus more importance could be given to this taluk.

Likewise, though the number of students is more in Kolar and Bangarpet taluks, they lack basic infrastructure and have poor student and teachers' ratio and per capita expenditures. Accordingly, more priority is needed to these taluks with respect to providing educational facilities.

4.16 Small Area Study: Recent SSLC Examination Performance in Kolar

This study was taken up as a result of the drastic jump in the number of Kolar District schools achieving a 100% pass percentage on the Secondary School Leaving Certificate (SSLC) examination. This state-wide exam is administered at the end of the 10th standard, to determine completion of the secondary

level of education and prospects for Pre-University College. Students in the district also participate in three rounds of preparatory tests for the SSLC exam, at the taluk, district, and state levels.

Introduction

In the 2010-11 exam cycle, Kolar District ranked last among the state of Karnataka's 30 districts with 57.81% of test takers passing the SSLC exam. By 2011-12, Kolar's rank climbed to 8th in the state with a pass rate of 81.46%. This number dropped to 79.83% in the most recent exam cycle, whereas many other districts boosted test performance, causing Kolar to drop down to 21st in the state.

In order to pass the SSLC exam, a student must receive 35% of the overall 625 marks. Students who achieve 50% or more pass second class, 60% or more pass first class, and 70% or more pass with distinction. In the 2011-12 academic year, 45 of Kolar's 287 schools, or 16%, had 100% of their SSLC exam takers pass the exam. By contrast, in 2012-13 academic year, 87 of 287 schools, or 30.3%, achieved a 100% pass percentage. The majority of these schools are concentrated in Srinivasapur taluk whereas Kolar taluk houses the greatest number of schools overall*. Additionally, 36 of 287 schools, or 13%, achieved a jump in pass percentage of 20% or more. The highest concentration of schools with a jump of 20% or more is in Bangarpet/KGF taluk (16 schools) whereas the lowest concentration occurs in Malur and Srinivasapur taluks (3 schools each).

Furthermore, among schools achieving 100% pass rates in the 2012-13 exam

cycle, 69 of 87 schools, or 79%, scored in the 35-49% range. In the 2011-12 exam cycle, these same schools had the majority of students at 52 of the 87 schools, or 60% of schools, score in the 60% and above range. This pattern indicates that while more schools were able to get every SSLC exam taker to pass the test in the 2012-13 cycle, the quality of scores declined in the time period. The declining score with which students pass the SSLC exam lends credence to the idea that schools are focusing intensely on the quantity of students who pass the exam, and not the quality of scores individual students achieve.

As seen above, the number of schools with 100% pass percentage in the district almost doubled in one exam cycle. In order to delve deeper into what accounts for the rapid improvement in test performance in Kolar, a field survey was conducted in four secondary schools across the district. Schools that achieved a 100% pass percentage in the 2012-2013 year and did not reduce test enrolment numbers in the same time period were chosen for the study. Furthermore, the schools were filtered out to have diversity in school sizes, management styles, language mediums, and regions. In addition to qualitative information derived from interviewing educators and students, the study evaluates 9th standard final exam scores for the 2012-13 SSLC exam cohort as well as state level preparatory test scores. Finally, interviews were conducted with representatives of Kolar's Deputy Director of Public Instruction (DDPI) office to get a sense of patterns in the district overall. The individual school profiles are given in the table below

Table 32. Description of schools selected for field study

School Name	School type	Recent Pass percentage	Taluk
Govt Girls Junior College	Government School	88.07	Srinivasapur
Al Ameen Urdu High School	Unaided School	52.63	Srinivasapur
Morarji Desai Residential School	Government School (Social Welfare Dept)	90.91	Kolar
Chinmaya Vidyalaya	Unaided School	100	Kolar

Opinion of district officials

Officials from the Kolar District Deputy Director of Public Instruction office provides an overview of district trends in the last four years. Kolar fell from 8th in the state of Karnataka to 21st from the 2010-11 exam cycle to the 2011-12 exam cycle. The total pass rate for 10th standard students in Kolar District dropped from 81.46% to 79.83% in this time period. While the sheer number of schools reaching a 100% pass rate in Kolar is substantial, it would appear that Kolar's performance within the state is not extraordinary.

A government official cited collective efforts in Kolar District schools to improve test scores. "It is not one single factor," he said, "It is a collective effort of administration, parent cooperation, and teacher dedication". He noted that in the last three years, education department has become more organized and committed to spending time in schools and discussing about SSLC results.

The office of the DDPI is prioritizing the tracking of school progress, having created an individual file to monitor each

student in the district. The office has also begun an intervention where individual subject experts will adopt certain high-need schools to visit frequently and build closer ties with the school Headmasters. This is an intervention intended to promote school accountability and makes teachers feel supported in their exam endeavours. Further, the district has an orientation programme for the district's new subject secondary teachers, which has helped to get the teachers on the same page for SSLC performance. The teachers were readily willing to expand school hours to squeeze in more SSLC revisions before the exam.

There are larger challenges as well in the district, which affects the overall SSLC performance in the district. Kolar being a largely rain-dependent agricultural economy, is affected drastically by insufficient rainfall since it affects the livelihoods for the bulk of Kolar's families. A closer look at the schools provides the micro-picture of these initiatives and challenges.

Govt Girls Junior College, Srinivasapur

This school is located in Srinivasapur town and its enrolment has varied from 175 to 220 in the last few years. Its pass percentage jumped from 65.91% to 88.07 in 2012-13, a raise of more than 22%. The Headmaster of this large, all-girls, urban secondary school has held her position for the last twelve years. She says her primary strategy in managing the student population is to instil the girls with self-confidence by encouraging them to coordinate and perform in all national day assemblies.

She feels this helps her students perform well on exams and more importantly, makes education in her school more comprehensive. 89% of the 2011 cohort passed the SSLC exam, generating considerable fluctuation in the pass rate over the years. The Headmaster attributes this in part to general variation in the learning aptitude of some batches compared to others. For three years the school also lacked a specialized First Language teacher, which severely impacted test performance in that subject area. Additionally, the school began using Navya Spoorti guidelines, which include questions and answers from old SSLC exams, to prepare students three years ago. These guidelines are provided to schools by the DDPI and also available online, all preparatory material is transparent and easy to access. She feels that recent efforts by the DDPI to mobilize government schools have been effective. Schools with pass rates below 50% get special attention from the department and feel a sense of competition with peer schools to improve test performance.

In this school, the entire portions of the 10th standard syllabus are covered by December of the academic year, with four unit tests and a midterm throughout the course. From January until April, teachers spend time reviewing the material and administering preparatory exams. This is the general 10th standard schedule followed by all the schools surveyed in this case study.

The school average for the SSLC state level preparatory exam was 75.7%, roughly 13 percentage points lower than the 2012-13 SSLC school average. This disparity indicates a great deal of last-minute preparation for the exam. Of

the 218 students who took the SSLC in 2012-13, 32, or 11%, earned distinction, scoring 70% or above.

As government schools are open to all students, they often face the challenge of educating a wide range of students. The Headmaster notes that many school resources are devoted to differentiated-learning and remedial education for slow learners. The school has designed a bridge course to provide specialized coaching lessons to students before the academic year begins. This also helps norm new students to the school. Furthermore, as test time approaches, the school extends hours until 6 pm to provide extra time for review. These interventions make the government school uniquely dedicated to student performance.

Of the four 10th standard students interviewed, all four take private tuitions outside of school. Two students have just started tuitions for 10th standard while the other two were also taking tuitions in the 9th standard. They explained that many students in the school take advantage of extracurricular tuitions before and after school, while the Headmaster did not encourage this practice. All four shared the sentiment that this school year had more serious implications and they were making efforts to prepare for the SSLC all year and attend school consistently.

A group interview with several staff teachers revealed that in this school, as in many urban government schools, teachers face a host of non-teaching responsibilities, which occupy their attention. In addition to administrative tasks, teachers have 60 to 70 students in each class and feel pressured by the 40-minute class period. Teachers also

shared the philosophy that working in such a big school, with limited resources, encourages focusing on the quantity of students who pass the SSLC rather than the quality of test performance. Teachers feel pressured by representatives of the education department to produce quantitative results, generating a common pattern of “teaching to the test” in this school. Indeed, a look at individual student scores shows that the majority of students who pass are scoring in the 35-50% range⁶.

In sum, the challenges faced in the school are common to many large, government schools. Teachers are overburdened, face large class sizes, inadequate infrastructural facilities, and do not receive much support from the parents’ community. Paired with these internal factors, teachers and administrators must respond to the pressures from education officials to produce results. Competition with neighbouring schools, and poor motivation up to the 9th standard show that students and teachers will have to employ rushed, haphazard study efforts in the SSLC exam year. While this may result in teaching that is primarily oriented towards examinations with low academic standards, resulting in greater quantity of students who pass the examinations, but largely unequipped have deeper insights in the subjects that becomes vital in post-secondary school education. Thus, such examination oriented preparation may compromise the quality of education resulting in rote learning and memorization that replaces critical thinking ability, ultimately hindering students’ prospects for higher education.

Al-Ameen Urdu High School, Srinivaspur

This school is located in Srinivaspur town. The school’s medium of instruction is Urdu and English. The school is an un-aided private school whose SSLC enrolment is low. The enrolment increase from 19 in 2011 to 21 in 2012. Its pass percentage increased from 52.63% to 100% in 2012-13.

Having experienced an exceptionally large jump in the pass rate between the 2011-12 and 2012-13 exam cycle, Al-Ameen High School was a special case in the small area study. While the class size is small, the strength has been growing gradually over time. This is a Muslim private school with four full-time teachers. The In-charge Headmaster, has been working in Al-Ameen for 10 years now and noted that there are no admission standards for children to attend this school. According to her, unlike some other private schools, Al-Ameen welcomes any student who is interested to learn in the school’s religious environment. Monthly school fees are only Rs.100 per student; management contributions and donations make up school costs that fees do not cover. Additionally, she noted that the school pays teachers only 25-50% of what teachers in government schools earn in order to keep fees low for students.

Two of the teachers are young men who have just joined at the start of this academic year. They offered that while the position does not pay much, they feel strongly they should contribute to the education and development of youth within their community. They feel that the public education system in Srinivaspur

does not provide sufficient opportunity to minority students, like Muslims and Christians. The teachers noted that the community-at-large faces economic problems, which sometimes compromise student attendance. Male students, in particular, are often expected to work to contribute to family income and their education is placed on the back burner. They hope to make up for this as male role models contributing their own guidance and leadership to the Muslim community of Srinivasapur.

One advantage of the small school size and unaided management is that teachers feel they can focus their attention primarily on instruction and spend all school time with the students. The teachers and students provided compatible information that most 10th standard students in the school engage in private tuitions. One of the four students interviewed is not presently taking tuitions but has an elder sister who is a teacher and works with him daily to review subjects. Two of the teachers in the schools are themselves engaged in private tuitions in math and science to students from several different schools in the evenings.

The 2012-13 SSLC exam cohort also performed well on the preparatory exam and in their 9th standard final exams, indicating consistent academic strength. Only one student failed the SSLC preparatory exam and others scored between 35% and 60%. In 9th standard, all students performed above 37% and 11 out of 21 students achieved 60% or higher marks.

The combination of a tight-knit community, the close attention of teachers to students, and the contribution of

private tuitions all seem to be improving test scores at Al-Ameen High School. The Headmaster also mentioned that programmes from the department of education and initiatives like the Navya Spoorti helped her school to prepare students well for the exam.

Morarji Desai Residential School, Kolar

This is a rural residential Kannada medium school run by the department of Social Welfare. Its SSLC enrolment has decreased from 29 to 15 in 2012-13 and its pass percentage has increased from 90.91% to 100% in 2012-13.

The pass rate in Murarji Desai Residential School has been steadily improving over the last three years. The rate grew from 88.8% in the 2010-11 academic year to 90.9% in 2011-12 and reached 100% in 2012-13. This residential school is designed to accommodate minority students, usually Muslim, Christian, Buddhist, and Other Backwards Caste (OBC) students, and place them in an immersive, supportive academic environment.

The principal of this school is also in-charge of another Morarji Desai school in Kolar taluk, which takes only Scheduled Caste (SC) and Scheduled Tribe (ST) students. In both schools, students must pass an entrance exam following the 5th standard and are admitted based on merit to study from 6th to 10th standard in the residential schools. The principal explained that students admitted to the school tend to come from “socially, politically, and economically backward families.” Once admitted, the Social Welfare Department funds tuition, room

and board for these students for all five years.

The school takes 50 new students each year, of which 38 must be minorities and 12 are OBC students to adhere with the guidelines of the department. There are a total of nine full-time teachers in the school, three of whom are minorities themselves. The principal explained that teachers in this school earn more than government school teachers because they are expected to remain on the school premises at all times and tend to students in the mornings and evenings as well.

One major challenge the school faces is retention. The SSLC cohort has reduced from 36 students in the 2010-11 exam cycle to 15 students in the 2012-13 exam cycle. The school's mathematics teacher explained that many students feel homesick living away from their families and often drop out to go back home. In her opinion, families add pressure especially to Muslim students to return home and contribute to family income. The school is working on raising awareness among minority communities about the value of education and the opportunity to study in a Morarji Desai school. The principal is from a poor socioeconomic background as well and feels strongly about serving communities similar to his own.

Because students are expected to remain in the school, they do not participate in private tuitions. One male 10th standard student, Sheik Sabir, indicated that he participated in special classes for every subject for two hours in the mornings and three hours in the evenings. Manjula, a female 10th standard student, has the same timetable

for special classes wherein the same school teachers teach these classes.

In addition to achieving a school-wide pass rate of 100%, each of Murarji Desai's 10th standard students in the 2012-13 exam cohort performed well on the district preparatory exam. Seven of 15 students achieved scores of 50% or higher and the remaining eight students achieved scores of 60% or higher. The principal was ready for our visit with a written list of factors that make Morarji Desai schools unique and academically successful. In addition to the immersive academic environment and peer support system cultivated at Morarji Desai school, the school boasts a great deal of individual attention to high need students and encourages debates and seminars for students to gain confidence with public speaking. Furthermore, the school references SSLC exams for the last five years in preparation for the 10th standard exam cycle. The school's principal made clear that old exams are a useful learning tool for students.

Chinmaya Vidyalaya, Kolar

This school is located in Chokkahalli of Kolar taluk. It is an un-aided English and Kannada medium school where over the last three years, enrolment has varied between 190 to 200. They have been able to retain 100% pass percentage since 2006. This unaided school prides itself on exceptional academic performance and its unique value-based educational philosophy. Since its inception in 1992-3 with only seven SSLC students, the school's enrolment has been growing gradually. In addition to achieving a 100% pass rate in 2012-13, 77 or 198 students passed the SSLC exam with

distinction, achieving individual scores of 70% or higher.

Chinmaya Vidyalaya's principal has worked in the school for 20 years, since the school's inception, and has been the principal for the last 13 years. He cites good school management and teacher-parent cooperation for the school's success. The school does not have admissions standards, but accepts students from a large pool of applicants on a first come, first serve basis. The school charges yearly fees ranging from Rs. 10,000 to 15,000 to students, with the higher fees assigned to 10th standard students, as the SSLC year requires more resources.

In addition to school fees, the school receives contributions from the Chinmaya Trust to fund capital improvements; fees are designated for teacher salaries and building maintenance. The principal feels that in the last two years, officials from the department of education have been more active about visiting and following up with schools. The DDPI holds what he referred to as "monthly motivational meetings" with school administrators to discuss school priorities.

On the SSLC state preparatory round of exams, one section of Chinmaya Vidyalaya students produced very strong results. Of fifty students in the section, only 13 students scored below 70% and the lowest score was 38.88%, which is still passing. This indicates that not a lot of last-minute preparation is necessary between the preparatory exam and the actual SSLC exam. The lowest score on

the actual SSLC exam was 45.76%, which is over 10 percentage points higher than the pass requirement.

In this school, test performance did not seem to be as big of a priority as in the other schools, or perhaps as big of a challenge. Students at every grade level are expected to complete and log one hour of community service per day. The school also offers an array of extracurricular activities including singing and table tennis, which most students partake in. Both 10th standard students interviewed at this school were active in extracurricular activities and did not participate in private tuitions. Both students were also exceptionally conversant in English and confident speaking with people of all age groups. Given the strong track record of test performance in the school, it seems that the school has been able to move past "teaching to the test" to generate a more well-rounded educational environment. Poojita, a female 10th standard student at the Chinmaya Vidyalaya School, said she feels the school is a "good environment to build up her character and study habits."

What Chinmaya Vidyalaya does have in common with other schools in Kolar District is the use of Navya Spoorti test preparation guidelines. The school's principal said they have been using old exam materials for about ten years now. All information is transparent and easily accessible for schools by the Deputy Department of Public Instruction (DDPI).

Conclusion

Of late, SSLC scores in Kolar are not exceptional, as districts across the state

have been improving test performance. However, spending time in Kolar District's schools revealed that department officials have made themselves visible and their desire to see strong quantitative results from every school. For every school other than Chinmaya Vidyalaya, where SSLC pass percentage seems to be an obstacle to overcome, test performance being a high priority. 10th standard students across the district expressed that their current year would be more rigorous and meaningful for educational prospects than previous years.

One teacher in Govt Girls Junior College noted that teachers are encouraged to pass as many students as possible, and that SSLC performance was about "quantity not quality." Similarly, the Headmaster at the Al-Ameen school mentioned that in one batch, about six or seven students, roughly one-third of a typical batch, enter the 10th standard with very poor literacy skills. Yet the school is producing a 100% pass percentage. Undoubtedly, this trend is new to the Al-Ameen school and each batch's aptitude will vary from year to year. Regardless, it is worth contemplating how schools open to all types of students, with a range of intellectual ability, get students to a proficiency level in just one year.

Thus, together with new interventions and high priorities to SSLC performance, the invigilation of SSLC exams must also be prioritized and well monitored across

the district to ensure that students' test performance is independent and fair.

Initiatives like **Navya Spoorti** provide teachers and students with useful study material and allow students to prepare well for exams delivered in a similar format. For districts like Kolar, where achievements of good performance in school education haven't been regular, boost in SSLC performance provides the inspiration as well as drive for better performance. The enthusiasm of the education administration in driving these continuous yearlong initiatives provide a good starting point for building on the successes in examination performance. The challenge now is to cultivate and identify learning outcomes outside of examination performance. That is, to focus on individual school factors which foster learning through personal development that promote critical thinking and extracurricular engagement together with priority for examination. This small area study provides good examples of schools where such holistic learning is necessary as well as schools where character building and non-academic learning activities are also implemented. The case studies of the four schools show that there is requirement as well as feasibility of delivering this type of quality education, even at a large scale and relatively low cost, where the pressures of examination performance alone doesn't become the driving force in secondary education.

* * * *

Health and Nutrition

5.1 Introduction

Economic development of a nation depends upon the individual health and knowledge of its citizens. Thus, health is used as an important indicator to assess the level of human development of a region. In analysing the status of health of a region, different systemic aspects like the demography of the region, reproductive and child health status, family welfare and levels of communicable diseases and status of infrastructure including human resources are quantitatively assessed. This analysis provides the understanding on the status of people's health, projected issues related to health and their possible impacts on human development of the particular region.

Within health, the status of public health demands the involvement of many stakeholders to achieve the status of good health for the entire community of citizens in the region. Given the situation of India, with its complex societal system, patriarchal families, lack of education, regional and urban-rural disparities, having a public health system that guarantees equitable access to quality health care is an immense challenge.

Karnataka is one of the better performing states of India in terms of attaining good health status of the people, and has taken many initiatives in building the skilled human resources and infrastructure in the health sector. However, even with these initiatives, regional disparities in health is a reality in Karnataka (as expressed in the Karnataka State Health Policy, 2004) with the northern districts of the state performing poorly in comparison to the southern districts. Similarly, between the

north and southern districts, there are intra-regional variations as well.

The table below presents Kolar's performance in human development as well as its health dimension based on the Karnataka State Human Development report, 2005. It shows that Kolar's overall human development status is average in comparison to other districts in Karnataka. The district was ranked at the 15th position in 1991 and 17th in 2001 in HDI, according to the Human Development Report of Karnataka in 2005. However, the district was ranked 13, in both these reports, with respect to its health status.

The Karnataka State Health Policy of 2004 classified the district as 'average performing' and placed it below districts like Chamarajanagar and Tumkur, 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, these reports indicate that there is vast scope to improve the condition of health in the district, thereby raise its human development further.

Table 33. Performance of Kolar in health

Year	Health			HDI			Composite Health Index (Karnataka State Health Policy, 2004)	
	Kolar		Karnataka	Kolar		Karnataka	Kolar	
	Index	Rank	Index	Index	Rank	Index	Index	Rank
1991	0.617	13	0.618	0.522	15	0.541	NA	NA
2001	0.653	13	0.680	0.625	17	0.650	71.92	16

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

For a long time issues like Japanese encephalitis (JE), mosquito borne viral disease affected the children of the district and during 80's it took away the life of many children and left many people being disabled⁵. Due to sustained effort by the government agencies and the trained health personnel of the district, JE infection reports have reduced to a considerable extent in Kolar. (see box item for details).

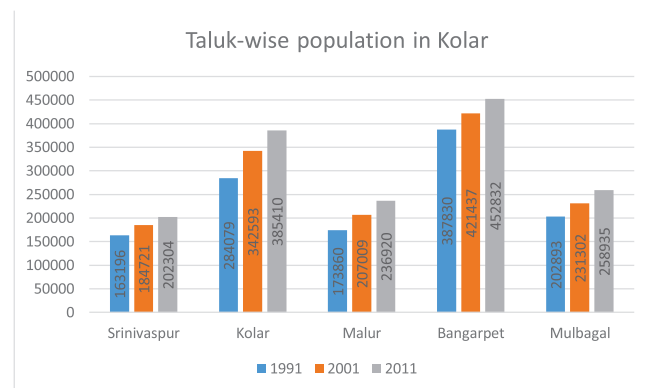
Another important health issue in Kolar is fluorosis. Fluorosis is a crippling and painful disease caused due to excess accumulation of fluoride in the body. It creates dental and skeletal problems and has resulted in permanent disability among many children and adults in the district. More proactive steps and multi-dimensional approach is required to solve this issue. Another aspect affecting the healthy life of Kolar people is, due to exploitation of gold mining for a long time it has led people to face some of the complications like respiratory problems, skin allergy etc. These are some of the major health issues seen in Kolar over the period of almost two decades.

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

5 Kolar is considered as a hotbed of JE infections in India (Prasad SR, George S, and Gupta NP. "Studies on an Outbreak of Japanese Encephalitis in Kolar District, Karnataka State in 1977-78." The Indian journal of medical research 75 (1982): 1-6. Print., Isalkar, Umesh, and Durgesh Nandan Jha. "First Indigenous Japanese Encephalitis Vaccine Awaits Formal Launch." The Times of India 5 Sept. 2013: n. pag. Print.)

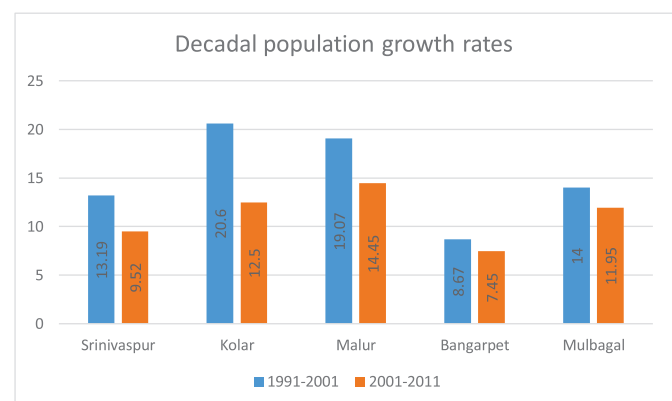
5.2 Demography of Kolar

According to the census 2011, the overall population of Kolar is 15,36,401, an increase of about 1.5 lakhs. Bangarpet is the most populous taluk by having 29% of the district population and 534 people per square km. Kolar is the second highest populated taluk which constitutes 25% of the district population with 486 people per sq km. Mulbagal constitutes 17%, Malur 15%, Srinivasapur 13% of the district population. Srinivasapur being geographically the largest taluk in Kolar, has the least population in the district and has the lowest population density of 235 people per sq.km.



Graph 7. Population trends of Kolar

Decadal growth rates



Graph 8. Decadal growth rates in Kolar

The figure above shows the decadal population growth rates in Kolar, between 1991-2001 and 2001-2011. It shows decreasing trends in decadal growth rates. Between 2001 and 2011, the overall population of the district increased from 13,87,062 to 15,36,401, a decadal population growth rate of 10.77%. The decadal rate of population growth decreased from 14.45% (1991-2001) to 10.77% (2001-2011). Within the district Malur followed by Kolar recorded the highest decadal population growth rates. Surprisingly, Bangarpet taluk witnessed the lowest decadal population growth rates in the district.

Rural Urban populations

In 2011, 69% of Kolar district population lives in rural areas and the remaining 31% in the urban areas where as in 2001, 71% of total population lived in rural areas. The proportion of rural population in Kolar is higher than the average rural population proportion of the state (61.33% in 2011). Further, over the period of 10 years there was just a 2% of raise in proportion of urban population in the district in comparison to the state level, where this proportion increased by 4.68%. Decadal increase in rural population of the district was 7.5% whereas it was 18.68% in the case of urban areas. The reasons for this large decadal growth rate in urban areas could be migration from rural to urban areas, migration from other states (since Kolar borders both Andhra Pradesh and Tamil Nadu).

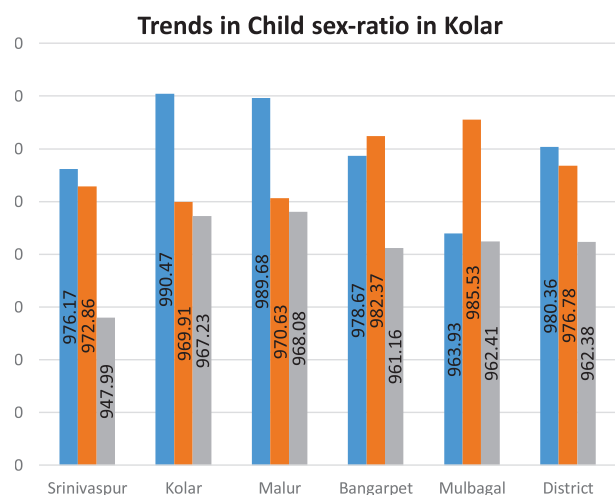
30.32% of the population belongs to SC community and 5.13% belongs to ST community. The SC population proportion in the district is higher than

the state average of 17.15% whereas the ST population proportion is lower than the state average of 6.95%. 70.3% of the SC population and 91.5% of the ST population in the district resides in rural areas.

Sex-ratio

The share of male and female population in the district is 51% and 49% respectively. According to census 2011, Sex-ratio (number of female population per 1000 male population) in Kolar district is 978.88 and is better than the state average (972) and the national average (943). Since 1991, Malur has the lowest sex-ratio among all other taluks of the district, and alarmingly, it has reduced from 964.9 (in 1991) to 956.67 (in 2011). Highest sex-ratio in the district is found in Bangarpet taluk in 2011 (989.41).

Over the period of three decades child sex-ratio has shown general decreasing trends in all taluks of the district. Amongst the taluks of the district, Srinivaspur has the largest fall in child sex-ratio from 1991 to 2011 (976 to 948). Kolar and Malur are the other Taluk which has a considerable fall in child sex-ratio.

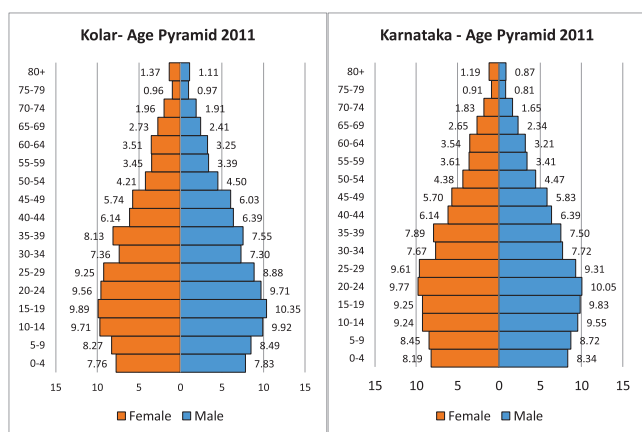


Graph 9. Trends in child sex-ratio in Kolar

During this period, India's child sex-ratio has decreased from 976 (in 1991) to 914 (in 2011) whereas the situation improved in Karnataka from 872.62 in 1991 to 949.72 in 2011. While Kolar's child sex-ratio is better than the state average, its decreasing trend is alarming.

Population dynamics

The figures below present the population pyramids of Kolar and Karnataka for the year 2011. Population pyramids show the distribution of the population among different age groups and are extensively used to understand the dependency ratio.



Graph 10. Age Pyramids of Kolar & Karnataka-2011

From the figures, it is evident that the age structure of Kolar's population is comparable to that of Karnataka. In both Kolar and Karnataka the proportion of 0 – 14 population is about 26%. Working age population is also roughly the same in the district as that of the state (67.3%). The share of male and female population has almost been equal in all age group except in the age group of 80 and above age.

Table 34. Comparison in dependency ratio

Dependency Ratio	1991	2001	2011
Kolar	39.61	59.15	48.72
Karnataka	38.71	58.28	47.95
India	71.05	62.84	57.31

Source: Census of India, 1991, 2001, 2011

The dependency ratio of Kolar in 2011 was is 48.72. i.e. for every 100 persons in the working population age group (15-64), there are approximately 48.72 persons dependent on them. In this aspect, the population structure of Kolar is similar to that of the state.

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

1. The demography of the district shows that the majority of the population is concentrated in rural areas and SC and ST population proportions being higher in comparison to other social categories.
2. The population structure of the district resembles that of the state, although the decreasing trends in population sex-ratio and child sex-ratio in the district have to be considered seriously, specifically Malur and Srinivasapur show alarming trends.

5.3 Maternal health

Women population constitutes almost half of the total population. Women also face unique health problems, related to their nutrition, reproductive health and sanitation related issues, that not only affect their personal health, but also affects the overall population dynamics of the region. Hence the public healthcare system should prioritize on the improving the overall standards of health of women and the girl child.

However, the task of improving their health status is difficult, especially in countries like India where women face a myriad of social and economic hurdles. The patriarchal nature of our society, low status of women in socio-economic empowerment and decision making related to issues like marriage, use of contraceptives, spacing between child births and the existence of social evils like child marriage system, sexual abuse, female foeticide and infanticide and preferential treatment for the boy child, are all difficult issues, the solutions to which require sustained and prioritized efforts, not just in provision of infrastructure, personnel and equipment, but also in the transformation of societal attitudes and behavioural change.

India is committed to achieve the Millennium Development Goals particularly with respect to maternal and child health. With the introduction of NRHM in the year 2005) further emphasis on reducing the maternal and infant mortality rate has been given.

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 Kolar. 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. Kolar's institutional

deliveries have increased significantly in the last decade and all three process indicators listed in the table show high achievement levels.

Table 35. Comparison of selected indicators of maternal health

Particulars	Kolar			Karnataka		
	DLHS 2	DLHS 3	2011*	DLHS 2	DLHS 3	2011**
Institutional deliveries (%)	53.2	62.2	97.79	58	65	97.10
At least 3 ANC visits (%)	86.9	92.3	97.69	78.6	81.3	91.98
Mothers registered in the 1 st trimester (%)	71.6	87.2	-	67.8	71.8	62.25

Sources*: District Health Office, Kolar

** : Karnataka state PIP, NRHM, 2013-14

Institutional deliveries

Skilled attendance at delivery is an important factor to reduce maternal mortality. In addition to professional attention, it is important that mothers deliver their babies in an appropriate setting, where lifesaving equipment and hygienic conditions are maintained to reduce the risk of complications that may cause death or illness to mother and child. Further, 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.

Table 36. Institutional deliveries in Kolar in 2011

Taluk	Total deliveries	% of Deliveries in different categories			
		Institutional deliveries	Govt Hospitals	Private Hospitals	Home
Srinivasapur	2559	98.63	95.66	2.96	1.36
Kolar	8556	97.93	55.60	42.11	2.26
Malur	3130	97.41	70.31	27.09	2.58
Bangarpet	6699	97.38	73.24	24.69	2.06
Mulbagal	3902	97.97	83.16	14.24	2.58
District	24846	97.79	70.66	27.11	2.20

Source: DHO office, Kolar

Out of 97.79% of institutional deliveries, 70.66% of deliveries occurred in government facilities, whereas 27% in Private Hospitals. 2.2% of deliveries (out of total deliveries) were home deliveries in Kolar district. 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.

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, the ratio of pregnant women receiving at least 3 ANC check-ups is very high. This process indicator implies that the probability of early preventable signs of complications during pregnancies is very high. The number of pregnant women identified with Anaemia is quite high in the district,

with more than 3/4ths of the pregnant women diagnosed to be suffering from it. This ratio is highest in Kolar and Bangarpet taluks of the district. Mulbagal although has the least proportion of pregnant women with anaemia, still has roughly half of the pregnant women suffering from it.

Table 37. Details of ANC in Kolar

Taluk	Pregnant women registered for ANC*	% receiving at least 3 ANC visits*	% of women with Anaemia**
Srinivasapur	3324	99.73	78.51
Kolar	6390	98.59	85.45
Malur	3960	88.66	63.33
Bangarpet	8005	99.19	85.24
Mulbagal	5128	99.86	50.32
District	26807	97.69	78.13

Source: *: District Health Office, Kolar, **: HDD, Dept of Planning, GoK

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. Except in a small number of cases, maternal mortality can be prevented by regular check-ups and follow ups, provision of efficient emergency obstetric care and clean hygienic and sanitary practices. Thus, 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. However, according to the United Nations Report 2012, maternal mortality ratio in

developing countries is 240 per 100,000 births versus 16 per 100,000 in developed countries. There are large disparities between countries, with few nations having extremely high maternal mortality ratios of 1000 or more per 100,000 live births. There are also large disparities within countries, between people with high and low income and between people living in rural and urban areas. The high rates of maternal mortality and the large inter and intra-regional disparities denote the limitations of the public health care mechanisms to provide quality health care to the communities they serve.

MMR in India in the period 2007 to 2009 was 212 and in Karnataka during the same period, it was 178,⁶. The table below presents the taluk-wise MMR of Kolar in 2011.

Table 38. Taluk-wise MMR in Kolar

Taluk	MMR ⁷
Srinivasapur	80
Kolar	96
Malur	196
Bangarpet	153
Mulbagal	211
District	140

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

Maternal Mortality rate of Kolar is 140 and among all Taluks Mulbagal recorded the highest MMR of 211, much higher than the state average of 178. Malur is the second highest in the MMR (196) with Srinivasapur and Kolar taluks recording

the MMRs below the NRHM target of 100.

Health condition of Schedule Caste communities - A case study of Avani village, Mulbagal

Avani village consists of people belong to different castes i.e, SC, Golla, Banajiga and Gowda. Among SCs there are three sub caste i.e., Adi Karnataka, Adi Dravida and Bovi communities. The socio-economic condition of SC community was poorer in comparison to other social groups. Their major source of employment is - wage labour in agriculture and stone quarries. Migration to Bengaluru or Andhra Pradesh is high, especially among the younger generation

In most SC households, every member of the family goes for wage labour. Due to poverty, pregnant women and young mothers hardly get enough rest and nutritious food pushing both women and their children in the trap of anaemia and malnourishment. Early marriage is prevalent among all three SC communities. Open defecation is common. During field visits, communities expressed that they didn't feel the need for toilet (or the importance of toilet) and were unaware of the health problems connected to open defecation.

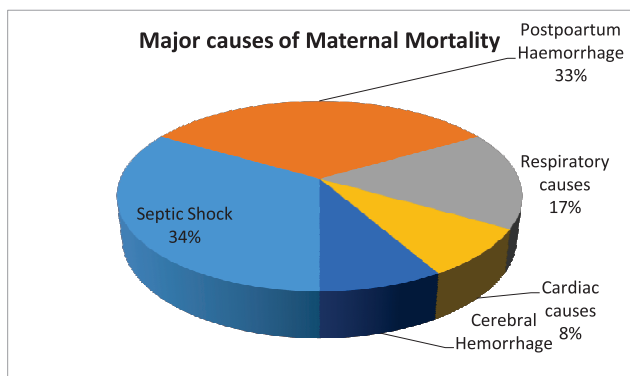
In spite of migration, most deliveries are institutional (either in Kolar or Andhra Pradesh) and subsequently mothers had received financial benefits of the institutional delivery. ASHA's are playing an important role in bringing women for regular ANC check-ups, hospital for delivery as well helping them to get the benefits of institutional deliveries.

As shown in the figure below, major causes of MMR are Septic shock or infection, Postpartum Haemorrhage, respiratory and cardiac causes which led to 16 maternal deaths in the year 2011-12 in Kolar. Family members and the local communities play an important role in early detection of complications, provision of suitable care, nutritious food and hygienic environments, thus avoiding preventable causes of maternal mortality. Early identification of the

6 Family Welfare Statistics in India 2011, Ministry of Health and Family Welfare, GoI

7 The MMR rates provided by the DHO's office in Kolar were not reliable and hence, based on the suggestions of HDD, Dept of Planning, the estimates from the following publication were taken: Ram, U., Jha, P., Ram, F., Kumar, K., Awasthi, S., Shet, A., Kumar, R. (2013). Neonatal, 1-59 month, and under-5 mortality in 597 Indian districts, 2001 to 2012: estimates from national demographic and mortality surveys. The Lancet Global Health, 1(4)

complications can be made only when, the grassroots service providers like ANM and ASHA, family and community members are fully aware of the possible complications women undergo during pregnancy as well post pregnancy.

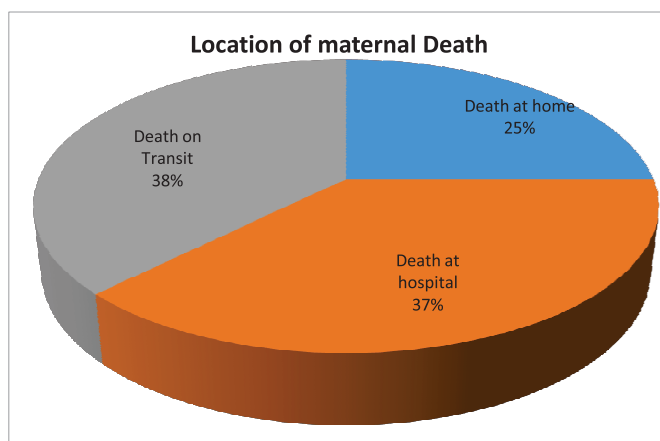


Graph 11. Major causes of maternal mortality in Kolar (2011)

The next figure provides the locations of maternal deaths in the district. Among the total maternal deaths, 6 deaths have occurred during the transit and 3 deaths at home/ during home delivery and 1 post-delivery (within 42 days of delivery) death occurred at home. The remaining deaths occurred in the health institutions. Out of the 16 maternal mortality cases, 6 young born babies were alive, 3 infants died during abortion and the status of remaining children was not available.



