



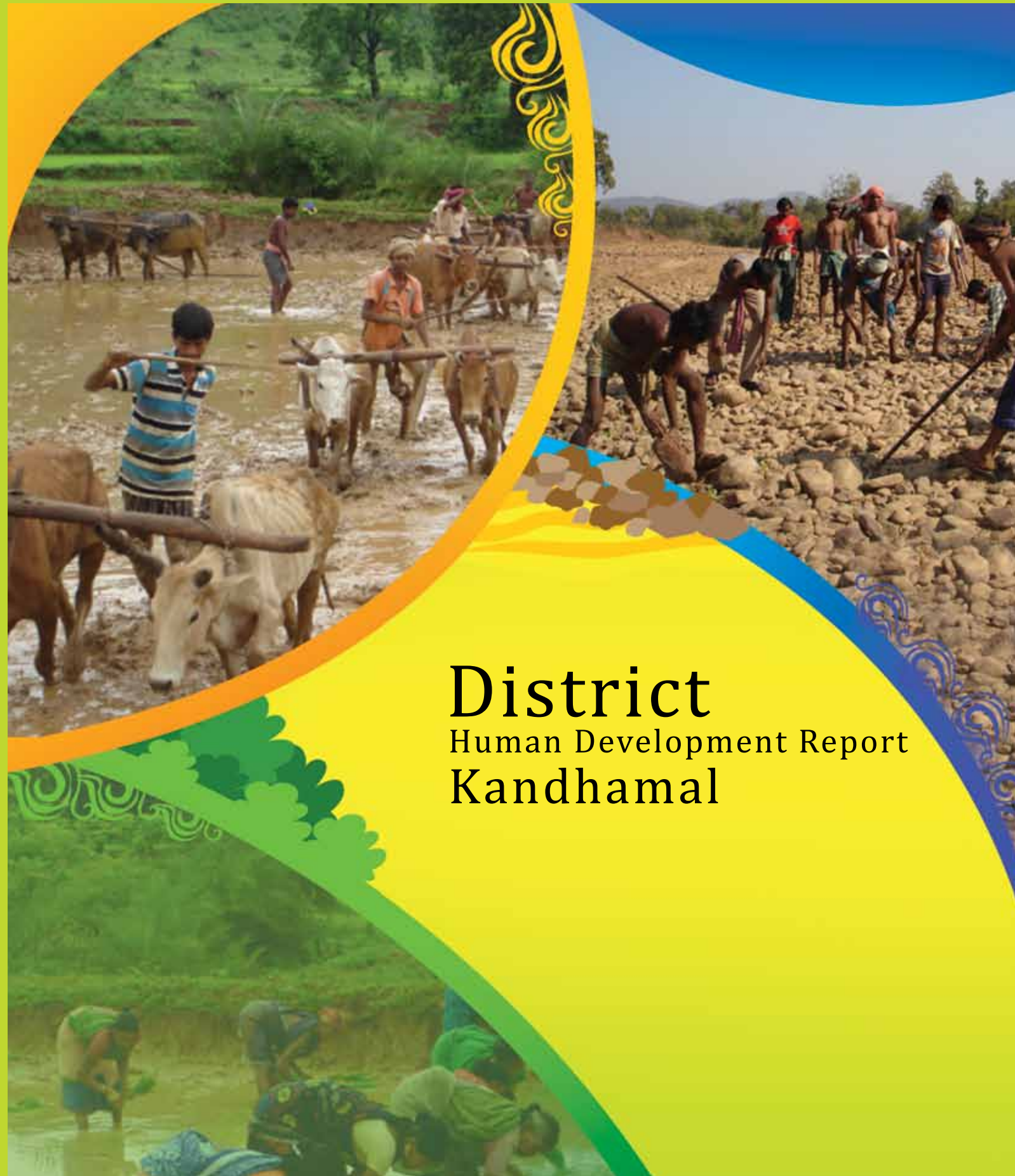
Planning and Coordination Department  
Government of Odisha



Planning Commission  
Government of India



Empowered lives.  
Resilient nations.



# District Human Development Report Kandhamal

Planning and Coordination Department  
Government of Odisha





# District Human Development Report

## Kandhamal



Planning and Coordination Department  
Government of Odisha



Planning Commission  
Government of India



*Empowered lives.  
Resilient nations.*

© 2012  
Government of Odisha  
Bhubaneswar

*Published by:*

Poverty and Human Development Monitoring Agency (PHDMA)  
Planning and Coordination Department  
Government of Odisha

This Report doesn't necessarily reflect the views of the Government of Odisha, the Planning Commission, Government of India and the United Nations Development Programme and its Executive Board.

All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means without the prior permission of the Government of Odisha.

*Copy editing, design, lay out and printing by:*

New Concept Information Systems Pvt. Ltd.

# Message from Chief Minister

**NAVEEN PATNAIK**  
CHIEF MINISTER, ODISHA



Telephone | (0674) : 531100 (Off.)  
| (0674) : 591099 (Res.)  
Fax | (0674) : 535100 (Off.)  
| (0674) : 590833 (Res.)

E. Mail—cmo@ori.nic.in

D. O. No. 921

BHUBANESWAR

Dated 12/1/12

## MESSAGE

I am glad to know that the first District Human Development Report (DHDR) for Kandhamal district is being brought out. This is a joint endeavour of the Planning & Co-ordination Department, Government of Odisha, Planning Commission, Government of India and the United Nations Development Programme (UNDP). This initiative provides a framework for a people-centric development process. Human Development has been conceived as a process that enables people to improve their skills, capabilities and choices to live long, healthy and fulfilled lives.

The first DHDR of Kandhamal attempts to make an independent assessment of the status of Human Development in that district. It highlights the status of literacy, skills, key health indicators and livelihood options available to the people of the district and brings out intra-district variations in respect of identified Human Development indicators. It also underscores the challenges ahead and offers new opportunities for the people of the district.

It is hoped that this exercise will help in evolving an appropriate development strategy that ensures effective and efficient use of available resources for furthering well-being of the people and encourages sharing of development benefits and opportunities in an equitable manner. This joint initiative of the State Government, Government of India and UNDP is a step in that direction.

I would like to thank the Planning Commission, Government of India and UNDP for their assistance and support for the preparation of the DHDR of Kandhamal district and look forward to future co-operation in following up the recommendations of this report.

(NAVEEN PATNAIK)

# Message from Minister, Planning & Coordination Department

**SHRI MAHESWAR MOHANTY,**  
MINISTER,  
Tourism & Culture ,  
Planning & Co-ordination, Odisha



## MESSAGE

I am glad to know that Planning and Co-ordination Department, Government of Odisha has prepared the first District Human Development Report (DHDR) of Kandhamal district with the support from Planning Commission, Government of India and United Nations Development Programme (UNDP). It is heartening to note that the District Administration has also taken keen interest in preparation of the first DHDR of the district.

The major thrust of the DHDR is to prepare a status of "Human Development" in Kandhamal district to highlight intra-district variations in key indicators and to set a bench-mark against which future attainments may be compared. This also identifies gaps in "Human Development" in the district and draws attention of the decision makers to focus attention on the areas where further action is required.

I hope the first DHDR of Kandhamal will be well received by different stakeholders and decentralized planning process will be suitably reoriented to effectively address the challenges ahead and meet the reasonable expectations of the people of the district.

A handwritten signature in Odia script, written in black ink.

(MAHESWAR MOHANTY)

# Message from Chief Secretary

**B.K. Patnaik**  
Chief Secretary, Odisha



Phone(+91 674) 2536700/4300  
Fax: (+91 674) 2536660  
e-mail- [csori@nic.in](mailto:csori@nic.in)  
Bhubaneswar, Jan., 2012



## MESSAGE

I am glad that Planning & Coordination Department has prepared the first District Human Development Report (DHDR) of Kandhamal district. The DHDR aims to provide the current status of key human development indicators at district and sub-district levels and has, in fact, given detailed disaggregated analysis of human development indicators.

The report acknowledges the sincere efforts made by the Government to accelerate the process of development including improving key human development indicators such as literacy, health status and income levels in Kandhamal. The report has also highlighted several challenges the district faces in improving human development indicators and accelerating the process of overall development of its people. This DHDR, which is the outcome of an interactive process, has provided valuable inputs for preparation of quality district plan. This report also provides a benchmark against which future attainments may be assessed.

I warmly thank the United Nations Development Programme (UNDP) and Planning Commission, Government of India for their support and guidance for preparation of this report. I hope that this report will be well received by the different stakeholders including policy planners, researchers, people at large and others.

A handwritten signature in blue ink, appearing to read 'B. Patnaik'.

(B. K. Patnaik)

# Message from Development Commissioner cum Additional Chief Secretary



**Dr. Rabinarayan Senapati, IAS**  
Development Commissioner-cum- Additional  
Chief Secretary and Secretary, Planning and  
Coordination Department  
Government of Odisha

**Bhubaneswar**



## MESSAGE

It gives me immense pleasure to know that the first District Human Development Report (DHDR) of Kandhamal district is going to be released. This report has been prepared by Planning and Coordination Department in partnership with the Planning Commission, Government of India and the United Nations Development Programme (UNDP). This report provides disaggregated data and analysis as regards the current status of key human development indicators at district and sub-district level.

The concept of "Human Development" is people-centric and a multi-dimensional measure of the people's overall well-being based on several socio-economic indicators including income, literacy, health, reproductive child health, access to safe drinking water and gender issues.

The report captures the efforts made by the Government to improve the delivery of public services for the people in general and the marginalised groups including the local Scheduled Tribes, Scheduled Castes and Women in particular. There are, however, several challenges that need to be tackled for continuously improving human development indicators in the district.

We express gratitude to the Planning Commission, Government of India and the United Nations Development Programme (UNDP) for their support and guidance.

We, in the Planning and Coordination Department hope that this report will be of great help to policy makers and others. We look forward to constructive comments and suggestions from all concerned who may find this report useful and have a stake in improving human development conditions in Kandhamal district and rest of the State.

A handwritten signature in black ink, appearing to be 'R. N. Senapati', with a long horizontal stroke extending to the right.

(Dr. R. N. Senapati)



# Message from UNDP

## United Nations Development Programme



*Empowered lives.  
Resilient nations.*

### MESSAGE

The Government of Odisha is to be commended for preparing the Kandhamal District Human Development Report, prepared under a partnership between the Planning Commission, the Government of Odisha and United Nations Development Programme (UNDP) India.

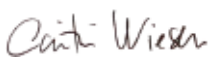
India is a unique example of preparing the maximum number of State and District Human Development Reports in the world. The experience of India in deepening the understanding and reporting on human development is highly inspiring for countries across the world.


In very simple terms, human development is defined as the expansion of people's capability to lead long, healthy and creative lives and to advance other goals that they cherish. This is, to a large extent, determined by historical, socio-cultural, institutional, governance, infrastructural, and geographical or environmental factors.

The Kandhamal District Human Development Report analyses various dimension of human development. Additionally, it discusses extremely relevant issues of environmental security, livelihood security, food security and human security - all of which have an impact on human capabilities. It underlines the importance of an enabling environment for maximizing human development gains.

One of the highlights of the India experience on human development is the close link between human development reports and planning processes. The Kandhamal District Human Development Report provides a sound situation analysis for district planning as well as an agenda for action which can facilitate progress on human development outcomes. We are confident that the Kandhamal District Human Development Report will be a strategic document for district planners.

We once again felicitate the Government of Odisha for preparing the Kandhamal District Human Development Report and look forward to the key messages of the report being translated into policy and action that will significantly improve the quality of life for the people of the district.

  
Caitlin Wiesen  
Country Director

  
Patrice Coeur-Bizot  
United Nations Resident Coordinator and  
UNDP Resident Representative

# Message from District Collector

*Rajesh J. Patil*, IAS  
District Magistrate & Collector,  
Kandhamal, Phulbani-762001  
(Odisha)



STD : 06842  
Office : 253602  
Res. Off : 253601  
FAX : 253905  
E-mail : dm-kandhamal@nic.in



## PREFACE

Human development is about people, and about expanding their choices to live full, creative lives, in good health and security, and with freedom and dignity. That means creating an environment in which people can develop their full potential, and providing them with the tools to enhance their own human capabilities – to accumulate knowledge, to gain access to resources, and to participate in the community.

Without these capabilities, many choices are simply not available, and many opportunities in life remain inaccessible. Economic growth is not an end in itself, but a means to achieve human development. And growth will only do so if it creates jobs, reduces poverty, respects the environment, and generates the necessary resources for essential social services.

The approach of human development puts people and their well-being at the centre of development and provides an alternative to the traditional, more narrowly focused economic growth paradigm. The thinking of the economy clearly belongs to the realm of human development. It focuses on humanity, makes sustainability key, favours well-being over wealth, and insists on the importance of learning.

Preparation of District Human Development Report (DHDR) beyond the earlier attempts of National and State HDRs, is an innovative and sincere attempt of reflecting the real socio-economic condition of the people at grass root level.

The principal objective of writing this report has been to inform, influence and transform district planning processes in the district of Kandhamal by reviewing the state of human development attainments in different pockets of the district and identifying the development issues that need to be resolved so that human development in the district can become more inclusive and holistic, touching the lives of the people of Kandhamal.

Traditionally Kandhamal has been placed among the least developed districts of Odisha with low healthcare and livelihood access and wide-spread rural poverty. Kandhamal being a predominantly agrarian society, population escalation restricts the absorption of new rural worker in to the farm based employment while low levels of urbanization restrain the growth of non farm sector. Thus district planning strategy must accordingly focus on the diversification of economic activities by

leveraging human development variables like education and improved healthcare, so that the district can ascend the development ladder through an alternative path. Identifying persisting roadblocks and regional disparities in the district through human development indexing, the DHDR, Kandhamal also outlines the way ahead in prioritizing the development intervention in a consolidated way.

Kandhamal in the present state was constituted w.e.f 1st January 1994 after reorganization of districts in Odisha. It is located in the heart of Odisha stretching between 19°34' & 20°34' north latitude and 83°34' & 84°35' east longitude with an area of 8021 sq.km. Physiographically the entire district lies with high altitude zone with interspearding inaccessible terrain of hilly ranges and narrow valley tracts which guides the socio-economic conditions of people and development of the district. It is rich for its tribal cultural heritage, is land of beautiful mountains and numerous valleys echoing with the rhythms of tribal culture and rich wild life. More than 52% of population constitutes ST community of aboriginal tribal races.

Endowed with rich biodiversity, the district is among the most beautiful districts of Odisha, about 72% of the total area of the district is thickly forested. With a population density of 91 the district is also owning the distinction of having a highly encouraging sex ratio at 1037. The people of the district are diligent. Due to less availability of agricultural land and mineral resources the people largely depend on forest and NTFP for subsistence.

There has been concerted efforts by the government for bringing about development in the district and there by improving the quality of life, but there is always a scope for betterment. The current document outlines the bottlenecks in development and identifies the load sectors for development.

Presently the district planning process is on in the district, which is a result of grass root planning through three tier Panchayati Raj institutions. This document has certainly highlighted the roles and responsibilities of the elected representatives in effective realization of a integrated district plan.

The present document is prepared with the support of UNDP and Planning commission with active support of P & C Department, Govt. of Odisha. This document has been prepared by the Technical Support Institute (TSI) "Sutra Consulting", Bhubaneswar, with active consultation with Political leaders, PRIs, Academicians, common men and other stakeholders of the district. The Administration has extended all support when and where required for making it a meaningful document. We would like to extend our acknowledgement and gratitude to all those who were instrumental in preparation of this document.

  
(Rajesh Prabhakar Patil)

# Acknowledgement

Many organizations and individuals have contributed for preparation of the first District Human Development Report (DHDR) of Kandhamal district. We are grateful to Sj. Naveen Patnaik, Hon'ble Chief Minister, Odisha, who inspired us to take up the task of preparation of the first DHDR of Kandhamal. We are also grateful to Sj. A. U. Singh Deo, former Hon'ble Minister, Planning & Coordination and Excise, Smt. Usha Devi, former Hon'ble Minister, Handlooms, Textiles & Handicrafts, Planning & Coordination and Sj. Maheswar Mohanty, Hon'ble Minister, Tourism & Culture, Planning & Co-ordination, who lent their wholehearted support for completion of this assignment.

Shri T. K. Mishra, former Chief Secretary and Chief Development Commissioner and Shri Bijay Kumar Patnaik, Chief Secretary and Chief Development Commissioner, Odisha both guided us during the tedious process of preparation of this DHDR. This document would not have been completed without full support and guidance of Shri S. P. Nanda, former Development Commissioner-cum-Additional Chief Secretary and Dr. R.N. Senapati, Development Commissioner-cum-Additional Chief Secretary. Their guidance and support are gratefully acknowledged.

We sincerely thank the District Administration of Kandhamal for their support. Dr. Krishan Kumar and Shri Rajesh Patil, both former Collectors of Kandhamal district steered the process for completion of this report. They were ably assisted by Shri Alekha Chandra Sethy, Planning Officer and his team at DPMU, Kandhamal. Various District Level Officers provided their inputs to facilitate this report. The co-operation and support of all is greatly appreciated and acknowledged.

This exercise would not have been possible without full support and guidance from Planning Commission, Government of India and United Nations Development Programme (UNDP). In particular, Ms. Caitlin Wiesen, Country Director, UNDP, Dr. K. Sita Prabhu, Ms. Sumeeta Banerji, Ms. Ritu Mathur, Dr. Ambika Prasad Nanda and others from UNDP were of great help and their support is gratefully acknowledged. We also thank the United Nations Joint Programme on Convergence team including Ms. Shairose Mawji, local head of UNICEF and Dr. Hemant Dwivedi, local head of UNFPA, for their valuable inputs for preparation of this report. Shri Tuhin K. Pandey, Joint Secretary (Plan Coordination), Shri Rajat Sachar, Director (RD), Dr. Indu Pattnaik, Joint Adviser, and Shri K. K. Tripathy, Project Manager (SSPHD), HDRC Unit, all of Planning Commission, Government of India extended their unstinted support and guidance for this new initiative in Odisha. We gratefully acknowledge their support and place on record our sincere thanks.

Shri Alok Acharya and his team from Sutra Consultancy Private Limited, Bhubaneswar took the major responsibility for researching, writing and completing this report. They took pains and made sincere efforts for collection and analysis of data presented in this report. M/s New Concept Information System Private Limited helped us in cover lay and layout design, copy

editing, and printing of this document. We sincerely thank them for finalizing and printing this report.

This work would not have been possible without the active co-operation of my colleagues in Planning & Coordination Department and Poverty and Human Development Monitoring Agency (PHDMA). They made untiring efforts from the beginning to the end of the entire process of preparing the DHDR. Shri R. C. Kar, former Director (DF&C)-cum-Additional Secretary to Govt., Shri A. K. Mishra, Director (DF&C)-cum-Additional Secretary to Govt., Shri B. N. Dash, and Ms. Neeta Mohanty both Deputy Director (DPC), Shri C.R. Satapathy, Deputy Director, Shri Niranjana Mishra, CAO, Shri B.K. Sahu, Systems Analyst and other officials from PHDMA assisted at different stages for completion of this DHDR. Shri Arabinda Acharya, Demographer, Shri Mainak Sarkar, State Project Officer, Shri Debashish Dash, State Facilitator and Shri Abhishek Mohanty, former State Facilitator, Dr. J.K. Patnaik, Shri Manoranjan Barik, Ms. Vaibhavi Bhandekar and Ms. Srabani Das, all former UNVs, also assisted and expedited the process. Their efforts and contributions are sincerely appreciated, and acknowledged.

We hope that this report will be well received by all stakeholders. It will be useful to all those, who intend to use it. We welcome constructive suggestions and comments for further improvement of this document from all those who find this document useful and who have a stake in improving human development indicators in Kandhamal and Odisha



(Dr. R. V. Singh)

Officer on Special Duty  
Planning & Coordination Department  
and Member Secretary PHDMA  
Government of Odisha.



# Executive Summary

- Human Development Report (HDR) is an important instrument that focuses on key human development indicators. The Government of India and United Nations Development Programme (UNDP) have jointly launched the "Project on Strengthening State Plans for Human Development (SSPHD)". Several states including Odisha participated in this project. As a part of this project, District Human Development Reports (DHDRs) have been prepared for selected districts. DHDR analyses the status of key human development indicators at the district and sub-district level and aims to provide a benchmark against which future attainments on human development can be compared. Kandhamal is one of the selected districts in Odisha for preparation of the DHDR.
- Kandhamal district in the current form was carved out of erstwhile undivided Boudh-Kandhamal district of Odisha. The district is centrally located and has a hilly terrain. About 65.38 percent of the district is under forest cover. The district has 12 Community Development Blocks, one Notified Area Council, one Municipality, 153 Gram Panchayats and 2,546 villages. Kandhamal has a population of 731,952 as per census 2011 with a decennial growth rate of 12.92 percent. The sex ratio which was 1,008 in 2001 has further improved to 1,037 in 2011. However, the sex ratio in 0-6 year age group has worsened from 970 in 2001 to 960 in 2011.
- The Urban population is 9.86 percent in 2011 which was only 6.8 percent in 2001. Schedule Castes constituted 16.9 percent and Schedule Tribes accounted for 52 percent of the district population in 2001. This tribal dominated district has 29 of the 62 tribes notified as Schedule Tribes in Odisha. Among the Schedule Tribes, Kandha constitute the majority in the district which is rich in tribal culture and tradition. Several local tribal festivals and dance forms are observed throughout the year. Some of the important dance forms include *Singa Badya* and *Danda Nata*. The district is well known for its tourist attractions such as Daringbadi, Katramal, Chakapada and Kotagarh sanctuary.
- Kandhamal was ranked amongst the bottom five districts in Odisha and has a Human Development Index (HDI) value of 0.389 as per Odisha HDR 2004. The district fares poorly on various socio-economic indicators as compared to other districts of Odisha; however it has shown impressive improvement over last few years in all aspects including health, education and basic infrastructural facilities.
- Kandhamal falls in the southern National Sample Survey (NSS) region which had the highest incidence of poverty of 87.05 percent in 1999-2000 (55<sup>th</sup> round of NSS). As per the BPL census carried out by the State Panchayati Raj Department, 78.42 percent households were reported as BPL in 1997 as against 88.62 percent in 1992. The State average for percentage of BPL families stood at 66.23 percent in 1997 BPL census. Though the incidence of poverty has come down as per 2004-05 and 2009-10 estimates, it is still very high.

- The district economy has grown at a marginally lower rate of 4.41 percent per annum against the annual growth rate of 4.57 percent for the State economy from 1999-2000 to 2004-05. Sectoral composition of real Gross District Domestic Product (GDDP) indicates reduction in the share of agriculture and allied sectors and diversification of economy into services and other sectors. Analysis of workers composition over census years also indicates decline in cultivators from 52.66 percent in 1981 to 33.39 percent in 2001 and a increase in other workers from 17.66 percent in 1981 to 34.65 percent in 2001.
- Agriculture, horticulture, forest produce and micro enterprises are the main sources of livelihood in Kandhamal. Agriculture in the district is characterised by small land-holdings, upland terrain, traditional cultivation practices, limited irrigation, poor water conservation measures, low productivity, limited crop diversification and low yields of food grains. Though the district economy has diversified over the years, 69.44 percent of the work force (cultivators and agricultural labourers) still depend on agriculture and allied sectors. Agriculture and animal husbandry sectors contributed 31.74 percent of the Gross District Domestic Product in 2004-05 which is high in comparison to the share of these sectors in GSDP at the state level. Land use and landholding patterns indicate that the pressure is rising on cultivable land due to less available land for agriculture (less than 18% of total area) and small landholding (86.58% farmers belong to marginal and small categories). The extent of irrigation is only 13.57 percent against the State average of 33.78 percent. The main crops in the district include paddy, maize, niger, vegetables and turmeric. Per capita value of agricultural output for Kandhamal stood at Rs. 899 in 2005-06 against the State average of Rs.1,381.
- Horticulture and forest produce collection are other major sources of livelihood in the district. The agro-climatic condition of the district is suitable for horticultural crops. Kandhamal produced 18 percent of total spices and condiments in the State in 2005-06 of which 26 and 45 percent were ginger and turmeric respectively. The district has potential in floriculture and tree based horticultural crops besides spices and vegetables. Forest produce collection as well as small scale forest based enterprises like sal leaf plate making, basket and broom making are important sources of livelihoods for Kandhamal inhabitants. Forestry sector contributed about ten percent to the GDDP of Kandhamal in 2004-05. Some major non-timber forest products (NTFP) include kendu leaf, sal leaf, siali leaf, sal seed, mahua, tamarind, amla, harida and bahada. There is a need to make a comprehensive plan for NTFP to facilitate sustainable harvesting, value addition, marketing and building forest based micro-enterprises.
- Kandhamal has also potential in the service sector including banking, real estate, repair services, retail and personal services. The share of banking, real estate and construction, utilities and transport in GDDP has shown an increase from 1999-2000 to 2004-05. The increased activity in service sector is also reflected by the 17.54 percent growth in consumption of electricity by commercial establishments from 2000 to 2004. The data from 5<sup>th</sup> Odisha Economic Census shows that about 60 percent of non-agriculture establishments are in the service sector indicating the importance of the service sector.



- Government schemes for livelihoods improvement and self-employment including Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Swarnajayanti Gram Swarozgar Yojana (SGSY), Self-Help Group (SHG) promotion through Mission Shakti, Jeevika and Biju Kandhamal O Gajapati Yojana have been instrumental in creating livelihood options for the rural poor of the district. Vocational training and skill building are also emphasised for supporting the cause of livelihood enhancement.
- The literacy levels in the district have remained below the State average. However, the situation has begun to improve in recent years. The literacy rate in Kandhamal has increased by 25.60 percentage point from 27.08 percent in 1981 to 52.68 percent in 2001 as against the 22.11 percentage point improvement at the State level from 40.97 percent in 1981 to 63.08 percent in 2001. The literacy rate has increased to 65.12 percent, with the male literacy rate of 78.41 percent and the female literacy rate of 52.46 percent, in 2011 census. The district shows high gender and social disparities in literacy levels. However, the gender literacy gap has come down from 33.93 percentage points in 2001 to 25.75 percentage points in 2011. The female tribal literacy increased more than six times from 4.74 percent in 1981 to 26.87 percent in 2001. It was however, still lower than the districts female literacy level in 2001. The schemes like NPEGEL, KGBV and 100-seated ST/SC girls hostels have been put in place to address the challenge of low tribal female literacy and to improve their enrolments, retention and learning achievements in schools.
- The census 2001 data indicated that literates with high school or higher qualifications were only 16.93 percent in Kandhamal against the State average of 25.11 percent indicating higher dropouts at elementary and secondary education levels. The DHDR primary survey found that 75.19 percent males and 50.24 percent female attained some kind of functional literacy levels even though some of them had not obtained any formal education. The results also showed that the levels of educational attainments have recently improved and that the gender gap has also narrowed down.
- Access to schools has improved significantly over the years. The number of primary and upper primary schools has increased from 1,319 in 2004-05 to 1,849 in 2009-10. The DHDR primary survey has also shown that about 96 percent of children attend school within their villages. Even though access has improved significantly, primary schools at remote habitations need to have good infrastructure to attract and retain students. As per annual plan of Sarva Shiksha Abhijan (SSA) 2007-08, 279 schools required drinking water facilities and 1,117 schools needed toilet facilities. The total number of teachers in primary schools went up to 3,472 in 2006-07 from 2,350 in 2004-05. The DISE data 2007-08 reported presence of 198 single teacher primary schools. The availability of teachers needed to be rationalised across all schools in different regions of the district. The district has limited opportunities for higher education and vocational training with only 16 colleges and one Industrial Training Institute.
- Enrolments and enrolment ratios for the district have improved over the years due to extensive social mobilisation and Information Education Communication (IEC) activities by SSA.

There was a growth of 65 percent in primary enrolments and 31.4 percent in upper primary enrolments from 2006-07 to 2008-09. It is interesting to note that in all social groups, enrolments for girls are found to be higher than those of boys. Further Net Enrolment Ratio (NER) for primary level in Kandhamal has improved from 81.45 percent in 2006-07 to 90.96 percent in 2008-09. At the upper primary level, NER has shown significant improvement from 41.87 percent in 2006-07 to 79.73 percent in 2008-09. The enrolment trends indicate that NER at the primary level is higher than that at the upper primary level, though the difference has reduced significantly over the years.

- The dropout rate at the upper primary level is found to be higher than the primary level. The dropout rate of 5.70 percent in 2006-07 has come down to 1.45 percent in 2008-09 at the primary level and the same for the upper primary levels has decreased from 19.77 percent in 2006-07 to 6.78 percent in 2008-09. Out of school children, as percentage of total child population for children in 6-11 year age group, has come down from 9.10 percent to 2.66 percent and for children in 11-14 year age group from 26.31 percent to 7.36 percent during 2006-09.
- Overall, the district showed improved access to elementary education, increased enrolment and reduced dropout rates for children, but quality of education and retention at higher classes continue to be a serious concern. The transition rate from primary to upper primary has improved from 72.34 percent in 2006-07 to 78.32 percent in 2008-09. Several steps have been taken by SSA to improve quality of education at various levels. The efforts include increasing the number of residential schools for tribal children, use

of multi-lingual instruction in primary schools, remedial teaching, vocational training and skill building in schools. There has been a substantial increase in fund flow to SSA over the last five years. This has played a pivotal role in improving the status of elementary education in the district. Despite enhanced quality of elementary education, the scope and facilities for higher education still remain as a challenge. The district has set-up a new ITI and a B.Ed. College under the special package as a step to meet this challenge.

- Health situation of Kandhamal is characterised by high incidence of malaria, high IMR and low per capita health access. Health access and reach are critical issues in many pockets of the district due to their remote locations, inaccessibility and lack of awareness among people. Kandhamal is among the bottom five districts in terms of reproductive health index (RHI) at 0.462 as reported in Odisha HDR 2004. The DLHS, RCH-II data shows an IMR of 79.12 in Kandhamal reported in 2004. The district administration through ICDS and NRHM schemes has been taking steps to enhance nutritional status of mothers and children, provide support to pregnant mothers and promote institutional deliveries.
- The DLHS, RCH III, 2008 data suggests improved pre-natal and post-natal care facilities. This data suggests that 52.9 percent pregnant women had at least 3 ante-natal visits during their pregnancy. Around 92.51 percent pregnant women got iron tablets and 88.32 percent women received iron folic acid tablets. About, 82.30 percent women were visited by anganwadi workers. More than 95 percent mothers received at least

one TT injection and 51.4 percent children were fully vaccinated against the State average of 62.4 percent. Child mortality rate is also affected by overall poverty conditions at the household level, availability of safe drinking water and sanitation conditions.

- Morbidity status in the district suggests many reported cases of critical illness. Major diseases that affect the district are malaria, diarrhoea, measles and skin diseases. The incidence of genetic disorders like sickle cell diseases and thalassaemia have also been reported among the Kandhas. Data on diseases from Directorate of Health suggests that diarrhoea has claimed the highest number of lives in the district during 2002-07. A preliminary study shows that about 76 percent family members have suffered from malaria, diarrhoea and high fever during one year prior to the survey. Malaria deaths have increased marginally in Kandhamal, from 8 in 2001 to 29 deaths in 2007. Kandhamal accounted 13.55 percent of total malarial deaths in Odisha in 2007. The *Panchavyadhi Chikitsa* scheme, launched in Odisha in the year 2001, was implemented in the district. Of the five serious major diseases, Acute Respiratory Infection (ARI), diarrhoea and malaria continue to be serious challenges while leprosy and scabies are under control.
- Health infrastructure available in the district, particularly at PHCs and sub-centre levels needs to be strengthened to ensure quality services. The district has one District level hospital at Baliguda, 7 other Government hospitals, 47 PHC/CHC including 35 new PHC, two mobile health units and 185 sub-centres. In addition to allopathic health institutions, 19 Government homeopathic and 17 ayurvedic dispensaries are present in the district. These health institutions suffer from large number of vacancies of doctors and staffs. In 2008, 34 percent of sanctioned positions for doctors were vacant. Despite Government efforts, access to health services is inadequate in the district. Only 41.34 percent of villages in the district have access to health services within 5 km of distance as reported in by the DLHS, RCH III in 2008.
- Several promotional schemes like the NRHM, RCH and ICDS are operational in the district to improve healthcare status. Important interventions under NRHM include provisioning of Accredited Social Health Activist (ASHA), Janani Surksha Yojana (JSY) and Rogi Kalyan Samiti (RKS). ASHA workers have helped to create adequate awareness on childcare among pregnant women and mothers and with the help of JSY institutional deliveries have improved from 41 percent in 2007-08 to 46 percent in 2008-09.
- The RCH scheme is operational in the district and aims at improving women and child health. An ANM is responsible for promoting the welfare of children and mothers at the sub-centre level, to organise RCH camps and popularise IEC initiatives on RCH including AIDS awareness. The DLHS, RCH III data indicates that 42 percent of ever married women and 55.7 percent unmarried women are aware of HIV/AIDS. The other important scheme, ICDS plays a major role for enhancing welfare of children within the age group of 0-6 year and pregnant mothers through anganwadi centres. Immunisation is a major programme under NRHM and ICDS and has been implemented successfully. The DHDR primary survey shows that 89.92 percent children had immunisation cards and 94.10 percent got immunised.

Nutritional status of children is also monitored by ICDS. Kandhamal is among the lowest ranked districts as regards to nutritional status of children. The percentage of children in 0-3 year age group under malnutrition (Grade II, III and IV) category is 21.51 percent against the State average of 17.88 percent.

- Despite efforts from the district administration, healthcare services continue to be a challenge owing to remote locations, inadequate staffing and lack of infrastructure. The healthcare system needs to get strengthened at the local level to cater to health emergencies. Mobile health unit facilities can be further strengthened in this context. Besides, a plan to promote local knowledge on medicinal plants and ayurvedic medicines may be further improved under AYUSH programme of Government of India. Fund flow to the district under various health, nutrition and sanitation schemes has increased over the years and it is expected that the health situation will continue to improve with focused implementation of existing promotional schemes.
- The district shows considerable gender disparity. Besides gender gap in literacy and educational attainments, disparity exists in work participation. The Work Participation Rate (WPR) is 52.23 percent for male and 42.2 percent for female as per census 2001. Gender gap in WPR in urban areas is 34 percent and the same in rural areas is 8.5 percent. As females are involved in agricultural activities, female WPR is much higher in rural areas.
- Focus Group Discussions for the DHDR survey found good participation of women and qualitative findings suggest that women participate in livelihood activities and given more freedom in tribal societies. The district has been implementing several women empowerment programmes like SGSY and Mission Shakti with the intention of bridging the gender gap and empowering women.
- Kandhamal has not witnessed much of natural disasters. It is, however, vulnerable to food, economic and personal insecurity faced by the inhabitants. Food insecurity is a major issue in Kandhamal. The district ranks 30<sup>th</sup> in Odisha in terms of food insecurity and is graded as extremely food insecure in Odisha Food Atlas, 2008. The primary survey found that the average stock of food grains per household is only for a week in difficult months. About 53.89 percent households responded to have skipped at least one meal during adverse months and 60 percent households reported food shortage for an average of 45 days in the last one year. These figures indicate acute food insecurity and the district administration has been implementing schemes like BPL rice, Antyodaya Anna Yojana and Annapurna Yojana to address the problem.
- The district is vulnerable to ethnic conflicts. Historically, the district has seen conflicts between SC and ST groups mainly owing to land alienation. This rivalry took a bad shape during 2008 and the district witnessed serious ethnic violence between these two groups. The district administration has restored normalcy and made considerable efforts to contain the problem of ethnic violence. In recent times, left wing extremist activities have increased in Kandhamal and the district is vulnerable owing to its strategic location. Both caste based conflicts and left wing extremist activities have an adverse

impact on district economy and these have emerged as serious challenges for Kandhamal.

- Kandhamal has a significant poor population. They are economically vulnerable. Limited livelihood opportunities contribute to the poor and disadvantage section economically insecure. The primary survey indicates that 21.67 percent households mortgaged and 16.23 percent households sold their assets in the last two years to cope with financial requirements. Health emergencies were found to be one of the main reasons in more than 40 percent cases followed by general consumption. In majority of cases, mortgaged asset, included land and ornaments and sold assets included livestock and crop produce. Around 49 percent households were found to have a current household debt. From the primary survey, the average household debt was estimated to be Rs.3,500. These figures indicate economic vulnerability of the rural poor in the district. The SHG movement has been able to increase credit access to the poor. The livelihood support schemes like SGSY, MGNREGS, OTELP and *Biju Kandhamal O Gajapati Yojana* have been implemented in the district. Other social welfare schemes under implementation include Odisha disability pension, scholarship to disabled students, national old age pension, national family benefit schemes and housing schemes like *Mo Kudia* and IAY.
- All these schemes target the vulnerable population and provide social security and livelihood opportunities through wage or self employment options.
- Though the district has made considerable improvement during the last decade, some of the persistent challenges including ethnic conflicts, rise of left wing extremism, inadequate infrastructure and lack of adequate livelihood opportunities need to be addressed more comprehensively to meet the goal of creating a prosperous and developed district.
  - Infrastructure development is a pressing requirement for the district. This will help overall well being, enhance access to health and education services and provide support for livelihoods promotion. Important needs include rural road connectivity, electrification, safe drinking water supply, rural and urban sanitation, waste disposal in two urban locations and infrastructure development at tourist locations.
  - The district offers limited scope for industrialisation. Agriculture, horticulture, tourism, forestry, animal husbandry and micro enterprise are the sectors that can act as growth drivers for Kandhamal. The district needs to have a convergence strategy through which livelihood and employment generation schemes can focus on these growth sectors and invest in long term livelihood solutions.





# Contents

<i>Message from Chief Minister</i>	<i>iii</i>
<i>Message from Minister, Planning &amp; Coordination Department</i>	<i>iv</i>
<i>Message from Chief Secretary</i>	<i>v</i>
<i>Message from Development Commissioner cum Additional Chief Secretary</i>	<i>vi</i>
<i>Message from UNDP</i>	<i>vii</i>
<i>Message from District Collector (Preface)</i>	<i>viii</i>
<i>Acknowledgement</i>	<i>x</i>
<i>Executive Summary</i>	<i>xiii</i>
<i>Acronyms</i>	<i>xxix</i>
<i>Glossary</i>	<i>xxxiii</i>
<b>Chapter 1: Introduction</b>	<b>1</b>
1.1 Human Development	3
1.2 Measurement of Human Development	4
1.3 Human Development and Millennium Development Goal	5
1.4 District Human Development Report	5
1.5 Kandhamal District: An Introduction	6
1.5.1 Kandhamal: A Historical Perspective	6
1.5.2 Location and Topography	7
1.5.3 Soils and Climate	7
1.5.4 Forest Cover	8
1.5.5 Administrative Set Up	8
1.5.6 Demographic Characteristics of Kandhamal	8
1.6 Social Development	10
1.6.1 Status of Education	10
1.6.2 Status of Healthcare	11
1.7 Economy of Kandhamal	12
1.7.1 Livelihood Pattern	12
1.7.2 Poverty and Economy	13
1.7.3 Sectors of Economy	13
1.8 Culture and Tradition	14
1.9 Fund Flow to Kandhamal	15
1.10 Chapter Summary	15
<b>Chapter 2: Swot Analysis</b>	<b>17</b>
2.1 Strengths	19
2.2 Weaknesses	20
2.3 Opportunities	20
2.4 Threats	21
<b>Chapter 3: Kandhamal Economy: Growth and Livelihoods</b>	<b>23</b>
3.1 District Economy: Structure and Growth	26
3.2 Kandhamal: Labour and Employment	28
3.3 Incidence of Poverty in Kandhamal	30

3.4	Livelihood Options in Kandhamal	31
3.4.1	Agriculture Sector	32
3.4.2	Horticulture	35
3.4.3	Forest Resources	36
3.4.4	Fisheries	37
3.4.5	Livestock	38
3.4.6	Industrial Development	39
3.4.7	Livelihood Opportunities in Service Sectors	41
3.4.8	Growth of Establishments	41
3.5	Secondary Sources of Income	42
3.6	Livelihood Promotion: The State Efforts	43
3.6.1	Biju Kandhamal O Gajapati Yojana	43
3.6.2	Odisha Tribal Empowerment and Livelihoods Programme (OTELP)	43
3.6.3	Special Programmes for Kandhamal	44
3.6.4	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)	44
3.6.5	Swarnajayanti Gram Swarojgar Yojana (SGSY)	45
3.6.6	Self Help Group Movement and Its Impact on Livelihoods	45
3.7	Fund Flow to the District	46
3.8	Scope for Livelihood Improvement	46
3.9	Chapter Summary	47
<b>Chapter 4: Education in Kandhamal</b>		<b>49</b>
4.1	Educational Development in Odisha and Kandhamal	52
4.2	Literacy Levels and Educational Attainments in Kandhamal	54
4.2.1	Inter-Block Disparities in Literacy Levels	56
4.2.2	Rural-Urban Disparities in Literacy Rates	56
4.3	School Infrastructure & Accessibility in Kandhamal	58
4.4	Teacher Strength	61
4.5	Current Administrative Setup and Efforts for Delivery of Educational Services	62
4.5.1	Sarva Shiksha Abhiyan (SSA)	64
4.5.2	Girls' Education: Kasturba Gandhi Balika Vidyalaya (KGBV)	64
4.5.3	National Programme for Education of Girls at Elementary Level (NPEGEL)	66
4.5.4	Inclusive Education for Disabled (IED)	66
4.6	Student Enrolments	67
4.6.1	Enrolments by Social Groups	68
4.6.2	Gender Disparities in Enrolments	69
4.6.3	Gross and Net Enrolment Ratios (GER and NER)	70
4.6.4	Dropout Rates	71
4.6.5	Repetition and Completion Rates	73
4.6.6	Out of School Children	75
4.7	Primary Survey Results on Out of School Children	76
4.8	Funds for Education in Kandhamal	78
4.9	Quality of Education and Adult Literacy Programmes	78
4.10	Chapter Summary	80



<b>Chapter 5: Health and Nutrition</b>	<b>83</b>
5.1 Health Conditions in Kandhamal	86
5.2 Mortality in Kandhamal	87
5.2.1 Infant Mortality Rate (IMR)	87
5.2.2 Maternal Mortality Rate (MMR)	90
5.3 Morbidity and Major Disease Burden in Kandhamal	90
5.3.1 Outcomes of the DHDR Survey: Disease Burden and Morbidity	93
5.4 Health Infrastructure and Delivery of Health Services	94
5.4.1 National Rural Health Mission (NRHM)	95
5.4.2 Institutional Deliveries	96
5.4.3 Family Welfare Measures: Women and Child Welfare	97
5.4.4 Child Welfare: Integrated Child Development Schemes (ICDS)	99
5.4.5 Nutritional Status of Children	100
5.5 Safe Drinking Water and Sanitation	102
5.5.1 Sanitation Facilities	104
5.6 Expenditure in Healthcare	104
5.7 Chapter Summary	104
<b>Chapter 6: Gender Issues</b>	<b>107</b>
6.1 Demography of Kandhamal: Some Gender Dimensions	110
6.2 Gender Differential in Education	110
6.2.1 Educational Attainments and Functional Literacy	112
6.2.2 Enrolment of Children	112
6.2.3 Dropout and out of school children	113
6.3 Participation in Economic Activity	113
6.4 Gender Gap in Health	115
6.5 Women Empowerment	116
6.5.1 Women Participation and Mobility	116
6.5.2 Decision Making by Women	116
6.5.3 Schemes for Economic Empowerment of Women	117
6.5.4 ICDS and Supplementary Nutritional Programme	118
6.5.5 Mission Shakti	119
6.6 Crime against women	119
6.7 Chapter Summary	120
<b>Chapter 7: Vulnerability in Kandhamal</b>	<b>123</b>
7.1 Vulnerability Issues in Kandhamal	125
7.2 Natural Calamities	125
7.2.1 Drought	126
7.2.2 Flood	126
7.2.3 Storm and Fire	126
7.2.4 Livestock Epidemic	126
7.2.5 Disaster Management	127
7.3 Personal Insecurity	127
7.3.1 Crime and Accidents	127
7.3.2 Caste Conflicts	128

7.4	Food Security and Nutrition Status	129
7.4.1	Food Security Index	129
7.4.2	Food Security Programmes	129
7.5	Economic Insecurity	131
7.5.1	Household Coping Mechanism	131
7.5.2	Financial Capital	131
7.5.3	Sources of Debt and Characteristics	131
7.6	Social Capital and Social Cohesion	133
7.7	Social Security and Welfare Measures	133
7.7.1	India Awas Yojana	133
7.7.2	Old Age Pension Schemes	133
7.7.3	Schemes for Destitute	134
7.8	Chapter Summary	134
<b>CHAPTER 8: Thematic Issues in Kandhamal</b>		<b>137</b>
8.1	Infrastructure Development	139
8.2	Healthcare Services	140
8.3	Personal Insecurity	140
8.4	Crop Failure	140
8.5	Livelihood Opportunities	141
8.6	Chapter Summary	142
<b>Chapter 9: Way Ahead</b>		<b>143</b>
<b>Annexures</b>		<b>149</b>
Annexure 1:	References	151
Annexure 2:	Methodology for DHDR Preparation	153
Annexure 3:	Report Card of PAHELI Survey	156
Annexure 4.1:	BPL Survey in 1992 and 1997, Kandhamal	161
Annexure 4.1A:	BPL Households Comparison in Kandhamal: 1992 and 1997	161
Annexure 4.1B:	BPL Households Comparison in All Districts: 1992 and 1997	162
Annexure 4.2:	Kharif and Rabi Crop Details in the District	163
Annexure 4.2 A:	Kharif Production Details (A=Area, Y=Yield, P=Production)	163
Annexure 4.2 B:	Area, Productivity and Production of Rabi Crops in Kandhamal: 2008-09	164
Annexure 4.3:	Horticulture Crop Production Details for Kandhamal	165
Annexure 4.4:	NTFP Price and Collection in Kandhamal (1999)	167
Annexure 4.5:	NREGS Data on Kandhamal	169
Annexure 4.5A:	Employment Generated for the Financial year 2008-09 in NREGS Online	169
Annexure 4.5 B:	Caste-wise Cumulative No. of job card Issued & Caste-wise Cumulative No. of Person days Generated in NREGS (As on 30.09.2009)	170
Annexure 5.1:	Trend of Enrolment in Secondary Classes: 2006-2009	171
Annexure 5.1A:	Secondary Enrolment 2006-07	171
Annexure 5.1B:	Secondary Enrolment 2007-2008	172
Annexure 5.1C:	Secondary Enrolment 2008-2009	173
Annexure 5.2:	Out of School Children as per SSA Micro planning 2007	174
Annexure 5.3:	Management and section wise Schools in Kandhamal, DISE 2007-08	175
Annexure 5.4:	School Infrastructure as per Conditional Survey, 2006	176
Annexure 6.1:	Health Indicators, DLHS-3 and DLHS-2	177

Annexure 7.1:	Food Security Outcome Index	179
Annexure 7.1-7.4:	Components of Food Security Index for all Districts	179
Annexure 7.2:	Availability Index as per Food Security Atlas 2008	180
Annexure 7.3:	Access Index as per Food Security Atlas, 2008	181
Annexure 7.4:	Absorption Index as per Food Security Atlas, 2008	182
Annexure 7.5:	Target BPL Household for IAY	183
Annexure 7.6:	Beneficiaries under Social Security Schemes	183
Annexure 8:	G.P. Profile	184

### List of Tables

Table 1.1:	Administrative Set-up: Kandhamal, 2005	8
Table 1.2:	Demographic Profile of Kandhamal District : 2001	9
Table 1.3:	Demography Trend in Kandhamal : 1971-2011	9
Table 1.4:	Schedule Tribes and Schedule Castes Population : 2001	9
Table 1.5:	Growth in Population and Sex Ratio: 1901-2011	10
Table 1.6:	Workers Population in Kandhamal: 2001	12
Table 1.7:	Trend in Fund Flow to Kandhamal District: 2002-2009	15
Table 3.1:	Kandhamal Economy: Sectoral Composition and Growth: 1999-2000 to 2004-2005	27
Table 3.2:	Workers and Worker-Population Ratios by Blocks/Urban Areas: 1991-2001	29
Table 3.3:	District Wise Poverty Ratio in Odisha: 1983-2000	30
Table 3.4:	Land Use Patterns by Blocks in Kandhamal: 2005	32
Table 3.5:	Comparison of Cropping Intensity in Kandhamal vis-à-vis Odisha: 2000-2006	34
Table 3.6:	Rice Yields and Paddy Production by Blocks: 2004-2005	34
Table 3.7:	Production and Area under Horticultural Crops in Kandhamal: 2004-2009	35
Table 3.8:	Potential for Fishery Activities in Kandhamal: 2000-2001	38
Table 3.9:	Production of Livestock in Kandhamal: 1994-2006	38
Table 3.10:	Year-wise Investment and Employment by SSI in Kandhamal: 1998-2007	39
Table 3.11:	SSI by Category in Kandhamal: 2000-2001	40
Table 3.12:	Status of Handicraft & Cottage Industries in Kandhamal: 1995-2001	40
Table 3.13:	Main Crafts and Their Distribution in Kandhamal: 2002	40
Table 3.14:	Consumption Pattern of Electricity: 1999-2000 and 2003-2004	41
Table 3.15:	Status of Implementation of NREGS in Kandhamal: 2008	44
Table 3.16:	Status of Implementation of SGSY in Kandhamal: 2007-2009	45
Table 3.17:	Allocation of funds to select sectors: 2002-2009 (In Rs. Lakh)	46
Table 4.1:	Literacy Rates by Gender and Social Groups in Kandhamal: 1981-2011	54
Table 4.2:	Comparison of Educational Attainments in Odisha and Kandhamal: 2001	55
Table 4.3:	Literacy Rates by Gender and Social Groups in Blocks in Kandhamal: 2001	57
Table 4.4:	Rural-Urban Disparities in Literacy Rates: 2011	58
Table 4.5:	School Infrastructure & Accessibility by Habitations in Kandhamal	59
Table 4.6:	Distribution of UP Schools & Accessibility by Blocks / Urban Centres: 2008	60
Table 4.7:	Distribution of Trained Teachers by Blocks in Kandhamal: 2006	61
Table 4.8:	Entitlement and Availability of Teachers in Primary School by Block in Kandhamal	62
Table 4.9:	Educational Administrative Structure in Kandhamal: 2008	63
Table 4.10:	Status of Implementation of KGBV in Kandhamal: 2008	66
Table 4.11:	Student Enrolments in Primary Schools by Block in Kandhamal: 2006-2009	67
Table 4.12:	Student Enrolments in U P Schools by Blocks in Kandhamal: 2006-2009	68
Table 4.13:	Number of Colleges, Enrolment and Teachers by Blocks in Kandhamal: 2005	69
Table 4.14:	GER and NER by Blocks and Urban Centres in Kandhamal: 2006-2009	72

Table 4.15:	Dropout Rates at Primary and UP Levels by Blocks and Urban Centres:2006-2009	72
Table 4.16:	Repetition Rates at Primary and Upper Primary Levels by Blocks: 2006-2009	74
Table 4.17:	Distribution of Out of School Children by Blocks/Urban Centres: 2006-2009	77
Table 4.18:	Allocation of Funds (Rs. lakh) in Education, Kandhamal: 2002-2009	79
Table 5.1:	Status of Births and Deaths in Kandhamal: 1998-2005	87
Table 5.2:	Mortality by Age Groups for Kandhamal : DLHS, RCH II.	88
Table 5.3:	Incidence of Some Major Diseases and Mortality in Kandhamal: 2002-2007	91
Table 5.4:	Epidemiological Data on Malaria in Kandhamal: 2001-2006	92
Table 5.5:	Number of Public Health Institutions in Kandhamal: 2008	94
Table 5.6:	Status of Implementation of Janani Surakhya Yojana in Kandhamal: 2008	96
Table 5.7:	Distribution of Institutional Deliveries by Blocks in Kandhamal: 2008-2009	97
Table 5.8:	Family Welfare Measures:Targets and Achievements: 2005-06 to 2007-2008	98
Table 5.9:	Awareness on HIV/AIDS in Kandhamal: 2002-2008	99
Table 5.10:	Status of Immunisation Under NRHM in Kandhamal: 2005-2008	100
Table 5.11:	Status of Immunisation & Sterilisation by Blocks Under NRHM: 2007-2008	100
Table 5.12:	Monthly Monitoring Report on Malnourished Children (0-3 Year): April, 2008	101
Table 5.13:	Monthly Monitoring Report on Malnourished Children (3-6 Year): April, 2008	101
Table 5.14:	Status of Safe Drinking Water Facilities by Blocks in Kandhamal: 2004-2005	102
Table 5.15:	Status of Household Latrines under TSC in Kandhamal: 2008	104
Table 5.16:	Fund Allocation (Rs. lakh) under Various Health Schemes (2002-2009)	105
Table 6.1:	Literacy Gap in Different Blocks of Kandhamal (2001)	111
Table 6.2:	Gender Gap in Literacy Rate Across Social Groups (2001)	112
Table 6.3:	Block Wise Gender Differential in WPR (2001)	114
Table 6.4:	Participation in the Decision Making	117
Table 6.5:	Women Beneficiaries Covered Under SGSY	118
Table 6.6:	Atrocities Against Women in India	119
Table 7.1:	Deaths Due to Natural Calamities in Kandhamal	127
Table 7.2:	Incidence of Crimes in Kandhamal district	128
Table 7.3:	Street Accidents in Kandhamal District	128
Table 7.4:	Categorisation of the Districts as per the Food Security Index	129
Table 7.5:	Food Security Index of different districts of Odisha (2008)	130
Table 7.6:	Progress of IAY in Different Blocks of Kandhamal : 2009	134

### List of Charts

Chart 1.1:	Schedule Tribes and Schedule Castes Population : 2011	10
Chart 3.1:	Per Capita Net District Domestic Product by Districts: 2004-2005	26
Chart 3.2:	Composition of Workers and Non-workers in Kandhamal: 1981-2001	28
Chart 3.3:	Composition of Workers by Activity in Kandhamal:1981-2001	28
Chart 3.4:	Proportion of BPL Households by Blocks: 1992 & 1997 BPL Census	31
Chart 3.5:	Landholding Patterns (by area) in Kandhamal: 2000-2001	33
Chart 3.6:	Landholding Patterns (by number) in Kandhamal: 2000-2001	33
Chart 3.7:	Cropping Patterns in Kharif and Rabi Seasons in Kandhamal	35
Chart 3.8:	Rising Trends in Fish Production in Kandhamal: 2003-2006	37
Chart 3.9:	Sectoral Composition of Non Agricultural Establishments in Kandhamal:2004-2005	42
Chart 3.10:	Secondary Income Sources for HH (First Source of Income is Agriculture)	42
Chart 3.11:	Occupational Patterns for Non-agricultural Households	43
Chart 4.1:	Educational Attainments in Kandhamal: 2001	55
Chart 4.2:	Current Adult Educational Attainments in Kandhamal: 2008	56
Chart 4.3:	Comparison of SC and ST Literacy in Kandhamal: 2001	57

Chart 4.4:	Inter-Block Gender Disparities in Literacy Rates in Kandhamal: 2001	58
Chart 4.5:	Distribution of Primary and UP Schools by Blocks in Kandhamal: 2005-2006 to 2009-2010	59
Chart 4.6:	Access to Primary School	61
Chart 4.7:	SC & ST Enrolments in Elementary System in Kandhamal: 2006-2009	69
Chart 4.8:	Gender Parity Index (GPI) Trends by Blocks for Primary Enrolments: 2006-09	70
Chart 4.9:	Gender Parity Index (GPI) Trends by Blocks for Upper Primary Enrolments: 2006-2009	70
Chart 4.10:	GER and NER Trends in Kandhamal: 2006-2009	71
Chart 4.11:	Comparison of Dropout Rates at Primary and UP Levels by Blocks: 2008-2009	73
Chart 4.12:	Completion and Attendance Rates by Blocks: 2007-2008	74
Chart 4.13:	Transition Rates by Blocks in Kandhamal: 2006-2009	75
Chart 4.14:	Response Rates for Reasons for Out of School Children	76
Chart 4.15:	Enrolment and Out of School Children	76
Chart 4.16:	Response Rates for Reasons for Out of School Children	78
Chart 4.17:	The Growth Fund Flow to SSA, Kandhamal: 2002-2003 to 2008-2009	79
Chart 5.1:	Year Wise Variations in Infant Mortality Rates in Kandhamal: 1998 – 2009	88
Chart 5.2:	IMR in Different Blocks of Kandhamal: 2008	89
Chart 5.3:	Trends for Leprosy Prevalence Rate in Kandhamal: 2003-2008	92
Chart 5.4:	Comparison of Cases and Deaths Due to Malaria in Kandhamal and Odisha: 2001-2007	93
Chart 5.5:	Disease Burden in Kandhamal: 2008, Survey Responses (%)	93
Chart 5.6:	Comparative Analysis of Institutional Deliveries by Blocks: 2007-2008 & 2008-2009	97
Chart 5.7:	Family Planning Methods Used in Kandhamal: 2008	98
Chart 5.8:	HH Responses for Sources of Drinking Water	103
Chart 6.1:	Sex Ratio by Social Groups and CFMR in Kandhamal: 2001	110
Chart 6.2:	Sex Ratio by Blocks in Kandhamal: 2001	111
Chart 6.3:	Percentage of Female Teachers in Different Blocks of Kandhamal	114
Chart 6.4:	Work Participation by gender in Kandhamal	115
Chart 6.5:	Analysis of Response on Women Empowerment	117
Chart 6.6:	Women Covered Under SGSY	118
Chart 6.7:	Cases of Atrocities and Dowry Tortures in Kandhamal	120
Chart 7.1:	Vulnerabilities In Kandhamal	127
Chart 7.2:	Reasons for Mortgaging Assets	131
Chart 7.3:	Saving Practices Among Men and Women	132
Chart 7.4:	Access to Common Property Resource	132

### List of Box

Box: 1	MDG 1 Eradicate Extreme Poverty and Hunger	25
Box: 2	A Case Study: Efforts of KASAM	36
Box: 3	A Case study: Maa Sautoshi SHGs.	46
Box: 4	Some Poverty and Livelihood related Indicators	48
Box: 5	Indicators under MDG 2	52
Box: 6	Case studies under KGBV	65
Box: 7	Indicators for Kandhamal District	80
Box: 8	MDG on Health Indicator	86
Box: 9	Indicators for Kandhamal District	105
Box: 10	MDG 3: Goal and Indicators	109
Box: 11	Available Indicators for Kandhamal	121
Box: 12	Odisha Relief Code	127
Box: 13	MDG 1 :Progress on the Eradication of Extreme Poverty and Hunger in India	135
Box: 14	List of GPs Covered for Primary Survey	155



# Acronyms

AAY	Antyodaya Anna Yojana
AIDS	Acquired Immuno Deficiency Disease Syndrome
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganawadi Workers
BP	Blood Pressure
BPL	Below Poverty Line
BRCC	Block Resource Centre Coordinator
BRGF	Backward Region Grants Fund
CBR	Crude Birth Rate
CDPO	Child Development Project Officer
CDR	Crude Death Rate
CED	Chronic Energy Deficiency
CFMR	Child Female Male Ratio
CHC	Community Health Centre
CPR	Common Property Resource
CRC	Cluster Resource Coordinator
CV	Coefficient of Variation
DEO	District Emergency Officer
DHDR	District Human Development Report
DPC	District Project Coordinator
DRDA	District Rural Development Agency
DSWO	District Social Welfare Officer
DT	Diphtheria and Tetanus
DDP	District Domestic Product
DISE	District Information System of Education
DPEP	District Primary Education Programme
EAS	Employment Assurance Scheme
EGS	Education Guarantee Scheme
GKS	Gaon Kalyan Samiti
GER	Gross Enrolment Ratio
GoI	Government of India
GoO	Government of Odisha
GP	Gram Panchayat

GSDP	Gross State Domestic Product
HDI	Human Development Index
HIV	Human Immuno-deficiency Virus
HH	Household
HRPC	Human Rights Protection Cell
IAY	Indira Awas Yojana
ICDS	Integrated Child Development Scheme
IMR	Infant Mortality Rate
INGO	International Non-governmental Organisations
IRDP	Integrated Rural Development Programme
ITI	Industrial Training Institute
JGSY	Jawahar Gram Samridhi Yojana
JRY	Jawahar Rozgar Yojana
JSY	Janani Surakhya Yojana
KGBV	Kasturba Gandhi Balika Vidyalaya
KBK	Kalahandi, Balangir, and Koraput
MDM	Mid Day Meal
MMR	Maternal Mortality Ratio
NAC	Notified Area Council
NAMP	National Anti Malaria Programme
NER	Net Enrolment Ratio
NFHS	National Family Health Survey
NGO	Non-Governmental Organisation
NLCP	National Leprosy Control Programme
NMEP	National Malaria Eradication Programme
NOAP	National Old Age Pension
NPCBP	National Prevention and Control of Blindness Programme
NPE	National Policy on Education
NPEGEL	National Programme for Education of Girls at Elementary Level
NREGS	National Rural Employment Guarantee Scheme
NRHM	National Rural Health Mission
NSDP	Net State Domestic Product
NTCP	National Tuberculosis Control Programme
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
ODMM	Odisha Disaster Mitigation Mission
OPV	Oral Poliovirus Vaccine
ORS	Oral Rehydration Salt
OSDMA	Odisha State Disaster Mitigation Authority



PDS	Public Distribution System
PHC	Primary Health Centre
PMGSY	Pradhan Mantri Gram Sadak Yojana
PRI	Panchayati Raj Institutions
RCH	Reproductive and Child Health
RNTCP	Revised National Tuberculosis Control Programme
RKS	Rogi Kalyan Samiti
SC	Schedule Castes
SD	Standard Deviation
SGSY	Swarnajayanti Gram Swarozgar Yojana
SHG	Self-help Group
SOAP	State Old Age Pension
SRS	Sample Registration System
SSA	Sarva Sikshya Abhiyan
SSI	Small-Scale Industries
ST	Scheduled Tribe
TB	Tuberculosis
TBA	Trained Birth Attendant
TSC	Total Sanitation Campaign
ULBs	Urban Local Bodies
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's' Fund
UPHC	Upper Primary Health Centre
VEC	Village Education Committee
VFC	Village Forest Committee
VHF	Very High Frequency
VLW	Village Level Worker
VPD	Vaccine Preventable Disease
VSS	Vana Surakhya Samiti
WHO	World Health Organisation
WPR	Work Participation Rate
ZP	Zilla Parishad

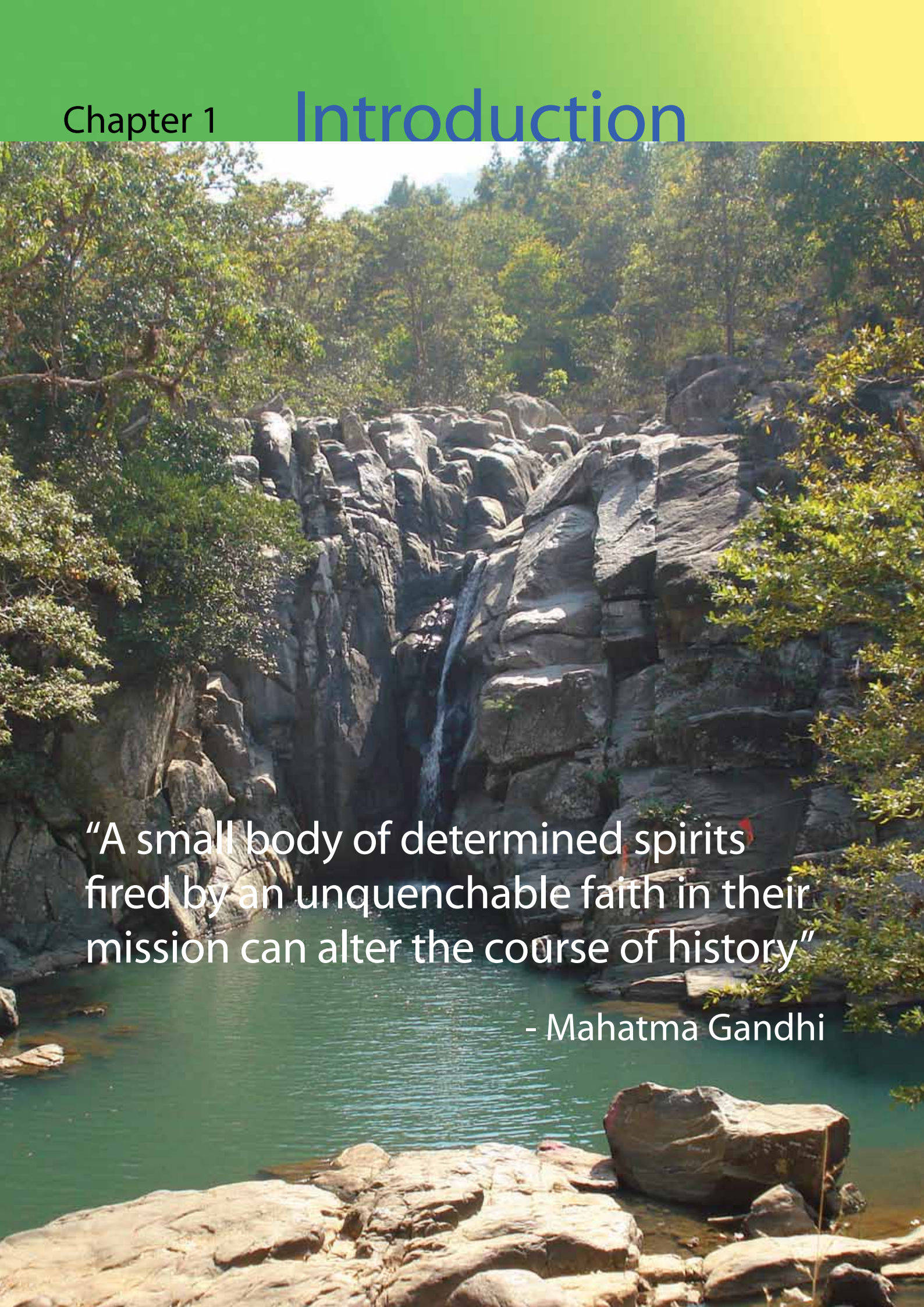




# Glossary

Coefficient of Variation (CV)	Is a measure of relative variability and is expressed as the ratio of standard deviation of a variable to its mean value multiplied by 100.
Completion Rate	At primary level it is calculated as the number of children completing Std V of the total students who joined Std. I. It is calculated by Cohort study in randomly selected Sample Schools.
Crude Birth Rate (CBR)	Is the number of births per 1000 population. The CBR for a single year is usually calculated as the number of live births during a year divided by the estimated mid-year population and multiplied by 1000.
Crude Death Rate (CDR)	Is the number of deaths per 1000 population. The CDR for a single year is calculated as the number of deaths during that year divided by the estimated mid-year population and multiplied by 1000.
Gross Enrolment Ratio (GER)	Is the population of a particular age group enrolled in schools as per cent of total population in that age group. When there is no adjustment for overage and underage population enrolled in a particular age group, it is referred to as GER, while it is called as net enrolment ratio (NER) when overage and underage population are excluded.
Infant Mortality Rate (IMR)	Is the number of deaths of infants under one year of age for every 1000 live births, usually computed for a period of one year.
Life Expectancy at Birth (LEB)	Is the number of years expected to be lived at the time of birth, given the current mortality trends.
Maternal Mortality Ratio (MMR)	Is the number of deaths of woman during pregnancy or 42 days after childbirth per 100,000 live births.
Neonatal Mortality Rate (NNMR)	Is the number of deaths of infants before 28 days of life per 1000 live births, usually computed for a period of one year.
Poverty Ratio (PR)	Is the per cent of population below the poverty line for a point in time. This is also referred to as the Head Count Ratio.
Sex Ratio	Is the number of females per thousand males.
Slide Positive Rate	Is the number of malaria positive blood samples as per cent of total number of blood samples examined
Repetition Rate	Is the percentage of students who repeat the same grades (primary or secondary classes) in the next year (t+1) to the total number of students enrolled in the original grades in the base year (t)
Under nutrition is	Is defined in terms of the value of Body Mass Index. A person is said to be undernourished if his/her BMI is less than 18 kg/m <sup>2</sup>

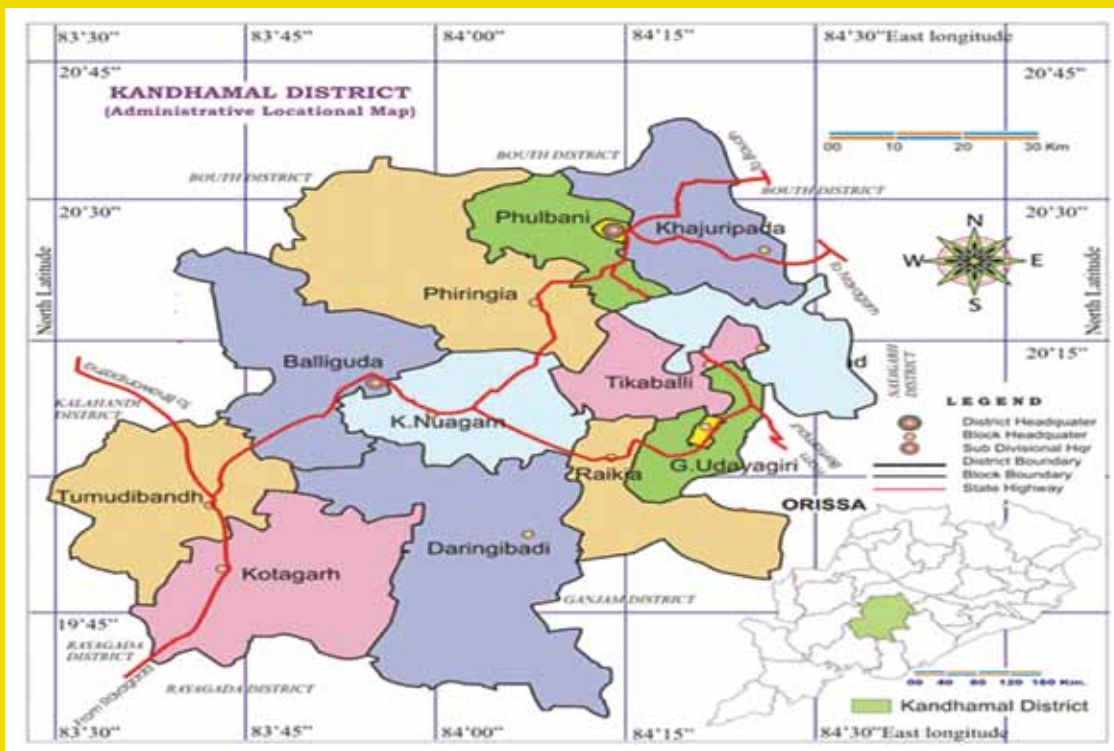




“A small body of determined spirits  
fired by an unquenchable faith in their  
mission can alter the course of history”

- Mahatma Gandhi

# Kandhamal at a Glance



Indicator	Value	Indicator	Value
District Human Development Index (HDI) (2004) rank	29	SC Literacy Rate (2001)** [%]	53.36
Total Population (2011)* [lakh]	7.32	ST Literacy Rate (2001) ** [%]	44.47
Male	3.59	Infant Mortality Rate (2002-04) #	79.12
Female	3.73	Standard of Living Index (2007-08) ## [%]	
ST (2001)** [%]	52.0	Low	93.5
SC (2001)** [%]	16.9	Medium	3.9
Population Density (2011) *	91	High	2.5
Sex Ratio (2011) *	1,037	Institutional delivery (2007-08) ## [%]	25.3
Child Sex Ratio (0-6) Yrs (2011) *	960	Contraceptive Prevalence Rate (2007-08) ## [%]	32.3
Literacy Rate (2011)* [%]		Unmet need of Family Planning (2007-08) ## [%]	27.8
Person	65.12	Girl marrying before completing 18 years ## [%]	31.4
Male	78.41	No. of People infected with HIV ***	27
Female	52.46	*** Real Gross District Domestic Product (Rupees in lakh) : 2006 - 07 at 1999-2000 prices	127,790
<b>Sources</b>		***Economic Survey-2010-11	
* Provisional Population Report-2011		# DLHS-II: 2002-04	
** Census of India, 2001		## DLHS-III: 2007-08	

# Introduction



This chapter introduces the concept of Human Development, explains its measurement processes, its linkage with Millennium Development Goals and the purpose and focus of District Level Human Development Report (DHDR). It also speaks of Kandhamal as a district and outlines key physical, demographic, social and economic features.

## 1.1 Human Development

The concept of, and focus on, human development has been popularised by

UNDP since 1990. Amartya Sen and others provided the conceptual foundation for an alternative and broader development approach that is defined as a process of enlarging people's choices, enhancing human capabilities, that is the range of things people can and do, and enabling them to live a long and healthy life. The process requires that the people have access to knowledge, enjoy freedom and a decent standard of living and participate in the life of their community and decisions affecting their lives <sup>1</sup>.

---

<sup>1</sup> Human Development Report website, UNDP 2009

"Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it" (Sen, 1998)

Human Development is a paradigm that is about creating an environment in which people can develop their full potential and lead productive and creative lives in accord with their needs and interests. People are the real wealth of nations. Development is thus about expanding the choices people have to lead, lives that they value. It is thus about much more than economic growth, which is only a means —if a very important one —of enlarging people's choices. Fundamental to enlarging these choices is building human capabilities —the range of things that people can do or be in life. The most basic requisites for human development are to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a

"The basic purpose of development is to enlarge people's choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives." - Mahbub ul Haq, Founder of the Human Development Report as documented in UNDP report.

decent standard of living and to be able to participate in the life of the community. Without these, many choices are simply not available, and many opportunities in life remain inaccessible.

Human Development Report (HDR) is a medium for policy focus on the broader attributes of human well-being. Human development is a process of enlarging people's choices, as well as raising the level of well-being. In principle, these choices can be infinite and vary over time and space. The human development paradigm focuses on those choices that help lead a long and healthy life; the choices to acquire knowledge and be educated; and to have access to resources needed for a decent level of living as the three most critical and socially valuable attributes. These choices of people are reflected in a range of social outcomes. However, central to human development paradigm are those variables and indicators that capture longevity of life, literacy level and levels of per capita income <sup>2</sup>.

## 1.2 Measurement of Human Development

The measurement of human development is based on two defining elements of the concept, namely, capability and deprivation. It was suggested in the very first global Human Development Report 1990 of the United Nations Development Programme (UNDP) that instead of attempting to be comprehensive, it is better, as a starting point, to 'focus on the three essential elements of human life - longevity, knowledge and decent living standards<sup>3</sup>. The minimum desirable values are the endpoints of a scale indexed from one to zero for each measure of deprivation. Placing a Country at the appropriate point on each scale

<sup>2</sup> India Human Development Report, 2001

<sup>3</sup> UNDP, 1990, p<sup>12</sup>



and averaging the three scales gives its average human deprivation index, which when subtracted from 1 gives the Human Development Index (HDI). The HDI is now widely used as a basic measure of human development. The strength and appeal of HDI lies in the fact that it brings the twin objectives of economic progress and social development together. It should, however, be kept in mind that HDI is only a summary measure of human development and is not a full representation of the comprehensive notion of human development <sup>4</sup>.

HDI can be supplemented with specialised thematic studies to capture other aspects of social well-being. The issues related to social well being are many and HDR attempts to capture some of these aspects. Since 1990, annual Human Development Reports have explored many challenges including poverty, gender, democracy, human rights, cultural liberty, globalisation, water scarcity and climate change.

### 1.3 Human Development and Millennium Development Goals

The Millennium Development Goals (MDGs) express various dimensions of human development through a set of numerical and time bound targets. MDGs are set with an objective and commitment for promoting human well-being, recognising the inherent dignity, freedom and equality of all people.

The UN Millennium Summit 2000 articulated the following eight MDGs:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality
4. Reduce child mortality
5. Improve maternal health
6. Control HIV/AIDS, malaria and other diseases

7. Ensure environmental sustainability
8. Develop a global partnership for development

Human development is closely linked to MDG which aim at improving health, education and livelihood. Further, MDG and human rights are two sets of interdependent and mutually reinforcing commitments. MDG can provide relevant benchmarks for the progressive realisation of human rights while a human rights-based strategy provides more effective and sustainable means for achieving the MDG. There are similarities in the guiding principles for the realisation of both MDG and human rights, notably in connection with: participation, empowerment, ownership and the importance of partnerships. Human rights standards are nationally owned and aim at establishing minimum standards for participation and empowering people as actors for human development. Partnerships at all levels – local, national and international – are necessary for effective implementation of human rights obligations. Similarly, the customising of MDG targets at various levels-national, state and local should take place through a broad-based and inclusive dialogue and debate. MDG reporting and monitoring at the regional level provides opportunity to take the MDG to community level, strengthening ownership and empowering people to better articulate their local needs within the framework of a nationally and internationally agreed development agenda <sup>5</sup>.

### 1.4 District Human Development Report

In India, Human Development Reports have been prepared at national as well as state levels. The State Human Development Reports have been the prime vehicle for infusing human development concerns in

<sup>4</sup> Odisha Human Development Report, 2004

<sup>5</sup> UNDG, Country Reporting on the Millennium Development Goals: Second Guidance Note, September 2003, p.9

state policies. The state governments are committed to national and international goals, including the Millennium Development Goals (MDGs) through an effective poverty reduction strategy and an action agenda for human development. The Government of Odisha in Planning & Coordination Department has attempted the preparation of District Human Development Reports (DHDR) for four districts, i.e., Ganjam, Kandhamal, Kalahandi and Mayurbhanj under the Gol UNDP project 'Strengthening State Plans for Human Development'. The objective is to have a systematic measurement of development on various parameters and measure changes across those parameters that contribute to achieving MDGs. The DHDR is expected to analyse key developmental issues in the local context and provide opportunities to address these issues at the district level.

The purpose of the DHDR Kandhamal is to provide a benchmark against which future attainments on human development front can be evaluated. The DHDR should also act as a tool to sensitise the planners and policy makers of the district on the significance of the human development perspective for promoting sustainable growth and poverty reduction. Preparation of a DHDR is expected to help in preparing, designing and implementing district plans from a human development perspective. It gives an opportunity for deeper understanding of the issues at the district level by way of analysing the status of human development attainments and key human development challenges at local level with special focus on efficiency and effectiveness of delivery systems. With these ends in view, this DHDR examines key components of human development in Kandhamal, highlights achievements and progress to date, identifies thematic areas in the local context and describes future strategies for growth and development of the district.

## 1.5 Kandhamal District: An Introduction

### 1.5.1 Kandhamal: A Historical Perspective

The ancient history of Kandhamal district can be traced back to the 3<sup>rd</sup> century B.C. It finds mention as an unconquered Atavika country in the Kalinga Rock Edicts of the legendary Mauryan Emperor, Ashok the Great. The earliest history of this area may be glanced from a number of copperplate inscriptions prepared by the kings of the early Bhanja dynasty, who reigned over Boudh and Kandhamal in the 8<sup>th</sup> and 9<sup>th</sup> Century. Their kingdom was known as Khinjali Mandala.

From the 10<sup>th</sup> century to the advent of the British in this region, Boudh, including Kandhamal, was governed in succession by several royal dynasties including the Somavanshis, the Chindak Nagas, Telugu Cholas, the Kalchuris and the Bhanjas. The present Kandhamal district is made up of some segments of the three erstwhile principalities of Boudh, Ghumsar and Khemundi, ruled by the Bhanjas and the Gangas from ancient times.

G. Udayagiri constituted the northern fringe of the Ghumusara kingdom of the Bhanjas. They ruled the region from the 9<sup>th</sup> century to the 19<sup>th</sup> century till the British started dominating the region. The Bhanjas could not put up with their interference and aggressive attitude from the very beginning and they revolted frequently against the British. The Kandhas and the Paikas forming the Ghumasar army waged wars against the British under the able leadership of Dohara Bissoyi from 1815 to 1835. However, the British occupied Ghumusara on November 3<sup>rd</sup>, 1835 deposing Dhananjay Bhanja. He died at G. Udayagiri in December of the same year as a fugitive. Baliguda region on the other hand was under the rule of Gangas of Kandhamal

from the 10<sup>th</sup> century till the 19<sup>th</sup> century. The British captured this area in phases from 1830 to 1880 by subjugating some hill chiefs, who were proteges of the Gangas.

The British launched a vigorous campaign in these hilly tracts with the objectives of annexing the areas to their empire and suppressing the practice of human sacrifice, then prevalent among the Kandhas. They encountered stiff resistance from the tribals for a prolonged period of 20 years from 1835 to 1855. As the Boudh *Raja* failed to curb the human sacrifice ritual, the British truncated a large area, where the Kandhas were predominant, from Boudh on February 15, 1855 and named this newly annexed territory Kandhamal. The present Kandhamal sub-division was an integral part of Boudh till 1855. After the British conquest of Uttar Ghumasar (G.Udayagiri area) and Uttar Khemundi (Baliguda area), these territories were placed under the administration of the Collector of Ganjam district. These areas remained under the control of the British administration until India attained independence.

Kandhamal remained a Tehsil from 1855 to 1891 and was administered by a Tehsildar under the direct control and supervision of the Superintendent of the Tributary mahals of Cuttack. In 1891, it was upgraded to sub-division and merged with Angul district. When Odisha emerged as a province in 1936, Ganjam was merged with it, from the Madras presidency. Kandhamal then became a sub-division of Ganjam. However, when amalgamation of the princely States with Odisha occurred in January 1948, Boudh and Kandhamal constituted the new district of Boudh-Kandhamal, with headquarters at Phulbani. Baliguda subdivision was added to Boudh-Kandhamal district in January 1949.

Boudh and Kandhamal were separated into two districts in 1994.

### 1.5.2 Location and Topography

The district is situated within the longitudes 83° 30' and 84° 35' East and latitudes 19° 34' to 20° 34' North. The district is located in central Odisha and bound by Boudh district in North, Rayagada in South, Ganjam and Nayagarh districts in East and Kalahandi district in West. Phulbani and Baliguda are two sub-divisions of the district.

Phulbani sub-division forms a broken plateau about 518 meters above sea level. Continuous mountains surround this sub-division from all sides. On the north-east and west, these ranges rise abruptly from the plains of Boudh district, while on the south, they merge with the outlines of the Eastern Ghats of Baliguda sub-division. The high plateau lying within these ranges is broken up by numerous smaller ranges which form an endless series of valleys varying in size. Thick forests cover much of these tracts and villages lie in scattered clearings along hill sides. The whole of this sub-division is a network of hills and forests interspersed with small hamlets of the Kandhas. This hilly tract is intersected in all directions by streams and rivers, which run dry after the cessation of rains. Baliguda sub-division is on the plateau and lies at heights varying from 300 meter to 1100 meter above mean sea level. The eastern side of the sub-division consists of wide well cultivated valleys. The hills of this sub-division are a part of the Eastern Ghats<sup>6</sup>.

### 1.5.3 Soil and Climate

Most parts of the district have red sandy soil of the red laterite group. The soils are generally light textured, porous and acidic in nature, having pH ranging from 5.3 to 6.5. As porous soils, they have poor moisture retention capacity and are subject to heavy runoff and soil erosion.

<sup>6</sup> Official website, Kandhamal District

The climate is sub-tropical in nature, characterised by hot and dry summer and dry cold winter. The average rainfall is 1,857 mm and temperature ranges between a maximum of 40 degree to a minimum of five degree centigrade.

#### 1.5.4 Forest Cover

Kandhamal has the highest forest coverage in Odisha. About 65.38 percent of the district is under forest cover. Major portion of the forests is covered by sal trees. Sal leaves, sal seeds, kendu leaves, siali leaves and honey are among major Non Timber Forest Produce (NTFP), collected by forest dwellers. Rural inhabitants depend on forests for firewood, small timber and other needs. The district forest resources are managed by Phulbani and Baliguda Territorial Divisions. Vana Samarakshna Samiti (VSS), which are community institutions for forest protection, are functional in the district.

The instances of shifting cultivation or podu are reported in some parts of the district, particularly in Phiringia and G. Udaygiri ranges. Though majority of minor forest produce in Odisha has been decentralised and gram panchayats control specified Minor Forest Produce (MFP) collection, Kendu leaf is still controlled by the State Government through its Forest and Environment Department. Phulbani Kendu Leaf Division is responsible for kendu leaf operations in the district.

#### 1.5.5 Administrative Set Up

The district has two subdivisions- Baliguda and Phulbani- 12 Tehsil, Community Development Blocks, one Notified Area Council, one municipality, 153 Gram Panchayats and 2,546 villages. Phulbani is the district head-quarter and the only Municipality of the district<sup>7</sup>. Table 1.1 summarises the administrative setup in Kandhamal district. Phulbani and G. Udaygiri

are only two urban areas of Kandhamal. Baliguda, G. Udaygiri and Phulbani are three assembly constituencies in the district. The district has 2,379 inhabited and 167 uninhabited villages.

**Table 1.1 Administrative Set-up: Kandhamal, 2005**

Administrative Units	Numbers
Subdivisions	2
Tehsil	12
CD Blocks	12
Census Towns	2
NAC and Municipality	2
Police Stations	18
Gram Panchayats	153
Inhabited Villages	2,379
Uninhabited Villages	167
Fire Stations	4
Assembly Constituencies	3

Source: District Statistical Handbook, Kandhamal, 2005, District at a Glance Odisha 2012

#### 1.5.6 Demographic Characteristics

The district had a population of 648,201 with 322,799 males and 325,402 females as per 2001 census. The ST population in 2001 was 52 percent and SC population 16.9 percent. The urban population was only 6.8 percent and sex ratio 1,008. Its population as per the 2011 census was reported as 731,952 (i.e., 359,401 male and 372,551 female) the decadal growth being 12.92 percent. The sex ratio in 2011 is 1,037 in general and 960 in 0-6 year age group. Kandhamal accounts for 5.15 percent of the geographical area and 1.76 percent of the population of Odisha. The district reported 4.14 percent of Schedule Tribe and 1.81 percent of Schedule Caste population of Odisha. Table 1.2 summarises the demographic profile of the district as per census 2001.

The decennial growth rate of population in the district is 12.92 percent which is slightly less than the State average of 13.97 percent, and the National average of 17.64 percent.

<sup>7</sup> Phulbani was given the status of Municipality in 2008

Total population of the district<sup>8</sup> increased from 211,421 in 1901 to 731,952 in 2011. ST population increased from 218,578 in 1971 to 336,809 in 2001. Table 1.3 compares selected demographic characteristics for Kandhamal over census periods from 1971 to 2011. Table

1.4 and Chart 1.1 give distribution of SC, and ST population across different blocks.

Sex ratio in Kandhamal improved from 1,008 in 2001 to a favourable 1,037 as per the 2011 census against the sex ratio of 978 for

**Table 1.2 Demographic Profile of Kandhamal District : 2001**

	2001	2011		2001	2011
Number of Households	145,676	242,935	Household Size	4.4	3.01*
Total Population	648,201	731,952	Urban Population (%)	6.8	9.86
Population-Rural	604,107	659,788	Sex Ratio	1,008	1,037
Population-Urban	44,094	72,164	Sex Ratio (0-6 year)	970	960
Population (0-6 year)	117,298	106,379	Percentage of SC population	16.9	NA
SC Population	109,506	NA	Percentage of ST population	52.0	NA
ST Population	336,809	NA	Population density (per sq km)	81	91

Source: Census of India, 2011, NA- Not Available, \*Estimated

**Table 1.3 Demography Trend in Kandhamal : 1971-2011**

Census Year	2011	2001	1991	1981	1971
Number of Households	242,935	145,676	121,459	99,665	87,156
Total Population	731,952	648,201	546,281	448,914	393,773
Population-Rural	659,788	604,107	510,619	423,742	382,796
Total Male	359,401	322,799	273,234	223,859	195,657
Total Female	372,551	325,402	273,047	225,055	198,116
Population-Urban	72,164	44,094	35,662	25,172	10,677
SC Population	NA	109,506	99,499	85,780	117,987
ST Population	NA	336,809	281,524	240,056	218,578

Source: Census of India, 1971-2011, NA- Not Available

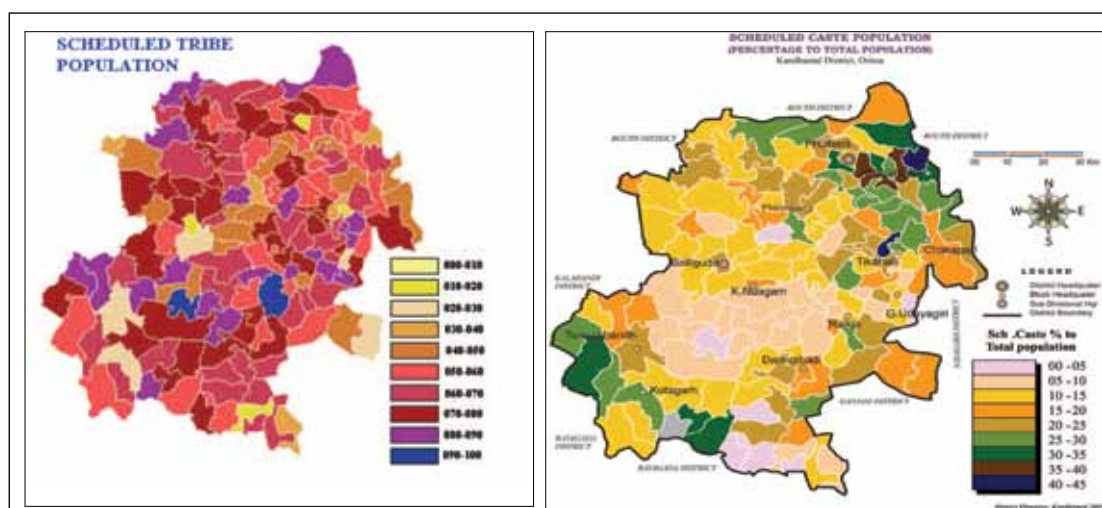
**Table 1.4 Schedule Tribes and Schedule Castes Population : 2001**

Name of the Block	SC Population (%)	ST Population (%)
Khajuripada	31.07	50.38
Phulbani	19.69	56.65
Phiringia	16.95	58.20
Baliguda	13.20	45.26
Tumudibandha	20.07	56.91
Kotagarh	17.22	57.43
Daringbadi	8.65	59.64
Kajamandi Nuagaon	10.49	51.22
Raikia	13.98	54.06
G.Udayagiri	12.12	65.14
Tikabali	21.02	54.69
Chakapada	24.94	47.69
<b>Kandhamal</b>	<b>16.90</b>	<b>51.96</b>

Source: Census of India, 2001

<sup>8</sup> Kandhamal district was part of erstwhile Phulbani district. The census data for 1991, 1981 and 1971 has been taken for the blocks corresponding to current Kandhamal district

**Chart 1.1 Schedule Tribes and Schedule Castes Population : 2011**



Source: DPEP Office, Mayurbhanj, Baripada

Odisha and the National average of 940. The district reported a higher sex ratio in rural areas in comparison to urban areas as per 2011 census. Demographic trends over the past 100 years from 1901 to 2011 have been analysed and presented in Table 1.5.

## 1.6 Social Development

This section gives an overview of social development parameters for the district. It gives a quick overview of health, education and livelihood situation in Kandhamal. The status of education, healthcare, livelihoods,

infrastructure and basic facilities was also ascertained through People's Audit of Health, Education and Livelihood (PAHELI) survey. The report card of the district is given in Annexure 3.

### 1.6.1 Status of Education

The district fares poorly in terms of social development indicators. It has a literacy rate of 65.12 percent with female literacy at only 52.46 percent as per census 2011. While the literacy rate of 65.12 percent is an improvement on the 52.68 percent in 1991, it is still lower than the State and National

**Table 1.5 Growth in Population and Sex Ratio: 1901-2011**

Year	Persons	Males	Females	Sex Ratio
1901	211,421	105,038	106,383	1,013
1911	239,272	118,857	120,415	1,013
1921	238,206	118,063	120,143	1,018
1931	260,557	128,876	131,681	1,022
1941	284,855	140,947	143,908	1,021
1951	289,182	142,784	146,398	1,025
1961	323,991	159,989	164,002	1,025
1971	393,773	195,657	198,116	1,013
1981	448,914	223,859	225,055	1,005
1991	546,281	273,234	273,047	999
2001	648,201	322,799	325,402	1,008
2011	731,952	359,401	372,551	1,037

Source: Census of India, 1901-2011

averages of 73.45 percent and 74.04 percent respectively. Female literacy has improved from 11.26 percent in 1981 to 52.46 percent in 2011. The ST female literacy has improved from 4.74 percent to 26.87 percent during the same period.

Kandhamal has a Gross Enrolment Ratio (GER) of 94.38 percent with a dropout rate of 1.45 percent and overall repetition rate of 9.38 at the primary level. For Upper Primary level, the GER is 104.96 percent; dropout rate is 6.78 while the overall repetition rate is 3.31<sup>9</sup>. As per the DISE data 2007-08, 2.44 and 7.36 percent of children are out of school in the age group of 6-11 and 11-14 years respectively. As per district SSA Annual Plan 2008, 86.81 percent habitations in the district have access to primary schools within a distance of one km.

The district has several issues related to education including access, enrolment and retention, learning achievements and institutional infrastructure. Massive community mobilisation and strengthening of schemes like tribal residential schools can help in building awareness among tribal communities and improving the educational status of tribal communities and of the district.

### 1.6.2 Status of Healthcare

The district has several remote locations for which health care access and quality of health services are key challenges. Malaria is the most dreaded disease in the district and is prevalent in several blocks. About 60.70 percent children in the age group of 0-3 year and 53.89 percent children in 3-6 year are classified under malnourished categories<sup>10</sup>. Only 19.18 percent villages had access to a PHC as per census 2001. The area per allopathic medical institution was

146 sq km as against the State average of 92 sq km<sup>11</sup>. Kandhamal is among the bottom five districts in terms of reproductive health index (RHI) at 0.462 calculated in Odisha HDR 2004. The reported under five mortality for the district is 186.5, which is the highest in Odisha<sup>12</sup>.

Health education, TB control, Smallpox and malaria control programmes were first launched in 1970 to control these epidemics in the district. The District Malaria Unit with its headquarters at Phulbani has been in operation since 1962-63. Though epidemics like small pox and TB are now under control, malaria remains a serious concern in some blocks of the district.

The district has several operational schemes including National Rural Health Mission (NRHM) and Integrated Child Development Scheme (ICDS) that aim at improving the health and nutrition status. NRHM, a flagship programme for improving rural health services, is operational in the district as per the Central Government guidelines. It operates under the supervision of the Chief District Medical Officer (CDMO) supported by the District Programme Manager (DPM). The Schemes under NRHM like the Janani Surakhya Yojana (JSY) and Rogi Kalyana Samiti (RKS) are successfully operational. Accredited Social Health Activist (ASHA) is appointed to assist Auxiliary Nurse Midwife (ANM) at sub centre level for early registration, identification of complicated pregnancies and providing at least three antenatal cares. They undertake post delivery visits, organise appropriate referrals and arrange transport for pregnant mothers in need. These health assistants work in villages and identify pregnant woman from BPL families as beneficiaries of the scheme.

<sup>9</sup> DISE Data, 2007-08, SSA office, Phulbani

<sup>10</sup> Data collected on Integrated Child Development Scheme from DSWO, Kandhamal

<sup>11</sup> Status of Health in Odisha, 1995, Odisha Voluntary Health Association

<sup>12</sup> RCH-DLHS (2002-04), Under five mortality computed from census 1991 and 2001 by IIPS for "Strengthening State Plans for Human Development":

In the Mission period during 2005-07, 958 ASHA have been selected and engaged.

ICDS has been implemented in the district and plays a major role in providing adequate nutritional and other services to children within the age group of 0-6 year, pregnant and lactating mothers to ensure their physical, social, mental and cognitive development. In 2003-04, 963 Anganwadi Centres and 963 feeding centres were functional in Kandhamal. These centres cater to more than 85,500 beneficiaries under ICDS.

Water and sanitation facilities in the district are also poor. This has a bearing on the health scenario. As per census 2001, only 32.03 percent villages had access to safe drinking water. Rural Water and Sanitation (RWSS) department and Total Sanitation Mission are engaged in improving the access to drinking water and individual household toilets in the district. The healthcare situation in the district requires specific attention to ensure reach of services to remote locations through investments in infrastructure like connectivity, mobile vans, facilities in Primary Health Centres (PHC) and improved water and sanitation facilities.

## 1.7 Economy of Kandhamal

### 1.7.1 Livelihood Pattern

Ninety three percent population of the district is rural and the economy is mostly based on agriculture and forest produce with very limited industrialisation. Table 1.6 gives a snapshot of worker's population in the district.

The distribution of workers population in the district indicates heavy dependence on agriculture. Percentage of workers to the total population decreased from 51.13 percent in 1981 to 47.24 percent in 2001. About 69.4 percent workers in the district are cultivators and agricultural labourers indicating predominance of agriculture as a source of livelihood.

Kandhamal has witnessed some growth in number of workers in non agriculture sectors though overall work participation improved in 2001 census period. The work participation rates for male and female were 52.32 percent and 42.20 percent respectively as per census 2001. The proportion of cultivators declined from 52.66 percent in 1981 to 33.39 percent in 2001 and that of agricultural labourers

**Table 1.6 Workers Population in Kandhamal: 2001**

Total Workers	306,209	Work Participation Rate (%)	47.24
Main Workers	176,128	Main Workers (%)	27.17
Marginal Workers	130,081	Marginal Workers (%)	20.07
Non Workers	341,992	Non Workers (%)	52.76
Cultivators (Main + Marginal)	102,251	Cultivators of Workers (%)	33.39
Agricultural Labourers (Main + Marginal)	110,389	AL (%)	36.05
Household Industries (Main + Marginal)	21,991	HHI (%)	7.18
Other Works (Main + Marginal)	71,578	OW (%)	23.38
Cultivators (Of Main Workers)	75,686	Cultivators of Main Workers (%)	42.97
AL (Of Main Workers)	39,424	AL of Main Workers (%)	22.38
HHI (Of Main Workers)	6,053	HHI of Main Workers (%)	3.44
OW (Of Main Workers)	54,965	Other workers of Main Workers (%)	31.21

Source: Census of India, 2001



increased from 29.68 percent in 1981 to 36.05 percent in 2001. It is also noted that the proportion of non workers increased from 17.66 percent in 1981 to 30.56 percent in 2001. This indicates growth of service sector and reduced dependence on agriculture. The livelihood choices are, however, largely limited to agriculture, allied sectors, forest produce and to some extent service sector. It is necessary to further diversify livelihood choices with adequate value addition of forest produce, application of technology in agriculture and capacity building of the rural poor.

### 1.7.2 Poverty and Economy

The District is one of the poorest in Odisha and lags behind in several socio-economic indicators. It is among the bottom five districts as per HDI and GDI values as indicated in Odisha HDR 2004. The district falls in the southern NSS region, which has the highest SC and ST population in the State as also a very high incidence of poverty, i.e., poverty ratio of 87.20 percent in 1999-2000. As per Panchayati Raj Department's BPL survey, 1997, 78.42 percent district households were classified as BPL families.

Kandhamal accounted for 1.99 percent of the real Net State Domestic Product (NSDP) of Odisha at 1999-2000 prices. In the year 2004-05, Kandhamal reported per capita real NDDP of Rs.15,375 against real per capita NSDP of Rs.13,707 of Odisha at 1999-2000 prices. Kandhamal ranked 10<sup>th</sup> in Odisha in terms of per capita income, calculated at 1999-2000 prices<sup>13</sup>. The district economy grew at an annual compound growth rate of 4.41 percent against an annual compound growth rate of 4.57 percent for Odisha in real terms (1999-2000 prices) between 1999-2000 and 2004-05.

The district economy is predominantly agricultural. Land is the prime asset of

households' and individuals. Livelihood options revolve mainly around land based activities including agriculture and allied activities like horticulture, fisheries, animal husbandry and forestry. There is a need to shift the labour force from primary to secondary and service sectors with greater economic diversification, increased agriculture productivity and availability of non-agriculture economic activities. Kandhamal has not seen large scale investments / industrialisation or urbanisation over the years resulting in continued dependence on agriculture and allied sectors. Local communities have poor skill base and follow traditional livelihood practices. Government schemes like the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Swarnajayanti Gram Swarozgar Yojana (SGSY) are operational in the district to strengthen livelihoods of the rural poor and to reduce distress migration.

### 1.7.3 Sectors of the Economy

Agriculture, forestry and allied sectors are the mainstay of the economy. Paddy, vegetables, maize, mustard, ginger, kulthi and turmeric are the principal crops. The district is known for its organic farming of a variety of vegetables and spices. Moreover, favourable agro-climatic conditions also promote the cultivation of horticulture crops such as mango, banana, guava, papaya and jackfruit. About 25 percent of the net cropped area is under protective irrigation. Increasing irrigation extent, adequate land and water management and improved support services like marketing, cold storage and processing facilities can strengthen livelihood opportunities in agriculture and horticulture.

The district has a suitable climate for horticulture. It needs to capitalise on this strength. There is good scope for

<sup>13</sup> Department of Economics and Statistics, Government of Odisha

development of agri-businesses, supply chains and other facilities for agriculture to improve realisation to farmers. Agriculture related activities like agro processing industry, cold storage and transport facilities, marketing initiatives and mobilisation of SHG to create micro enterprises based on agriculture, horticulture and forest produce will enhance scope for livelihood. Besides, the primary sector, service sector including tourism, hotels, education, repair services and personal services offer good scope for livelihood support and employment creation. The district should aim at improving its infrastructure and strengthening select sectors to boost the local economy and in turn strengthen livelihoods.

## 1.8 Culture and Tradition

The schedule tribes account for 52 percent of the district population as per 2001 census. Out of 62 tribes notified as scheduled tribes in Odisha, as many as 29 tribes are found in Kandhamal and among them Gond, Kandha, Saora, Kandha-Gouda and Kutia Kandha constitute the majority. The predominant tribe, 'Kandha' or 'Khonds' identify themselves as Kuilaku or Kuinga. Although Odiya is spoken in the district, the local communities prefer to speak in Kui, which interestingly does not have a script.

Kandhas can be classified into three subgroups, i.e., Kutia Kandha, Malua Kandha and Desia Kandha with each community being found in distinct geographical locations. Kutia Kandha is predominant in Kotagarh, Tumudibandha, and Belghar area of Baliguda sub-division. The Dongoria or Malua live in high lands of hilly areas of the district and they are less in number and the Desia or Odiya Kandhas live in plain areas with the non-tribals.

Community dancing is an integral part of the Kandha society. Some area and community

specific dance practices are Dhangeda – Dhangedi, Danda Nata and Singha Badya. Dhangeda–Dhangedi is also known as Loar-Enda dance and is performed by Kutia Kandha. Danda Nata is observed among schedule caste communities of Baliguda sub-division. Some of these forms are facing the threat of extinction due to lack of promotion. Some of the dance forms in the district include:

- *Dhangeda - Dhangedi*: This is otherwise known as Loar-Enda dance performed by *Kutia Kandha*. They use silver coin chains, bangles and a musical instrument known as Dheka for the performance. Dadra is the tal of the song.
- *Krahenda*: A hunting and warrior dance popular among the SC. Drums and flutes are the instruments that are used. This dance form is facing extinction.
- *Singha Badya*: Observed among SC people of Baliguda sub-division. ASSART, a voluntary organisation, of G. Udaygiri has retained this dance form.
- *Danda Nata*: Usually performed by the Ghasis (SC) of Baliguda, Tikabali and Chakapada area in summer months.

The district also witnesses several local festivals and fairs which are specific to tribal communities. The festivals have immense importance in the tribal way of life and they observe the occasions in groups as a community celebration. Some important festivals include Mati Puja during April-May, Kandula Jatra in Baliguda and Rhas Jatra at Kellapada of Phiringia. Danda Nata is observed throughout the district and Kendu jatra is observed by Kandhas.

Kandhas are also known for rich tribal craftsmanship. Craft making clusters include shainipadar (Phulbani town), terra cotta and bamboo handicrafts at Sudrukumpa, terra cotta handicrafts at Ratang, cane works at Tumudibandh,

dhokra at Barakhama (Baliguda Block) and Tudubali (Tikabali Block). Pusangia (Baliguda Block) is famous for ornaments (necklace) and utensils and Gadabisha (G. Udayagiri Block) exhibit products like diamond pattern bed sheets and appliqué works.

## 1.9 Fund Flow to Kandhamal

There has been considerable increase in total funds allocated to various departments and total Government spending in different sectors in the district. The data collected from the district office was analysed to understand the fund flow pattern. The information on annual fund flow to the district from 2002-03 to 2008-09 is given in table 1.7.

## 1.10 Chapter Summary

This chapter introduced the concept of Human Development, gave an introduction to DHDR and Kandhamal district. Kandhamal district in the current form was carved out of erstwhile undivided Boudh-Kandhamal district of Odisha. The district is centrally located in Odisha and has a hilly terrain.

Kandhamal has a population of 731,952 as per census 2011 with a decennial growth rate of 12.92 percent. The urban population

was only 9.86 percent and sex ratio 1,037 in 2011. SC constituted 16.9 percent and ST accounted for 52.0 percent of district population in 2001. The tribal dominated district has 29 tribes out of the 62 tribes notified as ST in Odisha. Among the schedule tribes, Kandha constitute the majority in the district, which is rich in tribal culture and traditions. Several local tribal festivals, dance forms and craftsmanship are observed throughout the district. The district is well known for its tourist attractions including natural forests and wildlife. Kandhamal is among the bottom five districts in Odisha according to Human Development Index (HDI) as per Odisha HDR 2004. The district fares poorly on various socio-economic indicators as compared to other districts of Odisha. However it has shown impressive improvements over the last few decades. The economy of the district is mostly based on agriculture and forest produce with limited industrialisation. The district has good potential in horticulture, tourism, forest products and micro enterprises. It is already known for horticulture crops and organic turmeric production. Though the district has made considerable improvements during the last few decades some of the persistent challenges including ethnic conflicts, rise of left wing extremism, inadequate infrastructure and lack of livelihood opportunities need to be addressed

**Table 1.7 Fund Flow to Kandhamal District: 2002-2009**

(Rs. In lakh)

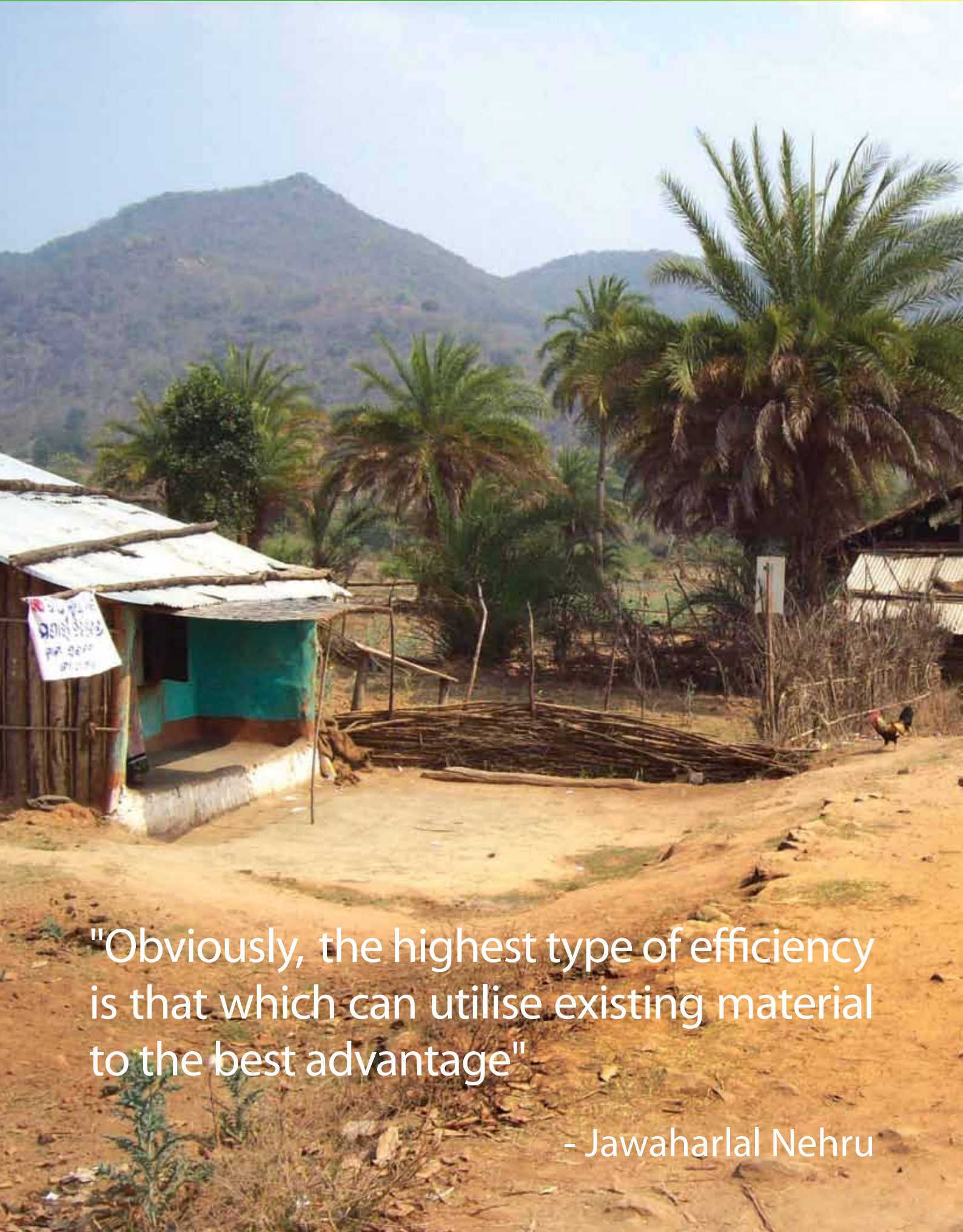
Broad Sectors of Allocation	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Agriculture and Allied Sector	777.80	664.00	866.18	925.68	1,264.58	25,595.71	2,934.13
Imigation	34.68	31.40	207.89	134.83	360.74	231.72	387.49
Industries (SSI, Village, Handicraft)	3.40	5.50	15.36	10.76	12.00	14.10	22.88
Rural Development (Roads, Building)	241.94	249.44	249.73	644.01	1,020.06	1,247.76	1,366.02
Tribal Development	153.30	147.94	154.94	227.67	395.52	475.76	372.42
Education Related Schemes	289.65	985.67	1,649.41	1,316.77	2,900.83	4,115.52	3,979.56
Health, Water and Sanitation	239.31	296.47	228.60	296.28	795.58	233.44	2,307.46
Welfare and Social Security	NA	NA	NA	NA	351.92	512.66	403.15

Source: District Planning Officer, Kandhamal, NA- Not Available

more comprehensively to meet the goal of creating a prosperous and developed district. The next chapter gives a Strength,

Weakness Opportunity and Threat (SWOT) analysis of the district followed by a chapter on economy, growth and livelihood issues.





"Obviously, the highest type of efficiency is that which can utilise existing material to the best advantage"

- Jawaharlal Nehru



# SWOT Analysis



Kandhamal, by its name is the land of the Kandhas, a well known tribe of Odisha. They constitute majority of the population in the district and are the largest tribal group of Odisha, numbering over one million. Kandhamal has a Human Development Index of 0.389<sup>14</sup> and is in the bottom five districts of the State. The district is one of the poorest in the State with a Food Security Outcome Index (FSOI) of 0.237 and is the most food insecure district of Odisha<sup>15</sup>. The district, though it lags behind on major socio-economic indicators, has potential in select areas which can be developed with proper planning. The Strength-Weakness-Opportunity-Threat (SWOT) analysis is prepared in a participatory manner. The district administration, elected

representatives and other key stakeholders were consulted to reflect on the areas of strength and concerns for the district.

## 2.1 Strengths

The district has a large forest cover and excellent climate for horticulture development. It is known for its horticulture products, forest cover and crafts. Large forest cover offers ample opportunities for enhancement of tribal livelihoods through collection and trading of a variety of forest produce. The agro-climatic conditions are conducive for cultivation and development of medicinal plants and horticultur. The district is known for its spices and horticultural crops

<sup>14</sup> Odisha HDR, 2004

<sup>15</sup> Food Security Atlas of Odisha, UN WFP, 2008

including ginger, turmeric and vegetables. Both in terms of productivity and quantity of production, Kandhamal is known for its organic turmeric.

Kandhamal also has a strong tourism potential. There are several locations of tourist attractions including possible ecotourism sites, which can be developed to make the district an important destination for tourists from within and outside Odisha. The district has made considerable progress with respect to operations of a large number of Self Help Groups (SHG), which are strengths for future developmental work.

## 2.2 Weaknesses

The major weaknesses of the district include underdeveloped infrastructure, poor connectivity, limited irrigation facilities, poor access to healthcare facilities and high incidence of poverty. Improving economic status of 78.42 percent BPL families<sup>16</sup> and reducing poverty is a huge challenge for the development policy planners. The district fares poorly in other socio-economic indicators. The literacy level for Kandhamal is 52.95 percent, female literacy being only 35.86 percent as per 2001 census. Healthcare conditions are generally poor. The district has the highest under-five mortality at 186.5<sup>17</sup> in Odisha. Kandhamal is also at the bottom of the districts in terms of access to PHC<sup>18</sup>.

The district has a hilly terrain and several parts of the district are poorly connected. There is no railway network and connectivity to other major towns in the district is also poor. Poor connectivity affects overall development of the district. About 54.01 percent of villages were electrified till 2006-07.

Poor connectivity also limits the access of people to markets and services including healthcare. The district lacks industrial infrastructure and skilled manpower.

About 71 percent cultivable land is sloppy upland, which is neither optimally terraced nor bunded. They are highly susceptible to erosion. This discourages high value crops. Large quantum of runoff passes through them from forests and makes them acidic affecting their productivity. In spite of availability of large number of streams and rivulets, the undulating hostile terrain has not favoured conventional irrigation projects. Irrigation extent is only 13.57 percent<sup>19</sup>. Small and marginal farmers consist 78.58 percent of total land owners. This hinders the process of mechanisation of agriculture. Agriculture in the district is characterised by large-scale use of traditional seeds, low level use of fertilizers and pesticides, lack of crop diversification and traditional methods of cultivation.

## 2.3 Opportunities

The district offers opportunity in horticulture, forest products, agro-processing and tourism. Horticulture, tourism, forestry, micro enterprises and small industries are sectors that have the potential to act as growth drivers for Kandhamal. There is a need to impart suitable skills to unemployed youth. This will help them take advantages of various self-employment schemes promoted by the Government. There is good potential for development of tourism, which will create employment opportunities for local people. The district should develop the required infrastructure at tourist sites and harness ecotourism opportunities.

<sup>16</sup> BPL survey 1997, Panchayati Raj Department

<sup>17</sup> Food Security Atlas of Odisha, UN WFP, 2008

<sup>18</sup> Census 2001, DLHS, RCH III, 2008

<sup>19</sup> Odisha Agriculture Statistics, 2005



The district may have limited options for large scale irrigation, but there are opportunities for promoting minor irrigation and to explore other means like water harvesting structures, tanks and streams and nallas. The large reservoir of unutilised ground water and available surface water can be tapped to augment irrigation potential. The favourable agro-climatic condition can be utilised to promote cultivation of high value crops, off-season vegetables, medicinal plants and tree borne oilseeds. The district can be promoted as an organic producer for various spices and vegetables. It has made a name in ginger and turmeric; which can be further strengthened through value addition and food processing units.

Forest products including NTFP are sources of employment and income opportunities. There is a need to create more processing units based on these local resources and to develop high quality products. With increased focus on market linkages and

development of value added products and micro enterprises forestry sector can offer good opportunities for the poor. The existing SHGs across the district also offer opportunities for developing micro enterprises.

## 2.4 Threats

The abject poverty is a serious threat to the socio-economic fabric of the district. Inadequate health care facilities, particularly for the tribals residing in remote areas, are a major concern. Malaria is still a big threat in several parts of the district. The healthcare delivery system, access and quality need to be improved to reduce health risks. The district administration also faces the huge challenge of dealing with historical and deep rooted ethnic conflicts and the rise of left wing extremism that adversely affects the district which has otherwise been known for peace and tranquility.





# Kandhamal Economy: Growth and Livelihoods



"The difference between what we do and what we are capable of doing would suffice to solve most of the world's problem"

- Mahatma Gandhi



# Kandhamal Economy: Growth and Livelihoods



A diversifying and growing economy creates more opportunities for improved livelihoods and higher income levels. This in turn accelerates poverty reduction. Higher income levels help people enjoy hunger-free, healthy and decent life styles. Therefore, higher and inclusive growth is considered essential for improving human development and freeing people from

the shackles of poverty and hunger. The Millennium Development Goals (MDG) are aimed at improving human development indicators like livelihood, education and health. The first MDG focuses on eradication of extreme poverty and hunger. To achieve this goal, an action plan is required. Box 1 illustrate monitorable targets for the first MDG.

## **Box: 1 MDG:1 Eradicate Extreme Poverty and Hunger**

### **MDG Goals and Indicators**

#### **Goal 1 Eradicate Extreme Poverty and Hunger**

**Target 1a: Reduce by half the proportion of people living on less than a dollar a day by 2015**

**1.1 Proportion of population below poverty line**

**1.2 Poverty gap ratio**

**1.3 Share of poorest quintile in national consumption**

**Target 1b: Achieve full and productive employment and decent work for all, including women and young people**

1.4 Growth rate of GDP per person employed
1.5 Employment-to-population ratio
1.6 Proportion of employed people living below poverty line
1.7 Proportion of own-account and contributing family workers in total employment
<b>Target 1c: Reduce by half by 2015 the proportion of people who suffer from hunger</b>
1.8 Prevalence of underweight children under-five years of age
1.9 Proportion of population below minimum level of dietary energy consumption

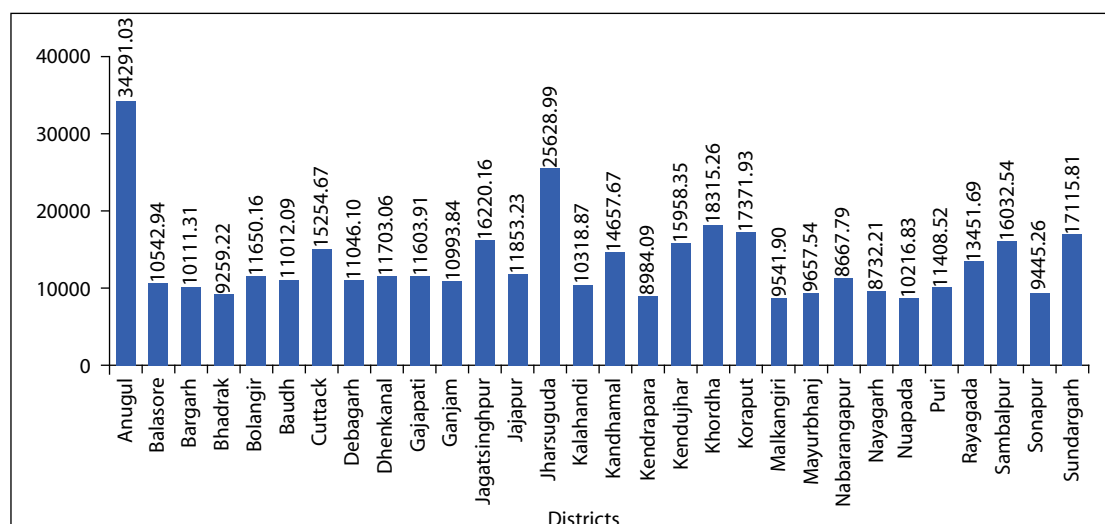
This chapter details the existing pattern and structure of the district economy, poverty conditions and livelihood options. The first section highlights the structure of Kandhamal's economy, gives macro economic variables like District Domestic Product and its composition and growth over the years. The second section looks at labour and employment situation, work participation rates and the trend in composition of workers over the years. The third section deals with poverty situation. The fourth section describes livelihood options available in the district and provides information on various sectors of the local economy including agriculture, horticulture, forestry, fisheries, industries and services. In each sector, current status, growth and opportunities for livelihoods generation have been analysed. The fifth section of this chapter focuses on findings from primary study of DHDR on livelihood options followed by the sixth section which gives details on livelihood promotion initiatives by the Government including MGNREGS, SGSY and

other special programmes for Kandhamal. The last section gives a note on scope for livelihood enhancement in Kandhamal.

### 3.1 District Economy: Structure and Growth

Kandhamal accounted for 5.15 percent area and 1.76 percent population of the State in 2001. In the year 1999-2000, Kandhamal accounted for 1.99 percent of the real Net State Domestic Product (NSDP) of Odisha at 1999-2000 prices. In 1999-2000, per capita real Net District Domestic Product (NDDP) for Kandhamal was Rs.11,869 against the per capita NSDP of Rs.10,485 for Odisha at 1999-2000 prices. In the year 2004-05, Kandhamal reported per capita real NDDP of Rs.15,375 against real per capita NSDP of Rs.13,707 of Odisha at 1999-2000 prices. The district economy grew at an annual compound growth rate of 4.41 percent against an annual compound growth rate of 4.57 percent for Odisha in real terms (1999-2000 prices) between 1999-2000 and 2004-05.

**Chart 3.1 Per Capita Net District Domestic Product by Districts: 2004-2005**



Source: Department of Economics and Statistics, Government of Odisha

Chart 3.1 compares per capita NDDP across all districts of Odisha for the year 2004-05. It may be inferred from this analysis that Kandhamal is favourably placed in many respects. It has a large area base, lesser population density and higher per capita real income than the State. It is evident from Chart 3.1 that only nine districts have done better than Kandhamal in terms of per capita district income.

Table 3.1 summarises the sectoral composition of real Gross District Domestic Product (GDDP), and growth, of the district economy from the year 1999-2000 to 2004-05 at 1999-2000 prices. It may be observed that agriculture and allied sectors, banking, insurance, real estate, construction and services including public administration are major sectors of the district economy. Utilities, transport, mining, manufacturing and trade are other sectors of the district economy. The share of agriculture and allied sectors in the district economy has declined by 4.82 percentage points from 47.27 percent in 1999-2000 to 42.45 percent in 2004-05

and that of services sector including public administration by 1.90 percentage points from 17.12 percent in 1999-2000 to 15.22 percent in 2004-05. The shares of other sectors have increased during the same period. The share of banking, real estate and construction increased by 2.98 percentage points from 20.36 percent in 1999-2000 to 23.34 percent in 2004-05 and that of utilities and transport by 2.69 percentage points from 5.32 percent in 1999-2000 to 8.01 percent in 2004-05. This implies that the district economy has been diversifying. Whereas the district economy grew at an annual average growth rate of 6.10 percent from 1999-2000 to 2004-05 in real terms at 1999-2000 prices, the agriculture and allied sector grew at a rate of 3.95 percent per annum during the same period. The utilities and transport sectors grew at an annual average growth rate of 15.80 percent the banking, insurance, real estate and construction sectors at 9.30 percent trade at 8.79 percent and mining and manufacturing sectors at 8.04 percent from 1999-2000 to 2004-05.