Photo 6. Nutritious food being provided to mothers in Anganwadi



Graph 12. Location of maternal deaths in Kolar (2011)

The analysis of maternal mortality in Kolar shows that the district hasn't been able to reduce MMR below 100. In fact, the district is way behind this target and it will take considerable efforts from the district authorities to bring down MMR in the district, especially in the taluks of Mulbagal and Malur.. The analysis of locations of the maternal deaths shows that a significant amount of deaths happened wherein suitable emergency medical care wasn't available. While process indicators provided by the department display satisfactory values, the quality of service provided, effectiveness of care and other related process indicators are parameters that the district administration has to focus to be able to bring down the rates of MMR in the district.

5.4 Child health

The future of any nation depends upon the health of its children. Further, the analysis of population pyramid of Karnataka and Kolar shows that more than a quarter of the entire population in the state as well as the district is under the age of 14. These facts provide additional emphasis

on the status of health of the children and its future impact on overall human development of the region. To guarantee good health of children, the government implements various initiatives related to child immunization, nutrition and overall medical care. As a result of the increased emphasis on indicators of child health, infant and child deaths have shown a steep decline in the country and in particular, in Karnataka as well.

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 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. NRHM had set the ambitious goal of bringing down IMR

under 30 in all regions of India before 2012. The table below presents the infant and child mortality of the taluks of Kolar district. From this table, it is evident that Mulbagal and Srinivasapur have to make considerable efforts to reach the national targets of IMR.

Table 39. Taluk-wise status of IMR and CMR in Kolar (2011)

Taluk	IMR	CMR
Srinivasapur	37	62
Kolar	18	23
Malur	30	36
Bangarpet	30	37
Mulbagal	51	63
District	34	39

Source: Ram U, Jha P, Ram F, et al(2013) and SRS, 2011

Further, a worrying feature of this table is that, CMR (under 5 mortality rate) is much higher in Srinivasapur and Mulbagal, pointing out to possible systemic issues negatively affecting child health in these taluks. As discussed before, Kolar has endemic health problems like JE and fluorosis which may have significant impact on the health conditions of the child population in these taluks.

Immunization

In 1985, the Universal Immunization Programme (UIP) was launched in India to protect all infants (0-12 months) against six serious but preventable diseases namely, Tuberculosis, Diphtheria, Pertussis (Whooping Cough), Tetanus, Poliomyelitis (polio), and Measles. NRHM has continued this high priority towards the child immunization by carrying out frequent and regular immunization drives. Due to the constant effort over

period of more than two decades, the immunization rate has been drastically increased and the child deaths due to the above mentioned diseases is also reduced.



Photo 7. Pulse Polio drive in Kolar

Full immunization includes immunization/vaccination provided against Tuberculosis, Diphtheria, Pertussis, Tetanus, Poliomyelitis and Measles. Rate of full immunization provides indication of the efficiency of immunization in the district. According to the DLHS survey, high % of child immunization was achieved in Bengaluru Rural (90.3%), Tumkur (90.0%), Kodagu (94.5%), Mysuru (93.5%) and Kolar district (94.5%) of Karnataka. The table below provides the comparison of immunization rates in Kolar, Karnataka and India.

Table 40. Comparison of full immunization rates

Full Immunization	DLHS 2 (2002 - 04)	DLHS 3 (2007 - 08)	2011
Kolar	86.2	94.5	92.94*
Karnataka	71.3	76.7	78**
India	45.9	54	61**

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

The next table presents the taluk-wise full immunization levels reached in Kolar in the year 2011. Further, according to the statistics provided by the DHO in Kolar, three Taluks i.e., Srinivasapur, Malur and Bangarpet have achieved 100% immunization rate. Kolar and Mulbagal have achieved 84 and 91 % of child immunization and have further scope to increase their full immunization rates.

Table 41. Taluk-wise status of full immunization in Kolar (2011)

Taluk	Children fully Immunized (%)
Srinivasapur	100.00
Kolar	83.57
Malur	100.00
Bangarpet	100.00
Mulbagal	91.11
District	92.94

Source: District Health Office, Kolar,

Child nutrition

Malnutrition in early childhood has serious, long-term consequences with overall physical and emotional development of a child. Malnourished children are less likely to perform well in school and more likely to grow into malnourished adults, at greater risk of disease and early death. Inadequate care of women and girls, especially during pregnancy results in low- birth weight children.

Contribution of Anganwadis

Integrated child development Services (ICDS) program is one of the unique programs implemented in India for the early childhood development. The major objectives of the program are: supplementary nutrition, immunization, health check-up, referral services, pre-schooling and nutrition & health education. The major beneficiary / target group of Anganwadi is below 6 year old children, adolescent girls, pregnant and lactating mothers. Anganwadis play a crucial role in connecting people to PHCs to ensure good health of women and children.

In Kolar, 58% of the 0-6 children are covered through Anganwadis and receive nutritious food, health check-ups and are referred for immunization. 48% of the registered pregnant women and 53% of the lactating women (among the live birth children) are receiving the nutritious food from the Anganwadi.

Child malnutrition remains a daunting problem in India, despite sustained economic progress and growing incomes of the vast middle class in the country. According to UNICEF, one out of every three malnourished children of the world lives in India. 47% of the children underweight. 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. Accurate and reliable statistics regarding malnourishment and underweight birth were unavailable at the district level and hence, the data had to be sourced through the office of the HDD, Dept of Planning, GoK.



Photo 8. Children in Anganwadi in Kolar

The following table presents the statistics of underweight and malnourished children in the taluks of Kolar. Mulbagal had the highest proportion of under-weight children whereas Kolar taluk had the highest amount of malnourished children in the district.

Table 42. Taluk-wise underweight and malnourished children in Kolar (2011)

Taluk	Children born underweight (%)	Malnourished children (%)
Srinivasapur	7.78	34.56
Kolar	8.36	40.53
Malur	8.26	30.73
Bangarpet	8.80	32.51
Mulbagal	9.13	38.97
District	8.46	35.37

Source:HDD, Dept of Planning, GoK

5.5 Family Welfare

This section analyses the district's family planning initiatives in the context of its decadal growth rates of population. 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. However, the statistics provided by the DHO Office on proportion of eligible couples using any family planning method shows that in 2011, this value has come down drastically to 12.67%. Further, DLHS 3 revealed that 18.4% of the girls in Kolar are married before the age of 18 (the corresponding rates in Karnataka and India are 22.4 and 22.1 respectively).

Table 43. Proportion of couples using any family planning method

Use of any family planning method	DLHS 2 (2002-04)	DLHS 3 (2007-08)	2011
Kolar	65.3	63.1	12.67*
Karnataka	59.3	61.8	66.42**
India	52.5	54	NA

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

The table below presents the taluk wise snapshot of family planning coverage of eligible couples for the year 2011. It shows that none of the taluks in the district have a higher proportion of eligible couples using any family planning method above 15%.

Table 44. Taluk-wise proportion of eligible couple using any family planning method in 2011

Taluk	Eligible Couples	Number of couples using any contraceptive method	Proportion
Srinivasapur	62965	7667	12.18
Kolar	31782	5545	17.45
Malur	34192	4389	12.84
Bangarpet	75318	7449	9.89
Mulbagal	40455	5956	14.72
District	244712	31006	12.67

Source: District Health Office, Kolar,

Japanese encephalitis in Kolar

Japanese encephalitis (J.E.) is an acute mosquito-borne viral disease caused by Japanese encephalitis virus. It is popularly known as 'Brain fever'. The epidemic was first identified in 1955 in Tamil Nadu.

In Karnataka there was a localized outbreak of J.E. in 1977-78 and 911 attacks were reported out of which 226 deaths occurred. Again in 1981 the epidemic occurred in Karnataka 837 attacks were reported and 236 people died. Kolar was the most worst affected district among all other districts of Karnataka, with 538 reported cases of JE and 133 people died out of it (25% of the JE affected people died). The high incidence of J.E. cases were reported in Bagepalli, Batlahalli, Vokkaleri, Koorgepalli and Kaiwara. The moderate incidence were reported in areas like Mulbagal, Sugatur, Kamasamudram, Siddlaghatta and Tondabavi and low incidence were reported in Malur, Guidbande, Dibbur, Namagondlu and Kyasamballi.

As Kolar was one of the District in Karnataka that had repeated sporadic outbreaks of JE, it was chosen for the pilot study in the year 2007. 90% of the children were covered (based on the 2001 census data) for the JE vaccination program. Since then this vaccine has been involved in the regular vaccination program. Constant effort has resulted in controlling the diseases. As a result, till now not even a single cases of JE has been reported.

5.6 Communicable diseases

Communicable diseases continue to be a major problem in India. Since the time of Independence, the government is making

continuous efforts to control the spread of communicable and non-communicable diseases. Throughout the country health infrastructure was strengthened and several national disease programmes were initiated to control or eradicate the communicable diseases. As a result of these efforts diseases like small pox has been completely eradicated in India and diseases like cholera and plague are completely under control.

The table below presents the statistics on number of people in Kolar suffering from major communicable and non-communicable diseases. It shows that Bangarpet and Srinivaspur taluks have relatively higher proportion of people affected with communicable diseases.

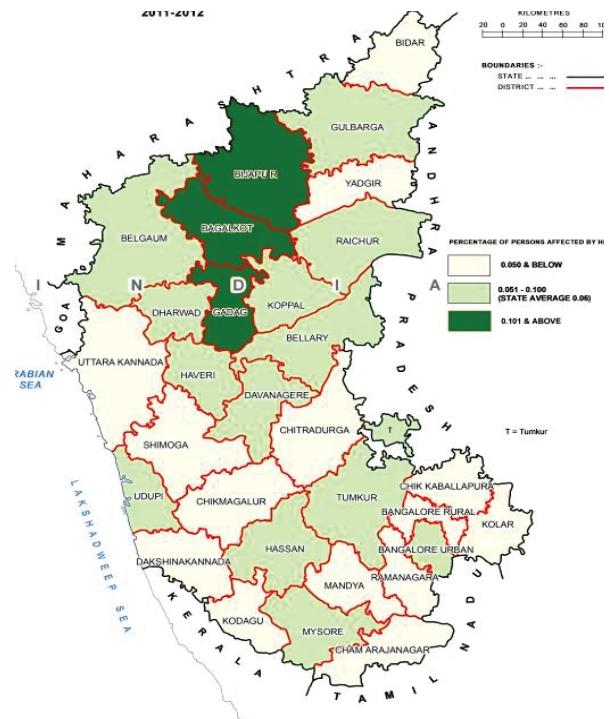
Table 45. Taluk-wise proportion of people affected with major communicable diseases

Taluk	People affected by major communicable diseases	Percentage of affected people
Srinivaspur	1695	0.84
Kolar	2075	0.54
Malur	1374	0.58
Bangarpet	4886	1.08
Mulbagal	1726	0.67
District	11756	0.54

Source: District Health Office, Kolar

HIV-AIDS

In the year 2009, GoI estimated that about 2.10 million Indians are living with HIV. Children (<15 years) account for 3.5% of all infections, while 83% are in the age group of 15-49 years, 39% of infected people are among women.



Map 3. Prevalence of HIV in Karnataka

The states with highest prevalence of HIV in India are Andhra Pradesh (500000) Maharashtra (420000), Karnataka (250000), Tamil Nadu (150000) account for 55% of all HIV infections in the country. The prevalence of HIV in Karnataka, among its different districts is provided in the figure above. It shows that Kolar is one of the districts with proportion of HIV infected persons less than the state average.

In 2011, the DHO office in Kolar reported that 785 people have been detected with HIV out of which 87 died. Prevalence of HIV in Kolar is presented below with taluk distribution of HIV patients and deaths due to HIV. It shows that more than half of the identified HIV infected are from Srinivaspur taluk, followed by Bangarpet and Mulbagal taluks.

Fluorosis in Kolar

Fluorosis is a crippling and painful disease caused by intake of fluoride. Fluoride can enter the body through drinking water, food, toothpaste, mouth rinses and other dental products; drugs, and fluoride dust and fumes from industries using fluoride containing salt or hydrofluoric acid. It mainly affects dental and skeletal part of the body.

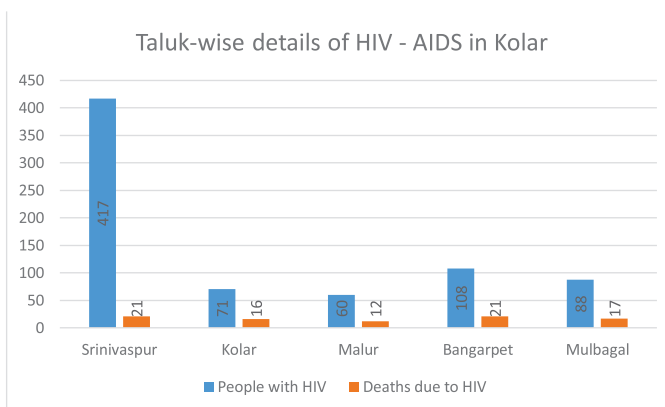
23 nations including India have the problem of excess fluoride in drinking water. India is placed in a geographical fluoride belt and fluorosis is prevalent in its 17 states including Karnataka with very high incidence of fluorosis. Kolar, a drought prone area with semiarid climate, is one among 16 fluorosis endemic districts of Karnataka. According to WHO, fluoride level in water should be within 1.5 mg/L but the fluoride concentration of ground water in Kolar ranges from 2.8 to 4.3 mg/L. It was estimated in 2002 itself, that about 26000 people suffer from dental and skeletal fluorosis and more than 39000 people are prone to it. (As reported in Times of India, June 6th 2002).

The Government, NGOs, Research institutes and many International agencies have taken measures to mitigate the problem. Small-scale community de-fluoridation units have been installed in many of the fluorosis-affected communities but there has been not much success to tackle this problem. With increasing water scarcity in Kolar, newer and deeper tube wells may have further worsened the problem of fluorosis.

Hence there is an urgent need to derive at some community level sustainable method to avoid the consumption of fluoride content water.

In 2013, National program for the prevention and control of Fluorosis has been launched and Kolar is one among the Districts where the program has been started. At present Health and Family welfare Dept is conducting a children's survey (children belongs to 7-11 year old) to identify the children affected by Fluorosis. 286 children have been identified to be suffering from Fluorosis so far (survey was ongoing at the time of preparation of this report).

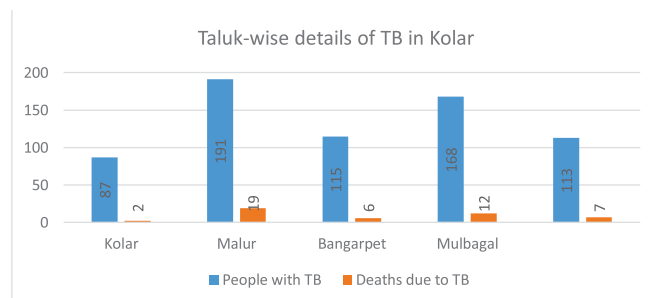
After the identification of children, grading will be made i.e., Mild, Moderate and Sever. Once this is done, Calcium and Mineral tablets will be given to children (identified as moderate and severely affected by Fluorosis) through PHC and Sub centers. This initiative is hoped to be helpful in controlling the Fluorosis especially among children.



Graph 13. Taluk-wise details of HIV-AIDS in Kolar (2011)

Tuberculosis

According to WHO report in 2007, 400000 deaths are caused in India due to TB and it is the leading cause for death among 15-49 age group people. In Kolar 0.043 % of people are detected with TB in the year 2011-12 and out of the affected people 6.82% of people have died due to it. The figure below presents the prevalence of TB in the taluks of Kolar district.



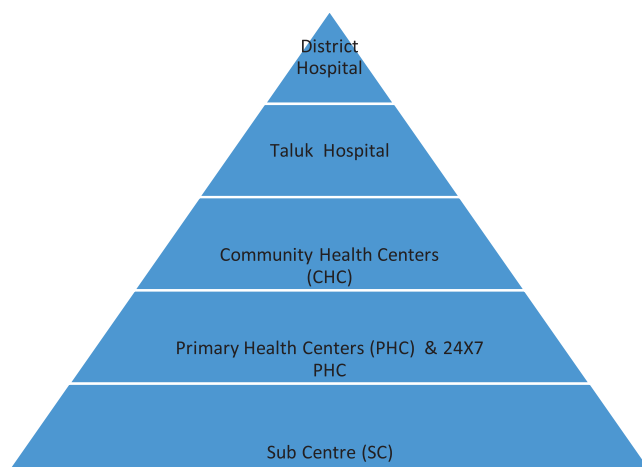
Graph 14. Taluk-wise details of TB in Kolar (2011)

From the figure, it is evident that Malur and Mulbagal taluks have the highest incidence of TB infected patients in the district and require special attention towards programmes like DOTS⁸,

⁸ Directly Observed Treatment, Short-Course (DOTS is a treatment/control strategy for TB, recommended by WHO

5.7 Infrastructure and health personnel

Availability of health service delivery institutions play a crucial role in shaping the health of people of a region. Guaranteeing the required infrastructure for health depends on the strategies to allocate resources and create demands for utilizing the established health infrastructure.



Graph 15. Structure of public health systems in India

In order to rationalize the public health system of the country, NRHM and Indian Public Health Standards (IPHS) have suggested ways to operationalize the provision of public health services in the country. The figure above provides the essential framework for provision of primary health care (through Sub-Centres and PHCs), secondary health care (through CHCs and Taluk Hospitals) and tertiary care through District Hospitals and beyond. IPHS also describes the populations each of these public health institutions should serve, the expected infrastructure and services from them and the quality of health care available in them. Some of these key standards are provided in the table below to compare and contrast the position of Kolar's public health institutions along these aspects.

Table 46. IPHS standards for public health institutions

Institution	Population coverage (excluding hilly areas)	Bed capacity	Referral unit for	Referrals made to	Important staff
Sub Centers (SCs)	5000	0	NA	PHC	ANM
Primary Health Centers (PHC)	30000	6	6 Sub Centers	CHC	1 Doctor (3 in the case of 24x7 PHCs), 3 Staff Nurse
Community Health Centers (CHC)	1 Lakh	30	3 PHCs	Taluk Hospital	5 specialists, 4 duty doctors, 10 staff nurses
Taluk Hospitals (TH)	5-6 Lakh (usually it covers the population of entire Taluk)	100	SC, PHC, CHC	District Hospital	10 specialists, 7 duty doctors, 18 staff nurses
District Hospitals (DH)	Depends on the population of the District	500	SC, PHC, CHC & Taluk Hospitals		

Source: IPHS Guidelines, 2012

In this background, the next table presents the existing public health infrastructure in Kolar district.

Table 47. Health Infrastructure in Kolar (2011)

Taluks	SC	PHC	CHC	Taluk Hospital	District Hospital
Srinivasapur	46	13	1	1	0
Kolar	64	14	0	0	1
Malur	48	8	0	1	0
Bangarpet	55	7	1	1	0
Mulbagal	64	17	0	1	0
District	277	59	2	4	1

Taluks	Autonomous & Teaching Hospitals	Other Allopathic Hospitals	AYUSH clinics	Private Hospitals	Private Clinics	Total
Srinivasapur	0	4	2	3	11	82
Kolar	0	18	3	17	56	173
Malur	0	9	2	9	16	94
Bangarpet	1	14	0	10	34	124
Mulbagal	0	4	1	10	25	123
District	1	49	8	49	142	596

Source: Kolar District at Glance, 2011-12

From the tables in this section, it is evident that Bangarpet being the highest populated taluk has only 7 PHCs and each PHC covers more than 30000 rural population. The number of Sub-Centres in all taluks of the district fall within the population specifications of IPHS standards. As FRUs, Bangarpet has one CHC and one taluk hospital. Taluks like Mulbagal, Srinivasapur and Kolar have higher density of PHCs in comparison to Malur and Bangarpet. Further, Srinivasapur is served by CHC as well. With only 2 CHCs in the district, the pressure on other FRUs like Taluk Hospitals and tertiary care units like District Hospitals increases.

Table 48. Population served and status of infrastructure

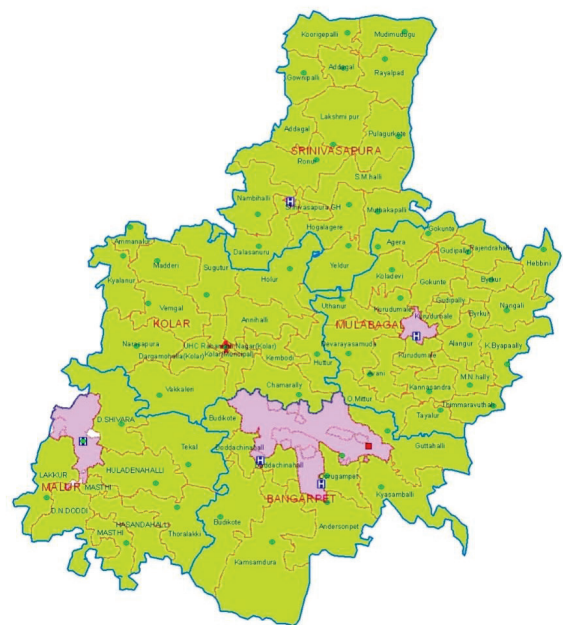
Taluk	SC	PHC	Doctors (per 1000)	Nurses (per 1000)	Beds (per 1000)
Srinivasapur	3815.457	13500.85	0.02	0.67	7.69
Kolar	3858.563	17639.14	0.39	0.25	14.59
Malur	4101.458	24608.75	0.21	0.16	6.99
Bangarpet	4278.909	33620.00	0.19	0.27	3.29
Mulbagal	3150.922	11862.29	0.19	0.17	2.79
District	3813.458	17903.86	0.247	0.28	7.04

Source: Kolar District at Glance, 2011-12

Together with public institutions of health, Kolar has extensive presence of private clinics and hospitals. Kolar taluk being the district headquarters and the location of the sole medical college in the district has the highest private clinics followed by Bangarpet and Mulbagal, thus probably balancing the deficit of public health institutions in these taluks.

Most of the developing countries face the problem of lack of skilled or trained personnel to deliver the desired services and India is no exception. Hence many times in spite of having the necessary infrastructure, due to lack of skilled people required health services are not reaching the poor and needy people of

rural areas. The High Level Expert Group Report on Universal Health Coverage for India Planning Commission of India identified in 2011 that there are 0.51 doctors per thousand people in India and recommended that India should work towards having at least one doctor per thousand population. While the current national status is still far from satisfactory Kolar's doctor availability is much less than the national average, with an average of 1 doctor per 4000 doctors (0.25 per 1000 population). Kolar taluk with the presence of large private health infrastructure has the highest density of doctors in the district. 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).



Map 4. Map of health infrastructure in Kolar

Source: Dept of Health and Family Welfare, GoK

In Karnataka, this figure was close to 1.1⁹. In Kolar, the average bed availability per thousand population was 7.04, with about 58% of the availability concentrated in Kolar taluk itself. Mulbagal had the

9 Based on the National Health Profile, 2012 published by the Central Bureau of Health Intelligence, Ministry of Health and Family Welfare, GoI.

least availability of beds per thousand population.



Photo 9. Health check-ups for senior citizens in Kolar

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.

From the table below, it can be seen that the number of ASHAs in Kolar is short of the standards prescribed by NRHM. 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.

Table 49. ASHAs in Kolar in 2011

Taluk	ASHAs	
	Present	Shortage
Srinivasapur	183	26
Kolar	251	16
Malur	150	36
Bangarpet	196	19
Mulbagal	183	53
District	963	150

Source: District Health Office, Kolar

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. The table below provides the details of JSY and Madilu kits provided in Kolar district in 2011. It shows that less than 50% of the overall deliveries in Kolar were covered by JSY and Madilu. In Malur and Bangarpet, coverage of Madilu kits were less than that of JSY.

Table 50. Trends in beneficiaries of JSY and Madilu Kits in Kolar in 2011

Taluk	Total reported deliveries	JSY Beneficiaries	Madilu Kits
Srinivasapur	2559	1750	1890
Kolar	8556	3125	3141
Malur	3130	1850	1120
Bangarpet	6699	2380	2250
Mulbagal	3902	2570	2750
District	24846	11675	11151

Source: District Health Office, Kolar

5.9 Per-capita expenditure on health

The table below presents the per-capita expenditure on health, as reported by the office of the CPO, ZP, Kolar. It shows that Mulbagal and Srinivasapur taluks have the highest per-capita expenditure reported in the district, while Bangarpet reported the lowest, followed by Kolar.

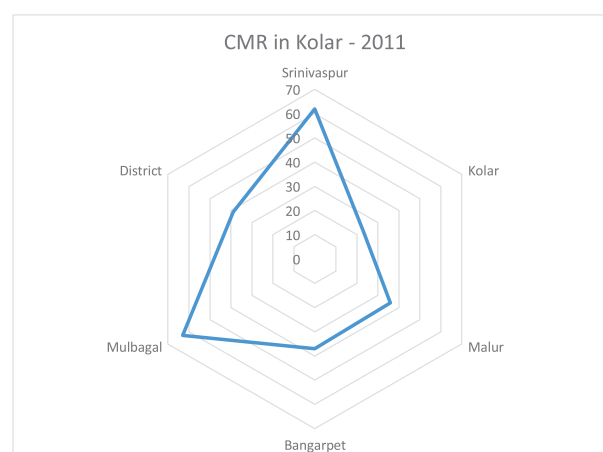
Table 51. Per-captia expenditure on Health (2011)

Taluk	Per-capita expenditure on health
Srinivasapur	67.43
Kolar	41.36
Malur	50.95
Bangarpet	35.35
Mulbagal	75.66
District	50.28

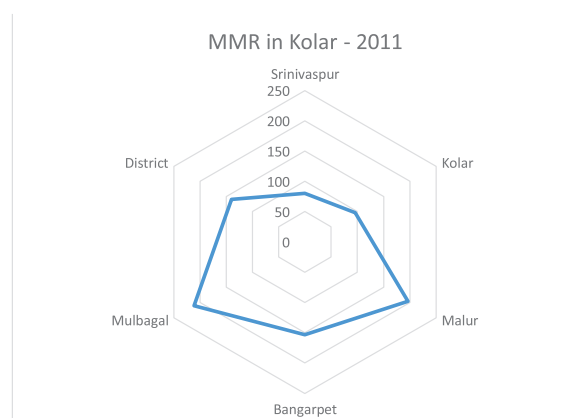
Source: Office of the CPO, ZP, Kolar

5.10 Radar analysis of important indicators of health

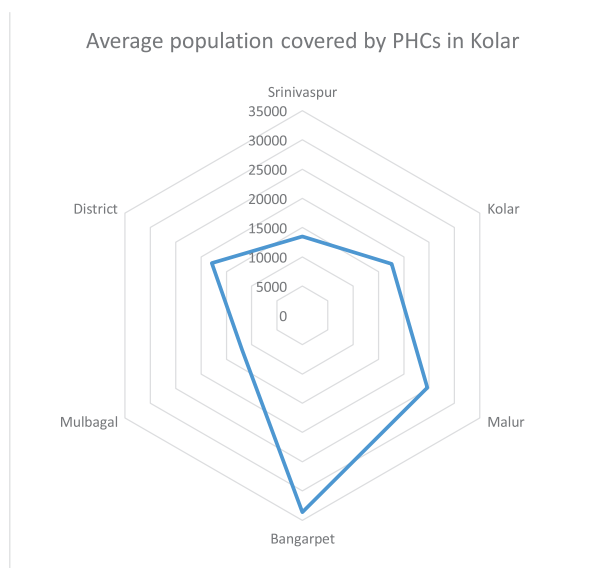
The graphs in the next section show the status of three important indicators of the status of health in the district: CMR, MMR, and average rural population coverage by PHCs in the taluks of Kolar. CMR is highest in Mulbagal (63) and least in Kolar (23) whereas MMR is highest in Mulbagal (211) and lowest in Srinivasapur (80). The average rural population covered by PHCs in Bangarpet is the highest (33620) and the lowest in Mulbagal (11862).



Graph 16. Radar graph of CMR in Kolar (2011)



Graph 17. Radar graph of MMR in Kolar - 2011



Graph 18. Radar graph of population covered by PHCs in Kolar (2011)

5.11 Performance and Inadequacies of Health Care System

This chapter presented the various dimensions of health in Kolar district. From the above analysis of status of health in Kolar it is evident that serious and sustained efforts have been made by the Dept of Health and Family Welfare to control the outbreak of major life threatening diseases like Japanese Encephalitis which have haunted the people of Kolar in the past. According to a Taluk Health Officer from Kolar, major communicable diseases in the district have been controlled and their prevalence has been reduced vastly. In spite of these efforts there are many issues that need to be prioritized at the earliest to achieve good health status in Kolar. They are:

Fluorosis – it is one of the serious public health issues that is leading to the permanent ailment to people and many children are being affected by this disease. This issue needs to be urgently tackled by the involvement of different stakeholders government agencies like Health, RDPR,

Watershed, Mines and Geology and Non-governmental organizations and community involvement to mitigate the harms of fluoride in-take and to find sustainable solutions for this problem.

Anaemia and malnourishment especially among pregnant women, is another cause of concern when it comes to women and child health. Sub Centres and PHCs play a very important role in creating awareness among men and women, adolescent boys and girls about family planning, changes in food patterns and very importantly behavioural and attitudinal changes with respect to nutrition, sanitation and health seeking behaviour.

As Kolar is situated in the border area of Karnataka, migration is quite common. Hence coordination with neighbouring districts of Karnataka as well as Andhra and Tamil Nadu is required for issues like early registration of pregnancy, regular ANC check-ups, distribution of IFS tablets for pregnant women and for controlling different diseases like TB and HIV.

The performance of health among the different Taluks of Kolar is not the same. There are vast disparities in the availability of infrastructure and personnel within the district. The health infrastructure in Mulbagal and Bangarpet are clearly low in comparison to other taluks of the district and hence may need prioritization.

Mulbagal with highest home delivery in the district also reported the highest infant, child and maternal deaths. Similarly, Malur taluk also has high rates of mortality. Thus, health related reforms in the district could begin by addressing these immediate issues based on which future changes in implementation strategies can be adopted.

Income, Poverty and Employment

“The basic objective of development is to create an enabling environment in which people can enjoy long, healthy and creative lives”

Mahbub ul Haq
Human Development Report in 1990

6.1 Introduction

The concept of human development is preferred more than economic development as it looks beyond GDP to a broader definition of wellbeing. The human development report provides a composite measure of three dimensions of human development- living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income). This chapter deals with the third main component of the human development that is ‘standard of living’. This component can be measured through certain indicators like income, employment, food security and poverty in the district. Over the past decades there have been unprecedented increases in material wealth and prosperity across the world. But these increases have been very uneven, with vast numbers of people not participating in the progress activities.

People are the real wealth of nations. Many times human welfare is equated with material wealth fascinated by the rise and fall of national incomes (as measured by GDP). At the same time, the importance of GDP growth

and economic stability should not be understated: both are fundamental to sustained human progress, as is clear in the many countries that suffer from their absence. But the ultimate yardstick for measuring progress is people’s quality of life. According to Aristotle, “Wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else.” Here the term ‘something else’ refers to the opportunity of people to realize their potential as human beings. Real opportunity is about having real choices—the choices that come with sufficient income, education, good health and living in a country that is not governed by oppression.

The analysis of HDI in many regions reflects the positive associations between income and health and education. Mass poverty, deeply rooted inequity and lack of political empowerment deny a large share of the world’s population the freedom to make real choices, curbing their overall development.

6.2 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. These estimates are available only at the national and the state levels. Karnataka has been a pioneer in estimating district income and the first estimates were made available in 1960-61. Since then, district estimates have been computed at ten year intervals till 1990-91 and thereafter, annual estimates are being worked out

regularly. The district estimates of GDP were, however, based on derivatives from the state GDP estimates. The district domestic product (DDP) estimates at the district-level are, however, derived from the State-level GDP estimates. The State Directorate of Economics and Statistics which collects and publishes these data, has so far not made any attempts to estimate the GDP at the grassroots levels.

The present study has attempted to estimate the GDP for Kolar district at the taluk-level. The data for the same have been gathered from the official records of the Kolar district office of the State Directorate of Economics and Statistics. Continuous time series data on GDP at the taluk-level are not available to examine the trends at the taluk level. However, the 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 and 3) 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.

6.3 District and Taluk Income

The growth of the India's economy is measured in terms of the GDP at current prices¹⁰. Likewise, the growth of Karnataka's economy is measured in terms of State Domestic Product (SDP). Similarly, the growth of Kolar district and its taluk can be measured in terms of District Domestic Product (DDP) and Taluk Domestic Product (TDP) at current prices. The growth of the DDP in Kolar district during the period 2004-05 to 2008-09 is presented in the table below. It presents the sector wise compound annual growth rates (CAGR) of the Gross and Net Domestic Products (in lakhs of rupees) across the years 2004-05 and 2008-09 at current prices.

Table 52. Sector-wise growth rates in Kolar

Sl. No	Particulars	GDDP (in Rs. lakhs)		CAGR (%)	NDDP (in Rs. lakhs)		CAGR (%)
		2004-05	2008-09		2004-05	2008-09	
1	Primary sector	145662	179491	4.27	134992	166517	4.29
2	Secondary sector	100613	176038	11.28	78533	141706	12.53
3	Tertiary sector	168016	271128	10.04	153038	250440	10.35
4	Total	414291	626657	8.63	366563	558663	8.79

Source: HDD, Dept of Planning, GoK

In Kolar district, the total income namely District Domestic Product (DDP) grew at the annual compound growth rate of 8.63% (GDDP) and 8.79 % (NDDP). Sector-wise, the secondary sector's income registered the highest CAGR (11.28%) followed by tertiary sector with 10.04 % growth. The district lags behind in primary sector growth with the CAGR of 4.69%. The next table presents the

¹⁰Gross domestic product (GDP) at current prices is GDP at prices of the current reporting period, also known as nominal GDP. Gross domestic product (GDP) at constant prices refers to the volume level of GDP. Constant price estimates of GDP are obtained by expressing values in terms of a base period.

taluk wise sectoral composition of Gross District Domestic Income (GDDI) for the year 2008-09 at current prices (in Rs. lakhs). The table gives a comparative picture of the growth rates of the economies of Karnataka state, Kolar district and taluks thereof. There exists considerable variation in the individual taluk's contribution to the Gross District Domestic Income of the district. Bangarpet taluk contributes highest of 30% followed by Kolar (21.4%), Mulbagal with 20.4%, Srinivasapur 14.1% and least contribution from Malur (13.7%). There is wide variation within the taluks regarding the three sectors of the economy. The district is equally depended on all three sectors and it is a positive indicator for growth and development of the district.

Table 53. Taluk-wise sectoral growth rates in Kolar

Sl. No	Taluks	Primary sector	Secondary sector	Tertiary sector	Total (GTDP)	% of GTDP to GDDP	Gross per capita income (in Rs.)
1	Bangarpet	24365.4 (12.8)	89754.0 (47.2)	76027.0 (40.0)	190146.4 (100)	30.3	41164.6
2	Kolar	33525.9 (25.0)	22879.0 (17.0)	77908.0 (58.0)	134312.9 (100)	21.4	35769.1
3	Malur	21659.0 (25.2)	21013.0 (24.5)	43135.0 (50.3)	85807.0 (100)	13.7	37818.3
4	Mulbagal	50156.4 (39.2)	34047.0 (26.6)	43769.0 (34.2)	127972.4 (100)	20.4	50478.4
5	Srinivasapur	49784.3 (56.3)	8345.0 (9.4)	30289.0 (34.3)	88418.3 (100)	14.1	43671.2
6	Total	179491.0 (28.6)	176038.0 (28.1)	271128.0 (43.3)	626657.0 (100)	100.0	41219.5
7	Karnataka state	5476376 (17.00)	8983274 (30.00)	16299999 (53.00)	30759652 (100)	-	53101.0

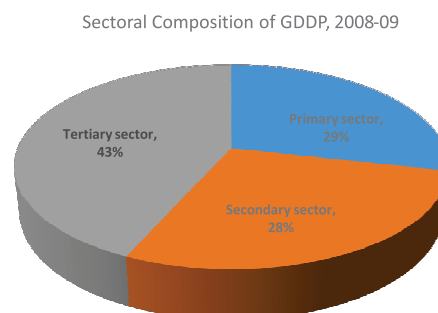
Source: HDD, Dept of Planning, GoK

Note: Figures in parentheses indicates percentages to the total.

Bangarpet taluk has a developed industrial and manufacturing sector contributing 47% to the GTDP followed by

tertiary sector with 40.0%. The primary sector contributes about 12.8% to the economy. Kolar taluk differs completely from the Bangarpet. The contribution from tertiary sector is very high (58%) in the taluk. This is followed by primary sector with 25% contribution and third position by secondary sector with 17%. In Malur taluk, the tertiary sector is contributing high of 50.3%, followed equally by primary (25%) and secondary sector (25%). Mulbagal taluk is quite different from the previous taluks. The contribution from primary sector is high in the taluk with 39% followed by tertiary sector (34%) and secondary sector (26%). Srinivasapur taluk is characterized with similar trends, although the share of primary sector in the economy is more pronounced in the taluk.

When we look at 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. At Kolar district as a whole, all three sectors of the economy contribute considerably to the economy. Some taluks of the district are primary sector dominant while others are secondary and tertiary sector dominant.



Graph 19. Sectoral composition of GDDP in Kolar

Per capita Gross and Net Taluk wise per capita income across the years 2004-05 and 2008-09 of Karnataka State, Kolar district and of the taluks of Kolar district are presented in the table below. Mulbagal recorded the highest per capita income whereas Kolar recorded the lowest in the district. Kolar taluk recorded the highest CAGR of 11.96% within the last five years while Malur recorded a lowest of 4.22%. The overall district per capita income is lower in comparison with the state average. Thus Kolar district's per capita income is reported to be lower than the State's per capita income. This clearly means that Kolar district's economy has grown at a slower rate than the State's economy. The gross per capita income of the Kolar district grew from Rs. 28531.3 to Rs. 41219.5 between 2004-05 and 2008-09 at the compound growth rate of 7.64 %. The corresponding gross per capita incomes of the State for 2004-05 and 2008-09 were Rs. 30062 and Rs. 53101, respectively.

Table 54. Gross and Net per capita incomes

Taluku	Gross Per Capita Income (Rs)		CAGR (%)	Net Per Capita Income (Rs)		CAGR (%)
	2004-05	2008-09		2004-05	2008-09	
Srinivasapur	33530.7	43671.2	5.43	28836.1	45710.1	9.65
Kolar	19039.6	35769.1	13.44	17985.5	31633.4	11.96
Malur	30753.0	37818.3	4.22	26970.2	33944.2	4.71
Bangarpet	28808.1	41164.6	7.41	24773.1	36349.3	7.97
Mulbagal	36104.6	50478.4	6.93	32441.6	40396.4	4.48
Total	28531.3	41219.5	7.64	25244.4	36747.1	7.80
Karnataka state	30062.0	53101.8	12.05	26806.0	47614.9	12.18

Source: CPO, ZP, Kolar

Sectoral growth in the district- primary, secondary and tertiary

Kolar is a region with its economy equally based on all three sectors of

the economy. Starting from agriculture, horticulture, animal husbandry, mining, manufacturing and service, the district's economy can be defined as a 'balanced' one. The major sources of employment are agriculture, dairy, sericulture and floriculture hence it is popularly known as the land of "Silk, Milk and Gold". Farmers in Kolar are totally dependent upon ground water for irrigation and drinking. The gold mines in Kolar Gold Fields were closed in the 2003 due to reduced gold deposits and increasing costs of production.