**Table 3.1 Kandhamal Economy: Sectoral Composition and Growth: 1999-2000 to 2004-2005**

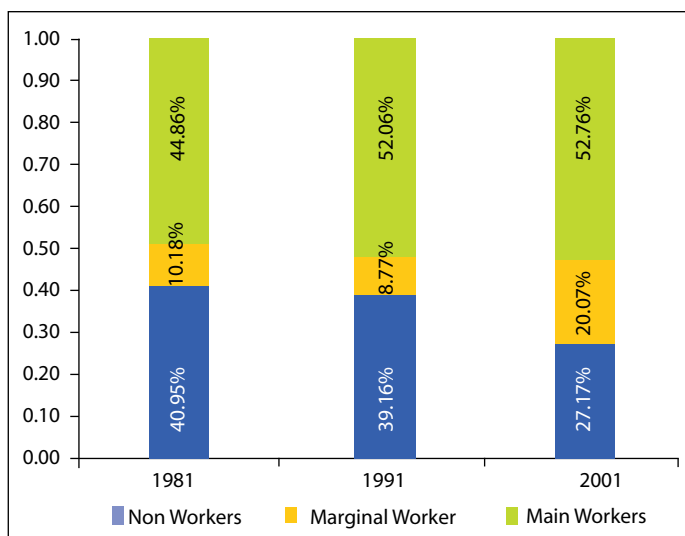
Sl. No.	Sector	1999-2000	2002-2003	2004-2005	Annual Avg. Growth (%)
<b>Real Gross District Domestic Product (Rs. lakh at 1999-2000 prices)</b>					
1	Agriculture & Allied Sectors	38,294	42,258	46,076	3.95
2	Mining & Manufacturing	4,277	5,083	6,262	8.04
3	Utilities & Transport	4,307	5,087	8,696	15.80
4	Banking, Real Estate & Construction	16,494	21,726	25,339	9.30
5	Trade	3,763	4,032	5,658	8.79
6	Service incl. Public Administration	13,878	15,056	16,521	3.57
<b>Kandhamal</b>		<b>81,011</b>	<b>93,241</b>	<b>108,553</b>	<b>6.10</b>
<b>Real GDDP: Sectoral Composition (Sector Share as percentage of Real GDDP)</b>					
1	Agriculture & Allied Sectors	47.27	45.32	42.45	(-) 4.82
2	Mining & Manufacturing	5.28	5.45	5.77	(+) 0.49
3	Utilities & Transport	5.32	5.46	8.01	(+) 2.69
4	Banking, Real Estate & Construction	20.36	23.30	23.34	(+) 2.98
5	Trade	4.65	4.32	5.21	(+) 0.56
6	Service incl. Public Administration	17.12	16.15	15.22	(-) 1.90
<b>Kandhamal</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>

## 3.2 Kandhamal: Labour and Employment

Census 2001 returned 306,209 workers (male: 168,896 and female: 137,313) out of total district population of 648,201. This yielded the Worker Population Ratio (WPR) of 47.24 percent with male WPR of 52.32 percent and female WPR of 42.20 percent. Even though number of workers in Kandhamal increased from 229,530 out of population of 448,914 in 1981 to 306,209 out of population of 648,201 in 2001, the WPR declined by 3.89 percentage points from 51.13 percent in 1981 to 47.24 percent (27.17% main workers and 20.07% marginal workers) in 2001. There were 176,128 (i.e., 27.17%) main workers and 130,081 (i.e., 20.07%) marginal workers in 2001 against 183,831 (i.e., 40.95%) main workers and 45,699 (i.e., 10.18%) marginal workers in 1981. The main workers constituted 57.52 percent and marginal workers 42.48 percent of total workers in 2001. This implies that the proportion of main workers has declined by 7,703 numbers and that of marginal workers increased substantially by 84,382 from 1981 to 2001. Chart 3.2 compares composition of workers (i.e., main workers and marginal workers) and non-workers from 1981 to 2001.

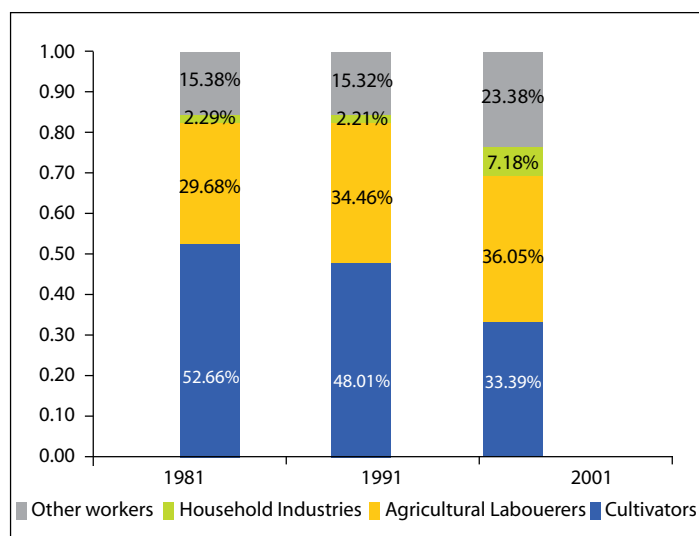
In 2001, the composition of workers was as follows: 102,251 (i.e., 33.39%) cultivators, 110,389 (i.e., 36.05%) agricultural workers, 21,991 (i.e., 7.18%) household workers and 71,578 (i.e., 23.38%) other workers. Further analysis indicates that the proportion of cultivators declined from 52.66 percent in 1981 to 33.39 percent in 2001 and that of agricultural labourers increased from 29.68 percent in 1981 to 36.05 percent in 2001. It is interesting to note that the proportion of other workers increased from 17.66 percent in 1981 to 34.65 percent in 2001. This analysis further supports the hypothesis that the economy of Kandhamal has been diversifying. A disturbing feature of this analysis, however, is that proportion of agricultural labourers has been rising at the cost of cultivators. That is, some cultivators have been converted to agricultural labourers. There may be several reasons for such a situation. First, because of repeated fragmentation of land-holdings, many cultivators turned into marginal farmers. Due to insufficient incomes from their reduced land-holdings, they had to earn additional incomes as agricultural labourers. Second, their land-holdings may have been usurped by others such as money lenders or others and they earned their incomes as agricultural labourers. Third, some land

**Chart 3.2 Composition of Workers and Non-workers in Kandhamal: 1981-2001**



Source: Census of India, 1981-2001

**Chart 3.3 Composition of Workers by Activity in Kandhamal:1981-2001**



Source: Census of India: 1981-2001



holdings, particularly uplands may have become unproductive because of erosion or other factors and owners of such resorted to earn their incomes as agricultural labourers. Chart 3.3 gives the composition of workers as cultivators, agricultural labourers, household workers and other workers from 1981 to 2001.

Table 3.2 compares workers and worker population ratios (WPR) in different blocks and urban areas in Kandhamal from 1991 to 2001.

It may be observed that the number of workers has increased in all blocks and urban areas of the district in 2001 as compared to 1991. However, there have been variations in WPR across blocks. The WPR increased in Chakapada, Khajuripada, Phiringia, Tikabali and G. Udayagiri blocks and decreased in all other blocks in 2001 as compared to 1991. In 2001, the maximum WPR was 52.35 percent in Phiringia block and minimum 44.48 percent in Tumudibandha block. The maximum male WPR was 55.73 percent in Phiringia block and

minimum 50.39 percent in Daringbadi block. The maximum female WPR was 49.00 percent in Phiringia block and minimum 38.13 percent in Tumudibandha block in 2001.

In Kandhamal, unorganised sector and self employment opportunities have created more employment in last few years. The schemes like MGNREGS, SGSY and PMRY have contributed to the growth of rural employment in unorganised sector. The SGSY benefited 2,260 poor families during 2007-08 as against 1,416 families during 2003-04 by way of facilitating creation of opportunities for self-employment. The NREGS has supported 34,902 households till the end of 2008<sup>20</sup>. The PMRY supported 327 micro enterprises with a view to helping unemployed youth from poorer sections in 2005-06. The State Government has accorded very high priority to generation of self-employment and to mitigate unemployment problems. Under the new Odisha State Employment Mission Society (OSEMS), constituted as a part of the

**Table 3.2 Workers and Worker-Population Ratios by Blocks/Urban Areas:1991-2001**

Sl. No.	Name of Block/Urban Centre	Worker - 1991			Worker - 2001			Worker Population Ratio (in %) - 1991			Worker Population Ratio (in %) - 2001		
		M	F	T	M	F	T	M	F	T	M	F	T
1	Baliguda	15,077	9,461	24,538	16,394	12,868	29,262	56.82	36.57	46.82	51.50	40.55	46.03
2	Chakapada	10,466	7,067	17,533	11,359	9,001	20,360	58.11	38.92	48.48	54.80	43.45	49.13
3	Daringbadi	19,653	16,293	35,946	23,104	22,366	45,470	54.58	43.24	48.78	50.39	46.91	48.62
4	G. Udayagiri	7,237	6,569	13,806	7,562	6,101	13,663	53.86	47.51	50.64	50.54	38.94	44.61
5	Khajuripada	11,918	8,659	20,577	13,004	10,091	23,095	55.79	40.85	48.35	55.31	43.41	49.40
6	Kotagarh	9,365	6,554	15,919	10,406	8,384	18,790	57.73	40.73	49.27	50.95	41.02	45.99
7	Nuagaon	11,512	9,258	20,770	12,554	11,158	23,712	57.33	45.88	51.59	53.44	46.66	50.02
8	Phiringia	17,353	11,195	28,548	20,009	17,734	37,743	58.50	37.30	47.84	55.73	49.00	52.35
9	Phulbani	8,798	6,655	15,453	9,184	8,073	17,257	56.95	43.32	50.16	52.35	46.31	49.34
10	Raikia	11,732	9,698	21,430	12,681	10,294	22,975	56.23	45.46	50.79	53.19	42.45	47.78
11	Tikabali	12,022	9,498	21,520	12,577	11,404	23,981	56.14	44.17	50.15	54.59	48.22	51.36
12	Tumudibandha	8,864	5,310	14,174	9,587	7,344	16,931	58.35	35.00	46.69	50.99	38.13	44.48
13	G.Udayagiri (NAC)	1,916	556	2,472	2,258	784	3,042	45.01	13.08	29.06	45.50	14.96	29.81
14	Phulbani (M)	6,810	1,380	8,190	8,217	1,711	9,928	46.21	11.11	30.16	45.89	10.71	29.29
	<b>Kadhamal</b>	<b>1,52,723</b>	<b>1,08,153</b>	<b>2,60,876</b>	<b>1,68,896</b>	<b>1,37,313</b>	<b>3,06,209</b>	<b>55.89</b>	<b>39.61</b>	<b>47.75</b>	<b>52.32</b>	<b>42.20</b>	<b>47.24</b>

Source: Census of India, 1991-2001 (M=Municipality, M=Male, F=Female, T=Total)

<sup>20</sup> NREGS Website, 2009

State Employment Policy 2005, a special drive for self employment programme has been initiated to coordinate creation of employment and self-employment opportunities in the district. A massive skill development programme has been started in the district in 2008-09.

### 3.3 Incidence of Poverty in Kandhamal

Kandhamal is a part of the southern NSS region which had the highest incidence of

poverty of 87.05 percent in 1999-2000 (55<sup>th</sup> round of NSS). On the basis of a tentative analysis of NSS data from 1983 to 1999-2000 using small sample methodology, district-wise incidence of poverty was estimated for the older 13 undivided districts of the State from 1983 to 1999-2000 and is reported in Table 3.3.

It is observed that Kandhamal district which was earlier part of Phulbani district has had a very high incidence of poverty that declined marginally from 75.59 percent in 1993-94 to 75.42 percent in 1999-2000.

**Table 3.3 District Wise Poverty Ratio in Odisha: 1983-2000**

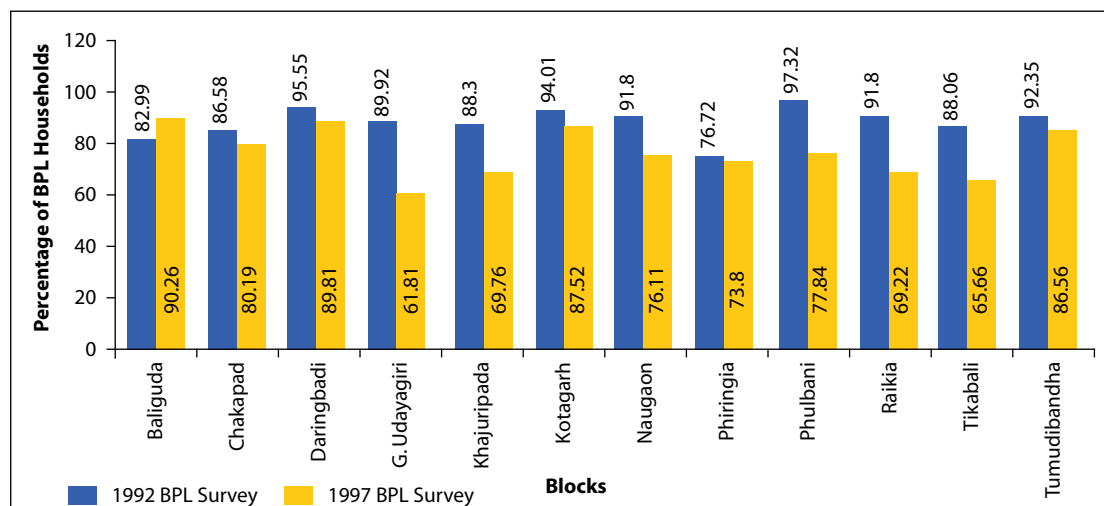
District	1983	1987-88	1993-94	1999-2000
Balangir	79.83	57.91	42.43	48.79
Balasore	72.15	50.88	33.37	41.39
Cuttack	56.71	43.74	48.96	27.98
Dhenkanal	81.45	54.39	34.68	47.53
Ganjam	56.34	45.22	29.57	18.18
Kalahandi	85.90	84.99	68.19	83.76
Keonjhar	78.27	65.66	62.99	61.92
Koraput	78.20	76.54	57.82	78.65
Mayurbhanj	83.45	64.44	48.19	68.42
Phulbani (Kandhamal)*	74.57	71.92	75.59	75.42
Puri	49.47	54.99	67.66	45.21
Sambalpur	58.43	54.50	37.78	42.02
Sundergarh	78.31	53.56	45.15	36.48
Mean	71.78	59.90	50.18	51.98
SD	11.67	11.74	14.39	19.39
Coefficient of Variation (CV)	16.25	19.59	28.67	37.29

\*Kandhamal district was carved out of the old Phulbani district in 1992-93. The undivided Phulbani district included both Boudh and Kandhamal districts

Source: Human Development Report, Odisha, 2004 (SD=Standard Deviation)

On the basis of guidelines prepared by the Ministry of Rural Development, Government of India, the State Panchayati Raj Department mounted a BPL census in 1992 and 1997 to identify households below poverty line (i.e., BPL households). Chart 3.4 compares the incidence of BPL households in different blocks as per 1992 and 1997 census.

As per 1992 BPL census, Kandhamal returned 88.62 percent household as BPL and as per 1997 BPL census, 78.42 percent BPL households. It may be observed that there are wide variations across blocks and Kotagarh and Tumudibandha blocks reported highest percentage of BPL families. Further details on the number of BPL households are reported in Annexure 4.1.

**Chart 3.4 Proportion of BPL Households by Blocks: 1992 & 1997 BPL Census**

Source: Panchayati Raj Department, Government of Odisha

### 3.4 Livelihood Options in Kandhamal

Livelihoods are functions of assets and capabilities of individuals or households and economic activities in which they are engaged in with a view to sustaining lives. Livelihoods are sustainable when they are capable of coping with vulnerabilities, and recovering from shocks that impact them from time to time. Sustainable and growing livelihoods are desirable in order to have higher incomes to maintain improved and better lives and for accelerated poverty reduction. Livelihood strategies at individual and household levels are shaped by economic environment, institutional framework and public policies. The vulnerability of individuals or households to external factors such as health shocks, natural calamities and seasonal effects are other dimensions, which influence the choices of livelihood strategies. For example, marginalised groups who depend on wage opportunities may find reduced work availability in their village during lean seasons as overall agriculture activity is reduced. Such groups may engage in NTFP collection to reduce their vulnerability and add to their incomes during a lean season.

The livelihood assets may be broadly thought to fall under five categories of capital: natural, human, physical, financial and social. These are often employed in combination. For example, land and water (natural capitals) are combined with labour and skills (human capital) to pursue landbased livelihood activities. In contrast, a landless individual uses labour and skills (human capitals) in pursuing a livelihood strategy as farm and non-farm wage earner. Small rural businesses use financial capital along with human capital for improving their business and livelihoods.

The district economy is dominated by agriculture and allied sectors including horticulture, animal husbandry, fisheries and forestry. Land is an important asset and land-based activities are key livelihood activities. Table 3.4 summarises land-use patterns in different blocks in the district for the year 2005.

We have earlier observed that though the proportion of individuals engaged in land-based activities has been declining from 82.34 percent since 1981, 69.44 percent of the work-force (i.e., 33.39% cultivators and 36.05% agricultural labourers) was still

engaged in land-based livelihood activities till 2001. It seems useful to look at various sectors which have created, or have potential for creating, opportunities for sustainable livelihoods for local people and households.

### 3.4.1 Agriculture Sector

Patterns of Land Holding in Kandhamal: The district has 93.2 percent rural population and most people depend on agriculture and other land-based activities in one way or the other for their livelihoods. In 1999-2000, agriculture and animal husbandry sectors contributed 33.84 percent share

to the Gross District Domestic Product (GDDP). The share of these sectors has come down to 31.74 percent in 2004-05. It may be observed that though agriculture is an important livelihood option in the district, Table 3.4 suggests that only about 9.39 percent area of the district is returned as "net sown area". Even if we include fallow land, pastures and cultivable waste land, the land available for cultivation may not exceed about 18 percent area of the district. That is a comparatively small proportion of the total area of the district which has potential for agricultural land use.

**Table 3.4 Land Use Patterns by Blocks in Kandhamal: 2005**

Sl. No.	Blocks / Reserved & Other Forests	Forests	Pastures	Cultivable Wastes	Non Agri. Use	Barren Lands	Fallow	Net Sown Area	Total
		Area (sq.km) Figures in parentheses are percentages							
		1	2	3	4	5	6	7	8
1	Baliguda	265.80 (62.36)	9.15 (2.15)	11.42 (2.68)	22.15 (5.20)	20.52 (4.81)	33.15 (7.78)	64.06 (15.03)	426.25 (100)
2	Chakapada	114.31 (46.41)	6.17 (2.72)	13.13 (5.33)	4.48 (1.82)	10.91 (4.14)	34.53 (14.02)	62.97 (25.56)	246.32 (100)
3	Daringbadi	337.97 (46.19)	15.92 (2.18)	23.17 (3.17)	22.71 (3.10)	178.86 (24.44)	64.82 (8.86)	88.30 (12.07)	731.75 (100)
4	G. Udayagiri	18.38 (12.78)	2.20 (1.53)	3.27 (2.27)	2.95 (2.05)	85.01 (59.13)	10.57 (7.35)	21.39 (14.88)	143.77 (100)
5	Khajuripada	41.14 (10.70)	11.13 (2.89)	10.25 (2.66)	12.30 (3.20)	194.02 (50.44)	42.68 (11.10)	73.13 (19.01)	384.65 (100)
6	Kotagarh	118.92 (56.89)	8.11 (2.55)	8.96 (2.82)	5.24 (1.65)	70.83 (22.27)	13.08 (4.11)	30.85 (9.70)	317.99 (100)
7	K. Nuagaon	157.97 (38.53)	6.79 (1.66)	15.36 (3.75)	17.69 (4.31)	93.55 (22.82)	54.82 (13.37)	63.79 (15.56)	409.98 (100)
8	Phiringia	148.28 (23.33)	15.09 (2.37)	20.69 (3.26)	18.26 (2.87)	257.01 (40.44)	65.02 (10.23)	111.14 (17.49)	635.48 (100)
9	Phulbani	134.90 (44.80)	5.80 (1.93)	5.33 (1.77)	11.26 (3.74)	64.19 (21.32)	28.76 (9.55)	50.85 (16.89)	301.09 (100)
10	Raikia	51.52 (19.35)	8.49 (3.19)	5.01 (1.88)	12.66 (4.75)	59.33 (22.28)	57.28 (21.51)	72.03 (27.05)	266.32 (100)
11	Tikabali	62.33 (24.34)	11.25 (4.39)	8.60 (3.36)	7.29 (2.85)	82.63 (32.27)	28.23 (11.02)	55.76 (21.77)	256.09 (100)
12	Tumudi-bandha	85.80 (33.45)	8.05 (3.15)	9.23 (3.61)	15.62 (6.11)	46.35 (17.85)	32.50 (12.67)	58.92 (23.03)	255.79 (100)
13	Reserved & other Forests	3,645.07 (45.44)	NA	NA	NA	NA	NA	NA	3,645.07 (100)
<b>Kandhamal</b>		<b>5,244.39 (65.38)</b>	<b>108.69 (1.36)</b>	<b>134.42 (1.68)</b>	<b>152.61 (1.90)</b>	<b>1,162.49 (14.49)</b>	<b>465.44 (5.80)</b>	<b>753.19 (9.39)</b>	<b>8,021.23 (100)</b>

Source: District Statistical Handbook, Kandhamal: 2005, NA- Not Available

Further, analysis indicates that average operational landholding size in the district is 1.15 ha as reported in 2000-01. Chart 3.5 depicts land holding patterns by area in Kandhamal district for the year 2000-01. Chart 3.6 depicts land-holdings by numbers in Kandhamal district for the year 2000-01.

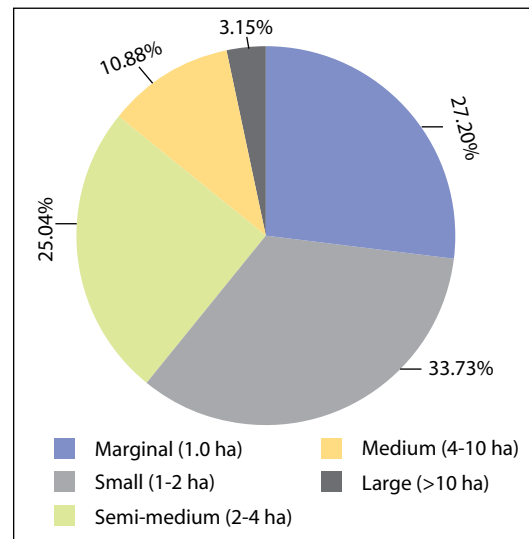
It may be observed from chart 3.6 that 58.51 percent marginal farmers own 27 percent land area, 28.07 percent small farmers own 34 percent area of land-holdings, 13.19 percent semi-medium and medium farmers own 36 percent area of land-holdings, and 0.23 percent large farmers own 3 percent area of landholdings. This analysis suggests that there are acute inequalities in ownership and distribution of land-holdings in the district. About 91 percent farmers work on their own lands and nine percent farmers work on others' lands either on share-cropping basis, lease or on the basis of other working arrangements. This analysis also indicates rising pressures on cultivable lands.

Further, analysis indicates that the irrigation potential in the district is only 13.57 percent against 33.78 percent in the State. However, the district reports a favourable cropping intensity as compared to the State average. Table 3.5 compares cropping intensity in the district vis-à-vis the State. It may be observed that Kandhamal reported a cropping intensity of 163 percent against the cropping intensity of 157 percent in Odisha in the year 2005-06.

The main crops include paddy, maize, ginger, vegetables and turmeric. More than 80 percent of the area is devoted to these crops. Kandhamal contributed 1.85 percent of the paddy production of Odisha in 2007-08. Table 3.6 compares paddy productivity and paddy production in different blocks of the district for the year 2004-05.

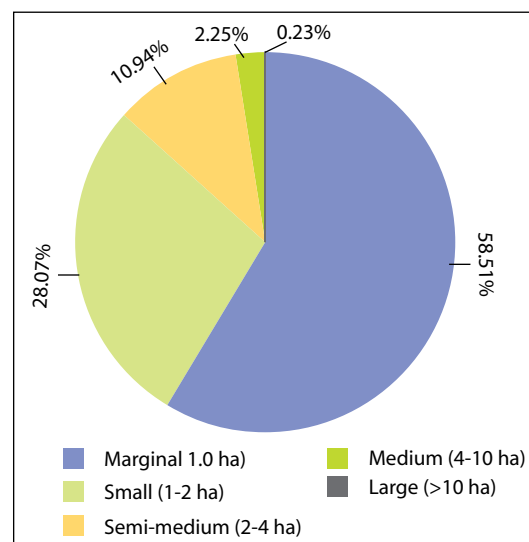
It may be observed that rice productivity in different blocks varied from 15.71 quintals/

**Chart 3.5 Landholding Patterns (by area) in Kandhamal: 2000-2001**



Source: Census of India: 1981-2001

**Chart 3.6 Landholding Patterns (by number) in Kandhamal: 2000-2001**



Source: Census of India, 1981-2001

ha in Khajuripada block to 26.06 quintals/ha in G. Udayagiri block. Daringbadi, Phiringia and Tikabli blocks emerged as major paddy producers in the district in 2004-05. The detailed break-up of production of agricultural crops for rabi and kharif separately are given in Annexure 4.2.

The district contributed 1.80 and 2.50 percent of the total production of pulses and oilseeds respectively of the State during 2005-06. Kandhamal compares poorly on overall production indicators

**Table 3.5 Comparison of Cropping Intensity in Kandhamal vis-à-vis Odisha: 2000-2006**

Year	Odisha			Kandhamal		
	Net Area Sown (ha)	Gross Cropped Area (ha)	Cropping Intensity (%)	Net Area Sown (ha)	Gross Cropped Area (ha)	Cropping Intensity (%)
2005-06	5,691	8,928	157	115	187	163
2004-05	5,739	8,718	152	117	184	157
2003-04	5,795	8,638	149	118	179	152
2002-03	5,680	7,852	138	119	168	141
2001-02	5,845	8,798	151	119	175	147
2000-01	5,829	7,879	135	122	158	130

Source: Agriculture Statistics, Odisha

**Table 3.6 Rice Yields and Paddy Production by Blocks: 2004-2005**

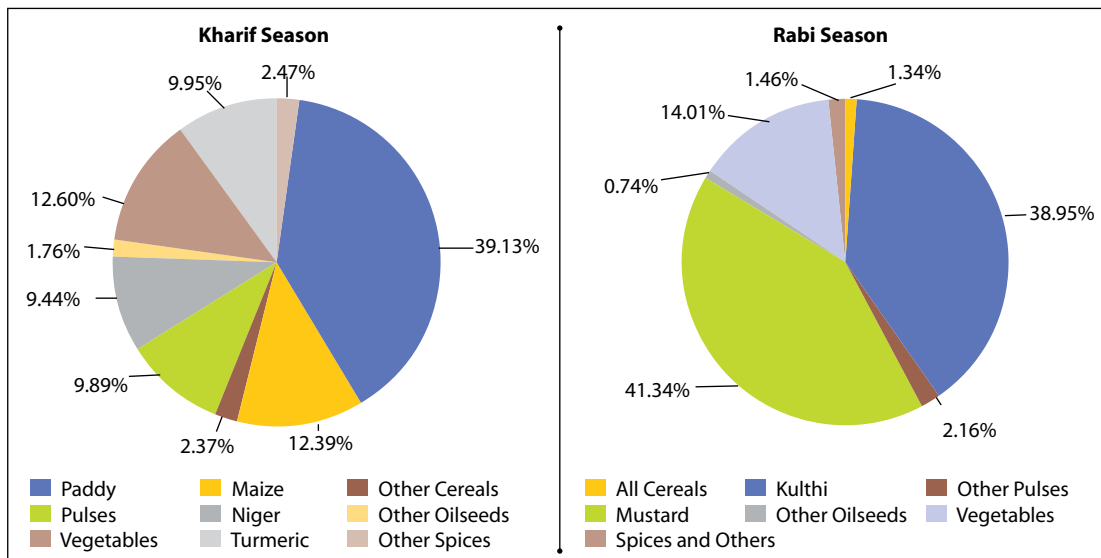
Name of Blocks	Rice Yield (Quintals /ha)	Paddy Production (Quintals)
Baliguda	18.13	88,680
Chakapada	15.99	83,869
Daringbadi	23.60	140,339
G.Udayagiri	26.06	78,135
Khajuripada	15.71	91,474
Kotagarh	21.54	50,921
K Nuagaon	21.51	93,191
Phiringia	19.74	184,614
Phulbani	19.23	82,313
Raikia	21.51	89,340
Tikabali	22.82	107,777
Tumudibandha	16.06	54,436

Source: District Statistical Handbook, Kandhamal 2005

in comparison to other districts owing to low production of food grains. The cropping patterns were also ascertained by analysing the responses of the DHDR primary survey. The analysis indicated that horticulture crops and oil seeds are grown during rabi season and rice in kharif season. About 39.13 percent of kharif crop is found to be paddy followed by oilseeds. In rabi season, major crops are vegetables, kulthi, maize, mustard and til. Chart 3.7 summarises cropping patterns of various agricultural and horticultural crops in rabi and kharif seasons. It gives percentage of land under cultivation of various crops in the district as reported in 2007-08.

Per capita value of agricultural output for Kandhamal stood at Rs. 899 in 2005-06. This is lower than the State average of at Rs.1,381 in 2005-06<sup>21</sup>. Agriculture in the district is characterised by small landholdings, traditional cultivation practices, limited irrigation, poor water conservation measures, upland terrain, low productivity, limited crop diversification and low yields of food-grains. The district offers very poor returns on cultivation. It is heartening to note that the district has prepared a Comprehensive District Agriculture Plan (C-DAP) in 2008-09 to address these bottlenecks and to develop the agriculture sector with a view to improving livelihoods

<sup>21</sup> Profile on Odisha Agriculture, 2006 prepared by directorate of agriculture and food production, GoO

**Chart 3.7 Cropping Patterns in Kharif and Rabi Seasons in Kandhamal**

Source: District Agriculture Office, DHDR Kandhamal

of the population dependent on agriculture. This will be achieved through creating additional irrigation potential, i.e., better management of water resources through active participation of communities, rain water harvesting, watershed development, rehabilitation of traditional tanks, ponds and nallas, improving productivity through use of new technologies, better inputs and crop diversification and providing strong forward linkages, i.e., market linkages, value addition, processing and agro based industries.

### 3.4.2 Horticulture

The district produced 18 percent of total spices and condiments in the State in 2005-06 with 26 and 45 percent of ginger

and turmeric respectively. Kandhamal produced four percent of the total State production of vegetables during 2005-06 and ranked 7<sup>th</sup> among all districts in vegetable production. The district has good potential to enhance vegetable cultivation because of its suitable agro-climate. In particular, tree based horticultural crops like mango, litchi, guava, jackfruit, papaya and others may be suitable for uplands. Table 3.7 reports area and production under broad horticulture categories in Kandhamal in 2004-05 and 2008-09. While total area under horticultural crops increased from 43,103 ha in 2004-05 to 59,633 ha in 2008-09, the productivity went down from 10.61 MT/ha in 2004-05 to 8.28 MT/ha in 2008-09.

**Table 3.7 Production and Area under Horticultural Crops in Kandhamal: 2004-2009**

Crops	2004-05		2008-09	
	Area (ha)	Production (MT)	Area (ha)	Production (MT)
Fruit Crops	1,235	85,006	14,988	93,076
Coconut	351	160	350	166
Vegetables Crop	25,618	337,641	26,335	359,260
Spices	15,895	34,573	17,850	40,783
Horticulture	3.78	28	110	839
<b>Total</b>	<b>43,103</b>	<b>457,408</b>	<b>59,633</b>	<b>494,124</b>
<b>Productivity (MT /ha)</b>	<b>NA</b>	<b>10.61</b>	<b>NA</b>	<b>8.28</b>

Source: Deputy Director of Horticulture, Kandhamal, NA- Not Available

Vegetables and spices are a major portion of production. Turmeric is the main cash crop mainly for tribals. Annually 12,000 ha is devoted to cultivation of vegetables and spices. There is also potential for commercial floriculture in this district. Gladioli, rose and orchids can be grown profitably. The area under floriculture increased from 28 ha in 2004-05 to 110 ha in 2008-09. The National Horticulture Mission supports several horticultural interventions. Raikia, K. Nuagaon, Phulbani and Phiringia have comparatively larger shares in production of vegetables and spices. However, spices including turmeric are grown across the district. Annexure 4.3 gives block-wise production and yields of horticultural crops for the district.

Horticulture offers good potential for the district and the existing strength in production of turmeric and ginger needs to be leveraged to enhance livelihood options and income levels for the poor. The district also has a potential for up-scaling organic cultivation of spices. There is a need for adding more value to locally grown spices. KASAM, a co-operative society, has made some efforts to encourage cultivation and processing of, and value addition in, turmeric

and ginger. Box 2 summarises a case study on efforts of KASAM.

### 3.4.3 Forest Resources

Kandhamal has an area of 5,244.39 sq km under forest cover including miscellaneous tree crops. This is 65.38 percent of the total geographical area of the district, which has rich and varied forests. However, this sector contributes only about 10 percent share to GDDP. The share of the forest sector to GDDP declined from 13.38 percent in 1999-2000 to 10.43 percent in 2004-05. The contribution of this sector needs to be increased substantially. Kandhamal's forests have considerable potential for production of timber and non-timber products. Some major non-timber forest products (NTFP) include kendu leaf, sal leaf, siali leaf, sal seed, mahua, tamarind, amla, harida and bahada. Forest produce collection as well as small scale forest-based enterprises like sal leaf plate making, basket and broom making are important sources of livelihoods for Kandhamal inhabitants.

In Odisha, Gram Panchayats have been entrusted with the responsibility to regulate collection and trading of 72 NTFPs. This

#### Box: 2 A Case Study: Efforts of KASAM

**Case I:** Kandhamal Apex Spices Association for Marketing (KASAM) is dedicated for the socio-economic development of tribal farmers of Kandhamal districts since 1998. It has focused mainly on organic cultivation of spices. The organisation is a certified organic spices producer and exporter in the Country with organic certificate from Skal of Netherlands. 12,000 spice growers from 61 farmer groups associated in KASAM embody a culture of nurturing soil organically and recycling on-farm waste materials.

The organisation operates from Phulbani and Daringbadi and provides farmers with application training and access to development subsidies and maintains close links with the Indian Spices Board and the ICAR Dry land Farming Research Centre at Phulbani. It has a central storage, processing, and business centre which is equipped with complement of processing equipments and has an installed packaging capacity of 2.8 MT a day. The society has grown in size over the years and has been trading in major spices like turmeric, ginger, tamarind, coriander, chilly and other medicinal plant products. It is one of the success stories in the district which can be replicated.



has resulted in higher value realisation in some cases where PRIs have responded proactively and have protected the interests of NTFP collectors. There is, however, a need for greater efforts to realise full potential of this sector in promoting livelihoods of poor tribals and other forest dwellers and adding higher values to various forest products. A comprehensive plan for NTFP needs to be in place. This will help sustainable NTFP harvesting, marketing, value addition and local entrepreneurship. Some organisations including Tribal Co-operative Marketing Development Federation of India Limited (TRIFED), Odisha Rural Development and Marketing Society (ORMAS) and KASAM are already working in the district for promotion of NTFP.

TRIFED is operational in Kandhamal and aims to facilitate marketing of forest produce collected by poor tribals with an assured off-take of collected products and enhanced earnings of primary collectors. TRIFED signed a Memorandum of Understanding in 2006 with Tribal Development Co-operative Corporation (TDCC) Baliguda, Agency Marketing Co-operative Society (AMCS) Tikabali, KASAM, Phulbani and District Supply and Marketing Society (DSMS), Phulbani for procurement of various forest produce and

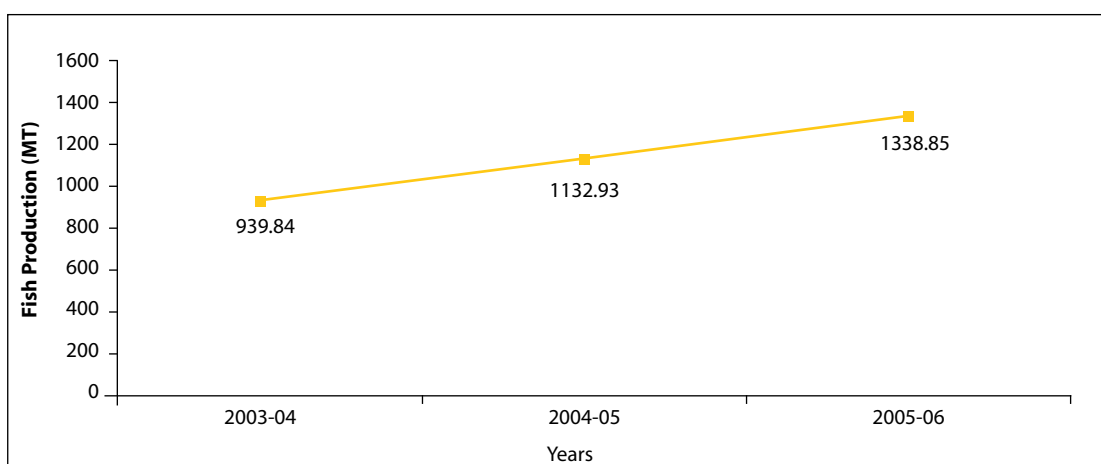
surplus agriculture produce of the district. These local agencies have been procuring targeted commodities on behalf of TRIFED, which markets them. An analysis of the responses of the DHDR primary survey suggests that collection of forest produce is a major economic activity that is aimed at supplementing household incomes. About 20 percent rural households with agriculture as the first source of income depend on NTFP as a second source of incomes and 11 percent households depend on NTFP as their main source of income. Annexure 3.4 gives some data on NTFP for the period 1996-99.

#### 3.4.4 Fisheries

Fishery is a very small sector for Kandhamal. The district contributed only 0.41 percent of total fish production of the State in 2006. Its share in GDDP was only 0.04 percent in 1999-2000. However, the sector has registered a very high growth in recent years and its share in GDDP increased to 0.27 percent in 2004-05. The sector has good potential for livelihood improvements in the district. In fact, fish production has been increasing over the years. Chart 3.8 captures rising trends in fish production in Kandhamal from 2003 to 2006.

Table 3.8 assesses potential for fishery activities in the district in 2000-01.

**Chart 3.8 Rising Trends in Fish Production in Kandhamal: 2003-2006**



Source: District Statistical Handbook, Kandhamal 2005

**Table 3.8 Potential for Fishery Activities in Kandhamal: 2000-2001**

Sl. No.	Water Bodies	No	Water Area (ha)
1	G.P Tank	451	166.16
2	Private Tank	272	88.36
3	Revenue Tank	166	45.11
4	Other Department Tank	96	27.06
5	Water Harvesting Structure	181	433.95
6	Reservoirs	1	120.00
7	Minor Irrigation Projects	83	441.09
	<b>Kandhamal</b>	<b>1,250</b>	<b>1,321.73</b>

Source: Report on Kandhamal by Small Industry Service Institute, Gol

Kandhamal recorded a growth of 11.8 percent in fish production from 2004-05 to 2005-06 while Odisha reported 10.3 percent growth during same period.

The district has taken steps to increase fishery activities and to create and develop water bodies such as minor irrigation projects, private reservoirs, GP tanks and water harvesting structures for promoting fish production through various schemes like Fish Farmer Development Authority (FFDA) and SGSY. During 2005-06, it was estimated that there were 781 feasible areas with 786.93 ha which could be targeted for fishing activities.

### 3.4.5 Livestock

Animal husbandry is one of the key sub-sectors of an agriculture economy and plays an important role in creating additional livelihood opportunities, providing gainful employment to small or marginal farmers and landless labourers and hedging risks

in the face of natural calamities such as droughts. Table 3.9 summarises annual trends of livestock-based production in Kandhamal from 1994-95 to 2005-06. It may be observed that milk production increased by 2.6 times, egg production by 1.7 times and meat production by 1.4 times from 1994-95 to 2005-06.

The district contributes 1.13, 2.28 and 1.27 percent of the State's production of milk, meat and egg production respectively. The district topology offers good scope for development of animal husbandry activities. The district has started an Integrated Dairy Development Project and Milk Producer Cooperative Societies have been set up. Several supporting activities like artificial insemination, collection, and milk processing are in place in the district. Livestock activities are gaining momentum with support from employment assurance schemes like SGSY and other initiatives taken by the State Animal Resource Development Department in recent years.

**Table 3.9 Production of Livestock in Kandhamal: 1994-2006**

Livestock-based Production	1994-95	2004-05	2005-06
Milk Production (000 MT)	5.80	14.25	15.22
Meat Production (MT)	846	1,159.89	1,184.78
Eggs Production (lakh)	92.80	130.59	162.33

Source: Chief District Veterinary Officer, Kandhamal

### 3.4.6 Industrial Development

The district does not have any large industrial activity. Though there have been reports of presence of minerals like bauxite, graphite, manganese, coal and gem stones, the deposits are yet to be assessed by the State Mining Department and most locations are in reserved forest areas, where clearance from the Forest Department is expected to be difficult. There is a graphite mine in the district, which is currently non-functional.

The district has a good potential for promoting small-scale and cottage

industries with particular focus on agriculture and horticulture based processing industries, forest produce based enterprises and tourism industry. Table 3.10 gives year-wise investments and employment in SSI in the district from 1998-99 to 2006-07.

It may be observed that there are 521 SSI units in the district with an investment of Rs. 8.99 crore and employing 2,164 persons. A number of SSIs has been reported to have closed down or have not been working in a regular manner.

**Table 3.10 Year-wise Investment and Employment by SSI in Kandhamal: 1998-2007**

Sl. No.	Year	Units (No)	Investment (Rs. lakh)	Employment (No.)
1	1998-99	51	54.69	138
2	1999-00	56	70.40	202
3	2000-01	62	114.41	231
4	2001-02	70	97.31	216
5	2002-03	74	91.47	230
6	2003-04	88	78.54	237
7	2004-05	92	166.69	437
8	2005-06	64	115.14	238
9	2006-07	64	110.11	235
	<b>Total</b>	<b>521</b>	<b>898.76</b>	<b>2,164</b>

Source: District Industry Centre, Kandhamal

Further, analysis has indicated that 39 percent units were in food and allied sectors in 2000-01. Other important categories included repairing services, textile units and forest produce processing units. Table 3.11 classifies SSI by category in Kandhamal in 2000-01. Out of total 558 SSI units in 2000-01, Kandhamal had 219 food processing units, 139 repairing and service sector units and 67 textile based units. Total investment was Rs.5.26 crore and total employment less than 2,000 persons.

The district also promotes handicraft and cottage industries under Odisha Khadi and Village Industry Board. These establishments undertake various activities including

processing of agriculture produce, forest products and small businesses in the service sector. Table 3.12 gives the status of handicraft and cottage industries in Kandhamal from 1995-96 to 2000-01.

The district has a variety of artisans and craft makers. The main crafts promoted by them in the district are summarised in Table 3.13. Crafts are promoted by the State in cluster mode with a view to economising the delivery of services and achieving economies of scale. Analysis of overall industrial scenario suggests that the industrial climate is not favourable for investment due to underdeveloped infrastructure and poor connectivity. There is lack of adequate

**Table 3.11 SSI by Category in Kandhamal: 2000-2001**

Sl. No.	Category	Units (No)	Investment (Rs. lakh)	Employment (No)
1	Food and Allied	219	158.68	568
2	Glass & Ceramics	19	21.05	116
3	Chemical	8	53.05	217
4	Electrical	12	3.35	24
5	Engineering and Metal	38	69.18	185
6	Repairing & Servicing	139	103.91	313
7	Forest & Wood Based	14	6.24	197
8	Textile based	67	21.91	232
9	Livestock/ Leather	5	0.93	10
10	Other Service Industries	6	46.67	60
11	Misc. Industries	26	32.60	55
12	Rubber/Plastic	2	4.39	5
13	Paper & Paper Products	3	4.01	15
	<b>All categories</b>	<b>558</b>	<b>525.97</b>	<b>1,987</b>

Source: Directorate of Industries, Cuttack

**Table 3.12 Status of Handicraft & Cottage Industries in Kandhamal: 1995-2001**

Sl. No.	Year	Units (Number)	Employment (Number)	Investment (Rs. lakh)
1	1995-96	2,449	4,349	47.42
2	1996-97	2,184	4,130	131.42
3	1997-98	2,303	4,596	231.14
4	1998-99	1,510	2,778	225.30
5	1999-00	1,445	2,891	407.75
6	2000-01	781	1,562	109.82

Source: Gol, (SIS) 2002, Industry Potential of Kandhamal

**Table 3.13 Main Crafts and Their Distribution in Kandhamal: 2002**

Sl. No.	Name of the Craft	Area of Concentration
1	Appliqu Works	Phulbani
2	Stone Carving	Pusangia, Baliguda
3	Artistic Mat	Damerika, K.Nuagaon
4	Wood Carving	Phirigia
5	Sisal Works	K.Nuagaon
6	Dhokra Casting	Barakhama, Baliguda, Kurtamgarh, Tumudibandh
7	Cane & Bamboo	Tumudibandha
8	Bamboo Works	Sudrukumpa, Khajuripada, Nandini
9	Clay Terracotta	Telapalli, Phiringia and Keradi
10	Tribal Jewellery	Pusangia, Baliguda

Source: Gol, (SIS) 2002, Industry Potential of Kandhamal

skilled local manpower for small enterprises. The district, however, has good potential for agro based industries, tourism related services, livestock development, repair and servicing and forest based enterprises. A plan for infrastructure development and leveraging the current strength in agriculture, horticulture, forestry and tourism may offer good opportunities for employment.

### 3.4.7 Livelihood Opportunities in Service Sectors

Service sector has seen a good growth over the last few years across the State as well as in Kandhamal. All services across various segments have shown growth including retail and trading, personal services, repair services, education, hotels and restaurants. Transport services have also grown rapidly and are likely to increase further due to considerable improvement of connectivity. The number of motor vehicles registered in the district went up by 1.55 times from 2002-03 to 2005-06<sup>22</sup> and this has created demand for repair and servicing units for motorbikes, cycles, light motor vehicles and heavy vehicles. Other services including education, training, financial services and social sectors have also grown in the last few years. There is scope for promoting these

sectors further. The district has taken steps to establish Teachers Training Colleges, Industrial Training Institutes and offer vocational training under the Odisha State Employment Mission.

### 3.4.8 Growth of Establishments

It has been ascertained that the consumption of electricity has increased by 23 percent from 1999-00 to 2003-04. Of this, 17.54 percent additional consumption was reported due to increase in number of commercial establishments. Table 3.14 gives the trends in electricity consumption by consumer categories from 1999-2000 to 2003-2004. It may be observed that there is substantial increase in commercial consumption of electricity.

Data from the 5<sup>th</sup> Economic Census, Odisha was analysed to understand the extent and coverage of establishments and employment in them in the district. As per this census, 34,836 establishments including both agricultural and non-agricultural establishments were reported in Kandhamal in 2005. This is 1.90 percent of total establishments in Odisha as per the 5<sup>th</sup> Economic Census. Chart 3.9 reports the status and sectoral composition of non-agricultural establishments in Kandhamal as per the 5<sup>th</sup> Economic Census.

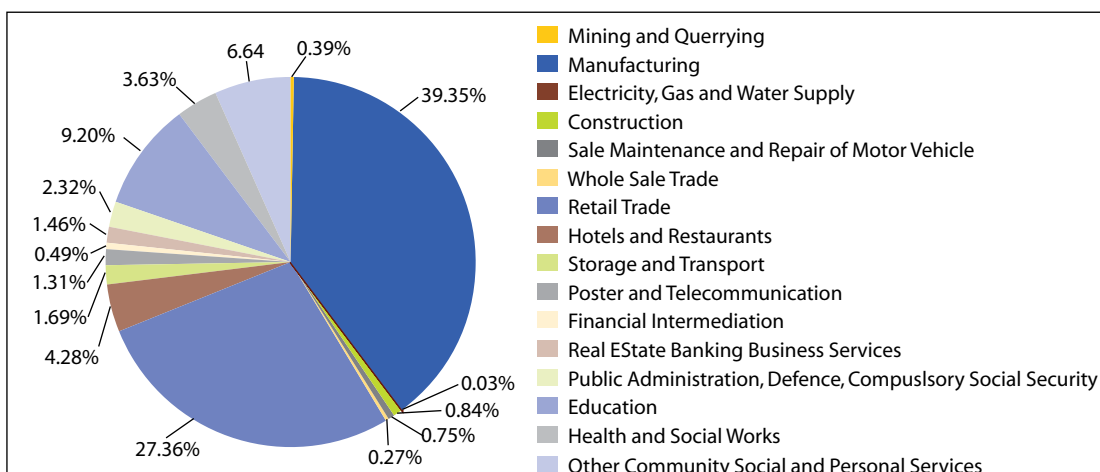
**Table 3.14 Consumption Pattern of Electricity: 1999-2000 and 2003-2004**

Sl. No.	Consumer by Category	Consumption Units (MW)	
		1999-2000	2003-04
1	Domestic	13,126,007	16,540,000
2	Commercial	311,636	5,467,000
3	Small Industry	901,112	910,000
4	Medium Industry	17,620	42,000
5	Large Industry	301,116	450,000
6	Street Light	468,100	400,000
7	Lift Irrigation	1,271,664	429,000
8	P.H.E.D	792,393	841,000
9	P.I Consumer	1,030,749	1,506,000
	<b>Total</b>	<b>21,620,229</b>	<b>26,585,000</b>

Source: District Statistical Handbooks

<sup>22</sup> District Statistical Handbook, 2005

**Chart 3.9 Sectoral Composition of Non Agricultural Establishments in Kandhamal: 2004-2005**

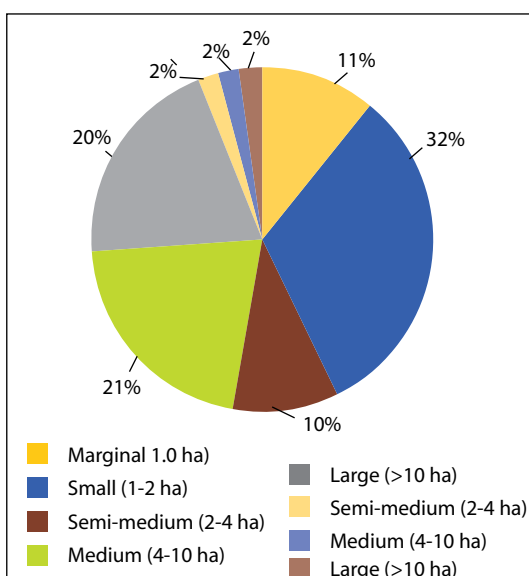


Source: District Agriculture Office, DHDR Kandhamal

Analysis of 26,114 non-agricultural establishments in Kandhamal suggests that 66.71 percent establishments are engaged in manufacturing, sales and maintenance and repair of motor vehicles. Other important sectors where people are engaged include education, personal services and hotels and restaurants. It may be observed that 39.35 percent establishments in 2004-05 reported manufacturing as their main activity and additional 27.65 percent were engaged in maintenance and repairing services.

The analysis of the 5<sup>th</sup> Economic Census data indicated that 71.41 percent establishments

**Chart 3.10 Secondary Income Sources for HH (First Source of Income is Agriculture)**



Source: Primary Survey, DHDR Kandhamal

were Own Account Establishments operating without any hired worker. Further, 97.66 percent establishments have 1-5 workers and 91.23 percent establishments are located in rural areas. The number of total establishments in the district increased by 32.03 percent from 1998 to 2004 and such establishments employed 64,200 workers in 2004, higher than 44,770 workers in 1998. This is 1.73 percent of total workers so employed in Odisha. About 22.5 percent of total workers were found to be engaged in agricultural establishments as against the State average of 9.05 percent, indicating importance of agriculture for Kandhamal. The growth of workers in rural areas at 32.73 percent was higher than that in urban areas and 7.64 percentage points higher than the State average.

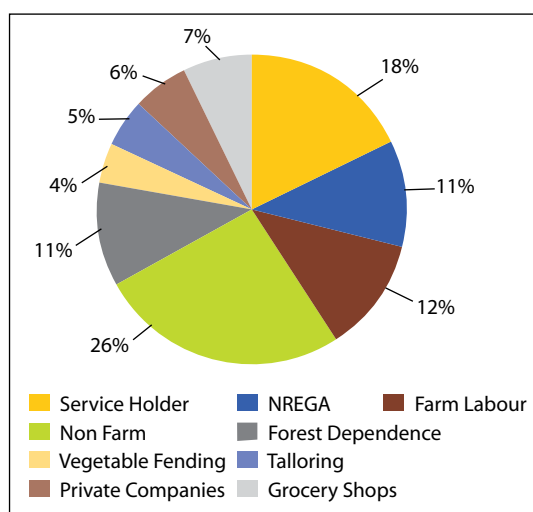
### 3.5 Secondary Sources of Income

An analysis of the responses of the DHDR primary survey revealed that out of 1,000 household respondents, 776 (i.e., 77.6%) reported agricultural activities as their primary source of income. Other members of respondent households and in many cases, the household leaders were also engaged in other activities including MGNREGS programmes (32%), non-farm activities (21%),

or forest-based activities (20%). Chart 3.10 summarises the results of the primary study regarding secondary sources of income for the surveyed households in Kandhamal.

The surveyed households for which the primary source of income was not agricultural activities displayed different occupational patterns. Chart 3.11 summarises occupational patterns of households whose primary occupation was not agriculture. About 26 percent households relied on non-farm labour activities as their primary source of income and 18 percent households had their head engaged in salaried employment. Another 11 percent households depended on forest-based activities and 23 percent households were engaged in NREGS (12 percent) and farm labour (11 percent) activities. The remaining 22 percent households were engaged in various other activities including grocery shops, private employment, tailoring and vegetable vending. The occupational mapping revealed that most households adopted multiple livelihood options.

**Chart 3.11 Occupational Patterns for Non-agricultural Households**



Source: District Agriculture Office, DHDR Kandhamal

## 3.6 Livelihood Promotion: The State Efforts

The State has taken several initiatives to promote self employment and livelihoods in the district. The Prime Minister Rojgar Yojana (PMRY) started in 1994 and supported 1,200 service and business activities during 1994-2006. Other major interventions included NREGS, SGSY, OTELP, Jeevika and Biju Kandhamal O Gajapati Yojana. Key interventions that help promote livelihoods are briefly discussed below.

### 3.6.1 Biju Kandhamal O Gajapati Yojana

The State has recently launched this initiative called *Biju Kandhamal O Gajapati Yojana* that aims at further improving infrastructure: roads, irrigation, electricity, drinking water and livelihood activities.

### 3.6.2 Odisha Tribal Empowerment and Livelihoods Programme (OTELP)

The programme aims at empowering tribal groups by enhancing their food security and livelihoods through participatory, equitable, self-managed and sustainable use of natural resources and off-farm/non-farm enterprise development. The broader objectives of the programme are:

- Building capacity of targeted communities
- Enhancing access and productivity of land, water and forests
- Encouraging off farm enterprises
- Ensuring food security
- Strengthening institutional capacities of public agencies and others
- Building on indigenous knowledge and blending with technological innovations
- Developing pro-tribal environment

The objectives of the programme are realised by promoting activities that would enhance the access of poor tribal people to land, water and forests. Further the programme seeks to increase productivity of these resources in environmentally sustainable and socially equitable ways; encourage and facilitate off-farm enterprise development focused on the needs of poor tribal households. It would also monitor basic food entitlements of tribal households, and ensure their access to public food supplies. The programme further seeks to; strengthen the institutional capacity of public agencies, Panchayati Raj Institutions, NGO and civil society to work effectively for participatory poverty reduction with tribal communities, encourage the development of a pro-tribal enabling environment through effective implementation of, and access to, development programmes through active involvement of poor tribal households. This programme also built on the indigenous knowledge and values of tribals and blended this knowledge with technological innovations to ensure a speedier pace of development. As part of the programme, Village Development Committees and Village Level Sub Committee (VLSC) are formed for implementation of OTELP activities. Village Social and Financial Audit Sub Committee is constituted to audit these activities on a monthly basis. The project components are implemented through VLSC and supported by partner NGOs. The programme has been implemented in Baliguda, Nuagaon and Daringbadi blocks in Kandhamal.

### 3.6.3 Special Programmes for Kandhamal

The district has been allocated budget under special grant for several activities related to livelihood and skill building. The proposed activities include Horticulture Training Institute at Kalinga and G.Udayagiri, establishment of a mega forest nursery at Mulagudari, establishment of B.Ed. Colleges

at Kalinga and Phulbani, strengthening of ITI Phulbani as a centre of excellence. Mo Kudia Scheme has been implemented in the district and 5,226 houses have been sanctioned out of the target of 5,377. Additionally 5,000 "Mo Kudia" houses have been allotted by the Panchayati Raj Department in 2009-10.

### 3.6.4 Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

The National Rural Employment Guarantee Scheme (NREGS) came into force with effect from 2<sup>nd</sup> February 2006. The scheme aims at providing enhancement of livelihood security to rural households by providing at least one hundred days of guaranteed work to households whose adult member volunteers to do unskilled manual work. It also aims to create durable assets which will strengthen livelihood resource base for the rural poor. The scheme is implemented as a Centrally Sponsored Scheme on a cost sharing basis between the Centre and the State in the ratio of 90:10. Projects approved to be undertaken under NREGS for this year and coming five years include road works, drainage works and irrigation structures and others. Table 3.15 gives the status of implementation of NREGS in Kandhamal

**Table 3.15 Status of Implementation of NREGS in Kandhamal: 2008 (In Number)**

Employment provided to households	34,902
Total person days	882,554
SC person days	206,283
ST person days	484,795
Women workdays	363,076
Others person days	191,476
Total fund (Rs. crore)	25.54
Expenditure (Rs. crore)	15.03
Total works	2,618
Works completed	164
Works in progress	2,454

Source: NREGS website and DRDA, Kandhamal



district in 2008. In all 54.93 percent ST and 23.37 percent SC households have benefited from this scheme in Kandhamal. Of the total beneficiaries, 41.14 percent are women.

### 3.6.5 Swarnajayanti Gram Swarojgar Yojana (SGSY)

SGSY was launched by Government of India in April 1999. This is a Centrally Sponsored Scheme funded by the Centre and the State in the ratio of 75:25. The scheme envisages promotion of micro enterprises considering the potential of the rural poor. The components of the scheme include all aspects of self-employment. Targeted BPL families are organised into Self-Help-Groups and given training and other necessary support. The objective of the scheme is to enable every targeted family to cross the poverty line within a period of three years by providing them income-generating assets through bank credit and Government subsidy. In all 1,416 households benefited under SGSY in 2003-04 and the number increased to 2,744 in 2008-09 and 3,192 beneficiaries have been targeted under SGSY in the district in 2009-10. Daringbadi block has the highest share of beneficiaries under

SGSY. The activities undertaken under SGSY in Kandhamal indicates activities like goatery, horticulture, mushroom / vegetable cultivation, dairy, poultry, pisciculture, NTFP related activities and agri business development. Table 3.16 gives the status of implementation of SGSY in Kandhamal from 2007 to 2009.

### 3.6.6 Self Help Group Movement and Its Impact on Livelihoods

The district has a good base of Self Help Groups (SHG), some of which have become very successful in promoting their livelihood enterprises through micro credit and savings activities. About 3,954 women SHG have been formed up to 2005-06. Of these, 1,981 SHGs have got credit access from banks and Rs.518.6 lakh credit has been advanced to target SHGs. Several livelihood schemes including those managed by Forest Department, ITDA, ICDS and Mid Day Meal programmes have been implemented by SHGs. Such groups have also implemented income generating activities under SGSY and OTELP. SHG networks have also created social capital that would help households cope with various stresses. Box 3 Summarises a case study on the achievements of Maa Santoshi SHG.

**Table 3.16 Status of Implementation of SGSY in Kandhamal: 2007-2009**

Name of Block	Beneficiaries in 2007-08	Beneficiaries in 2008 -09
Baliguda	250	323
Chakapada	151	199
Daringbadi	350	452
G.Udayagiri	120	155
K.Nuagaon	151	199
Khajuripada	151	199
Kotgarh	139	178
Phiringia	233	310
Phulbani	125	166
Raikia	144	198
Tikabali	141	187
Tumudibandha	138	178
<b>Kandhamal</b>	<b>2,093</b>	<b>2,744</b>

Source: District Rural Development Agency, Kandhamal

### Box: 3 A Case study: Maa Santoshi SHGs.

#### Case II: Improved Livelihood of members of Maa Santoshi SHG, Katadangada Village

Maa Santoshi SHG at village Katadangada, Lingagada, G.Udaygiri block comprises of 20 Kandha women. All members of the SHG are landless and depend on forest produce available in adjacent forests. They suffered from chronic poverty and faced food insecurity.

They formed SHG with motivation from Willium Nayak, the then Supervisor of Samanwita. They started with Rs.10 from each member of the group and availed credit of Rs 22,000 from SBI, G.Udayagiri Branch with interest rate of Rs 1 per month. The SHG also availed micro-capital assistance of Rs 24,000 form UNDP-Micro Capital Assistance (Under UNDP Food Security Programme) in 2000. They invested Rs 12,000 in winter vegetables with necessary technical support form Samanwita, a leading NGO at G. Udayagiri. Rs 1,000 were invested in collection of Mahua flowers. They purchased 10 goats in the year 2000 and they had 21 goats by 2002. By selling the goats all the remaining loans were remitted and the SHG has had a saving of Rs. 17,741 by March 2002.

The SHG is an ideal for all other SHGs at Lingagada Gram Panchayat of G. Udayagiri. The group was formed by poverty stricken women and resulted in yielding a sustainable livelihood for all of them. Members of the SHG owe their gratitude to Samaniwita which rendered them all required support in their need and guided them in undertaking official activities of the groups.

*(This case is collected from an NGO, Samanwita, G. Udayagiri, Kandhamal)*

### 3.7 Fund Flow to the District

Kandhamal has received progressively increasing funds in various sectors of the economy including agriculture and allied sectors and industries. The fund flow into the industries sector has been comparatively lower. There is substantial increase in funds received by departments like soil conservation, forestry and rural development. Works under livelihood schemes like the MGNREGS and JEEVIKA are implemented through one of the departments. Table 3.17 gives a trend of fund flow to the district in important sectors concerning livelihoods.

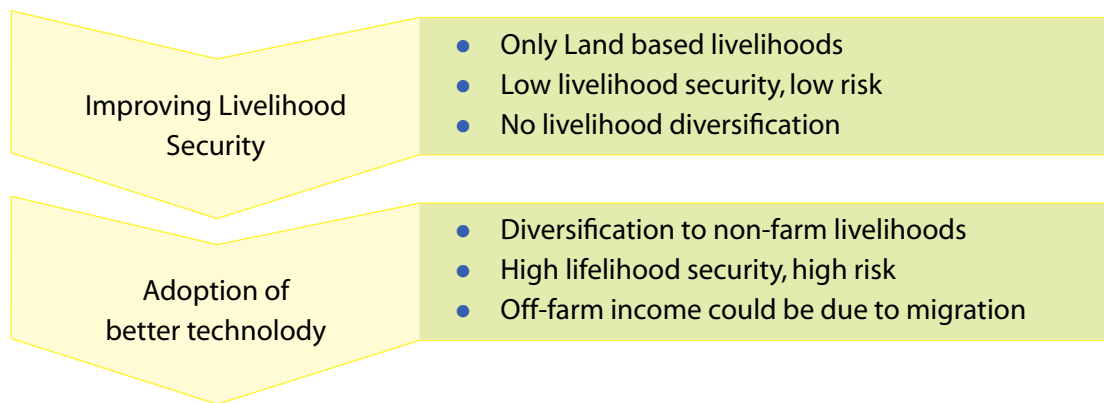
### 3.8 Scope for Livelihood Improvement

The Industrial Policy Resolution (IPR) 2001 highlighted growth sectors like forestry, tourism and fisheries apart from industrial activities to address livelihood concerns. IPR 2007 encouraged cluster approach. The State supported promotion of handicrafts, cottage industries, handlooms and village industries which are employment intensive. The policy also calls for linkages between micro, small, medium and large industries through downstream and ancillary units and promoting Public Private Partnership (PPP)

**Table 3.17 Allocation of funds to select sectors: 2002-2009 (In Rs. Lakh)**

Broad Sectors for Allocation	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Agriculture	3.26	1.40	4.88	6.23	8.52	12.83	17.99
Fishery	11.86	14.04	7.25	25.99	10.18	18.85	110.13
Soil Water Conservatioh	110.47	14.96	129.48	119.54	422.82	24,655.11	1,273.84
Forestry	652.22	633.61	724.58	764.93	823.06	907.92	1,108.06
Industries (SSI, Village, Handcraft)	3.40	5.50	15.36	10.76	12.00	14.10	22.88
Rural Development (Roads, Building)	241.94	249.44	249.73	644.01	1,020.06	1,247.76	1,366.02
Tribal Development	153.30	147.94	154.945	227.67	395.52	475.76	372.42

Source: District Planning Office, Kandhamal



on appropriate scales. The district needs to exploit its potential in horticulture, agro and forest product processing and tourism for faster growth and better livelihood opportunities. The State policies are geared towards vocational skill building and creating self employment opportunities. Kandhamal has prepared a road map for skill building under the Odisha State Employment Mission and started a training programme.

Agriculture, horticulture and forestry are main sources of livelihood and the district has a suitable climate for horticulture and is known for its production of ginger and turmeric. It needs to capitalise on this strength. There is a good scope for development of agri business, supply chains and other facilities for agriculture to improve realisation to farmers. Agriculture related activities like agro processing industry, cold storage and transport facilities, marketing initiatives, mobilisation of SHGs to make micro enterprises based on agriculture, horticulture and forest produce will enhance the scope for better livelihoods. The service sector including tourism, hotels, education, repair services and personal services also offers good scope for livelihood support and employment creation. The district should aim at improving its infrastructure and strengthening select sectors to boost the local economy to improve livelihoods.

Focus Group Discussions at village level indicated that livelihood is mostly based on

agriculture, horticulture and forest produce. Further, there has been increase in non farm labour and engagement in service sectors. The State initiatives like MGNREGS and SGSY have created wage employment and self employment options. However land based livelihood activities still continue to be the main source of household incomes. The district needs to leverage its strengths in horticulture, tourism and forestry sectors with a view to adding value to products of these sectors through further processing and marketing. There is also need to improve physical infrastructure, communication facilities and build capacities of local human resource.

### 3.9 Chapter Summary

This chapter highlighted economic structure, growth and livelihoods opportunities for Kandhamal. Sectoral composition of real Gross District Domestic Product indicates reduction in share of agriculture and allied sectors and diversification of economy into services sector. Analysis of workers composition over census years also indicate decline in cultivators from 52.66 percent in 1981 to 33.39 percent in 2001 and increase in other workers from 17.66 percent in 1981 to 34.65 percent in 2001. This supports the fact that economy of the district is diversifying. The district economy has diversified over the years; however 69.44 percent of the work force (cultivators and agricultural labourers) still depend on agriculture and allied sectors.

Agriculture and animal husbandry sectors contributed 31.74 percent of Gross District Domestic Product in 2004-05. Kandhamal falls in the southern NSS region which had the highest incidence of poverty of 87.05 percent in 1999-2000 (55<sup>th</sup> round of NSS). As per the BPL census carried out by the State Panchayati Raj Department, 78.42 percent households were reported as BPL in 1997 as against 88.62 percent in 1992. This was higher than the State average of 66.23 percent BPL families in 1997. Box 4 summarises some poverty and livelihood related indicators.

The chapter has also looks at livelihood options in Kandhamal and Government initiatives to improve livelihood conditions and reduce poverty. The status of agriculture

and allied sectors, industries and service sector has been analysed with respect to their contribution to the economy, potential for livelihood generation and promotional schemes by the Government. Agriculture in the district is characterised by small landholdings, traditional cultivation practices, limited irrigation, poor water conservation measures, upland terrain, low productivity, limited crop diversification and low yields of food grains. The district is known for its horticultural crops and organic spices. It produced 18 percent of total spices and condiments in the State in 2005-06. Forest produce collection as well as small scale forest-based enterprises like sal leaf plate making, basket and broom making are important sources of livelihoods for the district inhabitants. Overall, there is scope in agriculture, horticulture, forestry, micro-enterprises and tourism sectors for livelihood generation.

**Box: 4 Some Poverty and Livelihood related Indicators**

**Indicators for Kandhamal District**

- Percentage of BPL HH – 78.42 percent, against Odisha-66.23 percent (1997 BPL census)  
- Per capita Net District Domestic Product for Kandhamal was Rs.14,658 during 2004-05 which was higher than the State average of Rs.13,329
- Poverty Ratio 75.42 in 1999-2000, Odisha -48.01 – Source (Odisha HDR 2004)
- DDP grew at 10 percent from 2003-04 to 2004-05 (13 percent growth for Odisha) while total persons employed were 64,200 as per 5<sup>th</sup> economic census.
- Employment to Population Ratio: Taking employment from 5<sup>th</sup> Economic Census and Population as per 2001 census, the ratio for Kandhamal is 9.9, for Odisha is it 10.0
- Proportion of people working in own account establishments is 57.72 percent (5<sup>th</sup> Economic Census)
- As per 2008 ICDS data of district, 60.70 percent children in 0-3 years and 53.89 percent children in 3-6 years and are categorised as suffering from malnutrition

Government schemes for livelihoods improvement and self-employment, including MGNREGS, SGSY, SHG promotion through Mission Shakti, Jeevika and Biju Kandhamal O Gajapati Yojana, have been instrumental in creating livelihood options for the rural poor of the district. Vocational training and skill building are also emphasised upon for supporting livelihood enhancement. The special package for Kandhamal is supporting establishment and strengthening of ITI, B.Ed. colleges and a horticulture training institution.

The next chapter looks at status and educational attainment in Kandhamal which is closely linked to MDG 2 and MDG 3. It looks at key indicators for educational attainment, access and quality.

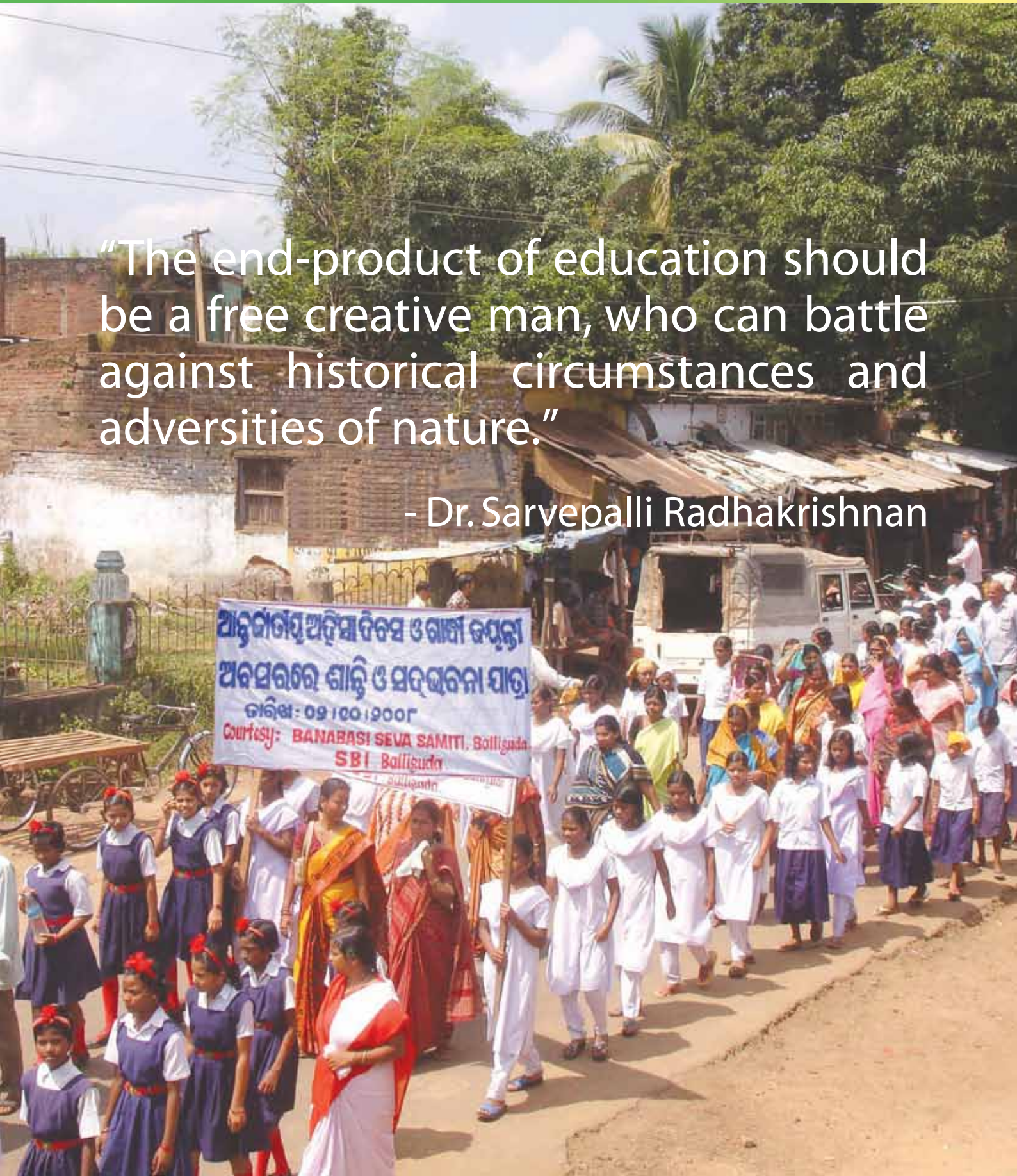


## Chapter 4

# Education in Kandhamal

“The end-product of education should be a free creative man, who can battle against historical circumstances and adversities of nature.”

- Dr. Sarvepalli Radhakrishnan





# Education in Kandhamal



Education is a powerful instrument of social transformation and nation building. It is a functional necessity for every society and considered one of the prime indicators of human development. Educational attainment is a key factor for creating human capital. It opens new opportunities. Every human being, and especially every child, has the right to education, knowledge and learning. The acquisition of knowledge and information helps an individual to improve the quality of life as well as to participate meaningfully in community life. There are societal benefits too, education

is an investment in human capital and leads to higher productivity and earning power. Key indicators of socio-economic development like infant mortality, health status of children, women empowerment and income levels are positively linked to educational attainments. Education helps to achieve social mobility and income redistribution. A study of 49 countries has found that about a fifth of income inequality can be explained by educational inequality<sup>23</sup>. Other studies too have shown that increased literacy is associated with improved income share.

<sup>23</sup>National Human Development Report, Planning Commission, New Delhi, 2001

The 2<sup>nd</sup> Millennium Development Goal (MDG), therefore, rightly emphasises upon the attainment of universal primary education. Improved educational status is likely to reduce poverty, and achieve gender mainstreaming, in a region. Box 5 below gives indicators under MDG 2 :

**Box: 5 Indicators under MDG 2**

MDG Goals and Indicators
Goal 2: Achieve Universal Primary Education
Target 2a: Ensure that all boys and girls complete a full course of primary schooling
2.1 Net enrolment ratio in primary education 2.2 Proportion of pupils starting grade 1 who reach last grade of primary 2.3 Literacy rate of 15-24 year-olds, women and men

This chapter reviews the status of education in Kandhamal, details key educational indicators and discusses challenges and future directions. The first section highlights the growth of primary education in Odisha and Kandhamal. The second section analyses levels of literacy and educational attainments. The third section deals with school infrastructure and accessibility. The administrative set-up and efforts for improving delivery of educational services are discussed in the section four which also deals with major initiatives, enrolments, dropouts and out of school children. The fifth section analyses flow of funds to the education sector in the district. The last section summarises concerns for quality in education. Policy and operational issues are examined throughout the chapter.

### 4.1 Educational Development in Odisha and Kandhamal

After independence, both Government of India and different State Governments have made concerted efforts to bring education within the reach of all, and to build a literate skilled and technologically capable society.

The Central Government has taken several initiatives, in particular to meet critical gaps in public provisioning, and to tackle the problem of low literacy. The development of the education sector throughout the Country has been guided by the framework of the National Education Policy, 1986, as amended from time to time. The policy envisaged free and compulsory education for all children until the age of 14 years before the onset of the 21<sup>st</sup> century. The policy at national level is focused not only on reach of elementary education but also on quality of education delivery. The National Curriculum Framework, 2005 prescribes four principles for curriculum development in schools, i.e., connecting knowledge to life outside the school, ensuring that learning shifts away from rote methods, enriching the curriculum so that it goes beyond textbooks and making examinations more flexible and integrating them with classroom life.

The Constitution of India and the Five-Year Plans have also laid special emphasis on the role of education in overall development of the Nation. Article 45 of the Constitution of India envisaged free and compulsory education for all children until the age of 14 years. Article 29 of the Constitution provided additional safeguards to ensure equity in accessing education by all without any discrimination. The 93<sup>rd</sup> Constitutional Amendment passed in 2001, made education a fundamental right. The 42<sup>nd</sup> Amendment of the Constitution, 1976, brought education under the ambit of the Concurrent List, made education a joint responsibility of the Centre and States, and required a new sharing of responsibility between the Union Government and the States<sup>24</sup>.

Odisha made considerable efforts in promoting education. Educational facilities expanded rapidly, with a remarkable rise in the enrolment of students and literacy

<sup>24</sup>Odisha HDR 2004.



levels. The State formulated its goals for the education sector. The educational goals included: (i) universalisation of elementary education and five years of primary education by 2007; and eight years of elementary education by 2010; (ii) universal literacy rate of at least 88 per cent—by 2011 and total literacy by 2015; (iii) functional skill development in adult education; (iv) modernisation of technical education; (v) consolidation of higher education by focusing on quality and standards in higher education; and (vi) language development to foster unity and integrity of the country amidst diversity. The Das Committee Report in Odisha laid special emphasis on elementary education and intended to cover three major aspects in this context: (a) universal access and enrolment, (b) universal retention of children up to 14 years of age, and (c) substantial improvement in the quality of education to enable all children to achieve essential levels of learning<sup>25</sup>.

The colonial administration made some early efforts to promote modern education in Kandhamal region. First three schools were started at Kurmingia, Udayagiri and Mahasinghi in Baliguda sub-division in 1851. Although initial efforts were not successful, the efforts to educate Kandhas and others in the region continued. Christian Missionaries also made efforts to promote education in this region. More schools were opened in G.Udayagiri Tehsil and 521 students were enrolled in the schools at Sankarakhole, Purunagarh and Brahmanpad by 1860.

From 1855 to 1880, many primary schools were set up at Phulbani, Khajuripara, Titrapanga and Ratanga in Kandhamal sub-division and were later upgraded to upper primary level. In due course of time, the school at Ratanga was shifted to

Bisipada and later it was converted into a Middle Vernacular School. This school was subsequently shifted to Phulbani from Bisipada in 1904 and in 1916 it became a Middle English school. In the year 1946, this school was upgraded to a Higher English School, and is now known as A.J.O. High School. The Angul District Gazetteer reveals that there were 12 U P schools in Kandhamal sub-division till 1908 with some Kandha teachers. The medium of instruction was Odiya. To facilitate higher enrolments and better learning of Kandha students, the school authorities were directed to prepare text books in Kui, the dialect of Kandhas, to be written in Roman scripts. Later, schools were set up in Baliguda subdivision exclusively for Scheduled Tribes (ST) and Scheduled Castes (SC) students. In addition, the Church authorities were also encouraged to set up private schools, one of the earliest schools being the one set up in 1914 at Gudripadi near G.Udayagiri. A High School was set up at Tikabali in 1939 and later shifted to G.Udayagiri in the year 1944. This school is still functioning and is now known as the Hubback High School<sup>26</sup>. Despite these early efforts, the extent of education in the region was poor as compared to other parts of the State.

In post-independence period, special steps have been taken to improve literacy among ST and SC. Special schools, such as Sevashrams (i.e., at Primary level), Ashram (i.e., at Middle English level), Kanyashramas (i.e., schools for girls) and High English schools were established in several pockets of the district for ST and SC students. These special schools provided free education to ST and SC children with free food, lodging, clothing and medical facilities. The first residential school by the State Tribal Welfare Department was opened at Nuagaon in 1947.

<sup>25</sup> See Government of Odisha, 1995a; 1997, 2001a and Samal 1999.

<sup>26</sup> See also Rath, 1993 and Boal, 1963.

Later, many schools were set up by the State Tribal Welfare Department in the district. By 2003-04, nine residential and 88 non-residential Sevashramas were functional in the district, in which 3,280 boys and 820 girls were enrolled as residential scholars and 6,415 boys and 4,415 girls as day-scholars.

## 4.2 Literacy Levels and Educational Attainments in Kandhamal

The literacy levels in the district have remained below the State average, though literacy rate has been recently increasing at a much faster rate. Table 4.1 analyses levels of literacy in Kandhamal from 1981 to 2011. It may be observed that overall literacy rate in Kandhamal has increased by 38.04 percentage points from 27.08 percent in 1981 to 65.12 percent in 2011, whereas the improvement in the levels of literacy in the State has been only 32.48 percentage points from 40.97 percent in 1981 to 73.45 percent in 2011. Whereas male literacy increased only by 8.62 percentage points from 69.79 percent in 2001 to 78.41 percent in 2011, female literacy increased by 16.60 percentage points from 35.86 percent in 2001 to 52.46 percent in 2011. This is heartening to note that the gap between male and female literates of 25.86 percentage points has been narrowing down at a faster pace. There are, however, gender and social disparities in literacy levels in the district. Tribal literacy was only 44.47 percent as compared to overall literacy rate of 52.68 percent in 2001.

It is, however, heartening to note that the SC literacy rate at 53.36 percent in 2001 is above the district average of 52.68 percent. Though the female tribal literacy has increased more than six times from 4.74 percent in 1981, it is still much lower at 26.87 percent than the district average and district female literacy levels in 2001. The female SC literacy at 36.08 percent was also slightly higher than the district average of 35.86 percent in 2001.

The educational attainments of the district are lower than the State average. Table 4.2 analyses educational attainments of the district for the census year 2001 and compares them with Odisha. It may be observed that there were 43.15 percent total literates in the district in 2001 including those who can read and write but have not obtained any formal educational qualification. This was much lower than the State average of 53.90 percent in 2001. Only 56.92 percent males and 29.49 percent females were literates in Kandhamal as compared to 64.27 percent males and 43.31 percent females in Odisha in 2001. It may also be observed from Table 4.2 that the literates with high school or higher qualifications are only 16.93 percent against the State average of 25.11 percent indicating higher dropouts during elementary and secondary education levels. Chart 4.1 depicts the levels of educational attainments in various categories in Kandhamal in 2001.

The current levels of educational attainments were also ascertained through a special primary survey of a carefully drawn sample

**Table 4.1 Literacy Rates by Gender and Social Groups in Kandhamal: 1981-2011**

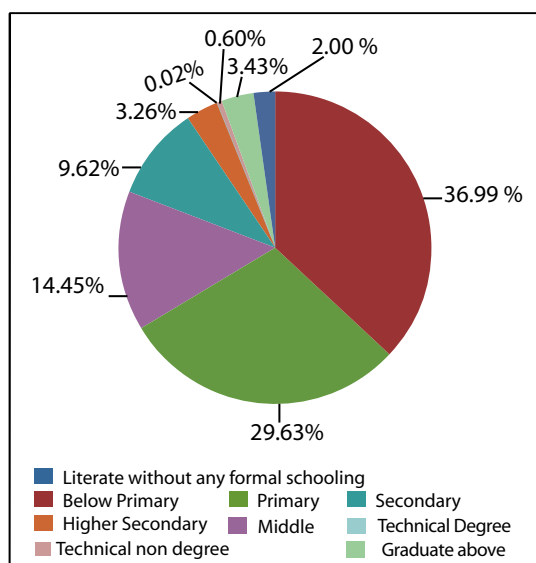
Year	All Castes			Schedule Tribe			Schedule Caste		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1981*	41.96	11.26	27.08	18.59	4.74	18.59	36.19	6.87	21.60
1991	54.68	19.82	37.23	44.54	11.26	27.68	51.02	14.07	32.63
2001	69.79	35.86	52.68	62.72	26.87	44.47	70.99	36.08	53.36
2011	78.41	52.46	65.12	NA	NA	NA	NA	NA	NA

Source: Census of India, 1981, 1991, 2001 and 2011 \* For Phulbani district, NA- Not Available

**Table 4.2 Comparison of Educational Attainments in Odisha and Kandhamal: 2001**

	Odisha			Kandhamal		
	Total	Male	Female	Total	Male	Female
Population	36,804,660	18,660,570	18,114,090	648,201	322,799	325,402
Total Literates	19,837,055	11,992,333	7,844,722	279,705	183,733	95,972
Total Literates (% of population)	53.90	64.27	43.31	43.15	56.91	29.49
Literates without Education level	428,001	279,304	148,697	5,589	3,742	1,797
Percentage (%)	2.16	2.33	1.90	2.00	2.06	1.87
Below Primary level	5,755,797	3,328,385	2,427,412	103,469	65,346	38,123
Percentage (%)	29.02	27.75	30.94	36.99	35.57	39.72
Primary level	5,798,954	3,280,957	2,517,997	82,864	54,008	28,856
Percentage (%)	29.23	27.36	32.10	29.63	29.39	30.07
Middle level	2,875,760	178,236	1,092,524	40,427	27,190	13,237
Percentage (%)	14.50	14.87	13.98	14.45	14.80	13.79
Matriculate / Secondary levels	2,616,294	1,665,245	951,049	26,921	18,476	8,445
Percentage (%)	13.19	13.89	12.12	9.62	10.06	8.80
Higher Secondary / Intermediate	1,021,802	2,269,408	357,394	9,116	6,258	2,858
Percentage (%)	5.15	5.54	4.56	3.26	3.41	2.98
Non-Technical Diploma or Certificate not equal to Degree	8,944	7,495	1,449	46.00	37.00	9.00
Percentage (%)	0.05	0.06	0.02	0.02	0.02	0.01
Technical Diploma or Certificate not equal to Degree	145,863	116,593	29,270	1,692	1,211	181
Percentage (%)	0.74	0.97	0.37	0.6	0.66	0.5
Graduate and Above	1,185,640	866,710	318,930	9,581	7,415	2,166
Percentage (%)	5.98	7.23	4.07	3.43	4.04	2.26

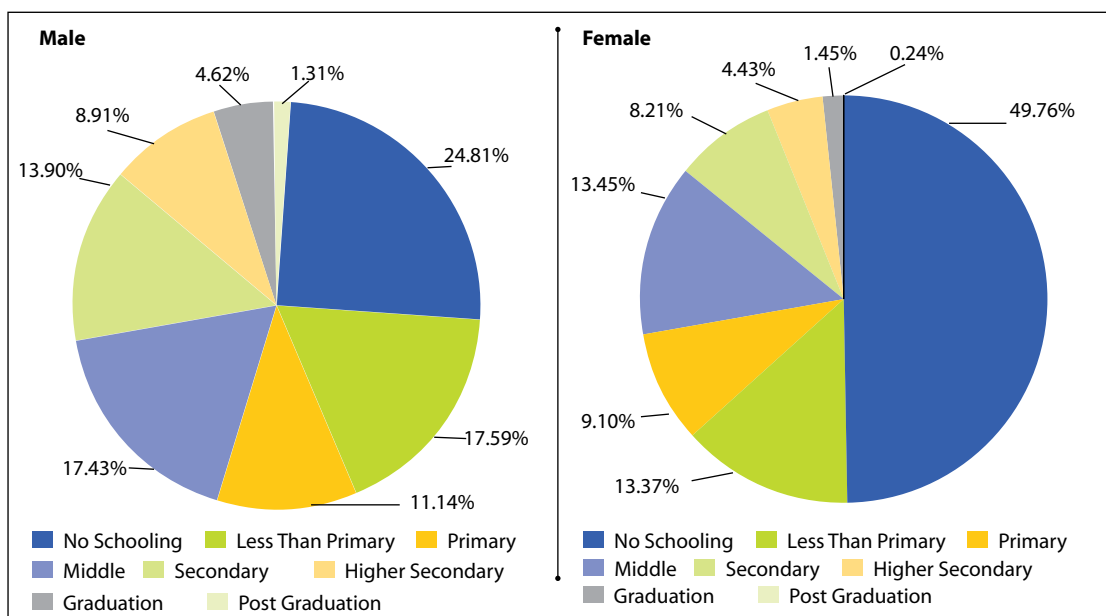
Source: Census of India, 2001

**Chart 4.1 Educational Attainments in Kandhamal: 2001**

Source: Census of India, 2001

of 1000 households in which all adults and children were covered. Chart 4.2 depicts the educational attainments of the sampled adults with more than 18 years of age. It was inferred that 38 percent of total adults (24.81 percent male and 49.76 percent female) have never been to school and 15 percent (17.59 male and 13.37 female) have been to school but not completed primary levels. However, 75.19 percent males and 50.24 percent female have attained some kind of literacy levels in 2008 even though some of them have not obtained any formal education. It is heartening to note that the levels of educational attainments have recently improved and gender gap has also narrowed down.

**Chart 4.2 Current Adult Educational Attainments in Kandhamal: 2008**



Source: Primary Survey 2008 for DHDR, Kandhamal

#### 4.2.1 Inter-Block Disparities in Literacy Levels

There are wide variations in literacy levels by gender and social groups across blocks and urban centres in the district. Table 4.3 summarises literacy levels by gender and social groups across blocks and urban centres of the district for the census year 2001. It may be seen from Table 4.3 that Tumudibandha block has reported the lowest literacy rate of 31.76 percent with male literacy of 45.48 percent and female literacy of 18.56 percent. G.Udayagiri block has returned the highest literacy of 63.39 percent which was marginally higher than the State average in 2001. The male literacy rate is 78.99 percent and female literacy rate 48.01 percent in G.Udayagiri block. Phulbani Municipality registered highest literacy rate of 85.74 percent with male literacy of 93.87 percent and female literacy of 76.61 percent. The lowest ST literacy rate of 9.15 percent with ST male literacy rate of 16.09 percent and ST female literacy rate of a mere 2.26 percent has been observed in Kotagarh block. The highest ST literacy rate of 61.77 percent with ST male literacy rate of 81.30 percent and ST female literacy rate of 36.76 percent has been

obtained in Phulbani block. Tumudibandha block has returned the lowest SC literacy rate of 23.22 percent with SC male literacy rate of 39.78 percent and SC female literacy rate of 7.80 percent in 2001. Phulbani block, on the other hand, has reported the highest SC literacy rate of 55.30 percent with SC male literacy rate of 74.29 percent and SC female literacy rate of 34.66 percent.

Even though SC literacy rates are generally much higher than the ST literacy rates, the SC female literacy in three blocks Kotagarh, Phiringia and Tumudibandha is represented in single digits. There is a need for focused interventions to accelerate female literacy levels in the district. Chart 4.3 depicts inter-block disparities in literacy rates by social classes in the district in 2001. Chart 4.4 gives inter-block gender disparities in literacy rates in the district in 2001.

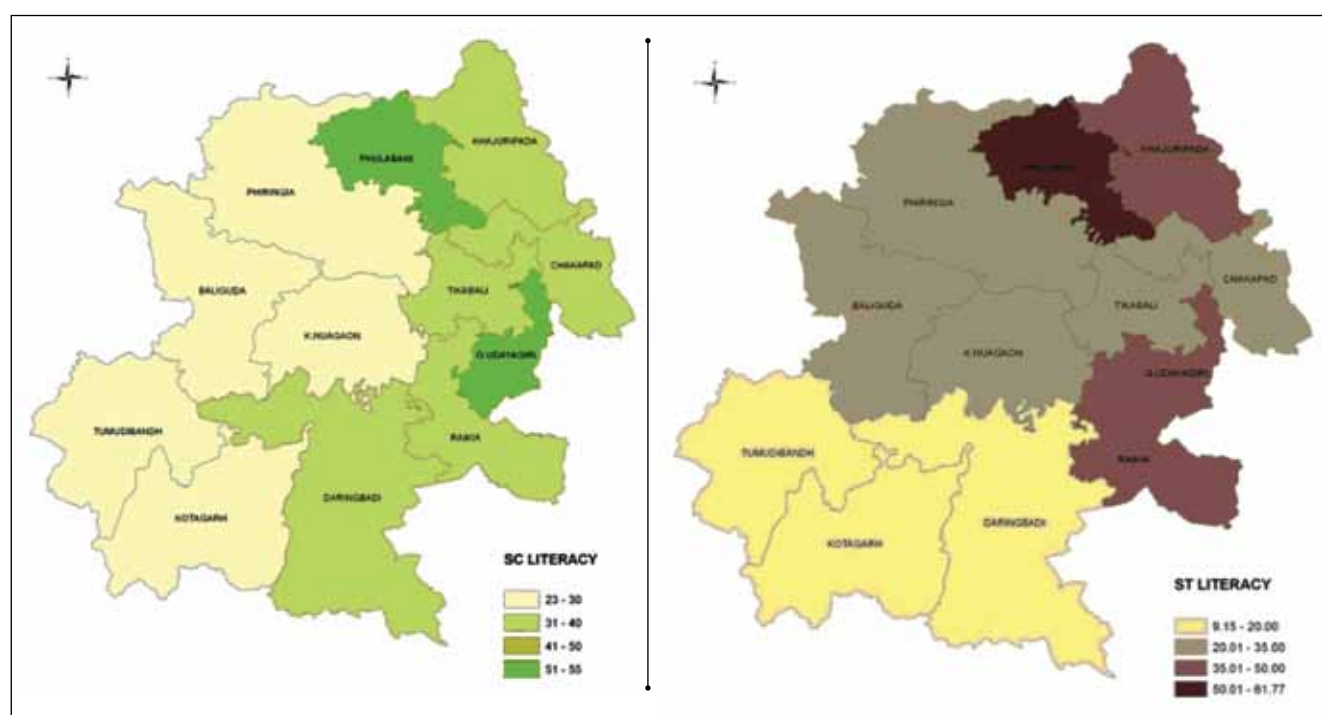
#### 4.2.2 Rural-Urban Disparities in Literacy Rates

The district has a small urban population of only 9.86 percent with a literacy rate of 87.68 percent against the State average of 86.45 percent. The rural literacy rate is 62.52

**Table 4.3 Literacy Rates by Gender and Social Groups in Blocks in Kandhamal: 2001**

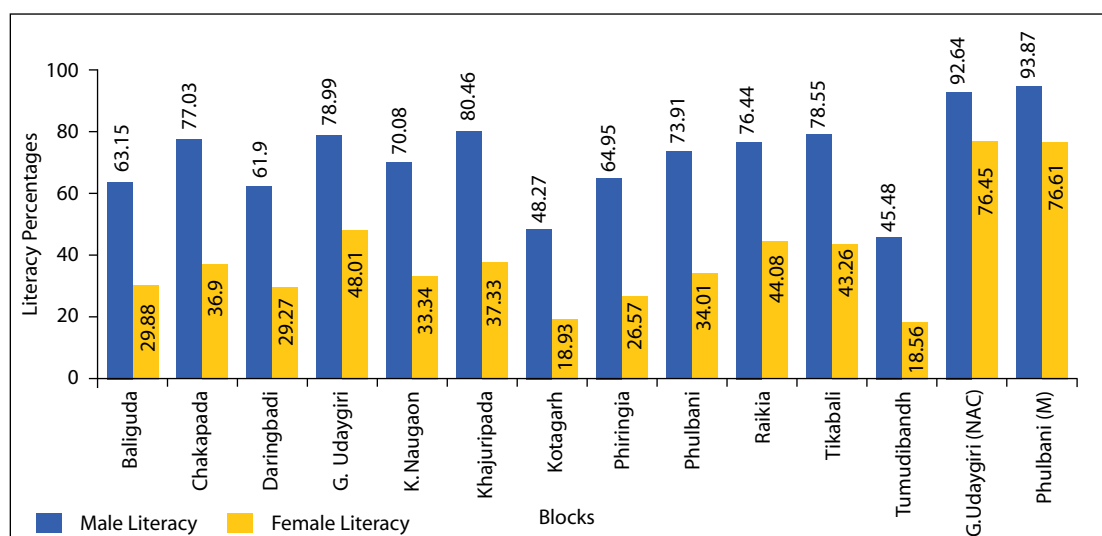
Block/Urban Centre	Population		Literacy Rate (%)								
	SC (%)	ST (%)	All Social Groups			SC			ST		
			T	M	F	T	M	F	T	M	F
Baliguda	15.01	45.37	46.53	63.15	29.28	28.40	42.76	13.51	35.58	31.55	6.94
Chakapada	24.25	47.23	56.87	77.03	36.90	33.42	51.34	15.93	32.51	53.04	12.43
Daringbadi	11.82	57.77	45.15	61.90	29.27	34.68	53.19	17.03	18.58	32.33	5.99
G. Udayagiri	14.78	63.39	63.05	78.99	48.01	54.08	75.96	23.21	42.16	61.68	23.74
K. Nuagaon	11.45	51.14	51.50	70.08	33.34	29.61	44.91	14.86	28.57	47.83	9.85
Khajuripada	30.49	51.32	58.88	80.46	37.33	35.71	59.04	12.58	37.75	63.54	12.15
Kotagarh	18.59	56.64	33.58	48.27	18.93	24.73	40.80	8.44	9.15	16.09	2.26
Phiringia	17.85	58.66	45.62	64.95	26.57	24.81	41.01	8.57	20.97	37.37	5.26
Phulbani	20.43	9.56	53.95	73.91	34.01	55.30	74.29	34.66	61.77	81.30	36.76
Raikia	15.58	53.56	59.97	76.44	44.08	33.62	44.53	17.67	37.49	55.94	20.05
Tikabali	22.04	54.35	60.48	78.55	43.26	33.61	60.54	18.43	34.13	58.43	15.37
Tumudibandha	20.49	56.79	31.76	45.48	18.56	23.22	39.78	7.80	19.91	20.96	18.85
G. Udayagiri (NAC)	12.24	21.49	84.23	92.64	76.45	53.69	69.95	38.72	60.10	76.75	45.55
Phulbani (M)	22.80	55.63	85.74	93.87	76.61	38.04	59.05	17.07	33.18	55.77	10.81
<b>Kandhamal</b>	<b>16.97</b>	<b>52.00</b>	<b>52.68</b>	<b>69.79</b>	<b>35.86</b>	<b>53.36</b>	<b>70.99</b>	<b>36.08</b>	<b>44.47</b>	<b>62.72</b>	<b>26.87</b>

Source: Census of India 2001, (Total =T, Male=M, Female = F, M=Municipality, NAC= Notified Area Council)

**Chart 4.3 Comparison of SC and ST Literacy in Kandhamal: 2001**

Source: DPEP Office, Mayurbhanj, Baripada

**Chart 4.4 Inter-Block Gender Disparities in Literacy Rates in Kandhamal: 2001**



Source: Census of India, 2001

**Table 4.4 Rural-Urban Disparities in Literacy Rates: 2011**

Area	Kandhamal			Odisha		
	Male	Female	Total	Male	Female	Total
Rural	76.51	49.29	62.52	80.41	61.10	70.78
Urban	94.43	80.89	87.68	91.83	80.70	86.45
<b>Total</b>	<b>78.41</b>	<b>52.46</b>	<b>65.12</b>	<b>82.40</b>	<b>64.36</b>	<b>73.45</b>

Source: Census of India 2011

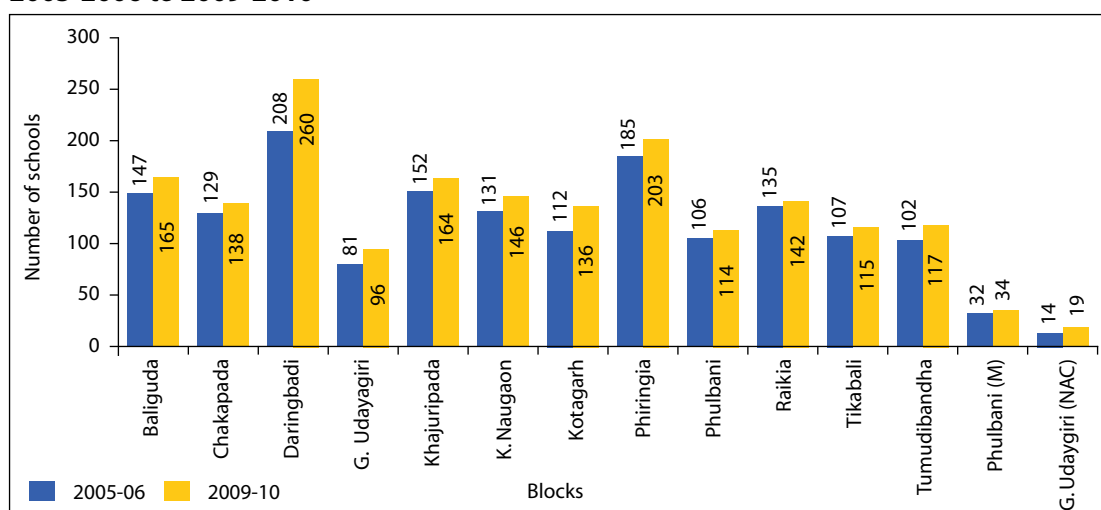
percent against the State average of 70.78 percent. The gender disparity in rural areas is higher than that in urban areas. Table 4.4 analyses rural-urban disparities in literacy rates by gender in 2011.

### 4.3 School Infrastructure & Accessibility in Kandhamal

The district has seen a rapid increase in number of schools and teachers over the years in the primary and upper primary education system. The number of primary and U P schools has gone up from 1,319 in 2004-05 to 1,849 in 2009-10. Chart 4.5 gives block-wise distribution of primary and U P schools in the district for the year 2005-06 and 2009-10. The number of high schools went up from 100 in 2004-05 to 122 in 2007-08.

As per DISE data 2007-08, of the 1,759 schools in the district, 1,169 schools have only primary classes and 430 schools have primary to upper primary classes. Only 22 schools have all sections from primary to high school and 84 and 28 schools have only high school and upper primary classes respectively. The schools are either Government managed or privately run. In each category, there are aided and non-aided schools. Six percent schools in the district have private management. The number of Government aided schools is negligible. About 92.7 percent schools are managed by Government. Annexure 5.3 gives category-wise details of schools by management and block. The district has adequate number of schools at primary and upper primary level and accessibility has

**Chart 4.5 Distribution of Primary and UP Schools by Blocks in Kandhamal: 2005-2006 to 2009-2010**



Source: District Statistical Handbooks and DISE Data, Kandhamal

improved significantly and in accordance with the prescribed norms.

Kandhamal has 4,161 habitations of which 3,593 habitations have access to primary schools within one km distance. Of those habitations that do not have primary schools within one km distance, only 45 habitations are eligible as per SSA norms for establishing primary schools. EGS centres also operate in some of those habitations

that do not have schools within one km. A majority of habitations without schools fall in Tumudibandha, Baliguda, Kotagarh and Daringbadi blocks. Micro planning data from SSA also indicates the accessibility of U P schools. Schools have been established in the eligible habitations under the SSA Plan: 2009-10. Table 4.5 gives school infrastructure and accessibility to primary schools by habitations in different blocks and urban centres in Kandhamal.

**Table 4.5 School Infrastructure & Accessibility by Habitations in Kandhamal**

Sl. No.	Block/Urban Centre	Habitations (Number)	Habitations with Access to PS within 1 km	Habitations without PS within 1 km	Habitations Eligible for PS as per State norms	Habitations not Eligible for PS
1	Baliguda	510	429	22	6	16
2	Chakapada	360	332	6	4	2
3	Daringbadi	467	370	19	8	11
4	G. Udayagiri	100	97	2	2	NA
5	K. Nuagaon	338	309	8	5	3
6	Khajuripada	324	302	NA	NA	NA
7	Kotagarh	240	185	19	4	15
8	Phiringia	660	578	14	4	10
9	Phulbani	255	238	1	1	NA
10	Raikia	256	213	14	NA	14
11	Tikabali	242	220	3	1	2
12	Tumudibandha	341	252	37	10	27
13	G. Udayagiri (NAC)	25	25	NA	NA	NA
14	Phulbani (M)	43	43	NA	NA	NA
	<b>Kandhamal</b>	<b>4,161</b>	<b>3,593</b>	<b>145</b>	<b>45</b>	<b>100</b>

Source: Micro Planning 2008, SSA, Kandhamal, PS = Primary School, NA- Not Available

It may be observed that 93.56 percent of the total habitations have access to U P schools within a distance of three km. Only, 3.48 percent habitations lack UP Schools within the radius of three km. In case of UP schools, the 2:1 ratio of Primary and UP school norm leaves a gap of 84 UP schools. Table 4.6 gives inter-block distribution of UP schools in Kandhamal in 2008. It may be observed that out of 4,161 habitations, 3,893 habitations have UP schools within three km distance and the district observes an average norm of 2.34:1 against the prescribed norm of 2:1 ratio for primary and UP schools. There is a gap of only 114 UP schools.

Access to pre-school education is provided through Anganwadi Centres under Early Childhood Care and Education (ECCE) Programme. There are 963 Anganwadi Centres in the district for education of preschool children (3-5 year age group). This is inadequate in response to the actual necessity of the district. Strengthening ECCE programme and Anganwadi centres will

increase school readiness among children and free the girl child from the burden of sibling care.

The district has several remote areas where schools do not have adequate infrastructure. As per annual plan of the SSA 2007-08, there is a requirement of 380 additional classrooms in 1,133 Government primary schools and 498 additional classrooms in 442 UP schools. 279 schools do not have drinking water facilities, 1,117 schools do not have toilet facilities and 1,328 schools do not have playgrounds. Girls' toilets are not available in 1,287 schools of the total 1,629 primary schools in the district. Toilets, specifically girls' toilets and drinking water facilities are of utmost importance and need to be addressed to ensure a better schooling environment. Annexure 5.4 gives a detailed picture of infrastructure facilities<sup>27</sup>.

The Primary Survey, conducted for this DHDR, also enquired about access to schools and types of schools. Chart 4.6 summarises

**Table 4.6 Distribution of UP Schools & Accessibility by Blocks / Urban Centres: 2008**

Sl. No.	Block/Urban Centre	Habitations (Number)	Habitations with UPS facility in 3 km Area (Number)	Habitations without UPS facility in 3 km Area (Number)	Existing PS (Govt. and Govt. Aided No.)	UPS (Govt. and Govt. Aided, No.)	PS and UPS Ratio	UPS eligible as per 2:1 ratio (No.)	Gap in UPS (No.)
1	Baliguda	510	48	22	87	61	1.4	43.5	NA
2	Chakapada	360	348	6	92	40	2.3	46	6
3	Daringbadi	467	429	19	158	57	2.8	79	24
4	G. Udayagiri	100	96	2	62	22	2.8	31	9
5	K. Nuagaon	338	322	8	101	33	3.1	50.5	18
6	Khajuripada	324	324	NA	112	42	2.7	56	15
7	Kotagarh	240	202	19	88	30	2.9	44	14
8	Phiringia	660	632	14	134	53	2.5	67	15
9	Phulbani	255	253	1	70	35	2.0	35	NA
10	Raikia	256	228	14	92	41	2.2	46	5
11	Tikabali	242	236	3	73	34	2.1	36.5	3
12	Tumudibandha	341	267	37	75	32	2.3	37.5	5
13	G. Udayagiri (NAC)	25	25	NA	9	9	1.0	4.5	NA
14	Phulbani (M)	43	43	NA	16	17	0.96	8	NA
	<b>Kandhamal</b>	<b>4,161</b>	<b>3,893</b>	<b>145</b>	<b>1,176</b>	<b>514</b>	<b>2.3</b>	<b>5.88</b>	<b>84</b>

Source: Micro Planning 2008, SSA, Kandhamal, PS = Primary School, NA- Not Available

<sup>27</sup> See also DISE 2008-09 report

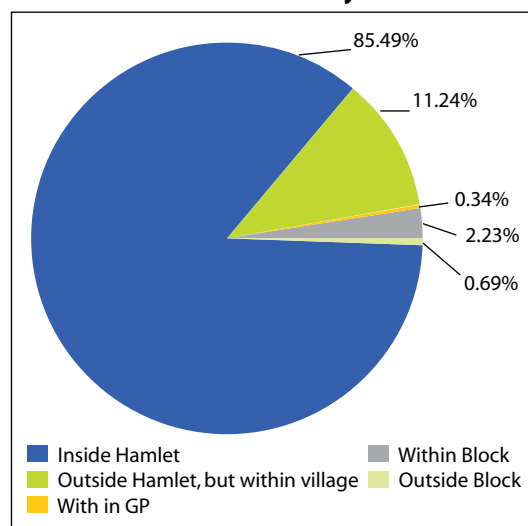


the results of the primary survey as regards children's access to primary schools. It may be observed that 85.49 percent children attended schools within their own hamlets and an additional 11.24 percent attended schools outside their hamlets but within their own villages. The survey results also indicated that 11.78 percent schools were privately managed.

#### 4.4 Teacher Strength

Teacher strength in the district has gone up in line with higher enrolments in the school education system. The number of teachers in primary schools went up to 3,472 in 2006-07 from 2,350 in 2004-05. During the same period, teacher strength in middle schools went down from 1,219 to 985 and for high schools it increased from 803 to 1,036<sup>28</sup>. DISE data suggests that the number of teachers in elementary system including primary and upper primary schools increased from

**Chart 4.6 Access to Primary School**



Source: Primary Survey, DHDR

5,095 in 2006-07 to 5,298 in 2008-09. Table 4.7 gives the distribution of trained teachers in primary and U P schools by blocks in the district in 2006. Percentage of trained teachers in the district went up to 62.5 percent from 36.31 percent in case of primary schools and 27.01 percent in case of U P schools.

**Table 4.7 Distribution of Trained Teachers by Blocks in Kandhamal: 2006**

Sl. No.	Block/Urban Centre	Primary Teacher						Upper Primary Teacher					
		Working Teachers	Trained*	Percentage	Received 60 days training	Total Trained	Percentage	Working Teachers	Trained*	Percentage	Received 60 days training	Total Trained	Percentage
1	Baliguda	346	240	69.35	42	106	30.64	185	146	79.00	39	39	21.08
2	Chakapada	265	167	62.95	39	98	36.98	101	99	98.17	2	2	1.98
3	Daringbadi	511	259	50.60	101	252	49.32	165	108	65.23	57	57	34.55
4	G. Udayagiri	231	156	73.36	23	57	26.76	63	60	95.16	3	3	4.76
5	K. Nuagaon	331	221	66.67	44	110	33.26	114	110	96.49	4	4	3.51
6	Khajuripada	362	250	69.19	45	112	30.94	128	119	93.16	9	9	7.03
7	Kotagarh	218	109	50.22	44	109	50.00	64	59	91.95	5	5	7.81
8	Phiringia	366	235	64.22	52	131	35.79	128	104	81.12	24	24	18.75
9	Phulbani	268	201	74.93	27	67	25.00	102	102	100.00	NA	NA	0.00
10	Raikia	284	213	75.10	28	71	25.00	116	97	83.46	19	19	16.38
11	Tikabali	244	159	65.37	34	85	34.84	93	83	89.41	10	10	10.75
12	Tumudibandha	231	120	51.84	44	111	48.05	89	58	65.26	31	31	34.83
13	G. Udayagiri (NAC)	58	42	73.00	6	16	27.59	67	62	92.52	5	5	7.46
14	Phulbani (M)	114	86	75.00	11	28	24.56	72	70	96.53	2	2	2.78
	<b>Kandhamal</b>	<b>3,811</b>	<b>2,382</b>	<b>62.50</b>	<b>540</b>	<b>1,353</b>	<b>35.50</b>	<b>1,487</b>	<b>1,277</b>	<b>81.44</b>	<b>210</b>	<b>210</b>	<b>14.12</b>

Source: DISE 2008-09, CTS 2006, Kandhamal M=Municipality, \*Trained as per NCTE Guidelines, NA- Not Available

<sup>28</sup> District Statistical Handbook, 2005 and Statistical Abstract of Odisha, 2008

Table 4.8 analyses availability of teachers and Pupil Teacher Ratio (PTR) in blocks of the district. It may be observed that PTR changed from 26 to 27 for primary schools, while it improved from 30 to 20 for U P schools during 2005-2009. Percentage of lady teachers went down from 38 to 29.6 percent for primary schools during 2006-09 and in case of U P schools it remained unchanged at 31 percent during the same period. Training of teachers has been intensified in last four years with support from SSA activities. It is observed that primary teachers are highest in Daringbadi block followed by Phiringia and K. Nuagaon blocks. Trained teachers are more in case of U P schools rather than primary schools. There were 198 single teacher primary schools in the district as per DISE 2007-08 Report. It has been estimated that there is

additional requirement of 553 teachers at primary school level and 18 teachers at UP school level.

#### 4.5 Current Administrative Setup and Efforts for Delivery of Educational Services

The State School & Mass Education Department and ST/SC Development Departments are responsible for imparting education to all communities. In an educational district, school educational activities are monitored by the Inspector of Schools. Kandhamal has been divided into three educational districts: Phulbani, Baliguda and Tikabali. The headquarters of Boudh-Kandhamal Circle is at Phulbani under the administrative control of the Director Elementary Education, Odisha. At

**Table 4.8 Entitlement and Availability of Teachers in Primary School by Block in Kandhamal**

Sl. No.	Block/Urban Centre	Students Enrolment in Govt. and Govt Aided Primary Schools	Entitlement of Teachers at 1:40 ratio	Sanctioned Posts			Working			PTR w.r.t. Sanctioned Posts	PTR w.r.t. Working Posts	Single Teacher Schools after Rationalisation	Gross Entitlement of Addl. Teachers for Priamry Schools
				By State	Under SSA	Total	By State	Under SSA	Total				
1	Baliguda	10,107	28	294	142	436	244	102	346	23	29	19	71
2	Chakapada	5,586	259	303	125	428	164	101	265	13	21	15	24
3	Daringbadi	17,813	504	369	255	624	329	182	511	219	35	30	107
4	G. Udayagiri	4,012	216	160	114	274	167	46	213	15	19	3	1
5	K. Nuagaon	7,905	300	267	93	360	262	69	331	22	1	88	31
6	Khajuripada	6,746	354	314	177	491	217	145	362	16	22	31	25
7	Kotagarh	8,333	230	278	75	353	143	75	218	19	31	40	69
8	Phiringia	11,517	343	398	137	535	325	41	366	16	23	3	92
9	Phulbani	5,580	277	256	160	416	173	95	268	28	43	18	16
10	Raikia	6,989	216	257	92	349	209	76	284	16	20	13	29
11	Tikabali	6,335	239	242	114	356	167	77	244	18	26	10	20
12	Tumudibandha	6,969	254	258	118	376	94	137	231	19	30	NA	68
13	G. Udayagiri (NAC)	1,40	49	67	13	80	33	25	58	13	18	NA	NA
14	Phulbani (M)	2,664	107	35	24	59	66	48	114	45	23	198	NA
	<b>Kandhamal</b>	<b>101,596</b>	<b>3,677</b>	<b>3,498</b>	<b>1,639</b>	<b>5,137</b>	<b>2,592</b>	<b>1,219</b>	<b>3,811</b>	<b>20</b>	<b>27</b>	<b>198</b>	<b>553</b>

Source: DIS, DISE Data 2007-08, Kandhamal, PTR - Pupil Teachers Ratio, NA- Not Available

the block level, Block Development Officer (B.D.O) looks after primary education. Similarly Sub-Inspectors of Schools (S.I.S) in each block supervise primary education. The District Education Administration is responsible for engagement and placement of teachers, school quality improvement and overall departmental administration. The district is divided into educational blocks for better implementation and monitoring of ongoing educational programmes. Each block has Block Resource Centres (BRC) and Cluster Resource Centres (CRC) to execute educational schemes and monitor overall delivery of elementary education. In order to provide pedagogical supports to primary and U P schools, 156 Cluster Resource Centres (CRC) were established since 2003-04. Table 4.9 details the educational administrative set-up in the district.

Only one District Institute of Education & Training (DIET) functions at Tikabali with an annual intake capacity of 50 students for two-year pre-service training. The DIET also conducts in-service training programmes for

untrained existing teachers of the district. It also conducts pedagogy training in the district through District Resource Group (DRG) and Block Resource Group (BRG)<sup>29</sup>.

With a view to accelerate the universalisation of primary education, the State Government has taken several initiatives with support from the Government of India. The Sarva Shiksha Abhiyan (SSA) is one of the most important initiatives to universalise, and improve quality of, primary education. Under this scheme, there is a District Project Office which is the nodal agency to perform all activities entrusted by SSA. The District Project Coordinator (DPC) monitors and guides activities under SSA, which aims at spreading universal elementary education. The DPC is supported by professional staff in planning, tribal development, pedagogy and girl's education. SSA has undertaken multiple initiatives including teachers training, girls' education, education for children with special needs, infrastructure building, teaching-learning material and special schemes like Kasturba Gandhi Balika Vidyalaya (KGBV) and

**Table 4.9 Educational Administrative Structure in Kandhmal: 2008**

Sl. No.	Block/ Urban Area	Educational Blocks	BRC / UBRC (No.)	CRC (No.)	Villages / Wards (No.)	GP (No.)
1	Baliguda	3	3	14	261	14
2	Chakapada	2	3	10	159	10
3	Daringbadi	5	3	24	336	24
4	G.Udayagiri	3	3	8	83	8
5	K. Nuagaon	3	3	11	211	11
6	Khajuripada	3	3	13	245	13
7	Kotagarh	2	3	11	145	11
8	Phiringia	3	3	20	412	20
9	Phulbani	3	3	11	216	11
10	Raikia	3	3	10	148	10
11	Tikabali	2	3	12	143	12
12	Tumudibandha	2	3	9	218	9
13	G.Udayagiri (NAC)	1	0	1	13	NA
14	Phulbani (M)	1	0	2	13	NA
	<b>Kandhmal</b>	<b>36</b>	<b>36</b>	<b>156</b>	<b>2,603</b>	<b>153</b>

Source: DISE Data 2007-2008, Kandhmal, NA- Not Available

<sup>29</sup> One B.Ed College at Phulbani is established in July, 2008 under financial support from ACA, another B.Ed. college is finalized with SC and ST development department

National Programme for Education of Girls at Elementary Level (NPEGEL) aiming at reducing gender gap and disparities among social groups. Salient aspects of these initiatives are summarised below.

#### **4.5.1 Sarva Shiksha Abhiyan (SSA)**

After the District Primary Education Programme (DPEP) of 1994, the Government has launched the "Sarva Shiksha Abhiyan (SSA)" in 2001 to universalise and improve the quality of elementary education through community ownership of elementary education. In order to effectively decentralise the management, it has involved Panchayati Raj institutions, formed School Management Committees, Village and Urban Slum Level Education Committees, Parent-Teacher Associations, Mother Teacher Associations, Tribal Autonomous Councils and other grassroots level structures. The SSA aimed at universalising primary education by 2007 and providing useful and relevant elementary education to all children in the 6-14 year age group by 2010. In order to improve the quality of elementary education, the SSA has emphasised on improving the student teacher ratio, teachers training, academic support, facilitating development of teaching learning material and providing textbooks to children from special focus groups.

The SSA is a historic stride towards achieving the long cherished goal of Universalisation of Elementary Education (UEE) through a time bound integrated approach, in partnership with State and Panchayati Raj Institutions. It recognises the need for improving the performance of the school system and providing community owned quality elementary education in mission mode. It also envisages bridging the gender and social gaps in literacy levels. Some of the features in SSA include:

- (i) Computer Aided Education
- (ii) Tribal Education
- (iii) Education for Children with Special Need
- (iv) Pedagogical Improvement
- (v) Bridge Course for out of School Children
- (vi) Planning and Management
- (vii) School Infrastructure Improvement
- (viii) Girls' Education

The components of SSA include physical infrastructure, initiatives to make education more inclusive through schemes for Children with special needs, girl child and tribal communities; schemes for pedagogical improvement and teachers training. The infrastructure support component include construction of new primary schools, additional classrooms in existing schools, drinking water facilities, toilets for boys and girls and boundary walls for schools among others. The District Information on School Education (DISE) data suggests a requirement of 99 new primary schools, additional classrooms in 320 schools, drinking water in 227 schools, toilets in 981 schools, ladies toilets in 1,287 schools and boundary wall in 628 schools as per the micro planning by SSA in 2007. These requirements were expected to be met during 2008-10.

#### **4.5.2 Girls' Education: Kasturba Gandhi Balika Vidyalaya (KGBV)**

KGBV aims to bring back dropout and out of school girls into the educational fold. The KGBV implementation in Kandhamal started during 2005-06. The objective of KGBV is to ensure access and quality education to girls of disadvantaged groups of society by setting up residential schools at Upper Primary level. The components of the scheme include providing infrastructure, procurement of teaching learning materials, establishment of appropriate system for providing academic support, monitoring and evaluation, motivating and preparing

girls and their families to attend residential schools through motivational camps.

One KGBV was sanctioned for Tikabali block in the year 2005-06 and five more KGBV were sanctioned during 2006-07. In addition, students in KGBV were also imparted vocational and life skill training. KGBV also offers regular remedial teaching to ensure that overage girls are equipped

with sufficient knowledge to compete in regular classes. Table 4.10 gives the progress of implementation of KGBV scheme in Kandhamal. About 550 girls of BPL families were enrolled under this scheme in 2007-08. Of these, 157 girls belonged to SC category, 360 to ST category and 33 to OBC category. The scheme has had a very positive impact. Some case studies of KGBV students are described in Box 6.

### Box : 6 Case studies under KGBV

#### Education Changes Lives: Kasturba Gandhi Balika Vidyalaya (KGBV)

**Case 1:** Kumari Samuka Diggall, daughter of Sri Sukadeva Diggall of village Katrikia, Baliguda, dropped out of school after Std.V and supported her father in livelihood activities. Under a drive to enroll out of school girls in KGBV, local BRCC and CRCC met her father and came to her house to discuss about enrolment in KGBV, Dhiasahi, Baliguda. Her father was convinced by the residential facility after visiting the KGBV and got her admitted during December 2008.

Life has since then changed for little Samuka. KGBV provides an atmosphere of staying together with friends, studying after school hours and participating in co-curricular activities. Being from a very poor family the facilities at KGBV is a dream come true for Samuka. The school provides healthy food including snacks and meals besides dress materials and daily use items like shampoo and soap.

The school provides special emphasis on experimental learning, reading, writing and listening skills, life skill training with specific attention to each student. The inmates have access to television and are able to watch education programmes. Basic health facilities are provided in the school and anganwadi worker takes care of children and takes them to the hospital if needed. The girls are also given remedial teaching in morning and evening time. Samuka now aims to complete her schooling and to become a successful lady in future.

**Case 2:** Chandrika dropped out for two years and was engaged in collecting firewood from forests for her family. She comes from a very poor family, but her uncle is little forward looking. He convinced her father and Chandirka joined Tikabali KGBV. Within one year, she has adapted to school environment, her communication skills are developed and she can sign in English. The KGBV has provided her a platform to get back to school and offers opportunity to learn computer, watch TV, develop a community feeling and get trained in life skill building.



**Table 4.10 Status of Implementation of KGBV in Kandhamal: 2008**

Sl.No.	Name of the Block	Year of opening	Name of the school
1	Tikabali	2005-06 (Phase-I)	Tikabali
2	Khajuripada	2006-07 (Phase-II)	Govt. UPS, Khajuripada
3	Phiringia	2006-07 (Phase-II)	Nodal UPS, Phiringia
4	K. Nuagaon	2006-07 (Phase-II)	Block colony PS, K. Nuagaon
5	Tumudibandha	2006-07 (Phase-II)	Medical colony PS, Tumudibandha
6	Kotagarh	2006-07 (Phase-II)	Govt. High School, Kotagarh

Source: Office of DPC, SSA, Kandhamal, 2008

#### **4.5.3 National Programme for Education of Girls at Elementary Level (NPEGEL)**

NPEGEL is operational in all educationally backward blocks, where the rural female literacy is below national average and gender gap in literacy is more than the national average. It aims at promoting girls' education including creating model cluster schools (MCS), life skill education training, bridge course centres, remedial coaching, construction of additional classrooms and educational tours. All 12 blocks in Kandhamal are covered under NPEGEL. The activities under NPEGEL include community mobilisation for promotion of girls' education, teachers' sensitisation, awareness creation and targeting enrolment of dropouts, overage and out of school girls, provision of better infrastructure at model cluster schools including toilets and classrooms. The scheme also supports running of Early Childhood Care and Education Centres (ECCE), distributing school uniform to girl children and awards to schools and teachers. In select pockets, NGOs have been involved for proper orientation and review of NPEGEL in the district.