Sectoral growth of the district can be studied through analyzing subsectors i.e. primary, secondary and tertiary individually. The tables below show the sub-sector wise CAGRs in the taluks of Kolar district during the five-year period 2004-05 and 2008-09. These tables reveal certain interesting taluk-wise and sub-sector-wise trends in income generation in Kolar district during the period of study.

Primary sector

As far as growth of the agricultural sector is concerned, the contribution has declined in the taluks of Bangarpet, Kolar and Malur for the period 2004-05 and 2008-09. However the district recorded a meagre of 3.43% of growth since last 5 years. Forestry and logging has witnessed a growth of 12% while fishing is gaining momentum across the taluks except Srinivasapur taluk where water resources for fish farming are very limited. Irrespective of the taluks, optimistic growth rates were noticed in the income generated because of mining and quarrying. Overall, from primary sector three other taluks other than Mulbagal and Srinivasapur recorded negative growth rates in the district.

Table 55. CAGR in Primary sector in Kolar

Taluk	Agriculture including Animal Husbandry	Forestry and Logging	Fishing	Mining and Quarrying	Total
Srinivasapur	5.80	11.06	-1.61	44.04	6.12
Kolar	-3.56	13.81	19.61	43.96	-2.01
Malur	-7.29	12.32	8.91	44.19	-5.42
Bangarpet	-5.87	9.84	22.41	43.75	-4.21
Mulbagal	1.68	12.78	22.31	43.75	2.62
Total	3.43	12.07	17.19	43.96	4.27

Source: CPO, ZP, Kolar

Secondary Sector

The secondary sector in Kolar district has grown at the rate of 11.84% during the period 2004-05 and 2008-09 (see table below). The secondary sector grew at the highest rate (16.02%) in Mulbagal taluk and at the lowest rate (4.65%) in Kolar taluk. Among the sub-sector of the secondary sector, in the district the construction industry grew at the highest rate of 16.03%, followed by the registered manufacturing (13.85%) and unregistered manufacturing (9.65%) in that order. Electricity, gas and water supply had negative rate of growth, -0.69%.

Table 56. CAGR in Secondary sector in Kolar

Taluk	Manufacturing		Construction	Electricity Gas and Water Supply	Total
	Registered	Un-registered			
Srinivasapur	-	0.65	14.43	24.32	14.16
Kolar	-7.62	1.94	14.91	-11.08	4.65
Malur	113.17	12.66	16.26	3.04	14.83
Bangarpet	13.55	19.34	14.54	-8.28	11.81
Mulbagal	-	7.65	16.84	17.00	16.02
Total	13.85	9.65	16.03	-0.69	11.84

Source: CPO, ZP, Kolar

Data on registered manufacturing sub-sector in Mulbagal and Srinivasapur taluks were not reported. The important

point to note here is the huge growth of 113% noticed in registered manufacturing sector in Malur taluk. The large scale setup of industrial area and manufacturing units is contributing to the growth of the sector. Unregistered manufacturing in Bangarpet taluk experienced growth rate of 19.34% followed by Malur with 12.66% and Srinivasapur with lowest growth rate of 0.65%. The growth of construction industry did not vary much across the taluks; it ranged between 14.43% in Srinivasapur and 16.84% in Mulbagal taluk. Income generated from electricity production, gas and water supply showed negative growth rates in Bangarpet and Kolar taluks and at district level.

Tertiary Sector

The next table presents the CAGR of GTDP in the tertiary Sector of Kolar District between 2004-05 and 2008-09. Among the different sub-sectors in the tertiary sector in Kolar district, there is no revenue from railways in the taluks of Mulbagal and Srinivasapur during 2004-05 to 2008-09 as the taluks lacked railway lines. Transportation by other means recorded progressive growth rates in all taluks, Mulbagal with highest of 21.01% and Bangarpet with lowest of 15.69%. Communication sector irrespective of the taluks grew at 8.96% in the district. The growth of public administration was negative of -2.30% in all the taluks. This growth indicates the saturation of employment creation in public sector in the district. This is depressing in terms of economic growth and livelihood generation in the district.

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, Kolar taluk witnessing the highest growth rate of 11.95% and Srinivasapur the least (5.17%). Among the sub-sectors of the tertiary sector, other services which include service in the

field of health and education grew fastest (10.68%) in the district. This is an outcome of establishment of various education institutes (2 Engineering colleges, 1 Medical college, 1 Dental college and 8 Polytechnic colleges) and multi-specialty hospitals in the district under the study period. Storage sub-sector registered the worthy growth rate just in Kolar taluk of 16.38% followed by Mulbagal (14.87%) and Bangarpet (5.64%) while the growth rates of two taluks; Malur and Srinivasapur were not reported. The real estates, ownership of dwelling & business services grew at high rates in the district (14.0%) irrespective of the taluks. This is due to the increasing demand for land in the district for industrial purpose (setup

of manufacturing units). Trade, hotels & restaurants and banking & insurance subsectors recorded high variations in the district- Kolar district with highest of 24.28% and Srinivasapur recorded lowest of -6.92% in the district. In summary, the tertiary sector of the district is growing at an average CAGR of 10.04%.

The next table presents the taluk-wise CAGR and the sectoral composition of Gross District Domestic Product for the year 2004-05 and 2008-09 at current Prices (in Rs. lakhs) across the years 2004-05 to 2008-09. Kolar taluk has recorded highest growth rate of 14% in the economy, followed by Bangarpet (8.39%) and Mulbagal taluk.

Table 57. CAGR in Tertiary sector in Kolar

Sl. no	Particulars	Railways	Transport by other means	Storage	Communication	Trade, Hotels & restaurants	Banking and Insurance	Real estates, Ownership of Dwelling & Business Services	Public Administration	Other Services	Total
1	Bangarpet	8.67	15.92	5.64	8.96	19.16	5.18	13.79	-2.30	13.16	10.80
2	Kolar	8.66	17.22	16.38	8.97	24.28	5.18	14.45	-2.30	9.12	11.95
3	Malur	8.69	17.80	-	8.97	11.35	5.17	14.68	-2.30	8.96	9.42
4	Mulbagal	-	21.12	14.87	8.97	6.91	5.17	13.99	-2.29	11.37	10.01
5	Srinivasapur	-	17.08	-	8.96	-6.92	5.21	14.87	-	7.37	5.17
6	Total	8.68	17.52	13.21	8.96	9.79	5.18	14.30	-2.30	10.68	10.04

Table 58. Taluk-wise CAGR of Kolar's economic sectors

Sl. No	Particulars	GDDP for the year 2004-05 at Current Prices				GDDP for the year 2008-09 at Current Prices				CAGR (%) on GTDP
		Primary sector	Secondary sector	Tertiary sector	Total (GTDP)	Primary sector	Secondary sector	Tertiary sector	Total (GTDP)	
1	Bangarpet	30207.7	51363.0	45526.0	127097	24365.4	89754.0	76027.0	190146	8.39
2	Kolar	5759.7	18228.0	44297.0	68285	33525.9	22879.0	77908.0	134313	14.49
3	Malur	28625.4	10523.0	27496.0	66644	21659.0	21013.0	43135.0	85807	5.18
4	Mulbagal	44068.7	16196.0	27159.0	87424	50156.4	34047.0	43769.0	127972	7.92
5	Srinivasapur	37000.5	4303.0	23538.0	64841	49784.3	8345.0	30289.0	88418	6.40
	Total	145662.0	100613.0	168016.0	414290	179491.0	176038.0	271128.0	626657	8.63
	Karnataka state	3309593	4816549	8506403	16632548	5476376	8983274	16299999	30759652	13.08

6.4 Agriculture: Cropping Pattern, Irrigation, and Livestock

Land use patterns

The table below provides the status of land use patterns in the district. About 5.5% of the total geographical area (TGA) in the district is covered with forests (20620 hectares). About 20% of the TGA is not available for cultivation, with the highest proportion of such lands in Bangarpet (22%). Uncultivated land, including permanent pastures and trees and groves form about 14% of the TGA in Kolar. The proportion of permanent

pastures and trees and groves is highest in Mulbagal taluk (16.37%) and the least in Kolar taluk (5.7%). Agriculture is the major land use component in Kolar. Total land under agriculture forms about 51.8% of the total available land in the district, with the highest share of land under agriculture in Mulbagal taluk (58.1%). About 5.67% of the land under agriculture is sown more than once, with the highest proportion in Malur taluk. Srinivasapur has only 2.52% of land under agriculture that is sown twice a year. These statistics indicate that agriculture in Kolar is mainly dependent on rainfall and ground water.

Table 59. Land utilization patterns in Kolar (2010-11) in hectares

Sl. No.	Particulars		Srinivasapur	Kolar	Malur	Bangarpet	Mulbagal	District
1	Total geographical area		85824	69210	63166	74520	82246	374966
2	Forest area		9547	4633	1560	2758	2122	20620
3	Land not available for cultivation	Non-agricultural	8395	10897	8258	7435	10692	45677
		Barren	9460	3807	1907	8982	4714	28870
		Total	17855	14704	10165	16417	15406	74547
4	Other uncultivated land	Cultivable waste	968	405	2399	1407	1218	6397
		Permanent pasture	9998	2672	10742	5495	10511	39418
		Trees and groves	1632	1270	742	411	2954	7009
		Total	12598	4347	13883	7313	14683	52824
5	Fallow land	Current	1915	10003	5003	13467	3031	33449
		Others	1230	1597	4203	1200	2082	10312
		Total	3145	11600	9236	14667	5113	43761
6	Area sown	Net area sown	42679	33926	28322	33365	44922	183214
		More than once	1105	2682	2517	1851	2864	11019
		Total	43784	36608	30839	35216	47786	194233

Source: District Statistics at a Glance, 2011-12

Land holding patterns

As per 9th agricultural census data done during the year 2010-11, there are a total of 236855 agriculture landholders in the district cultivating in a total of 233922.91 hectares of agriculture land in the district, with the average land holding size of about 1 ha per land holder. 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 (67.18%) and very small portion of medium and large farmers (2.82% together). The interesting point here is to observe that this meagre percentage of large and medium farmers hold about 17.5% of the cultivated area while high number of marginal farmers hold 28.8% of the total area. Small and marginal farmers together constitute 88.01% of the total landholders who own a total of 57.85% of the area.

Table 60. Patterns of agricultural land holdings (numbers) in Kolar (2010)

Taluk	Marginal (< 1 ha.)		Small (1-2 ha)		Semi medium (2-4 ha)	
	No	Area	No	Area	No	Area
Srinivaspur	19434	8423.64	7285	10163.14	4124	11065
Kolar	37984	15579.52	10667	14695.47	4576	12121
Malur	33725	13828.99	9252	12693.68	4131	10945
Bangarpet	33931	14933.46	10970	15154.62	4198	11074.4
Mulbagal	34066	14583.98	11147	15268.47	4683	12393
District	159140	67349.59	49321	67975.38	21712	57598.4

Taluk	Medium (4-10 ha)		Large (10 ha)		Total Farmers	Average land holding
	No	Area	No	Area		
Srinivaspur	1578	8711	139	1819.61	32560	1.23
Kolar	1062	5754.79	81	1153.72	54370	0.91
Malur	1205	6646.18	107	1493.89	48420	0.94
Bangarpet	1040	5673.8	82	1096.39	50221	0.95
Mulbagal	1277	7058.08	111	1592.08	51284	0.99
District	6162	33843.85	520	7155.69	236855	0.99

Source: Agriculture census 2010-11

Ragi is the major food crop in Kolar district sown in 60273 ha, roughly forming 1/3rds of the net area sown, followed by paddy, in about 5203 areas. The relatively less amount of paddy grown in the district can be attributed to the lack of surface water irrigation in the district. Pulses are grown in about 20412 ha in the district, with comparable acreage in all taluks. Ground nut is the major oilseed produced in the district on a commercial basis, followed by sunflower.

Srinivaspur taluk is well known for the cultivation of mangoes with 63 varieties of the fruit being produced in the taluk. It stands first in mango production in Karnataka State. Mangoes are marketed throughout India and few varieties are exported as well. Srinivaspur is hence called as Mango capital of Karnataka.

Horticulture and vegetables

Horticulture in Kolar is predominantly focussed on commercial cultivation of fruits, vegetables and sericulture, mostly driven by manual labour. Major fruit crops in the district are Mango, Banana, Sapota, Papaya, Cashew and Grapes. The total annual mango production in the district was about 4.86 metric tonnes. Major vegetables grown in the district are: Tomato, Potato, Brinjal, Green Chilly, Beans and leafy vegetables.

Another major commercial agricultural activity in Kolar is Sericulture. Mulberry is grown in about 13621 ha and 11724 tonnes of silk cocoons were produced in the district. The highest acreage of mulberry plantations and the highest production of silk cocoons was in Kolar taluk, attributing about 36% of the total cocoon production of the district.

High-value commercial agricultural crops like floriculture and export oriented vegetable production have also gained popularity among the farmers in the district.

Animal husbandry

Traditionally, the district is famous for its milk production as well. Approximately, 2.5 lakh cattle, 4.6 lakh sheep and goats and 3.1 lakh poultry are reared in the district (based on Livestock Census of 2007) making animal husbandry a major allied livelihood opportunity in the district.

Milk production in the district is principally driven by Co-operative societies, with approximately 2.4 lakh members registered in co-operative societies with a reported annual production of 750 million litres of milk (District Statistics at a Glance, 2011).



Photo 10. Health check-up for Sheep

Summary

Agriculture is the major land use driver of Kolar and is the primary occupation of the majority of the people in the district. However, due to lack of surface irrigation facilities, farming in the district is dependent on monsoons and ground water to a large extent. With intensive commercial agricultural activities, the

pressure on ground water extraction is enormous in the district resulting in severe loss of ground water table and water depletion. This issue is explored further in different sections and a small area study.

Together with field crops like Ragi and pulses that guarantee food security, considerable emphasis and dependence on commercial agriculture is a characteristic feature of Kolar. The large scale cultivation of high-value, volatile horticulture crops like Mango, Banana, Vegetables, floriculture and sericulture puts considerable environmental and market risks on the farmers of the district.

Further, dependence of these activities largely on manual labour, nearness to large urban conglomerates like Bengaluru and the booming mining industry negatively impact the productivity of agriculture in the district, as visible in the intra-sectoral growth rates of the economy.

6.5 Industries

“Industrialise or Perish” is the slogan of the day. Industries have a major role to play in the economic development of the district. It is also an essential ingredient of rapid and self-sustained development of rural areas. It is believed that the solution to the economic maladies like poverty, unemployment, mal nutrition, etc., lies in the rapid industrialization. As such industrialization assumes paramount importance, particularly, in the developing economies.

Industrialisation is usually regarded synonymous with economic development. Industries supply basic raw materials and tools needed for agriculture development.

Agriculture meets the growing needs for raw materials in industries. Therefore, a close collaboration between industry and agriculture is needed for rapid economic development of a region. It helps industry and agriculture take benefit of their mutual existence. The complimentary of the two sectors make the pace of economic development rapid and cumulative. As such the programme of industrialization must give due consideration to the development of rural areas.

Kolar district has not made much headway in industrial development, specifically in comparison to other districts of the state. It lags behind other industrialized districts like Bengaluru (Urban), Mysuru, Dharwar, Dakshina Kannada and Belagavi district. Even though the taluk is endowed with rich agricultural, mineral and horticultural resources, their potentialities have not been properly harnessed for industrial purposes. This slow pace of industrialization is also due to inadequate industrial infrastructural facilities. The other major factors attributed for lack of industrial development in the district is the absence of large and medium scale industries, which are capable of promoting various ancillary and tiny small scale enterprises in the district.

In 2011, 234 registered factories were present in the district, employing 26710 people, the highest density of which was found in Bangarpet taluk. Srinivaspur and Mulbagal had the least amount of registered industries (2 and 7 respectively) in the district. There were only 2 medium scale industries registered in the district. There were no large scale industry registered in the district. A total of 8408 small scale industries have

been registered, providing employment to 52396 people, of which about 64% work in trade, hotel and transportation services. Other industries in the district include silk processing units, flour mills, textiles, general engineering, bricks and tiles, leather processing industries and automobile service units. There are 5 industrial estates in the district, consisting a total of 112 sheds and 118 industrial plots.

Although Kolar is endowed with natural and human resources, industrialization in the district hasn't progressed at the pace visible in other districts of the state. There is immense scope for development of agriculture based enterprises that can add value to the agricultural products of the district. The presence of international airport at Devanahalli, Bengaluru is a boon for exporting value added agricultural products, which should be utilized to the fullest by the district. The international demand for cut flowers will offer excellent opportunities for establishing floriculture projects in the district. Similarly, Kolar has immense potential for producing value added dairy based products due to its high production of milk

Further, small scale industries like Agarbatthi, decorative candle making and handloom and artistic articles that have higher demand in nearby districts like Bengaluru can assure employment and economic development for several artisans and traditional skilled workers of the district. There is immense scope for setting up of electronic units, mechanical components, software and hardware production centres and bio-technology parks in the district. Good opportunities for post- cocoon activities like reeling, twisting, weaving, dyeing, printing, etc. exist in the district due the large scale

cultivation of mulberry and silk worms in the district. The following sections provide a glance of existing industrial areas in Kolar.

Major industries/industrial areas in the district:

1. Bharth Earth Movers Limited (BEML): The government of India started this PSU unit for defense related earth movers, vehicle and Metro coaches manufacturing.
2. Indian Railway: Coach Manufacturing unit granted for Kolar district in railway budget 2012. The government of Karnataka provided two places: in Kurudumale Mulbagal Taluk and Srinivaspur Taluk for setting up the manufacture unit.
3. Power Grid Corporation of India has substation at Arahalli Village, Kolar-Chintamani-State Highway-5, Kolar.
4. All India Mission Tablet Industry at Bangarpet.

Famous trading markets

1. Tomato trading market at Vadahalli, Mulbagal Taluk
2. Kolar Sericulture and Agriculture (tomato and other vegetables) market at Kondarajanahalli (Malur - Bengaluru road), Kolar Taluk
3. Mango trading market at Srinivaspur
4. Jewellery shops at Kolar Gold Fields

Narasapura Industrial Area:

Narasapura Industrial Area, Narasapura in Kolar taluk will become a hub for many automobile and aerospace companies setting up their manufacture unit here. Many multinational companies are also expected to establish their units in this industrial area.

6.6 Mining and Minerals

Kolar is rich in mineral resources. Black granite, building stone deposits, curb and rock stones are available in large quantity in the district. There are a few industrial units engaged in the district that prepare these resources for exporting to European countries through Chennai harbour. In view of this, there is immense scope for establishing export oriented curb stone units in the district. As officials agreed informally, curbing illegal quarrying and mining activities will not only restore ecological balance, but also help in building the state exchequer in the district.

The taluk is well connected with bus and train facilities. The nearest sea port is at Mangaluru and Chennai. These Ports provide a gateway for export and import trade throughout the year. The nearest airport to the Taluk is Bengaluru, Mangaluru, Hyderabad and Chennai. The communication facilities in the Taluk through Telephones and mobiles, post and courier services have made an easy access to Industrial Development.

6.7 Poverty alleviation

BPL Households

Large numbers of India's poorest people live in the country's semi-arid tropical region. In this area shortages of water and recurrent droughts impede the transformation of agriculture that the Green Revolution has achieved elsewhere. Hence the continued presence of poverty means that creating social security measures is an important aspect of alleviating poverty. 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.

The table below gives a detailed inventory about the public distribution system in the district. There are a total of 521 fair price shops in the district covering 1608 villages in the district. There are 449049 ration card holders, out of which 301928 are BPL card holders (67.24%) and 114752 APL card holders in the district.

Table 61. FPS and Ration card details in Kolar (2011-12)

Taluk	No. of Villages	Anthyodaya	BPL	BPL %	APL	Total	PDS outlets
Srinivasapur	292	4565	44224	72.28%	12399	61188	93
Kolar	331	6893	74365	65.55%	32182	113440	148
Malur	314	5462	46117	68.80%	15454	67033	97
Bangarpet	356	9788	81714	62.19%	39900	131402	183
Mulbagal	315	5661	55508	73.05%	14817	75986	121
District	1608	32369	301928	67.24%	114752	449049	521

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

Agricultural wages

The analysis of land ownership in Kolar shows a skewed resource distribution as well as unsustainably small land holding sizes and hence, agricultural wages become a crucial element in the analysis of poverty in the district. With the perceived shortage of agricultural labour everywhere in the state, we would expect higher wage rates. Further, wage rates of male and female agricultural labourers would also tend to be differential. However the average agricultural wage rates as reported by the department of statistics shows surprising results. The department

reported a uniform agricultural wage rate of Rs 236.5 for all taluks for both men and women. While, this is unlikely to be true in reality, it shows that wage rates in the district are considerably higher than other districts that are predominantly dependent on agriculture.

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 20.998 akhs man-days for rural people in the district. The table below provides other important indicators of progress of the scheme in the district.

Table 62. Progress indicators of MGNREGA in Kolar

Progress indicators	2009	2010	2011	2012	2013*
Households provided with employment	204087	88262	59528	43596	58922
Total man-days generated	12388795	4079433	2099807	2125728	3125600
Average number of man-days per household	61	46	35	49	53
Number of households with 100 days labour	27904	3722	928	3379	6956

Based on the table above, it can be seen that there is 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.

6.8 Employment and Unemployment

Employment can be defined as the means to secure livelihood entitlement, a crucial link between the growth and human development. The meaning of the term 'Growth' is complete when it gets translated into real employment opportunities and empowerment of people to improve their earning power. Employment has a very important role to play in enhancing human capabilities. In a developing country situation, most poor have access to only asset i.e. labour. Therefore expansion of productive employment is crucial for sustained poverty reduction in the country. Employment not only ensures economic security, but also promotes general participation in society and the economy. Employment is necessary for promoting better health and education not only for those who are employed, but also for those who are dependent on them. The need to attain the objective of inclusive growth through productively and gainfully employing its growing labor force is therefore widely regarded as one of the challenges of human development. Therefore, this section of the chapter deals with investigating the situation of employment opportunities and to analyze the magnitude of unemployment in the district.

Employment is a relationship between two parties, usually based on a formal or informal contract, one being the employer and the other being the employee. There exist various forms of employment which deviates from the default definition of the employment. They can be classified under four different categories like,

- The paid employees, Employees are those who are in employment and are paid a wage by an employer for the work they do. This category may be further sub-divided into permanent and temporary employees¹¹.
- The self-employed are defined as those who, in their main job, work on their own account, whether or not they have employees.
- Unpaid family workers are those whose work contributes directly to a business, owned or operated either by themselves or by a relative, but who receive no pay or profits for this work.
- Participants in Government-supported training schemes. People on the government-supported training schemes include those getting work experiences with an employer and those wholly engaged in training. The total number of people in employment is analyzed whether they work full or part-time.

Trends in work participation

The most observed universal trend is employment opportunities are created in linear growth thereby leading to a lot of unemployment, under-employment and disguised employment which is opposite to the rate of population growth (logistic growth). The case of Kolar district is no different to this trend. The decadal population growth rate (2001-

¹¹ Temporary workers are those employees who say that their main job is not permanent in one of the following ways: fixed period contract, agency tempting, casual work, seasonal or other temporary work. This is also based on respondents' self-assessment. Data on people's reasons for engaging in part-time and temporary work provide information on the number of people who could not find full-time or permanent employment.

2011) was observed as 10.77% with high demands for labor in the district across all three sectors of the economy. In all, employment can be classified on the basis of the nature of work, namely, main workers represented by **cultivators, agricultural laborers, artisans and marginal workers**.

Workforce: The total population of Kolar district as per 2011 census was 15.41 lakhs. During the last decade (2001- 2011), the district population has increased considerably. The decadal growth rate in population works out to 10.77 percent.

The district is basically a mixed economy. Out of the total population of 15.41 lakhs, 10.56 lakhs live in rural areas. The rural population constitutes 68.57 percent of the total population. Interesting fact is, the decadal growth rate of rural population is 7.57 percent while the urban population decadal growth rate is recorded to 18.68%. This clearly indicates the increasing urban population and high migration of young people from rural areas to towns within and outside the district.

Employment in Kolar district can be evaluated from various angles, depending on the perspective and emphasis. For the sake of analysis, the employment is viewed as work participation in various sectors in Kolar district. The workforce in the district is studied looking into the work participation by men and women. The taluk-wise analysis on different forms of workforce is discussed in the following sections. The table below gives work participation rate in Kolar district and state during 2011.

Table 63. Work participation rate in Kolar district and state (in %)

Particulars	Kolar	Karnataka
Work participation rate	52.55	45.62
Percentage of total workers within total population	52.63	38.27
Percentage of marginal workers within total population	18.56	16.00
Percentage of agricultural labourers within total workers	28.03	25.67
Percentage of home based industries within total workers	3.36	3.28
Percentage of other workers within total workers	43.10	47.44

The table shows that work participation rate and % of total workers in Kolar is higher in proportion than the state average. Further, the values of many other employment related variables (like share of marginal workers, agricultural labourers, home based industries etc) in the district are comparable to that of the state.

The next 4 tables depict the workforce available in the district across the taluks with specific information on main and marginal workers. In all taluks of the district, female work participation is lower in comparison to male work participation rate. However, the rates are particularly low in Bangarpet taluk. Mulbagal and Srinivasapur taluks have the highest female work participation rates in the district. The male work participation rate in the district is comparable between all the taluks.

Table 64. Gender-wise Work participation rates in Kolar (2011)

Taluk	Male	Female	Total
Srinivasapur	67.43	49.745	58.65
Kolar	65.92	37.210	51.74
Malur	67.27	38.677	53.30
Bangarpet	63.40	29.021	46.27
Mulbagal	67.46	51.114	59.34
District	65.85	39.003	52.55

Source: Census 2011

Table 65. Work participation Rate- total and marginal workers in Kolar (in %)

Particulars	Total and main workers			
	2001		2011	
	Total	Main	Total	Main
Kolar district	56.15%	81.43	52.55	82.16
Karnataka State	44.53	82.28	45.62	88.30

Source: Census 2011, 2001

The above table shows the proportion of total main workers and marginal

workers in Kolar in the years 2001 and 2011. It shows that both the proportion of workers as well as proportion of main workers among workers has increased marginally in Kolar, while it has increased substantially at the state level. This situation indicating that employment levels in the district haven't grown to the extent visible in the state resulting in about 2.2 lakh people in the district, not employed throughout the year. About 30% of this group are men and the remaining are women.

Table 66. Trends in main and marginal workers in Kolar (%)

Kolar	Male Workers				Female Workers				Total			
	Main		Marginal		Main		Marginal		Main		Marginal	
	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
Rural	85.42	90.11	14.58	9.89	69.99	67.15	30.01	32.85	79.14	80.21	20.86	19.79
Urban	90.28	94.34	9.72	5.66	83.63	81.86	16.37	18.14	88.65	91.62	11.35	8.38
Total	86.81	91.04	13.19	8.96	72.17	68.54	27.83	31.46	81.43	82.16	18.57	17.84

Source: Census 2001,2011

The previous table presents the gender trends in main and marginal workers in urban and rural areas of Kolar. It shows that the share of male main workers in Kolar increased both in urban and rural areas in Kolar, reaching more than 91% in 2011 with corresponding decreases in marginal workers. However, in both urban and rural areas, female main workers reduced in proportion to marginal workers. Thus, on the overall, marginal workers in rural Kolar are higher in proportion than in urban areas. Further, in urban areas, proportion of marginal workers has decreased by 3 percentage points, indicating higher full time employment opportunities in urban areas for male workers than in rural areas of the district.

The table below captures the taluk-wise trends in different types of employment recorded through Census. It includes both main and marginal employment categories. From the table, it is evident that more than 64% of the employment opportunities in Kolar is based in agriculture, with 36.70% of the workers employed as cultivators and 27.37% employed as agricultural labourers. Employment in 'Others' which includes all government servants, municipal employees, teachers, factory workers, plantation workers, those engaged in trade, commerce, business, transport banking, mining, construction, political or social work, priests, entertainment artists, etc employs 32.69% of the total workers in the district.

Table 67. Taluk-wise employment trends in Kolar (2011)

Taluk	Total Workers	Cultivators	Agri labourers	Household industry	Others
Srinivasapur	96591	38889 (40.26)	24479 (25.34)	1586 (1.64)	31637 (32.75)
Kolar	160213	44985 (28.08)	35714 (22.29)	8088 (5.05)	71426 (44.58)
Malur	99365	36124 (36.35)	31768 (31.97)	3587 (3.61)	27886 (28.06)
Bangarpet	163702	45877 (28.02)	36090 (22.05)	2891 (1.77)	78844 (48.16)
Mulbagal	114506	43716 (38.18)	32910 (28.74)	6565 (5.73)	31315 (27.35)
District	1235028	453233 (36.70)	337971 (27.37)	40111 (3.25)	403713 (32.69)

Source: Census 2011

6.9 Child Labour

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 survey conducted by the team appointed by the Deputy Commissioner of Kolar district in 2011 came out with an estimated 500 child labourers in the district. The taluk-wise child labour data are presented in table below.

Table 68. Child Labour trends in Kolar (2011-12)

Taluk	Child labours identified at dangerous work places		Child labours identified at non-dangerous work places		Total
	Boys	Girls	Boys	Girls	
Srinivasapur	60	-	-	-	60
Kolar	20	-	26	23	69
Malur	41	29	54	36	160
Bangarpet (excluding KGF)	11	-	62	02	75
KGF	55	-	-	-	55
Mulbagal	46	-	29	07	82
Total	233	29	171	68	501

Source: Survey of Child Labourers, Deputy Commissioner's Office, Kolar

The proportion of girls in total child labour is 47.23 per cent. Malur and Bangarpet (including KGF) had about 58% of the total child labourers found in

the district. The details of rehabilitated child labourers in residential schools is provided in the table below.

Table 69. Details of child labour rehabilitation in Kolar (2011)

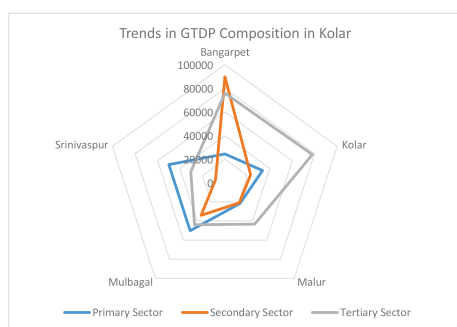
Non-government and voluntary organizations	Total number of admitted children		Scheduled caste		Scheduled tribes		Minorities		others		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
Saraswati Mahila mandal, Kolar	24	16	6	10	7	-	2	3	9	3	40
Maruti education society, Malur	13	17	5	3	7	2	1	1	1	10	30
Basavaeshwara Vidyasamsthe, Malur	24	22	7	5	3	3	3	4	11	11	47
Parivarthana multipurpose social work organization	28	22	8	8	4	1	-	-	16	13	50
Vinayaka mahila mandala, Mulbagal	-	-	-	-	-	-	-	-	-	-	-
Total	89	77	26	26	21	6	6	8	37	37	167

Source: Office of the CPO, ZP Kolar

The most common types of occupation and place of work of child labourers are: 1) Hotel 2) Garage 3) Brick Klins 4) Cattle rearing 5) Construction work 6) Agricultural work 7) Domestic Chores. The District authority has rehabilitated nearly 296 child labourers.

6.10 Radar analysis of GTDP composition in Kolar

The radar graph below presents the sectoral composition of GTDP among the taluks of Kolar in 2008.



Graph 20. Radar graph of GTDP composition in Kolar (2008)

It can be seen that the primary sector is the highest contributor to GTDP in Srinivasapur and Mulgabal taluks and the secondary sector is the highest contributor in Bangarpet taluk. In Malur and Kolar, tertiary sector contributes significantly towards the gross taluk domestic product in the district. Thus, it can be seen that there is diversity in the economic structure of the taluks of the district.

6.11 Concluding Remarks

The economy of Kolar is principally agricultural in nature since more than 64% of the work force is involved in the sector (either as cultivators or as agricultural labourers). Total land under agriculture forms about 51.8% of the total available land in the district. However, between 2004 and 2008, the primary sector registered a modest growth of

5% whereas, within the primary sector, the actual growth of agriculture and allied activities was just 3.43%, with 3 out of the 5 taluks (Kolar, Malur and Bangarpet) registering negative growth rates. This shows that there is an urgent need to improve the productivity of agriculture in order to sustain equitable economic growth in the district. However, this is a bigger challenge in Kolar since feasibility of surface irrigation is limited and the levels of groundwater extraction in the district have already reached unsustainable and alarming levels.

The land distribution patterns in Kolar through interesting insights. While the majority of farmers in the district are small and marginal farmers (88% of all landholders), their share of land ownership is only about 58%. The average landholding per landholder in the entire district is just under one hectare, thus largely limiting the choices of agricultural diversification. Considering the fact that Kolar has diversified agricultural outputs including Ragi, horticulture and vegetable crops, floriculture, sericulture Mangos and animal husbandry, the average farmer with less than a hectare land holding has to choose anyone of these choices, due to the lack of land, and thus expose himself fully to the risk of crop/price failure and related uncertainties associated with that crop.

The analysis of work participation rates in the district shows that, in all taluks of the district, female work participation is lower in comparison to male work participation rate. However, the rates are particularly low in Bangarpet taluk.

In summary, it is clear that the district faces many challenges in making sure

that its agriculture provides continued and increasing incomes to the people of the district. Industrial growth offers a complementary source of livelihood to the people of the district. However, industries within the district haven't grown to the extent of providing real choices for the majority of the people in the district to use it as a serious source of livelihood. Expansion of industrial firms operating in the district, diversification of industrial units and long term plans for inculcating skill training programmes for people in the district have to be prioritized if industrialization and related sectors have to address the challenges faced by the district's agricultural sector.

6.12 Small area study: The precarious situation of Groundwater in Kolar

Introduction

Kolar is one of the worst districts in India in terms of being affected by water shortage and ground water over-exploitation. Through this study, we try to understand the actual situation with regard to groundwater in the district, its availability and quality while also capturing perspectives of the community and government officials. We also present some of the positive steps being undertaken such as the National Drinking Water Security Pilot Project in Mulbagal Taluk (one of 15 Taluks where the pilot is being undertaken), examples of RO plants for drinking water and conclude with some broad recommendations based on the study undertaken. Apart from primary data, information and statistics for this small area study are drawn from the following sources: 1. Groundwater information booklet 2009 and 2012

published by the Central Ground Water Board, Ministry of Water Resources, Govt. of India, 2. District Statistics from the website of National Rural Drinking Water Programme and article (Narayanamurthy and Anil Navale Santhuram, 2013)¹².

Two Gram Panchayaths, one each in Bangarpet and Mulbagal Taluk were chosen for interaction with locals and assessment of ground realities with regard to availability of water and for capturing community perspectives.

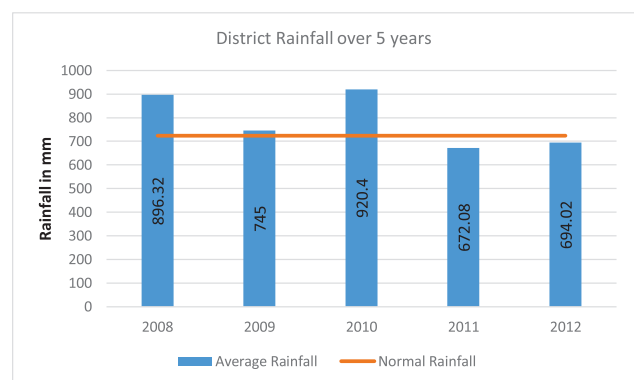
The accessibility and availability of water, whether it is for drinking & domestic purposes or for livestock and agriculture, has a key role in human development. The quantity and quality of water as well as the sustainability of the sources of water can potentially impact various human development parameters such as health, education, livelihood, indebtedness and migration.

Kolar is a land locked district and hard rock terrain of Karnataka in the maiden (plain) region and covers an area of 3639 sq.km. The district lies almost in the central part of peninsular India, which has immense bearing on its geo-climatic conditions. This district experiences tropical climate throughout the year, Kolar district owes its prosperity and development to the existence of ancient tanks. There are 2980 tanks which are highest number in the state. The main occupation of people is agriculture. In the absence of surface water irrigation system ground water is the main source of irrigation. The district has about 29,936 borewells which is also highest in the state.

Rainfall:

Kolar experiences a semi-arid climate characterized by typical monsoon tropical weather with hot summers and mild winters. Measured at 5 rain gauge stations in each of the 5 Taluks, normal annual rainfall ranges from around 799 mm at Bangarpet to around 857 mm at Kolar averaging 748 mm for the district. The South-West monsoon contributes about 52% to 55% of the annual normal rainfall, followed by North-East monsoon season (30% to 32.5%). The remaining about 15% of rainfall occurs in the pre-monsoon season. Rainfall is the key climatic variable that governs the regional hydrological cycle and availability of water resources. Rainfall data are essential in many hydrological analyses and engineering design projects including drinking water projects.

The below graph gives the information of the average annual rainfall received by the district from 2008 to 2012. It may be seen that there is no distinct trend of increase or decrease in the quantum of annual rainfall as compared to normal, but interactions with officials have revealed that the rains of high-intensity are not resulting in run-off that is useful to fill command areas that can act as water sources.



Source: District Statistical Office, Kolar

Graph 21. Year-wise rainfall in Kolar

¹²Narayanamurthy, Shruthi, and Anil Navale Santhuram. 2013. "Prevalence of Dental Fluorosis in School Children of Bangarpet Taluk, Kolar District." *Journal of Orofacial Sciences* 5 (2): 105. doi:10.4103/0975-8844.124253.

Ground water scenario

In Kolar, almost all the domestic water requirement is met by groundwater for its population of more than 15 lakh and also for the livestock. Kolar also has the highest number of irrigation tanks in the state, but its dependability for irrigation depends upon the rainfall. The area is drought-prone and hence the significance of groundwater for the district cannot be further emphasized.