#### **4.5.4 Inclusive Education for Disabled (IED)**

The district project office for SSA has a Coordinator for Inclusive Education for Disabled (IED) intervention. One District

Resource Group (DRG) and 12 Block Resource Groups (BRG) have been constituted to provide resource support for successful implementation of IED activities in the district. In the year 2007-08, 3,844 children with special needs (CWSN) were identified through anganwadi workers (AWW) and teachers. All children were medically assessed to know the exact nature of their type and degree of disability. Several training camps, sensitisation programmes, parents counselling and medical examinations are being conducted under this scheme to support CWSN. The activities for promotion of inclusive education include training on classroom management for CWSN, use of special TLM, speech therapy centres, capacity building of DRG/ BRG/ teachers/anganwadi workers, medical assessment camps, and distribution of aid/appliances for physically challenged children. SSA adopts "Zero Rejection" policy, so that no child is left out of the education system. The objective is to provide inclusive education to as many children with special needs in general schools. The remaining children with disabilities are covered through alternative mode available under SSA including home based education and bridge course centres. During 2007-08 the district identified 3,844 children out of which 3,732 have been enrolled in schools. Further, 112 would be provided home based education and bridge course by Block Resource Teacher (BRT) of the concerned block.

## 4.6 Student Enrolments

There has been a rapid growth in enrolments under school education system in Kandhamal over the years. Table 4.11 summarises a status of enrolments of boys and girls in primary schools in different blocks and urban areas from 2006-07 to 2008-09.

It may be observed from Table 4.11 that enrolment of children in primary schools increased from 71,726 (with 37,538 boys and 34,188 girls) in 2006-07 to 118,860 (with 60,622 boys and 58,238 girls) in 2008-09. The enrolments increased by 65 percent in a period of three years. The gender gap in enrolments has also reduced. There were only 717 girls per 1000 boys enrolled in 2007-08, but this increased to 961 girls per 1,000 boys in 2008-09. About 51 percent boys and 49 percent girls were enrolled in primary schools in 2008-09. There are also variations in enrolments across blocks. Though absolute numbers of the enrolled students do not provide

a clear picture, it may be observed that Kotagarh deserves special attention to increase enrolments of both boys and girls of all communities.

Table 4.12 analyses student enrolments in U P Schools by blocks and urban centres in Kandhamal from the year 2006-07 to 2008-09. It may be observed that student enrolments increased from 21,804 (with 11,862 boys and 9,942 girls) in 2006-07 to 28,655 (with 15,377 boys and 13,278 girls) in 2008-09. There was a growth of 31.4 percent in enrolments from 2006-07 to 2008-09. For 2008-09, total enrolment in UP schools at 28,655 had 53.66 percent boys and 46.34 percent girls. There is, therefore, need for further efforts to increase girls enrolments in UP schools. There are also variations in student enrolments across blocks. Kotagarh blocks again needs special attention to improve enrolments of boys and girls of all communities at UP school levels.

The district also saw growth in secondary and college education over the years.

**Table 4.11 Student Enrolments in Primary Schools by Block in Kandhamal: 2006-2009**

Enrolment (Children in 6-11 Year)										
Sl. No.	Block/Urban Centres	2006-07			2007-08			2008-09		
		B	G	T	B	G	T	B	G	T
1	Baliguda	3,021	2,500	5,521	6,116	5,337	11,453	6,393	6,064	12,457
2	Chakapada	2,550	2,657	5,207	3,071	3,056	6,127	3,227	3,317	6,544
3	Daringbadi	7,668	7,261	14,929	9,707	9,157	18,864	9,952	9,900	1,9852
4	G. Udayagiri	2,103	1,753	3,856	2,414	1,995	4,409	2,196	2,028	4,224
5	K. Nuagaon	2,323	2,158	4,481	4,216	4,014	8,230	4,455	4,512	8,967
6	Khajuripada	1,245	1,094	2,339	3,705	3,032	6,737	3,899	3,608	7,507
7	Kotagarh	1,032	858	1,890	4,271	3,682	7,953	4,854	4,385	9,239
8	Phiringia	4,858	4,431	9,289	5,961	5,572	11,533	6,901	6,556	1,3457
9	Phulbani	2,516	2,246	4,762	2,851	2,718	5,569	3,022	3,252	6,274
10	Raikia	3,183	3,122	6,305	3,860	3,665	7,525	4,240	4,024	8,264
11	Tikabali	2,074	1,704	3,778	3,446	2,976	6,422	3,868	3,610	7,478
12	Tumudibandha	2,342	1,868	4,210	3,805	3,261	7,066	4,452	3,971	8,423
13	G. Udayagiri (NAC)	695	835	1,530	886	991	1,877	771	925	1,696
14	Phulbani (M)	1,928	1,701	3,629	2,449	1,937	4,386	2,391	2,087	4,478
	<b>Kandhamal</b>	<b>37,538</b>	<b>34,188</b>	<b>71,726</b>	<b>56,758</b>	<b>51,393</b>	<b>1,08,151</b>	<b>60,622</b>	<b>58,238</b>	<b>1,18,860</b>

Source: SSA, Kandhamal (B=boys, G=Girls, T=Total, M=Municipality, NAC= Notified Area Council)

Middle school enrolments have come down from 32,048 to 30,000. Total enrolments in secondary schools went up from 15,781 in 1996-1997 to 18,135 during 2008-09. Kotagarh, Tumudibandha, Chakapada and Phulbani blocks had lower percentages of students in Grade X in 2008-09. The number of secondary students by classes in last three years has remained at similar levels. Annexure 5.1 gives the detail of enrolments in high schools from 2006-07 to 2008-09 by class and gender. The district has limited opportunities for higher education. There were 16 colleges in Kandhamal with 221 lecturers and readers and 3,865 students in 2005. Table 4.13 gives details of block-wise number of colleges, teacher strength and student enrolments in 2005. About 26.26 percent of the total college students were girls and 27.2 percent belonged to ST community. The district does not have any technical colleges other than an ITI at Phulbani. With the new policy on a vocational education, additional Industrial

Technical Institutes are being planned in the district.

#### 4.6.1 Enrolments by Social Groups

Chart 4.7 analyses the growth of SC and ST enrolments by gender in elementary schools. As per 2008-09 DISE data, 57.4 and 24.2 percent children belonged to ST and SC communities respectively in primary enrolments. Out of the total enrolments in UP schools, 27.1 percent belonged to SC and 48.86 percent to ST communities. There has been rapid growth of primary enrolments in ST (70.0 percent) and SC (75.3 percent) children during 2006-2009.

In case of upper primary enrolments, the growth has been moderate for ST (23.6 percent) as against a high growth for SC children (53.4 percent). It is interesting to note that in all social group enrolments, growth for girls is found to be higher than that for boys. This can be attributed to intense community mobilisation and special schemes for girls in the last few years.

**Table 4.12 Student Enrolments in U P Schools by Blocks in Kandhamal: 2006-2009**

Enrolment (Children in 11-14 Year)										
Sl. No.	Block/Urban Centres	2006-07			2007-08			2008-09		
		B	G	T	B	G	T	B	G	T
1	Baliguda	1,589	1,268	2,857	1,668	1,238	2,906	1,925	1,571	3,496
2	Chakapada	618	568	1,186	817	792	1,609	821	893	1,814
3	Daringbadi	1,804	1,440	3,244	2,097	1,881	3,978	1,996	1,663	3,659
4	G. Udayagiri	565	506	1,071	650	555	1,205	788	680	1,468
5	K. Nuagaon	1,036	855	1,891	1,335	1,101	2,436	1,157	1,061	2,218
6	Khajuripada	273	297	570	945	739	1,684	1,127	633	1,960
7	Kotagarh	411	283	694	980	722	1,702	692	517	1,209
8	Phiringia	1,134	887	2,021	1,692	1,353	3,045	1,494	1,239	2,733
9	Phulbani	674	527	1,201	963	724	1,687	845	700	1,545
10	Raikia	1,059	953	2,012	1,134	1,008	2,142	1,385	1,359	2,744
11	Tikabali	990	845	1,835	945	850	1,795	933	758	1,691
12	Tumudibandha	765	597	1,362	920	645	1,565	819	728	1,547
13	G. Udayagiri (NAC)	224	332	556	272	470	742	421	546	967
14	Phulbani (M)	720	584	1,304	982	631	1,613	874	730	1,604
	<b>Kandhamal</b>	<b>11,862</b>	<b>9,942</b>	<b>21,804</b>	<b>15,400</b>	<b>12,709</b>	<b>28,109</b>	<b>15,377</b>	<b>13,278</b>	<b>28,655</b>

Source: SSA, Kandhamal (B=boys, G=Girls, T=Total, M=Municipality, NAC= Notified Area Council)



#### 4.6.2 Gender Disparities in Enrolments

With a view to bridging the gender gap in literacy, girls' education is given importance in the district. This will act as a stimulus to improve overall education status in the long run. Gender Parity Index (GPI) refers to the proportion of girls to boys at any specific level of education like primary or upper primary. Schemes like NPEGEL and KGBV have helped in improving Gender Parity Index. The GPI

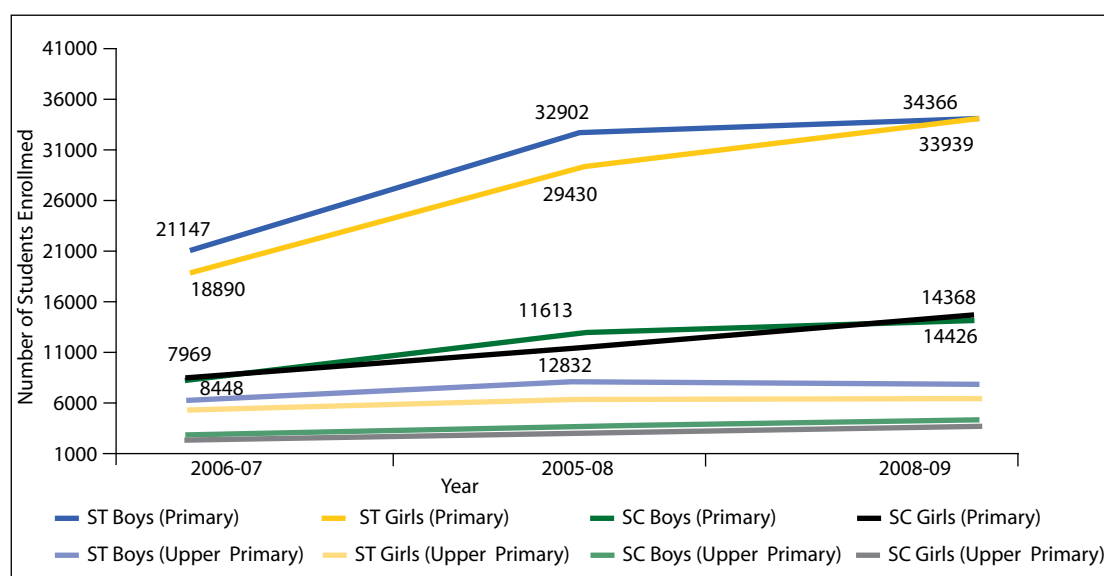
for primary schools during 2007-08 was 0.96 as against a GPI of 0.91 during 2004-05. For U P schools, the GPI improved from 0.79 in 2004-05 to 0.86 in 2007-08. For secondary schools, the GPI improved marginally from 0.70 during 2004-05 to 0.73 in 2008-09. The GPI value indicates lower participation of girls at higher levels of education. The GPI for college education is found to be only 0.43 during 2004-05. The block-wise

**Table 4.13 Number of Colleges, Enrolment and Teachers by Blocks in Kandhamal: 2005**

Sl. No.	Year/Block ULB	Number of Colleges			No. of Lecturers/Readers			Number of Students		
		Man	Women	Total	Man	Women	Total	Boys	Girls	Total
1	Baliguda	1	NA	1	21	NA	21	284	54	338
2	Chakapada	3	NA	3	22	2	24	184	79	263
3	Daringbadi	2	NA	2	10	2	12	235	71	306
4	G.Udayagiri	NA	NA	NA	NA	NA	NA	NA	NA	NA
5	K.Nuagaon	1	NA	1	5	NA	5	46	28	74
6	Khajuripada	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	Kotagarh	1	NA	1	10	2	12	66	21	87
8	Phiringia	2	NA	2	11	2	13	236	98	334
9	Phulbani	NA	NA	NA	NA	NA	NA	NA	NA	NA
10	Raikia	1	NA	1	16	2	18	204	65	269
11	Tikabali	1	NA	1	14	1	15	226	63	289
12	Tumudibandha	1	NA	1	8	4	12	90	42	132
13	G.Udayagiri (NAC)	1	NA	1	19	4	23	369	125	494
14	Phulbani (M)	1	1	2	63	3	66	910	369	1,279
	<b>Kandhamal</b>	<b>15</b>	<b>1</b>	<b>16</b>	<b>199</b>	<b>22</b>	<b>221</b>	<b>2,850</b>	<b>1,015</b>	<b>3,865</b>

Source: District Statistical Handbook, Kandhamal, 2005, NA- Not Available

**Chart 4.7 SC & ST Enrolments in Elementary System in Kandhamal: 2006-2009**



Source: SSA, Kandhamal

GPI trends for primary enrolments from 2006-07 to 2008-09, given in Chart 4.8, suggests improvement in GPI over the years. Chakapada, K.Nuagaon and Phulbani blocks report higher GPI in comparison to other blocks during 2008-09.

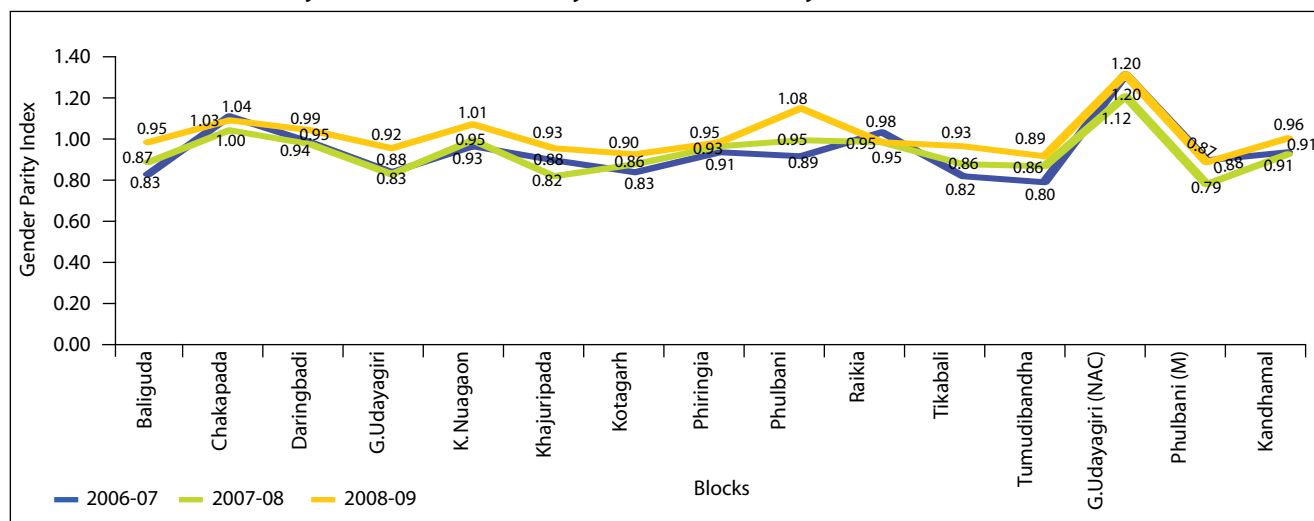
same period. The low GPI figures for upper primary enrolments suggest lower transition rate for girls from primary to upper primary levels.

### 4.6.3 Gross and Net Enrolment Ratios (GER and NER)

Chart 4.9 gives the Gender Parity Index trends for upper primary enrolments from the year 2006-07 to 2008-09. Overall, disparity in enrolments has been found to be declining. The GPI was higher than 0.8 in all blocks for all the years. In 7 out of 12 blocks and two urban areas, the GPI was less than 0.9 during 2008-09. Khajuripada and Kotagarh blocks show GPI of less than 0.8 during the

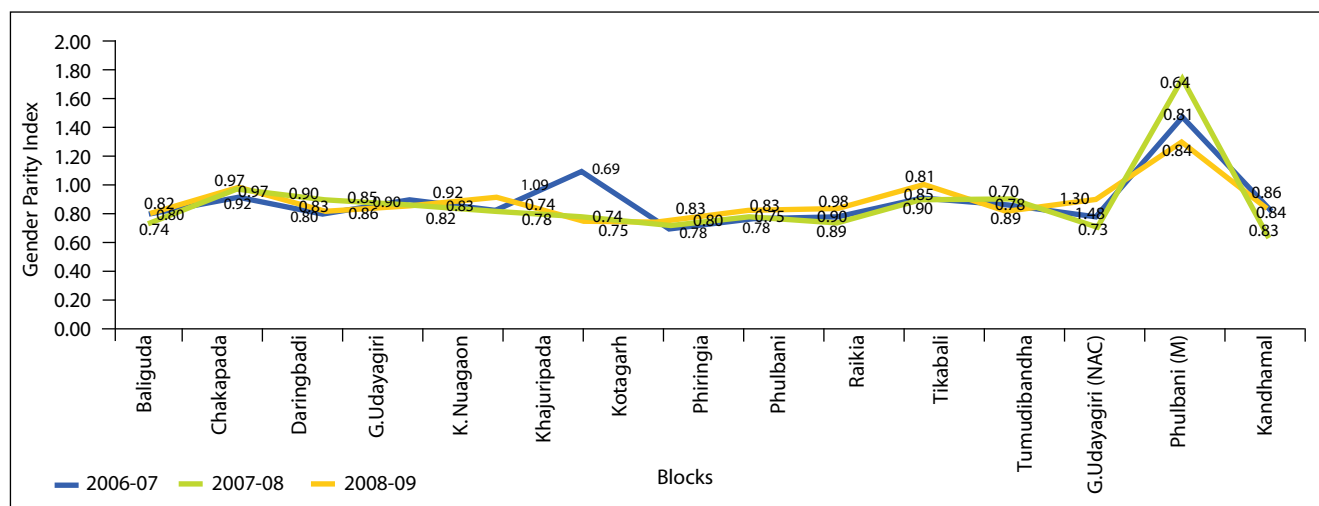
The absolute numbers of student enrolments provide a rough indication of overall expansion of elementary education. However, they tell us little about enrolment position with regard to total eligible child population. Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) are measures that capture the number of children enrolled at a specific education level or

**Chart 4.8 Gender Parity Index (GPI) Trends by Blocks for Primary Enrolments: 2006-2009**



Source: SSA, Kandhamal

**Chart 4.9 Gender Parity Index (GPI) Trends by Blocks for Upper Primary Enrolments: 2006-2009**



Source: SSA, Kandhamal

age group out of total eligible children in a particular age group. GER for primary level is the ratio of children in class I-V to total child population in 6-11 year age group, while NER is the ratio of children in schools in the age group of 6-11 year and total children population in 6-11 year age group. The GER for primary level in Kandhamal has shown a decline from 108.66 in 2006-07 to 94.38 in 2008-09, while NER has improved from 81.45 in 2006-07 to 90.96 in 2008-09. At the upper primary level, NER has shown significant improvement from 41.87 in 2006-07 to 79.73 in 2008-09.

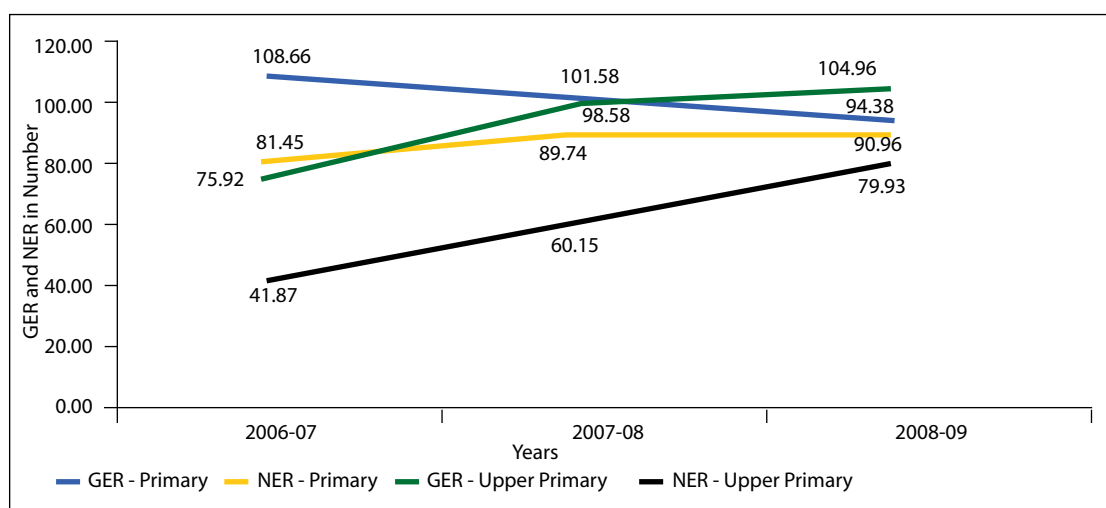
The enrolment trends at primary and upper primary levels indicate that NER at primary level is clearly higher than that at upper primary levels, though the difference has reduced significantly over the years. Chart 4.10 gives the trends of GER and NER for the district from 2006-07 to 2008-09. It may be observed that NER at primary and upper levels has been increasing over the years. Table 4.14 analyses GER and NER at primary (6-11 year age group) and upper primary (11-14 year age group) levels in different blocks and urban centres in the district from 2006-07 to 2008-09. It may be observed from Table 4.14 that the GER and NER vary across the blocks and urban centres. Baliguda,

Daringbadi and Phiringia, Tumudibandha and Kotagarh blocks have reported very low GER and NER, while Phulbani block and urban centres have shown higher NER at upper primary levels. The NER is higher at primary levels in G.Udayagiri and Phulbani urban areas.

#### 4.6.4 Dropout Rates

On the basis of DISE report, Table 4.15 analyses trends of dropout rates both at primary (i.e., 6-11 year age group) and upper primary levels (i.e., 11-14 year age group) from 2006-07 to 2008-09 in different blocks and urban centres in Kandhamal. It may be observed from table 4.15 that dropout rates have come down significantly from 2006-07 to 2008-09. The dropout rate of 5.70 percent in 2006-07 has come down to 1.45 percent in 2008-09 at primary level for the district. Similarly, dropout rates at upper primary levels have come down from 19.77 percent in 2006-07 to 6.78 percent in 2008-09 in the district. Table 4.15 also suggests that there are wide variations in dropout rates across blocks and urban centres. However, good progress has been observed in arresting dropout rates across all blocks and urban centres both at primary and upper primary levels in Kandhamal. Baliguda, Tikabali

**Chart 4.10 GER and NER Trends in Kandhamal: 2006-2009**



Source: SSA, Kandhamal

**Table 4.14 GER and NER by Blocks and Urban Centres in Kandhamal: 2006-2009**

Sl. No.	Block/Urban Centres	2006-07				2007-08				2008-09			
		6-11 year Children	11-14 year Children	6-11 year Children	11-14 year Children	6-11 year Children	11-14 year Children	6-11 year Children	11-14 year Children	6-11 year Children	11-14 year Children	6-11 year Children	11-14 year Children
1	Baliguda	139.23	75.68	43.82	19.57	93.44	89.76	92.14	52.90	94.42	89.97	102.56	78.76
2	Chakapada	97.22	85.11	132.84	77.12	95.69	88.16	120.21	72.17	94.25	92.56	108.94	84.31
3	Daringbadi	105.97	85.02	76.24	44.33	104.76	191.99	98.03	59.75	97.09	92.87	97.66	74.44
4	G.Udayagiri	96.15	84.68	141.25	87.40	93.32	86.46	133.85	78.33	95.98	92.85	109.98	82.50
5	K.Nuagaon	90.81	80.53	13.99	89.43	101.67	90.04	299.16	63.06	93.13	90.12	111.52	81.90
6	Khajuripada	127.78	82.93	72.89	37.01	98.76	89.24	106.86	64.02	96.13	93.52	102.65	84.00
7	Kotagarh	109.79	86.59	85.73	47.12	107.73	92.18	52.16	33.43	96.91	92.31	64.84	49.22
8	Phiringia	118.98	77.17	25.20	11.54	103.36	90.48	86.22	56.28	94.08	90.20	99.02	73.98
9	Phulbani	101.27	83.34	69.37	40.21	97.44	88.24	108.90	69.29	91.33	89.87	118.85	89.60
10	Raikia	101.06	83.06	102.11	57.07	99.41	88.57	118.90	69.24	94.75	90.84	110.29	86.66
11	Tikabali	89.13	75.37	148.73	86.87	99.28	89.28	105.35	64.49	91.00	89.60	123.00	87.32
12	Tumudibandha	101.10	81.35	102.28	60.56	108.94	91.52	70.09	40.87	97.51	91.70	83.98	65.30
13	G.Udayagiri(NAC)	123.76	75.02	66.32	32.31	93.78	84.80	109.36	67.64	91.36	88.36	115.64	94.24
14	Phulbani (M)	115.60	74.24	32.01	13.74	91.14	83.09	17.92	72.64	82.84	82.65	137.03	95.74
	<b>Kandhamal</b>	<b>108.66</b>	<b>81.45</b>	<b>75.92</b>	<b>41.87</b>	<b>101.58</b>	<b>89.74</b>	<b>98.58</b>	<b>60.15</b>	<b>94.38</b>	<b>90.96</b>	<b>104.96</b>	<b>79.73</b>

Source: SSA, Kandhamal (M=Municipality, NAC= Notified Area Council)

and Tumudibandh blocks reported high dropout rates ranging from 12.72 percent to 16.36 percent at primary levels in 2006-07. In all these and other blocks, dropout rates at primary level got reduced to less than two percent in 2008-09.

It may also be observed from Table 4.15 that Baliguda, Phiringia, Raikia, Khajuripada, Daringbadi, Kotagarh and Tumudibandha blocks and both urban centres had reported very high dropout rates ranging from 44.35 percent to 14.04 percent at upper primary

**Table 4.15 Dropout Rates at Primary and UP Levels by Blocks and Urban Centres: 2006-2009**

Sl. No.	Block/Urban Centres	Dropout Rates among Children					
		2006-07		2007-08		2008-09	
		6-11 year	11-14 year	6-11 year	11-14 year	6-11 year	11-14 year
1	Baliguda	14.05	37.914	1.14	7.50	1.92	6.45
2	Chakapada	1.91	1.60	0.49	4.97	1.29	4.97
3	Daringbadi	3.46	15.91	0.92	4.12	0.92	4.12
4	G.Udayagiri	0.64	1.87	0.09	0.50	0.09	0.50
5	K.Nuagaon	6.36	1.62	0.68	5.54	0.68	5.54
6	Khajuripada	3.38	17.35	0.85	4.87	0.85	4.87
7	Kotagarh	9.92	14.04	2.44	20.80	2.44	20.80
8	Phiringia	5.39	29.83	1.53	8.80	1.53	8.80
9	Phulbani	2.96	15.44	0.75	3.20	0.75	3.20
10	Raikia	3.00	18.57	0.62	2.80	0.62	2.80
11	Tikabali	12.72	2.61	0.51	4.85	0.51	4.85
12	Tumudibandha	16.36	15.51	1.914	9.90	1.91	9.90
13	G.Udayagiri(NAC)	0.88	30.74	1.12	3.77	1.12	3.77
14	Phulbani (M)	1.73	44.35	0.27	2.85	0.27	2.85
	<b>Kandhamal</b>	<b>5.70</b>	<b>19.77</b>	<b>1.03</b>	<b>6.18</b>	<b>1.45</b>	<b>6.78</b>

Source: DISE 2006-2007 to 2008-2009, Kandhamal (M=Municipality, NAC= Notified Area Council)

levels in 2006-07. The dropout rates at upper primary level have come down to single digits in all cases. Only Kotagarh block reported poor performance in terms of dropout rates that are above two percent at primary level and of the order of 20.80 percent at upper primary level in 2008-09 as may be seen from Chart 4.11 that depicts dropout rates at primary and upper primary levels for the year 2008-09. Increasing awareness among parents, intensive community mobilisation and further strengthening of schemes like tribal residential schools particularly in poorly performing blocks may help in showing higher enrolments and lower dropout rates in the district.

#### 4.6.5 Repetition and Completion Rates

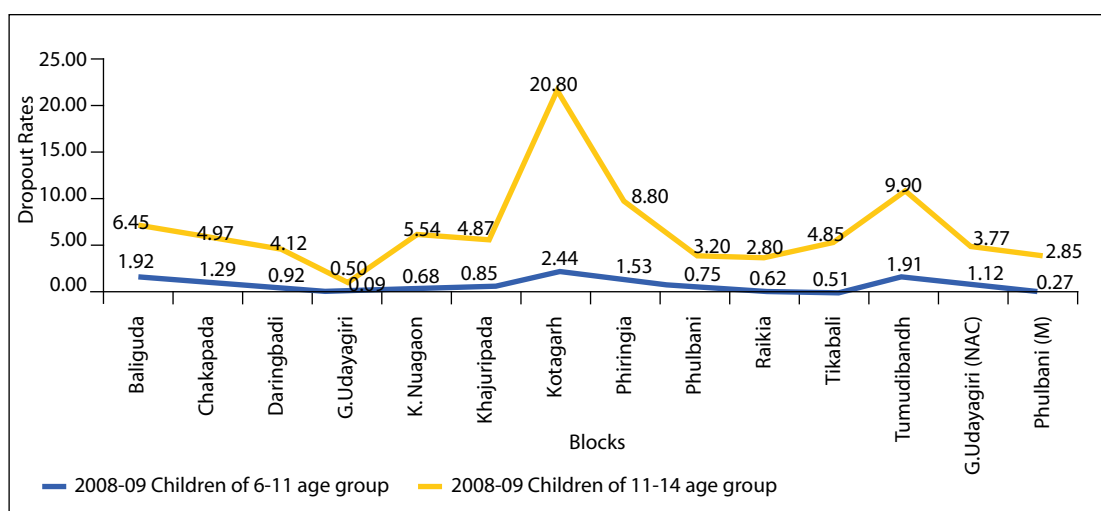
As per DISE report, Table 4.16 analyses repetition rates both<sup>30</sup> at primary (6-11 year age group) and upper primary (11-14 year age group) in different blocks and urban centres in the district from 2006-07 to 2008-09. It may be observed that the repetition rate at primary level was 12.68 percent in 2006-07 and has come down to 9.38 percent in 2008-09 in the district. Similarly, the repetition rate at upper primary level was 6.08 percent in 2006-07

and came down to 3.31 percent in 2008-09 in the district. There are also wide variations in repetition rates across blocks and urban centres. The repetition rate is reported higher among children at primary level than at upper primary level. Kotagarh, Raikia, Daringbadi and Phiringia blocks have reported higher repetition rates at primary level.

The completion rate<sup>31</sup> and attendance percentage, as per DISE data, are 67.01 and 68.29 percent respectively. Kotagarh, Phiringia and Daringbadi blocks have reported completion rate of less than 60 percent. Both urban areas have reported highest completion as well as attendance rates. Chart 4.12 gives completion and attendance rates in different blocks and urban centres of the district as per DISE report 2007-08 and SSA sample survey, 2006-07.

As per SSA records students graduating from primary systems increased by 19.84 percent, from 13,871 in 2006-07 to 16,624 in 2008-09. DISE also gives a transition rate<sup>32</sup> from primary to upper primary levels. Chart 4.13 analyses transition rates by blocks and urban centres from 2006-07

**Chart 4.11 Comparison of Dropout Rates at Primary and UP Levels by Blocks: 2008-2009**



Source: DISE 2008-2009, Kandhamal

<sup>30</sup> Overall Repetition rate is the percentage of students who repeat the same grades (primary or secondary classes) in the next year (t+1) to the total number of students enrolled in the original grades in the base year (t)

<sup>31</sup> Completion Rate at primary level is calculated as the number of children completing Std V of the total students who joined Std. I. It is calculated by Cohort study in randomly selected Sample Schools

<sup>32</sup> Transition rate from primary to upper primary level is the percentage of primary enrolled student who get admitted in UP schools

**Table 4.16 Repetition Rates at Primary and Upper Primary Levels by Blocks: 2006-2009**

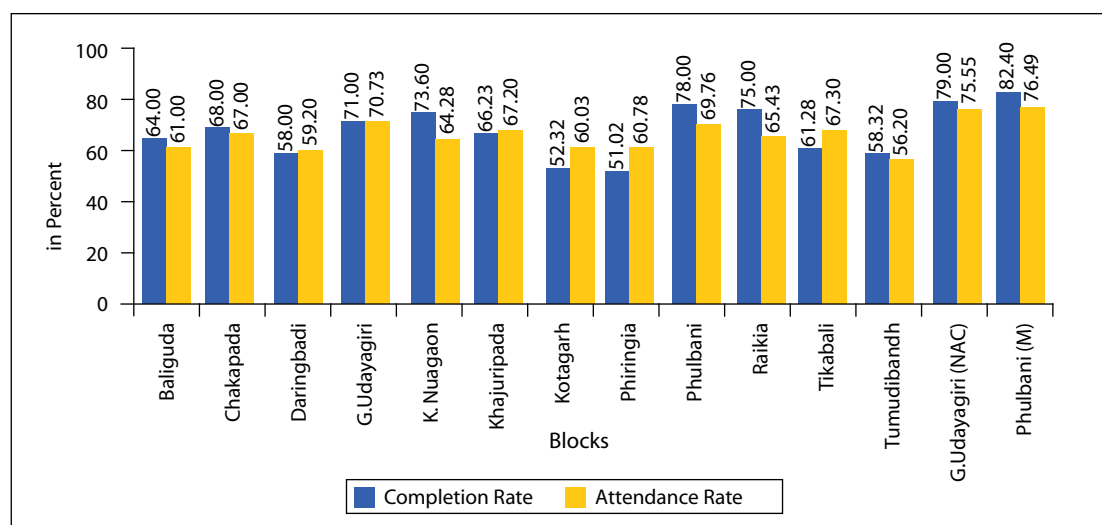
Sl. No.	Block/Urban Centres	Dropout Rates among Children			
		2006-07		2008-09	
		6-11 year	11-14 year	6-11 year	11-14 year
1	Baliguda	16.07	7.76	6.20	7.17
2	Chakapada	10.90	1.87	4.05	1.46
3	Daringbadi	18.06	3.89	16.14	18.62
4	G.Udayagiri	22.23	3.54	4.50	1.00
5	K.Nuagaon	12.39	8.75	9.27	5.83
6	Khajuripada	18.12	4.85	8.52	3.14
7	Kotagarh	18.20	5.15	14.21	9.19
8	Phiringia	22.29	9.04	12.14	5.08
9	Phulbani	8.64	6.32	5.08	2.52
10	Raikia	14.05	5.05	12.65	9.21
11	Tikabali	15.05	2.15	6.84	1.34
12	Tumudibandha	15.20	4.52	16.88	6.63
13	G.Udayagiri (NAC)	10.36	18.09	3.44	2.45
14	Phulbani (M)	2.02	9.13	3.44	2.15
	<b>Kandhamal</b>	<b>12.68</b>	<b>6.08</b>	<b>9.38</b>	<b>3.31</b>

Source: DISE Data 2006-2009, Kandhamal

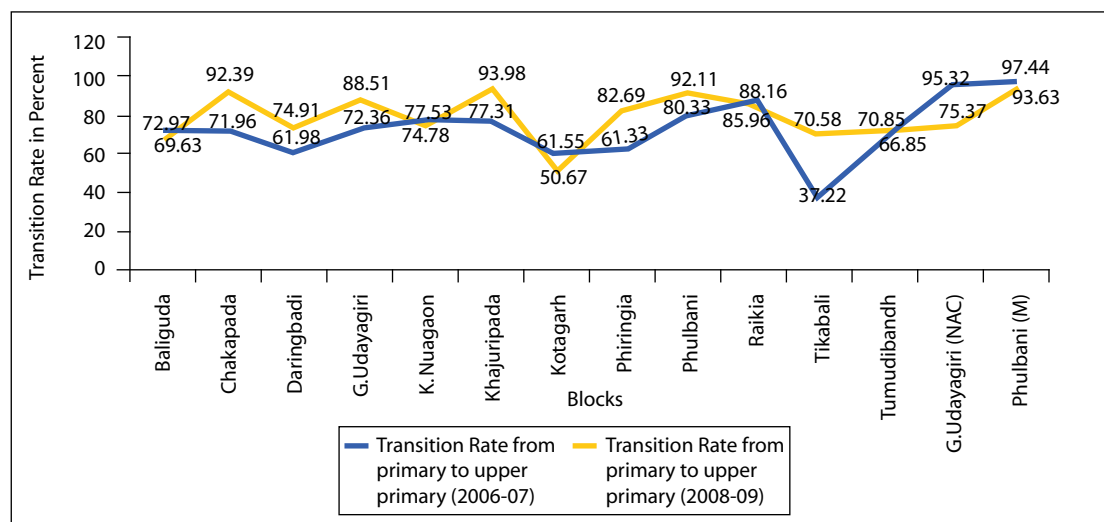
to 2008 - 09. It may be observed that the transition rate has improved from 72.34 percent in 2006-07 to 78.32 percent in 2008-09. Daringbadi, Tumudibanda, K.Nuagaon and Tikabali have transition rates less than 75 percent. Kotagarh reports the lowest transition rate of 50.67 percent.

The performance of the district at the high school examination compares poorly with the State averages. The pass percentage at class X for the year 2005-06 was only 35.07 percent against the State average of 55.36 percent. In Kandhamal, pass rates for boys and girls were 37.73 and 31.57 percent respectively.

**Chart 4.12 Completion and Attendance Rates by Blocks: 2007-2008**



Source: DISE Data 2007-2008 / Sample survey 2006-2007, Kandhamal

**Chart 4.13 Transition Rates by Blocks in Kandhamal: 2006-2009**

Source: DISE Data 2006-2009, Kandhamal

The gender gap in high school pass rates is 6.16 percentage points which is 1.25 percentage points higher than the State level.

Quality of elementary education in the district is a matter of concern. The completion rate (i.e., the percentage of students joining Class I and completing primary level) at the primary level is 67.01 percent. The transition rate from primary to Upper Primary level is 78 percent. This shows that the system is unable to retain students because of lack of quality education and disinterest of students and parents. It would be helpful to have more residential schools where remedial teaching can be imparted and, if possible, with an alternative curriculum for overage and tribal children with instructions offered in tribal languages.

#### 4.6.6 Out of School Children

As per Odisha Child Census 2005, the absolute number of out of school children was 14,698. It was further ascertained that 45 percent of out of school children never enrolled while 55 percent children dropped out. The district has been able to reduce number of out of school children from 14,698 in 2005 to 5,251 in 2007-08 as per SSA micro

planning 2007-08. This percentage of out of school children in 6-11 year age group came down from 9.10 to 2.66 percent and in 11-14 year age group from 26.31 to 7.36 percent. The distribution across age has, however, remained skewed towards elderly children in the age group of 11-14 year indicating higher dropouts at the upper primary level. The percentage of out of school children in the age group of 11-14 year was about 50 percent during 2005 and it came down to 43 percent in 2007-08. The gender disparities are, however, not very high with 51 percent out of school children being girls. Detailed age-wise distribution of out of school children is given in Annexure 5.2.

Table 4.17 gives the distribution of out of school children by blocks and urban centres and social groups for primary (6-11 year age group) and upper primary (11-14 year age group) levels separately. It may be observed that Baliguda, Kotagarh, Tumudibandha and Khajuripada blocks reported more than nine percent out of school children. It may also be seen that higher percentage of out of school children has been observed among ST community at 3.09 and 9.17 percent respectively for primary and upper primary levels.

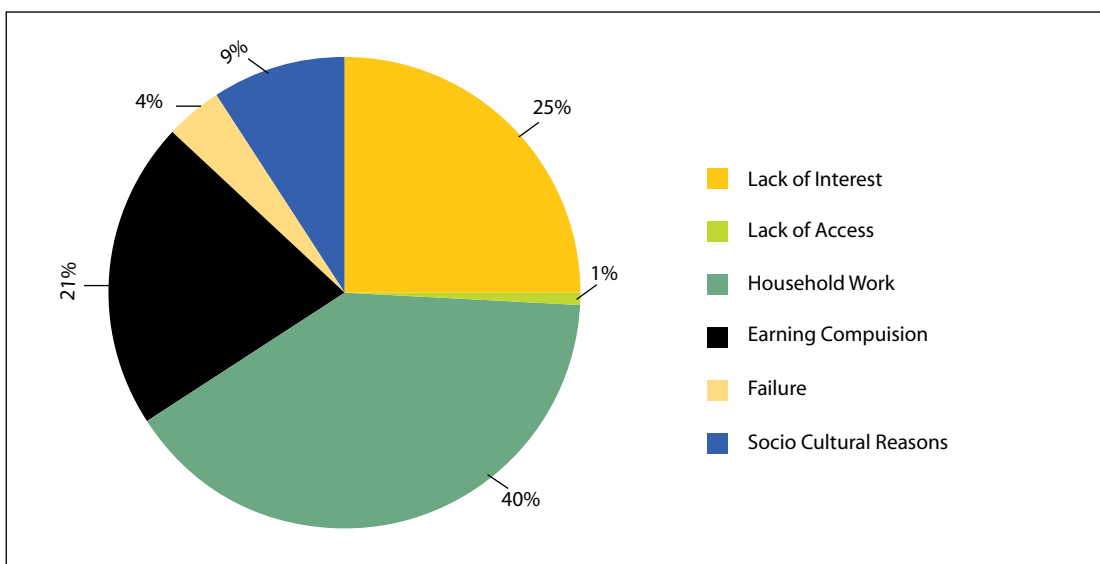
Chart 4.14 analyses main reasons responsible for children being out of schools. It may be observed that 40 percent respondents gave household work as the main reason, 21 percent earning compulsions and 25 percent lack of interest. On the basis of micro planning SSA project office at district level identifies out of school children and undertakes different initiatives to mainstream them into the education system. Some of the initiatives include new primary schools, residential girls' schools for tribal children and residential and non-residential bridge course centres (NRBC). All 5,251 out of school children are targeted to be covered under NRBC, residential tribal girls' schools, new and existing schools. Other initiatives

taken for reducing the number of out of school children and increasing enrolments and retention in schools include extensive campaign and sensitisation activities of SSA, increased access to schools, Mid Day Meal, teachers training, teaching learning material in schools to improve education delivery and community ownership through Village Education Committees.

#### 4.7 Primary Survey Results on Out of School Children

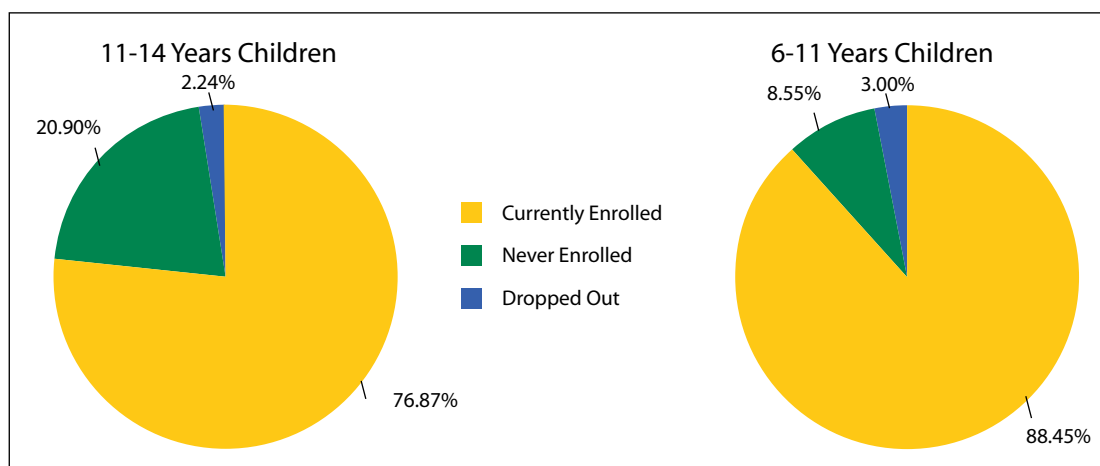
With a view to ascertaining current enrolment and dropout rates, a primary study covered children from 1000 households. Chart 4.15 summarises the results of primary

**Chart 4.14 Response Rates for Reasons for Out of School Children**



Source: DISE Data 2008-2009, Kandhamal, Base: Out of school children

**Chart 4.15 Enrolment and Out of School Children**



Source: Primary Survey, DHDR, Kandhamal



Table 4.17 Distribution of Out of School Children by Blocks/Urban Centres: 2006-2009

Sl. No.	Block/Urban Centres	Percentage of Out of School Children (6-11 years)						Percentage of Out of School Children (11-14 years)											
		All Communities			SC			All Communities			SC								
		2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09						
1	Baliguda	16.29	3.20	3.24	14.27	3.09	2.72	18.28	3.73	3.67	40.89	9.05	7.64	37.07	6.94	4.84	43.96	11.12	9.64
2	Chakapada	2.71	1.81	1.83	1.71	1.65	1.59	3.47	2.16	2.34	7.05	5.74	5.13	5.28	4.72	3.57	8.85	7.72	7.30
3	Daringbadi	8.89	2.42	2.53	6.93	2.21	2.11	9.81	2.48	2.74	19.02	5.38	5.82	14.03	4.89	4.45	22.24	6.03	7.03
4	G. Udayagiri	1.03	1.74	0.50	1.66	1.66	0.71	0.92	1.85	0.46	2.90	2.19	2.33	2.92	1.53	2.73	3.28	2.56	2.34
5	K. Nuagaon	7.30	1.98	1.92	6.08	2.05	1.93	7.33	2.02	2.03	20.65	6.49	7.08	18.23	5.09	5.53	21.24	7.20	8.02
6	Khajuripada	4.96	3.11	1.67	4.70	2.42	0.31	5.58	3.49	2.84	17.87	8.33	7.24	18.38	5.19	3.89	18.12	10.74	11.20
7	Kotagarh	19.20	4.96	4.83	10.50	3.68	3.32	24.00	5.77	5.45	45.53	20.87	27.08	36.16	15.61	17.52	49.82	24.92	39.27
8	Phiringia	10.86	4.16	4.06	7.78	2.77	2.61	12.33	5.07	5.00	26.05	9.38	10.33	23.64	8.75	8.53	27.98	9.87	11.83
9	Phulbani	6.20	2.97	2.80	6.15	2.98	2.94	6.19	3.14	3.07	18.41	4.53	4.92	13.98	4.03	4.75	18.84	4.71	4.89
10	Raikia	6.08	1.90	1.89	6.57	2.41	2.03	5.82	1.57	1.55	16.48	3.38	2.66	17.72	4.30	2.61	16.15	3.00	2.25
11	Tikabali	10.96	1.79	1.63	10.03	1.70	1.54	12.07	1.96	1.72	31.94	6.80	7.19	30.35	9.46	8.94	34.10	5.33	6.00
12	Tumudibandha	20.37	3.36	3.44	14.42	2.13	1.84	22.94	4.03	4.05	50.51	10.73	10.84	40.41	3.73	2.84	55.22	15.46	16.86
13	G. Udayagiri (NAC)	1.67	2.59	0.29	2.85	4.91	0.91	0.97	2.21	0.19	3.64	4.87	0.51	3.53	9.09	0.83	4.05	4.01	0.51
14	Phulbani (M)	3.27	2.41	2.38	5.50	2.43	0.80	2.44	1.90	1.70	5.44	3.70	3.72	8.84	6.48	6.56	6.83	2.65	1.97
	<b>Kandhamal</b>	<b>9.10</b>	<b>2.85</b>	<b>2.66</b>	<b>7.44</b>	<b>2.47</b>	<b>1.84</b>	<b>10.31</b>	<b>3.20</b>	<b>3.09</b>	<b>26.31</b>	<b>7.56</b>	<b>7.36</b>	<b>22.57</b>	<b>6.48</b>	<b>5.47</b>	<b>29.41</b>	<b>8.91</b>	<b>9.17</b>

Source: DISE Data 2006-2009, Kandhamal (M=Municipality, NAC= Notified Area Council)

survey. It may be observed that 88.45 percent children in 6-11 year age group and 76.87 percent children in 11-14 year age group are currently enrolled in primary and UP schools respectively. The extent of out of school children is 11.55 percent and 23.14 percent at primary and upper primary levels. Kotagarh, Tumudibandha, Baliguda and Daringbadi blocks have reported higher percentage of children out of school.

Chart 4.16 reports the reasons cited by the survey respondents for out of school children. It may be observed that financial problems have been cited as the main reason for out of school children by 38 percent respondents, no interest of children or parents by 29 percent and household work or sibling care by only nine percent respondents.

#### 4.8 Funds for Education in Kandhamal

There has been a substantial increase in fund flow to SSA in last five years. Total receipts improved from Rs. 240.71 lakh in 2002-03 to Rs. 2,575.67 lakh in 2008-09. Table 4.18 and Chart 4.17 summarises the growth in fund

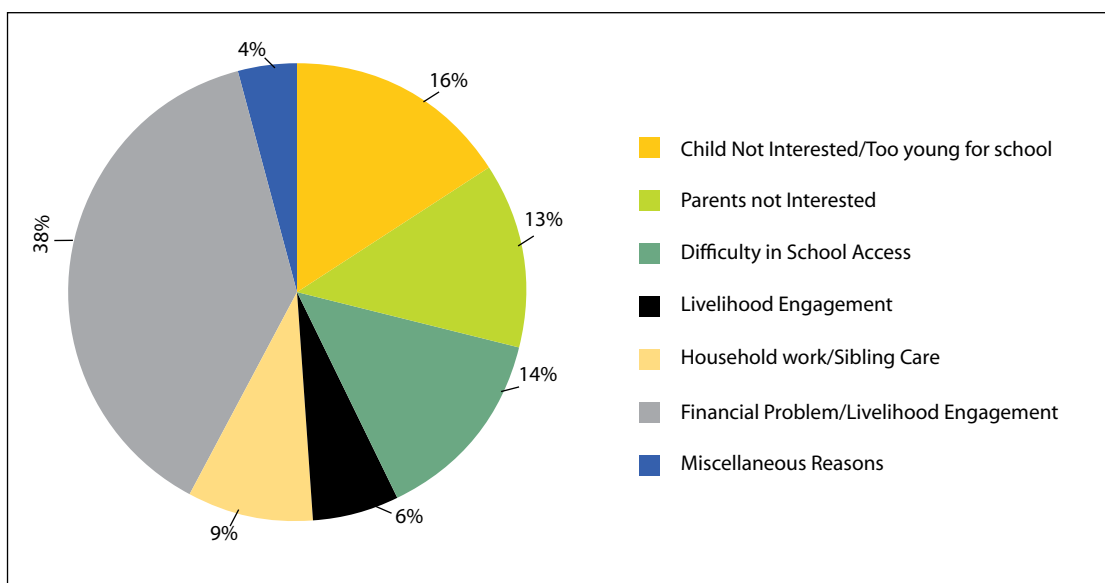
flow under SSA in the district from 2002-03 to 2008-09.

In addition, the State ST/SC Development Department also spends sizable amount of funds to promote education among ST and SC communities. The scholarships to tribal students are administered through District Welfare Officer. Pre-matric scholarships are given to all Scheduled Caste and Scheduled Tribe students studying in Residential Schools of SC & ST Development Department and M.E Schools and High Schools of School and Mass Education Department including special ST hostels of ST & SC Development Department. Similar provisions are there for post matric scholarships. There has been an increase of funds for scholarships over the last few years in the district. Total expenditure has gone up from Rs.17.01 lakh in 2002-03 to Rs.514.94 lakh in 2008-09.

#### 4.9 Quality of Education and Adult Literacy Programmes

In the course of the primary survey, a simple test of subtraction and reading an Odiya paragraph were conducted to assess the

**Chart 4.16 Response Rates for Reasons for Out of School Children**

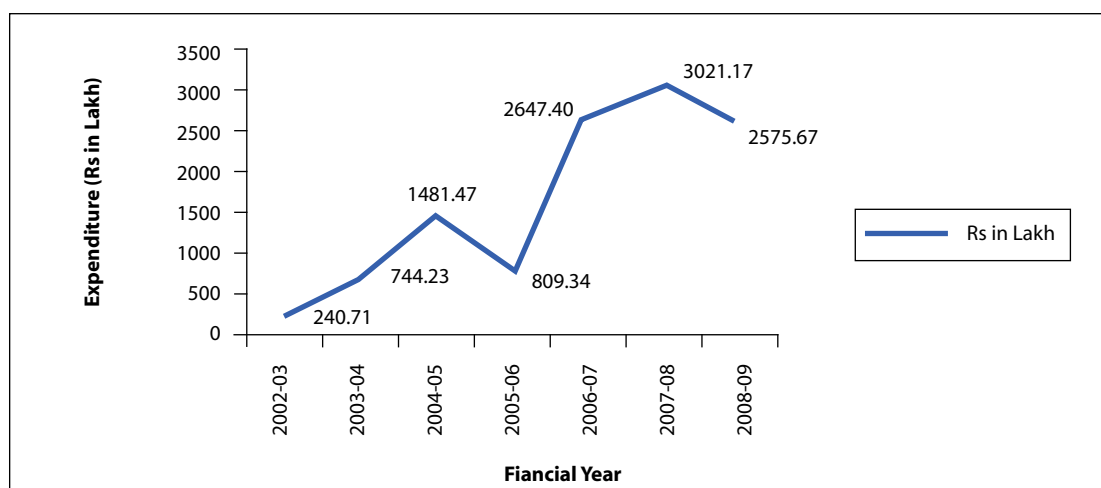


Source: Primary Survey, DHDR Kandhamal

**Table 4.18 Allocation of Funds (Rs. lakh) in Education, Kandhamal: 2002-2009**

Name of the Scheme	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
SSA	20.49	357.38	858.39	443.64	1550.33	2523.07	2485.66
DPEP	252.13	571.84	451.00	772.54	900.20	1073.58	599.57
NPEGEL	NA	NA	262.03	22.40	214.57	166.69	139.88
KGBV	NA	NA	NA	4.90	139.41	180.37	205.79
Fund from ST/SC Dev. Dept.							
Post Matric Scholarship	11.45	11.95	12.85	11.32	35.29	35.88	35.40
Pre Matric Scholarship	5.58	44.50	65.14	61.97	61.03	135.93	513.26
<b>Total of Education related Schemes</b>	<b>289.65</b>	<b>985.67</b>	<b>1,649.41</b>	<b>1,316.77</b>	<b>2,900.83</b>	<b>4,115.52</b>	<b>3,979.56</b>

Source: District Project Office, SSA Office and DSWO, Kandhamal, NA- Not Available

**Chart 4.17 The Growth Fund Flow to SSA, Kandhamal: 2002-2003 to 2008-2009**

Source: District Project Office, SSA, Kandhamal

quality of education received by the sampled students in classrooms. It was found that 71.5 percent children were able to perform subtraction correctly while the remaining 28.5 percent were unable to perform the task. Similarly, the reading test showed that 58.33 percent are able to read clearly, while 27.81 percent found it difficult to read with fluency. Only 14.86 percent children could not read at all. The primary survey also probed the effectiveness of implementation of adult literacy programmes. It transpired that 42 percent female and 66 percent male who attended adult literacy programmes could read and write. Therefore, quality of education is a matter of concern in the district.

In the course of Focused Group Discussions (FGD), the participating community members made several suggestions for improving quality of education. The suggestions included individual attention through extra tutorials, strengthening tribal residential schools, alternative curriculum for tribal children and teaching in *kui* language. Other suggestions for improving the quality of education are as follows:

- Introduction of Multi Lingual Education (MLE) in class I and II in selected schools where population of Schedule Tribe children is high
- Multi-level and multi-grade teachers training

- Implementation of National Curriculum Framework (NCF), 2005 in true spirit
- Vocational training and life skill education for all schools
- Capacity building and strengthening DRG and BRG for providing support to schools
- Establishment and strengthening tribal residential schools
- Organisation of Talent Search Programmes to explore potential of every child
- Strengthening of school and community linkage through community mobilisation and greater involvement of VEC, PTA and MTA
- Creating library facilities at schools which will encourage children participation
- Conducting exposure visits for teachers and children to other schools, promotion of activity based learning through competitions on local dance, tradition, art and craft

## 4.10 Chapter Summary

This chapter described the status of education in Kandhamal and traced the progress of educational attainments in the district. Indicators for educational development show substantial improvement over the last few decades. The literacy rate has increased by 38.04 percentage points from 27.08 percent in 1981 to 65.12 percent in 2011 as against the 32.48 percentage points improvement at the State level from 40.97 percent in 1981 to 73.45 percent in 2011. There are however, gender and social disparities in literacy levels. There was a difference of 33.93 percentage points between male literacy of 69.79 percent and female literacy of 35.86 percent in 2001.

The gap between male and female literacy has got reduced to 25.95 percentage point, between 2001 and 2011. Though the female

tribal literacy increased more than six times from 4.74 percent in 1981, it was still much lower than the district female literacy levels in 2001. The female literacy is still a challenge and schemes like the NPEGEL and KGBV are underway to improve girls' enrolments in schools and their educational attainments. Box 7 illustrate indicators for Kandhamal district.

### Box: 7 Indicators for Kandhamal District

#### Indicators for Kandhamal District

- NER at primary level 90.96 for 2008-09 (DISE)
- Completion rate in primary level 67.01 (sample survey 2006, SSA as given in DISE data)
- Literacy rate is 65.12 percent as per census 2011, 78.41 and 52.46 percent for male and female respectively

Educational attainments of the district are lower than the State average. Only 78.41 percent males and 52.46 percent females were literate in Kandhamal as compared to 82.40 percent males and 64.36 percent females in Odisha in 2011. The DHDR primary survey found that 75.19 percent males and 50.24 percent female have attained some kind of literacy levels even though some of them have not obtained any formal education. The results also show that the levels of educational attainments have recently improved and gender gap has also narrowed down.

Enrolment ratios have improved and dropout rates have reduced in the district due to extensive social mobilisation and IEC activities by SSA. NER has improved from 81.45 percent in 2006-07 to 90.96 percent in 2008-09 at primary level and from 41.87 percent in 2006-07 to 79.73 percent in 2008-09 for upper primary level. The dropout rate at upper primary level is found to be higher than primary level. The dropout rate of 5.70

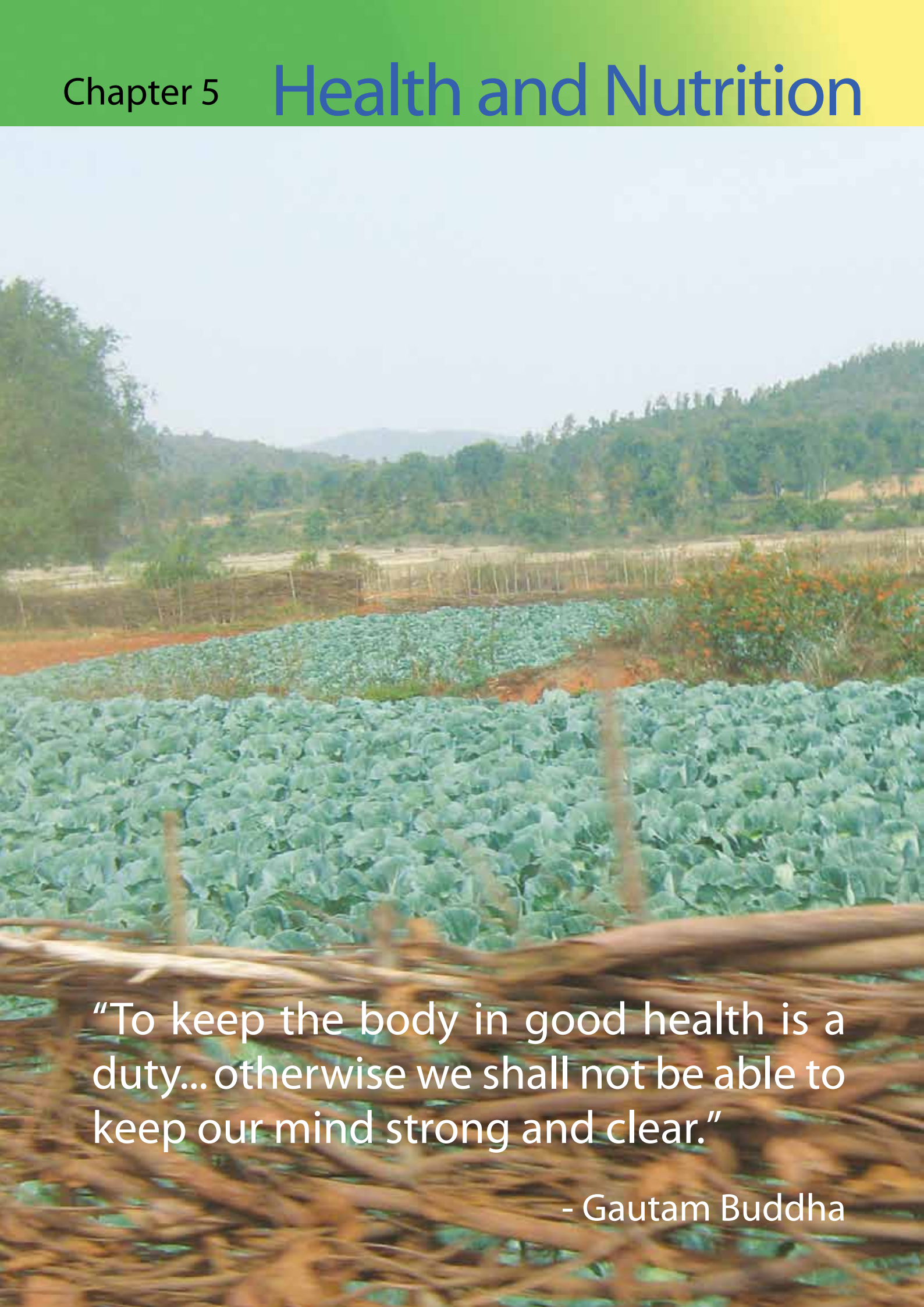
percent in 2006-07 has come down to 1.45 percent in 2008-09 at primary level and the same for upper primary levels have come down from 19.77 percent in 2006-07 to 6.78 percent in 2008-09. It is observed that dropout rates are higher at higher age groups and at transition levels from primary to upper primary classes. Overall, the district shows improved access to elementary education, increased enrolment and reduced dropout rates for children, but the quality of education and retention at higher classes continue to be challenges. Several steps have been taken

by SSA to improve quality of education at various levels. These efforts include increase in residential schools for tribal children, use of multi-lingual instructions in primary schools, remedial teaching, vocational training and skill building in schools.