Table 70. Ground water level in observation borewells

Taluk	Depth of Borewells (in mtrs)					Percentage use of groundwater extraction
	2008	2009	2010	2011	2012	
Srinivasapur	22	23	23.39	23.66	31.04	166%
Kolar	21.02	27.44	21.69	32.33	40.59	165%
Malur	20.52	18.64	18.6	33.19	38.69	184%
Bangarpet	22.46	22.7	24.18	24.73	25.43	211%
Mulbagal	9.09	9.02	10.88	14.2	16.94	201%

Source: Dept. of Mines and Geology, ZP, Kolar

The groundwater situation of the district is a cause for concern with 68% of the monitoring points of Central Groundwater board showing falling trends. The district also has the highest number of bore wells in the state (nearly 30,000) and the unchecked rise in number of bore wells is also contributing to the depleting groundwater. As there are no perennial rivers that flow through the district, it is found that more than 95% of the cultivated land in Kolar is irrigated by wells – earlier by dug-wells / open wells, which are now being replaced by bore wells. As per 2012 report of Central Groundwater Board, the net annual ground water availability of the district is 29144 Hectare Metres (HAM), whereas the draft for all uses is 52635 HAM and there is no water resources available for future irrigation development as of 2009. All the blocks of the district are categorized as overexploited, and there is no further

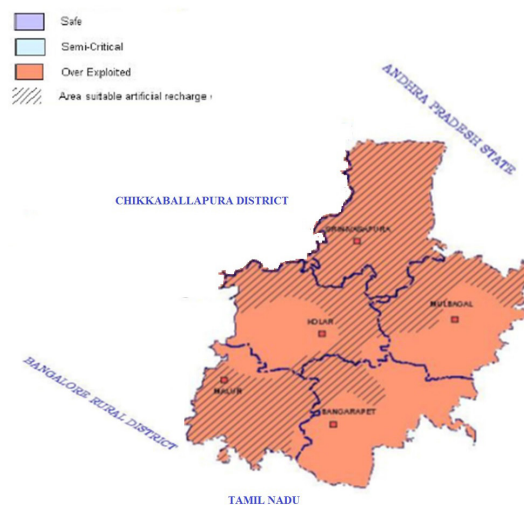
scope for groundwater development. As the data shows, all taluks have high ground water exploitation (more than 100% denotes that the groundwater is not being recharged). Bangarpet followed by Mulbagal have the highest rates of unsustainable groundwater extraction. Further, as depicted in the figure below, the groundwater is over exploited in the entire district and barring a few areas of Mulbagal and Bangarpet, all entire geographical area has the potential for groundwater recharge.

The information received from the Department of Mines and Geology, Kolar also reveals that the groundwater level in their observation bore wells have been decreasing consistently. The table below provides a glance on the increase in usage of borewells in the district.

Table 71. Number of borewells in Kolar

Taluk	2008	2011
Srinivasapur	10355	12343
Kolar	16610	18084
Malur	12397	14080
Bangarpet	16434	18035
Mulbagal	12431	16715
Total	68227	79257

Source: Dept. of Mines and Geology, ZP, Kolar



Map 5. Graphical depiction of groundwater status in Kolar

Traditional water storage mechanisms and changing patterns in farming

Kolar District has been known for its traditional water storage mechanisms – Keres, Kuntas and Kalyanis (tanks of different sizes) and network of **Raja Kaluves** (canals). The tanks were constructed by kings and philanthropists centuries ago and were designed to catch and store the water from run-off slopes and maintained by communities. There are records of Kolar having upto 4488 tanks and together, these tanks served the multiple purposes of drinking, domestic use, irrigation as well as support for livestock.

Over a period of time, the lack of maintenance of these tanks and Kaluves have resulted in massive siltation and rainwater accumulation in these tanks and percolation has also lowered. The increasing dependence on borewells for irrigation is attributed to this. There have been changes in the farming practices over the years both in the methods of irrigation as well as crop patterns. The proximity of Bengaluru ensures that there is a high demand for vegetables and as a result, the cultivation of vegetables has increased which gives the farmers better and quicker financial gains compared to paddy or other grains.

There has also been a shift in irrigation methods from open wells and dependence on tanks and traditional water holding structures to borewells. However, a well-managed tank irrigation system is historically regarded by the poor as an asset for their continued dependence on agriculture as they would lack the means to invest in borewells. Land owners with larger tracts of land are also involved

in cultivating eucalyptus, which is also known to extract a lot of groundwater. Thus there is a case that the poor groundwater situation in the district can lead to greater disparity between the rich and the poor, but establishing the same is beyond the scope of this study.

Hebbani and Sulikunte

Among the Taluks, Bangarpet and Mulbagal are affected more seriously and as part of the study, the groundwater situation of one Gram Panchayath each in these Taluks were closely analysed. Bangarpet records groundwater overexploitation of 217% while the corresponding figure for Mulbagal is 201%. However, Mulbagal is considered by some experts as more vulnerable due to its elevation and the fact that four watersheds flow out of the region.

Snapshot Hebbani

Hebbani GP area in Mulbagal taluk is one of the most water stressed and quality affected areas in Kolar district with Andhra Pradesh border just an average of 1 km away. With 1876 households and a population about 10,000, the GP has 15 habitations across 9 revenue villages. It is one of the most over-exploited pockets with an annual groundwater draft of about 201%.

The table below shows the estimated drinking water requirements of Hebbani GP in Mulbagal Taluk and also the water availability per day considering the fact that there are 23 bore wells used to source drinking water in the GP. The population of this GP is about 10,000 and the per capita water availability is -computed based on the number of hours of pumping. During summers,

the power supply is usually limited to 3 hours per day and it can be seen that the average LPCD of water available for the population of Hebbani comes to about 29, which is significantly short of the estimated 55 LPCD required for sufficient consumption. Also, this does not take into account the water requirement for livestock, which have to depend on irrigation bore wells.

Table 72. Drinking water availability and needs of Hebbani GP

Number of habitations	15 habitations across 9 revenue villages	
	Human	Livestock
Drinking water needs (Liters per day)	Human	551870
	Livestock	220040
	Total	771910
Drinking water availability (Liters per day)	@6 hours of pumping	@3 hours of pumping
	576360	288180
Per capita water availability for people	@6 hours of pumping	@3 hours of pumping
	57	29

Source: AFPRO

Sulikunte Snapshot

Sulikunte GP of Bangarpet Taluk has 10 revenue villages and a total of 1913 households and a population of 11714. Located about 55 kms from Bengaluru, Sulikunte is a typical GP in Bangarpet Taluk, which has overexploited the groundwater resources and there is no possibility of future irrigation development through groundwater. 'Sulikunte' itself is a small tank located less than a km away from the Gram Panchayth office which contains water filled with slime and algae.

The water extraction for irrigation was done through open wells using animals about 40 to 50 years ago, but these have started failing in the last 20 to 30

years. Borewells gained prominence in the 1990s and while water was available at around 350 feet earlier, it is now common to dig atleast a 1000 feet to get water. As borewell failures have increased and water availability reduced from these wells, the extent of irrigated land has also decreased. There is also an increasing trend of growing Eucalyptus among the farmers here, which are giving good financial returns, but likely to have an adverse impact on the groundwater ecosystem in the long run.

Quality of water

The ground water quality is an issue facing the district of Kolar with Flouride and Nitrate contamination reported from several parts of the district. Fluoride concentration of more than 1.5 mg/l. is reported in pockets from most of the taluks. Nitrate concentration of more than 45 ppm is reported from parts of Mulbagal, Bangarpet and Malur taluks. Intensive irrigation (with heavy synthetic application) and over-exploitation make the groundwater vulnerable for contamination. Bangarpet as a Taluk also suffers from other groundwater contamination issues such as high arsenic levels (possibly as a result of gold mining in KGF), high TDS, coliform bacteria and hardness as noted by various studies.

High fluoride content in the groundwater has resulted in fluorosis among the people. Yellowness of teeth and pits in the teeth were noticeable among both the young and elderly people during interactions with them in Sulikunte. Studies undertaken by the Department of Community Medicine, Sri Devaraj Urs Medical College, Kolar, Karnataka, India

indicate a 31.05% of prevalence of dental fluorosis among school going children, predominantly in females. Other studies on the topic corroborate that fluorosis is a public health issue in Kolar.

Interactions with the community in Hebbani GP of Mulbagal Taluk have also brought to light health problems such as colouring of teeth, pain in the limbs and joints, fever, etc which they attribute to quality of water. There are almost 170 affected habitations in Mulbagal Taluk, out of which 37 are affected by Flouride contamination and 117 by Nitrates contamination.

Table 73. Drinking Water Quality Status (as on 1.4.2012)

Parameter	No. of Habitations affected	Percentage (%) of Quality Affected Habitations
Flouride	37	9.51
Iron	7	1.79
Salinity	14	3.59
Nitrate	112	28.79
Total affected habitations	170	43.68

Source: Data provided by AFPRO

The percentage of population of people with disabilities in Kolar district is close to both the State (2.13%) as well as the National average (2.21%). As per Census Data 2011, there are 32,277 PwDs are in Kolar which is 2.10% of the total population in the district. Kolar stands at 10th position in the state with respect to percentage of population of people with disabilities (along with Vijayapura and Davangere.)

It is important to note that the locals attribute incidence of disabilities to contaminated groundwater. These were

highlighted in group discussions and interviews with local communities and Gram Panchayath members. However, in the interactions with medical officers in Mulbagal Taluk, concrete linkages in this regard could not be established.

Voices from the ground

Interactions with the community corroborate the seriousness of the situation of groundwater and its quality. This section aims at providing a snapshot of the community perspective.

Deep bore wells, high debts

Sulikunte in Bangarpet Taluk is replete with stories for farmers who have invested a lot in bore wells, many of which have failed in a span of 5 to 6 years and some of them have failed within 2 years and within 15 days to 2 months in some cases. A common feature among almost all the farmers interviewed is that they have shifted from open wells to bore wells for irrigation. One of the more common reasons cited by the farmers for the failure of bore wells as well as open wells that have functioned for decades is the digging of another bore well by a neighbouring farmer in close proximity. At the same time, it is normal to come across bore wells that have been dug more than 1200 feet deep. In cases where bore wells haven't failed over the years, the yield has considerably reduced.

Many farmers with a land holding of 5 acres or more have started growing Eucalyptus in parts of their land seeking better financial returns. As per the farmers interviewed, at least 3000 Eucalyptus trees can grow in 3 to 4 acres of land and can fetch about Rs. 1.5 lakh to Rs. 2.0 lakh in about 4 to 5 years' time

with negligible investment and minimum maintenance efforts. They feel more assured about this income. However, those farmers with lesser land holding (2 acres or lesser) grow Ragi, Mulberry, Tomato and a few other Vegetables with either low yielding bore wells or depend upon rainfall for the cultivation.

“As of now, there could be around 100 to 200 Persons with Disability in our Gram Panchayat limits, but if you come five years later, you may find around 50% of our population with disability. We know we are living in risky situation. We are inevitably drinking water with high fluoride content and other toxic materials. Malnourishment is common among us, especially in children and adolescents. So, certainly there will be more disabled people for you to survey in the coming years”

**Ex. President of Yerramvaripalli GP,
Srinivasapura Taluk**

(Names changed to maintain confidentiality; about 25 farmers were interviewed and discussions were held with Gram Panchayath members)

- Papanna owns 6 acres of land in a village in Sulikunte GP irrigated by open well, only 20 feet deep which was dug about 50 years back, with which he cultivated tomato, chilly, cabbage and potato. The water in the well started depleting and ultimately failed in 2007-08. In 2005, a borewell was dug at 600 feet with which about 4 acres of land was irrigated, but it failed in 2008. Now Papanna only grows rain-fed Ragi.
- Madan has 20 acres of land out of which 18 acres are dry and only 2 acres are irrigated. Two open wells were in use about 50 years back, both of which failed in the 1980s. About 25 years back, a bore well at a depth of

160 feet irrigated about 7 to 8 acres of land and functioned well for 16 years before it was re-bored to 700 feet. The well failed in 2010. Another borewell was dug about 10 years back at 250 feet and after some years re-bored to a depth of 1100 feet. A total of 7 bore wells were dug in the land, out of which 5 have failed after reaching a depth of 1000 feet or more. Madan used to cultivate tomato and other vegetables, but has now grown Eucalyptus in 4 acres of land. After constantly investing in borewells, he is expecting an income of Rs. 1.8 lakh from 3200 Eucalyptus trees in about 5 years' time.

- Subbanna has about 3.5 acres land which he used to irrigate with an open well dug at 90 feet. In 1993, he installed a bore well close to a lake at a cost of Rs. 25,000/- and was also in a position to give free water to another farmer. It was re-bored to about 700 feet in 1996/97 at a cost of Rs. 50,000/- but the bore well failed in a few years. In 2009, he invested Rs. 6 lakhs in a bore well at 1050 feet, which was later deepened to 1300 feet. The relentless investment in bore wells, which are eventually failing has left him financially indebted.
- Kumar, who inherited a farm from his parents spent about Rs. 15 lakhs within a month for digging 3 borewells, but all the wells failed and no water could be extracted whatsoever.

The question of sustainability

Through interactions with the farmers and community members in Sulikunte, it was clear that the sustainability of groundwater availability is a serious issue and the continuous depletion from the high number of bore wells that are being dug as well as cultivation of water

intensive vegetables and Eucalyptus. The poor existing groundwater situation and the fact that there is little scope of further development of groundwater can potentially cause socio-economic distress. However, these interactions also revealed that the proximity of a metropolitan city such as Bengaluru is providing sources of employment to the people from Sulikunte and nearby GPs. While this may be looked at as a positive option that helps in mitigating economic hardship, the future of agriculture as a primary source of occupation is not guaranteed. There is also a privately owned golf-course in Sulikunte and how the high water requirements of maintaining a golf-course is impacting the groundwater situation could not be estimated.

Farmers' expectations

Interactions with the farming community across different parts in Kolar revealed that they are expecting a Tank Filling program recommended by the Paramashivah commission to solve their water woes. This program involves diversion of the tributaries of Netravati river eastwards and filling the tanks in Tumkur, Chikkaballapur, Bengaluru Rural, Ramanagar and Kolar districts. At the time of writing this report, the Government is studying the techno-economic and ecological feasibility of the project, but the farmers in Kolar seem to have high hopes of the project.

Positive measures

The National Drinking Water Security Pilot Project

With the objective of accomplishing drinking water security in water-stressed and quality-affected areas in the country, the Government has launched a national

pilot program in 15 blocks of the country to test and demonstrate the concept of Drinking Water Security Planning by addressing various dimensions of water security. The 15 blocks are spread across 10 states are those with alarming levels of groundwater and Mulbagal Taluk of Kolar district has been identified as one such block.

Drinking Water Security Pilot Projects are launched with the objective of achieving drinking water security in a holistic manner, through a four-pronged approach of

- Measures for source sustainability through convergence with MNREGS, IWMP & other Watershed programmes and NRDWP
- Participatory integrated water resources management led by Gram Panchayats
- Preparation of drinking water security plans by villages
- Making the selected villages open defecation free and ensuring proper solid and liquid waste management

The project is funded by National Rural Drinking Water Project and Nirmal Bharath Abhyan. The organization structure for the project comprises agencies at central, state, district and taluk levels, the core groups and working committees at various levels. The Central Groundwater Board and WSP-SA (World Bank) provide the necessary technical support to the project. The latter includes CGWB and WSP-SA (World Bank). The funding for the project comes from NRDWP and NBA.

Though the state level core committee includes the RDPR, at the district and taluk levels, there is involvement of multiple line departments, with the nodal department being the PRED (Panchayath Raj Engineering Department). The project characteristically depends heavily on convergence action from the departments and community participation through the involvement of Village Water and Sanitation Committees.

In Mulbagal Taluk, AFPRO (Action for Food Production) is the support organization that is implementing the project. AFPRO has reached several milestones of the project beginning with analysis of secondary data to understand the current demographical status, drinking water sources, availability, supply and usage. With the help of Gram Panchayath members and PDOs, the communities have been made aware of NDWSPP and its objectives. Participatory Rural Appraisals (PRA) to map the land use in terms of rain-fed agricultural land, irrigated area, barren land, forest land, water bodies, open defecation sites, etc in the Gram Panchayaths followed by the constitution of VWSCs as per norms. The VWSC members were then the contact points for AFPRO for discussions and capacity building on water & sanitation issues.

Subsequently, water budget estimation workshops were carried out in all the villages wherein the concepts of hydrological cycle, water availability on the earth, measurement of groundwater levels in the borewells, rainfall, discharge of a pump, etc were made known to the villagers and VWSC members in particular. Water budgeting exercises

help the community understand and compute the groundwater availability from rainfall and surface water recharge on the one hand and water usage across sectors viz. drinking and domestic purposes, irrigation, livestock, etc on the other. Once the supply and demand estimation is made, the communities have a greater understanding of the water situation and can start developing the water security plans for their villages.

Water budgeting is a key exercise and has an impact on the effectiveness of NDWSPP. Following this activity, the Village Water Security Plan is developed, which comprises several water management and conservation activities and forms the crux of NDWSPP implementation. The program also stresses on sanitation with a target of making all villages open-defecation free. These activities were yet to commence at the time of writing this report. With good support from the community, the actions under NDWSPP can possibly help address the critical issue of groundwater availability and quality in the water-stressed areas. It is hoped that the pilot programs are successful and can be replicated in other parts of the country as well.

Safe Drinking Water supply through Reverse Osmosis plant

In order to provide safe drinking water at low cost, a reverse osmosis water treatment plant has been installed in the limits of Hebbani Gram Panchayath in Mulbagal Taluk. The plant has been built at a cost of about Rs. 15 to 16 lakhs (including the building) from a convergence of funds for various schemes. Local political leadership has

been instrumental in ensuring that the plant was built and that it provides water at a low cost. The villagers in the vicinity of the plant purchase water at Rs. 5/- for 25 litres.



Photo 11. Villagers collect treated water from a Reverse Osmosis plant in Hebbani

The plant is installed to cater to the needs of a population of 7000 people. However, the number of people who avail this facility is well below this target. This is because it is more convenient to people living close to the plant or for those who have vehicles. To make sure that the water reaches more people, the PDO along with locals is considering buying large steel drums and keeping them at the GP headquarters.

While it is a welcome fact that initiatives such as these are providing safe drinking water in predominantly water-stressed areas, there are a few challenges with access for people staying at higher distances from the plant. Also, the waste water from the plant is not treated as of now before discharge. This would pose another problem as the scale of functioning goes up. It may thus

be concluded that such plants can help provide clean water to few surrounding villages, but the lasting solution to the problem of access to clean drinking water lies in covering all households with tapped water and having a reliable purification mechanism before supply.

Conclusion and recommendations

It must be noted that Hebbani and Sulikunte are not isolated Gram Panchayaths who face severe water problems. The issue of availability of water for drinking and irrigation reverberates throughout the district in various places and is visibly most likely to affect the sustenance of agriculture as a primary occupation in the district. The proximity of the industrial hub in and around Bengaluru, the employment opportunities for youth and continued expansion of industrial activity beyond Hoskote towards Kolar are also contributing factors towards this. At the same time, the health of people as a result of groundwater contamination is also a matter of concern and is only likely to worsen if not addressed immediately. Incidents of fluorosis among children are visible and interactions with the community bring to light health issues faced by them such as joint pains, etc. The sanitation scenario of the district also leaves much to be desired as detailed out in the main chapter.

Based on the information summarised in the study and an analysis of perspectives from various quarters, the following are recommended as steps for further action.

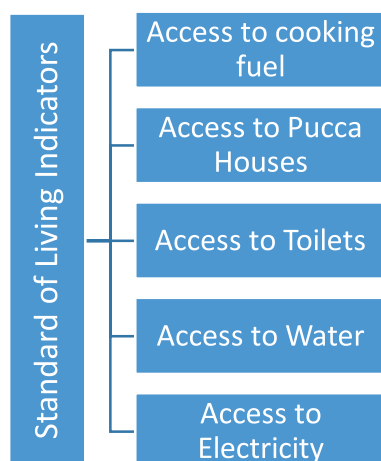
- A detailed study on groundwater contamination and its health impact be carried out and specialized medical units for treatment of ailments occurring from groundwater contamination be set up
- Though there is evidence of depleting groundwater levels, consolidation of the factors contributing to the same (change in cultivation pattern, increasing number of borewells, decline of traditional water storage and conservation techniques) must be made.
- Further to this, efforts to conserve water through regulation and maintenance of tanks, watershed programs and conservation efforts to rejuvenate groundwater with community participation and a check on the increasing number of bore wells are necessary. Processes such as 'water budgeting' adopted by the National Drinking Water Security Pilot project are a step in the right direction
- Cultivation for commercial gain is a present day reality, but extensive cultivation of water intensive crops including vegetables, expansion of area for growing Eucalyptus, are also contributing factors to groundwater depletion and threat to sustainability of agriculture in the district. Hence a district policy on cultivation with the participation of departments of agriculture, horticulture and forests may be prepared to bring in a balance in land use and conservation of groundwater.

* * * *

Standard of living

7.1 Introduction

The availability and quality of housing affects the physical and mental well-being of the tenant. As housing other factors/components like supply of water, electricity, and sanitation are also very important to determine the quality of human life in the society. Housing not only provides shelter for the human being it also gives identity, an address to avail benefits from the government schemes too. The existing status of housing, water, sanitation, electricity supply of the district are discussed in this chapter.



Graph 22. Indicators of standard of living

Standard of Living Indicators contribute significantly to the computation of Human Development Index. The computation of HDI 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. 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

Table 74: Number of Households in the District

Taluk	Rural	Urban	Total
Srinivasapur	37598	5545	43143
Kolar	52190	29976	82166
Malur	42665	9172	51837
Bangarpet	51562	47905	99467
Mulbagal	42230	12147	54377
District	226245	104745	330990

Source: Census 2011

The above shows tenure status of Kolar district in comparison with Karnataka State. According to 2011 census, Kolar district has 3, 30,990 households of which 226,245 (68.35%) rural households and 104,745 (31.65%) urban households. Based on the table below we can infer that across the district 78.94% lives in own houses, 18.31 lives in rent houses and remaining 2.73 are in other types of houses. Where as in comparison with the state average, more people lives in own houses and less in rent but other type is same as State.

Table 75: Housing Tenure status

Region 2001		Own Hous- es		Rented Houses		Other ¹	
		2011	2001	2011	2001	2011	
Kolar	Rural	94.00	92.46	4.57	5.44	1.43	2.09
	Urban	46.61	49.70	51.41	46.11	1.98	4.11
	Total	79.98	78.94	18.43	18.31	1.59	2.73
State	Rural	91.16	89.92	6.23	7.45	2.61	2.61
	Urban	54.62	51.05	41.98	46.04	3.39	2.89
	Total	78.46	74.24	18.66	23.01	2.88	2.73

Source: Census 2001 (including Chikkaballapur district) & 2011

92.46% of people in rural areas own their own houses, whereas this ratio is just below half in urban areas. This is displayed appropriately in the statistics of rented houses. Other housing tenures are marginal are of higher proportion in Kolar district in comparison to the state aggregate figures. When compared to 2001 (with the undivided district) & 2011, there is very less variation in the dynamics of rented and owned houses with slight increases in rented houses in the district.

Housing Condition

The table below shows, overall District has 68.98% of pucca¹³¹⁴ houses among them highest percentage of urban population (79.07%) are living in a pucca houses when compared to rural population (64.31%). Srinivaspur has 69.92% of rural and 81.71% of urban pucca houses, Kolar taluk accounts 66.38% of rural and

74.04% of urban pucca houses, Malur taluk has 60.34% of rural and 86.62% of urban pucca houses, Bangarpet has 61.87% of rural and 80.03% of urban pucca houses, and Mulbagal has 63.74 and 80.76 percentage rural and urban pucca houses respectively

Table 76: Households with pucca Houses

Taluk	Rural	Urban	Total ¹⁴
Srinivaspur	69.92	81.71	71.43
Kolar	66.38	74.04	69.17
Malur	60.34	86.62	65.00
Bangarpet	61.87	80.03	70.61
Mulbagal	63.74	80.76	67.53
District	64.31	79.07	68.98

Source: Census 2011

Among the taluks, Srinivaspur (71.43%) and Bangarpet (70.61%) had the highest percentage of pucca houses and Malur had the least percentage of pucca houses.

Table 77: Condition of houses category wise

Region	Category	SC			ST			Total (SC & ST and Others)		
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Kolar	Good ²	48.42	59.08	51.49	47.88	65.59	50.62	53.93	66.79	58.00
	Liveable ³	44.44	38.92	42.85	46.11	32.29	43.97	40.93	31.64	37.99
	Dilapidated ⁴	7.15	2.00	5.66	6.01	2.12	5.41	5.13	1.56	4.00
State	Good	45.46	61.69	50.23	45.80	63.29	50.01	51.73	72.39	60.06
	Liveable	47.88	34.13	43.83	47.16	32.86	43.71	42.96	25.67	35.99
	Dilapidated	6.66	4.18	5.93	7.04	3.86	6.27	5.29	1.93	3.94

Source: Census 2011

¹³ Other House: The household lives in a house which is neither owned nor rented, this will include the cases where rent free accommodation is provided to employees by their employers or where the ownership either of the land or of the structure does not belong to the household, i.e., houses constructed on encroached land in un regularized slums or anywhere else. Also, the households living in unauthorized manner in abandoned buildings, buildings under construction and buildings identified for demolition for which they have not to pay any rent and the households living in caves and similar natural shelters are also covered under this category

¹⁴ Pucca Households: is a combination of wall and roof which is made up of
Roof: Handmade Tiles, Machine made Tiles, Burnt Brick, Stone/Slate, G.I./Metal/Asbestos sheets, Concrete. Wall: made up of wood, stone packed with mortar, GI/metals/asbestos sheets, Burnt brick, concrete.

The above table depicts that condition of residential houses among different social categories. Totally there are 3,30,990 houses in the district among them 58% are living in a good conditioned houses, 38% are in a liveable conditions and 4% are living in a dilapidated houses. These figures are comparable to the state figures and the district falls short of the state average by about 2% points in houses under good condition. Among houses resided by SC and ST communities, the trends at the state level are more or less resonated in the district, although the proportion of SC rural dilapidated houses in the district are marginally higher in Kolar. In all categories, lesser share of urban houses are in dilapidated condition. However, lesser proportion of SC and ST houses are in 'good' condition and higher proportion of dilapidated houses, reflecting the comparative backwardness of these social categories with respect of quality housing.

Siteless households

A survey conducted by Zilla Panchayat in the year 2009 reveals that about 44,777 households were identified as House-less and 18,873 as site-less in the District. Highest number of houseless families found in Kolar taluk (11512), Bangarpet has 9710 houseless families, Mulbagal taluk has 9606 houseless families. Malur taluk has 7533 houseless families and Srinivasapur taluk has 6416 houseless families in the district. The table below takes the census figures of overall households to compute the proportion of house-less and site-less households to arrive at taluk comparisons.¹⁵¹⁶¹⁷

15 Good: Such census houses which do not require any repair and are in fairly good condition.

16 Livable: Census houses which need minor repairs are recorded in this category

17 Dilapidated : Such census houses which show signs of decay or those breaking down and required major repairs and are far from being in condition that can be restored

Table 78: Proportion of Houseless and Site less households

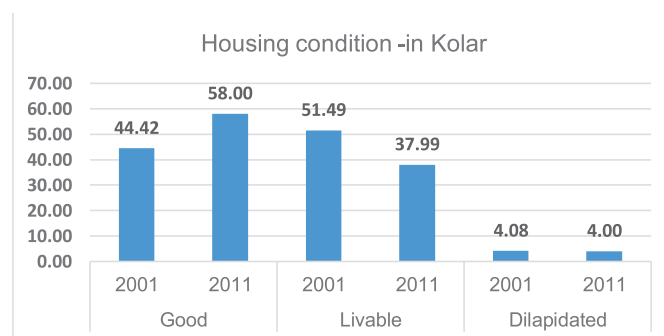
Taluk	Houseless	Site less
Srinivasapur	14.87	4.99
Kolar	14.01	5.90
Malur	14.53	8.62
Bangarpet	9.76	5.27
Mulbagal	17.67	4.00
District	13.53	5.70

Source: Zilla Panchayat, Kolar

Mulbagal had the highest proportion of house-less households whereas Bangarpet had the least. On an, the district had about 13.5% of the households who did not were houseless. Malur had the highest proportion of site-less households followed closely by the rest of the taluks. Mulbagal had the least proportion of site-less households in the district.

Condition of houses

The figure below captures the trends in housing conditions between two census periods of 2001 (undivided Kolar district) and 2011. It shows that the share of good houses have increased at the expense of liveable houses. However, the percentage of dilapidated houses has remained the same.



Graph 23. Trends in housing condition in Kolar

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 Kolar 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, Bicycle, 2 wheeler and 4 wheeler vehicles).

Table 79. Status of household assets

Taluk	Television	Bicycle	2 wheeler	4 wheeler	Mobile phone	Banking services	No assets (Telephone, TV, mobiles, 2 wheelers and 4 wheelers)
Srinivasapur	55.55	38.23	22.05	2.14	45.56	51.46	19.18
Kolar	67.43	43.73	30.09	3.96	58.17	50.46	11.10
Malur	65.52	41.42	28.74	2.85	56.11	53.37	13.19
Bangarpet	66.46	34.76	25.08	2.61	51.93	45.77	14.76
Mulbagal	55.61	34.12	20.42	1.73	53.17	45.66	18.79
District	63.35	38.38	25.74	2.74	53.51	48.85	14.84

Source: Census 2011

The asset status of Kolar shows that about 2/3rds of the households of the district have televisions whereas only a quarter of the households have two wheelers. More than half the households in Kolar have mobile phones whereas 15% of the people in the district have no assets, with the highest proportion reported in Srinivasapur. About 49% of the households have access to banking facilities and people owning 4 wheelers in the district is just about 2.74%. The

housing asset status in Srinivasapur and Bangarpet is comparatively low in the district and provides an indirect indicator of the situation of poverty in these two taluks.

7.4 Schemes for housing facilities

The Union as well as the State Government have launched several schemes and programs to provide housing for the citizens. The following major schemes that have been operational in Kolar.

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.

The Rajiv Gandhi Housing Corporation Limited 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. In addition to the above, housing has been provided under Basava Indira Awaas Housing Scheme 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. Details are provided in the below given table. Where figures are not mentioned, it indicates that there were no targets for the scheme in that particular year.

Table 80. Unit costs of houses under different housing schemes

Year	Rural Ashraya	Ambedkar Rural	IAY	Urban Ashraya
2000-01 to 2003-04	20000	20000	20000	25000
2005-06	25000	20000	25000	25000
2006-07	30000	-	25000	-
2007-08	-	30000	35000	-
2008-09	40000	40000	35000	-
2009-10	-	40000	40000	-
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. The disaggregated information on houses provided for SC, ST and general households is presented in the chapters on vulnerable groups.

Status of urban housing schemes

In the year 2010-11, only the Vajpayee Urban Housing scheme was active in Kolar. The table below presents the status of progress of this scheme across the taluks of the district.

Table 81: Houses Constructed under Vajpayee Urban Housing Scheme

Town Name	Year	Sanctioned	Achieved	Progress (%)
Malur TMC	2010-11	281	58	20.64
Mulbagal TMC		333	84	25.23
Srinivasapur TMC		127	38	29.92
Bangarpet TMC		350	68	19.43
KGF Robertsonpet CMC		70	13	18.57
Kolar CMC		0	0	
Total		1161	261	22.48

Source: RGRHCL

From the table, it can be seen that other than Kolar CMC, all other urban areas in the district were sanctioned with houses, a total of 1161 for the entire urban areas of the district. Out of this, only 261 have been completed, with a percentage progress of 22.5%. Other than Srinivasapur and Mulbagal, other urban areas could not even complete a quarter of the sanctioned houses in the district. This analysis shows that there are major hurdles in the implementation of urban housing schemes.

Status of rural housing schemes

The table below shows the status of rural housing schemes in the district. It lists the major schemes active in the district as well as their current status of progress, as reported by the RGRHCL. The overall progress of housing schemes in 2011-

12 is much higher than that of 2010-11, principally because of the difficulty in implementation of Basava Indira Awaas scheme. Achievement status of houses sanctioned in 2010-11, which were considerable (33,859) have been

very low (18.24%) whereas achievement of targets for houses sanctioned in 2011-12, predominantly through the Indira Awaas Yojana with relaxed measures for eligibility criterion and lesser targets have been higher.

Table 82: Houses Constructed under Rural Housing Schemes

Rural Housing Schemes in Kolar		2010-11		2011-12	
		Sanctioned	Achieved	Sanctioned	Achieved
Srinivasapur	Basava Indira Awaas	3377	1058	0	0
	Indira Awaas Yojana	0	0	561	251
	Ambedkar	61	16	0	0
	Rural Special Housing Schemes	1	1	0	0
Kolar	Basava Indira Awaas	8517	1716	0	0
	Indira Awaas Yojana	0	0	635	258
Malur	Basava Indira Awaas	3587	678	0	0
	Indira Awaas Yojana	0	0	410	137
	Ambedkar	0	0	6	0
	Rural Special Housing Schemes	35	9	0	0
Bangarpet	Basava Indira Awaas	14216	2102	0	0
	Indira Awaas Yojana	0	0	666	445
	Ambedkar	0	0	0	0
	Rural Special Housing Schemes	11	10	0	0
Mulbagal	Basava Indira Awaas	4000	568	0	0
	Ambedkar	54	17	24	0
	Indira Awaas Yojana	0	0	537	254
District	All schemes	33859	6175	2825	1345
			18.24%		47.61%

Source: RGRHCL

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.

Table 83: Distribution of Rural House sites

Taluk	Year	Sanctioned	Achieved
Srinivaspur	2010-11	888	0
	2011-12	667	0
Kolar	2010-11	1279	0
	2011-12	960	0
Malur	2010-11	995	0
	2011-12	746	0
Bangarpet	2010-11	1315	255
	2011-12	987	0
Mulbagal	2010-11	1066	0
	2011-12	799	0
District	2010-11	5543	255
	2011-12	4159	0

Source: RGRHCL

The table above shows the status of progress in distribution of rural housing sites, a major hurdle in the implementation of Basava Indira Awaas Yojana. From the table above, it is evident that other than Bangarpet taluk, no other taluk showed any progress in the distribution of sites, either for the targets sanctioned in 2010-11 or for those sanctioned in 2011-12.

Urban house sites distribution

Table 84: Distribution of Urban House sites

Town Name	Year	Sanctioned	Achieved
Malur TMC	2010-11	176	0
	2011-12	176	0
Mulbagal TMC	2010-11	176	0
	2011-12	176	0
Srinivaspur TMC	2010-11	176	0
	2011-12	176	882
Bangarpet TMC	2010-11	176	0
	2011-12	176	0
KGF Robertsonpet CMC	2010-11	423	0
	2011-12	423	0
Kolar CMC	2010-11	423	0
	2011-12	423	0

Source: RGRHCL

The table above shows the status of progress in distribution of urban housing sites. Similar to the statistics of rural housing site distribution, urban housing site distribution was zero in all urban areas except for Srinivaspur, where higher than sanctioned sites were distributed. This could pertain to achievement in site distribution from allotments of previous years.

7.5 Drinking water

Access to water is another important indicator to assess standard of living in Human Development. Source, access, availability and quality of water are the important aspects, we can quantify water according to the Government 55 LPCD¹⁸, whereas quality we should look at it very carefully by getting regular water quality Test through laboratory. In context of Kolar, we can see the scarcity of water because of less rainfall and over exploited ground water.

¹⁸ Litre Per Capita Per Day

According to the National norms for supply of drinking water (water for all domestic purposes) a daily supply of 40 litres per capita (40 lpcd) is considered the minimum requirement of people in rural areas in Karnataka, the State Government's Strategy Paper 2000-05 on Rural Water Supply and Sanitation adopts 55 lpcd as the norm for rural water supply throughout the state and 70 lpcd for the DDP districts. Fluoride concentration of more than 1.5 mg/l. is reported from many parts in the Kolar district.

However, some of the exploratory bore wells also have recorded fluoride concentration of 2mg/l and above. Nitrate concentration of more than 100 ppm is reported from parts of Mulbagal, Bangarpet and Malur taluks as reported by Central Ground Water Board of Karnataka (2012). As per Bureau of Indian Standards (BIS), Permissible limit is 1.5mg/l –fluoride, Nitrate is about 45 ppm. Exposure to high concentration of fluoride, causes mottling of teeth and, in severe cases, crippling skeletal fluorosis. Kolar where more than 80 per cent of the children in the age-group of 6-14 suffer from skeletal and severe dental fluorosis¹⁹ is only because of the water they consume has excess fluoride which has weakened their hands and legs. Worse, in Kolar, all villages depend on ground water for their domestic and other requirements. An epidemiological survey has revealed that over 26,000 people suffer from dental and

skeletal fluorosis and more than 39,000 people are prone to it is reported in Times of India.

15 blocks were identified as "A National Drinking water Security Pilot Project blocks" in the country. Considering the severity of the drinking water issues in Kolar, Mulbagal taluk is one of the pilot project block among 15 block project blocks (3 from Andhra Pradesh, 1 from Gujarat, 1 from Haryana, 2 from Madhya Pradesh, 2 from Maharashtra, 1 from Punjab, 1 from Rajasthan, 1 from Tamil Nadu, 2 from Uttara Pradesh and 1 from Karnataka. The objective of this pilot project is to understand issues like

- 1) Unit of management – district, block or panchayat,
- 2) Rural to Urban transition and disparities – minimum tariffs and standards,
- 3) Issues of agricultural power subsidies and energy component in drinking water to enable appropriate
- 4) Pricing and recovery
- 5) Conjunctive storage in aquifers and rainwater harvesting systems, and
- 6) Demand and supply side management of water.

The project is currently under implementation in Mulbagal taluk.

In the year 2011-12, Ministry of Drinking water and Sanitation has allocated a total Rs. 2833.72 lakhs for drinking water and sanitation whereas Rs. 1349.21 was from Central government and Rs. 1484.51 lakhs was from State government to the District.

¹⁹ Fluorosis playing havoc in Kolar, TNN | Jun 6, 2002, Times of India

Table 85: Major source of Drinking water in Kolar

Taluk	Tap			Tube well/Bore well		
	Rural	Urban	Total	Rural	Urban	Total
Srinivasapur	45.34	97.29	52.02	51.66	1.98	45.27
Kolar	62.60	77.95	68.20	33.18	11.14	25.14
Malur	61.32	93.14	66.95	36.35	1.67	30.21
Bangarpet	65.54	48.96	57.56	31.01	15.13	23.36
Mulbagal	66.27	86.72	70.84	29.34	8.51	24.69
District	60.85	68.06	63.13	35.64	11.35	27.95

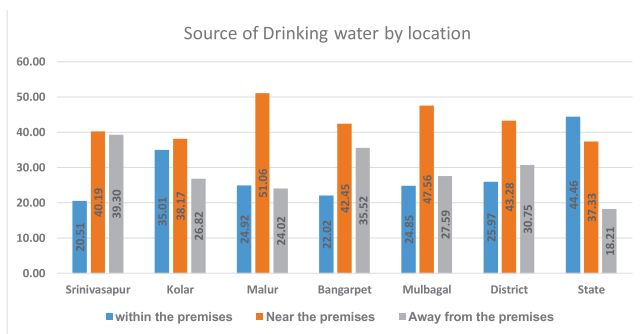
Source: Census 2011

The table above shows the major sources of water in Kolar (excluding open well, hand pump and other sources since the dependents on these sources are negligible). As per 2011 census, the highest population are dependent on tap water followed by secondly tube well/bore wells. Negligible amount of people are depending on open wells, hand pumps, river, canal and other sources. While the source of tap water in Kolar is also significantly sourced from ground water, the Census information does not record the actual source of water for tap water. In many instances in rural areas, untreated tube well/bore well water is distributed through community/household taps and cisterns.

Mulbagal (70.84%) has the highest access to tap water whereas, Srinivasapur has the least percentage of households served with tap water. On the whole, the district has 63.13% of households are depending on tap water which is supplied from the rural and urban water supply department. Tap water supply in urban areas are more than the rural areas, Srinivasapur taluk it is 97.29% of

tap water supply in urban areas which is double than rural areas (45.34%). Kolar taluk has 62.60% of rural and 77.95% of urban tap water supply, Malur taluk has 61.32% of rural and 93.14% of urban tap water supply, Bangarpet taluk has 65.54% of rural and 48.96% of urban tap water supply, Mulbagal taluk has 66.27% of rural and 86.72% of urban tap water supply and the District has 60.85% of rural and 68.06% of urban tap water supply. More number of rural households are dependent on bore well/tube well. 51.66% of rural and 1.98% of urban households in Srinivasapur, 33.18% of rural and 11.14% of urban households in Kolar, 36.35% of rural and 1.67% of urban households in Malur, 31.01% of rural and 15.13% of urban households in Bangarpet 29.34% of rural and 8.51% of urban households in Mulbagal and 35.64% of rural, 11.35% of urban and 27.95% of total households of District are dependent on bore well/tube well for drinking water. Very negligible amount of District households 1.6, 0.8% and 5.17% of households are dependent on well, Hand pump and other sources of drinking water.

The graph below presents the trends in location of water sources in Kolar in comparison with the state. In the district only 25.97% of the households have access to drinking water within the premises. This is quiet below than the state average value of 44.45%. 43.28% of the district households have access to drinking water near the premises and 30.75% of households have access to drinking water away from the premises.



Graph 24. Location of source of drinking water in Kolar

Compared to the state, lower proportion of households have access within the premises, more number of households have access near the premises and away from the premises. Karnataka on the average, has better access to drinking water compare to Kolar. Srinivasapur has the highest proportion of households where drinking water sources are away from the premises (about 40%) whereas Kolar has the highest proportion of households where source of drinking water is within the premises of the household. However, as noted above, the district average availability of water within household premises is considerably lower than the state average, thus highlighting the issues with quality of water supply in Kolar district.

During field visit to 3 villages of Avani GP, Mulbagal Taluk it was found that the households received water, only once, in 6 days.

In the village of V.Guttalli of Avani GP, there was only one common water tap for all dalit households.

7.6 Electricity

This section discusses the status of provision of electricity to the households of the district. Kolar being in the plains/ maidan region of the state can be expected

to have high coverage in electricity provided to urban and rural households. The next table presents the census data on household electricity coverage in the different taluks of Kolar in 2001 and 2011.

Table 86: Households having access to Electricity as lighting facility

Taluk	2001			2011		
	Rural	Urban	Total	Rural	Urban	Total
Srinivasapur	88.57	90.25	88.76	94.06	95.44	94.23
Kolar	83.30	96.67	92.75	93.70	97.75	95.18
Malur	89.05	93.93	89.77	92.70	98.51	93.72
Bangarpet	88.51	91.71	90.02	91.43	94.49	92.90
Mulbagal	78.99	91.06	81.20	90.03	95.69	91.29
District	83.30	93.12	85.72	92.37	95.96	93.51
State	72.16	90.53	78.55	86.72	96.42	90.63

Source: Census 2001 & 2011

The overall proportion of households having electricity connections in the district increased from 85.72% to 93.51% over the decade. In Karnataka, 90.63% of the households have electricity connections. In Kolar district, Kolar taluk followed by Srinivasapur have the highest proportion of households having electricity supply. All taluks of the district have higher proportion of electricity connections than the state. There is considerable growth in access to electricity in rural areas since 2001 and the difference in electricity coverage between urban and rural areas is comparatively less in Kolar than in the state.

7.7 Traditional and modern fuels

Table 87: Types of cooking fuel and usage

Taluk	Households using Traditional fuel			Households using modern fuel		
	Rural	Urban	Total	Rural	Urban	Total
Srinivaspur	90.48	50.41	85.33	9.39	49.25	14.51
Kolar	89.23	52.38	75.79	10.55	47.01	23.85
Malur	84.86	38.78	76.70	14.85	60.86	22.99
Bangarpet	90.17	52.97	72.25	9.64	46.45	27.37
Mulbagal	89.84	52.35	81.46	10.01	47.27	18.34
District	88.94	51.35	77.04	10.86	48.12	22.65
State	87.70	34.02	66.05	12.01	65.33	33.52

Source: Census 2011

77.04% of households in the district are dependent on traditional fuel (firewood, crop residue, cow dung, coal, kerosene) for cooking. Very less percentage of district (22.65%) households are depending on Modern fuel (LPG/PNG, Electricity, bio gas) for cooking. In comparison. The state on the average is less dependent on traditional fuel than Kolar. Within Kolar, Srinivaspur and Mulbagal are taluks that are most dependent on traditional fuel, whereas within the rural areas, dependence on traditional fuel is lowest in Malur district. The use of traditional fuel in rural areas of the district is comparable with the rest of rural areas in the state.

The difference between urban and rural cooking fuel practice is high in the district. Although urban households in the district have adopted modern fuels more than rural areas, the adoption is less in comparison to other areas within the state.

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.

Table 88: Households having access to Latrine

Taluk	2001			2011		
	Rural	Urban	Total	Rural	Urban	Total
Srinivaspur	17.85	74.97	24.46	22.51	82.76	30.25
Kolar	23.19	91.24	46.43	34.76	94.88	56.70
Malur	21.25	46.02	24.90	29.96	92.92	41.10
Bangarpet	20.37	69.28	43.44	19.99	67.38	42.81
Mulbagal	18.86	78.48	29.81	18.86	83.81	33.37
District	20.45	74.93	36.57	25.49	80.21	42.80

Source: Census 2001 & 2011

Compared to the progress in other districts like Udipi, Uttara Kannada and Kodagu, the progress in Kolar in rural sanitation has not been very satisfactory. There has been a sustained attempt to improve the status of sanitation from 1990s in Karnataka. A very low 42.80 percent of total households in the district had toilets in the house. If we look at the transition of toilets in the district from 2001 to 2011 is also very less i.e 6%. Sanitation status of household is also contributing to calculate the Human Development Index.

Toilets in Anganawadis

During our field visit to Devaraya Samudra & Lakkuru Grama Panchayat's in Kolar, 2 anganawadis had toilet with water facility out of 3 visited. All the visited schools had Drinking water facility in the school campus, whereas, all are dependent on tank & water supplied by Grama Panchayat (tap) water. There is no dependency on well or Hand pump as a source of water. All of them had a separate toilets for Girls and Boys.

Compared to rural households (25.49%), urban households (80.21) were better off, in terms of access to toilets. Urban households of Kolar taluk (94.88) and Malur (92.92) are having highest percent of toilets when compared to other taluks in the district. 83.81 percent of urban Mulbagal and 82.76 percent of urban Srinivasapur are had toilets in the households which stands second in the district. The table below presents the prevalence of open defecation in the district.

Table 89: Households having practice of Open defecation

Taluk	Rural	Urban	Total
Srinivasapur	75.41	15.91	67.76
Kolar	62.68	4.07	41.30
Malur	68.96	6.57	57.92
Bangarpet	78.65	12.53	46.81
Mulbagal	79.06	15.63	64.89
District	72.68	10.12	52.88
State	68.11	10.72	44.96

Source: Census 2011

It shows that more than 70% of rural households practice open defecation, which is more than 4% lesser than the state average. 10% of the urban households practice open defecation and is comparable to the state average. Thus,

there is a scope for improvement in rural sanitation in the District. More or less the same percent of urban households are having open defecation in the state (10.72%) as well as District (10.12%).



Photo 12. Anganwadi worker and ASHAs involved in sensitization towards sanitation

NGP awarded GPs

The concept of sanitation was expanded to include personal hygiene, home sanitation, safe water, garbage disposal, excreta disposal and waste water disposal. With this broader concept of sanitation, Central Rural Sanitation Program adopted a “demand driven” approach with the name “Total Sanitation Campaign” (TSC) with effect from 1999. In relation with TSC, Government of India (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. The award gained immense popularity and contributed effectively in bringing about a movement in the

community for attaining the Nirmal Status thereby significantly adding to the achievements made for increasing the sanitation coverage in the rural areas of the country. Encouraged by the success of NGP, the TSC is being renamed as “Nirmal Bharat Abhiyan” (NBA). The objective of NBA is to accelerate the sanitation coverage in the rural areas so as to comprehensively cover the rural community through renewed strategies and saturation approach. Nirmal Bharat Abhiyan (NBA) envisages covering the entire community for saturated outcomes with a view to create Nirmal Gram Panchayats.

The next table shows very less percent (5.77) of Gram Panchayats in Kolar won NGP award and 95% are yet to provide 100% sanitation coverage in their villages. Among the taluks only Bangarpet has awarded by 5 Panchayats, Mulbagal has 2 GP’s, others has 1 each and in Srinivaspur no Grama Panchayat has achieved the target and won the award. Rural Sanitation program in the district thus has a long way to go, before it can be declared open defecation free, and reach to the status of districts like Udipi and Mangaluru who have already achieved it.

Table 90: Grama Panchayaths awarded NGP

Taluk	GPs	NGP awarded GPs	% of NGP GPs
Srinivaspur	25	0	0
Kolar	36	1	2.78
Malur	28	1	3.57
Bangarpet	37	5	13.51
Mulbagal	30	2	6.67
District	156	9	5.77

Source: Zilla Panchayat, Kolar



Photo 13. Unhealthy living conditions in Boinahalli, Bangarpet taluk

7.9 Concluding remarks

The chapter presented some of the major issues affecting the standard of living in Kolar district. From the analysis, it is evident that site distribution schemes haven’t progressed to the desired extent, with many beneficiaries not having received sites. Similarly, much of the housing scheme targets in the districts haven’t been met.

The presence of poverty prevents accumulation of assets and this is visible in the proportion of households in the districts not having the basic basket of assets (telephone, tv, phone/mobile two wheeler/four wheelers). This proportion is highest in Srinivaspur and Mulbagal and denotes the low standard of living in these taluks.

Kolar District is considered one among the Desert Development Program to improve the water status. In Kolar scarcity of water because of low rainfall and over exploitation of Ground water.

Recommendations based on the Government initiation like National water security Pilot project and Yethinahole Yojane should be carefully studied before decisions are taken and further, continuous monitor of environmental and ecological impacts have to be carried out. Further, based on the analysis of this chapter, the following steps could be considered for future course of action.

All the taluks of the district have under over-exploited category. In these taluks further ground water exploitation should be strictly regulated and monitored and governed to avoid further adverse effects on the ground water system. Constant monitoring of ground water quality should be carried out in the fluoride-contaminated areas (pockets) to prevent further deterioration and related problems.

In the Kolar region rooftop rainwater harvesting practices may have to be made mandatory. Awareness has to be created in the creation of sustainable and useful rain water harvesting mechanisms. It will help in reducing stress on water supply systems.

For drinking water and community irrigation schemes, instead of investing on the creation of new water systems, government can invest on renovation of water supply sources like bore wells/tube wells/tanks etc.

Access to individual household latrines is not very effective in the District, and as per 2011 census only 42% of households are having access to toilets in the District. There is only 6% increase in household access to toilets from 2001 to 2011. Special attention is required in implementation of NGP/NBA programmes in the District. Distinct attention should be given to the Srinivasapur taluk in terms of Sanitation.

* * * *

Gender and Development

8.1 Introduction – Gender as Concept

As women constitute almost half of the country's population, any measurement that fails to take into account the progress made by them, does not showcase the complete picture of human development. Different tools like, Gender Inequality Index (GII) that measures existing gender disparities and inequality in the society, Gender Development Index (GDI) to calculate the distribution of well-being and wealth among different groups of society, while obtaining the average numbers across categories, and Gender Empowerment Measure (GEM) of the United Nations Development Program (UNDP) that captures the extent of gender inequality across countries based on estimates of women's relative economic income, participations in high paying positions, and access to professional and parliamentary positions, have been formulated in the past 2 decades.

According to UN GII report, India stands at the 132nd position behind high ranked countries of Norway, Australia, USA, Netherland and Germany, all of which enjoy a high level of women empowerment in terms of political participation, proportion of women in economic activities and standards of educational qualification.

In general, the India's GII is mainly 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.

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 Kolar. 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. Eight indicators are used for the calculation of GII in this report. The values for these indices for the five taluks of Kolar are listed below.

Table 91. Indicators of GII in Kolar

Taluk	Srinivaspur	Kolar	Malur	Bangarpet	Mulbagal
Maternal Mortality Ratio	80	96	196	153	211
Share of Institutional deliveries	98.63	97.93	97.41	97.38	97.97
Anemia among pregnant women	78.51	85.45	63.33	85.24	50.32
% of Female elected representations in PRIs	41.83	44.15	42.97	43.82	43.31
Share of females in 0-6 population	48.67	49.17	49.19	49.01	49.04
Female literacy rate	62.30	69.16	62.47	71.95	61.90
Female work participation rate	49.75	37.21	38.68	29.02	51.11
Female Non-agri workers in total female workers	24.64	47.96	37.41	42.33	27.31
Female agricultural wage rates	236.50	236.50	236.50	236.50	236.50
GII	0.093	0.117	0.111	0.148	0.098

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 Kolar district. According to this analysis, Srinivaspur has the lowest inequality within the district whereas Bangarpet taluk has the highest gender inequality.

Kolar's performance in gender development has been average, based on the 1991 and 2001 state human development reports and in comparison to other districts of the state, the relative development in gender has been slower. 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)

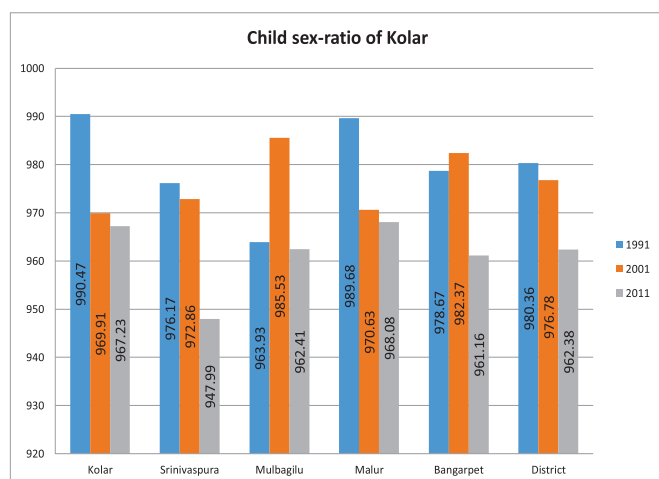
Table 92. Ranks of Kolar in GDI in the state

Sector	1991	2001
Health	13	13
Education	17	13
Livelihood	19	18
Overall	15	17

It shows that Kolar's performance is average in all sectors, and between the three sectors of health, education and livelihood, the development status of women with regards to livelihoods is worse off. This chapter examines similar trends and further delves into various parameters like education, health, sex-ratio, participation of women in political bodies and employment opportunities, crime rates and the like, to understand the current level of women empowerment in the Kolar district of the country.

8.2 Patterns in demography and health

Declining sex-ratio, especially within the 0 – 6 age group has been a growing concern in India. Sex-ratio (number of female population per 1000 male population) in Kolar district is 978.88 and is better than the state average (972). However, child sex-ratio has shown general decreasing trends in all taluks of the district. Amongst the taluks of the district, Srinivaspur has the largest fall in child sex-ratio from 1991 to 2011 (976 to 948). Kolar and Malur are the other Taluk which has a considerable fall in child sex-ratio.



Graph 25. Trends in child sex-ratio in Kolar

Another social evil, child marriage is prevalent in the district as reported in the District Level Household Survey (DLHS) 3, conducted in 2007-08. 18.4% of the respondents in the district said that they were married before 18 years of age. This ratio was 26.3% in 2002-04, based on DLHS-2. While Kolar's proportion of child marriages is less than the state average of 22.4% (DLHS-3), there is still a large need to stop child marriages in the district.

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 Kolar in these specific aspects

Table 93. Indicators of maternal health in Kolar

Taluk	% of institutional deliveries	% of anaemic pregnant women	MMR
Srinivasapur	98.63	78.51	80
Kolar	97.93	85.45	96
Malur	97.41	63.33	196
Bangarpet	97.38	85.24	153
Mulbagal	97.97	50.32	211
District	97.79	78.13	140

Source: District Health Office, Kolar, HDD, Dept of Planning, GoK

The table above shows that while the district performs exceedingly well in institutional deliveries, the number of anaemic women is very high (more than 3/4ths of all pregnant women), with the highest proportion in Kolar taluk. The MMR in many taluks are exceedingly high, with Mulbagal having the highest recorded MMR of 211. Further, as the analysis in the chapter on health status of the district showed, the in a majority of cases, the reasons for maternal deaths were preventable in nature and shows the lack of effective anticipation of complications as well as the provision of affordable emergency obstetric care in the district. Thus, the status of maternal health of women in the district is far from the national targets set by ambitious programmes like NRHM.

8.3 Patterns of Literacy and Enrolment

Education of women has the power of transforming the age-old attitudes of the patriarchal society and the creation of an equitable society, wherein women of all social categories are able to participate as equal partners in the creation of wealth and welfare of the society. Thus,

the status of education of women is a key factor in understanding the ability of women to contribute towards the overall human development of the region.

A reflection of rising education status of a region can be seen in female literacy. The following table shows the trends in literacy rates in the state and district. Literacy rates in Kolar have been lesser than the state averages traditionally and is reflected in rates of female literacy as well.

Table 94. Literacy rates in Kolar and Karnataka

Year	Kolar			Karnataka		
	Male	Female	Total	Male	Female	Total
1991	62.69	37.75	50.45	67.26	44.34	56.04
2001	73.14	52.81	63.14	76.10	56.87	66.10
2011	81.8	66.83	74.39	82.85	68.13	75.60

Source: Census of India 1991, 2001 and 2011

The gaps between male and female literacy which was about 25% in 1991 has reduced but is still substantial, with a difference of about 15%. There has been a boost to the literacy rate in the decade of 1981-1991, from the slow growth period of the 1961-1981, through flagship programs of the government like National Literacy Mission (launched in the year 1988) and Sarva Shikshana Abiyana (launched in the year 2001). The results also show the thrust given to female education. Nevertheless, as seen from the table above, there is a long way to go before they reach the mark of 100% literacy rate, specifically that of female literacy rate. These trends are also visible at the taluk level as shown from the table below, with the highest difference between male and female literacy levels found in Srinivasapur and Mulbagal taluks.

Table 95. Taluk-wise Literacy rates in Kolar in 2011

Taluk	Male	Female	Difference
Srinivasapur	80.15	62.29	17.86
Kolar	83.1	69.15	13.95
Malur	77.92	62.47	15.45
Bangarpet	84.98	71.87	13.11
Mulbagal	79.22	61.89	17.33
District	81.8	66.83	14.97

Source: Census, 2011

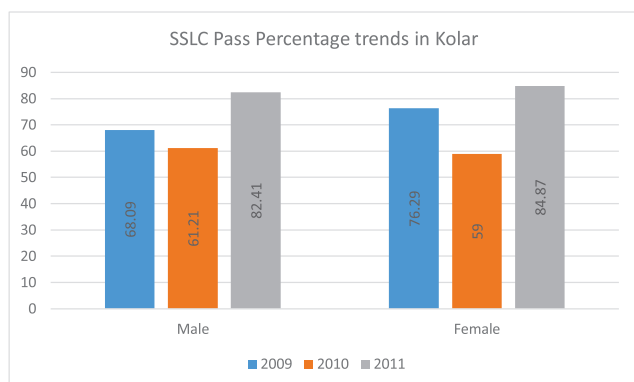
Crucial to minimizing the gaps in male and female literacy and ensuring universal primary education, is the status of net enrolment rates. The table below presents the gender-wise details of Net Enrolment rates in the educational blocks of Kolar district (including the additional block of KGF, considered as a separate educational block). It shows that, other than Srinivasapur taluk, in all other educational blocks net enrolment rates of the girl child was higher in comparison to boys. While Net enrolment rates can be improved in many blocks (specifically Malur, Kolar and Mulbagal), it is worthwhile to note that there is no gender disparity visible in the district with respect to Net Enrolment rates. Similarly, as seen in the discussion in the education chapter, there was no evidence of higher drop-out rates among female students.

Table 96. Net Enrolment Rate at the primary level in Kolar in 2011

Taluk	Male	Female	Total
Srinivasapur	95.06	92.29	93.7
Kolar	84.39	85.97	85.16
Malur	80.49	82.98	81.69
Bangarpet	91.95	94.17	93.02
KGF	100	100	100
Mulbagal	83.14	85.87	84.48
Total	89.19	90.06	89.61

Source: DDPI, Kolar

When it comes to the performance in the SSLC examination, the district outshines several others in the state (ranked 8th in 2011), with pass percentages of the male and the female students, as a factor the total appeared, being 82.41% and 84.87%, respectively. Female students show a better record of performance when compared to boys. This trend is visible among students of marginalized communities as well. Further, male and female student enrolment to pre-university and degree courses in the district also does not show gender disparities.



Graph 26. SSLC pass percentage in Kolar

In summary, while there are encouraging signs like high enrolment rates and high pass percentage among female students in the district, the overall literacy rates and specifically, the difference between male and female literacy rates in the district leave a lot of scope for improvement. Thus, while the recent efforts in creating equitable access to primary and secondary education in the district seems to be progressing well, these initiatives would truly pay off when educational status translates into better economic and social empowerment of women. The next sections of this chapter looks at economic, and political participation of women in the district.

8.4 Work participation trends

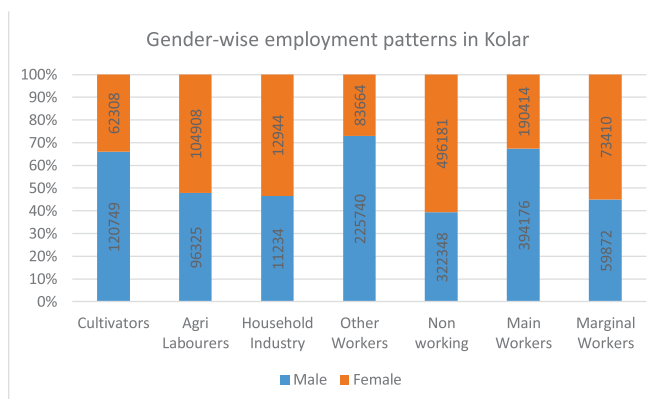
Involvement of women in economic activities and income generating initiatives provide them with the crucial elements of empowerment, that allows women to have the opportunity to decide on issues related their health, nutrition, education and other social choices.

Table 97. Gender-wise Work participation rates in Kolar (2011)

Taluk	Male	Female	Total
Srinivasapur	67.43	49.745	58.65
Kolar	65.92	37.210	51.74
Malur	67.27	38.677	53.30
Bangarpet	63.40	29.021	46.27
Mulbagal	67.46	51.114	59.34
District	65.85	39.003	52.55

Source: Census 2011

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 in the chapter on income, poverty and employment, the trends in work participation rates in Kolar show these expected trends as shown below.



Graph 27. Gender-wise employment patterns in Kolar (2011)

However, Kolar stands out because of disparities in work participation trends of women across its taluks. Mulbagal and Srinivasapur show the highest values in women's work participation trends whereas Bangarpet shows the least. With Bangarpet having the highest population in the district, increasing women's work participation in this taluk also reaps the highest dividends in terms of women's economic empowerment. The above graph shows the participation in employment across the census categories of employment. The employment categories: Cultivators, Agricultural Labourers, Household Industry workers and other workers are total workers working both as main workers and marginal workers. The last three columns present in absolute terms, the male and female population that is not involved in any work, employed full time as main workers and those who are not employed throughout the year, respectively.

The graph shows that among two major categories of labour: cultivators and 'Other Workers'²⁰, which together

form about 70% of the total employment in the district, women contribute lesser than men and make up about 35% and 27% of the total workers in these categories respectively. Women are in higher numbers in agricultural labour and household industry. Number of non-working women is higher than working men and similarly, the number of women working as marginal workers is also higher than that of men. Thus, the graph summarizes the status of work participation in Kolar. It provides evidence that women's participation is very less in modern employment opportunities (represented in Other Workers") as well as full time cultivators. Thus, women's participation in categories of work, where they have control of land use or in comparatively well-paying employment is very less. Further, close to 1/3rds of the total working women are not involved in work full time. More than 65% of the total women population (including children and elders) aren't employed at all, in comparison to men, where only 41.5% aren't employed at all.

Trends in participation in 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 is recognized as a major initiative to alleviate the problem of rural poverty and for the creation of long term natural assets and has had significant impact on rural communities. Provision of employment through MGNREGA provides a significant opportunity for creating social security nets, specifically

²⁰ The census definition of other workers includes all government servants, municipal employees, teachers, factory workers, plantation workers, those engaged in trade, commerce, business, transport banking, mining, construction, political or social work, priests, entertainment artists

since MGNREGA guarantees equal wages without the interference of middlemen and contractors. Thus, MGNREGA is a useful initiative for rural women empowerment if the local implementation facilitates and encourages the participation of women in the works taken up through the scheme.



Photo 14. MGNREGA works for de-silting of lakes in Kolar

According to Census 2011, 2,27,058 households reside in rural areas in Kolar. In 2011-12, 1,97,290 cards existed in Kolar. Out of total people registered under MGNREGA 47.22% are women. Among the man-days generated through MGNREGA in 2011-12, about 50% were utilized by women. All taluks in the district have comparable patterns in share of registered women workers as well as average number of man-days provided for women.

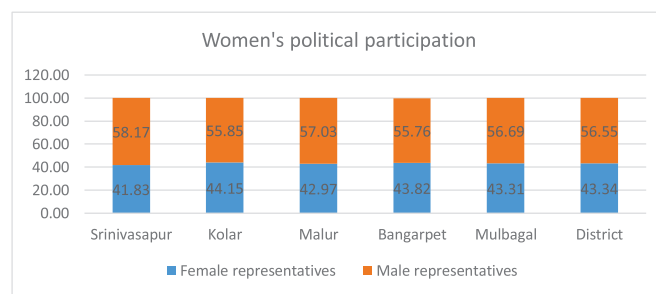
Table 98. Women's participation in MGNREGA in Kolar (2011)

Taluk	Job Card Issued	Share of women in total workers (%)	Total Man-days generated	Share of women's participation (%)
Srinivasapur	34886	48.41	136981	48.29
Kolar	37829	48.14	362521	49.86
Malur	25956	47.32	220389	50.42
Bangarpet	43165	48.64	722417	51.87
Mulbagal	55454	45.42	657499	47.64
District	197290	47.22	2099807	49.81

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 Kolar, there are a total of 2831 elected members from all three levels of Panchayat Raj Institutions (PRIs) and ULBs. Out of that 43% of them are women elected representatives. The graph below show that women are still under-represented in the PRIs and ULBs of Kolar district.



Graph 28. Political representation of women in PRIs and ULBs in Kolar.

Out of 43.34% of women representations about 20% of the women belong to SC/ST communities and 24% belong to backward classes.

8.6 Gender differences in district and Community attitude, Social prejudice

The analysis in the above section shows that gender based differences exist in the district in levels of literacy, work participation and political representation in PRIs and ULBs. Declining level of sex-ratio in all taluks of the district is an alarming trend. In essence, these issues confirm gender bias and prejudiced behaviour against women in the district, thus pointing towards reform in the attitude of the community if Kolar has to have meaningful human development. While women centric measures like higher involvement in SHGs and encouragement for higher participation in MGNREGA can be continued, the attitude of the society as such has to change, if women are to get equal opportunities and be treated on par with men.

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”.²¹. The Indian Penal Code (IPC) identifies the following crimes as crime against women: 1) Rape, 2) Kidnapping and abduction for different purposes, 3) Homicide for dowry, 4) Torture (mental and physical), 5) Eve teasing, 6) Molestation and 7) Import of girls. 17 Special and Local Laws (SLL) protect women against these crimes under different circumstances. Kolar contributed to about 1.8% of the total crimes against women reported in Karnataka in 2012-13. The following graph shows the taluk-level cases of crimes reported against women in Kolar. The data is obtained from the office of the Superintendent of Police, Kolar. Data from Bangarpet and KGF weren’t available and hence aren’t reported in this section.

Table 99. Crime against Women in Kolar

Taluks	2011		2012	
	Crimes reported	Crime Against Women	Crimes reported	Crime Against Women
Srinivasapur	257	17	294	20
Kolar	649	36	744	60
Malur	292	28	260	25
Mulbagal	255	23	362	20
District	1453	104	1660	125

Source: Superindtentend of Policy, Kolar

The table shows that on an average, crimes documented as specifically committed against women in Kolar (excluding Bangarpet and KGF) for about

²¹ “Declaration of elimination of violence against women”, A/RES/48/104, taken by the United Nations General Assembly in the plenary meeting, December 20, 1993.

7%-8% of the total crimes committed in the district. 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.

8.8 Self-help groups and women empowerment

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 of 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.

SHGs have the other useful effect of empowering women of marginalized classes as well. There are around 1,39,983 women SHGs functioning in Karnataka with 18,52,067 members, out of which 4,05,477 are SC and 1,60,032 are ST women. The total saving of these SHGs in Karnataka is up to Rs 1,080 Crores. In Kolar, there are 4221 SHGs with a total of 70300 women registered under them. 20308 SC women and 5392 ST women ((9% and 10% of the SC and ST women population respectively) of Kolar are engaged in SHGs. A total of Rs 2.84 Crores has been the accumulated savings of the SHGs in the district. Major sectors of activities of these groups include Diary, horticulture and agriculture.

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. Three schemes are briefly described and the status of their implementation is explored in this section

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 a maximum of 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 turn 18, Rs 100000 is given to them

In Kolar, 36783 children have been benefitted by this scheme. Among the taluks of Kolar, Kolar taluk had issued highest number of bonds to children followed by Bangarpet and Mulbagal.

Indira Awaas Yojana

This is 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. It has now been converted into a women's social welfare in which, the beneficiaries have to be women. Under the scheme, financial assistance worth Rs.63,500/- in plain areas and Rs.75,000/- in difficult areas (high land area) is provided for construction of houses. The houses are allotted in the name of the woman or jointly between husband and wife. In 2011, 2825 houses were sanctioned to Kolar district, out of which 1345 houses have been completed.

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 34,511 women in Kolar are receiving widow pensions

8.10 Concluding Remarks

This chapter presented different facets of gender development in Kolar. It shows that gender based disparities distinctly exist in the district and is visible in the areas of literacy, work participation (specifically under the categories of cultivators and other employments) and political representation in PRIs and ULBs. The political scenario of Kolar does not seem to be very conducive to equal participation of women since both in PRIs as well as ULBs, women's representation is well below the 50% mark. Further, Kolar also faces the alarming signs of declining sex-ratios in all its taluks, the highest being in Mulbagal. Mulbagal also has the highest MMR crossing 200, which in the context of the targets set by NRHM, is unacceptable.

Specific problems like lower quality of work allocated to women, higher marginal labour among women can be handled by encouraging SHG based livelihood options in the district, that explore innovative ideas towards integration with existing government schemes like MGNREGA and vocational and skill training programmes targeted towards rural women that not only enable women to take up jobs that aren't being tapped by them in the labour market, but also significantly improve their economic status, thus providing the impetus for social empowerment as well.

8.11 Small area study: Namma Dhwani Community Radio

Introduction

Empowerment of communities so that they are able to undertake initiatives towards their own development is a long drawn process and depends on several socio-economic, political and cultural factors. While effective capacity building of communities and leaders within the community is the key to the success of empowerment efforts, sustaining the empowerment is an even more challenging task. For several decades, NGOs have been engaged in the empowerment efforts, but have been challenged in sustaining the empowerment and handling their own withdrawal from the process. It calls for strategies that involve supporting the communities with minimal external resources and for innovative ways in which community members are engaged.

One such successful initiative is the Namma Dhwani Community Radio station in Budikote Gram Panchayath in Bangarpet Taluk of Kolar District. Housed in a Community Managed Resource Centre (CMRC) in Budikote, the radio-station has been contributing to sustaining community empowerment, especially that of women. This case study examines the various aspects of the initiative including factors contributing to its success, challenges and community perceptions.

About Budikote

Budikote is a small village situated in Bangarpet Taluk of Kolar District and located at a distance of about 15 kilometers from Kolar Gold Fields (KGF). The place is famous for and named after

its “fort of ash”, and has a historical significance of being the birth place of Nawab Hyder Ali Khan, father of Tippu Sulthan. Budikote has a population of 3347 with 757 households. The people here mainly depend on agriculture and small businesses for their livelihood.

Community Radio – an overview

Community radio is a form of broadcasting which is called the third model, the other two being commercial and public broadcasting. Its content is focused and relevant to people in a limited geography, usually a radius of 10 to 20 kms from the broadcasting tower. Essentially Community radios are non-profit initiatives and are operated, owned, and influenced by the communities they serve. Community radios gained momentum in India in the mid-nineties and currently there are nearly 130 initiatives in India, either promoted by NGOs or Educational Institutions. In Karnataka, there are 11 community radio stations and Namma Dhwani is the first NGO promoted Community Radio in Karnataka and the only one that is fully managed by the community.

The SHG movement and Community Managed Resource Centres (CMRC)

The community radio initiative in Budikote is part of a larger community empowerment movement led by MYRADA – a non-governmental organization established in 1968 and working towards poverty alleviation and community empowerment using a capability building approach in several districts of Karnataka, Andhra Pradesh and Tamil Nadu. Facilitating the creation and growth of self-help groups and

support through financial institutions with credit have been key instruments in the direction of empowerment of the poor, especially women. Studies have also shown that the experience of participation and governance of community institutions such as Self-help groups leads to people's environment. Further, the federation of multiple SHGs and formation of a second tier institution that helps in providing services such as capacity building, audits, linkages to banks, legal awareness, quality checks and following of regulations among others become important in organizing as well as sustaining the SHGs and the empowerment process. These institutions are managed by members of SHGs themselves and are also a resource for multiple activities and information for the SHGs and are appropriately called Community Managed Resource Centres.

Self-help groups – a movement to empower women

The concept of self-help groups emerged in the nineteen eighties when the larger Cooperative Societies organized by MYRADA broke down, but the smaller groups of poorer members of the societies had to be organized so that they could manage credit and leverage economic and social benefits from the collective. These groups were formed based on the affinity existing within its members and were hence also referred to as Self-help Affinity Groups (SAGs), and mutual trust and support among members was recognized as the strength of these groups. By 1986 at least 300 groups were formed by MYRADA and various studies and strategies to link these groups with banks were being worked out.

Beyond providing linkages to the banks, strengthening the institutional capacities of the groups, training members to be change-agents and break social and political barriers, providing opportunities of productive skill-building to members for and advocating for changes in the rules and standards in the official financial system that could be applied to these groups were some of the key activities conducted.

It was in 1992 that NABARD initiated the process of lending to these unregistered groups and over a period of time RBI as well as NABARD came up with policy changes on lending to these groups. The linkages with the banks was a major milestone in the growth of SHGs as a credit system that could be successfully implemented had to be developed based on local contexts. Access to credit to the poor at reasonable and consistent rates is identified as one of the critical tools of empowerment as it helps in mitigating the increasing vulnerability that is associated with the informal money-lenders.

In terms of empowerment of women, studies indicate several areas of impact that include status of the woman SHG member in her family, the increase in participation of women in decision making, attitudinal changes towards girl-child, increased participation of women in spaces such as Grama Sabhas, awareness of rights and procedures, and most importantly attitude of men towards women. In places where women walking up to a bank and handling transactions was unheard of, the SHGs have helped created a semblance of equity in the gender relations in the villages. It must

be noted that these changes have taken place over years and they were not without initial hurdles and socio-political challenges.

Emergence of CMRC

By 1996, federations of SHGs, with about 20 to 25 groups in each federation were being organized with the objectives of collection and analysis of data on trends in savings, performance, repayment of loans, etc by the SHGs so that livelihood interventions could be planned and for conflict resolution and also to mobilize support for social and governance issues. However, the federations had limitations in their structure and could not meet the increasing demands because of lack of full-time staff, resources and limited organizational capabilities. At the same time, the role of the promoting NGO also had to be minimised and a process of withdrawal had begun. This paved way for the creation of a structure wherein a larger group of SHGs, numbering 100 to 150 could come together regardless of whether they were promoted by Government programs or NGOs and form a registered body whose key objective is to provide resources for facilitating administrative and accounting functions of SHGs. An experienced staff member would manage this organization along with the support of a team and a Board of directors elected from the community. This centre, known as Community Managed Resource Centre or CMRC would offer a combination of chargeable and free services to the SHGs and CBOs who sign-up members, and the scale of functioning is supposed to generate funds for the sustenance of the Centre including the salaries of the manager and the staff.

Namma Dhwani Sampanmula Samsthe (Namma Dhwani CMRC)

Namma Dhwani CMRC, located in Budikote in Bangarpet Taluk is one of the 9 CMRCs functioning in Kolar District. Currently this resource centre works with 112 SHGs from 48 villages spread across 5 Gram Panchayaths, which includes 58 MYRADA promoted Self-help Affinity Groups and other CBOs including SHGs promoted by the Department of Women and Child Development. The management committee of the CMRC has 7 members, 6 of who are members of the community, who take the major operational decisions. The objective of the CMRC is “to provide day to day information and timely & needy services to the member CBOs and community”.

The centre offers certain services at a fixed annual fee such as updating the books of accounts & preparation of financial statements of the groups, trainings to the member organizations, documentation, and solving problems, if any. It also offers services such as auditing of books, providing linkages with LPG suppliers, insurance, banking, skill-training institutions, etc., offering the centre’s training hall on rent and computer trainings & related services at additional charges. The CMRC also provides free services to the groups that include conducting camps, health referrals, providing basic support with banking procedures, providing daily market prices for vegetables and cocoons, support to new SHGs and also legal awareness and referrals, if necessary.

The CMRC premises serves as a meeting point for members of SHGs besides serving as a knowledge

resource/information centre on various issues. It also houses the recording and broadcasting studio of Namma Dhwani Community radio station.

Namma Dhwani Community Radio Station

Namma Dhwani, meaning “our voice” is an initiative was set up with a collaborative effort of three institutions, namely, (i) **UNESCO** for providing equipment, (ii) **MYRADA** for providing space/building and (iii) **VOICES** for the overall coordination and technical support. The Community Radio initiative started in 2002 with cable casting in two villages and by 2007 had extended its service to 40 villages through narrow casting. The broadcasting license was obtained from the Ministry of Information and Broadcasting, Govt. of India in 2008-09 and the project was initially supported by Dr. Kasthurirangan’s MPLAD fund and Novib, a Dutch philanthropic foundation. Since 2010, Namma Dhwani Community Radio functions as a well-equipped radio station and is part of the Community Managed Resource Centre supported by MYRADA.

The community audio production centre was started during September 2001. The centre has a recording studio and an instrument room complete with required mixers and recorders. The programmes are decided and operated by the local communities who are the board members of CMRC. The coverage of the radio extends to 86 villages within a 10km radius across 8 GPs in Bangarpet and Malur Taluks reaching 6617 families. A recent survey estimated that there are 3924 families that are active listeners and most of these are members of SHGs.