The next chapter details the health conditions, mortality and morbidity situations in Kandhmal, describes access and quality of healthcare services and facilities and offers available data on nutritional status of children.







“To keep the body in good health is a duty... otherwise we shall not be able to keep our mind strong and clear.”

- Gautam Buddha





# Health and Nutrition



Health is defined by World Health Organisation (WHO) as a “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. By this definition, health can be seen as an important determinant of well-being in the broadest sense of the term. Improved health is desirable not only in itself, but also because it leads to enhanced capability to work and to participate in economic development. Improved health and nutritional status also contribute to increased life expectancy by enhancing resistance to micro organisms, in particular those causing infectious and communicable diseases. Good health may

be thought of as an important livelihood asset and illness can be a major cause of impoverishment. This is particularly true where the majority of the population lacks any formal health insurance and where access to public health care facilities and its quality are far from satisfactory<sup>34</sup>.

Three of eight Millennium Development Goals (MDGs) aim to improve health indicators and overall health conditions. Goal four aims to reduce child mortality, Goal five targets improvement in maternal health and Goal six focuses on controlling diseases like AIDS and malaria. Box 8 illustrate indicators under MDG 4,5 and 6.

<sup>34</sup> See also Odisha Human Development Report 2004.

**Box: 8 MDG on Health Indicator**

<b>MDG and Indicators</b>
<b>Goal 4: Reduce Child Mortality</b>
<b>Target 4a: Reduce by two thirds the mortality rate among children under five</b>
4.1 Under-five mortality rate 4.2 Infant mortality rate 4.3 Proportion of 1 year-old children immunized against measles
<b>Goal 5: Improve Maternal Health</b>
<b>Target 5a: Reduce by three quarters the maternal mortality ratio</b>
5.1 Maternal mortality ratio 5.2 Proportion of births attended by skilled health personnel
<b>Target 5b: Achieve, by 2015, universal access to reproductive health</b>
5.3 Contraceptive prevalence rate 5.4 Adolescent birth rate 5.5 Antenatal care coverage (at least one visit and at least four visits) 5.6 Unmet need for family planning
<b>Goal 6: Combat HIV/AIDS, malaria and other diseases</b>
<b>Target 6a: Halt and begin to reverse the spread of HIV/AIDS</b>
6.1 HIV prevalence among population aged 15-24 years 6.2 Condom use at last high-risk sex 6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS 6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years
<b>Target 6b: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it</b>
6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs
<b>Target 6c: Halt and begin to reverse the incidence of malaria and other major diseases</b>
6.6 Incidence and death rates associated with malaria 6.7 Proportion of children under 5 sleeping under insecticide-treated bed nets 6.8 Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs 6.9 Incidence, prevalence and death rates associated with tuberculosis 6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course

This chapter deals with the status of health services and health indicators in the districts and narrates steps taken by the Government to improve quality of and access to healthcare. The first section describes general health conditions in the district followed by a section on mortality which discusses IMR and MMR. The third section highlights situation of morbidity and major disease burden in the district. The fourth section describes status of health infrastructure and healthcare services including progress of various Government health schemes such as NRHM, ICDS and family welfare measures in Kandhamal. This section also gives data on status of institutional deliveries, nutritional status of children and awareness on HIV/AIDS. The fifth section details drinking water and sanitation conditions followed by the last section which deals with the trend of fund flow to the district in the health sector.

## 5.1 Health Conditions in Kandhamal

Tribal dominated interior districts of Odisha generally have adverse health conditions. Kandhamal, being an interior tribal district, is no exception. The district is characterised by high incidence of malaria, high IMR and poor access to health services. Malaria claims large number of victims, either directly or through many other health complications which are caused by frequent attacks of malaria. Other major prevalent diseases include cholera and tuberculosis. The District Malaria Unit at Phulbani has been in operation in the district since 1962-63. The District TB Control Centre, Phulbani came into being in the year 1968. The large tribal population of the district generally practiced traditional systems of medicine including using medicinal herbs. Witchcraft was, and is sometimes, practiced in tribal dominated pockets. The health service facilities have slowly improved in the post-independence period.

Though epidemics like small pox and TB are under control now, malaria still remains a serious challenge in some blocks of the district. Health access and reach is also a critical issue in many pockets of the district due to their remote locations, inaccessibility and lack of awareness among people, particularly tribal communities. Health education and promotional schemes that have been implemented by the State Government have improved awareness and health consciousness in the district over the years. NRHM, ICDS programme, specific disease control programmes have received a thrust to improve general health conditions.

## 5.2 Mortality in Kandhamal

Mortality rate indicates the demographic transition and is an indicator of overall health status of a population. Mortality rates in Odisha are generally higher than the national averages. Table 5.1 gives some details on vital statistics, particularly status of births and deaths, in the district. It may be seen that in Kandhamal, crude deaths have increased

from 4,731 in the year 2000 to 5,272 in 2005. The Civil Registration System (CRS) data suggests an increase in absolute number of live births and still births and reduction in absolute number of infant deaths. Live births have increased from 12,746 in 1998 to 14,465 in 2005. Infant deaths have been declining at a slow rate. Crude Death Rate (CDR) and Crude Birth Rate (CBR) can be calculated from this information using population projections. The CDR and CBR were found to be 7.57 and 19.44 respectively for 2005.

### 5.2.1 Infant Mortality Rate (IMR)

The Infant Mortality Rate<sup>35</sup> is a summary indicator to capture the overall health status of a community or society. The National Population Policy, 2000 aims at a reduction of IMR to less than 30 by 2010. The Millennium Declaration aims to reduce infant mortality by two thirds from its current level. A reduction in the IMR depends on both exogenous and endogenous factors such as medical assistance at delivery, nutritional levels, and health status of mother as well as child care during and after delivery<sup>36</sup>. Even though IMR reported for Kandhamal by various health

**Table 5.1 Status of Births and Deaths in Kandhamal: 1998-2005**

Year	Live Births			Deaths			Infant Deaths			Maternal Deaths	Still Births
	M	F	T	M	F	T	M	F	T		
1998	6,536	6,210	12,746	2,740	2,222	4,962	560	508	1,068	20	305
1999	6,427	6,023	12,450	2,686	2,066	4,752	566	425	991	24	285
2000	7,749	6,601	14,350	2,658	2,073	4,731	526	466	992	11	334
2001	7,016	6,707	13,723	2,801	2,117	4,918	477	426	903	13	307
2002	6,905	6,625	13,530	2,800	2,180	4,980	484	409	893	18	331
2003	7,489	6,980	14,469	2,858	2,233	5,091	507	373	880	28	347
2004	6,958	6,433	13,391	2,664	2,145	4,809	464	404	868	16	379
2005	7,481	6,984	14,465	2,872	2,400	5,272	437	414	851	24	417

Source: Directorate of Health, Bhubaneswar (M=Male, F=Female, T= Total)

<sup>35</sup> CRS data and data on child, infant and maternal mortality maintained by the District Health Authorities (i.e., CDMO, Kandhamal and her sub-ordinate offices) and Social Welfare Authorities (i.e., DSWO, Kandhamal and her sub-ordinate offices) suffer from some limitations. Therefore, IMR and MMR as reported by these authorities are not generally reliable. The acceptable values for IMR and MMR at district and sub-district levels may be ascertained only after systematic studies, which this study has not undertaken because of time and fund constraints. However, IMR and MMR as reported by various authorities and studies for Kandhamal have been given in this report at appropriate places. There reported values for IMR and MMR need be viewed with caution.

<sup>36</sup> See IIPS, Mumbai reports for different years

authorities and other sources<sup>37</sup> varies widely, the reported IMR for Kandhamal has been generally high and the district is among bottom few districts in the State. Below five year child mortality is reported to be 186.5 in Kandhamal<sup>38</sup>, which is the highest among all districts. The RCH II data shows an IMR of 79.12. Table 5.2 analyses mortality rates by cause and age groups in the district. It may be observed that Neo-Natal Mortality (NNM) accounts for the highest proportion of infant deaths. Neonatal Mortality Rate (NMR – infant deaths within four weeks of life per 1000 live births) at 49 (SRS 2007) accounts for 69 percent of infant deaths, while early NMR (infant deaths within one week of life per 1000 live births) at 37 (SRS 2007) accounts for 76 percent of the NMR. Kandhamal has to focus on child and maternal health care services and community awareness to reduce IMR. Several promotional schemes under ICDS and NRHM have been implemented in the district with a view to improve family health and reduce IMR.

**Table 5.2 Mortality by Age Groups for Kandhamal : DLHS, RCH II.**

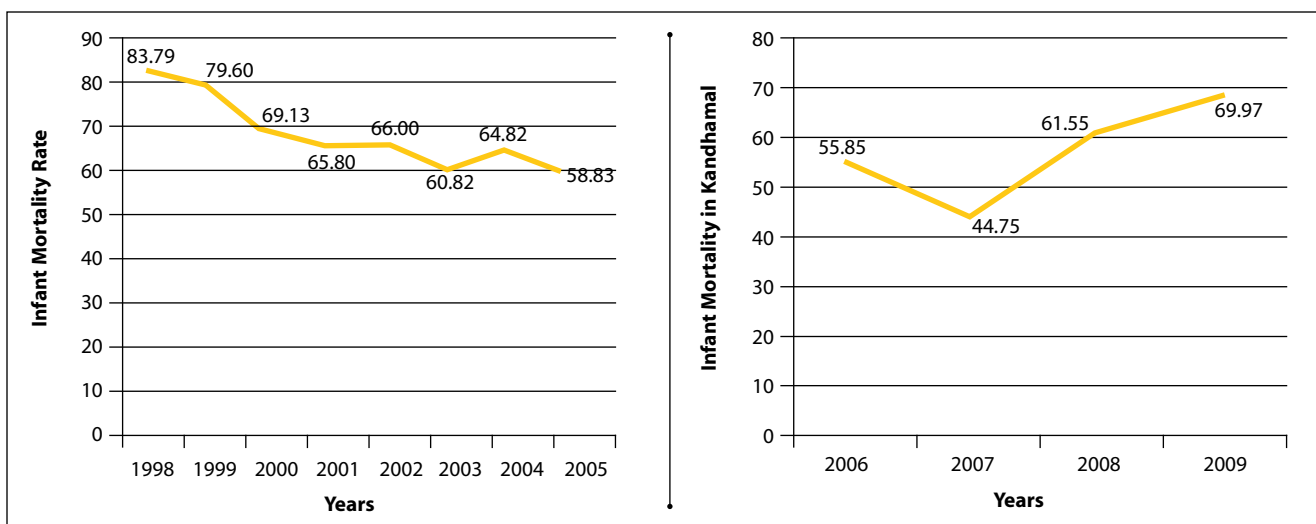
Neo Natal Mortality (NNM)	58.9
Post Neo Natal Mortality (PNNM)	21.1
Infant Mortality Rate (IMR)	79.1
Child Mortality Rate (CMR)	6.5
Under Five Mortality Rate (U5MR)	85.6

Source: DLHS, RCH II: 2002-04

A study, "**Ranking and Mapping of Districts**"<sup>39</sup>, shows that Kandhamal is ranked 27<sup>th</sup> among 30 districts on the basis of composite health index. The study covered 593 districts in India and Kandhamal with IMR of 121 ranked 485. This is very adverse as compared to the national average of 54 per 1,000 live births.

Chart 5.1 gives IMR figures as calculated from the data of Directorate of Health Services till 2005 and IMR data collected from District Social Welfare Office (DSWO) for 2006-09. It may be observed that IMR, as reported by

**Chart 5.1 Year Wise Variations in Infant Mortality Rates in Kandhamal: 1998 – 2009**



Source: Directorate of Health Services, Odisha and DSWO, Kandhamal, 2009

<sup>37</sup> IMR figures have been variously reported by different sources, however they report high figures for Kandhamal in comparison to other districts.

<sup>38</sup> Food Security Atlas of Rural Odisha (UN World Food Programme), 2008

<sup>39</sup> Ram and Shekhar, IIPS, 2006 conducted by Population Foundation of India, Delhi

the District Health Authorities has shown a declining trend from 1998 to 2005. On the other hand, IMR based on data from DSWO, Kandhamal has shown a decrease from 2006 to 2007 and an increase from 2007 to 2008.

As per the DSWO records, IMR of the district increased from 44.75 in 2007 to 69.97 in 2009. The data on vital statistics collected from Civil Registration System (CRS) can be used to estimate IMR figures. The IMR calculated from this data was 79.60 in 1999 and 58.83 in 2005. The absolute number of infant deaths during the same time has gone down from 1,068 in 1998 to 851 in 2005.

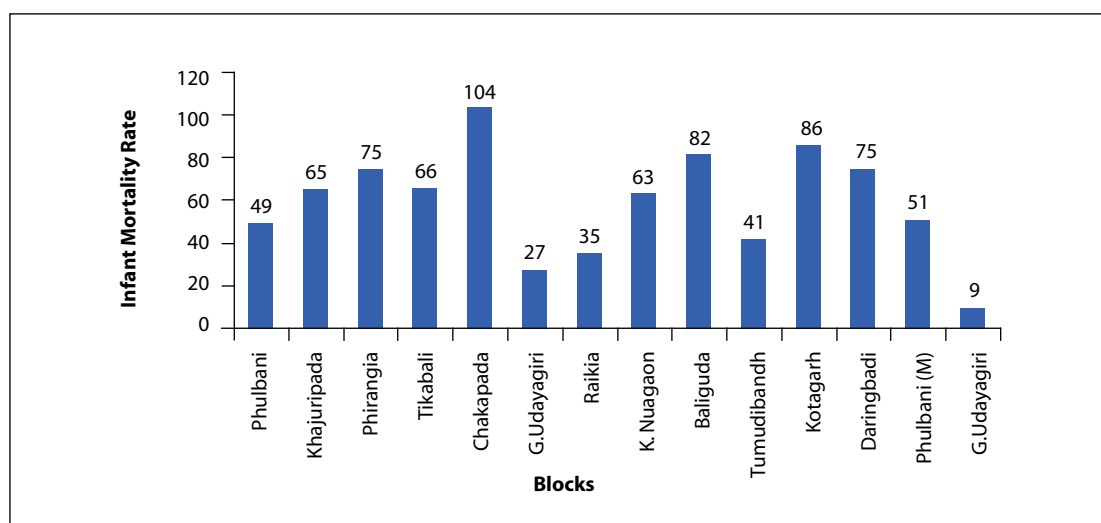
Chart 5.2 summarises IMR in different blocks in 2008, as calculated on the basis of data obtained from the District official sources. For the year 2008, Chakapada block has recorded the highest IMR of 104 and other blocks with high IMR include Baliguda, Kotagarh and Daringbadi. Blocks like G.Udayagiri, Raikia and Phulbani have reported low IMR. The urban areas of Phulbani and G.Udayagiri have also record comparatively lower IMR.

The pace of decline in IMR has been rather slow in the district. The reasons for high IMR

in Kandhamal are often attributed to lack of professional attendance at birth; low birth weight, poor nutrition conditions of mothers and children and poor post-natal care. The main causes of child death include diarrhoea, respiratory infection and measles which are curable with access to safe drinking water and basic curative measures. The District Administration has taken several steps to improve nutrition status of mothers and children, provide support to pregnant mothers and promote institutional deliveries.

The age at marriage is a strong determinant of Reproductive Child Health (RCH). It is found from the primary survey that 16.2 percent women got married at less than 18 years of age. DLHS, RCH, III data, however, indicates that 29.2 percent girls are married before completing 18 years of age. The success rate of pregnancy among the surveyed women was found to be 93 percent. The reasons for unsuccessful deliveries are found to be high still births, abortion or miscarriage. Access to prenatal care has been derived from DLHS, RCH, III survey data. About 65.25 percent women responded to have availed pre-natal care and 52.9 percent pregnant women had at least three antenatal

**Chart 5.2 IMR in Different Blocks of Kandhamal: 2008**



Source: DPM, NRHM, Kandhamal

visits during their pregnancy<sup>40</sup>. Only 92.51 percent women got iron tablets during their pregnancies, 88.32 percent women received folic acid tablets during their pregnancies and 82.30 percent women were visited by anganawadi workers.

The coverage of postnatal care was also reported to be inadequate in the district. According to DLHS, RCH III, more than 95 percent mothers received at least one TT injection. This is similar to other districts. About 51.4 percent children were fully vaccinated against the State average of 62.4 percent. The use of contraceptives was generally low in the district. Only 30-40 percent people used contraceptives. Kandhamal is in bottom ten districts in this regard. Complete list of indicators and their values for DLHS II and III are given in Annexure 6.1. The results of the primary survey indicated that 52.87 percent mothers went for post-natal check-ups and 42.88 percent mothers and new born were visited and checked by ASHA workers. The women respondent suggested that 5.7 percent child deaths occurred during neo-natal stage while 12.9 percent died within one year. They also reveals that 16.5 percent ever born children died within five years.

Child mortality rate is also affected by overall poverty conditions at the household level. In addition, availability of safe drinking water and sanitation conditions positively impact child mortality. Kandhamal is one of the most food insecure districts in Odisha as per Food Atlas of Odisha 2008. The district has high incidence of poverty and poor rural female literacy particularly among ST communities. Improved healthcare facilities and health education will help reduce infant and child mortality rates.

### **5.2.2 Maternal Mortality Rate (MMR)**

NRHM data suggests that maternal mortality rate (MMR) in the district is high. Chakapada

block has reported a very high MMR of 200 and Phiringia a very low value of 22. Though these values cannot be readily accepted as valid MMR, these values are indicative of relative status of MMR in different blocks. Several programmes including ICDS and NRHM have focused attention on reducing IMR and MMR. The strategies include increased coverage of Anganwadi workers and Anganwadi centres, deployment of ASHA workers, universal registration of pregnancies, increased institutional deliveries and deliveries by trained attendants and intense health awareness and education programmes. The main initiatives include IMR Reduction Mission, NRHM, and Janani Suraksha Yojana (JSY).

## **5.3 Morbidity and Major Disease Burden in Kandhamal**

Morbidity, as an incidence of ill health that affects people's work and social life, is measured in various ways. It is measured as a probability that a randomly selected individual in a population at some date and location would become seriously ill at some period of time. National Sample Survey (NSS) provides estimates of prevalence of morbidity as Proportion of Ailing Persons (PAP) and measured as the number of persons reporting ailment during a 15-day period per 1000 persons for some broad age groups. When a person becomes ill, there is a likelihood that the person, and if the sick person is family head and bread winner, the household, may not meaningfully participate in socio-economic life and will not be able to earn their income and livelihood for the affected period. That is morbidity increases. Sickness may also lead to mortality.

It is commonly accepted that there is an inverse relation between overall mortality rate and overall incidence of disease rate. As mortality declines and life expectancy

<sup>40</sup> DLHS, RCH III 2008

increases, the chances of survival and leading a long healthy life improve significantly but the propensity to fall ill generally increases and morbidity increases. Conversely, when mortality rates are higher, morbidity rates tend to be less<sup>41</sup>.

The State has identified five major diseases, called *panchvyadhi*: malaria, diarrhoea, acute respiratory infections, leprosy and scabies that affect a large number of people and accounts for more than 70 percent of patient load on public health institutions in Odisha. Major diseases in Kandhamal are malaria, diarrhoea, measles, jaundice and skin diseases. The incidence of genetic disorders like sickle cell diseases and thalassaemia has also been reported among the *Kandhas*. Around 3.1 percent sickle traits and 3.2 percent sickle cell diseases are observed among the *Kandhas* of Phulbani<sup>42</sup>. Table 5.3 analyses reported incidence of some major diseases and mortality in Kandhamal from 2002 to 2007.

It may be observed that the incidence of diarrhoea including bloody diarrhoea is very high and diarrhoea has claimed the highest number of deaths in the district in last five years. Though number of cases reported

under bloody diarrhoea are maximum, death incidence under this are less. Acute Respiratory Infection (ARI) is also a very common child illness in the district. DLHS, RCH III, 2008 data reported very high incidence of diarrhoea and ARI among children and women in the district. It was also reported that 53.6 percent and 41.3 percent children were given treatment respectively for diarrhoea and ARI in Kandhamal. The *Panchavyadhi Chikitsa* scheme was launched in the year 2001; specific clinical protocols to be followed by health personnel were prescribed and included free treatment and free medicines for patients, particularly for the poor ones. The incidents of, and efforts made by the State, to deal with major diseases, particularly leprosy and malaria, are discussed in the following paragraphs.

### Leprosy

National Leprosy Eradication Programme (NLEP) is operational in the district since 1982. It aims to eradicate leprosy by 2010. The programme has implemented Multi Drug Therapy (MDP) which has been very successful and new detected cases have come down from 124 in 2003-04 to 28 in 2007-08. After treatment, only 21 cases are on record in 2007-08. Chart 5.3 gives

**Table 5.3 Incidence of Some Major Diseases and Mortality in Kandhamal: 2002-2007**

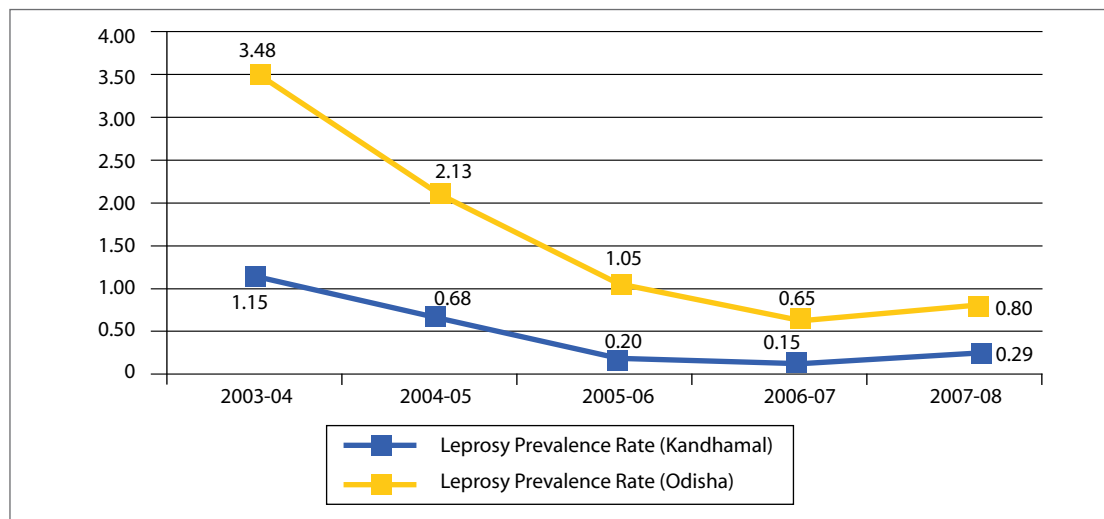
Name of the Disease	2002		2003		2004		2005		2006		2007	
	C	D	C	D	C	D	C	D	C	D	C	D
Diarrhoea	5,300	28	4,397	34	3,599	10	3,878	16	3,456	6	3,573	13
Bloody Diarrhoea	26,158	1	30,666	NA	30,924	1	32,504	1	27,723	0	22,808	0
Acute Jaundice	518	7	389	6	279	13	272	6	176	6	70	1
Measles	78	0	121	9	31	0	59	0	13	0	NA	NA
Neonatal Tetanus	1	1	0	0	0	0	0	0	0	0	NA	NA
Suspected Meningitis	5	2	8	2	4	0	9	4	1	1	NA	NA

Source: Directorate of Health, Odisha (C=Cases, D=Deaths), NA- Not Available

<sup>41</sup> HDR Odisha 2004

<sup>42</sup> Indian Journal of Human Genetics, 2008

**Chart 5.3 Trends for Leprosy Prevalence Rate in Kandhamal: 2003-2008**



the trends in respect of prevalence rate in Kandhamal from 2003-04 to 2007-08. The prevalence rate per 10,000 persons has come down from 1.15 in 2003-04 to 0.29 in 2007-08 for Kandhamal. The rate of detection per 10,000 persons has come down from 1.81 in 2003-04 to 0.38 in 2007-08. It may be observed that the prevalence rates for leprosy in Kandhamal are lower than the State.

### Malaria

Odisha accounts for about 50 percent of malaria deaths in the Country. Malaria has staged a comeback in the last 10–15 years as a major public health concern in Odisha. Its prevalence in southern and tribal dominated districts is rather high. In remote locations and forest

dominated regions the incidence of malaria is very high and its treatment rather poor owing to inaccessibility and operational problems in implementing malaria control programme in such remote and inaccessible locations. The National Malaria Eradication Programme (NMEP) has been implemented in the district and the District Malaria Control Society is operational in Kandhamal since 1997. Under NMEP, the incidence of malaria has come down. However, deaths due to malaria in the district have recently increased. Table 5.4 summarises epidemiological data on Malaria for Kandhamal from the year 2001 to 2006.

Chart 5.4 compares detected cases for, and deaths due to, Malaria in Odisha and Kandhamal. It may be observed that deaths

**Table 5.4 Epidemiological Data on Malaria in Kandhamal: 2001-2006**

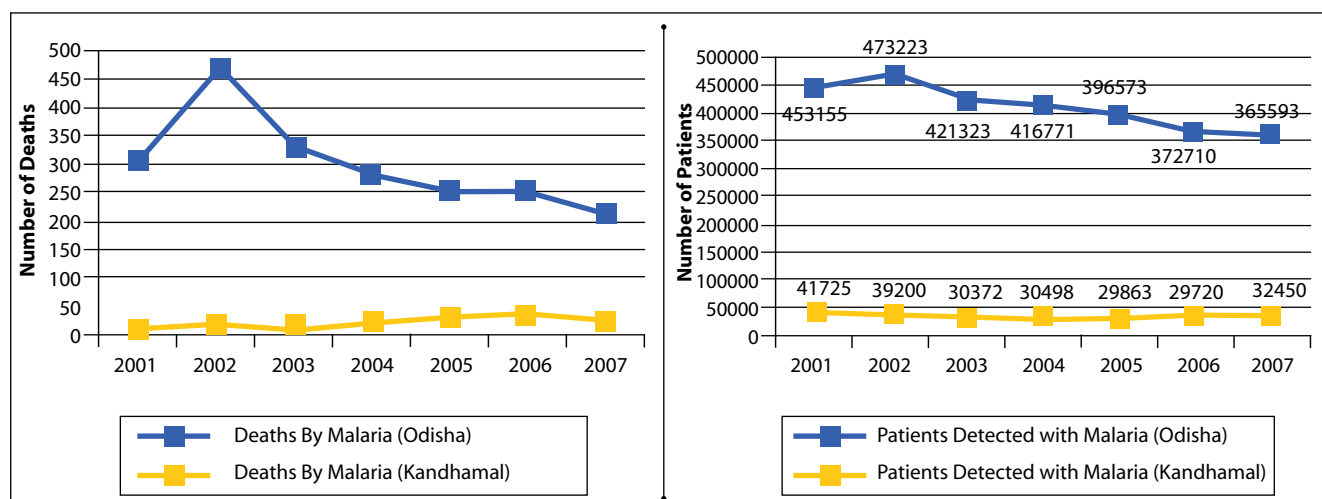
Year	Population	BSC	BSE	+ve	PF	Death	ABER	SPR	Pf%	API
2001	647,912	239,286	239,286	41,725	40,167	8	36.93	17.44	96.27	64.40
2002	662,821	281,931	281,931	39,200	37,945	18	42.54	13.90	96.80	59.14
2003	674,227	218,749	218,749	30,372	29,678	19	32.44	13.88	97.72	45.05
2004	685,015	214,904	214,904	30,498	29,907	24	31.37	14.19	98.06	44.52
2005	695,975	244,794	244,794	29,863	29,251	31	35.17	12.20	97.95	42.91
2006	707,041	226,489	226,489	29,720	29,190	33	32.03	13.12	98.22	42.03

Source: Directorate of Health Services, (Malaria Unit), Odisha (Pf - Plasmodium falciparum, ABER-Annual Blood Examination Rate, SPR- Slide Positive Rate, API-Annual Parasite Incidence)

Source: NLEP, Odisha



**Chart 5.4 Comparison of Cases and Deaths Due to Malaria in Kandhamal and Odisha: 2001-2007**



Source: Directorate of Health Services, (Malaria Unit), Odisha

due to malaria in Odisha have declined from 2001 to 2007, but have increased from eight in 2001 to 29 in 2007 in Kandhamal. Kandhamal reported 13.55 percent of total malarial deaths in Odisha. The incidence of malaria in Kandhamal has been reported as reduced by 22.22 percent during 2001-07.

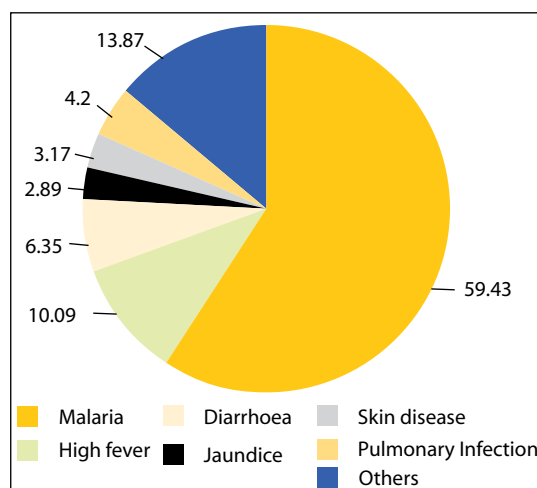
morbidity. It may be observed that 59.43 percent respondents suffered from malaria, which clearly emerged as the most prevalent disease. Many persons had repeated malaria attacks :average frequency of malaria being 2-3 times a year, but in some cases, it could be up to six times a year.

**5.3.1 Outcomes of the DHDR Survey: Disease Burden and Morbidity**

Information on disease prevalence and morbidity was collected through the DHDR Primary Survey 2008 in the district. Chart 5.5 summarises the results of analysis of survey responses as regards disease burden and

Malaria clearly emerged as one of the most prevalent diseases in the district. Malaria poses a serious health hazard and is a matter of concern. Other reported diseases included high fever (10.09% response), diarrhea (6.35% response), pulmonary infections (4.2% response), skin diseases (3.17% response), jaundice (2.89% response) and other diseases (13.87%). Diarrhoea was reported as the most fatal disease among children, 36.16 percent of which suffered from diarrhoea. Of them, 45.69 percent received allopathic treatment and 31.28 percent relied on ORS. About 40.21 percent respondents did not attend work for more than one week because of illness; 20 percent suffered at least once in a year from some or the other disease and were unable to work for more than one week; and 11 percent suffered repeated illnesses in a year.

**Chart 5.5 Disease Burden in Kandhamal: 2008, Survey Responses (%)**



Source: Primary Survey, DHDR Kandhamal

It may appear surprising that though incidences of diseases in the district

are generally high, only 1.24 percent respondents sought medical treatment and others did not seek medical treatment. This may be due to several reasons including poor access to health services, low affordability due to poverty and lack of awareness. The Focus Group Discussions in the sampled villages indicated that access to good health facilities was very limited. While 41.05 percent respondents depended on the district hospital for treatment of more serious ailments, 33.39 percent relied mainly on Primary Health Centres (PHC) or Community Health Centres (CHC), which were generally ill-equipped, particularly in remote pockets. About 6.71 percent respondents consulted unregistered practitioners or quacks and 4.77 percent preferred to go outside the district for treatment of serious diseases. It was ascertained from community consultations that the number, and condition, of hospitals, PHC and CHC need to be increased and improved in different parts of the district.

## 5.4 Health Infrastructure and Delivery of Health Services

The State is the main provider of healthcare in the district, which has 58 allopathic public health institutions. This include one hospital at Phulbani (i.e., the District Hospital), one sub-divisional level hospital at Baliguda, seven other Government hospitals, 47 Primary Health Centres (PHC)/Community Health Centres (CHC) including 35 new PHCs, two mobile health units (one each at Baliguda and Phulbani) and 185 sub-centres. Table 5.5 gives the status of public health institutions except mobile health units in the district.

There were 494 beds in different hospitals and public health institutions in the district in 2008. The district hospital, Phulbani has 176 beds and the sub-divisional hospital at Baliguda has 66 beds. While the CHC and Government hospitals are better equipped, PHCs need to be strengthened for providing better health services. The district has

**Table 5.5 Number of Public Health Institutions in Kandhamal: 2008**

Sl. No.	Block	PHC/CHC/ Upgraded PHC (Location)	New PHC (Number)	Area/Govt. Hospital (Number)	Sub-Centres (No.)
1	Kotagarh	Subarnagiri PHC	3	1 Government Hospital	11
2	Tumudibandha	Tumudibandha UPHC	2	1 Government Hospital	12
3	Baliguda	Barakhama PHC	3	1 Hospital	17
4	K.Nuagaon	Nuagaon PHC	2	1 Area Hospital	14
5	Daringbadi	Daringbadi CHC	4	1 Government Hospital	26
6	Raikia	Raikia CHC	3		13
7	G.Udayagiri	G.Udayagiri CHC	3	1 Area Hospital	12
8	Chakapada	Brahmanpad PHC	3		13
9	Tikabali	Tikabali UPHC	3		15
10	Phiringia	Phiringia UPHC	3	1 Government Hospital	23
11	Phulbani	Gumagarh PHC	3	2 including District Hospital	14
12	Khajuripada	Khajuripada UPHC	3		15
<b>Kandhamal</b>			<b>35</b>	<b>9</b>	<b>185</b>

Source: DPM, NRHM, Kandhamal

deployed mobile health units one at Baliguda and the other at Phulbani for providing health services in an outreach mode to people in remote villages. In addition, there are 19 Government homeopathic dispensaries and 17 ayurvedic dispensaries with 34 doctors and 17 health assistants. More than 7.50 lakh patients access various health services from allopathic, homeopathic and ayurvedic public health institutions. The number of patients seeking health services, and the patient load on the public health institutions, has been increasing over the years.

Despite the efforts made by the State to improve health facilities in the district, the access to health services in the district is still far from satisfactory, particularly in comparison to developed districts of Odisha. About 41.34 percent villages have access to some public health facilities within five km of /distance<sup>43</sup>. Most public health institutions suffer from large number of vacancies of doctors, nurses and other para medical personnel. There were 39 vacancies of doctors against the sanctioned strength of 114 doctors and 10 nurses against the sanctioned strength of 47 in the district in 2008. That is, there are more than 34 percent vacancies of doctors in the district. Inadequate number of doctors and other health personnel in various public health institutions is a matter of serious concern. The shortage of doctors and other health workers adversely affects the provisioning of public health services to the people in a district which needs these services the most.

#### **5.4.1 National Rural Health Mission (NRHM)**

NRHM, the flagship health programme, aims at improving rural health services in the district. It proposes to upgrade peripheral health centres in accordance with the quality public health standards;

decentralise technical functions to Auxiliary Nurse Midwives (ANM); and motivate women at household level and at community level through a combination of awareness initiatives and incentives to access health services during and post pregnancy. NRHM operates under the overall supervision of the Chief District Medical Officer (CDMO) and is supported by the District Programme Manager (DPM). Important interventions under NRHM include provisioning of Accredited Social Health Activist (ASHA), Janani Surakhya Yojana (JSY) and Rogi Kalyana Samiti (RKS).

ASHA assists ANM in early registration, identifies complicated pregnancies, makes at least three visits to provide antenatal care to new born babies and mothers, organises appropriate referrals and arranges transport for pregnant mothers in need. These health assistants work in villages and identify pregnant woman from BPL families as beneficiaries of the scheme. In the Mission period between 2005 and 2007, a total of 958 ASHA have been selected against a target of 963.

The Janani Surakhya Yojana (JSY) became operational during August 2006. JSY aims to reduce overall Maternal Mortality Ratio and Infant Mortality Rate, by increasing institutional deliveries through support to pregnant women of 19 years or more age and belonging to BPL households up to two live births. Benefits are also extended to woman belonging to a BPL family even after a third live birth if the mother of her own accord chooses to undergo sterilisation immediately after the delivery. JSY integrates cash assistance with antenatal care during the pregnancy period, institutional care during child birth and immediate post-partum period in a health centre by establishing a system of coordinate care by field level health

<sup>43</sup> DLHS, RCH III

**Table 5.6 Status of Implementation of Janani Surakhya Yojana in Kandhamal: 2008**

Year	2006-07	2007-08	2008-09*
<b>Total JSY Beneficiaries</b>	6,424	9,688	2,111
<b>Institutional Delivery</b>	4,228	6,465	1,703
<b>Home Delivery</b>	2,196	3,223	408
<b>Delivery supported by ASHA</b>	1,787	4,436	1,420

Source: DPM, NRHM Kandhamal \*only up to May 2008

workers. Table 5.6 gives the progress of JSY in Kandhamal. It may be observed that there is a substantial improvement in number of beneficiaries assisted under the scheme and increase in institutional deliveries. ASHA has also significantly contributed to the increase in institutional deliveries.

Rogi Kalyana Samiti (RKS): In 2005-06, the budget provision for this scheme was a total of Rs.38 lakh, out of which Rs. 5 lakh was allotted to District Head Quarter Hospital (DHH) and Rs.1 lakh to Sub Divisional Hospital (SDH) and 12 blocks. In all 14 block level RKS including those at DHH and SDH have been registered in 2008-09. The scheme targeted 40 RKS at PHC level, of which 38 have been completed.

#### **5.4.2 Institutional Deliveries**

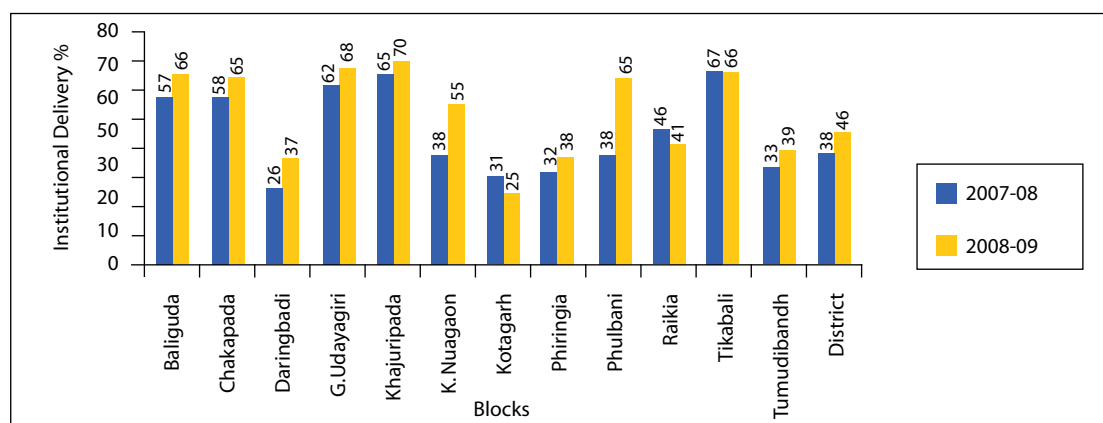
The number of institutional deliveries has been increasing in Kandhamal, despite the fact that tribal communities are generally reluctant to take advantage of this public

health intervention. The promotional health schemes like National Rural Health Mission (NRHM) and Integrated Child Development Scheme (ICDS) have significantly contributed to create awareness among expectant mothers and other members of society with regard to benefits of institutional deliveries. As a result, there has been an increase in institutional deliveries from 38 percent in 2007-08 to 46 percent in 2008-09. Chart 5.6 compares institutional deliveries in different blocks of the district in 2007-08 and 2008-09.

It may be observed that nine out of 12 blocks of the district have shown improvement in institutional deliveries in 2008-09 over 2007-08. Only three blocks, that is Kotagarh, Raikia and Tikabali, reported less number of institutional deliveries in 2008-09 over 2007-08. Daringbadi, K. Nuagaon and Phulbani blocks reported substantial improvement in institutional deliveries in 2008-09 over 2007-08.



Janani Express, the mobile van to assist pregnant women for access to health institution. JSY has been instrumental in increasing institutional delivery and promoting safe motherhood in the district.

**Chart 5.6 Comparative Analysis of Institutional Deliveries by Blocks: 2007-2008 & 2008-2009**

Source: ICDS, Kandhamal 2007-2009

Table 5.7 gives the distribution of institutional deliveries in different blocks in Kandhamal for the year 2008-09. It may be observed that Khajuripada, G.Udayagiri, Baliguda, Tikabali, Chakapada and Phulbani blocks have reported more than 60 percent institutional deliveries during the year 2008-09. On the other hand, Kotagarh block has reported the lowest 25 percent institutional deliveries. Daringbadi, Phiringia, Tumudibandha and Raikia blocks have also reported institutional deliveries below the district average of 46 percent. An analysis of results of the DHDR

Primary Survey indicated that 26.95 percent pregnant women delivered their last child at some public health institution, 54.14 percent pregnant women delivered their last child at home in the absence of a trained birth attendant or ANM and 18.92 percent had their last delivery at home assisted by a trained birth attendant.

#### 5.4.3 Family Welfare Measures: Women and Child Welfare

Several schemes are operational in the district with the objective of improving

**Table 5.7 Distribution of Institutional Deliveries by Blocks in Kandhamal: 2008-2009**

Block	Institutional Deliveries (Number)	Home Deliveries (Number)	Total Deliveries (Number)	Institutional Deliveries (%)	Home Deliveries (%)
Baliguda	188	98	286	66	34
Chakapada	860	472	1,332	65	35
Daringbadi	842	1,446	2,288	37	63
G.Udayagiri	72	34	106	68	32
Khajuripada	157	66	223	70	30
K.Nuagaon	30	24	54	56	44
Kotagarh	50	151	201	25	75
Phiringia	678	1,127	1,805	38	62
Phulbani	113	61	174	65	35
Raikia	354	502	856	41	59
Tikabali	129	66	195	66	34
Tumudibandha	60	93	153	39	61
<b>Kandhamal</b>	<b>3,533</b>	<b>4,140</b>	<b>7,673</b>	<b>46</b>	<b>54</b>

Source: District Social Welfare Officer, Kandhamal

**Table 5.8 Family Welfare Measures: Targets and Achievements: 2005-06 to 2007-2008**

Sl. No.	Birth Prevention Practice	2005-06			2006-07			2007-08		
		Target	Actual	Extent (%)	Target	Actual	Extent (%)	Target	Actual	Extent (%)
1	STERILISATION	1,762	480	27.24	1,824	1,092	59.87	1,931	1,129	58.47
2	I.U.D	4,322	3,707	85.77	4,480	3,100	69.20	4,333	3,722	85.90
3	C.C. USERS	9,658	10,797	111.80	9,950	9,309	93.56	9,203	10,850	117.90
4	O.P. USERS	6,893	5,350	77.61	7,887	5,600	71.00	7,265	5,681	78.20
5	M.T.P.	NA	593	NA	NA	481	NA	NA	288	NA

Source: DPM, NRHM, Kandhamal (T=Target, A=Actual), NA- Not Available

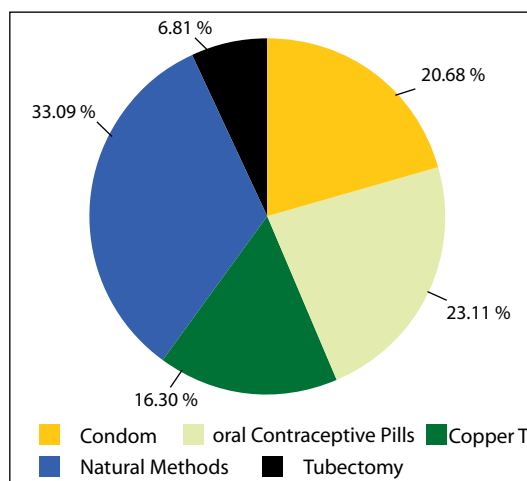
family welfare in general, and health conditions of children and women in particular. Reproductive Child Health (RCH) is a comprehensive intervention that aims at improving reproductive health. One ANM is responsible to promote the welfare of children and mothers at sub-centre level, to organise RCH camps and popularise IEC initiatives on RCH. RCH also aims at improving nutritional status of children and women and undertaking immunisations and other programmes to protect children and other target groups from several diseases. Other schemes include Kishori Shakti Yojana for training on reproductive health of adolescents, and formation of Gaon Kalyan Samities (GKS) to improve overall health conditions at village level.

The District Level Household Survey (DLHS) under Reproductive Child Health III (RCH III) data revealed the district-wise use of contraceptives by currently married couples, particularly women in 15-49 year age group. In Kandhamal, 32.3 percent respondents reported the use of contraceptives for family planning. Kandhamal has the lowest percentage of use of modern contraceptives among all districts. The unmet need of family planning percentage for Kandhamal is 27.8 percent of which 11.1 percent is for spacing and 16.7 percent is for limiting. The district promotes family welfare measures under NRHM, which has increased awareness levels on family planning and different birth

prevention practices in the district. Table 5.8 summarises family planning targets and achievements under NRHM from 2005-06 to 2007-08.

An analysis of responses from the DHDR Primary Survey indicated that 48.75 percent women adopted some birth control methods to avoid pregnancy and that the most preferred methods included natural methods, contraceptives and condoms. Chart 5.7 reports the results of analysis of responses on family planning methods from the DHDR Primary Survey. It may be observed that 23.11 percent women used oral contraceptive pills, 20.68 percent couples used condoms, 16.30 percent women used copper-T and 33.09 percent couples used natural methods.

**Chart 5.7 Family Planning Methods Used in Kandhamal: 2008**



Source: Primary Survey, DHDR Kandhamal

**Table 5.9 Awareness on HIV/AIDS in Kandhamal: 2002-2008**

Indicators	DLHS - 3		DLHS - 2	
	Total	Rural	Total	Rural
<b>Knowledge of HIV/AIDS and RTI/STI among Ever married Women (age 15-49)</b>				
Women heard of HIV/AIDS (%)	42.0	40.4	44.1	24.2
Women who knew that consistent condom use can reduce the chances of getting HIV/AIDS (%)	18.7	18.1	10.4	8.2
Women having correct knowledge of HIV/AIDS (%)	61.2	60.2	NA	NA
Women underwent test for detecting HIV/AIDS (%)	0.5	0.5		
Women heard of RTI/STI (%)	12.7	12.9	46.9	33.8
<b>Knowledge of HIV/AIDS among Un-married Women (age 15-24)</b>				
Women heard of HIV/AIDS (%)	55.7	53.5	NA	NA
Women who knew that consistent condom use can reduce the chances of getting HIV/AIDS (%)	13.2	11.7	NA	NA
Women having correct knowledge of HIV/AIDS (%)	84.2	82.4	NA	NA
Women underwent test for detecting HIV/AIDS (%)	1.1	1.3	NA	NA
Women heard of RTI/STI (%)	15.8	15.9	NA	NA

Source: DLHS III District Fact Sheet, Kandhamal, NA- Not Available

Though HIV/AIDS is not a major concern for the district, efforts have been made to generate public awareness about HIV/AIDS. DLHS results show that awareness among younger women is relatively higher. Table 5.9 summarises the levels of awareness about HIV/AIDS in the district.

#### **5.4.4 Child Welfare: Integrated Child Development Schemes (ICDS)**

Integrated Child Development Scheme (ICDS) has been implemented in the district through a wide network of anganwadi centres with a view to enhance welfare of children within 0-6 year age group, before and after birth and during the period of growth to ensure their well rounded physical, social, mental and cognitive development. It also extends services to pregnant and nursing mothers and orphan children. Emphasis is also laid on prevention of fatal diseases like diphtheria, portusis, tetanus, polio-myliities, measles, night blindness and malaria among children and mothers. ICDS also aims at reducing Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) in

the community. There are 963 anganwadi and feeding centres in Kandhamal under ICDS. About 85,000-100,000 beneficiaries access various services from anganwadi centres annually.

Immunisation programmes are a major component under ICDS and NRHM. Each year, a target group is fixed to be covered under various immunisation programmes. Table 5.10 gives the status of implementation of vaccination programmes under National Rural Health Mission in Kandhamal from 2005-06 to 2007-08. It may be seen that various vaccination programmes have received good response in the district from 2005-06 to 2007-08.

Table 5.11 reports the status of immunisation and sterilisation in different blocks of the district under NRHM in 2007-08. The district shows highest percentage of achievement for BCG and Vitamin A under NRHM. It may be observed that Barkhama, Baliguda, Tikabali and Gumagarh blocks have generally done well, and Raikia, Subrangiri and G. Udayagiri

**Table 5.10 Status of Immunisation Under NRHM in Kandhamal: 2005-2008**

Sl. No.	Year Types of Immunisation	2005-06			2006-07			2007-08		
		Annual Target	Annual Progress	Extent (%)	Annual Target	Annual Progress	Extent (%)	Annual Target	Annual Progress	Extent (%)
1	TT.(PW)	18,819	18,308	97.28	19,402	17,418	89.77	18,641	16,491	88.47
2	IFA BIG	18,819	17,902	95.13	19,402	9,843	50.73	18,641	16,565	88.86
3	D.PT	16,720	17,694	105.83	17,547	15,659	89.24	16,845	14,819	87.97
4	POLIO	16,720	17,694	105.83	17,547	15,659	89.24	16,845	14,819	87.97
5	BCG	16,720	19,015	113.73	17,547	17,129	97.62	16,845	15,740	93.44
6	MEASLES	16,720	17,162	102.64	17,547	14,930	85.09	16,845	15,190	90.18
7	VIT A	16,720	17,038	101.90	17,547	14,983	85.39	16,845	15,349	91.12
8	IFA Small	37,907	37,907	100.00	49,283	7,244	14.70	40,381	23,605	58.46
9	D.T	20,345	23,738	116.68	20,444	18,920	92.55	20,523	20,069	97.79
10	T.T. 10Yrs	20,419	20,643	101.10	21,933	19,211	87.59	21,489	18,665	86.86
11	TT. 16Yrs	18,349	19,190	104.58	20,440	17,258	84.43	20,153	16,637	82.55

Source: District Programme Manager, NRHM, Kandhamal

**Table 5.11: Status of Immunisation & Sterilisation by Blocks Under NRHM: 2007-2008**

Sl. No.	Name of PHC	Tetanus Toxoid		BCG		DPT/OPV		Measles		VIT-A		Sterilisation	
		T	P (%)	T	P (%)	T	P (%)	T	P (%)	T	P (%)	T	P (%)
1	Gumagarh	958	97.91	872	86.35	872	90.60	872	90.71	872	99.08	88	94.32
2	Phiringia	2,196	94.31	2,120	74.76	2,120	80.09	2,120	88.58	2,120	88.58	167	55.09
3	Khajuripada	1,325	76.30	1,197	77.44	1,197	76.27	1,197	79.53	1,197	79.53	128	82.81
4	Phulbani	888	96.69	652	156.90	652	79.29	652	86.81	652	86.81	133	69.17
5	Subarnagiri	1,300	74.08	1,100	101.91	1,100	81.82	1,100	74.00	1,100	84.00	130	38.46
6	Tumudibandha	1,280	84.69	1,175	96.00	1,175	94.38	1,175	88.34	1,175	88.34	165	36.36
7	Barkhama	1,336	133.76	1,208	128.06	1,208	130.55	1,208	135.26	1,208	135.30	141	95.04
8	Daringbadi	2,846	79.94	2,591	96.53	2,591	83.29	2,591	86.38	2,591	86.38	300	14.69
9	K.Nuagaon	1,289	91.31	1,172	88.82	1,172	87.88	1,172	90.02	1,172	90.02	127	62.99
10	Raukia	1,564	71.68	1,422	71.10	1,422	75.88	1,422	75.74	1,422	75.74	200	49.50
11	G.Udayagiri	1,152	74.74	1,039	81.91	1,039	83.35	1,039	87.10	1,039	87.10	72	87.50
12	Tikabali	1,036	100.19	951	103.58	951	99.26	951	100.84	951	100.80	106	92.45
13	Barhmanpad	1,111	87.58	1,016	87.11	1,016	88.98	1,016	82.87	1,016	85.33	119	56.30
14	Baliguda	360	100.00	330	115.76	330	101.21	330	100.30	330	100.30	55	110.91
	<b>Kandhamal</b>	<b>18,641</b>	<b>88.47</b>	<b>16,845</b>	<b>93.44</b>	<b>16,845</b>	<b>87.97</b>	<b>16,845</b>	<b>90.18</b>	<b>16,845</b>	<b>91.12</b>	<b>1,931</b>	<b>58.47</b>

Source: District Programme Manager, NRHM, Kandhamal (T=Target, P(%)= Progress)

did poorly, in regard to vaccinations for Tetanus Toxoid, BCG, DPT and measles and for administration of vitamin-A. An analysis of the DHDR Primary Survey indicated that 89.92 percent children had immunisation cards and 94.10 percent got immunised, most of them either at school or at anganwadi centres.

#### 5.4.5 Nutritional Status of Children

Kandhamal ranks very low in Odisha with regard to nutritional status of children and women. Children with nutritional deficiency are classified as grade I to grade IV, with grade I and II being moderate malnutrition and grade III and IV being serious forms



**Table 5.12 Monthly Monitoring Report on Malnourished Children (0-3 Year): April, 2008**

Sl. No.	Block	Children in 0-3 years (No)	Children weighed during month (No)	Children weighed during month (%)	Normal children (%)	Grade I children (%)	Grade II children (%)	Grade III children (%)	Grade IV children (%)	Grade III (No)		Grade III (No)	
										Previous month	During the month	previous	During the month
1	Baliguda	6,812	6,537	95.86	42.74	38.55	18.00	0.64	0.09	44	42	7	6
2	Chakapada	2,620	2,468	94.20	47.41	35.25	16.20	1.13	0.04	24	28	1	1
3	Daringbadi	11,108	6,258	56.34	7.49	62.14	29.80	7.00	0.08	NA	2	NA	NA
4	G.Udayagiri	1,750	1,733	99.03	52.57	33.53	13.00	0.87	0.06	17	15	3	1
5	Khajuripada	2,802	2,623	93.61	39.84	41.67	17.20	0.88	0.38	19	23	6	10
6	K.Nuagaon	3,684	3,654	99.19	45.46	39.30	14.68	0.36	0.14	16	13	3	5
7	Kotagarh	5,458	5,069	92.87	39.91	34.96	24.60	0.53	0.04	25	26	2	2
8	Phiringia	5,980	5,895	98.58	46.65	37.34	15.40	0.54	0.08	29	32	3	5
9	Phulbani	2,300	2,258	98.17	43.14	39.02	16.70	1.11	0.04	22	25	2	1
10	Raikia	3,609	3,482	96.48	48.68	37.74	13.00	0.52	0.03	19	18	1	1
11	Tikabali	2,901	2,854	98.38	46.36	38.30	14.10	1.12	0.11	31	32	5	3
12	Tumudibandha	4,735	4,711	99.49	39.91	35.47	24.30	0.34	0.02	14	16	2	1
	<b>Kandhamal</b>	<b>53,759</b>	<b>47,542</b>	<b>88.44</b>	<b>39.32</b>	<b>40.64</b>	<b>19.30</b>	<b>0.64</b>	<b>0.09</b>	<b>260</b>	<b>270</b>	<b>35</b>	<b>36</b>

Source: District Social Welfare Officer, ICDS, Kandhamal, NA- Not Available

of malnutrition. About 21.51 percent children in 0-3 year age group suffer from malnutrition of grade II, III and IV against the State average of 17.88 percent. The district is classified as a high burden district by the

State Government with other 10 districts, mostly from the KBK region. The DSWO, Kandhamal regularly monitors on monthly basis the status of malnutrition among children. A typical monitoring report for April

**Table 5.13 Monthly Monitoring Report on Malnourished Children (3-6 Year): April, 2008**

Sl. No.	Block	Children in 3-6 years (No)	Children weighed during month (No)	Children weighed during month (%)	Normal children (%)	Grade I children (%)	Grade II children (%)	Grade III children (%)	Grade IV children (%)	Grade III (No)		Grade III (No)	
										Previous month	During the month	previous	During the month
1	Baliguda	4,912	4,769	97.09	43.97	39.25	16.70	0.08	NA	3	4	NA	NA
2	Chakapada	2,150	2,107	98.00	50.64	37.30	11.60	0.43	NA	10	9	2	NA
3	Daringbadi	7,625	7,336	96.20	47.26	38.75	13.90	7.00	NA	15	3	NA	NA
4	G.Udayagiri	1,404	1,319	93.95	52.69	37.68	9.40	0.15	0.08	1	2	1	1
5	Khajuripada	1,916	1,872	97.70	44.23	42.90	12.70	0.21	NA	5	4	1	NA
6	K.Nuagaon	3,030	3,018	99.60	44.07	43.51	12.40	0.03	NA	4	1	NA	NA
7	Kotagarh	3,574	3,404	95.24	38.72	37.51	23.60	0.18	NA	5	6	NA	NA
8	Phiringia	10,576	10,415	98.48	46.67	37.77	13.60	0.32	0.03	35	33	3	3
9	Phulbani	4,737	4,588	96.85	46.92	40.89	12.40	0.09	NA	4	4	NA	NA
10	Raikia	2,940	2,545	86.56	46.67	39.65	13.30	0.08	0.04	2	2	1	1
11	Tikabali	2,414	2,354	97.51	45.41	41.29	13.10	17.00	0.04	4	4	1	1
12	Tumudibandha	2,863	2,817	98.39	43.56	34.40	21.90	0.11	0.04	2	3	1	1
	<b>Kandhamal</b>	<b>48,142</b>	<b>46,544</b>	<b>96.68</b>	<b>46.11</b>	<b>39.00</b>	<b>14.70</b>	<b>0.16</b>	<b>0.02</b>	<b>90</b>	<b>75</b>	<b>10</b>	<b>7</b>

Source: District Social Welfare Officer, ICDS, Kandhamal, NA- Not Available

2008 on malnutrition status of children in 0-3 year age group by blocks is reproduced in Table 5.12. It may be observed that 39.32 percent children were reported normal, 40.64 percent children Grade I, 19.30 percent children Grade II, 0.64 percent children Grade III and 0.09 percent children Grade IV in the district in April 2008. Though Grade III and IV children with very severe malnutrition were less than one percent, 11 new children were added to this category (10 in Grade III and one in Grade IV) during April 2008. In all, 20.03 percent children suffered from severe malnutrition in the district in 2008. It may also be seen that Daringbadi block has reported the highest incidence (36.88%), and Raikia block has the lowest incidence (13.55%), of severely malnourished children. Kotagarh and Tumudibandha blocks also have very high incidence of 25.17 percent and 24.66 percent respectively of severely malnourished children.

Table 5.13 gives the monthly status of malnourished children in 3-6 year age group in different blocks of the district. It may be observed that 46.11 percent

children were reported normal, 39.00 percent Grade I, 14.70 percent Grade II, 0.16 percent Grade III and 0.02 percent Grade IV. In all, 14.88 percent children suffered from severe malnutrition. Tikabali block reported highest incidence (30.14%) of malnourished children and G. Udayagiri block lowest incidence (9.63%) of malnourished children. It is heartening to note that most blocks except G. Udayagiri, Phiringia, Raikia, Tikabali and Tumudibandha reported no incidence of Grade IV children.

## 5.5 Safe Drinking Water and Sanitation

Poor access to safe drinking water and sanitation has been ascertained as a major cause for diarrhoea and other water borne diseases in Kandhamal. As per 2001 census, 69.42 percent rural areas had access to safe drinking water against the State average of 72.32 percent. The situation has, however, considerably improved since 2001. Table 5.14 gives the status of safe drinking water facilities in the district.

**Table 5.14 Status of Safe Drinking Water Facilities by Blocks in Kandhamal: 2004-2005**

Block	Tube Wells		Sanitary Wells		Piped water	
	Working Tube Wells	Villages Covered	Working Sanitary Wells	Villages Covered	No of Piped WS Projects	Villages Covered
Baliguda	666	202	88	37	1	1
Chakapada	677	123	79	14	1	1
Daringbadi	801	220	73	39	1	1
G. Udayagiri	467	71	15	5	NA	NA
Khajuripada	634	225	53	13	1	2
Kotagarh	350	123	71	19	1	1
Nuagaon	626	154	35	20	1	2
Phiringia	918	354	134	36	2	2
Phulbani	595	201	35	4	NA	NA
Raikia	606	116	62	22	1	2
Tikabali	636	118	40	14	1	4
Tumudibandha	447	179	69	27	1	1
<b>Kandhamal</b>	<b>7,423</b>	<b>2,086</b>	<b>754</b>	<b>250</b>	<b>11</b>	<b>17</b>

Source: District Statistical Handbooks, Kandhamal, 2005, NA- Not Available

The Rural Water Supply and Sanitation (RWSS) Department is responsible for assessing the needs of rural people for safe drinking water supply, creating desired infrastructure for safe drinking water supply and meeting the needs of the rural people as per the State policy in all districts including Kandhamal. The Accelerated Rural Water Supply Scheme (ARWSS) is the main initiative supported by the Government of India and implemented by the State Government. In addition, funds of Backward Regions Grant Fund (BRGF) and special schemes such as the *Biju Kandhamal O Gajapati Yojana* are accessed to increase safe sources of drinking water supply in the district. Major sources for safe drinking water supply include tube wells, sanitary wells and piped water supply projects.

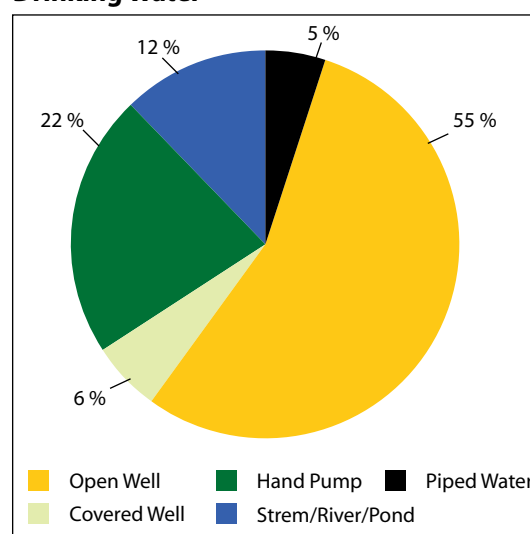
It may be observed that tube wells are the main sources of safe drinking water in most villages followed by sanitary wells and piped water supply projects. Phiringia block has highest number of working tube wells covering highest number of villages. There has been a growth of 46.09 percent in number of tube wells from 2004 to 2005. The number of sanitary wells grew by 3.98 percent. There are only 11 piped water projects covering 17 villages. In addition, urban centres of Phulbani and G. Udayagiri also have limited piped water supply facilities provided by both urban local bodies of Phulbani and G. Udayagiri.