Program Details

Namma Dhwani community radio station broadcasts programs in 4 languages viz. Kannada, Telugu, Tamil and Urdu for 8 hours a day. The themes for the programs include agriculture, irrigation, health, education, traditional medicine, devotional songs, cookery, live debates, information on government schemes, local festivals and cultural events related announcements, awareness on legal issues, environment, self-help groups, women and youth, news and other social issues etc. The programs follow the guidelines of the Ministry of Information and Broadcasting as far as the content of the programs are concerned. The members of the CMRC, almost all of who are locals decide on the broadcasting schedule of the programs.

The formats of the programs include interviews both in & outside CR studio, subject based panel discussion, audio skits and plays, awareness songs, public service announcements, success stories CBOs & individuals, folk songs from communities and live programs (questions and answers). The community members contribute actively to the content of the programs mainly in two ways.

- There are resourceful locals who contribute to content that include people with good knowledge on agricultural practices, eloquent speakers on health issues, education, adolescent issues, etc. in addition to people contributing with folk songs, cultural programs, etc.
- Community members also contribute in the form of field recordings and interviews conducted by the station staff on various issues and problems faced by them, community perspectives and ground level information on development schemes.

Many of the contributors are women SHG members from in and around Budikote village and they attribute their high levels of awareness to the programs broadcast community radio. Some SHGs make sure that they are contributing consistently by exploring themes and providing content on a rotational basis.

As per the guidelines, at least 50% of the content for community radio should come from the community. In the case of Namma Dhwani Community Radio, a significant amount of content does come from the community, but the technical support for content development, which includes scripting and final program design has to be provided by the station staff.

Impact of the programs

The impact of the programs aired through the radio station goes beyond providing information and awareness to the community. It has also led to the addressing of local issues including health and sanitation and improvement of some basic services. The most distinguishable impact is seen in terms of the confidence and attitude of the women members.

In interviews with the CMRC staff as well as with the community members, it was apparent that the women have come a long way from facing resistance by the men-folk in their homes to participation in SHG activities to confidently talk about women's health issues, home remedies and other locally relevant contemporary topics on the radio. This has been the result of the effort of many years and the radio programs are providing a platform for such empowerment to sustain.

- The radio has contributed to solving local issues as well. For instance, a water scarcity issue resulting from the failure of many borewells that was unaddressed by local authorities for quite some time was given coverage in the radio. In the radio program, the problems faced by the community were highlighted through interviews with affected people. This put pressure on the local authorities to think about alternative solutions and as a result, water was shared by private well owners till other arrangements are made.
- Though, the study did not capture the exact number of cases recorded, there is a strong perception and belief that crime against women, including domestic violence, has come down over the years. This is attributed to the legal awareness and support provided by CMRC as well as related radio programs.

Most women as well as the CMRC staff felt that participating in a radio program itself is an empowering experience, and while they concede that they were very hesitant initially, the fact that listening to themselves or one of their own community feels very positive. Even the men who were interviewed said that women would not step out of the house earlier and were restricted in many ways. Now the women not only visit Gram Panchayaths, banks, other government offices confidently, but some of them are also entrepreneurs. The women also take the initiative in celebrating national festivals in the village or the school and use the radio as a platform to disseminate information about the same.

Community voices

(Comments from women SHG members interviewed during the study)

“We did not know about SHGs in the beginning. We started with savings of rupees 10, 20, 50 and so on. Then we got loans for Rs. 50,000 from banks and now we have been able to get loans of Rs. 5 lakhs and subsidy from Taluk Panchayath of Rs. 1.5 lakh. Despite initial opposition from family members earlier, now they are supporting us because of the benefits of SHG. People are respecting us now because we have no hesitation in going to GP, banks or Govt. offices”

“I am a regular listener of a program called Arogya Bhagya. Recently a gynaecologist provided awareness on women’s health issues on the radio. It was a trigger for further consultation with the doctor for different problems and some of the women got due treatment.”

“Because of SHGs, we are empowered in terms of talking in front of a mass. We are able to go everywhere like TP, banks, etc. Earlier I did not even know how to sign or even to calculate money, but now I am able to sign and calculate money in lakhs”

“Programs like songs and skits from the school children are very interesting and attractive to children. The radio is a forum for children to show and shape their talent. When the listeners praise the children, more children and parents will be motivated to give programs in the radio”.

Challenges & the way forward

The Community Radio station also faces its own share of challenges, especially in terms of sustainability and growth. By

its nature, community radio has to serve a defined community within a defined geographical area. With hardly any scope for increasing its subscriber base, there is a lot of pressure to be innovative and creative and at the same time financially viable. One of the main challenges with Community radio is that of paying the spectrum fee which has been hiked up from Rs. 19,700/- to Rs. 91,000/- in April 2012 as per information provided by CMRC management. High operating costs would need support from external sources and hence self-sustenance would be a question.

Community radio also has to compete with newer and conventional forms of media that occupy the subscribers’ time. With television and mobile media content making rapid strides, it is a challenge for community radio to keep up with the pace of transformation. The technical as well as financial support needed towards this can tend to be high, which could also mean restrictions in the level of participation by the community.

Rural community radio stations such as Namma Dhwani also face a challenge of staff turnover. While the training provided by the CMRC in handling the radio operations are proving very useful for the youth to develop their own careers, it also results in staff turnover at Namma Dhwani itself. Though this is a problem, the management at CMRC took it positively as they believed that this is also developing youth who can grab opportunities.

Lastly, it must be strongly underlined that the Community Radio station and Budikote is part of the CMRC and is acting as an extension of its services. It would be very difficult to establish an identity and context for the radio station

to sustain without the CMRC. This may not necessarily be a drawback, but an evidence that community radio – though intended to be run by the community with the purpose of empowerment and people’s development can contribute towards its purpose only when it is part of a larger development initiative or a social movement.

The way forward

As a way forward, the Government must look into the sustainability issues of community radios as they are an effective tool to reach out to the community and instrumental in addressing the last mile issues with many Govt. schemes. At the same time, more grassroots NGOs could also work together and use the platform provided by community radio for convergent action on development. It is also important to not just provide technical and financial support to such initiatives, but measures must be taken to create and nurture a talent pool who can contribute creatively to community radio. Towards this training centres must be established and information about careers in this space must also be highlighted. Despite the challenges mentioned above, as long as the content is relevant to the pressing issues that communities face, community radio would definitely have a context and it is up to the stakeholders including district administration, communities and organizations to exploit it and contribute to the human development of the region.

Conclusion

Namma Dhwani Community Radio station provides a successful example of how a locally managed radio station

can play a role in sustaining community empowerment. However, it also has a challenge in keeping itself relevant in the face of rapid advances in technology that give people more options to access information. In a few years, a generation that contributed to it and was impacted most, would have passed by and it remains to be seen how the community radio station caters to the needs of the next generation. While the radio station and the information disseminated through it clearly shows that it can contribute significantly to social change, we must also note the many years of investment in community empowerment by the promoting NGO. The SHG movement has led to empowerment of women in multiple ways and the services provided by the Community Managed Resource Centre at Budikote along with other Community Resource Centres plays an active role in keeping up good practices of the SHGs. Further, it is seen that Namma Dhwani Community Radio station effectively complements the work of the CMRC.

This goes on to establish that in the backdrop of a strong community empowerment movement, Community Radio stations can provide a vital link to sustain it and take it further and it is difficult to envision that such success at the grassroots level can be achieved by a radio station by itself or in isolation. Thus we may conclude that while community radios play an important role in shaping a development discourse amongst people within a particular geography, it would be much more effective if the promoting agencies are also involved at the grassroots level and play an active role in holistic development interventions in that geography.

* * * *

Schedule caste and Schedule tribes

“...ours is a battle not for wealth or for power. It is battle for freedom. It is the battle of reclamation of human personality”

Dr. Babasaheb Bhimrao Ambedkar

9.1 Introduction

Sustainable human development can be realized only when the most vulnerable and marginalized groups of a region are also guaranteed with the same opportunities for individual growth as other better-off groups. 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 presents some of the key indicators that allow us to understand status of these vulnerable groups in the district based on the broad categorization into two social groups: 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. Traditionally, these groups have lagged significantly behind other social categories in development in India as well as Karnataka. This is documented in the State Human Development Report of Karnataka in 2005, wherein the human development as well as gender development levels of SC and STs are considerably lower than that of the state averages. The table

below draws from this report, the status of SCs and STs. It also shows that even after taking 3 years of development into account (between 2001 and 2004), SC and ST populations lag behind other social categories in development.

Table 100. HDI and GDI of SCs and STs in Karnataka

Category	HDI	GDI
SC (2004)	0.575	0.564
ST (2004)	0.539	0.527
All (2001)	0.650	0.637

Source: Karnataka State Human Development Report, 2005

9.2 Demographic profile

Kolar district has the highest proportion of SC population in Karnataka. With 465867 SC persons in the district, 30.32% of Kolar population is made up of SCs. The average proportion of SC population in Karnataka's overall population is 17.15%.

Table 101. Taluk-wise population of SC and STs in Kolar

Taluk	SC Population	Population %	ST Population	Population %
Srinivasapur	57832	28.59	21537	10.65
Kolar	90989	23.61	15410	4.00
Malur	60184	25.40	22375	9.44
Bangarpet	181961	40.18	10905	2.41
Mulbagal	74901	28.93	8648	3.34
District	465867	30.32	78875	5.13

Source: Census 2011

Kolar's SC population makes for 4.45% of the total SC population of 10474992 in the state. Kolar comprises of 78875 persons in the ST category which forms 5.13% of the total population of

the district. The average proportion of ST population in Karnataka's overall population is 6.95%. The table above provides the taluk-wise SC and ST population in the district. It shows that the highest SC population is located in Bangarpet. 40.18% of the taluk's population is SC. Bangarpet also forms 39% of the district's SC population. The least SC population is found in Kolar taluk (23.61%). Malur has the highest ST population in the district followed by Srinivasapur. In Srinivasapur taluk, ST population comprises of 10.65% of the taluk's population. Bangarpet taluk has the lowest proportion of ST population in the district. Mulbagal has the lowest ST population in the district.

Table 102. Taluk-wise location of SC and ST populations in Kolar (2011)

Taluk	SC (%)		ST (%)	
	Rural	Urban	Rural	Urban
Srinivasapur	91.96	8.04	96.65	3.35
Kolar	81.83	18.17	86.41	13.59
Malur	88.69	11.31	93.73	6.27
Bangarpet	43.73	56.27	83.28	16.72
Mulbagal	89.23	10.77	92.02	7.98
District	70.28	29.72	91.46	8.54

Source: Census 2011

Most of the SC and ST populations of the district is located in rural areas, other than Bangarpet, where majority of the SC population and ST population to some extent is concentrated in urban areas. Thus, it can be seen that rural development plays a vital role in the development of vulnerable groups of the district. Further, while Kolar witnessed an overall decadal growth rate of 10.77%, the growth rate in SC population was 17.36% and that of the ST population was 15.76%. The table below presents the sex-ratio of various social categories in the district.

Table 103. Sex-ratio among social categories in Kolar (2011)

Taluk	SC	ST	Others	Total
Srinivasapur	990.23	982.78	977.88	981.92
Kolar	991.44	967.82	970.31	975.15
Malur	992.19	962.72	942.31	956.67
Bangarpet	1019.16	987.06	969.20	989.41
Mulbagal	998.91	958.33	979.50	984.36
District	1003.33	972.02	968.15	978.89

Source: Census 2011

From the table, it is evident that SC communities have the highest sex-ratio, whereas the non-SC non-ST population has the lowest sex-ratio in the district. The sex-ratio of SCs in all taluks is better in comparison to other social groups. Among the ST communities, taluks like Mulbagal and Malur have very low sex-ratio compared to rest of the taluks and compared to other social categories as well. Further, SC and ST sex-ratios in the district have shown an increasing trend since 1991 in successive census years.

9.3 Education profile

Education plays a very significant role in empowering poor and marginalized community. It is evident that access to knowledge is crucial to improving the Human Development status of the human being. Attainment of education directly contributes to the human development like health since it creates the basic platform for marginalized communities to attain opportunities provided by the welfare state.

Literacy profile

The next table provides a snapshot of the status of literacy among the different social categories in Kolar district and compares them with the averages in Karnataka and India

Table 104. Status of literacy among social categories

Region	Literacy Rate (SC) %			Literacy Rate (ST) %			Literacy Rate (Others) %		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
District	63.86	86.44	70.64	61.75	83.37	63.61	69.0	86.12	74.39
Karnataka	60.44	77.43	65.33	58.99	74.82	62.08	68.73	85.78	75.36
India	62.85	76.17	66.07	56.89	76.78	58.96	58.7	79.9	64.8

Source: Census 2011

The overall literacy rates of SCs and STs in Kolar is better than the state and national averages, whereas the literacy rates of other social categories is less, in comparison to the state and national averages. However, the difference in literacy rates of other social categories and that of SCs and STs is significant. The literacy rates of urban communities in all social categories is higher than the rural categories. However, the gaps between urban SC and ST populations and their rural counterparts is also significantly higher in Kolar district. The trends visible in this table applies to literacy rates of male and female populations within all social categories including SC and ST communities.

Based on the discussion the chapter on gender, it is clear that although gender gaps in literacy rates are decreasing in the district, there is an overall substantial difference of 15% between male and female literacy rates. In Kolar SC male literacy rate (78.4%) is higher than that of the state (74%) and country average (75%). Similarly, literacy rates in female SC population in Kolar (62.8%) is also higher than that of the state (56%) and national average (56%). Gender gap in SC literacy rate in the district is (16%) but which is less than State (18%) and Country (19%).

Literacy rates among male STs in Kolar (72%) is nearer to that of the state (71%) and country average (69%). Similar trends are observed in literacy rate of female STs in Kolar (54.7%), which is higher than that of the state average (53%) and national average (49.3%).

Thus, literacy rates of SCs and STs are better in the district than the state and national averages. This is significant in the case of SCs since the district has the highest proportion of SCs in the district. However, as reported in chapter on education, the overall literacy rates of the district have to make significant progress in order to reach the national target and this applies to the SC and ST populations of the district as well. In this direction, a lot of emphasis has been made for universalization of primary education. 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 has received sustained importance. The challenge is to transform these efforts into avenues for social and economic development of these marginalized groups in the district.

Enrolment

Enrolment rate in schools is an indicator to know about every child in the particular area is going to school. It is also an indicator to assess school/ education attainment of the children. The table below shows the proportion of SC and ST children in enrolment in primary education.

Table 105. Proportion of SC and ST children in enrolment

Taluk	SC			ST		
	Boys	Girls	Total	Boys	Girls	Total
Srinivasapur	29.88	30.88	30.37	11.99	25.61	25.38
Kolar	25.49	25.01	25.25	4.79	4.59	4.69
Malur	26.16	27.20	26.67	11.29	11.50	11.39
Bangarpet	40.47	41.55	40.99	4.12	3.83	3.98
Mulbagal	31.13	31.77	31.45	4.41	4.11	4.26
District	31.57	32.09	31.82	6.55	6.45	6.50

Source: DDPI office, Kolar

Totally the district has 32% of SC enrolment and only 6.5% of ST enrolment, whereas 31.5% of boys and 32% of girls in SC and 6.5% of boys and 6.5% of girls in ST. There is no gender gap in SC and ST enrolment of children. Among the taluks, Bangarpet has highest enrolment 40% (in-line with the population proportion of SCs) and Mulbagal (31.4%). The proportion of ST children's enrolment is highest in Srinivasapur followed by Malur and conforms to the population patterns of STs in these taluks. The table above does not show evidence of gender gaps in enrolment.

The number of out of school children in the district increased from 358 in 2010-11 to 758 in 2011-12. Out of them, 162 (45.25%) children were SC and 55 (15.36%) were ST in 2010 and 126 (16.62%) children belonged to SC and 60 (7.91%) children belonged to ST in the 2011.

Education infrastructure

This section presents the status of hostel infrastructure, in Kolar for helping pre-matric and post-matric students of marginalized groups. The data for this analysis is taken from the District

Statistics at a Glance of Kolar for the year 2011. The discussion in the section presents the existing hostel infrastructure for SCs, STs and Backward Castes. Kolar contains 53 pre-matric government hostels for SCs with an intake of 3507 students. Out of these, 39 are for boys and 14 hostels are for girls. Bangarpet has the highest number of boys and girls hostels (15 totally, housing 927 students). There are 3 Scheduled-Caste aided hostels functioning in the district, all of them in Bangarpet, which can house 300 SC totally for aiding them in education. The district also has 20 post-matric hostels with a total intake capability of 2270 SC students (1599 for boys and 271 for girls). 6 Hostels out of these are present in Kolar district, housing 458 students.

Relatively, the infrastructure for providing hostel facilities to ST students is lesser. There are 5 pre-matric government hostels for ST children, housing a total of 221 children out of which 177 are boys and 44 are girls. The boys' hostels are situated in Kolar, Malur and Srinivasapur taluks whereas the only girls ST hostel is situated in Srinivasapur taluk of the district. There are no post-matric hostels or aided hostels exclusively for STs in the District.

A total of 34 pre-matric government hostels exist for backward caste students, with an intake of 2106 students in the district. 4 post-matric government hostels have a total intake of 1300 backward class students in the district. Further, 2 pre-matric aided hostels also exist for facilitating education of backward caste students.

There are 10 Morarji Desai residential schools as well in the district, with a total intake of 1521 students in the district. Among them, 3 are present in Bangarpet

taluk while the rest are spread out in the rest of the taluks. There are also 4 Kitturu Rani Chennamma residential schools for girls with a total intake of 395 students.

Educational scholarships

Together with the provision of hostel facilities for marginalized groups, the state government provides scholarships for encouraging SC, ST and backward caste students to continue with their education. As noted earlier, about 31.82% of the total enrolments in primary education are SC students and 6.5% are ST students. Thus, about 65,000 SC students and 13,250 ST students are enrolled in primary and high schools of the district. Among these students, 47356 (about 70%) SC students (36345 primary and 11011 high school) received scholarships. Similarly in a total of 8817 (about 66%) ST students (6670 primary and 2170 high school) received scholarships.

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.

As discussed at length in the chapter on health, while process indicators of health, like proportion of institutional delivery, first trimester registration of pregnancy and 3 ANC check-ups in the

district are very high, the proportion of infant and maternal mortality in the district hasn't shown the intended decrease. While exact evidence of the status of vulnerable groups in regards to maternal and child health wasn't provided for this report, it is safe to assume that the district has to prioritize these issues and specifically target the vulnerable groups of the district, to improve health related indicators of availability, access and utilization.

9.5 Occupational patterns

With the lack of major industries in the district, agriculture is the backbone of the rural economy of Kolar. Since majority of the vulnerable groups in the district reside in rural areas, the status of their land ownership becomes a primary indicator of their status of livelihood opportunities. Similarly, analysis of work participation trends allow us to understand if disparities are present among different social groups in accessing avenues for gaining economic development.

Land ownership

Land ownership is a key enabler of a household's ability to move out of the poverty trap. However, owning too little land not only reduces the benefits of alienating land, it prevents the household from reaping benefits by reducing the amount of profits and possibility of investments for increasing economic development. The land holding patterns in Kolar show that high majority of the farmers in the district are either marginal or small farmers (88.01%). Similar patterns are applicable within SC and ST farmers as well.

Table 106. Social categories of landholders in Kolar (area in ha) in 2001

Taluk	SC		ST		Others		Total	
	Farmers	Land holding	Farmers	Land holding	Farmers	Land holding	Farmers	Land holding
Srinivasapur	6021	6351.6	2532	2824.28	24007	31006.51	32560	40182.39
Kolar	8153	6314.31	1333	1134.92	44884	41855.27	54370	49304.5
Malur	7644	6030.66	3024	2550.14	37752	37026.94	48420	45607.74
Bangarpet	9971	8276.57	1590	1365.75	38660	38290.35	50221	47932.67
Mulbagal	9798	8179.76	1373	1339.28	40113	41376.57	51284	50895.61
District	41587	35152.9	9852	9214.37	185416	189555.64	236855	233922.91

Source: District Statistics at a glance, 2011.

Note: Total includes jointly owned and institutional holdings

That is, 92% of the SC landholders and 89.90% among ST farmers are either small or marginal land holders. However, only 17.58% of the total land holders in the district are SCs (in contrast to their proportion in the total population in the district of 30.32%). The proportion of ST landholders among the total landholders in the district is 4.92% which is comparable to their proportion in the overall population of the district (5.13%). Thus, the analysis shows that asset distribution, in terms of land ownership is clearly skewed against the SC population of the district.

9.6 Housing, Sanitation and Drinking Water facilities

The chapter on standard of living discussed at length, the housing, sanitation and drinking water status of households in Kolar. The district has 94,872 SC households, among them 48,854 (51.49%) in Good conditioned households, 40,648 (42.85%) are in liveable households and 5,370 (5.66%)

are living in dilapidated households. Among the 19,241 ST households 9,740 (50.62%) are in good households, 8,461 (43.97%) are in liveable households and 1,040 (5.41%) are living in a dilapidated households.

It was found that, among houses resided by SC and ST households in the district, the trends at the state level are more or less resonated in the district, although the proportion of SC rural dilapidated houses in the district are marginally higher in Kolar. In all categories, lesser share of urban houses are in dilapidated condition. However, lesser proportion of SC and ST houses are in 'good' condition and higher proportion of dilapidated houses, reflecting the comparative backwardness of these social categories with respect of quality housing.

The table below shows the details of water facilities available for SC and ST households in the district.

Table 107. Status of drinking water facilities in Kolar (2011)

Social Categories	Within Premises	Near Premises	Away
SC	14.43	48.02	37.55
ST	15.39	46.17	38.44
Others	31.95	40.95	27.10
Total	25.97	43.28	30.75

Source: Census, 2011

As discussed in earlier chapters, the status of drinking water in Kolar is in a state of crisis. As a common indicator for comparison of drinking water facilities between households of different social categories, the location of drinking water, based on Census 2011 is used. The table shows that while only 1/4th of the households in Kolar have access to drinking water within their premises, the proportion of SC and ST households having access to drinking water at their own premises is significantly low. The table clearly shows that more SC and ST households in the district have to go away from their household premises to collect drinking water, thus showing the social gaps in access to basic amenities like drinking water in the district. The next table takes another basic amenity that indicates sanitation, hygiene, dignity and security of the households. It presents the proportion of households in the district that have access individual household latrines and those that practice open defecation. While more than half the households of Kolar district don't have access to any toilet facilities and practice open defecation, the proportion is extremely high in SC and ST households. Correspondingly, their access to individual household latrines (IHHLs) is correspondingly lower than other social categories.

Table 108. Status of household sanitation in Kolar (2011)

Social Categories	Individual household latrine	Open defecation
SC	24.20	66.78
ST	22.62	73.58
Others	52.73	44.96
Total	42.80	52.88

Source: Census, 2011

Thus, from this section it is clearly evident that when it comes to standards of living, the SC and ST households of Kolar clearly lag behind other social categories. The coverage of housing, drinking water and sanitation were used as indicators of provision of basic amenities and across the different social categories, the analysis shows that SC and ST households are clearly disadvantaged. This analysis thus points to the immediate focus needed in these aspects from the district administration.

9.7 Conclusion

A just state guarantees the same opportunities to all its citizens irrespective of gender, class or caste. However, we find that disparities exist in the status of education, health, social and economic status based on many such socio-cultural categories. In a society like India where marginalization based on along these lines have existed from ancient times, arriving at this ideal position of true equity is a long drawn process which requires sustained priorities and carefully designed affirmative action policies. Further, it is necessary to understand from time to time, the trends in these disparities and whether the policies and schemes that focus on bringing down these disparities are paying off effectively.

This chapter was such an attempt to understand the status of broad based indicators of human development of the marginalized groups in Kolar. The chapter focussed specifically on two groups: SCs and STs.

A unique feature of Kolar is that the population proportion of SCs in the district is highest in Karnataka. However, this hasn't translated into the expected improvement in human indicators. While category-wise indicators of human development were hard to collate in the district, there is enough evidence to conclude that much more has to be done in the district to guarantee that such marginalized groups too have the same capabilities and opportunities as that of others, to lead a healthy and fruitful life.

The literacy rates of SCs in the district are comparable to that of others while literacy rates of STs are significantly short of the district averages. However, both the literacy rates of both communities are better off, than the state and national averages of the respective communities. Further, as this chapter shows, within these communities, there are significant differences between urban and rural areas as well as between male and female populations.

The analysis of landholding patterns in district shows that asset distribution, in terms of land ownership is clearly skewed against the SC population of the district, with a disproportionately low percentage of SC households owning land in the district. The analysis of coverage of basic amenities like drinking water and individual household latrines showed that the district has a long way to go in guaranteeing full coverage of the

households. However, the coverage of SC and ST communities in these aspects is even more inferior and thus points to the comparatively lower standards of living of these communities. The analysis in the chapter on governance shows that there is larger scope needed for political participation of SCs, specifically in ZPs and TPs of Kolar.

While disaggregated data on status of health and economic wellbeing of different social categories weren't available in the district, from the above analysis, it is clear that SC and ST households in communities have attained lower human development status than that of the other social categories in the district. This issue requires the immediate attention of the corresponding implementing departments so that meaningful efforts are taken to address the human development of marginalized communities in the district. The starting steps in this direction could be the provision of basic amenities like drinking water and individual household latrines.

9.8 Small area study: Composite Dalit Development Index – A case study of Avani Gram Panchayath

Introduction

A study of human development in a region is neither complete nor holistic if inquiry is not made into the socio-economic, political and cultural development of those people at the lowest rung of the social ladder. 'Dalits' or people belonging to the Scheduled Castes in India have been at the lowest rung of the social ladder for centuries in India and as a result their development whether it is in terms of education, health or economic status remains stunted.

The Constitution of India gives a powerful framework with which social, economic and political inclusion of Dalits in the nation's growth story is made possible. Several schemes and programs from the Government towards the upliftment of the Scheduled Castes are testament to the same. However, there still exist stark differences in the perception of inclusion, liberty, discrimination, equality and equity between Dalits and non-Dalits.

This study aims at capturing the perception of such phenomena qualitatively and quantitatively within the perimeter of a Gram Panchayath in the district. A Composite Dalit Development Index (CDDI) has been constructed to determine the development of Dalits in the one Gram Panchayath of the district. Dalit Deprivation Index (DDI) is further derived from CDDI. Data for the purpose of this calculation and analysis was collected from Avani Gram Panchayath in Mulbagal Taluk of Kolar District.

Avani GP

Located about 13 kms from Mulbagal Taluk Headquarters, Avani is one of 30 Gram Panchayaths in the Taluk. Mulbagal Taluk ranks the lowest among the Taluks of Kolar district in terms of backwardness as per D M Nanjundappa committee's "Report of the High Power Committee for Redressal of Regional Imbalances in Karnataka" submitted to the Government of Karnataka in 2002.

Avani Gram Panchyath comprises 7 revenue villages with a total population of 7213. Of the 1636 families, there are 886 SC families, making it roughly 54% of

the population. Of the 7 revenue villages, surveys were carried out in 4 villages namely Avani, V. Guttahalli, Ramapura and Virupakshi. In addition to a survey conducted across 50 Dalit households, discussions were held with GP members, ASHA workers, teachers and a group of students. Sources of secondary data collection and analysis include PDO, School HMs, Taluk Panchayath office of Mulbagal, Avani Gram Panchayath office, Census of India 2011 and the website of RDPR, GoK.

Composite Dalit Development Index (CDDI)

Based on the information collected from Avani Gram Panchayath, the Composite Dalit Development Index has been computed taking into account 10 parameters that include perceptions of inclusion, discrimination and the liberty to protest against discrimination, conflict resolution, freedom and gender dimensions. The computation also takes into account standard of living, access to basic facilities and education. These parameters are described in the following paragraphs.

Institutional Inclusion (0.67):

In terms of institutional inclusion, we witness healthy presence of SC members in various committees such as SDMCs, Water Societies, etc. However the number of SC Gram Panchayath members is short of the expected number, if we take into account the percentage of SC population in the GP. We must note here that the Joint Forest Management Committee (JFMC) does not exist in the Gram Panchayath and if we exclude JFMC from the computation, the institutional inclusion is higher. JFMC does not exist.

Social Inclusion (0.6):

Social inclusion for Dalits is slightly lower than institutional inclusion; the latter usually being driven by legal norms. Though a high percentage of Dalits expressed that they are treated equally in hotels, addressed with respect and also have opportunities to enter temples and participate in festivals, Dalits having freedom to enter a non-Dalit house is almost non-existent.

Perception of Discrimination (0.7):

The perception of discrimination in terms of access to education or health services is quite low, whereas some amount of discrimination still exists in terms of access to water facilities. It must be noted however that though there is visible difference in the infrastructure for water supply between Dalits and non-Dalits, it is not perceived as discrimination by many families. Economic discrimination such as differential wages in work places does not exist nor are Dalits restricted from entering other vocations. However, the primary occupation in most of the households surveyed was some form of manual labour, which indicates that Dalits are not in a position to exploit financially lucrative opportunities, if any.

Protest against Discrimination (0.1) and Conflict resolution (0.4):

The percentage of people who have protested against discrimination is quite low. This may be attributed to an overall low perception of discrimination. Further, the incidence of conflict resolution is also low in the case of Avani.

Perception of freedom (0.8):

The perception of freedom is quite high among the Dalits in Avani in terms of mobility (freedom to walk in all parts of the village), employment opportunities and in having the opportunity to ask questions and protest, if necessary. But as may be seen above, the incidence of protests have been low in number. The question on freedom to participate in cultural activities of the village yielded mostly positive responses.

Standard of living (0.1):

The standard of living assessed through secondary data is low in the villages surveyed. The number of non-agricultural establishments, land and assets holding among Dalits is lower than the non-Dalits and this fact is corroborated by the officials of the GP. This is further substantiated by the fact that most of the Dalits are engaged in some or the other form of manual labour work, especially in stone quarrying, as revealed in the household survey.

Gender dimension of development (0.4):

Though there is a high percentage of institutional delivery among Dalits, it is lesser than the Taluk's rate of institutional delivery. About 40% percent of women do not get adequate rest before delivery, though almost all women get more than three months of rest after delivery. With regard to reproductive health support and health assistant visits, there is no strong evidence to believe that Dalits are positively or negatively discriminated owing to a wide variation in response.

Access to basic facilities – Water, Toilets, Drainage (0.167):

The percentage of toilets among Dalit households is less than that of the general population and the drainage facilities are also lesser in comparison to the others. Usage of toilets was seen in less than 20% of all the Dalit households surveyed. The manner in which water was accessed by Dalit households varied from village to village and it had a bearing on the quantity of water available. This includes public stand posts, common (street) drinking water taps and accessing others' private water sources. It may be noted that there is a visible difference in the ease of access to drinking water and water supply infrastructure between Dalit and non-Dalit households.

Access to education (0.5):

There is no difference found between the enrolment, attendance and transition rate of Dalit and non-Dalit students. Further, all the respondents of the survey also expressed that there is no discrimination in how students are treated in schools and hence the GP fares well in this dimension.

The Composite Dalit Development Index (CDDI) taking into account the above factors stands at 0.44 and Dalit Deprivation Index (DDI) at 0.56, which indicates that the performance of Avani GP may be considered to be average with regard to development of Dalits.

Table 109. Calculation of Composite Dalit Development Index

Description	Value
Institutional inclusion	0.67
Social inclusion	0.60
Perception of discrimination	0.70
Protest against discrimination	0.10
Conflict Resolution	0.40
Standard of living	0.10
Perception of freedom	0.80
Gender dimension	0.40
Access to Basic facilities	0.17
Access to Education	0.50
CDDI	0.44
DDI	0.56

Dalit Development – a qualitative assessment

The following paragraphs contain a qualitative description of some of the factors observed that affect the overall development of Dalits and their social, economic, political and cultural inclusion.

In an Adi-Dravida household with 5 male children, it could be found that the first son has completed his SSLC and is working in a quarry. The second son studied upto 9th standard and dropped out. The third and fourth son who are twins are currently studying in 9th standard, whereas the last child, aged less than 14 is already working in a quarry and has never gone to school. The reasons cited by the mother included poverty on the one hand and a special affection for the twins on the other – who she wishes must continue their education.

Settlements (Housing)

In all the villages, the SC households are settled in separate areas that are usually called SC colonies or just colonies or

named as Ambedkar colony. While there were rare instances of Dalits living outside the 'colony', there were no instances of non-Dalits living in the colonies. There were visible differences in the perception of discrimination and awareness levels among those who lived within the colony and those outside. The latter showed not only greater political awareness, but also better understanding about Government Schemes, etc.

Exclusion within the excluded

It is recognized that Dalits face different kinds of exclusion as a result of being at the lowest rung of the social order. However, there are instances where there is discrimination within the people classified as Scheduled Castes. Two stand out examples of social exclusion can be noted among the Scheduled Caste population of Avani Gram Panchayath.

- In V. Guttahalli village, there are approximately 60 families who belong to communities that are classified as Adi Karnataka, while there are 12 families who are classified as Adi Dravida. Being a minority within the Dalits, they do not have access to houses of other Dalit families, leave alone entering the houses of others. The two groups do not have food in each other's houses. This is one of the villages where Dalits and non-Dalits have their own temples, but Adi Dravidas have had to create their own place of worship, which is a small structure built of stone.
- The differences extend to other areas as well. People belonging to Adi Karnataka have political representation at the GP level, while Adi Dravidas had none. In terms of educational attainment

and employment, there were cases of children dropping out from school and working among Adi Dravidas, while there are examples of Adi Karnataka youth pursuing higher studies and working in pharmaceutical industries, etc. Almost all the Adi Dravidas in the village are employed as daily wage labourers in stone quarrying.

- In Avani village, members of Bovi community constitute a unique case of exclusion among the Dalits. Members of this community are mostly migrant and travel between Andhra Pradesh and Kolar. They are employed as labourers for stone cutting or loading. There are only 25 to 30 Bovi families in this village where the total number of SC families is close to 229.
- While some SC families in Avani have availed benefits from housing schemes, most of the Bovi families live in huts on the outskirts of the village. They do not have electricity connections and use kerosene and firewood for cooking. In the interviews, it was revealed that their children do not go to Anganwadis regularly, the drop-out instances from schools are higher and there were incidences of children as young as 11 and 12 going to work in the stone quarrying industry with their parents and without wages.
- It is clear the asset holding among Bovis is low despite some families living there for a long time. They do not have the freedom to enter the houses of other SCs in the village and also do not mingle with others castes among SCs. It may thus be seen that the Bovis are excluded not only from the fruits of development by lack of access to basic

amenities, their situation is further worsened by the social exclusion faced by them internally within SC communities.

Impact of education On Discrimination

Education is normally singled out as a strong factor that can lead to lesser discrimination of Dalits in the long run, as better education not only results in more opportunities for growth, but also helps people reason and question traditional discriminatory practices. The study experience confirms that the perception of discrimination and its articulation is distinctly sharper among young respondents who were educated up to the levels of graduation and beyond. This may help in more protests against discrimination and thus help in reducing it, but it still does not address the issue of discriminatory behaviour among non-Dalits.

“...don't think that you have become great because of your education, your education will not change your identity (caste)”

Shared by a young student pursuing her Bachelor's degree in Arts, this is a typical response to any act by a Dalit such as collecting water from a common water source before non-Dalits or any other acts of protest.

In a discussion with 10 high-school students in Virpupakshi village, all the students stated that they sit in school together, participate in school activities together and play together as well. However, all of them shared that Dalit students do not go to non-Dalit houses and unanimously agreed that such practice should not continue. However, they are by themselves powerless to change it. The Head Master of the school contended that it would take a long time to get rid of the centuries old practices,

but was positive that discussions that stimulate and sensitize the students would have a great impact.

The primary occupation in almost all Dalit households was some form of manual labour, particularly in stone quarrying works. Though there is no discrimination found in terms of wages or availability of opportunities of employment between Dalits and non-Dalits, it is clear that the present socio-economic condition of Dalits does not gear them to exploit other opportunities. While the percentage of Dalits who have graduated from college is presently low, it could be found that they are finding employment in places like Kolar and Bengaluru and improving their economic status. It may thus take a generation to see Dalits occupied in professions other than labour.

Dalit ASHA – a ray of hope

In the survey that comprised more than 50 households across 4 villages in the Gram Panchayath, the practice of Dalits not entering the houses of non-Dalits was a common feature. While in most cases, it was because it was not acceptable to non-Dalits, there are also cases where Dalits have unquestioningly accustomed themselves to the continuation of a centuries old practice.

However, there was one exception. In a lone Dalit household, Lakshamma (name changed) responded in the affirmative when asked whether she had access to non-Dalit households. Lakshamma is the village ASHA worker, whose responsibilities include taking care of pregnant women and lactating mothers, ANC registrations, etc. This position has given her a noteworthy exceptional status wherein she has gained access to houses of non-Dalits. She can go beyond the threshold of the non-Dalit house for

taking care of the needy ones. This is attributable to awareness about health services rendered by her and an indicator that development interventions can help break the discriminating traditional mould of non-entry to households and indeed a positive sign and a ray of hope.

Conclusion

It is clear from the study undertaken in Avani Gram Panchayath limits that caste discrimination is still prevalent and there is no reason to believe that Avani is a case in isolation, where Dalits are victimised due to their caste. Protest against discrimination is one way of addressing the issue, but it is dependent on exceptional perception of discrimination, both of which are found wanting in Avani. For instance, Dalits not entering the houses of non-Dalits is an accepted tradition and the continuance of this tradition without protest would mean that some forms of social discrimination would may take a very long time to be eliminated. However, it may be hoped that education and awareness can alter the situation as seen by the example of the Dalit ASHA who has access to non-Dalit houses. It may also be hoped that as more Dalits take up higher education, they may find opportunities that improve their socio-economic status, enhance their acceptability and result in better overall human development.

9.9 Small area study: “Differently Abled are differently counted too”

The first Human Development Report in 1990 began with an approach of development with the words ‘People are the real wealth of a nation’. That the objective of development should be to create an enabling environment for people to enjoy long, healthy and creative lives is the crux of human development paradigm. But that has not always been the case in reality. The deep divide between rich and poor, and depriving a

section of society from accessing benefits of development is a strange but common phenomenon observable in many developmental contexts. This has been unfortunately further dismal in the case of Persons with Disability (PwD).



Photo 15. Disabled people distributed with tri-cycles in Kolar

A society can be said to be equitable when it's marginalized and weaker sections have similar opportunities for growth and development as that of the mainstream. However, similar to other marginalized groups, PwD have very limited opportunities to be self-reliant and lead a dignified life. PwD are the most vulnerable and marginalized slice of society cutting across caste, creed and community. They have been marginalized in the rural set up even more, where they cannot be self-reliant despite being confident and active due to limited livelihood opportunities other than agriculture and other physical labour oriented employment options. With this back drop this small area study in Kolar attempts to understand the status of PwD in the Kolar District. The specific focus on the study is to understand the roots of discrepancy in recognizing PwD and the possible impacts of this discrepancy on the human development status of PwD in the district.

PWD in Kolar District

Poverty is considered to be one of the major causes of disability. This is because the poor are more exposed to risky

working and living conditions, including lack of access to healthcare facilities, poor nutrition and safety measures etc. On the other hand, disability can also be a cause of poverty. Hence disability can be both cause and consequence of socio-economic condition of a family. A large majority of PwD live in rural areas (69.5% according to the Census of 2011) where very few of them have access to rehabilitation and health care.

The Census of 2011 shows that 2.21% of India's population suffers from disability, a raise from 2.13% in 2001. Proportion of disabled persons in India has increased both in rural and urban areas during the last decade. Proportion of disabled population is higher in rural areas (2.24% of total population) in comparison to urban areas (2.17%). Further, at the national level, prevalence of disability is higher among SC population (2.45%) than the rest of the population.

Table 110. Population profile of PwD

Sl. No.	Particulars	Population	No. of PwD	%
1	India	1210569573	26810557	2.21
2	Karnataka	61095297	1324205	1.96
3	Kolar	1540231	32277	2.10

Source: Census, 2011

The Census of 2011 identified 32,277 PwD in Kolar which is 2.10% of the total population in the district. The PwD population in Kolar is above the state average and almost near to the national average. Also, Kolar stands in 10th position in the state with respect to PwD.

Data Discrepancy

An estimate on the extent of negligence about PwD can be made based on the levels of discrepancy on the actual count of PwD, in the data maintained by different authorities. The discrepancy of data on PwD can also be seen at

the national level. But, this discrepancy arises basically due to differences in definition of PwD. According to the World Bank's report in 2007, PwD in India is 8%; the National Sample Survey in 2002 estimated it to be 1.8% and the Census of India identified it to be 2.13% in 2001 and 2.21% in 2011.

"As of now, there could be around 100 to 200 PwD in our Grama Panchayat limits, but if you come five years later, you may find around 50% of our population with disability. We know we are living in risky situation. We are inevitably drinking water with high fluoride content and other toxic materials. Malnourishment has been a common thing amongst us; especially in children and adolescents. So, certainly there will be more disabled people for you to survey in the coming years"

-Ex. President of Yaramaarpalli GP,
Srinivaspur Taluk

In the case of Kolar, it is found that there is lack of clarity in identifying PwD and less priority given to maintenance and updating of the data. Further, the situation in some taluks is much more alarming. There was no data on PwD available in Bangarpet taluk just because of the vacancy of Village Rehabilitation Workers (VRW) and Multipurpose Rehabilitation Worker (MRW). In other taluks, where data was available data, it was hardly reliable. Severe discrepancies found between the data, even at the grassroots level, where personnel of several departments were located next to other, and in close proximity with the actual PwD. The following table provides the taluk-wise PwD populations as identified from the 2007-08 survey conducted by the department of Disability and the Census of 2011. These two sources provide the main access points for identification of the PwD at the district level.

Table 111. PwD population in Kolar District

Taluku	No. of PwD 2007-08 Survey			Taluk proportion (%)	PwD in Census 2011
	Male	Female	Total		
Srinivasapur	3749	2971	6720	23.25	7510
Kolar	3080	2774	5854	20.25	6540
Malur	2913	1993	4906	16.97	5471
Bangarpet	4077	3092	7169	24.80	8005
Mulbagal	2514	1736	4250	14.70	4745
Total	16333 (56.52%)	12566 (43.48%)	28899		32271

Source: Dept. Disability, Kolar (2007-08 Survey), Census, 2011
Identification, reporting and review processes

At the field level, there are three institutions responsible to have the data on PwD. The Village Rehabilitation worker appointed by Disability Welfare Department, the Anganwadi worker who is appointed by the Women and Child Development Department and the Gram Panchayath. But, each of these departments work in isolation and primarily reports to their own authorities at taluk and district level without convergence at the field level. The next table provides a brief summary of the processes followed by each of these institutions to identify report and review PwD in their area.

Table 112. Identification – Reporting – Review of PwD by different sources

Process	VRW	AWW	GP
Identification	There is no set process to identify the PwD such as periodical house-to-house survey. The PwD will be registered in the VRW's records if they have doctors certificate. Those, who are unable to get the certificate, will not be considered as PwD for the purpose of ensuring any entitlements.	AWW will identify and list the PwD during yearly children census. Focus is given to identify children with disability. However, no criteria to ascertain the disability and recorded based on the words of family / community member or based on the general observation.	Absolutely no system to record PwD. Completely depended on the VRWs record. If no VRW, then no data. System to registered and maintain records of PwD not been institutionalized unless they have received some entitlement.
Reporting	Monthly Reporting to Multipurpose Rehabilitation Worker	Monthly Reporting to CDPO, but not much regarding PwD	No such system
Review of List	VRWs do not have fixed time for updating; During our survey, the VRWs said that they get to know about addition and deletion of PwD since they are in the same vilalge, and thereby update the list. Few VRWs said they do once a year through door to door visit. There is no proper directions / process to review the list.	During yearly children survey, but not focused on adult PwD.	No such independent process observed.

The above table shows the lack of convergence between the different representatives of Government departments despite being close to each other geographically. Further convergence mechanisms in available human resources are not institutionalized. For example, the VRWs will be remunerated by the Disability Welfare Department, if they bring the endorsement of their attendance from the local GP. The local GP does not know the functioning of the VRW to assess whether s/he was actually present in the field.

The PwD certification process

The PwD certification is done by a committee set up at the district level. This committee consists of four doctors from Department of Health and Family Welfare along with the representative of Indian Red Cross Institute and chaired by a district surgeon. The committee is the disability certifying body at the district level. The committee is expected to meet every week on Wednesday. PwD from all over the district should present in front of a committee to get certified. The committee evaluates the percentage of disability and provides the appropriate certification. This certificate is essential for the PwD to get his/her rightful benefits from various departments of Government.

As per a recent sample check²², across five GPs of the district spread over four taluks 35.68% of the PwD above 18 years of age does not have doctors certificate and more than half of them belong to SC category. As observed in the Focus Group Discussions with PwD, getting this

certificate is not easy since the doctors are not available at the taluk level. PwD have to travel to the district headquarters for the certification, and in the cases of mental illness, they are required to travel to the state headquarters.

Village Rehabilitation Workers

The Village Rehabilitation Worker (VRW) is a GP level voluntary worker who works for disability related and senior citizen related issues. VRWs maintain PwD data and feed this crucial information to taluk level offices, which forms the basis of PwD related activities of the department of Disability. In our field work, we found that most VRWs weren't aware of their importance in the guaranteeing disability welfare. Discussions with VRW revealed that their positions weren't utilized optimally since there was no organized training pertaining to their work, no institutionalized reporting mechanisms for their activities, survey of PwD and updating the existing data-base based on changes in the field (like marriages, selection of beneficiaries, migration, deaths etc).

Lack of coordination and convergence

Though the responsibility of PwD welfare was under Dept. of Women and Child Development, immediately after separation i.e. establishing the independent Dept. of Welfare of Disabled and Senior citizens, the field level work of the Dept of Women and Child Development has moved away from concerns for the PwD, except deputing staff on ad-hoc basis, during intermittent needs. The newly established department of Disability at the taluk level and below did not have access to the data already

²² Conducted by Grassroots Research And Advocacy Movement as part of a study on inclusion of people with disabilities in MGNGREGA in Kolar district.

with the dept of Women and Child Development. Even PRIs except at ZP level did not have specific mandate to ensure that activities regarding PwDs should be prioritized. Similarly, they did not feel necessary to have disability related information accessible within their offices. It was clearly evident that there was no coordination between these different government offices, thus contributing to the inconsistency of data.

Exclusion of PwD and data validation

At the village level, there are four possible sources of PwD related data. These are

- Data maintained by GPs for uploading on RDPR website (sometimes collected for Samanya Mahiti²³)
- Village Rehabilitation Worker Register
- Survey data conducted by the disability department in collaboration with DWCD
- Anganawadi Workers Register



Photo 16. Field validation of PwD

As part of the small area study, extensive validation of the data was carried out in 15 Grama Panchayath in the district spread across 04 taluks. At the first level, the data uploaded on the website of Rural Development and Panchayath Raj Department by the respective GP proved to be absolutely unreliable. Based on the discussion with personnel of the GPs, the data they have on PwD is to be used for the purpose of provision of employment under MGNREGA and other schemes and hence, they collect information about PwD aged above 18 years. Hence, technically, the number of PwD as per the data with the GP should be lesser than the survey data of the Dept of Women and Child Development, which has to have information of all ages. However, the data provided by the GPs and the number of PwDs registered under MGNREGA were much higher than the number of PwD listed in any of the other source of data.

As seen from the next table, the total number of disabled persons in the 15 villages where field work was conducted, varies from one source to another. According to the GPs, 1110 PwD were registered for NREGA in the respective GPs. Based on the VRWs report, there were 252 PwD and based on the Anganwadi Workers register there were 213 PwD in the GP headquarter villages themselves. According to 2007-08 survey, 983 PwD are present in the GPs listed. The following table gives the detailed statistics of PwD in the villages according to the said sources.

²³ Samanya Mahiti is a collection of information useful for the GP for its planning purposes in schemes like MGNREGA, Housing etc. Samanya Mahiti is uploaded onto the GP work automation website 'Panchatantra', which is publicly accessible through the website 'Panchamitra'.

Table 113. Source-wise statistics of PwD in selected GP

Sl.No	Taluk	GP	NREGA\$	VRW#	AWW#	Survey\$	Master# List
			Total	Total	Total	Total	Total
1	Bangarpet	Gollahalli	16	8	7	9	10
2		InnoraHosahalli	243	0	7	10	15
3		Kyasamballi	220	28	14	49	29
4		Ramasagara	54	10	9	54	12
5		Srinivasasandra	238	0	2	19	8
6	Kolar	Beglihosahalli	4	0	14	99	22
7		Kondarajanahalli	28	13	12	35	15
8		Vadagooru	31	14	10	67	18
9	Mulbagal	Agara	66	35	26	68	37
10		Avani	11	42	32	117	52
11		Emmenatta	0	11	9	94	14
12		Gummakallu	166	18	11	78	23
13		Nangali	29	34	29	60	38
14	Srinivasapur	Hodali	0	16	15	125	26
15		Lakshmipura	4	23	16	99	24
Total			1110	252	213	983	343

#: GP Headquarters Village
\$: GP

The data provided by GPs, available through the RDPR website were first excluded from the validation process. The field team meticulously verified the other three sources and a **master list** of PwD in the GP headquarters village merging all the three data was prepared, after house to house verification.

Based on this master list, there are total of 343 PwD in the GP headquarter villages of the 15 GPs. But, it is 252 according to VRW list and 213 according

to AWW's records. The discrepancy in the data is vividly visible at the village level, in the table above. For example, in Innorhosahalli in Bangarpettaluk, there are 7 disabled as per Anganawadi Worker's list, 10 PwD found in Department survey list (2007-08) but as per RDPR website 243 PwD registered for MNREGA work. This shows 486% growth of PwD within 5 years. Similar inconsistencies were found in Kyasamballi and Srinivassandra villages of Bangarpet taluk as well.

Table 114. GP-wise discrepancy in PwD lists

Sl.No	Taluk	Exclusion of PwD			
		GP	Total Number (Master List)	Exclusion in VRW register	Exclusion in AWW register
1	Bangarpet	Gollahalli	10	2	3
2		Innorahosahalli	15	15	8
3		Kyasamballi	29	1	15
4		Ramasagara	12	2	3
5		Srinivasasandra	8	8	6
6	Kolar	Beglihohahalli	22	22	8
7		Kondarajanahalli	15	2	3
8		Vadagooru	18	4	8
9	Mulbagal	Agara	37	2	11
10		Avani	52	10	20
11		Emmenatta	14	3	5
12		Gummakallu	23	5	12
13		Nangali	38	4	9
14	Srinivasapur	Hodali	26	10	11
15		Lakshmipura	24	1	8
	Total		343	90 (26.24%)	125 (36.44%)

The above table provides the extent of exclusion of PwD in different sources. There are 343 PwD in 15 villages according to the master list. 26.64% of PwD are excluded in the records of VRWs and 36.44% from the Anganawadi Workers' records. Alarmingly, two GPs from Bangarpet taluk (Innorahosahalli and Srinivasasandra) and one from Kolar taluk (Beglihohahalli) had 100% exclusion in the VRWs list. The exclusion was caused due to non-availability of VRWs in these GPs.

The study team visited to all the households and conducted a physical check to know whether the excluded members are disabled or not. In comparison with the master list, a totally of 62.68% of PwD names were missing (from the VRW and Anganwadi registers). Among the excluded PwD 56.6% are Male and 43.4% are Female.

From promising dawn to disappointing dusk

Organized efforts from marginal groups are needed for getting attention of the society to their problems. However, PwD

have hardly organized and never come forward for collective bargaining to get their rights and entitlements. A study conducted by K. P. Kumaran in the year 2013 highlight that organizing PwD into Self-help groups helps them to come out of their shackles and to know about their rights and entitlements. It is interesting to note that one such effort to organize PwD in a Self Help Group (SHG) happened in the Kolar district.

‘Yelichepalli’ is a remote village in Mulbagal taluk of Kolar district which is situated 17.5 kms away from taluk headquarter. This village belongs to Dhoolapalli GP. The village with about 280 households is having about 20 disabled persons. After observing the activities of a local women’s SHGs formed by Ms. Shanthamma, a staff of a local NGO by name ‘KGF Women’s Association’, these PwD asked her to help them as well. With hard work and sustained effort, the PwD were organized as ‘Sri Devaraj Urs Disabled Self Help Group’. The group was formed in the year 2010 with 10 disabled members. After a year, another 2 members joined the group. Among the 12 members, 9 members were male and 3 were female, all belonging to the Marathi community. The two female members in the group were severely disabled, with certification of more than 80 percent. However, disability never reduced their zeal to participate in the group.

Their SHG got the basic training and orientation about the concept of SHGs, savings and self-development, Health and sanitation, environment etc. The group met regularly and had the credit and thrift activities, which helped most of its members to meet their medical expenses.

According to Ms. Shanthamma who helped form this SHG, the group was running well and she felt that it is important to link the group with financial institutions. She said that she went and approached the local nationalized bank to facilitate the financial linkage. But the response from the bank was not encouraging. She also approached various government departments and PRIs. While the officials appreciated her effort, the requirement of ‘proper documentation’ was difficult for Shanthamma. She had to visit these offices many times and spent money out of her pocket for facilitating the linkage, but there was no positive result. After 3-4 months, she expressed her helplessness to the group members. Without institutional support, a group that could have become pioneers in the PwD SHG movement gradually became defunct.

While success stories and best practice models for community based rehabilitation of PwD exist in the neighbouring state of Andhra Pradesh (with which Kolar shares most of its borders), similar initiatives are missing in Karnataka for the upliftment of PwD.

Conclusion

Accurate and dependable data is essential for planning, framing policies, programs and implementing the same in order to address any developmental issue in a focused manner. The statistical information should not only be accurate, it should also be available within a reasonably acceptable time frame before it becomes obsolete. It is also necessary that the data cover wide range of information, such as type of disability, age profile, rural and urban

distribution, education, employment status, etc for effective intervention and desired outcomes.

As it normally happens in any developmental intervention 'something not counted, is not considered at all'. The neglect in information collection can be attributed to the neglect of the development of PwD itself. When the administration and respective program implementation authorities are not sure about number of PwD in the districts, the accuracy in planning, budgeting and designing process to ensure entitlements will miserably fail right at the inception. The focus of human development is to reach the most vulnerable and marginalized section of the community. And, there cannot be any other section more vulnerable than PwD, since they are spread out and hidden among different social categories, castes, gender and other hierarchies. Accurate information

about the number, geographical spread and demographics of PwD, intensity of the disability and their socio-economic profile is the first step towards empowering them for dignified development. This small area study shows that the district has a long way to go, if it has to provide such an environment for its disabled population. Thus, there is an urgent need for data collection relating to PwD of Kolar District to assess their inclusion in various Government welfare schemes. The Department of Disability should take up a leadership role of guiding and integrating the efforts of various government agencies and conduct scientific surveys that adopt universal definitions and criterion to identify exact number of PwD in the district and plan specific development initiatives for this ignored vulnerable group in order to achieve overall human development in the district.

* * * *

Governance and Human Development

10.1 Introduction

According to the United Nations Economic and Social Commission for Asia and the Pacific, governance is defined as ‘the process of decision making and the process by which decisions are implemented (or not implemented). Good governance has the following eight major characteristics: it is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. Since the government is a major player involved in governance, good governance in the government assures that societal ills like corruption, violence and oppression are minimized.

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. While majority of the policy decisions w.r.t to good governance are determined at the state and national levels, the actual planning and direction provided for implementation of these policies and schemes and their impacts can be seen at the district level and below. Thus, governance influences the process of planning and prioritization of issues, decision making and extent of funds made available for these issues and the efficiency of implementation processes. Thus, governance directly influences the development outcomes of the various schemes and programmes of the government.

Thus, the Karnataka Human Development Report 2005 emphasizes the links between operational characteristics of good governance like effectiveness of fund utilization, patterns of service delivery, accountability and inclusiveness to gains in sectors like health, education and livelihoods and increasing the overall quality of life of the people.

The discussions in the previous chapters of this report show that the current status of human development in the district is far from satisfactory. In this context, the role of good governance is even more critical since the district faces a multitude of challenges (specifically, in the sectors of nutrition, sanitation, natural resource management and livelihoods). While the previous chapters on health, education, livelihood and standard of living focus on sector specific issues in the district, this chapter analyses the different aspects of good governance in the district. The first section focusses on the local governance structure, including PRIs and ULBs followed by analysis of political and bureaucratic stability in the district. The next section focusses on the analysis of fiscal trends followed by the discussion on the physical infrastructure for delivering public goods and services in the district.

10.2 Local governance structure

Panchayat Raj Institutions (PRI) and Urban Local Bodies (ULB) form the major decentralized governance structures

in India, responsible for delivering various development related goods and services at the district level. Further, the district revenue administration mechanism also joins hand in this effort by ensuring security, stability and translating the welfare measures of the state into action, 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 effective political and fiscal decentralization structures and mechanisms.

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.

While many such experiments in fostering decentralization has been conducted in the state, 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'²⁴ 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.

²⁴ Planned expenditures: Expenditure included in implementation of different development schemes and programmes (deriving from five year plans)

Non-planned expenditures: Mainly includes salary and wages of government employees, subsidies, interest payments and expenditures on pensions, police services, tax collection etc. It forms the bulk of government expenditure

Table 115. PRI details in Kolar

Zilla Panchayat	Kolar
Taluk Panchayats	Srinivaspur, Kolar, Malur, Bangarpet and Mulbagal
GPs	156 (Srinivaspur:25, Kolar:36, Malur: 28, Bangarpet: 37, Mulbagal: 30)
Total ZP members	28
Total TP members	89
Total GP members	2545

Source: District Statistics at a glance 2011, Kolar

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. Kolar has the following PRI structures and elected members

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.

10.3 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.

Table 116. 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, the table below gives the details of ULBs in Kolar. 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.

Table 117. ULB details in Kolar

Area	Type of ULB	Population	Council members
Kolar	City Municipal Council	138462	35
Robertsonpet (KGF)	City Municipal Council	162230	38
Srinivasapur	Town Municipal Council	26793	23
Malur	Town Municipal Council	40050	23
Bangarpet	Town Municipal Council	44849	23
Mulbagal	Town Municipal Council	57276	27

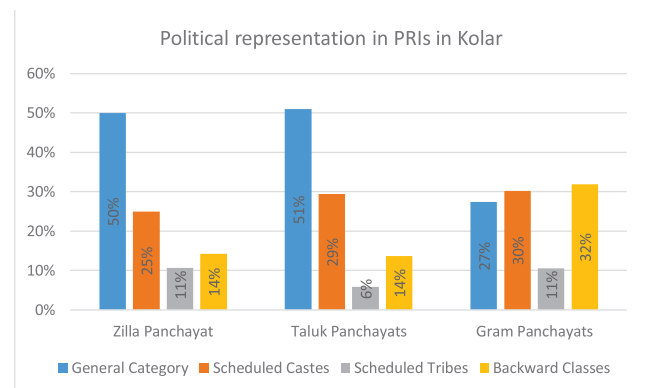
Source: Respective ULBs and Census 2011

10.4 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 roster 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).

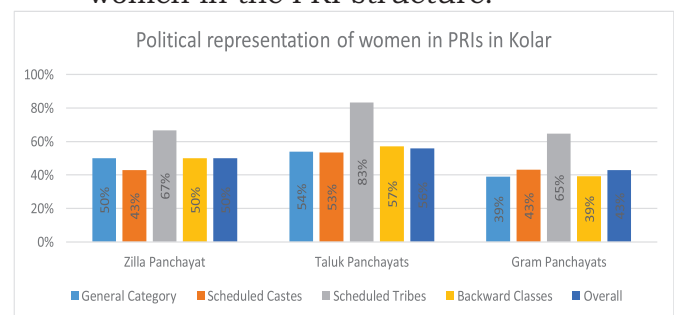
Based on the 2011 Census, Scheduled Castes form about 31% and Scheduled Tribes form about 7% of the population of Kolar's population. The graph below presents the political representations of various social categories in the PRI structure. On an average, 30% of the Gram Panchayat members belonged to

SC category while 11% of the members belonged to ST category. The proportion of SC members was the highest at the GP level. In the ZP and TP levels, their proportion was considerably less than their population (at 25% and 29% respectively). Similarly, the proportion of members belonging to Backward Classes was the highest at the GP level and considerably under-represented at the ZP level.



Graph 29. Political representation in PRIs in Kolar

In 2009, the Union Cabinet approved 50% reservation for women in PRIs (raising it from the previous share of 33%). This was considered as a significant initiative towards empowerment of women, aiding their participation in local governance. On the whole, including the three tiers of PRIs and Urban Local Bodies, women members comprise of 43.3 % of the total members in these bodies. The table below presents the disaggregated (social category-wise) political representation of women in the PRI structure.



Graph 30. Political representation of women in PRIs in Kolar

While the average share of membership of women in the ZP and TP levels are at the prescribed levels, the total share of serving women members at the GP level is less than the prescribed norm of 50% reservation. This applies to all social categories other than ST. Further, among the different social categories, only in the ST category, women form more than 50% of the members consistently across the three tiers.

The table below presents the political representation in the different ULBs of Kolar. It shows that women's representation in Kolar's ULBs is 39.16,%. This is quite less when compared to the PRIs in the district. The representation of backward class elected representatives is highest, followed by the general category. Robertsonpet has the highest representation of SC elected representatives in the district.

Table 118. Political representation in ULBs in Kolar

Category	Kolar	Robertsonpet	Srinivasapur	Malur	Bangarpet	Mulbagal	Total
General	4	5	0	12	11	12	44
SC	4	17	4	3	6	3	37
ST	1	1	1	1	1	1	6
Backward Classes	26	12	18	7	5	11	79
Women	12	13	9	10	11	10	65
Men	23	22	14	13	12	17	101
Total	35	35	23	23	23	27	166

Source: District Statistics at a glance, 2011-12

From the above analysis it can be concluded that

- The different social classes are duly represented politically at the GP level and there is scope for increasing their representation in the ZP and TP levels (Specifically of the SC category). In the ULBs, political representation of

SCs (22.23%) is slightly less than the population proportion of SCs in urban areas (28.84%).

- The political representation of women at the GP level is yet to reach the prescribed norm of 50%, whereas at the ZP and TP levels, their representation is above the minimum prescribed norms. In the ULBs, women's political representation is 39.16%.

10.5 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. 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, Kolar).

Table 119. Number of persons serving as President and Vice Presidents per year

Year	Presidents	Vice-Presidents
2008-09	1	1
2009-10	1	1
2010-11	4	3
2011-12	1	2
2012-13	1	1

Source: Administrative reports of Kolar ZP

The above table shows that, other than the year 2010-11 (Election year for ZPs and TPs in Karnataka), the political leadership in Kolar ZP has been stable (other than one change in the position of the Vice President in 2011-12). However, the same is not true for the top bureaucratic positions. As shown in the table, these top positions in the Kolar ZP have changed frequently. This not only affects the identification of development issues, planning and implementation of development activities at the ZP level, but also significantly affects development administration itself; specifically the monitoring and efficient implementation of schemes and programmes in the line departments as well as the lower tiers of PRIs (TP and GP).

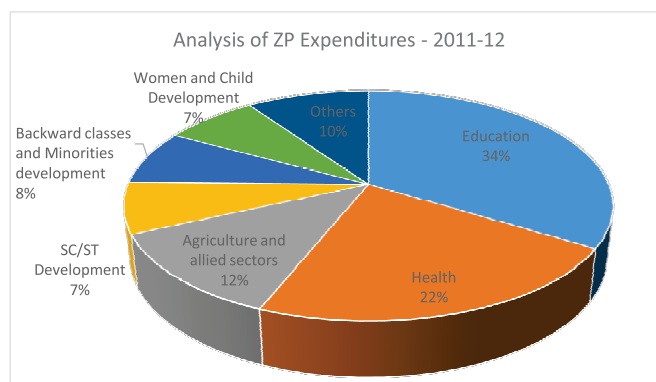
Table 120. Number of persons serving in bureaucratic positions per year

Year	CEO	DS	CPO
2008-09	2	5	3
2009-10	1	2	2
2010-11	5	4	2
2011-12	3	1	3
2012-13	3	2	1

Source: Administrative reports of Kolar ZP

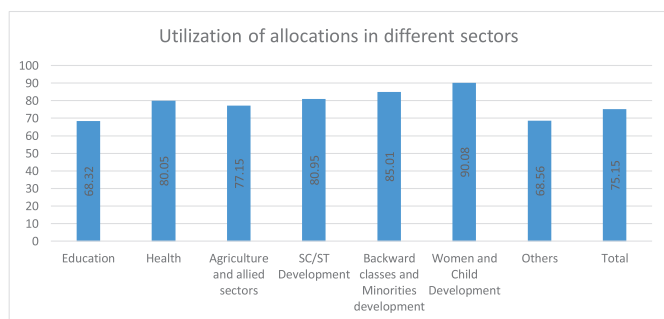
10.6 Fiscal trends

ZP and TP levels are dependent on devolution of government funds entirely, the GPs have the power of taxation and can raise their own resources for fund mobilization. However, in reality, the PRI structures are dependent substantially on funds devolved from Central and State governments. The graph below shows the development sector-wise ratio of expenditure of Kolar ZP in 2011-12, within its available budgetary allocation. It shows that a majority of finances of the ZP were utilized for funding activities under education (34%), health (22%) and development of vulnerable groups (15%).



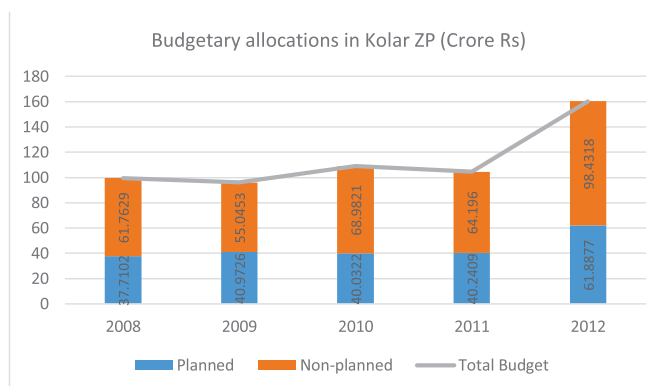
Graph 31. Analysis of ZP expenditures in Kolar (2011-12)

The composition of the ZP expenditure in 2011-12 shows that the financial emphasis of the ZP are focussed on sectors crucial to human development. However, a major portion of these expenditures are actually non-planned expenditures and thus allow little scope for local decision making. The graph below provides the trends in utilizations of allocations in different sectors in 2011-12. Among these different sectors, utilization of funds is highest in the Dept of Women and Child Development, and lowest for the department of Education (which also has the highest share in the expenditures of the ZP). The overall utilization of allocated funds for Kolar ZP is just about 75%, and has significant scope for increasing its efficiency.



Graph 32. Fund utilization levels in different departments in Kolar (2011-12))

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 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 Kolar ZP. It shows that although the budgetary allocations to Kolar ZP has increased gradually in the last 5 years, the budgetary allocations for 'planned activities' of the Kolar ZP have varied between 37% to 43%.

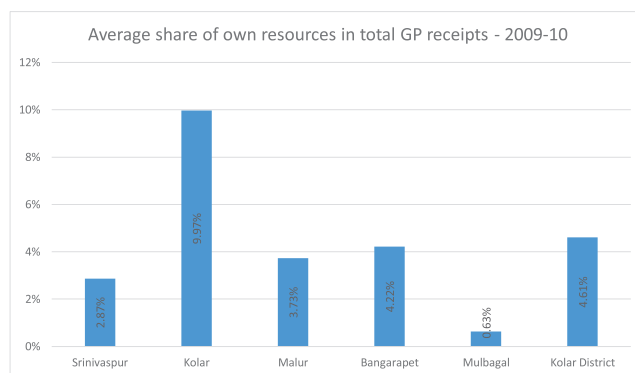


Graph 33. Budgetary allocations in Kolar ZP

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 12% (Mulbagal) to 22% (Srinivasapur).

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 34. Average share of own resources in total receipts of GPs in Kolar

The graph shows that, on the average, the share of own resources in Kolar's GPs was only 4.61% of the total receipts of its GPs. Within the district, GPs of Kolar taluk had the highest share of own resources, whereas GPs in Mulbagal taluk had the lowest share. 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.

10.7 Progress under MGNREGA

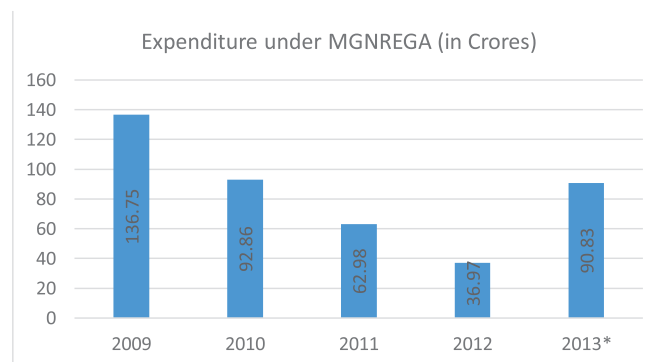
The Mahatma Gandhi National Rural Employment Guarantee Act was introduced in 2005 and mandates the local Gram Panchayat to provision 100 days of unskilled labour for any household in its boundary. The scheme was started in 2005 and was introduced in Kolar in 2008. Recognized as a major initiative to 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.



Photo 17. Construction of cattle-shed under MGNREGA in Kolar

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. The graph below presents the total district expenditure under the scheme since 2009.



Graph 35. Expenditure under MGNREGA in Kolar

The 2013 figures are tentative (and are based on the MGNREGA MIS, accessed in March 2014). Based on the graph, it can be seen that expenditure under the scheme has drastically declined (till 2013), which in principle shows a reducing trend in creation of opportunities for unskilled labour for rural households.

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 121. Public service delivery infrastructure in Kolar (2011-12)

Details of infrastructure	Srini-vaspur	Kolar	Malur	Bangarpet	Mulbagal	District
Average population served by Primary Health Centres	13500.85	17639.14	24608.75	33620.00	11862.29	17903.86
Average population served by sub- Centers	3815.46	3858.56	4101.46	4278.91	3150.92	3813.46
Availability of doctors per 1,000 population	0.022	0.392	0.211	0.192	0.185	0.247
Average health expenditure	67.435	41.365	50.954	35.353	75.655	50.283
Percentage of villages having Anganwadis within a km. distance	98.24	100.00	76.92	100.00	100.00	94.97
Percentage of villages having PDS outlets with in the Village	31.85	44.71	30.89	51.40	38.41	32.40
Student – teacher ratio for elementary education	28.15	34.79	27.90	40.51	28.90	32.76
Student - teacher ratio for secondary education	21.12	19.05	24.66	25.27	22.89	22.42
Percentage of villages having a Primary School within 1 km. distance	100.00	100.00	100.00	100.00	100.00	100
Average education expenditure	197.74	124.49	170.99	128.88	190.19	153.67

Source: Compiled from various tables from previous chapters.

From the table, it is clear that health infrastructure and expenditure has scope for improvement in Bangarpet taluk whereas the number of villages not having PDS shops is substantial in the district.

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 Kolar district.

Table 122. 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 Information 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 oppressed 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 Kolar has multiple non-governmental organizations, working in the areas of agriculture, water conservation, dalit rights, women, people with disabilities, governance and labour issues. Further, networks of such organizations also exist in Kolar, to provide umbrella support to communities on various issues related to development, transparent governance and prevention of violence and injustice.

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.

10.11 Conclusion

The analysis of governance related issues in Kolar show that women's participation in local bodies, specifically, in ULBs has scope for further improvement. The analysis of fiscal trends in Kolar shows that planned expenditures in the district form 37% to 43% of the overall expenditures. Increase in planned expenditures allow the district the flexibility to prioritize issues and taluks of immediate importance and thus allows the local governance to contribute significantly in meeting the development requirements. Further, the

analysis of resource mobilization levels of GPs in Kolar show that there are large disparities in GPs of different taluks, with Mulbagal lagging behind significantly. All of Kolar's taluks perform poorly and district administration have to focus on promoting local resource mobilization if decentralized governance has to be fostered. MGNREGA in the district shows declining trends in expenditure as well as man-days generated till 2012-13. These trends have to be analysed keeping in view the dynamics of agricultural labour and the actual labour demanded through MGNREGA in the district.

The chapter summarized various development related issues to be dealt with in the district, which requires long term vision and planning. This requires stable bureaucratic and political regimes in the district. Bureaucratic and political stability in the ZP are issues of concern in Kolar since every single year seems to have multiple teams of bureaucratic and political leadership. Kolar requires stable leadership in guiding the district's development efforts towards long term economic and environmental sustainability. 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.

* * * *

Urban Issues in Human Development

Urbanization is a process in which the population of people living in urban areas grows, through a complex process of migration of population from rural areas, conversion of rural areas to urban areas as well as population growth within existing urban areas. In a developing country like India, urbanization is an inevitable end product of economic growth and modernization. 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.

Urbanized societies provide more opportunities for diversity of livelihoods. In countries like India where low paying and stagnant agricultural labour forms a major source (and sometimes the only source) of employment, urbanization is seen as a way to diversify livelihood options, provision of better employment opportunities and access to better health and educational facilities, so that households are provided with the opportunity to quickly move up the social and economic ladder. Thus, in many cases, urbanization is seen as a positive sign for human development of a region since it can result in improvements in multiple dimensions of human development. Hence, in the analysis of indicators of development in this report, indicators like proportion of non-agricultural labour (a proxy for urbanization), and share of urban populations in overall population of a district are considered as positive indicators whereas share of agricultural labourers.

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 Ballary.

In 2011, 31.24% of the population of Kolar lived in the urban areas where as in 2001 this ratio was 29.16%. Thus, it can be said that urbanization in Kolar is less in comparison to that of the state and over the period of 10 years, the absolute growth in urban population proportion

was about 2% in the district, whereas at the state level, this proportion increased by 4.68%.

The urbanization scenario in Kolar is quite unique in the sense that urbanization in the district is principally driven by Robertsonpet (KGF) and Kolar, which respectively constitute 33.79% and 28.84% of total urban population of the district. Thus, while the pace of urbanization is increasing in other taluks of the district, the immediate focus of urban planning, security and infrastructure has to be on Kolar and Robertsonpet in the district.

Kolar has 6 towns, namely Srinivasapur, Kolar, Malur, Bangarpet, Robertsonpet, and Malur. As discussed in the chapter on governance, administration of these localities is the responsibility of the respective urban local body. Kolar and Robertsonpet are 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 123. Urban Local Bodies in Kolar

Area	Type of ULB	Population (2011)	Council members	% of urban population to total taluk population
Kolar	City Municipal Council	138462	35	28.84%
Robertsonpet (KGF)	City Municipal Council	162230	38	33.79%
Srinivasapur	Town Municipal Council	26793	23	5.58%
Malur	Town Municipal Council	40050	23	8.34%
Bangarpet	Town Municipal Council	44849	23	9.34%
Mulbagal	Town Municipal Council	57276	27	11.93%

Source: Census 2011, ULB Websites

Robertsonpet, being a mining town district headquarters has the highest proportion of urban population (33.79%), followed by Kolar, which is the headquarters of the district. Among the other taluk headquarters, Mulbagal had the highest population of 57,276.

11.1 Service Delivery Issues

Housing

Affordable housing is considered as a key determinant in the growth of a city. In the context of human development of urban areas, quality of housing is a crucial indicator. 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. Further, migration to urban areas for rural households enables human development if the housing facilities they are provided in the urban areas allow them to effectively explore the economic opportunities available in urban areas. Thus, analysis of basic amenities available in urban areas is crucial to understand status of urban development. The table below presents the status of ownership of houses, the proportion of the population of urban areas living in slums and proportion of urban houses not having electricity connections. It shows that in all urban areas of Kolar, more than 1/5th of the households do not own houses with the highest proportion in Bangarpet and Mulbagal. More than

90% of the houses in urban households of Kolar have electricity connections in Kolar. Robertsonpet has the highest % of households not having electricity in Kolar.

Table 124. Housing trends in urban areas in Kolar in 2011

Town	% of households without own houses	% of households without electricity	% of population living in slums
Kolar	25.52	2.25	3.01
Robertsonpet	22.97	6.57	4.63
Srinivasapur	29.76	4.56	22.61
Malur	26.71	1.49	1.55
Bangarpet	30.73	2.09	2.99
Mulbagal	30.46	4.31	23.34

Source: Census 2011, respective ULBs

Srinivasapur and Mulbagal have significant population (more than 1/5th) living in slums. Malur has the lowest slum population in the district. As indicated earlier, slums are also areas that are underserved with regards to services pertaining to health, sanitation and other basic amenities, the urban local administration of Mulbagal and Srinivasapur could concentrate on their slum populations since they are sizeable in number.

Other services

The table below provides snapshot of other 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 125. Essential services and safety indicators in urban areas in Kolar 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)
Kolar	14.59	9.34	19.30	10.04
Robertsonpet	2.10	3.48	6.93	4.86
Srinivasapur	7.69	15.71	14.53	4.15
Malur	6.99	4.99	10.97	5.02
Bangarpet	8.36	16.80	1.74	1.21
Mulbagal	2.79	8.12	13.98	7.88

Source: District Statistics at a Glance, 2011, Dept of Police and respective ULBs

Kolar being the district headquarters has the highest beds per 1000 population ratio followed by Bangarpet. Robertsonpet has the lowest ratio of beds per 1000 population (may be due to the large urban population and the absence of government tertiary care units), whereas Bangarpet and Srinivasapur have the highest density of roads. Crime rate and road accident rates are the highest in Kolar whereas Bangarpet has the lowest crime rate and road accident rates. Density of roads in the towns of Kolar shows wide disparities pointing to differential infrastructural abilities of the urban areas.. Urban planning has to essentially take these issues into consideration in the district.