Scarcity of safe drinking water is a chronic problem in Phulbani town. It becomes acute in summers when the main sources of water supply, the rivers Salki and the Pila Salki, dry up. During summers, people access water mainly from tanks in the town and chuas in the beds of Pila Salki and other low lands for their drinking water supply. In G. Udayagiri town, there is no supply of purified water.

An analysis of the responses from the DHDR Survey indicated that 63.03 percent villages used tube wells as sources of safe drinking water. However, many tube wells dried up in summer or remained dysfunctional for considerable periods of time. About 83.82 percent wells are used as drinking water source. When the sources of safe drinking water dry up in summer, 54 percent villagers use stream water facilities and 32 percent villages rely on ponds. About 46 percent households face water scarcity problem of varying degrees for at least two months and another 46 percent for more than two months. Only eight percent households report no problem of water scarcity during the year.

Chart 5.8 summarises the responses for sources of drinking water used by various households in Kandhamal. It may be observed that 55 percent households use open wells for drinking water, 22 percent use hand pumps, six percent use covered wells and only five percent households have access to piped water supply in Kandhamal. Around 12 percent households reported streams, rivers or ponds as sources of their drinking water.

**Chart 5.8 HH Responses for Sources of Drinking Water**



Source: Primary Survey, DHDR Kandhamal

**Table 5.15 Status of Household Latrines under TSC in Kandhamal: 2008**

Sl. No.	Block	Target	Achievement up to Mar' 08	Target for 2008-09	Funds Required in Rupees
1	Phulbani	6,765	2,542	2,200	2,640,000
2	Phiringia	12,434	4,208	3,000	3,600,000
3	Khajuripada	8,221	2,105	2,000	2,400,000
4	Chakapada	9,041	1,049	1,700	2,040,000
5	Baliguda	13,701	1,770	1,600	1,920,000
6	Daringbadi	17,361	1,294	1,560	1,872,000
7	Tumudibandha	7,395	1,111	1,500	1,800,000
8	Kotagarh	8,326	927	1,000	1,200,000
9	G.Udayagiri	4,697	1,294	1,200	1,440,000
10	K.Nuagaon	8,566	1,027	1,500	1,800,000
11	Raikia	8,138	799	1,000	1,200,000
12	Tikabali	7,777	1,293	2,000	2,400,000
	<b>Kandhamal</b>	<b>112,422</b>	<b>19,419</b>	<b>20260</b>	<b>24,312,000</b>

Source: Mission Director, Total Sanitary Mission, Kandhamal

### 5.5.1 Sanitation Facilities

Only 9.98 percent households had toilets or latrine facilities in the district against the State average of 14.89 percent in 2001. In rural areas of Kandhamal, only 6.74 percent had toilet facilities against the State average of 7.71 percent. Total Sanitation Campaign (TSC) has been implemented in Kandhamal with a view to create awareness and promote sanitation facilities both at individual households and community levels.

Table 5.15 analyses targets and achievements for creating toilets at household levels in different blocks of the district. It may be observed that the district aims to provide latrines to a total of 112,422 households of which 19,419 have been completed by March 2008. That is, only 17.27 percent of overall target has been met and 20,260 latrines have been targeted to be created during the year 2008-09. The requirement of funds for creating targeted toilets in the district has been estimated to be Rs.2.43 crore. It may be observed that Daringbadi, Phiringia and Baliguda blocks have high targets in excess of 10,000, whereas G. Udayagiri and Phulbani blocks have very modest targets

of 4,697 and 6,765 respectively. However, Phulbani, Phiringia and Khajuripada blocks have reported better performance in meeting their targets. Raikia, K. Nuagaon and Kotagarh blocks have reported very poor performance in meeting their targets up to March 2008.

## 5.6 Expenditure in Healthcare

Various health related schemes like NLEP and NPCB have been operating in the district before the National Rural Health Mission was launched in the district. Fund flow under National Leprosy Eradication Programme has come down as leprosy is no more a major hazard in the district. Most other health schemes have been receiving higher allocations over the years to meet the growing needs of the local people for health services. Table 5.16 summarises fund flow into the district for various health schemes from 2002-03 to 2008-09. The utilisation of allocated funds has also been rising over the years.

## 5.7 Chapter Summary

Health situation of Kandhamal is characterised by high incidence of malaria,

**Table 5.16 Fund Allocation under Various Health Schemes (2002-2009) (Rs. in lakh)**

Name of the Scheme	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
N.L.E.P	31.62	14.49	6.91	4.93	3.41	2.23	3.89
N.V.B.D.C.P	31.72	18.14	22.13	19.72	16.63	45.35	45.64
N.P.C.B	2.84	3.77	14.23	5.53	3.48	8.26	7.70
RNTCP	15.16	5.93	3.23	8.73	10.68	18.26	16.30
N.R.H.M.	NA	NA	NA	NA	NA	NA	16.63
Rural Water Supply and Sanitation	157.97	256.15	182.10	257.37	386.58	1,029.49	970.68
Women and Child Development	NA	NA	NA	NA	374.80	1,226.85	1,246.62
<b>Total of Health, Water and Sanitation</b>	<b>239.31</b>	<b>298.47</b>	<b>228.60</b>	<b>296.28</b>	<b>795.58</b>	<b>2,330.44</b>	<b>2,307.46</b>

Source: CDMO, Kandhamal, NA- Not Available

high IMR and low per capita health access. Health access and reach are critical issues in many pockets of the district due to their remote locations, inaccessibility and lack of awareness among people. Malaria is considered to be the most dreaded disease in the district as it is still prevalent in several blocks. Number of deaths due to malaria in Kandhamal was 13.55 percent of total

#### Box: 9 Indicators for Kandhamal District

##### Available Indicators for Kandhamal

- U5MR is 85.6 (DLHS, RCH II, 2002)
- IMR is 79.12 (DLHS-RCH II, 2002), 69.97 (ICDS data 2009), 121 (Population Foundation of India Study, 2009)
- 90.18 percent children immunized against measles (ICDS data 2007-08)
- Institutional delivery is 32.4 percent (less than 30 percent as per DLHS, RCH III), percentage of delivery attended by skilled health personnel – 21.7 (DLHS RCH II)
- Women/husband using any modern family planning method – 34.9 percent (DLHS, RCH II)
- Antenatal care – 69.4 percent got antenatal care during pregnancy (DLHS, RCH II)
- Unmet need for family planning – 16.5 percent (DLHS, RCH II)
- Knowledge on HIV/AIDS – For female and male it is 44.1 and 61.5 percent respectively (RCH II)
- During 2001-07, positive cases came down by 22.2 percent, deaths went up from 8 to 29, prevalence of malaria was 5359 per 1,00,000 population
- Tuberculosis - 864 per 1,00,000 population (DLHS, RCH II)

malarial deaths in Odisha in 2007. Other major prevalent diseases include diarrhoea, cholera and tuberculosis.

Health indicators for the district are generally found to be poor. Kandhamal is among the bottom five districts in terms of Reproductive Health Index (RHI) at 0.462 as reported in Odisha HDR 2004. The district reports high IMR and MMR figures. DLHS, RCH-II data shows an IMR of 79.12 in Kandhamal reported in 2004. The District Administration through ICDS and NRHM schemes has taken steps to enhance nutritional status of mothers and children, provide support to pregnant mothers and promote institutional deliveries. Box 9 illustrate indicators for Kandhamal district.

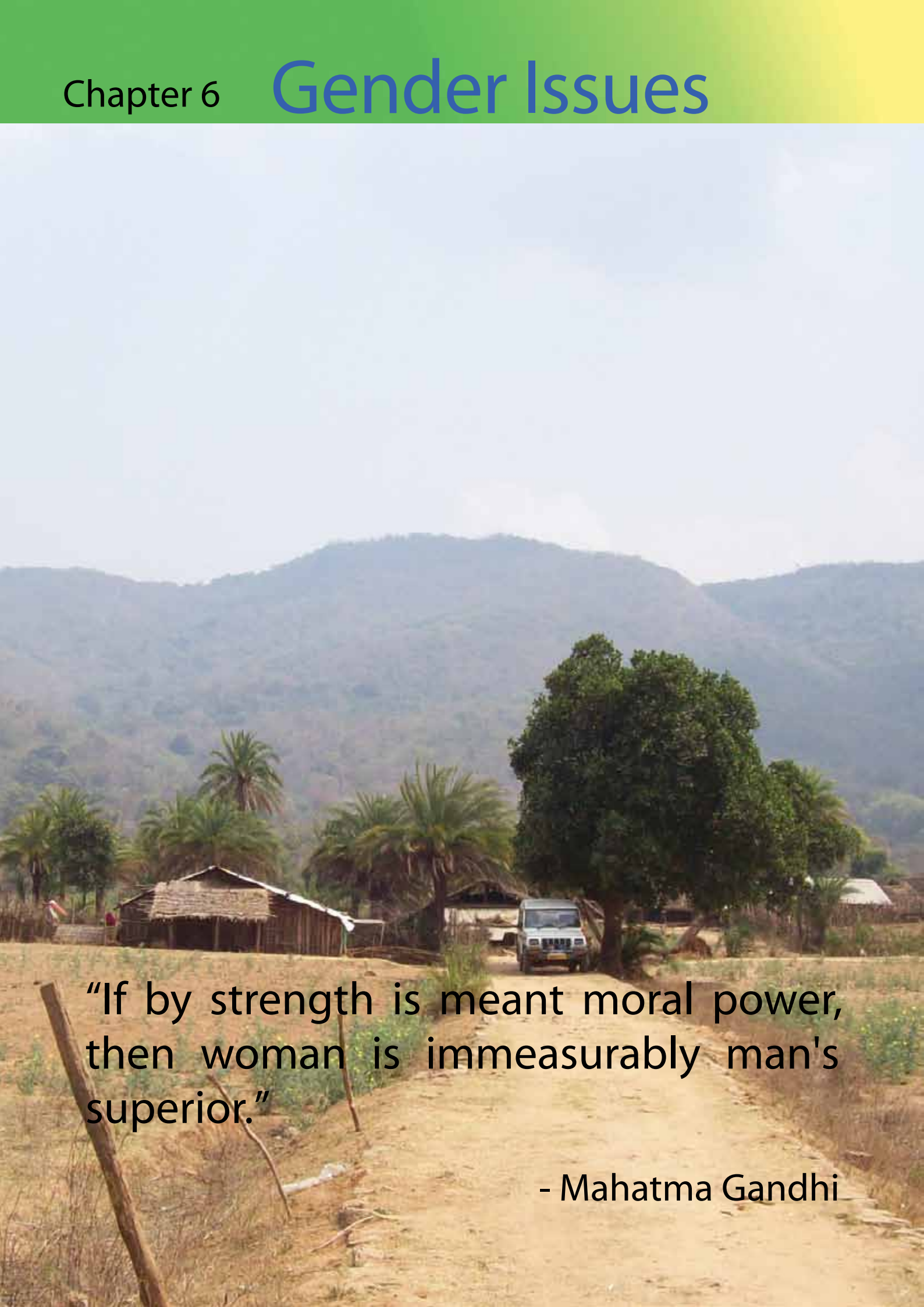
Health infrastructure available in the district, particularly in PHCs and sub-centres needs to be strengthened to ensure quality services. The health institutions suffer from large vacancies of doctors and staff. In 2008, 34 percent of sanctioned positions for doctors were vacant. Despite Government efforts, access to health services is inadequate in the district. Only 41.34 percent of villages in the district have health access within five km distance as reported in DLHS, RCH III in 2008. Several promotional schemes like NRHM, RCH and ICDS are operational in

the district to improve healthcare status. ASHA workers appointed by NRHM have helped to create a good awareness on childcare among pregnant mothers and with the help of JSY institutional deliveries has improved from 38 percent in 2007-08 to 46 percent in 2008-09. Even if ICDS is operational, the district is still among the lowest ranked districts for nutritional status of children. Percentage of children in 0-3 years under malnutrition (Grade II, III and IV) category is 21.51 percent against the

State average of 17.88 percent. Over last two decades, patient load has increased and more people have started accessing healthcare services. However, healthcare services continue to be a challenge owing to remote locations, inadequate staffing and poor health infrastructure.

The next chapter deals with cross cutting issue of gender. The chapter reflects on gender disparity in various parameters, women empowerment and social capital.



A photograph of a rural landscape. In the foreground, a dirt road leads towards the background. A white SUV is parked on the road. To the left, there is a small hut with a thatched roof. Several palm trees are scattered around the hut. In the background, there are rolling hills or mountains under a clear sky.

**“If by strength is meant moral power, then woman is immeasurably man's superior.”**

**- Mahatma Gandhi**





# Gender Issues



As men and women are integral constituents of a society, it is natural for both of them to seek, and get, equitable treatment in all social interactions. There is, however, a growing perception that women have historically remained in a position of disadvantage in many respects. Gender gaps have been observed in terms of rights, access, and control of resources and economic opportunities on one hand and decision-making, power and political representation on the other. Gender equity is, therefore, an important objective for human development. The **Millennium Development Goal 3** aims at promoting gender equality and empowerment of women in all spheres of life. The Box 10 below details indicators under MDG 3;

## Box: 10 MDG 3: Goal and Indicators

### MDG Goal and Indicators

Goal 3: Promote gender equality and empowerment of women

Target 3a: Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015

- 3.1 Ratios of girls to boys in primary, secondary and tertiary education
- 3.2 Share of women in wage employment in the non-agricultural sector
- 3.3 Proportion of seats held by women in national parliament

This chapter discusses main gender issues in Kandhamal. It is organised as follows. The next section analyses some gender dimensions of demography at the district and sub-district levels. The subsequent

sections discuss gender disparities, particularly with regard to education, health and participation in economic activities. The following section narrates some recent initiatives that have aimed at empowering women and improving their overall welfare. The last section summarises key gender issues and concerns.

## 6.1 Demography of Kandhamal: Some Gender Dimensions

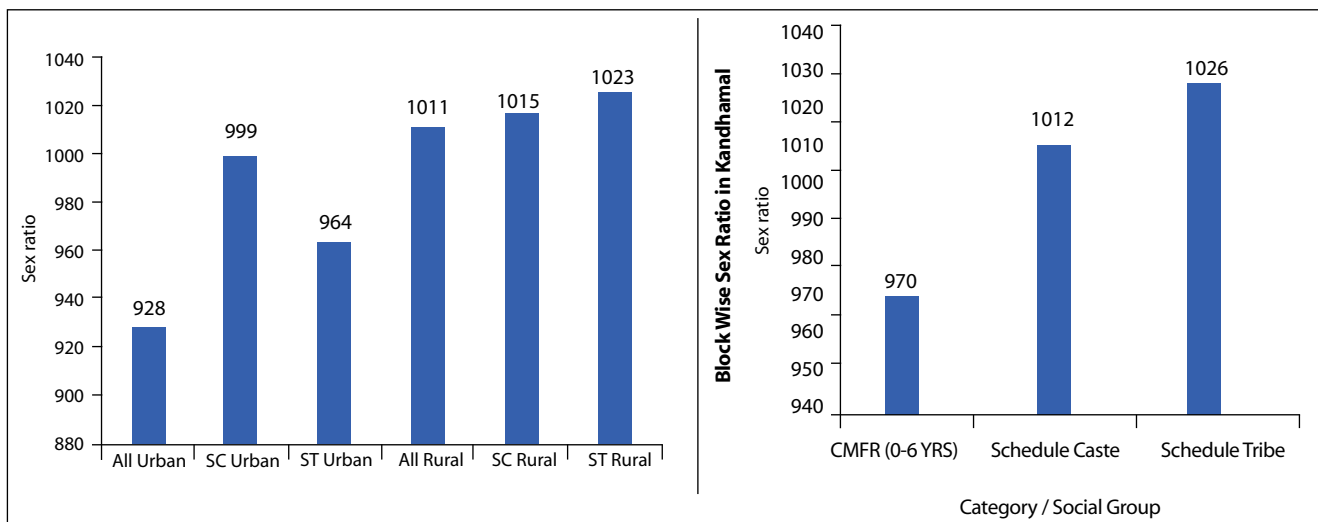
As per 2011 census, Kandhamal has returned 50.89 percent female population of 372,551 out of 731,952. The sex ratio in 2011 improved substantially from 1,008 females in 2001 to 1,037 females in 2011 per 1,000 males, against the State average of 978 in 2011. The child population (0-6 year age group) of the district is 106,379 in 2011, (54,266 boys and 52,113 girls). The district reported a 52.0 percent ST population of 336,809 (i.e., 166,283 male and 170,526 female) and 16.97 percent SC population of 109,506 (i.e., 54,417 male and 55,089 female) in 2001. Total population of the main disadvantage groups including women, ST and SC communities was 546,102 or 84.25 percent of total population in 2001. The sex ratio for child population (0-6 year age group), was only 970 girls per 1,000 boys

in 2001. This has further come down to 960 in 2011. Chart 6.1 summarises the results of this analysis with regard to sex ratio of SC and ST for rural and urban population as well as Child Female Male Ratio (CFMR) in Kandhamal for the census year 2001. Sex ratio also varies across different blocks and urban centres of the district. Chart 6.2 gives the block-wise sex ratio in Kandhamal as per census 2001. Sex ratio is above 900 for all the blocks except in G. Udayagiri.

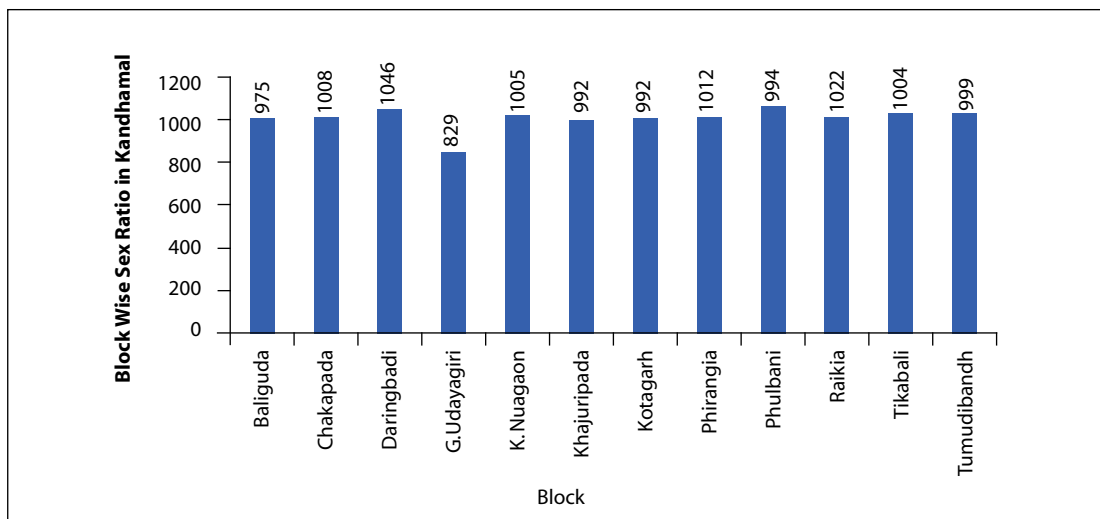
## 6.2 Gender Differential in Education

Education level of women has a direct impact on healthcare and nutritional status of children. There is a strong correlation between infant mortality and low female literacy level due to poor educational attainment among women. Several Government schemes are operational in Kandhamal to promote female education including NPEGEL, KGBV, girl's residential schools, remedial teaching and life skill training. Gender gap can be noticed in key educational indicators like literacy rates, enrolments, dropout rates, percentage of out of school children, educational attainment and adult functional literacy.

**Chart 6.1 Sex Ratio by Social Groups and CFMR in Kandhamal: 2001**



Source: Census of India, 2001

**Chart 6.2 Sex Ratio by Blocks in Kandhamal: 2001**

Source: Census of India, 2001

During 1991-2001, literacy rate in Kandhamal increased from 37.23 to 52.68 percent. In 2001-2011, the female literacy rate increased by 16.60 percentage points from 35.86 percent in 2001 to 52.46 percent in 2011 as against 8.62 percentage points in case of male literacy that increased from 69.79 percent in 2001 to 78.41 percent in 2011. The gap in gender literacy that was 33.93 percentage points in the period 1991-2001 got reduced 25.95 percentage points. That is a welcome development. Table 6.1 gives block-wise gender gap in literacy in 2001.

Literacy rates for both male and female are highest in G. Udayagiri and lowest in Kotagarh. The Gender Gap in literacy is highest in Khajuripada block (42.10) and lowest in Daringbadi block (5.90). Table 6.2 gives gender gap in literacy across all blocks by social groups in 2001.

The female literacy is lowest among Schedule Tribe women as reflected by blocks like Baliguda, Daringbadi, K. Nuagaon, Kotagarh and Phiringia. The female literacy in Kandhamal for SC and ST groups stands at

**Table 6.1 Literacy Gap in Different Blocks of Kandhamal (2001)**

Block	Male Literacy Rate	Female Literacy Rate	Gender Gap in Literacy
Baliguda	62.80	28.60	34.20
Chakapada	77.00	39.30	37.70
Daringbadi	36.70	30.80	5.90
G.Udayagiri	81.00	48.10	32.90
K.Nuagaon	77.00	39.30	37.70
Khajuripada	80.70	38.60	42.10
Kotagarh	48.80	19.50	29.30
Phiringia	71.40	31.10	40.30
Phulbani	76.20	34.20	42.00
Raikia	76.40	44.40	32.00
Tikabali	77.60	42.40	35.20
Tumudibandha	51.30	23.60	27.70
<b>Kandhamal</b>	<b>69.79</b>	<b>35.86</b>	<b>33.93</b>

Source: Census of India, 2001

**Table 6.2 Gender Gap in Literacy Rate Across Social Groups (2001)**

Block/NAC	SC Literacy			ST Literacy		
	Male	Female	Gender Gap	Male	Female	Gender Gap
Baliguda	42.76	13.51	29.25	31.55	6.94	24.61
Chakapada	51.34	15.93	35.41	53.04	12.43	40.61
Daringbadi	53.19	17.03	36.16	32.33	5.99	26.34
G.Udayagiri	75.96	23.21	52.75	61.68	23.74	37.94
K.Nuagaon	44.91	14.86	30.05	47.83	9.85	37.98
Khajuripada	59.04	12.58	46.46	63.54	12.15	51.39
Kotagarh	40.80	8.44	32.36	16.09	2.26	13.83
Phiringia	41.01	8.57	32.44	37.37	5.26	32.11
Phulbani	74.29	34.66	39.63	81.30	36.76	44.54
Raikia	44.53	17.67	26.86	55.94	20.05	35.89
Tikabali	60.54	18.43	42.11	58.43	15.37	43.06
Tumudibandha	39.78	7.80	31.98	20.96	18.85	2.11
G.Udayagiri (NAC)	69.95	38.72	31.23	76.75	45.55	31.20
Phulbani (M)	59.05	17.07	41.98	55.77	10.81	44.96
<b>Kandhamal</b>	<b>70.99</b>	<b>36.08</b>	<b>34.91</b>	<b>62.72</b>	<b>26.87</b>	<b>35.85</b>

Source: Census of India, 2001

36.08 and 26.87 percent respectively as per census 2001. Gender gap among Schedule Tribe (35.85 for the district) is higher than that of Schedule Caste (34.91 for the district). The gender gap in literacy is highest in G.Udayagiri block for SC community and Khajuripada block for ST groups. The ST female literacy is a matter of concern and special initiatives by SSA and SC and ST Development Department have been taken to address the issue.

### 6.2.1 Educational Attainments and Functional Literacy

The primary survey indicated that 29.03 percent of adult males and 14.33 percent of adult females completed high school and above. The primary survey of 1,000 households also found that 24.81 percent adult male and 49.76 percent of adult female of the sample have never been to school. This indicates a clear gender bias. The sample survey checked the educational functionality of adults and it was found that 42 percent

of adult women could not read, write or sign and another 42 percent could read and write. The percentage for the same for male members was 18 and 66 percent respectively indicating a substantial gender gap.

### 6.2.2 Enrolment of Children

As per DISE data 2008-09, of the enrolments in 6-11 year age group, 51 percent were boys and 49 percent are girls. Similarly, for 11-14 year age group 53.66 percent enrolments were for boys and 46.34 percent for girls. The gap in enrolment numbers is higher in upper primary classes. However, gender gap in enrolment is narrowing down. Gender Parity Index refers to the proportion of girls to boys at any specific level of education like primary or upper primary. Schemes like NPEGEL and KGBV have helped in improving Gender Parity Index (GPI). GPI for primary level is higher than 0.8 for all blocks while in case of upper primary level in blocks like Khajuripada and Kotagarh it is less than 0.8. Overall GPI for the district was 0.96 and 0.86

for primary and upper primary respectively for the year 2008-09. GPI at high school level was 0.7 for the same year. This indicates a gradual reduction in participation of girls in higher level of education.

The GPI trend for upper primary enrolments shows higher gender gap than for primary enrolments. In seven of 12 blocks and two urban locations, the GPI was less than 0.9 during 2008-09. Khajuripada and Kotagarh blocks show GPI of less than 0.8 during the same period. The low GPI figures for upper primary enrolments suggests lower transition rate for girls from primary to upper primary level.

### 6.2.3 Dropout and Out of School Children

The gender gap in dropout rates was analysed and found to be marginal. Dropout rates are higher at upper primary level than primary level. Dropout levels for children in 6-11 age groups came down from 5.7 to 1.45 percent while the same for children in 11-14 age groups reduced from 19.77 to 6.78 percent during 2006-09. The dropout rate (calculated as percentage of total enrolments) among girls are marginally higher than for boys. In 2008-09 at primary level, dropout rates for boys and girls were 0.86 and 1.0 percent respectively. The same for upper primary level was 5.26 and 7.05 percent respectively. DISE data also showed that out of school children were higher in case of 11-14 year age group or upper primary level. About 51 percent of the out of school children were girls as per SSA micro planning data 2007.

In order to reduce the gender disparity in schools, various schemes have been initiated by the Sarva Sikshya Abhiyan (SSA). These schemes include: (i) supply of free textbooks for girls, (ii) women representation in Village Education Committee, (iii) provision of separate toilets for girls, (iv) training of teachers on gender

mainstreaming, (v) implementation of National Programme for Education of Girls at Elementary level (NPEGEL), (vi) opening of model cluster schools for girls education under Sarva Sikshya Abhiyan (SSA); and (vii) implementation of Kasturba Gandhi Balika Vidyalaya scheme.

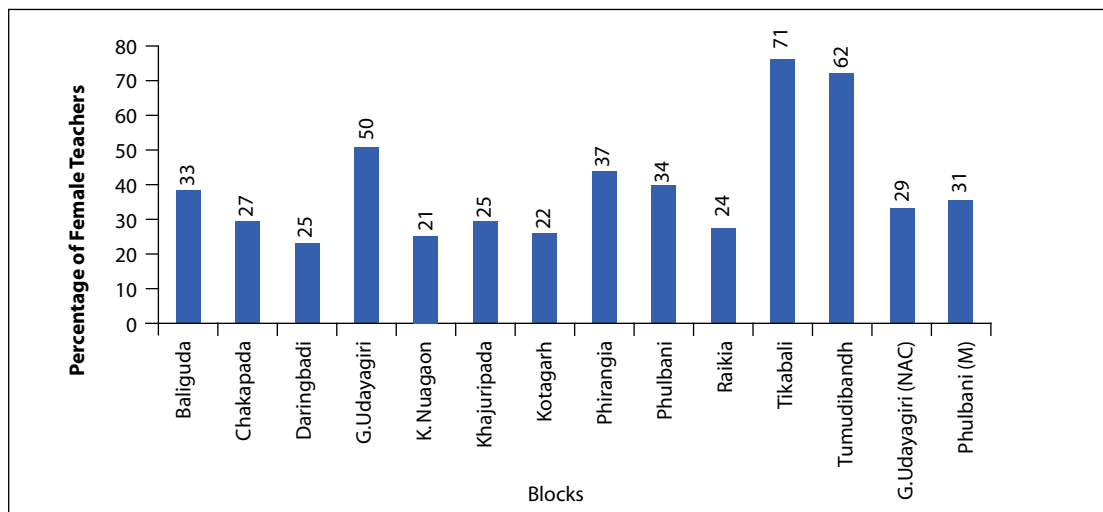
As a result of the efforts by SSA, gender gap has reduced at primary level both for enrolments and dropout rates. There is a requirement to retain girl children at higher classes to increase educational attainments and improve education quality. The district's performance in high school examination is relatively weak. The pass percentage at class X for the year 2005-06 was 35.07 percent against the State average of 55.36 percent. In Kandhamal pass rate for boys and girls were 37.73 and 31.57 percent respectively. The gender gap in high school pass rates is 6.16 percentage points which is higher than the same at the State level (1.25 percentage points). The district administration has taken steps to improve quality of education at middle and high school levels. As a part of the schemes under SSA, the percentage of the female teachers in schools has been increased progressively to make the school girl child friendly. Chart 6.3 gives the percentage of lady teachers across different blocks.

In Kandhamal, the female teachers are only 29.59 percent. K. Nuagaon has the lowest strength of female teachers (21 percent) and Tikabali block the highest, 71 percent female teachers. However, both the urban areas in Kandhamal have around 30 percent lady teachers.

## 6.3 Participation in Economic Activity

The work participation rate among male and female workers shows gender disparity in labour participation. In Kandhamal Work Participation Rate (WPR) is 52.32 percent for

**Chart 6.3 Percentage of Female Teachers in Different Blocks of Kandhamal**



Source: DISE, Kandhamal 2007-08

**Table 6.3 Block Wise Gender Differential in WPR (2001)**

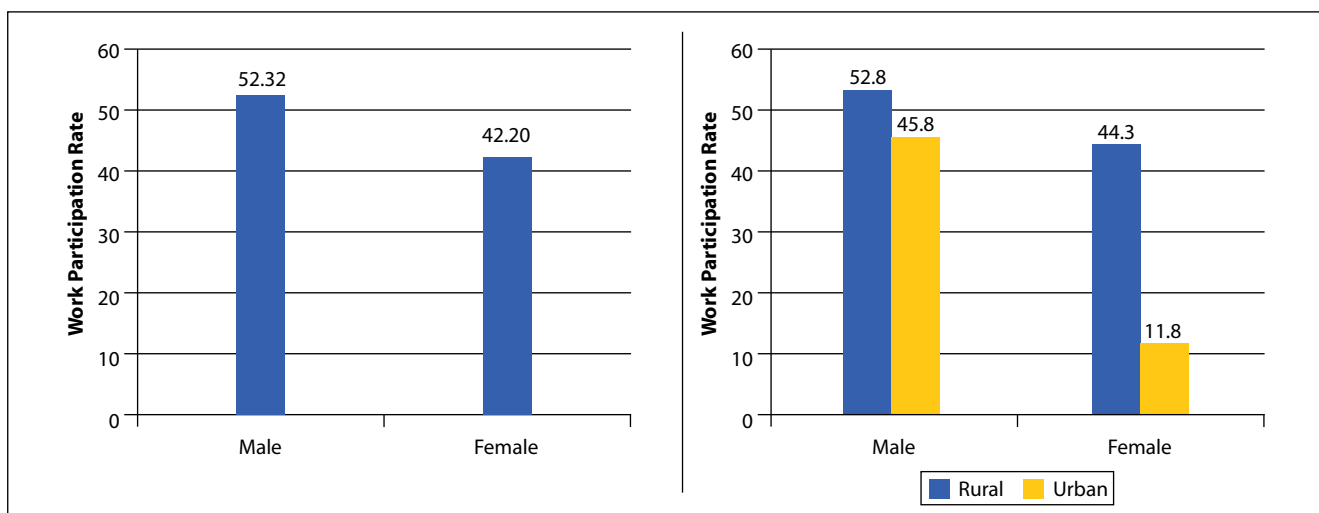
Name of Block/Urban Area	Male Population	Male Worker	Female Population	Female Worker	Male WPR %	Female WPR	Gender Gap
Baliguda	31,834	16,394	31,736	12,868	51.50	40.55	10.95
Chakapada	20,728	11,359	20,717	9,001	54.80	43.45	11.35
Daringbadi	45,850	23,104	47,680	22,366	50.39	46.91	3.48
G. Udayagiri	14,963	7,562	15,668	6,101	50.54	38.94	11.60
Khajuripada	23,511	13,004	23,244	10,091	55.31	43.41	11.90
Kotagarh	20,422	10,406	20,438	8,384	50.95	41.02	9.93
Nuagaon	23,490	12,554	23,912	11,158	53.44	46.66	6.78
Phiringia	35,905	20,009	36,194	17,734	55.73	49.00	6.73
Phulbani	17,543	9,184	17,433	8,073	52.35	46.31	6.04
Raikia	23,840	12,681	24,250	10,294	53.19	42.45	10.74
Tikabali	23,040	12,577	23,648	11,404	54.59	48.22	6.36
Tumudibandha	18,803	9,587	19,258	7,344	50.99	38.13	12.85
G. Udayagiri NAC	4,963	2,258	5,241	784	45.50	14.96	30.54
Phulbani (M)	17,907	8,217	15,983	1,711	45.89	10.71	35.18
<b>Kandhamal</b>	<b>322,799</b>	<b>168,896</b>	<b>325,402</b>	<b>137,313</b>	<b>52.32</b>	<b>42.20</b>	<b>10.12</b>

Source: Census of India, 2001

male and 42.20 percent for female. WPR is higher in rural areas and female WPR is lower than male WPR. Chart 6.4 offers the difference in work participation by gender.

During the primary survey, it was observed that the work participation of female is more among the Schedule Tribes in comparison to other social groups. In fact, female children in the tribal society are encouraged to

participate in household works instead of joining school. As per census 2001, the gender differential in the WPR is 10.1 percent. The Rural and Urban variation shows 34 percent gender gap in urban areas while for rural areas the difference is 8.5 percentage points. As females are involved in agricultural activities, the female WPR is much higher in rural areas. Table 6.3 gives the gender differential in WPR across blocks.

**Chart 6.4 Work Participation by gender in Kandhamal**

Source: Census of India, 2001

Block specific variation shows highest gender difference in WPR for Tumudibandha block (12.85 percentage point) and the lowest for Daringbadi (3.48). The average difference is 10.12 percentage points. Table 6.3 gives block-wise gender gap in WPR.

The primary survey found that 5.6 percent of the total households were women headed. It is expected that these households are more vulnerable and necessary access to resources and capital must be provided for women for productive use. Schemes like Mission Shakti identifies women headed households as most vulnerable groups and includes them in the project.

## 6.4 Gender Gap in Health

Healthcare services though available to all might be accessed by men more often than women. The district records high IMR and MMR, low number of institutional deliveries and poor nutritional status among children. The district has one of the highest IMR in the State. Poor nutrition and post-natal care leads to infant or child deaths. NRHM information indicates that Chakapada has the highest IMR of 118 as reported in 2008. The data collected from the district does not

give IMR by gender, however crude estimates from the primary data indicate that neonatal deaths, IMR and U5MR for boys are higher than those of girls. It was found that 14.9 percent of the male children born, died within five years whereas the same figure in case of girl child was 11.4 percent. Similarly infant death percentage was found to be 0.096 and 0.076 percent for boys and girls respectively.

Nutritional data on women is not available at district level, but the State level data from NFHS-3 indicates gender differences. There is gender gap in prevailing nutritional and health status of adult members of the household. NFHS-3 data indicates that 40.5 percent of women (43.7 percent in rural areas) have problems of nutritional deficiency and whose Body Mass Index is below normal. This is less than the figure for male which is 32.1 percent (34.5 for rural population). Similarly prevalence of anemia for adults in 15-49 year age group is reported as 62.8 and 37 percent in female and male members respectively.

Reproductive health is crucial to women's well being. In Odisha HDR 2004, a reproductive health index (RHI) was prepared taking six

critical parameters that can affect or reflect reproductive health. RHI for Kandhamal was less than 0.5 as against the State average of 0.55. The district was among six most backward districts with respect to RHI.

## 6.5 Women Empowerment

Empowerment is a multidimensional social process that helps people to gain control over their own lives. It is a process that fosters power (that is the capacity to implement) in people for use in their own lives, their own communities and in their own society, by acting on issues that they describe as important. Above all, empowerment is a result of participation in decision-making<sup>44</sup>.

Women's empowerment refers to the process by which women acquire due recognition at par with men, to participate in the development process through political institutions as a partner with dignity<sup>45</sup>.

Kandhamal, being a tribal dominated district shows less discrimination against women. Women empowerment involves social, economic, political and legal empowerment at individual and community levels. Decision making, connectedness, mobility, voicing and participation are important indicators to understand the level of women empowerment. Focus Group Discussions for the DHDR survey found good participation of women and qualitative findings suggest that women participate in livelihood activities and are given freedom to some extent in the tribal society.

### 6.5.1 Women Participation and Mobility

The number of women in elected bodies is less in Odisha. There is no women representative from Kandhamal in Odisha assembly. Women reservation in Panchayati

Raj Institutions has facilitated their participation in decision making. One-third seats are reserved for women candidates in PRI system. In case of SC, reserved seats for women is 46.72 percent and for ST reserved seats are 39.51 percent. As per the Odisha Panchayat Act 1994, one of the two top office bearers must be a woman at each level of PRI at GP, block and district levels.

An analysis of responses given by the women in the household on their participation and mobility reveals that 69 percent of women participated in the last palli sabha in contrast to 79.51 percent in case of men. About 31 percent women however, never participated in palli sabha while 30 percent agreed to have participated in palli sabhas regularly. Absenteeism in palli sabha for men is only 20.49 percent while in case of women it is almost double at 41.24 percent. Chart 6.5 gives breakup of responses of women on mobility and participation.

The primary survey indicates that women were relatively better empowered and participated in different activities in the village. About 68.53 percent of women participated in work and went alone for marketing, 79.25 percent of women went alone to meet relatives and 30.05 percent women were found to attend palli sabha. The higher level of participation can be attributed to tribal customs where the woman member is encouraged to participate in livelihood activities.

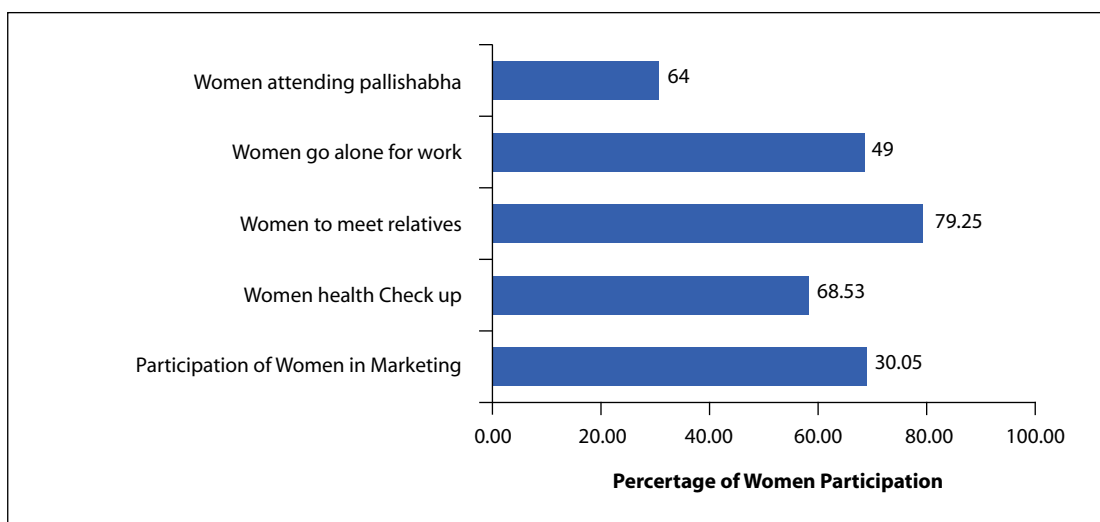
### 6.5.2 Decision Making by Women

NFHS-3 data reveals that 55.3 percent women participate in household decision making in Odisha. The DHDR primary survey indicated that in 8.45 percent of the households, the male took all the decisions at home. In 5.32 percent of the household decisions were taken only by women and in 86.23 percent of the household decisions were taken jointly

<sup>44</sup> Saxena, N, C, What is meant by people's participation, A note, Journal of Rural Development.

<sup>45</sup> Palanthurai, G, and 2001: The Genre of Women leaders in local bodies: Experience from Tamil Nadu, Indian Journal of public Administration.



**Chart 6.5: Analysis of Response on Women Empowerment**

Source: Primary Survey, DHDR Kandhamal, Base 1000 HH

by men and women. In the matter of savings women took the lead in decision making (15.60 percent), while the decisions on borrowings were taken mostly by the male alone (12.97 percent). Table 6.4 gives detail on decision making at the household level.

### 6.5.3 Schemes for Economic Empowerment of Women

The district has been implementing several women empowerment programmes like SGSY and Mission Shakti with the intention of bridging the gender gap and empowering women. The Swarnajayanti Gram Swarojgar Yojana (SGSY) promotes self employment through Self Help Groups. The objective of the programme is to support BPL families by

providing income generating assets through credit linkage and subsidy. Women Self Help Groups (SHGs) are a major beneficiary of the programme. SGSY promotes micro enterprises and self employment options and encourages women beneficiaries. Table 6.5 gives the coverage of men and women beneficiaries as of 2005.

In the year 2008-09, a total of 2,744 beneficiaries were covered under SGSY. Of the beneficiaries, ST were highest followed by SC and general caste. Special focus was given to women SHGs through promotion of suitable micro enterprises. Women beneficiaries under SGSY were 220 in 2004 and went up to 1,474 in 2005. For the year

**Table 6.4 Participation in the Decision Making**

Subjects for Decision Making	Male Takes Decision (%)	Female Takes Decision (%)	Joint Decision (%)
Son/Daughter marriage	6.19	4.56	89.25
Livelihood Choices	8.04	3.30	88.66
Savings	9.01	15.60	75.38
Borrowing	12.97	3.77	83.26
Purchase of Household Assets	11.08	4.48	84.43
Sale/Mortgage of Household Assets	10.90	4.67	84.42
Family Planning	5.54	3.21	91.25
Number of Children	3.85	2.96	93.20
<b>Total (Across all Decisions)</b>	<b>8.45</b>	<b>5.32</b>	<b>86.23</b>

Source: Primary Survey, DHHR Kandhamal

**Table 6.5 Women Beneficiaries Covered Under SGSY**

Sl. No.	Name of the Blocks	Social Group-wise Beneficiaries Under SGSY				
		SC	ST	General	Total	Women
1	Baliguda	56	112	39	207	180
2	Chakapada	32	69	24	125	109
3	Daringbadi	84	174	61	319	277
4	G. Udayagiri	22	43	15	80	70
5	Khajuripada	35	63	22	120	104
6	Kotagarh	31	61	22	114	98
7	Nuagaon	34	66	23	123	107
8	Phiringia	46	97	34	177	154
9	Phulbani	23	46	16	85	74
10	Raikia	29	63	22	114	99
11	Tikabali	31	63	22	116	101
12	Tumudibandha	31	63	22	116	101
	<b>TOTAL</b>	<b>454</b>	<b>920</b>	<b>322</b>	<b>1,696</b>	<b>1,474</b>

Source: District Statistical Handbook, Kandhamal 2005

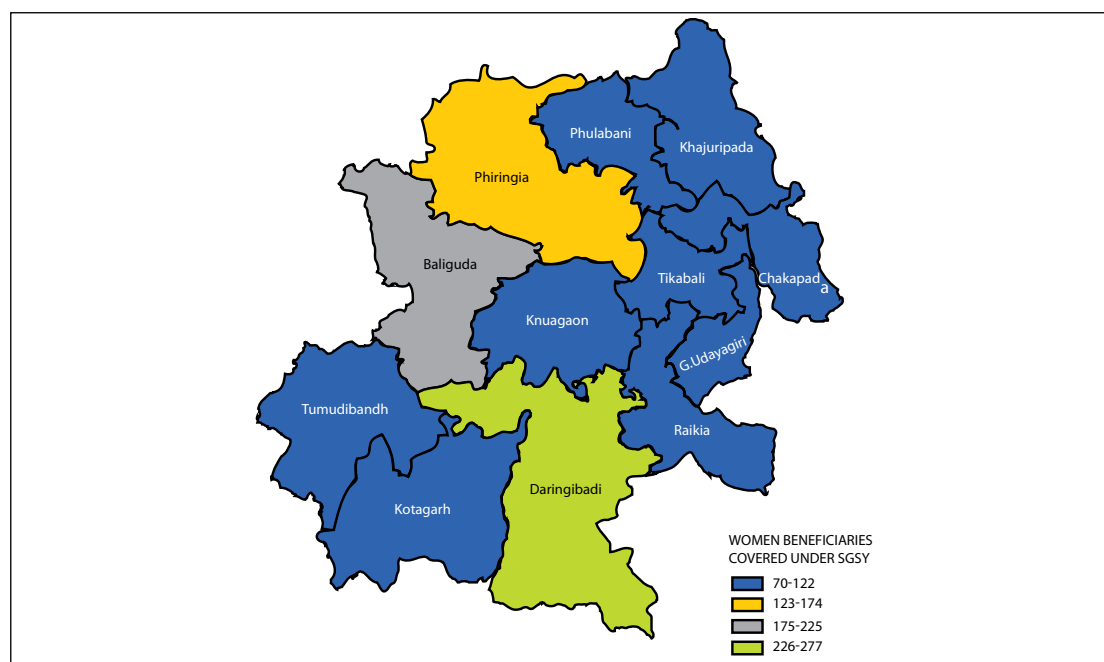
2008-09, the physical target for the district was 2,744 Swarojgaries (2,470 Swarojgaries in 247 groups and 274 individuals). For the year 2008-09, the action plan under SGSY focused more on women and disabled with a total financial investment of Rs. 49 lakh with Rs. 33.5 lakh credit coverage and Rs.15.5 lakh subsidy. About 1,279 women were targeted to be benefited under SGSY in 2009-10. Chart 6.6 gives a graphical representation of distribution of women beneficiaries in

Kandhamal. Daringbadi, Baliguda and Phiringia show maximum concentration of women beneficiaries.

#### 6.5.4 ICDS and Supplementary Nutritional Programme

The Integrated Child Development Scheme (ICDS) plays a major role in providing adequate services to children within the age group of 0-6 years, before and after birth and during the period of growth to ensure

**Chart 6.6: Women Covered Under SGSY**



Source: District Statistical Handbook, Kandhamal 2005

their physical, social, mental and cognitive development. It also helps pregnant and nursing mothers, old, infirm, disabled, destitute, blind and orphan children. Emphasis is also given for prevention of fatal diseases like Diphtheria, Pertussis, Tetanus, Polio-myelitis, Measles, Night Blindness and Malaria among the children and mothers through mass immunisation by the health and ICDS staff and reduction of the Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) in the community.

Supplementary Nutrition Programme aims at providing nutritious supplementary food to children in the age group of 0-3 year and 3-6 year and pregnant women and lactating mothers through Anganwadi Centres. The nursing and expectant mothers and children below six year of age are considered most vulnerable in the society and generally suffer from mal-nutrition. They are provided SNP food stuffs (Orimix & RV Oil for 25 days each month @ Orimix 80gm., & R.V Oil 8 gm. which contains 400.16 k. calories and 12.80 gm. of protein). By 2008, 84,500 beneficiaries were covered under the scheme.

### 6.5.5 Mission Shakti

The scheme was launched in the State on 8<sup>th</sup> March, 2001 with the objective of empowering women through promotion of women Self Help Groups (SHGs). Under the scheme SHGs have been formed in all revenue villages. This aims to augment the economic, social and cultural status

of women in the society through various income generation activities according to the availability of the raw materials in their locality and after looking into marketing facilities. Government supports the SHG through IGA grant for micro credit activities. SHG movement has caught up in the district and there is a good network of SHG across the district. However, activities relating to micro enterprises and livelihood promotion need to be strengthened.

Other schemes for women include Swadhar Scheme, Short Stay Homes and Working Women Hostels. Swadhar is implemented by Women and Child Development Department and provides assistance for rehabilitation of women in distress. Short stay homes and working women hostels are accommodations run by NGOs to protect women facing exploitation, family problems, and mental strain and working women facing a problem of accommodation.

## 6.6 Crime against women

Although Women may be victims of any of the general crimes such as 'Murder', 'Robbery' or 'Cheating', only the crimes which are directed specifically *against Women* are characterised as 'Crimes Against Women'. Various new legislations have been brought and amendments have been made in existing laws with a view to handle these crimes effectively. Table 6.6 gives atrocity details against women in India.

**Table 6.6 Atrocities Against Women in India**

Year	Total IPC Crimes	Crimes Against Women	Percentage to Total IPC Crimes
2002	1,780,330	131,112	7.4
2003	1,716,120	131,364	7.6
2004	1,832,015	143,615	7.8
2005	1,822,602	143,523	7.9
2006	1,878,293	154,158	8.2

Source: National Crime Records Bureau

Bihar and Odisha have reported highest number of crimes against women accounting for 62.7% and 17.9% respectively of total such cases at the National level for the year 2006. For the year 2006, 570 cases of deaths due to dowry and 1,702 cases of non-dowry torture have been reported<sup>46</sup>.

As per the statistics collected by the Crime Records Bureau, the proportion of crime against women (IPC) in the IPC crimes has been increasing in India over the last few years. Both cases of dowry tortures and atrocities have however come down over the last few years.

In Kandhamal, 61 cases of atrocities were reported in 2005. This has come down to 10 in 2009. From 2005 to 2009, there is a continuous reduction of atrocities on women. Dowry cases have shown fluctuating trends over the years. In 2005, 46 cases were reported and in 2007, 26. The number of dowry cases rose to 51 in the year 2008. In 2009, reported cases of dowry were 22. Chart 6.7 gives cases of atrocities against women and dowry cases.

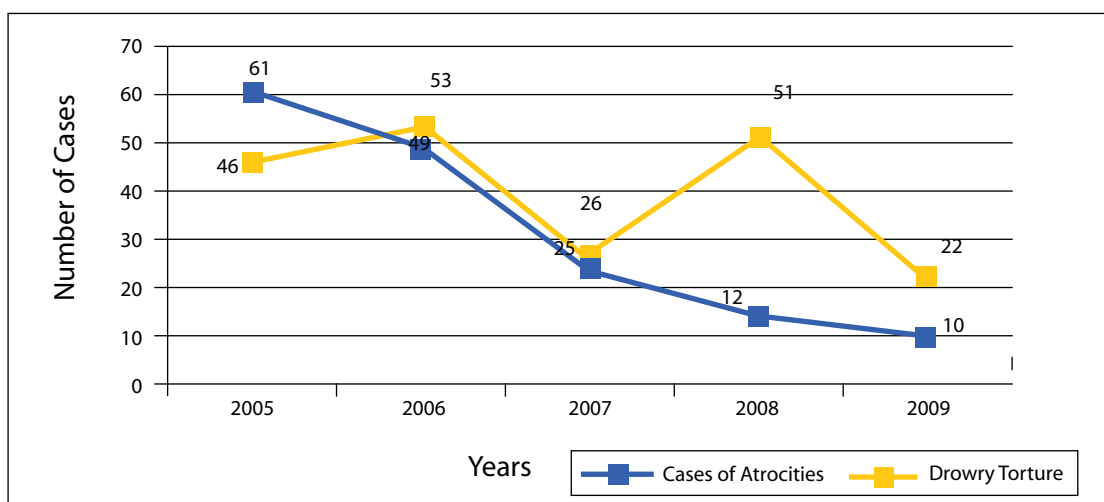
Many cases of women atrocities remain underreported. However, it is clearly evident

that dowry tortures of women is a serious concern. Deaths due to homicide and suicide often remain underreported. Increased women awareness of their rights, legal entitlements and higher participation of women in socio-political activities are some of the measures to be adopted for curbing dowry and atrocities against women in the district.

## 6.7 Chapter Summary

This chapter analysed the gender disparity across various variables in Kandhamal. The district shows considerable disparity within gender and social groups in various development indicators. Gender gap has been observed in key educational indicators like literacy, enrolments, dropout rates, percentage of out of school children, educational attainments and adult functional literacy. As per census 2011, male literacy was 78.41 percent and female literacy was 52.46 percent in Kandhamal. Gender gap in literacy reduced marginally from 34.86 percentage points in 1991 to 33.93 percentage points in 2001. This gap has been further brought down to 25.95 percent in 2011 as compared to 33.93 percent in 2001. The gender gap among ST is 35.85

**Chart 6.7 Cases of Atrocities and Dowry Tortures in Kandhamal**



Source: Office of Superintendent of Police, Kandhamal

<sup>46</sup> Statistical Abstract of Odisha, 2008.

percentage points, which is higher than that of SC at 34.91 percentage points. Among all the groups, ST female literacy at 26.87 percent is the lowest and is a challenge for the district.

#### Box: 11 Available Indicators for Kandhamal

##### Available Indicators for Kandhamal

- Ratio of girls to boys: 0.96 for primary level in 2007-08, 0.86 for upper primary in 2007-08, 0.7 for secondary level in 2008-09 and 0.43 for college education in 2004-05
- Share of women in wage employment in non-agricultural sector -23.87 percent (5<sup>th</sup> Economic census, Odisha)
- DDP grew at 10 percent from 2003-04 to 2004-05 (13 percent growth for Odisha) while total persons employed were 64,200 as per 5<sup>th</sup> economic census.
- No reserved seats for assembly and parliamentary elections. However, one-third reservation in PRI elections are as per the state government norms (in excess of 35 percent)

The primary survey in 1,000 households found that 24.81 percent adult male and 49.76 percent adult female of the sample have never been to school indicating a clear gender bias. The sample survey also found that 42 percent adult women and 18 percent adult men cannot read, write or sign

indicating a substantial gender gap. The GPI calculated from the enrolments indicate a gradual reduction in participation of girls in higher level of education. The gender gap in dropout rates is found to be marginal. Schemes like NPEGEL, KGBV, scholarships for girl child are operational to reduce gender gap in education. Gender difference is also noticed in work participation. In Kandhamal, Work Participation Rate (WPR) is 52.23 percent for male and 42.2 percent for female as per census 2001. The gender gap in WPR in urban areas is 34 percent and the same in rural areas is 8.5 percent. As females are involved in agricultural activities, female WPR is much higher in rural areas. Box 11 illustrate indicators for Kandhamal district .

The study also studied women participation and empowerment. Focus Group Discussions for the DHDR survey found good participation of women and qualitative findings suggest that women participate in livelihood activities and are given more freedom in tribal societies. The district has been implementing several women empowerment programmes like SGSY and Mission Shakti with the intention to bridging the gender gap and empowering women.

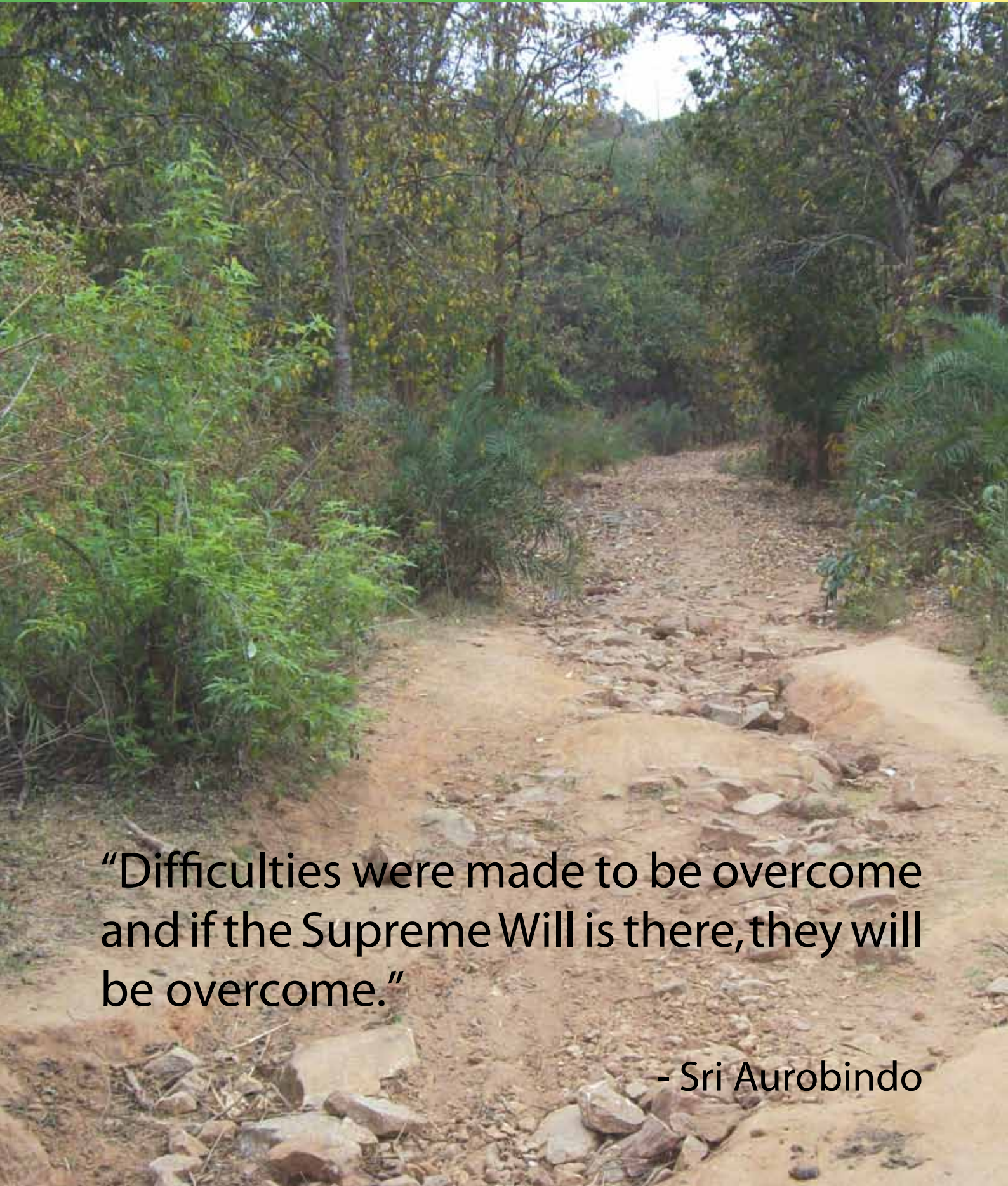
The next chapter deals with vulnerability issues for Kandhamal.





Chapter 7

# Vulnerability in Kandhamal



“Difficulties were made to be overcome and if the Supreme Will is there, they will be overcome.”

- Sri Aurobindo





# Vulnerability in Kandhamal



This chapter examines vulnerability issues of the district. The first section gives an overview of different vulnerability factors followed by detailing of some of these issues. The following sections details the vulnerability factors including natural calamity, personal insecurity, food insecurity and economic insecurity and social capital and cohesion. The last section details various schemes by the Government for social security measures.

## 7.1 Vulnerability Issues in Kandhamal

Hilly terrain and low irrigation extent results in low agricultural production. The district

faces crop failures quite often due to natural calamities such as flash floods and droughts. The district is classified as one of the severely food insecure regions. Besides, the district remains traditionally vulnerable to caste based conflicts. The district has witnessed disturbances from left wing extremists in recent times.

## 7.2 Natural Calamities

A natural disaster can best be understood as the combination of a natural hazard like cyclone, flood and drought among others. Vulnerability actually refers to the manner in which households or communities are

affected when the hazard takes place. Rapid growth of per capita income and use of this growth for improvement of living conditions of the people is the best measure to fight vulnerability. Both Government and civil society can play an important role to meet emergency needs during disasters.

Odisha has been prone to natural calamities for long. Natural calamities like drought and floods are regular features in the State. Since 1965, Odisha has experienced floods for 17 years, droughts for 19 years, and cyclones for seven years. Such natural calamities affect people's lives and properties. The post disaster conditions are more difficult for the poor, whose crops and properties are damaged.

### **7.2.1 Droughts**

Drought is a slow onset of a disaster. It occurs mostly due to lack of adequate rain in the dry land areas or because of uneven distribution of rainfall during a particular year. Drought is a major reason for crop failure in Kandhamal. The primary survey indicated that 38.32 percent of villages suffered crop failures in 2007. In the year 2006 and 2007 crop failures affected most of the villages leading to food shortages. High altitude terrain, poor rain water management and lack of water harvesting structures resulted in water shortage and thus crop failure in Kandhamal. The primary survey revealed that 22.86 percent of villages surveyed were affected by drought in 2008. The adverse impact of drought was severe in 2001 as reported in the village level discussions. Migration was rampant and affected several families.

### **7.2.2 Floods**

Odisha faces floods now and then. It faced heavy floods in 1950, 1955, 1982 and 2001. Floods resulted in not only human and livestock casualties, but also affected cultivated area at an increasing rate.

Kandhamal has generally not witnessed heavy floods. But sometimes heavy rains affect crops and community lives. Serious flood was reported in the year 2005. Much agricultural land was damaged. About 17.54 percent of the surveyed villages suffered in recent times from floods as reported in the primary survey. In 2007 one death was reported due to floods and three deaths were reported in 2008<sup>47</sup>.