11.2 Water Supply, and Sanitation

The table below presents the status of water supply and drainage coverage in the towns of Kolar. It shows that the bigger towns of Kolar and Robertsonpet have lesser coverage of tap connections. However, as discussed in the chapter on standard of living, the piped water supply in Kolar is sourced primarily from tube

wells, which is affected by high fluoride content. Thus, together with ensuring coverage of piped water supply, the priorities in Kolar has to be the provision of clean drinking water, in a sustainable way.

More than 80% of all the households in the towns of Kolar are covered with drainage, although drainage coverage through closed drains is considerably less in all urban areas other than Kolar and Bangarpet towns. Malur and Mulbagal have very less closed drainage infrastructure.

Table 126. Water supply and drainage coverage in urban areas in Kolar in 2011

Town	% of households with tap connections	% of households covered with drainage	% of households covered with closed drainage
Kolar	77.95	92.55	55.84
Robertsonpet	35.49	84.97	23.73
Srinivasapur	97.29	89.56	12.25
Malur	93.14	89.63	3.75
Bangarpet	87.79	92.58	42.97
Mulbagal	86.72	84.54	3.32

Source: Census 2011

11.3 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 collected in the ULBS of the district, based on a survey conducted by Karnataka Urban Infrastructure Development and Finance Corporation in 2007-08. It shows that Mulbagal has the least coverage (53.49%) in terms of solid waste collection, whereas Srinivasapur had the highest coverage (82.9%)

Table 127. Solid Waste details in ULBs of Kolar

Taluk	Solid Waste generated per day (tonnes)	Solid Waste collected per day (tonnes)	% of Waste collected
Kolar	52	NA	NA
Roberstonpet	46	32.8	71.30%
Srinivasapur	9.65	8	82.90%
Malur	11.4	9	78.95%
Bangarpet	16.71	13.5	80.79%
Mulbagal	17.2	9.2	53.49%

Source: Karnataka Urban Infrastructure Development and Finance Corporation, 2007-08

11.4 Urban local body expenditures

The analysis above shows that towns in Kolar have differential 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 128. ULB finances in Kolar

Town	% of own resources to total Receipts	Per-capita expenditure on Development Works
Kolar	17.93	236.89
Robertsonpet	12.97	527.49
Srinivasapur	12.11	503.86
Malur	17.13	599.25
Bangarpet	12.80	622.62
Mulbagal	26.40	1192.47

Source: Income and Expenditure statements 2011, respective ULBs

The table shows that other than Mulbagal, all other ULBs have raised own resources whose proportion is less than 1/5ths of their total receipts. More than a quarter of the total receipts of Mulbagal town municipal council comes from own resources. Conversely, Srinivasapur had the lowest share of own resources in its total receipts of funds. Mulbagal also stands first in terms of per-capita

expenditure on development works. In this regard, Kolar has the least per-capita expenditure on development works. However, it's a matter of concern that even with higher share of own resources as well as higher per-capita expenditure on development works, the coverage of basic amenities in Mulbagal town leave a lot to be desired.

11.5 Urban Development Index

The sections above provided a brief analysis of the infrastructure existing in the towns of Kolar. The provision of infrastructure and basic amenities in urban areas can have substantial influence on human development of the district. Based on these parameters the Urban Development Index (UDI) is calculated. The UDIs of the 6 towns of Kolar are presented in the table below and provides a comparative performance of these towns.

Table 129. Urban Development Index in 2011

Town	UDI	UDI Rank
Kolar	0.558	2
Robertsonpet	0.415	4
Srinivasapur	0.409	5
Malur	0.512	3
Bangarpet	0.612	1
Mulbagal	0.390	6

11.6 Concluding Remarks

The analysis of urbanization in Kolar provides multiple insights. While urbanization in the district hasn't progressed in the speed at which it has been witnessed in other districts, urban areas in the district haven't been able

to guarantee quality infrastructure and amenities to its citizens. The problem of water, which the entire district faces also troubles the urban areas of the district. Further, the size of two urban areas: Robertsonpet and Kolar over-rides the importance of urban infrastructure in other towns of the district. Urbanization efforts in the district cannot ignore the disparities between different social categories. These disparities are related to the difference in the status of their human development and their capacities to utilize the growth in infrastructure and access to public and private health and education facilities, leading to differential

adoption and utilization of diversified livelihood opportunities.

Thus, managing urbanization and its preparatory processes (like land acquisition, conversion of land etc) have to envision the feasibility of creating efficient housing, water supply, solid and liquid waste management, and their environmental and socio-political ramifications. Further, governance and stewardship of urban local bodies become important if urban areas have to sustainably grow and encourage prosperity in the urban area as well as the neighbouring rural areas.

* * * *

12.1 Introduction

The analysis of human development in Kolar, famously known as the land of “milk, silk and gold” shows that the district has to make concrete efforts in many areas, in order to attain the levels of human development, that is comparable with the state and that of its neighbouring districts.

While it can be argued that the ecological problems faced by the district, in terms of its alarmingly fast rates of water table depletion and ground water contamination are a result of unregulated water extraction, it is also true that this model of agricultural development triggered the growth of agriculture and horticulture sectors, on which, the majority of the people of the district are primarily dependent for their livelihoods. Further, there are considerable challenges for the district, in the sectors of education, health and livelihoods as well.

The preceding chapters have discussed these issues in detail and have condensed the specific issues that the policy and implementation processes of the government have to focus in Kolar to enhance its development outcomes. These issues are summarized in this chapter to provide a holistic understanding of the status of human development in Kolar.

12.2 Status of Human development in Kolar

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.

While Kolar clearly outperforms the other taluks in HDI, FSI and CTDI, other taluks outperformed the taluk in GII and CDI. The remaining taluks of Kolar, specifically, Mulbagal, Bangarpet and Malur have opportunities to improve their overall status of development.

Table 130. Overall taluk ranks in development indices in Kolar

Taluk	HDI	GII	CDI	FSI	CTDI
Srinivasapur	4	1	2	5	2
Kolar	1	4	4	1	1
Malur	3	3	1	3	5
Bangarpet	2	5	3	2	4
Mulbagal	5	2	5	4	3

Education

The district is placed in 14th position, with an overall literacy rate of 74.39%, significantly below the national target. The difference in literacy rates between male and female population in the district is also significant, pointing towards continuing trend in gender inequality in education. The net enrolment rates in Bangarpet, high rates of high-school dropouts in Srinivasapur and Malur are issues that can be immediately addressed by the educational administration in respective taluks.

The proportion of students finishing 10 years of schooling is about 40% in all taluks of the district, thus underlining the focus needed for improving the transition rates from primary education to secondary education. While Kolar has performed well in the recent years in its SSLC pass percentage, there is

wide scope to improve performance, not just in the performance of students in examinations, but also in learning outcomes, as analysed in the small area study conducted on SSLC performance in the district.

The overall analysis of education in Kolar showed that, within the district the focus on Malur needs to be high, in terms of improving its effectiveness in guaranteeing universal primary education.

Health

Due to sustained efforts of the department of health and family welfare, the outbreak of major life threatening diseases like Japanese Encephalitis have been controlled. However, many other challenges, like Fluorosis, widespread presence of anaemia and malnourishment among pregnant women and children continue to negatively affect the health of Kolar's residents. These issues are uniquely difficult to address in Kolar, in the sense that, in both cases, multiple line departments from border districts of Karnataka, Andhra Pradesh and Tamil Nadu have to work hand in hand with each other as well as the local communities if sustainable solutions have to be found.

Kolar also faces the alarming signs of declining sex-ratios in all its taluks, the highest being in Mulbagal. Mulbagal also has the highest MMR crossing 200, which in the context of the targets set by NRHM, is unacceptable. Mulbagal with highest home delivery in the district also reported the highest infant and child deaths. Similarly, Malur taluk also has high rates of mortality. Thus, health related reforms in the district could begin by addressing these immediate issues in these taluks

Livelihood and standard of living

The economy of Kolar is principally agricultural in nature since more than 64% of the work force is involved in the sector (either as cultivators or as agricultural labourers). However, the actual growth of agriculture and allied activities was just 3.43%, with 3 out of the 5 taluks (Kolar, Malur and Bangarpet) registering negative growth rates. This shows that there is an urgent need to improve the productivity of agriculture in order to sustain equitable economic growth in the district. The average landholding per landholder in the entire district is just under one hectare, thus largely limiting the choices of agricultural diversification thus exposing the small farmers to the risk of crop/price failure and related uncertainties associated with that crop.

The presence of poverty prevents accumulation of assets and this is visible in the proportion of households in the districts not having the basic basket of assets (telephone, tv, phone/mobile two wheeler/four wheelers). This proportion is highest in Srinivasapur and Mulbagal and denotes the low standard of living in these taluks.

The district faces many challenges in making sure that its agriculture provides continued and increasing incomes to the people of the district. Industrial growth offers a complementary source of livelihood to the people of the district. However, industries within the district haven't grown to the extent of providing real choices for the majority of the people in the district to use it as a serious source of livelihood. Expansion of industrial firms operating in the district, diversification of

industrial units and long term plans for inculcating skill training programmes for people in the district have to be prioritized if industrialization and related sectors have to address the challenges faced by the district's agricultural sector.

The small area study on status of groundwater in the district provided a microscopic view of the issues involved in availability of water for drinking and irrigation purposes. While the precarious situation of groundwater is most likely to affect the sustenance of agriculture as a primary occupation in the district, its effect on the health of people as a result of groundwater contamination is also a matter of concern and is only likely to worsen if not addressed immediately. A detailed study of ground water contamination's impact and possible interventions has to be conducted to understand the magnitude of the problem as well as possible of intervention strategies to mitigate the damages.

Immediate ways to lessen the dependence on groundwater for drinking purposes in the district is the widespread adoption of sustainable and useful rain water harvesting mechanisms. Efforts are needed to develop these rainwater harvesting systems that are suited to the needs of the district and provide both immediate and long term relief.. Access to individual household latrines is only 42% and hence, special attention is required in implementation of NGP/NBA programmes; with focus on Srinivasapur which has the least coverage.

The sensitivity of the ecological factors affecting agriculture in Kolar is a matter of concern since they have considerable social impacts as well. The intensive

use of natural resources for agriculture in Kolar has to be regulated through a holistic cultivation policy with inputs from all concerned government agencies.

Vulnerable groups

The literacy rates of SCs and STs of Kolar are comparatively lower than that of other social categories in the district. Similarly, the analysis of landholding patterns in district showed that asset distribution, in terms of land ownership is clearly skewed against the SC population of the district, with a disproportionately low percentage of SC households owning land in the district. Significantly low proportion of SC and ST households were covered in the provision of drinking water (within their premises) and access to individual household latrines.

While disaggregated data on status of health and economic wellbeing of different social categories weren't available in the district, it was clear from the analysis in the chapter that SC and ST households in communities have attained lower human development status than that of the other social categories in the district.

The small area study on Composite Dalit Development Index conducted in Avani GP of Kolar showed that caste discrimination is still prevalent and may in general be prevalent throughout the district. Some practices of discrimination were even accepted to be continuance of tradition. However, the study also found that comparatively better educated dalits (like dalit ASHAs) are making in-roads in attaining the socio-economic status that enhances their acceptability and results in lesser discrimination for them.

The small area study on discrepancies in registering PwD indicates that the neglect in information collection can be attributed to the neglect of the development of PwD itself. The case study analysed the cause of this discrepancy and found that the institutional structures for catering to the overall development of PwD was ineffective and unaccountable and suggested that the Department of Disability should take up a leadership role of guiding and integrating the efforts of various government agencies and conduct scientific surveys that adopt universal definitions and criterion to identify exact number of PwD in the district and plan specific development initiatives for them.

12.3 Way forward

The findings and analysis of the different dimensions of human development in Kolar 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 strategies in the different sectors of human development are summarized below.

Education Sector

Improving the literacy rates and reducing gender disparities in the district has to be the top priority in the district since it lags considerably behind in this issue. Improving the effectiveness of education, specifically, in guaranteeing universal primary education, by improving retention rates and mainstreaming of out of school children, sustaining the high pass percentages in SSLC results,

converting them into better learning outcomes and translating the same to higher pass percentages in PUC could be the future targets in the education sector.

Malur, Srinivasapur and Bangarpet are the taluks to be prioritized in the educational sector of the district, needing special attention in primary education.

Health Sector

The over all health situation of Kolar needs much to be desired. An issue of concern ins the declining sex ratio in the district that needs immediate attention, in terms of behavioural change strategies and rapid awareness creation among the different communities of the district. The district's status in maternal and child health, specifically in Mulbagal and Malur taluks needs to be prioritized. Further, the district's unique predicament of ground water contamination and fluorosis. The impact of these issues on the larger health of the district population has to be studied in detail and suitable long term intervention strategies to mititgate the situation have to be designed. Further Kolar is affected by endemic diseases like Japanese enciphalities, which require the district to be ready with trained manpower to handle such the outbreak of such issues.

Livelihood and standard of living

The challenge for Kolar in the future is going to be sustaining its agricultural growth, on the face of emerging crisis of ground water depletion. In this aspect, all taluks of the district have to prioritize ground water saving strategies together with practical rain-water harvesting solutions.

Conclusion

In summary, the report identifies the following crucial areas about which the district political and bureaucratic administration could focus their immediate attention.

1. Attaining higher literacy rates and reducing gender disparities in literacy rates.
2. Improving the effectiveness in guaranteeing universal primary education, with special focus on Malur taluk.
3. Addressing the issue of declining sex-ratio and lagging indicators of maternal and child health, specifically in Mulbagal and Malur taluks.
4. A detailed study of ground water contamination's impact on health and possible intervention strategies to mitigate the damages.
5. Sustainable agricultural growth in all taluks of the state, with immediate interventions to minimize water intensive agriculture, regulation of groundwater extraction and adoption rainwater harvesting mechanisms
6. Better provisioning of basic amenities like drinking water (within their premises) and access to individual household latrines for SC and ST households.
7. Conduct scientific surveys that adopt universal definitions and criterion to identify exact number of PwD and integrate the efforts of various government agencies aimed towards development of PwD in the district.

* * * *

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 indicators¹

$$\text{Index value}_i = \frac{\text{Actual Value}_i - \text{Minimum Value}_i}{\text{Maximum Value}_i - \text{Minimum Value}_i}$$

and for negative indicators²

$$\text{Index value}_i = \frac{\text{Maximum Value}_i - \text{Actual Value}_i}{\text{Maximum Value}_i - \text{Minimum Value}_i}$$

where, is the index value of the i^{th} 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 (l_1)	Census
	% of HHs having access to toilet (l_2)	Census
	% of HHs having access to water (l_3)	Census
	% of HHs having access to electricity (l_4)	Census
	% of HHs having access to Pucca house (l_5)	Census
	% of non-agricultural workers (l_6)	Census
	Per-capita income (l_7)	District Statistics at a glance
Health	Child Mortality Rate(h_1)	Estimated
	Maternal Mortality Ratio (h_2)	Estimated
Education	Literacy rate (e_1)	Census
	Gross enrolment rate at schools (Primary and Secondary) (e_2)	Census

1 Indicators that reflect positive change with increasing values (for example, literacy rate)

2Indicators that reflect negative change with increasing values (for example, infant mortality rate)

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.

$$L = (l_1 l_2 l_3 l_4 l_5 l_6 l_7)^{\frac{1}{7}}$$

$$H = (h_1 h_2)^{\frac{1}{2}}$$

$$E = (e_1 e_2)^{\frac{1}{2}}$$

$$HDI = (L.H.E)^{\frac{1}{3}}$$

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 (PR_F , PR_M)	District statistics at a glance
	Share of female and male children in the age group 0 – 6 years ($CHLD_F$, $CHLD_M$)	Census
	Share of female and male literacy(LIT_F , LIT_M)	Census
Labour market	Share of female and male work participation rate(WPR_F , WPR_M)	Census
	Share of female and male workers in the non-agricultural sector(NAG_F , NAG_M)	Census
	Female and male agricultural wage rate($WAGE_F$, $WAGE_M$)	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

$$G_F = \sqrt[3]{\left[\left(\frac{1}{MMR}\right) \cdot ID \cdot ANE\right]^{\frac{1}{3}} \cdot [PR_F \cdot CHLD_F \cdot LIT_F]^{\frac{1}{3}} \cdot [WPR_F \cdot NAG_F \cdot WAGE_F]^{\frac{1}{3}}}$$

$$G_M = \sqrt[3]{1 \cdot [PR_M \cdot CHLD_M \cdot LIT_M]^{\frac{1}{3}} \cdot [WPR_M \cdot NAG_M \cdot WAGE_M]^{\frac{1}{3}}}$$

$$HARM(G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2} \right]^{-1}$$

Step 2: Calculation of the reference standard

$$\overline{\text{health}} = \left[\frac{\left[\frac{1}{MMR} \cdot ID \cdot ANE\right]^{\frac{1}{3}} + 1}{2} \right]$$

$$\overline{\text{empowerment}} = \frac{\left[[PR_F \cdot CHLD_F \cdot LIT_F]^{\frac{1}{3}} \right] + \left[[PR_M \cdot CHLD_M \cdot LIT_M]^{\frac{1}{3}} \right]}{2}$$

$$\overline{LFPR} = \frac{\left[WPR_F \cdot NAG_F \cdot WAGE_F \right]^{\frac{1}{3}} + \left[WPR_M \cdot NAG_M \cdot WAGE_M \right]^{\frac{1}{3}}}{2}$$

$$G_{F,M} = \sqrt[3]{\overline{\text{health}} \cdot \overline{\text{empowerment}} \cdot \overline{LFPR}}$$

Step 3: Calculation of GII

$$GII = 1 \frac{HARM(G_F, G_M)}{G_{F,M}}$$

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 3 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)	SRS 2011
Nutrition	Percentage of malnourished children(PMAL)	District health statistics
	Percentage of children born under-weight (PUNDW)	District Health statistics
Education	Percentage of dropout children (Primary and Secondary) that were mainstreamed (PDROP)	District Education statistics

The CDI is calculated as the arithmetic mean of the index values of the three 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	SRS 2011
	% 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
	VHSCs 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 (4 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	SRS 2011
	Child Mortality Rate - CMR	SRS 2011
	Maternal Mortality Ratio	SRS 2011
	% of women headed households	Census

Livelihood and employment indicators	% of BPL Cards issued to Total Ration Cards	Revenue Dept
	Cropping Intensity	District Statistics at a glance
	Irrigation Intensity	District Statistics at a glance
	% of Households provided employment under MGN-REGS	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-wise and District Data for Indicators							
No	Indicator	Srinivasapur	Kolar	Malur	Bangarpet	Mulbagal	District
Indicators for Human Development Index (HDI)							
1	Percentage of HHS having access to cooking fuel	14.512	23.854	22.991	27.367	18.337	22.651
2	Percentage of HHS having access to Toilet	30.253	56.696	41.102	42.814	33.371	42.803
3	Percentage of HHS having access to Water	60.56	71.21	75.29	58.24	71.67	66.64
4	Percentage of HHs having access to Electricity	94.233	95.179	93.725	92.902	91.294	93.506
5	Percentage of HHs having access to Pucca house	71.433	69.175	64.995	70.614	67.526	68.978
6	Percentage of Non agricultural workers (main+marginal)	30.255	54.610	45.233	57.826	33.965	46.468
7	Per-capita income	43671.15	35769.09	37818.32	41164.60	50478.37	41219
8	Child mortality rate	62	23	36	37	63	39
9	Maternal Mortality Rate	80	96	196	153	211	140
10	Literacy Rate	71.290	76.215	70.372	78.491	70.618	74.395
11	Gross enrolment rate (Primary+secondary) schools	100.000	97.958	91.954	100.000	95.891	98.574
Indicators for Gender Inequality Index (GII)							
12	Maternal Mortality Rate	80	96	196	153	211	140
13	Share of Institutional deliveries (ID)	98.632	97.744	97.412	97.940	97.412	97.794
14	Share of pregnant women with Anemia (ANE)	78.51	85.45	63.33	85.24	50.32	78.13
15	Share of female and male elected representatives in PRIs and ULBs PRF	41.834	44.154	42.974	43.820	43.315	43.342

16	Share of female and male elected representatives in PRIs and ULBs PRM	58.166	55.846	57.026	55.758	56.685	56.552
17	Share of female and male children in the age group 0-6CHILDF,	48.665	49.167	49.189	49.010	49.042	49.042
18	Share of female and male children in the age group 0-6,CHILDM	51.335	50.833	50.811	50.990	50.958	50.958
19	Share of female and male literacy LITF,	62.299	69.156	62.470	71.951	61.900	66.838
20	Share of female and male literacy LITM	80.154	83.105	77.921	84.984	79.225	81.808
21	Share of female and male work participation WPRF	49.745	37.210	38.677	29.021	51.114	39.003
22	Share of female and male work participation WPRM	67.429	65.917	67.266	63.401	67.460	65.847
23	Share of female and male workers in the Non agricultural sector NAGF	24.643	47.960	37.410	42.330	27.308	36.618
24	Share of female and male workers in the Non agricultural sector NAGM	34.336	58.274	49.530	64.870	38.945	52.191
25	female and male agricultural wages rate WAGEF,	236.5	236.5	236.5	236.5	236.5	236.5
26	female and male agricultural wages rate WAGEM)	236.5	236.5	236.5	236.5	236.5	236.5
Indicators for Child Development Index (CDI)							
27	Child mortality rate	62	23	36	37	63	39
28a	Percentage of malnutrition children	34.56	40.53	30.73	32.51	38.97	35.37
28b	Percentage of children born underweight	7.78	8.36	8.26	8.80	9.13	8.46
29	Percentage of out of school children mainstreamed	15.358	4.604	10.288	6.203	7.866	9.206

	Indicators for Food Security Index (FSI)						
30	Cropping Intensity	102.590	107.910	108.890	105.550	106.380	106.014
31	Percentage change in NSA(Net Sown Area) over the years (2001-2011)	17.006	-9.581	-16.489	-14.896	16.333	-1.355
32	Per-capita food grain production	93.750	95.088	107.910	73.849	119.744	94.784
33	Per Capita forest cover	11.124	6.694	2.470	3.701	2.580	5.499
34	Irrigation Intensity	130.926	141.293	160.490	140.056	144.055	143.466
35	Percentage of area degraded to TGA	1.128	0.585	3.798	1.888	1.481	1.706
36	Percentage of leguminous crops in the GCA	11.895	12.585	11.252	16.862	24.520	15.929
37	Percentage of BPL families in the Taluk	72.276	65.554	68.797	62.186	73.050	67.237
38	Per-capita income	43671.150	35769.090	37818.320	41164.600	50478.370	41219.488
39	Percentage of Non agricultural workers (main+marginal)	30.255	54.610	45.233	57.826	33.965	46.468
40	Average size of holdings	0.983	1.287	1.788	1.350	1.188	1.278
41	Percentage of Agricultural labourers to total workers	31.348	23.719	32.059	23.159	34.426	28.032
42	Percentage of Villages having PDS outlets with in the Village	31.85	44.71	30.89	51.40	38.41	32.40
43	Child mortality rate	62	23	36	37	63	39
44	Percentage of HHS having access to Water	60.56	71.21	75.29	58.24	71.67	66.64
45	Share of pregnant women with Anemia (ANE)	78.51	85.45	63.33	85.24	50.32	78.13
46	Percentage of malnutrition children	34.56	40.53	30.73	32.51	38.97	35.37
47	Female Literacy Rate	62.299	69.156	62.470	71.951	61.900	66.838

	Indicators for Composite Taluk Development Index (CTDI)						
48	Decadal population growth rate	9.519	12.498	14.449	7.450	11.947	10.767
49	Population Density	235.237	486.015	367.318	534.000	314.623	387.100
50	Sex ratio	982	975	957	989	984	979
51	Percentage of Slum Population	2.995	1.081	0.261	1.955	5.163	2.152
52	Percentage of Population in the age group of 0-6	10.257	11.354	11.033	10.884	11.774	11.092
53	Child sex ratio	948	967	968	961	962	962
54	Infant mortality rate(IMR)	37	18	30	30	51	34
55	Child mortality rate	62	23	36	37	63	39
56	Maternal Mortality Rate	80	96	196	153	211	140
57	Percentage of Women headed households	24.716	23.441	25.330	27.918	26.401	25.729
58	Percentage of BPL HHs provided with BPL ration cards	72.276	65.554	68.797	62.186	73.050	67.237
59	Cropping Intensity	102.589	107.905	108.887	105.548	106.375	106.014
60	Irrigation Intensity	130.926	141.293	160.490	140.056	144.055	143.466
61	Percentage of Households provided employment to total number of households registered under MGNREGS	12.810	26.360	29.242	46.576	31.312	30.154
62	Ratio of average agricultural wage to minimum wages prescribed by the state	1.183	1.183	1.183	1.183	1.183	1.183
63	Work participation rate	58.65	51.74	53.30	46.27	59.34	52.55
64	Decadal growth rate of employment	11.855	5.878	10.898	10.766	22.031	11.659
65	Percentage of Cultivators to total workers	38.397	21.671	22.707	19.015	31.609	25.500
66	Percentage of Main workers to total workers	83.798	81.698	74.412	83.000	82.893	81.434

67	Percentage of workers in household industries	2.616	5.244	1.873	1.783	4.934	3.368
68	Percentage of Agricultural labourers to total workers	31.348	23.719	32.059	23.159	34.426	28.032
69	Percentage of HHs having access to Pucca house	71.433	69.175	64.995	70.614	67.526	68.978
70	Percentage of Site less households	4.955	5.827	8.516	5.253	3.979	5.662
71	Percentage of Households provided with house sites	0	0	0	0	0	0
72	Percentage of houses constructed for houseless poor families	2.837	2.128	2.323	4.398	2.665	2.870
73	Percentage of households with cycles	38.238	43.738	41.428	34.765	34.125	38.384
74	Percentage of households with Two-wheelers	22.050	30.092	28.740	25.088	20.428	25.740
75	Percentage of households with other assets such as Telephone,TV, 2 wheelers and 4wheelers	19.180	11.100	13.190	14.760	18.790	14.843
76	Percentage of HHs having access to Electricity	94.233	95.179	93.725	92.902	91.294	93.506
77	Percentage of HHS having access to cooking fuel	14.512	23.854	22.991	27.367	18.337	22.650
78	Percentage of women elected representatives in rural local bodies	41.981	44.715	42.949	44.240	43.651	43.651
79	Percentage of elected SC/ST representatives in rural local bodies	41.274	45.528	39.316	37.942	39.881	40.834
80	Percentage of women elected representatives in urban local bodies	39.130	34.286	43.478	39.344	37.037	38.462

81	Percentage of elected SC/ST representatives in urban local bodies	21.739	14.286	17.391	40.984	14.815	25.444
82	Percentage of active SHGs	81.410	92.797	91.100	100.000	93.388	92.087
83	Percentage of pregnant women receiving full ANC	99.729	98.592	88.662	99.188	99.863	97.687
84	Share of pregnant women with Anemia (ANE)	78.51	85.45	63.33	85.24	50.32	78.13
85	Share of Institutional deliveries (ID)	98.630	97.930	98.050	97.380	97.970	97.794
86	Percentage of children fully Immunized	100.000	83.570	100.000	100.000	91.110	92.939
87	Percentage of Children born underweight	7.780	8.360	8.260	8.800	9.130	8.460
88	Percentage of malnutrition children	34.560	40.530	30.730	32.510	38.970	35.370
89	Percentage of people affected by major communicable diseases	0.838	0.538	0.580	1.079	0.667	0.538
90	Average population served by sub-centers	3815.46	3858.56	4101.46	4278.91	3150.92	3813.46
91	Average Population served by Primary Health Centres (PHCs)	13500.85	17639.14	24608.75	33620.00	11862.29	17903.86
92	Availability of Doctors per 1,000 population	0.022	0.392	0.211	0.192	0.185	0.247
93	Availability of nurse per 1000 population	0.667	0.249	0.156	0.267	0.166	0.281
94	Average population served by Anganwadi centres	59.284	75.900	86.786	77.396	83.492	76.646
95	Percentage of villages having Anganwadis within a km. distance	98.24	100.00	76.92	100.00	100.00	94.97

96	Percentage of couples protected by any contraceptive method	12.177	17.447	12.836	9.890	14.723	12.670
97	Average health expenditure	67.435	41.365	50.954	35.353	75.655	50.283
98	Percentage of gram panchayats selected for nirmal gram purskar awards	0.000	2.778	3.571	13.514	6.667	5.769
99	Percentage of HHS having access to Toilet	30.253	56.696	41.102	42.814	33.371	42.803
100	Percentage of villages with drainage facility	35.820	39.184	41.544	25.975	42.915	35.759
101	Percentage of HHS having access to Water	60.560	71.210	75.290	58.240	71.670	66.640
102	Percentage of Literacy	71.290	76.215	70.372	78.491	70.618	74.395
103	Gross enrolment rate- elementary school	100.000	99.936	92.268	100.000	97.563	100.000
104	Net enrolment rate	97.269	95.540	94.360	90.861	95.433	95.155
105	Dropout rate in Elementary education	0.399	0.234	0.637	0.391	0.434	0.397
106	Percentage of out of school children (Primary and Secondary) mainstreamed	15.358	4.604	10.288	6.203	7.866	9.206
107	Student – Teacher ratio for elementary education	28.15	34.79	27.90	40.51	28.90	32.76
108	Secondary school gross enrolment rate (15-16 years)	88.861	90.469	90.715	95.288	89.958	91.655
109	Drop-out rate in secondary education	11.680	3.590	11.680	4.750	9.040	9.160
110	SSLC pass percentage	88.270	87.290	84.670	76.070	86.960	83.655
111	Student - Teacher ratio for secondary education	21.12	19.05	24.66	25.27	22.89	22.42
112	PUC pass percentage	65.482	68.669	77.367	61.293	58.614	66.593

113	School infrastructure index	0.880	0.883	0.816	0.849	0.800	0.846
114	Average education expenditure	197.74	124.49	170.99	128.88	190.19	153.67
115	Percentage of villages having a Primary School within 1 km. distance	100.00	100.00	100.00	100.00	100.00	100

No	Indicator	Srinivaspur TMC	Kolar CMC	Malur TMC	Bangarapet TMC	Robertsonpet CMC	Mulbagal TMC
Indicators of Urban Development Index							
1	Percentage of ULB population to total population in the taluk	13.244	35.926	16.904	9.904	35.826	22.120
2	Percentage of Households without Own Houses	29.757	25.520	26.712	30.735	22.965	30.460
3	Percentage of Slum Population to Total ULB Population	22.610	3.008	1.546	2.994	4.629	23.340
4	Water Supply – Percentage of HHs with Tap water connection)	97.295	77.946	93.142	87.788	35.494	86.721
5	Sewerage/ Drainage – Percentage of HHs Sewerage and Drainage (Both Close and Open facilities)	89.558	92.547	89.631	92.581	84.973	84.539
6	No. of Hospital Beds per 1000 population in urban area	7.689	14.589	6.991	8.361	2.096	2.793
7	Percentage of Own Resource Mobilization to Total Receipts	12.113	17.926	17.131	12.801	12.968	26.399
8	Per capita expenditure on Development Works	503.863	236.888	599.251	622.623	527.491	1192.472
9	Length of Roads in Kms per Sq. Km of geographical area	15.714	9.342	4.986	16.800	3.476	8.118
10	Crime Rate per 10000 Population	14.533	19.304	10.974	1.745	6.934	13.980
11	Road accidents per 10000 population	4.152	10.041	5.023	1.215	4.858	7.878

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Annexure 3: 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 indices 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.

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Annexure 4: Data sources and References

Data sources

1. Administrative Reports of Kolar Zilla Panchayath
2. Agricultural Census, 2011, GoK
3. Census of India, GoI
4. Coverage Evaluation Survey, 2009 UNICEF
5. District Information System for Education, National University of Educational Planning and Administration, New Delhi
6. District Level Household Survey, International Institute of Population Sciences, Mumbai & GoI
7. District Statistics at a Glance, Kolar Zilla Panchayath
8. Family Welfare Statistics in India, Ministry of Health and Family Welfare, GoI
9. Food, Civil Supplies and Consumers Affairs Department Databases, GoK
10. Health Management Information System, Ministry of Health and Family Welfare, GoI
11. Income and Expenditure Statements and Balance Sheets of ULBs
12. Indian Economic Census, GoI
13. Karnataka State Natural Disaster Monitoring Center
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, Kolar Zilla Panchayath (Photos and Maps)
17. Office of the Deputy Director of Agriculture, Kolar Zilla Panchayath
18. Office of the Deputy Director of Animal Husbandry, Kolar Zilla Panchayath
19. Office of the Deputy Director of Horticulture, Kolar 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
23. Sample Registration System, Census of India, GoI

References

Anand, S., & Sen, A. (2000). Human development and economic sustainability. *World Development*, 28(12), 2029–2049

Chakraborti, D., Rahman, M. M., Murrill, M., Das, R., Siddayya, Patil, S. G., Das, K. K. (2013). Environmental arsenic contamination and its health effects in a historic gold mining area of the Mangalur greenstone belt of Northeastern Karnataka, India. *Journal of Hazardous Materials*, 262, 1048–1055.

Engberg-Pedersen, Lars. *Coping with Poverty and Institutionalised Practices: Tank-irrigated Cultivation in Kolar District, Karnataka*. Copenhagen: DIIS, 2011. Print.

Glaeser, E. L. (2013). *A World of Cities: The Causes and Consequences of Urbanization in Poorer Countries* (Working Paper No. 19745). National Bureau of Economic Research

Haq, M. ul. (1996). *Reflections on Human Development* (OUP Catalogue). Oxford University Press.

Jayadev, A., Motiram, S., & Vakulabharanam, V. (2007). Patterns of wealth disparities in India during the liberalisation era. *Economic and Political Weekly*, 42(38), 3853–3863.

Kumar, A. (2008). Paradoxes of paradigm shift: Indian engagement with liberalization and globalization. *Futures*, 40(8), 762–766.

Kundu, A. (2011). Trends and processes of urbanisation in India. IIED.

Kurian, N. J. (2007). Widening economic & social disparities: Implications for India. *Indian Journal of Medical Research*, 126(4), 374.

Madheswaran, S., & Attewell, P. (2007). Caste discrimination in the Indian urban labour market: Evidence from the National Sample Survey. *Economic and Political Weekly* 42 (41), 4146–4153.

Naik, N. T. K., & Rahman, S. M. (2007). *Urbanisation Of India*. Serials Publications.

Narayanamurthy, Shruthi, and Anil Navale Santhuram. 2013. “Prevalence of Dental Fluorosis in School Children of Bangarpet Taluk, Kolar District.” *Journal of Orofacial Sciences* 5 (2): 105. doi:10.4103/0975-8844.124253

Planning and Statistics Department. (2005). *Karnataka Human Development Report - 2005*. Bengaluru: Government of Karnataka.

Prasad SR, George S, and Gupta NP. “Studies on an Outbreak of Japanese Encephalitis in Kolar District, Karnataka State in 1977-78.” *The Indian journal of medical research* 75 (1982): 1–6. Print.,

Ram, U., Jha, P., Ram, F., Kumar, K., Awasthi, S., Shet, A., Kumar, R. (2013). Neonatal, 1–59 month, and under-5 mortality in 597 Indian districts, 2001 to 2012: estimates from national demographic and mortality surveys. *The Lancet Global Health*, 1(4)

Ranis, G., Stewart, F., & Ramirez, A. (2000). Economic growth and human development. *World Development*, 28(2), 197–219.

Annexure 5: 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.

District and taluk level workshops were also organized to create awareness about the human development approach, among elected members of PRIs, self help groups, citizen groups, youth groups and students. These workshops also served as platforms for understanding unique human development issues affecting the district.

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. This resulted in 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. The situation in Kolar was no exception.

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 6: Details on workshops, meetings

Date	Meeting/workshop	Venue	Participants	Discussion points
11.12.2012 – 15.12.2012	Basic training Workshop	ATI Mysore	4 day basic training for preparation of DHDRs for all lead agencies	
23.07.2013 – 27.07.2013	Technical training Workshop	ATI Mysore	3 day technical training workshop for calculation of indices	
21.01.2013	District Level Core Committee meeting	Zilla Panchayath, Kolar	CEO ZP Kolar, CPO ZP Kolar Deputy Directors of line departments, GRAAM team	Introduction to Human Development report and discussion
07.06.2013	District Level Core Committee meeting	Zilla Panchayath Kolar	Core committee members and members of ZP Kolar, GRAAM team	Reviewed progress of the project and the status of data collection.
15.03.2013	Subcommittee meeting on Housing, Water and Sanitation	Zilla Panchayath Kolar	CPO, ZP Kolar, Officials from Health Dept, PRED, Statistical Officer, Local experts and professors and GRAAM team	Discussion about the problems, areas of concern, achievement in water and sanitation, housing
20.03.2013	Subcommittee meeting on Health, Livelihood and Education	Zilla Panchayath Kolar	CPO, ZP Kolar, Officials from different departments, Local experts and professors and GRAAM team	Discussions about formats for data collection and data availability
07.06.2013	District level workshop in Kolar	Zilla Panchayath, Kolar	ZP officials, ZP members, officials from line departments, NGO representatives, GRAAM team	Introduction to Human development report to different Govt department officials.
12.07.2013	Taluk Level Workshop – Bangarpet	Taluk Panchayath Office, Bangarpet	CPO ZP Kolar, Taluk and Gram Panchayath members Students from local colleges, members of, local NGOs, GRAAM team	Presentation about Human development concept and its objectives. Presentation about Human development concept and its objectives. Presentation about Human development concept and its objectives.
15.07.2013	Taluk Level Workshop – Mulbagal	Taluk Panchayath office Mulbagal	CPO ZP Kolar, Taluk and Gram Panchayath members Students from local colleges, members of, local NGOs, SHG members, Anganawadi teachers, GRAAM team	
16.07.2013	Taluk level workshop – Srinivasapur	Taluk Panchayath Office Srinivasapur	Taluk and Gram Panchayath members Students from local colleges, members of, local NGOs, SHG members, Anganawadi teachers, GRAAM team	

Annexure 7

Kolar 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	Basavaraju R, Sham N Kashyap
3.	Computation of Indices	Pushpa C O, Divyashree H R, Sham N Kashyap
4.	Literacy and Education	Dr. Rajendra Prasad
	Small area study: Recent SSLC examination performance in Kolar	Dr. Rajendra Prasad, Nitika Sethi
5.	Health and Nutrition	Chandrika Shetty
6.	Income, Poverty and Employment	Rajeshwari M, Sham N Kashyap
	Small area study: The precarious situation of groundwater in Kolar	Rohit Shetti, Dr Anand Vadivelu, Dr Siddappa Madiwalar
7.	Standard of living	Divyashree H R, Rohit Shetti
8.	Gender and Development	Chandrika Shetty, Sham N Kashyap
	Small area study: Namma Dhvani Community Radio	Rohit Shetti, Divyashree HR
9.	Schedule Caste and Schedule Tribe	Sham N Kashyap
	Small area study: Composite Dalit Development Index – A case study of Avani graam panchayat	Rohit Shetti, Divyashree HR
	Small area study: Differently abled are differently counted too	Dr Siddappa Madiwalar, Basavaraju R
10.	Governance and Human Development	Sham N Kashyap
11.	Urban issues in human development	Sham N Kashyap
12.	Way forward	Sham N Kashyap

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