### **7.2.3 Storm and Fire**

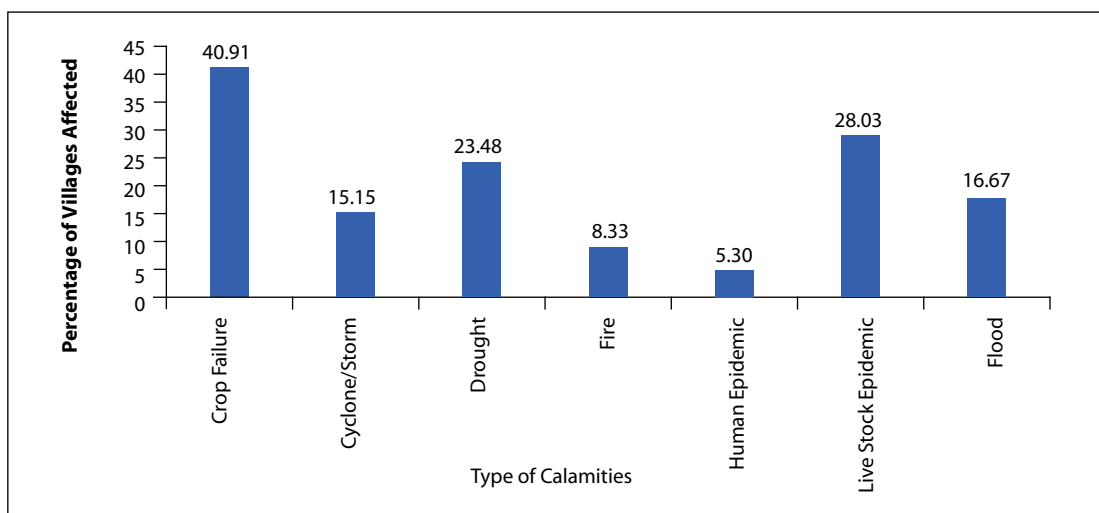
Due to hilly geography and dense forests, storm and forest fire are often reported in the district. Storms and fire are other natural calamities that affect the district periodically causing damage to houses, livestock and physical assets. About 15.09 percent of the villages surveyed were affected by storms during 2005-08 and 8.65 percent of the villages suffered from fires in the last 10 years. The recent fire of 2006 had most hazardous effect resulting in damage to 10 percent houses in six affected villages and 4.80 percent villages suffered from human epidemics.

### **7.2.4 Livestock Epidemic**

Around 29 percent of surveyed villages suffered from livestock epidemic. In 2004 livestock epidemic struck the district severely. This resulted in large scale deaths of cows and oxen. Chart 7.1 gives summary of responses from the primary survey on various types of disasters affecting people.

The surveyed villages have been affected by natural calamities as well as livestock and human epidemic. The primary survey responses place crop failure as the most acute vulnerability issue in the district. Use of highland for agriculture and poor rain water management are often cited as the reasons for crop failure or low harvest for farmers. The district has also seen acute epidemic attack on livestock despite regular immunisation by the veterinary department.

<sup>47</sup> District Emergency Officer, Kandhamal

**Chart 7.1 : Vulnerabilities In Kandhamal**

Source: Primary Survey, DHDR Kandhamal, base- 132 villages

### 7.2.5 Disaster Management

A number of initiatives have been taken by the State through planned interventions to combat natural disasters. Employment Assurance Scheme (EAS) was introduced to meet the post-drought calamities in 1996. Drought Prone Area Programme (DPAP) was also introduced to meet calamities in drought prone areas. Box 12 indicates the Odisha Relief Code which provides guideline for preparedness relief measures at the time of natural calamities.

In Kandhamal, one District Emergency Officer has been appointed to initiate action during natural calamities. Table 7.1 gives figures on death by natural calamities.

**Table 7.1 Deaths Due to Natural Calamities in Kandhamal**

Natural Calamities and Violence	2006-07	2007-08
Communal Conflicts	0	3
Lightening	3	8
Flood	1	3

Source: District Emergency Officer, Kandhamal

## 7.3 Personal Insecurity

### 7.3.1 Crime and Accidents

Theft and burglary are the highest reported crimes in Kandhamal. A comparison of cases

### Box: 12 Odisha Relief Code

#### Odisha Relief Code

The Odisha Relief Code (ORC) is a comprehensive document which acts as a guideline for undertaking preparatory measures prior to the occurrence of the natural calamities and relief measures soon after their occurrence. For the first time after the catastrophic cyclone of 1971, the Government decided to frame a fresh Relief Code. Odisha Relief Code, 1980 came into existence. After 1980, a number of instructions have been issued by the State Government to enlarge the scope and content of the code in order to make it more relevant to the times.

during 2002-2004 shows that incidences of theft are decreasing while those for burglary have increased in 2004 in comparison to 2002. Among the crime against women, atrocity, rape and kidnapping are also reported. There are limited reported cases of robbery and dacoity. Table 7.2 gives incidence of crime in the district.

Accidents are also one of the major factors of personal insecurity besides theft, murder and burglary. The number of accidents is on a rise in the district, as reported during 2002-04. About 42.42 percent of the accidents occurred due to heavy vehicles like truck and jeeps or taxis and 22.37 percent of the total accidents were due to two wheelers. In all 295 accidents were reported in last

**Table 7.2 Incidence of Crimes in Kandhamal district**

Sl. No.	Nature of Crime	2002	2003	2004
1	Murder	21	25	23
2	Dacoity	3	1	1
3	Robbery	13	7	13
4	Burglary	58	58	70
5	Theft	86	78	62
6	Rioting	16	14	22
7	Swindling & Cheating	6	13	2
8	Rape	32	35	25
9	Kidnapping	24	24	17
10	Miscellaneous Cases	1,051	1,215	1,000
<b>Total</b>		<b>1,310</b>	<b>1,470</b>	<b>1,235</b>

Source: District Statistical Handbook 2005, Kandhamal

**Table 7.3 Street Accidents in Kandhamal District**

Sl. No.	Type of Accidents	2002	2003	2004
1	Bus	12	15	21
2	Truck	35	25	26
3	Car/Jeep/Taxi	20	15	13
4	Scooter/Motor cycle	19	20	27
5	Cycle/Cycle Rickshaw	Nil	Nil	2
6	Other Vehicle	12	12	17
<b>Total</b>		<b>98</b>	<b>91</b>	<b>106</b>

Source: District Statistical Handbook 2005, Kandhamal

three years and 78 persons were killed in these accidents and 425 individuals were seriously injured . Table 7.3 gives details of accidents in Kandhamal from 2002-04.

Deaths due to accidents have increased in 2004 in comparison to 2002 while cases of injuries due to road accidents have decreased in these years. Road load in terms of automobiles is rising resulting in more road accidents. Attack by wild animals is also another threat to the inhabitants of the district. The district is home to about 12 percent of the total forest in Odisha and it has a large number of forest fringe villages. The villagers are vulnerable to attacks by wild animals and reptiles. Instances of death due to snakes bite are often reported to police and medical officers. In 2005, 58 deaths due to snake bites were reported in the district.

### 7.3.2 Caste Conflicts

The district is sensitive on caste divide owing to the friction between the Schedule Castes and Schedule Tribes. Historically, there have been conflicts between the Schedule Tribes (Kandhas) and Schedule Castes (Panas) owing to land alienation. This rivalry took a bad turn during the violence of 2008. The district administration successfully managed the situation and normalcy was restored. Peace committees have been in place in the district with Government support to stop such incidences. The State and District administration have taken steps to have a lasting solution by addressing problems of land transfer and reservation facilities offered to different castes.

In recent times, extremist activities have increased in Odisha and Kandhamal

district has also fallen prey to this owing to its strategic location in relation to other bordering districts which are affected by left wing extremism activities. The district administration needs to develop a long term plan to solve caste based conflicts as well as left wing extremist activities which are major reasons for personal insecurity in the district.

## 7.4 Food Security and Nutrition Status

Food Security is not guaranteed by adequate food grain production or even food availability. It is more fundamentally linked to both physical and economic access to food. Livelihood security is an important determinant for access to food. A combination of economic, social, ecological and institutional factors contribute to food security. A high level of income poverty, poor connectivity and periodic recurrence of droughts and floods give rise to a situation of chronic and endemic food insecurity. Chronic Energy Deficiency (CED), as a measure of chronic and severe under nutrition and malnutrition, is an indicator of food insecurity.

### 7.4.1 Food Security Index

Food security index is estimated taking into account food availability, food access and absorption. Food availability is estimated on the basis of per capita agriculture output, share of forest area, irrigation extent and rural connectivity. Access index is estimated ratio of workers, literacy and per capita expenditure. Absorption index is estimated by access to PHCs and safe drinking water. Table 7.4 categorises different district of Odisha as per the food security index. Kandhamal stands last (30<sup>th</sup> position) in availability, access and absorption index. The food security index of the district is estimated to be 30 and Kandhamal is put in the category of extreme insecure as per Food Security Atlas of Odisha 2008. Table 7.5 gives distribution of different districts as per food security index.

### 7.4.2 Food Security Programmes

Public Distribution System (PDS) makes grains available to the poor at a provisioned price. PDS retail shops are located at various locations of the district to distribute the allotted grains to the beneficiaries. PDS is used for distribution of BPL rice, Antyodaya Anna Yojana and Annapurna Yojana which are in place to reduce food insecurity among rural poor.

**Table 7.4 Categorisation of the Districts as per the Food Security Index**

Extremely Insecure	Severely Insecure	Moderately Insecure	Moderately Secure	Secure
Gajapati	Angul	Dhenkanal	Kendrapara	Bhadrak
Kandhamal	Balangir	Jharsuguda	Jajpur	Puri
Rayagada	Baudh	Ganjam	Balasore	Jagatsinghpur
Nabarangpur	Deogarh	Sonepur	Bargarh	
	Kalahandi	Nayagarh	Khordha	
	Keonjhar		Cuttack	
	Koraput			
	Malkangiri			
	Mayurbhanj			
	Nuapada			
	Sambalpur			
	Sundergarh			

Source: Odisha Food Security Atlas, 2008

**Table 7.5 Food Security Index of different districts of Odisha (2008)**

District	Availability Index		Access Index		Asorption Index		Food Security Index		Food Security Outcome Index	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Anugul	0.326	26	0.473	11	0.268	29	0.390	18	0.485	12
Balangir	0.433	18	0.356	17	0.519	9	0.409	15	0.467	13
Balasore	0.498	17	0.505	9	0.658	2	0.528	7	0.600	5
Bargarh	0.601	11	0.410	13	0.742	1	0.529	6	0.140	21
Baudh	0.441	27	0.351	19	0.337	23	0.379	20	0.402	22
Bhadrak	0.601	14	0.576	3	0.632	4	0.594	3	0.414	20
Cuttack	0.593	2	0.587	1	0.375	19	0.553	4	0.692	3
Deogarh	0.443	5	0.334	20	0.308	27	0.366	21	0.504	11
Dhenkanal	0.406	19	0.478	10	0.276	28	0.420	14	0.565	6
Gajapati	0.274	25	0.320	22	0.315	26	0.304	29	0.294	28
Ganjam	0.511	13	0.442	12	0.389	18	0.456	12	0.389	24
Jagatsinghpur	0.684	6	0.581	2	0.629	5	0.624	1	0.624	4
Jajpur	0.515	3	0.572	4	0.365	20	0.518	8	0.452	15
Jharsuguda	0.503	9	0.385	15	0.513	10	0.446	13	0.830	1
Kalahandi	0.484	16	0.297	25	0.535	8	0.399	16	0.395	23
Kandhamal	0.164	30	0.302	24	0.249	30	0.247	30	0.237	30
Kendrapara	0.441	22	0.571	6	0.503	12	0.516	9	0.508	9
Keonjhar	0.408	10	0.396	14	0.330	25	0.389	19	0.415	19
Khordha	0.531	1	0.571	5	0.457	16	0.538	5	0.507	10
Koraput	0.395	28	0.253	28	0.460	13	0.336	26	0.386	25
Malkangiri	0.381	29	0.284	27	0.504	11	0.353	23	0.276	29
Mayurbhanj	0.393	15	0.330	21	0.331	24	0.351	24	0.564	7
Nabarangpur	0.365	12	0.207	30	0.585	7	0.322	27	0.452	14
Nayagarh	0.424	7	0.518	8	0.363	21	0.461	10	0.708	2
Nuapada	0.427	4	0.291	26	0.586	6	0.392	17	0.344	26
Puri	0.625	8	0.561	7	0.641	3	0.596	2	0.563	8
Rayagada	0.362	23	0.232	29	0.461	14	0.313	28	0.302	27
Sambalpur	0.385	24	0.354	18	0.343	22	0.362	22	0.422	16
Sonepur	0.586	21	0.374	16	0.457	15	0.458	11	0.422	17
Sundargarh	0.322	20	0.320	23	0.453	17	0.343	25	0.418	18

Source: Food Security Atlas of Odisha, 2008

**BPL Rice:** PDS rice is being supplied at Rs. 2/ kg to all BPL families and non-BPL families in KBK districts with effect from August, 2008. The scale of entitlement is 25 kg per family per month. The coverage extends to 37.58 lakh non-AAY BPL families and 5.56 lakh non-BPL families in KBK districts. Prior to August, 2008, the consumer price was Rs. 6.30/kg for BPL rice. In Kandhamal for the year 2009-10, 3696 BPL families are to be targeted under this scheme.

**Antyodaya Anna Yojana:** AAY is a Central Scheme launched in December 2000 for 10 million poorest of the poor families. In Odisha, 25 kg of rice per month is provided to all the families living Below the Poverty Line (BPL) at Rs. 2 per kg. For Kandhamal, 35kg of rice per family can be available under this scheme at Rs.2 per kg. A total of 846 beneficiaries are to be covered under this scheme for the year 2009-10.

**Annapurna Yojana:** The Annapurna Scheme aims at providing food security to meet the requirement of those senior citizens who though eligible have remained uncovered under the National Old Age Pension Scheme. The applicants are above 65 years and given 10 kg of rice free of cost. For Kandhamal district 110 beneficiaries receive these benefits through the PDS under Annapurna scheme.

## 7.5 Economic Insecurity

### 7.5.1 Household Coping Mechanism

About 21.67 percent of the surveyed households reported that they have mortgaged assets in the last two years to cope with financial needs. Mortgaged assets included land (40.37 percent cases) followed by jewellery (34.16 percent). The reasons for obtaining a loan varied among households. About 52 percent have mortgaged assets to meet health emergencies and accidents and 9 percent household mortgaged assets for household consumption. Other prominent reasons included general consumption, education of children and household business. Chart 7.2 gives the detailed reasons for mortgaging of assets.

### 7.5.2 Financial Capital

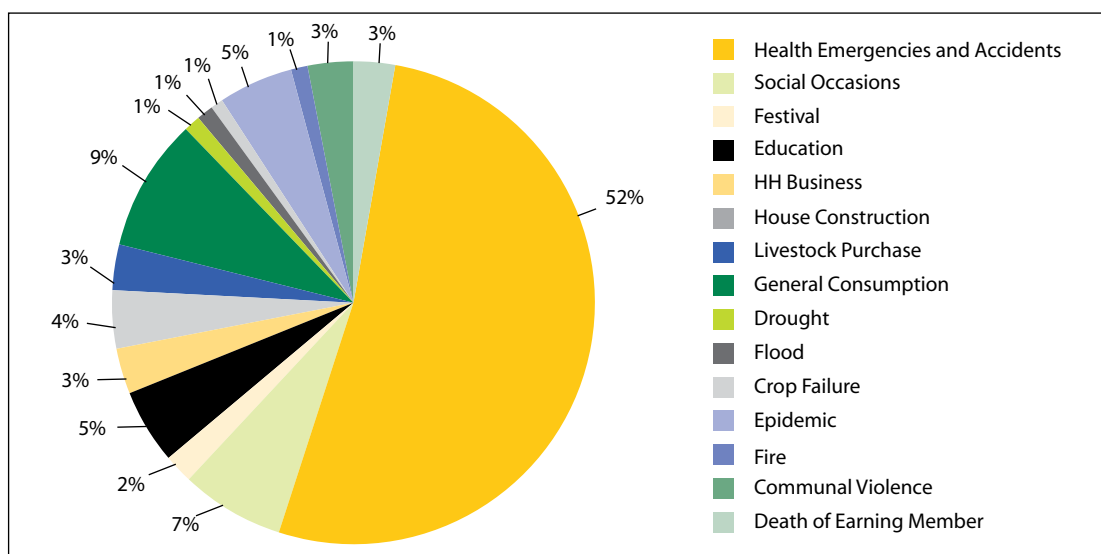
Saving habits have improved after the SHG movement. Men in 32.26 percent of the sample were reported to have made savings, 67 percent save in banks while 19 percent prefer post offices, 7 percent men save in peerless/private company. The other 7 percent prefer, to keep their money with landlords, relatives or SHGs. Chart 7.3 gives saving practices in Kandhamal.

Women in 44.75 percent households participate actively in saving. Around 81 percent of the women prefer to save in SHGs while 16 percent save in banks and post offices. Monthly saving (12 times a year) is the common household saving practice. The reported household savings amount varies from Rs. 20 to Rs. 6 lakh, and can hence be only indicative. The savings pattern indicates good spread of SHG activities and the district development planning should build on this micro credit activity to facilitate livelihood activities.

### 7.5.3 Sources of Debt and Characteristics

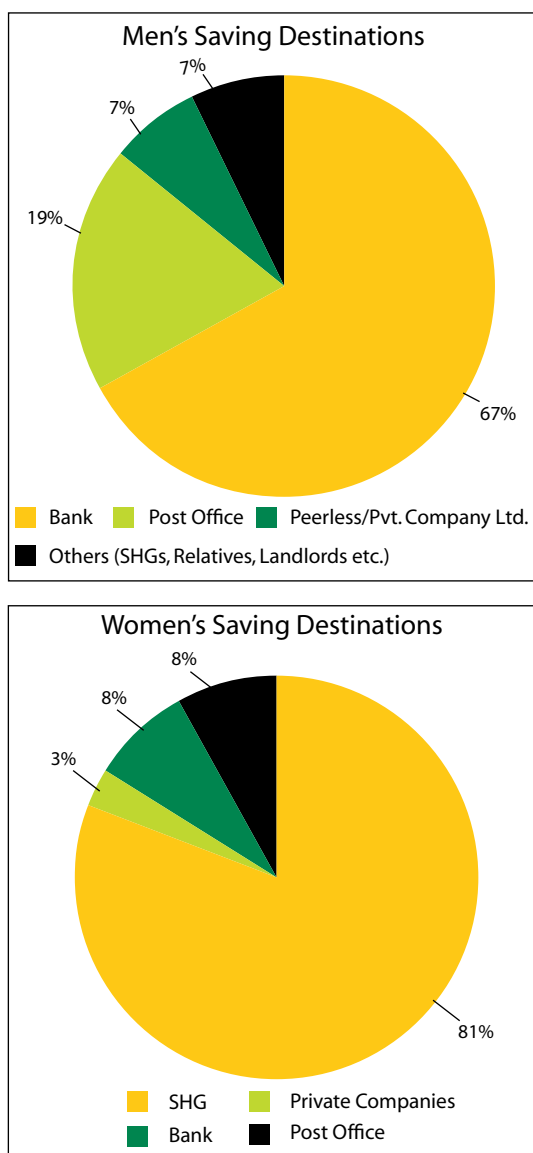
Type and extent of debt among households was also analysed as a part of the primary

**Chart 7.2: Reasons for Mortgaging Assets**



Source: Primary Survey, DHDR Kandhamal

**Chart 7.3: Saving Practices Among Men and Women**

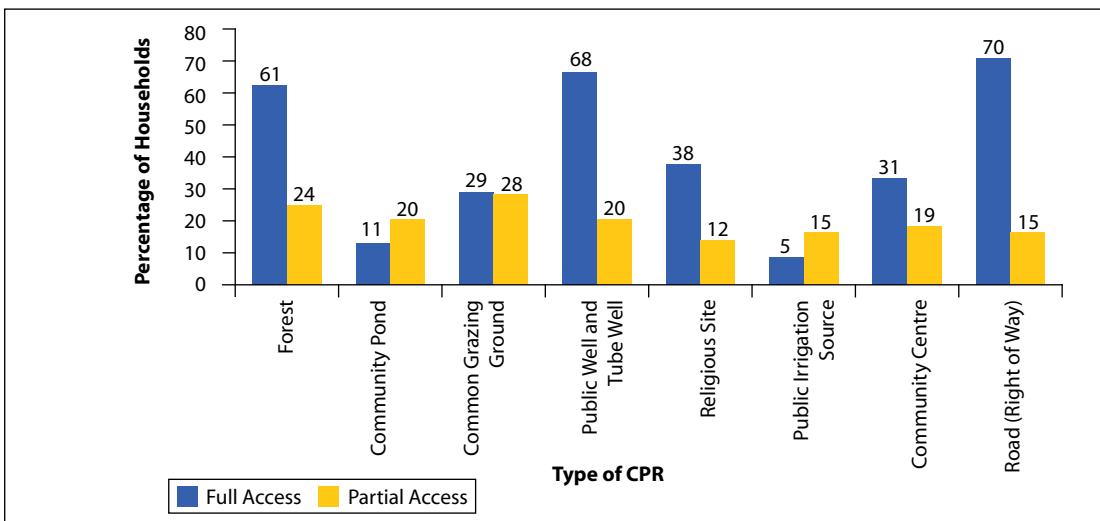


Source: Primary Survey (1000 HHs)

survey. In all, 48.36 percent households were found to have a current household debt. The amount of debt varied between Rs. 100 to 15,000. On an average, household debt is estimated to be Rs. 3,500 from the primary survey. The debt amount from banks varied between Rs. 1000 to Rs. 4 lakh with a varying interest rate from 0.75 to 15 percent per annum with land held as collateral in most of the cases. In 90.75 percent households, men borrow money from banks.

The debt amount from SHGs varied from Rs. 500 to Rs. 25,000 with an interest rate varying from 1 to 50 percent. No collateral is required in most of the SHGs while collateral like crop output and household durables are demanded in some cases. There is presence of money lenders as well to a small extent with a high interest rate ranging from 5 to 50 percent. Access to credit seems to be moderate with 22.68 percent of the households having faced conditions in last one year when they could not borrow money during their requirement. It is observed that the rural community in Kandhamal has been exposed to formal and informal credit institutions.

**Chart 7.4: Access to Common Property Resource**



Source: Primary survey, DHDR Kandhamal, base- 1000 HH



## 7.6 Social Capital and Social Cohesion

Social capital is also one of the factors that act as a coping mechanism in vulnerable conditions. Social capital includes cohesion, trust and solidarity amongst the community members, harmony and sharing of community resources.

Analysis of primary response suggests high degree of social cohesion with respondents suggesting that 3-5 families come out to help them in distress. A good number of households refer to 10 or 15 families who can help their families in need. As indicated in household response, during emergencies generally Rs.1,000/- to 5,000/- can be gathered from various households in the village indicating good trust and social cohesion. The community has access to most of the available Common Property Resource (CPR). However the areas of concern include irrigation sources, community ponds and grazing grounds where access is thought to be limited. Chart 7.4 gives extent of CPR access.

Consultation indicates good harmony among villagers with mutual visits among households and regular participation of household members in village festivals. Of the households surveyed, 6.6 percent felt presence of social barriers while participating in community meetings and events. Almost half of respondents agreed to have participated in community development activities. Though response was in general positive on social cohesion, there seems to be some divide along the lines of religion owing to recent violence between Schedule Castes and Schedule Tribes communities.

The tribal community is found to be less informed, but women are generally

empowered. Use of media like newspaper and radio is found to be limited. Of the surveyed households 26.17 percent were found to have not read any newspaper. Only 42.01 percent had read some newspaper that to only once in the last week prior to the survey. Around half of the sample population has listened to the radio once a week.

## 7.7 Social Security and Welfare Measures

Kandhamal has high incidence of poverty. The poor are vulnerable to health hazards and life threats due to inadequate livelihood sources. The district administration has been implementing social welfare schemes and several social security measures for vulnerable population besides food security programmes. Some of the schemes are given below.

### 7.7.1 Indira Awas Yojana

Indira Awas Yojana (IAY) is provided to BPL rural households including SC/ST and freed bonded labourers for construction of dwelling houses. The beneficiaries under this scheme are selected through Gram Sabha/ Palli Sabha and the houses are constructed by beneficiaries themselves. IAY is a centrally sponsored scheme funded on cost-sharing basis between the Government of India and the State in ratio of 75:25. Total proposed five year allocation under IAY is Rs. 3,796.40 lakh out of which the central share is Rs. 2847.30 lakh and the state share is Rs. 949.10 lakh. Table 7.6 gives progress of IAY by blocks in Kandhamal. Annexure 7.5 gives the details of targets under IAY for Kandhamal.

### 7.7.2 Old Age Pension Schemes

National Old Age Pension (NOAP) and State Old Age Pension (SOAP) schemes have been implemented by ICDS in Kandhamal. One

**Table 7.6 Progress of IAY in Different Blocks of Kandhamal : 2009**

Name of the Block	IAY Houses allotted in 2008-09	Total Houses for 2008-09	IAY houses completed	Balance
Baliguda	178	302	182	120
Chakapada	132	210	92	118
Daringbadi	262	458	255	203
G. Udayagiri	92	146	72	74
K. Nuagaon	140	253	149	104
Khajuripada	146	194	92	102
Kotagarh	119	190	97	93
Phiringia	213	414	189	225
Phulbani	105	142	138	4
Raikia	146	249	83	166
Tikabali	142	259	170	89
Tumudibandha	108	183	75	108

Source: District Rural Development Agency, 2009

component of NOAP, i.e., National Family Benefits Scheme (NFBS) is in operation in Kandhamal. Fund allocated under this scheme for 2004 was 4.5 percent of the total allotment under NOAP which increased to 8.99 percent in 2005.

For the year 2005, the beneficiaries under NOAP are only 30 percent of the total beneficiaries covered under the SOAP. However, it may be noted that beneficiaries are identified together for both NOAP and SOAP. A monthly support of Rs. 200 is provided under both the schemes. It is reported that financial grant for NOAP is 30.5 percent (Rs. 58.91 lakh) of the total allocation under SOAP (Rs. 193.13 lakh) for the year 2005. For the year 2004, allocation under NOAP was Rs. 58.85 lakh, which is 31.87 percent of Rs. 184.60 allocated for SOAP. Similarly, beneficiary coverage under NOAP for 2005 was 4,904 as against 15,383 under SOAP. Annexure 7.6 gives detailed targets for social security programmes in Kandhamal.

### 7.7.3 Schemes for Destitute

Schemes for disabled destitute persons is meant for destitute persons who are totally

blind or orthopedically handicapped and have visible signs of loss of vision due to Leprosy from the age of 5 years. People with these difficulties are eligible to receive get Rs.100 as pension per month. Coverage of beneficiaries under this scheme has improved from 1,675 beneficiaries in 2004 to 1,925 beneficiaries in 2005. A sum of Rs.23.1 lakh was spent on this scheme during 2005.

## 7.8 Chapter Summary

This chapter discussed vulnerabilities in Kandhamal. The district has not witnessed severe natural disasters. It is, however, vulnerable to food, economic and personal insecurity issues. Food insecurity is a major issue in Kandhamal. The district ranks last in terms of food insecurity and is graded as extremely food insecure as per the Odisha Food Atlas, 2008. The district administration has been implementing schemes like BPL rice, *Antyodaya Anna Yojana and Annapurna Yojana* to address the problem of food insecurity.

The district is also vulnerable to ethnic conflicts. Historically, the district has witnessed conflicts between SC and ST

groups owing to land alienation and other issues. The Government has taken several steps to deal with the problem. In recent times, left wing extremist activities have increased in Kandhamal and the district is vulnerable owing to its strategic location. Kandhamal has a significant poor population, which are economically vulnerable. Limited livelihood opportunities also make the poor and disadvantage economically insecure. The primary survey indicates that 21.67 percent

households have mortgaged and 16.23 percent households have sold their assets in the last two years to cope with financial requirements. About 48.36 percent households are found to have a current household debt. The average household debt is estimated to be Rs.3,500 from the primary survey. These figures indicate economic vulnerability of the rural poor in the district. Box 13 illustrate the progress on the eradication of extreme poverty and hunger in India under MDG 1.

**Box: 13 MDG 1 : Progress on the Eradication of Extreme Poverty and Hunger in India**

**MDG 1: Progress on the Eradication of Extreme Poverty and Hunger in India**

To achieve the goal set globally of halving extreme poverty and hunger by 2015, India should reduce the proportion of people below poverty line from nearly 37.5% in 1990, to 18.75%.

Data from 1999-2000 show that poverty headcount ratio is 28.6 percent.

The prevalence of under nourishment during 2001-2003 is estimated at 20 percent down from 25 percent in 1990-1992.

The total number of undernourished people during the period from 2001-2003 is estimated to be 212 million.

Source: Human Development Report, 2006

SHG movement has been able to increase credit access. Livelihood support schemes like SGSY, MGNREGS, OTELP and *Biju Kandhamal O Gajapati Yojana* have been recently implemented in the district. Other social welfare schemes under implementation include Odisha disability pension, scholarships to disabled students, national old age pension, and national family benefit schemes and housing scheme like *Mo Kudia* and IAY. All these schemes target the vulnerable population and provide social security and livelihood opportunities through wage or self employment options.

The following chapter addresses critical thematic issues in Kandhamal.





Chapter 8

# Thematic Issues in Kandhamal



“You must be the change you wish to see in the world.”

- Mahatma Gandhi



# Thematic Issues in Kandhamal



Kandhamal DHDR identifies thematic issues cutting across sectors. Health, livelihood, infrastructure and personal security are some of the important issues in the district which need attention. Kandhamal is one of the most backward districts in Odisha and fares poorly in several human development indicators. It shows high incidence of poverty and ranks among the districts with severe food insecurity. The district has, however, made remarkable progress on various aspects of well being over the last few years. While the district is considered to be most vulnerable and food insecure, there are ample opportunities for growth in agriculture, horticulture, tourism and forestry sectors. To achieve the goal of becoming

a developed and progressive district, key thematic issues need to be addressed. Some of these issues are highlighted below in this chapter.

## 8.1 Infrastructure Development

Infrastructure development is the most pressing requirement for the district and will help in overall well being, enhance access to health and education and provide support infrastructure for livelihood improvement. Important needs include rural road connectivity and electrification which will develop basic access. Kandhamal has a hilly terrain and large forest cover with several inaccessible pockets. The road network is

relatively weak beyond block headquarters and needs to be developed with support from the State Government as well as schemes like PMGSY and MGNREGS. Besides roads, electrification of villages, which stand at 54 percent also, needs to be expedited.

Phulbani and G.Udayagiri are the only urban centres in the district. Phulbani became a municipality in 2008. The infrastructure facilities in these two urban locations are inadequate with limited street lighting, lack of sewerage system and basic modern facilities of township. It is envisaged that population will continue to grow in these towns and necessary infrastructure needs to be developed to accommodate the requirements of growing population, external visitors and tourists.

Infrastructure at important tourist locations also needs attention. District administration needs to explore possibility of public private partnership for facilities such as hotels and guest houses while developing basic infrastructure like roads and drinking water facilities at the tourist locations.

## 8.2 Healthcare Services

Malaria is a major health hazard in Kandhamal. Improvement of sanitation facility, waste water drainage system and intense awareness campaign will help to reduce the spread of malaria. Healthcare facilities in the district are inadequate with one district headquarter hospital and one sub-divisional hospital at Baliguda. Even with the implementation of schemes like NRHM and ICDS, the district continues to have high mortality rates among children and mothers. Healthcare services need to reach remote locations quickly and effectively. The system of mobile health units may be strengthened to address this issue. Availability of doctors is

a challenge for the district. About 34 percent of sanctioned doctor strength was vacant in 2008. Healthcare facilities particularly at PHCs need to be upgraded. Public Private Partnership can be used to encourage private participation in health sector. It is important to expedite improvement of health infrastructure in remote areas and develop a mechanism of offering incentives for doctors to work in these areas.

## 8.3 Personal Security

Historically, there have been conflicts between the Schedule Tribes (*Kandhas*) and Schedule Castes (*Panas*) in Kandhamal. This rivalry sometimes takes a bad shape. There was a severe violence in 2008 and became a threat to personal insecurity of inhabitants. The district administration successfully controlled the situation and normalcy was restored. The State and district administration have taken several steps to address the problems of land alienation and other issues.

In recent times left wing extremist activities have increased in Odisha and Kandhamal district has also been affected by this owing to its strategic location and proximity to other bordering districts which are affected by such groups. The district administration needs to make a long term plan to solve ethnic conflicts as well as extremist activities.

## 8.4 Livelihoods Security

The district has limited irrigation potential owing to its geographical location and the available potential is also not fully utilised. There are frequent crop failures because of drought. As the topography is hilly holding water and subsurface recharge of water is a challenge for the district. Application of rain water harvesting, repair



and construction of diversion weirs, water harvesting structures, check dams, canals and renovation of minor Irrigation projects in drought prone areas of Kandhamal can check water runoff. Introducing Rain Water Management techniques in all irrigation related infrastructures, both old as well as new will help in utilising the maximum rain water for cultivation. This can act as a shield for drought spans.

## 8.5 Livelihood Opportunities

Poverty is a major challenge for the district and creating sustainable livelihood choices for the rural poor can help improve their living standards. Even if agriculture is the main source of livelihood, productivity remains low due to fragmented landholding, lack of modern technology, hilly terrain, limited irrigation facility and other factors.

The district climate is suitable for horticulture and is known for turmeric, ginger and honey. However, full potential of horticulture crops and vegetables has not yet been exploited. Kandhamal can use its strength in land based resources to enhance livelihood options for the rural poor. Consultations at the district and block level suggest that agriculture, horticulture, tourism, forestry and micro enterprises are sectors that can be growth drivers for Kandhamal, if harnessed properly and to the fullest extent. The Government schemes for self employment and wage employment like MGNREGS and SGSY need to work on the broad framework of sustainable livelihoods and focus on these growth sectors. The district needs to proactively work towards higher growth, associate private players and make district planning align with the overall growth plan.

Kandhamal is endowed with a favourable climate for horticultural crops. Extension activities need to be intensified and

necessary technical knowledge should be transferred for improving production of offseason vegetables like tomatoes and cabbage, flowers like rose and marigold and tuber crops. Initiatives like processing and value addition, promotion of organic production of spices, mobile cold storage and market linkages, nurseries and PPP models can help strengthen horticulture, agriculture and allied sectors.

Kandhamal has limited scope for heavy industries, but there is good potential for cottage and micro enterprises based on forest products, crafts, agriculture and food processing. These industries can be promoted in a cluster mode with definite safeguard for the primary producer. The district lacks in skilled manpower and vocational training for the unemployed youth is important to have a pool of skilled talent. The district administration has already taken initiatives for skill development by establishing additional ITI and B.Ed. colleges. A comprehensive plan for micro enterprise can be worked out with NABARD, Industrial Training Institutes, district administration and other commercial banks where youth can be trained and supported for placements outside the district or financed for self enterprises. Some potential micro enterprises include oil extraction, khali stitching, turmeric processing, hard mango pulp and jackfruit processing and squash and fruit juice making. It is important to train SHG members and build capacities of local youth to undertake such activities. Developing skilled manpower should be an important component for micro enterprise development plan.

Kandhamal also has several tourist destinations which can be promoted with adequate development of associated infrastructure at specific spots. Daringbadi can be promoted as a mini hill station

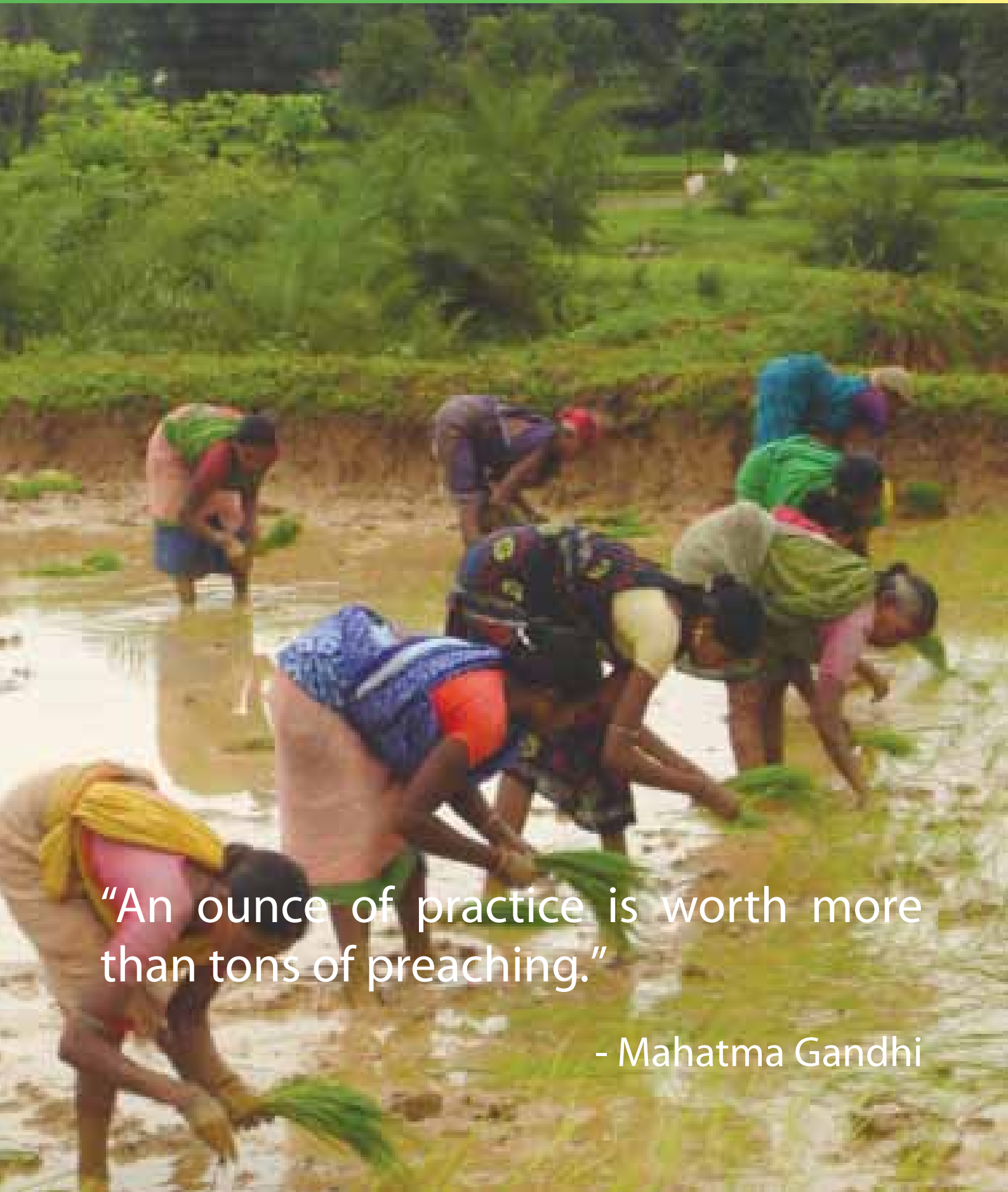
and Chakapada as a religious destination. The third major area of tourist attraction can be Kotagarh sanctuary which can be promoted as an eco-tourism destination. The major constraints for tourists at present are basic facilities for boarding and lodging which can be developed by offering incentives to private players. Allied activities related to tourism will give opportunity for employment generation and scope for livelihoods enhancement. The State Government needs to develop infrastructure to, and at tourist sites and attract private investors in hospitality business to give a boost to this sector.

## 8.6 Chapter Summary

The chapter highlighted major thematic issues faced by Kandhamal and looked at scope for improvement. The issues include increased ethnic conflicts and left wing extremist activities, poor infrastructure and healthcare facilities and livelihood and food insecurity. The district needs to invest in infrastructure building, improve healthcare infrastructure and develop skilled manpower through vocational training to expedite its development. Agriculture, horticulture, forest products, micro enterprises and tourism sectors can act as growth drivers for the district.



## Chapter 9 **Way Ahead**



"An ounce of practice is worth more than tons of preaching."

- Mahatma Gandhi



# Way Ahead



Even though human development indicators are poor for Kandhamal, it has made considerable progress in recent years. Poor infrastructure and health services, high incidence of poverty and limited livelihood options are some of the important challenges that the district faces. In recent times, ethnic conflicts and left wing extremist activities have emerged as new challenges for Kandhamal. The district has taken necessary steps to address these challenges. It needs to plan on two fronts: first, to strengthen basic services like healthcare and education, ensure security and peace for its people and second, identify opportunities for growth and thereby increase standards of living.

The district has already taken steps to ensure peace and security that was impaired due to ethnic violence in 2008. The district has been working with local communities and local leaders to ensure harmony among all communities. The aim is to have a lasting peace in the district. Further, security measures have been strengthened to make sure that the spread of left wing extremist activities is effectively contained and addressed.

The district lacks good infrastructure. There is a need to improve and strengthen road network, to have bridges/cross drainage works to provide all weather connectivity,

to promote electrification of all villages, to create more productive infrastructure. It is heartening to note that the state has recently launched the *Biju Kandhamal O Gajapati Yojana* that focused on bijli (i.e., electrification), sadak (i.e., road and connectivity) and pani (i.e., irrigation and drinking water supply).

Inadequate health infrastructure and services are serious concern. The district needs to look forward to reduce children death through better services and strengthening of activities under NRHM and ICDS. Interventions like mobile health units, safe rural water supply and improved sanitation, promotion of ayurvedic and traditional health practices may also help substantially to improve healthcare status, quality and reach in the district.

With regard to education, access and enrolments at elementary level have improved considerably. However, the dropout rates at the upper primary level and quality of education are a matter of concern. There is a need to promote vigorously female literacy, particularly tribal female literacy and to bridge the gender gap in this regard in the district. It is heartening to note that the State has been establishing 100-seated ST/SC girl's hostels in Kandhamal and other districts. This has substantially improved enrolments and retention of ST girls in schools. As livelihood security is a prime issue, the district should look forward to provide vocational education at school as per the guidelines of National Council of Vocational Training.

Another challenge for the district is promotion of employment of youth, particularly those completing intermediate or dropping out at those levels. Strong focus on vocational training, self employment options and industrial training are some of the options for the district administration. The new Industrial Training Centre and B.Ed. College under the

special package for Kandhamal district are a step in the right direction.

The district should not only work on basic services but also look at creating an enabling environment for rapid growth that will create livelihood opportunities and reduce poverty. Horticulture, agriculture, forest produce, tourism and micro enterprise are the sectors that can act as growth drivers for Kandhamal. The district planning exercise in 2008-09 has created a vision document which highlights these sectors for growth and livelihood promotion.

Though potential of the district in horticulture, forest products and tourism is well known, limited value addition and forward linkages have restricted the scope for livelihood enhancement from these sectors. A comprehensive plan for forest products and medicinal plants may improve livelihood opportunities for the poor. The agro-climatic condition of the district is suitable for development of horticulture products and the district should build on the existing strength to create more value addition opportunities in spices and vegetables. It need to adopt public private community partnership models in horticulture to bring more investment into the district as well as to establish market linkages for horticultural outputs. The district administration has taken some steps by way of setting up a mega nursery and horticulture training institution under the special package for the district.

Developing employable skills of youth and others in the district is a serious challenge. The district has been providing vocational training to youth under Odisha State Employment Mission. It is important to offer complete cycle of training including financing and handholding support to ensure creation of successful micro enterprises by unemployed youth. The district need to have focused training in handcrafts, tourism related services

and horticulture or agriculture based sectors and process and facilitate establishment of enterprises by trained youth.

Kandhamal has several locations of tourist attractions including possible eco-tourism sites which should be developed to make the district one of the important destinations for tourists from within and outside Odisha. Tourism activities would create employment opportunities for local communities and could drive growth in the local economy. The district should invite private investors to set up infrastructure and hotels in the district.

The lack of assured irrigation is a limiting factor in the districts and affects the growth of agriculture. It seems possible to promote rain water management across the district and conserve water through water harvesting structures like small check dams and tanks which will ensure appropriate runoff and ground water recharge. This rain water management technique will increase water availability

and enhance agriculture production. The district has already prepared Comprehensive District Agriculture Plan as a part of participatory planning process where rain water management application has been highlighted.

It is not only important to identify growth sectors discussed above for livelihood improvement but also plan all Government schemes keeping these sectors in mind. Programmes like MGNREGS and SGSY need to be planned for creating sustainable livelihood options with a long term view and keeping the overall sectoral growth in mind. This process will encourage convergence, pool resources and expedite the pace of growth.

Overall, Kandhamal looks forward to be one of the developed districts in Odisha with improved infrastructure, education and health services, enhanced irrigation facilities and better water conservation methods, value addition to horticulture and forest produce, developed micro enterprise and tourism sectors.







# Annexures





# Annexure 1

## References

- Behera, D. (1984) - Freedom Movement in the State of Ghumsar in Odisha, Calcutta
- Boal, Barbara M. (1963) - The churches in Kond Hills - An Encounter with Animism. The National Christian Council of India, Nagpur
- Cases on the PRI Three Tier Systems in Kandhamal, NIPDIT, Phulbani, Kandhamal
- Chalam, KS (2007): Caste Based Reservation and Human Development in India
- Das and RM Patel: Maternal Mortality in India: Levels, Differentials and Causes Population Research Centre, MS University of Baroda
- Das Mohapatra, Sudarshan (2007), Odisha Year Book
- Fiscal Reforms, Persistent Poverty and Human Development: The case of Odisha, National Institute of Finance and Policy
- Government of India (2007-08): Economic Survey of India
- Government of India (1971), Census of Kandhamal, Census of India
- Government of India (1981), Census of Kandhamal, Census of India
- Government of India (1991), Census of Kandhamal, Census of India
- Government of India (2001), Census of Kandhamal, Census of India
- Government of India (2002): Industry Potential of Kandhamal, Small Industry Service Institute
- Government of India (2007): Report on the National Evaluation of Kasturba Gandhi Balika Vidyalaya Scheme
- Government of India (2008): India 2008, Publication Division
- Government of Odisha (2007): Annual Reference, Odisha
- Government of Odisha (1983): Odisha District Gazetteer Odisha, Boudh-Kandhamal
- Government of Odisha (1995a), Education in Odisha: 1995-96, Odisha State Plan of Action for Children 2001 AD, Department of Women and Child Development, Bhubaneswar
- Government of Odisha (1997), Odisha State Policy on Primary Education as Human Resource Development, School and Mass Education Department
- Government of Odisha (1999, 2007): Statistical Outline of Odisha, Directorate of Economics and Statistics
- Government of Odisha (2001a), Economic Survey 2000-01, Directorate of Economics and Statistics, Planning and Coordination Department, Bhubaneswar
- Government of Odisha (2004): State Human Development Report
- Government of Odisha (2005): 5<sup>th</sup> Economic Census, Odisha, Directorate of Economics and Statistics
- Government of Odisha (2005): District Statistical Hand Book, Kandhamal
- Government of Odisha (2005): Statistical Abstract Of Odisha, Directorate of Economics and Statistics
- Government of Odisha (2006): State Environment Report, Odisha

- Government of Odisha (2006-07): Economic Survey Odisha  
Odisha Economic Journal, Jan.-June of July– Dec. Odisha Economics Associations
- Government of Odisha (2007): State's Economy in Figures, Directorate of Economics and Statistics  
Mohammad Izhar Hassan, Pritirekha Daspataniak and Padarabinda Rath (2008): Gender bias and economic development in India: A case study in Haryana, Social Change, Council for Social Development, June
- Government of Odisha (2007-08): Economic Survey Odisha  
Pradhan, AM (2004): Tourism in Kandhamal, Odisha Review, September
- Government of Odisha (2008): Statistical Abstract Of Odisha, Directorate of Economics and Statistics  
Rao, Hanumanth C. H. (2005) - Agriculture, Food Security and Environment – Essays in Post Reform, India Oxford University Press
- Government of West Bengal (2005): District Human Development Report, Malda  
Rath, Raghunath, 1993-Kandha Sanskrutira Analochita Adhyaya-Satta Sahitya Sansada, Koraput
- Government of West Bengal (2005): District Human Development Report, Bankura  
Rath, Raghunath, (2006): Education of Tribal Children in Kandhamal District, Odisha Review, May
- Haan De, Aarjan (2004): Disparity within India's Poorest Regions, Background Papers for World Development Report 2006  
Sahoo, Harihar and Raju Saraswati (2007): Domestic Violence in India: Evidences and implications for working women, Social Change, Council for Social Development, December
- International Institute for Polulation Sciences (2002-04): DLHS II fact sheet for for Odisha, and Kandhamal  
Samal, Kishor C (1999), 'Privatisation of Higher Education: Is it Possible with Alternative Source of Finance, Man and Development, Vol.21, No.3, September, pp.155-62
- International Institute for Polulation Sciences (2008): DLHS III fact sheet for for Odisha, and Kandhamal  
Trinivasan, T.N. (1994): Human Development: Means and Ends by Paul Streeten/ Human Development: A New Paradigm or Reinvention of Wheel, American Economic Review, Vol.84, No: 2, May
- Institute of Human Development (2008): Food Security Atlas of Odisha  
UNDP (2007-08): Human Development Report
- Kateja, Alpana (2007): Role of Female Literacy in maternal and infant mortality decline, Social Change, Council For Social Development), June
- KRS Campaign (2007): The Halfway Mark and State of Realisation of MDG in Odisha
- Ministry of Home Affairs (2001-04): Crime Against Women, National Crime Records Bureau, New Delhi
- Misra, Baidyanath (2006): Post – Reform Trends in India's Agricultural Growth,

## Annexure 2 : Methodology for DHDR Preparation

### **Context :**

State Governments in India aim to achieve Millennium Development Goals (MDGs) thorough effective poverty reduction strategies and an action plan for human development. The States which have prepared Human Development Reports are participating in the GOI-UNDP Project on “Strengthening State Plans for Human Development” which aims at providing a human development perspective in State Plan documents, research services to identify policy options to finance human development and strengthening State statistical systems to get development related information. Government of Odisha in Planning and Coordination Department is preparing District Human Development Reports for five selected districts, namely Kandhamal, Kalahandi, Ganjam, Mayurbhanj and Sundergarh.

### **Process of DHDR Preparation :**

DHDR preparation followed the guideline issued by P&C Department, Government of Odisha. The approach adopted was consultative and participatory in nature supported by qualitative and quantitative information on the district. The Technical Support Institution appointed to prepare the DHDR worked closely with the P&C Department and District Administration. DHDR for Kandhamal district was prepared in a participatory manner involving all the stakeholders on the basis of data from secondary sources, findings from primary survey and consultations with various stakeholders.

A District Level Core Committee was constituted to facilitate preparation of DHDR. The committee included all relevant

officials from the district, civil society, academicians and elected representatives. This plan and methodology for DHDR preparation was shared and ratified by the core committee. At the beginning of the DHDR preparation process, a consultative meeting was organised at district level involving Government officials, PRI members, civil society organisations, academicians and people’s representatives to discuss on the process of DHDR preparation. Suggestions of different stakeholders were taken into consideration and incorporated in the overall design for preparing the DHDR.

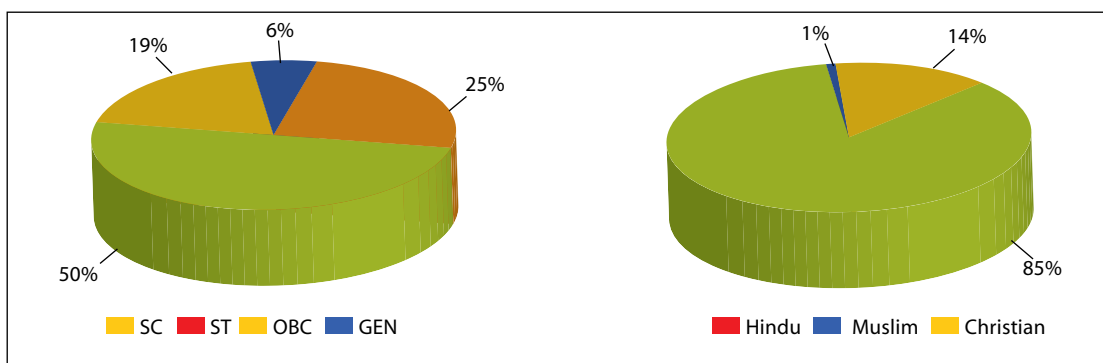
### **Secondary Analysis :**

Secondary research included analysis of information and data collected from various district offices including agriculture, horticulture, fisheries, industry, mining and planning. Published data from Odisha Economic Survey, Odisha Economic Census, District Statistical Handbook, Census of India, National and State HDR, District and State Gazette, National Family Health Survey (NFHS) and District Level Household Survey, Reproductive Child Health (DLHS-RCH) reports were reviewed and analysed to understand key indicators and their trend for the district. Consultations were made with P&C Department, Government of Odisha, UNDP representatives, line departments at district, local PRI bodies and academicians. Findings of the study were shared in workshop mode at district and block level to incorporate any changes and correct any aberrations before finalisation of the report.

### **Primary Survey :**

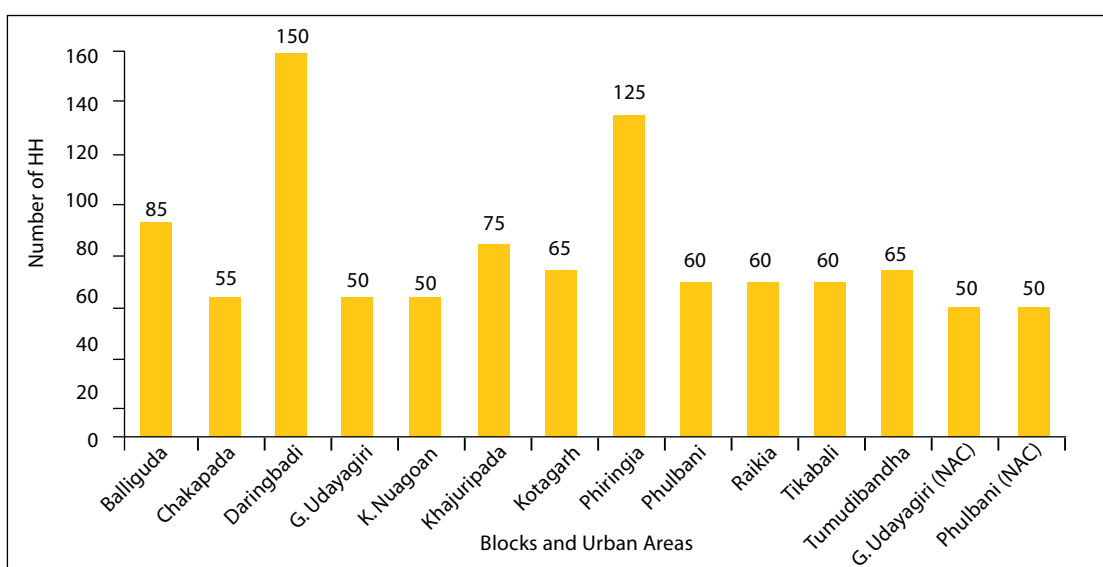
Selected villages and households were covered under primary survey to

### Distribution of Sample in The Primary Study



Source: Primary Study, DHDR Kandhamal

### Distribution of Sample in The Primary Study



Source: Primary Study, DHDR Kandhamal

understand present status of various aspects of human development. Purposive stratified random sampling was used for selection of GPs and households. The district has 12 blocks and 153 Gram Panchayats (GPs). The following charts give sample distribution across social groups and blocks / urban centres.

Primary survey covered 15 GPs spread across all 12 blocks to capture the geographical diversity. All the villages in selected GPs were surveyed under the study. Primary study included household surveys and a total of 1,000 households were surveyed in 15 GPs and 132 villages. The study also sampled 100 households (50

households each) from two urban areas in the district. The study used village and household questionnaires to collect data on various socio-economic indicators and information on human development. Focus Group Discussions were conducted at village level to collect qualitative information on development issues in the local context. The sample distribution was representative of population in terms of social groups.

Key Informant Consultations were conducted with various department officials at district and block level, elected representatives, academicians and civil society representatives. Officials consulted include, the Project Director, DRDA, Chief District

Medical Officer, District Project Coordinator of SSA, DSWO, PA-ITDA, AGM of NABARD, District Project Manager, NRHM, District Officers for all departments, faculty members from Phulbani College and representatives from civil society organisations like KASAM, PHAD, AHEAD, Banabasi Seva Samiti, NIPIDIT.

### Tools for Primary Study :

Structured household and village level questionnaires were separately administered to collect information on various socio-economic indicators. Semi structured formats and checklists were used for consultations with various levels of officials as well as for Focus Group Discussions at the village level. The household questionnaire looked at various dimensions of human development and has the following components: (a) Household roster with information on all members of the household, (b) Health status, (c) Marriage and maternity history for all ever married women, (d) Immunisation and diarrhoea, (e) Education status including quality test, (f) Housing characteristics, (g) Facilities and utilities, (h) Ownership of household durables, (i) Livestock ownership, (j) Ownership of farming assets, (k) Landholding and cropping, (l) Source of livelihood, (m) Food security and vulnerability, (n) Household coping mechanism, (o) Financial capital, (p) Social capital and empowerment, and (q) Access for Common Property Resources.

The village schedule has information on demographic and infrastructure, which were collected from key informants like school teacher, PRI member, Sarapanch and other village level functionaries in FGD mode. The components of this schedule include information on (a) Demography, (b) Village resources like water and forest, (c) Village infrastructure like water, sanitation, electricity, road and transport, (d) Market

Price, (e) Livestock, (f) Credit access, (g) Village enterprise, (h) Vulnerability context, (i) Prevailing practices, (j) Government schemes, and (k) Institution performance.

### Data Analysis and Synthesis :

All the primary information gathered from various sources analysed and compared with secondary sources and presented at district and block level workshops for ratification. The report was prepared in the line of the standard format given by the P&C Department. Information on each chapter was given from the secondary sources with relevant primary information supplementing secondary information where required. The findings of secondary and primary survey was shared at district and block level workshops with key stake holders including local representatives, Government officers and civil society. Their suggestions and comments on the report were incorporated. The report was submitted to Planning and Coordination Department and their feedback was incorporated to prepare the final draft. The list of GPs covered under the survey is given in the following Box 14.

### Box: 14 List of GPs Covered for Primary Survey

Name of the Block	Name of Gram Panchayat (s)
Kotagarh	Kotagarh
Khajuripada	Gudari
Tumudibandha	Sirla
G.Udayagiri	Gresingia
Phulbani	Ganjuguda
Baliguda	Baliguda
Chakapada	Arabaka
Phiringia	Kelapada, Taladandakia
Tikabali	Guttingia
Daringbadi	Hatimunda, Kirikuti
K.Nuagaon	Kanjamendi

## Annexure 3: Report Card of PAHELI Survey

### KANDHAMAL, ODISHA DISTRICT HUMANDEVELOPMENT REPORT CARD

Supported by Planning & Coordination Department, Odisha

Total HH refers to the total no. of households surveyed in the district.

All other numbers in boxes represent the % of total households' surveyed.

#### I. LIFE & LIVELIHOOD

Adult women were asked questions regarding the household.

Sets of clothing owned by the woman of the house In Percent

Total HH	2 or fewer	More than 2 sets
549	70.7	29.3

Type of house In Percent

Total HH	No house	Kutcha	Semi-Pucca	Pucca
553	3.6	61.1	24.1	11.2

Source of household fuel for cooking food In Percent

Total HH	Firewood	Coal	Kerosene	Gas
552	90.9	4.5	3.9	0.7

Ownership of animals for the household In Percent

Total HH	No animal	Goats	Cows	Any other
503	18.5	4.3	25.7	51.5

Assets owned In Percent

Total HH	No assets	Some assets
504	18.3	81.7

Loans & Types of Loans In Percent

Total HH	With any kind of loan	Of families with loans, those with bank loan
547	51.0	16.6

Use of iodised salt during cooking In Percent

Total HH	Iodine	No Iodine
558	48.6	51.4

Migration In Percent

Total HH	HH who did not migrate
542	88.4





## II. WATER & SANITATION

Total HH refers to the total no. of households surveyed in the district.

All other numbers in boxes represent the % of total households' surveyed.

Adult women were asked questions regarding the household.



Main source of water supply

In Percent

Total HH-558	River or Stream	Pond or Tank	Well	Hand pump, Tube well or Tap	Tanker
Normal times	24.6	1.8	41	24.5	8.1
Summer months	26.5	3.4	38	25.1	7.0



Main supplier of water

In Percent

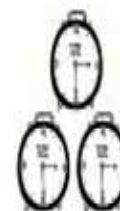
Total HH	Government	Private Source	Community source	Don't know
552	56.3	22.8	0.9	20



Distance traveled daily to access drinking water source

In Percent

Total HH-559	1km. or more	Less than 1km.	In home/ close to home
Normal times	0.4	18.4	81.2
Summer times	0.9	23.1	76



Time taken each day to collect water for all needs of the household

In Percent

Total HH-557	1hr. or more	Less than 1hr.
Normal times	22.4	77.6
Summer times	37.5	62.5



Water shortage experienced by the household in a year

In Percent

Total HH	1-2 months	3-4months	More than 4 months	None
556	24.8	37.6	0.9	36.7

Bacterial contamination of drinking water in the households

In Percent

Total HH	Safe	Contaminated
102	50	50



Access to sanitation for members of the household

In Percent

Total HH	In an open area	In a public toilet	In a latrine in house/ close to house
553	93.7	0.5	5.8

### III HEALTH : MOTHER & CHILD

Total refers to the children and mothers surveyed in district.

All other numbers in boxes represent the % of the total referred to in the above sentence.



Mothers were asked these questions.

Intake of Iron tablets while pregnant

In Percent

Total Mothers	Yes	No
167	76.1	23.9

Minimum of one Pre-natal check up undertaken

In Percent

Total Mothers	Yes	No
167	66.7	33.3



Birth place of child

In Percent

Total children	At home	In govt. hospital	In Pvt. hospital
167	56.9	41.9	1.2

Child visited by a health worker one month prior to the survey

In Percent

Total children	Yes	No
158	72.8	27.2



Babies breastfed colostrums

In Percent

Total children	Yes	No
165	80	20

Commencement of regular breast feeding practices for the child

In Percent

Total children	First day	Second day	After two days
165	80.0	94.4	96.7



Exclusive breast feed given to child for the first 6 months

In Percent

Total children	Yes	No
36	54.0	46.0

Number of months after birth child is given solid foods

In Percent

Total children	0-6 months	0-9months	After 10 months
124	8.9	37.1	54.0

Child immunisation card

In Percent

Total children	Yes	No
146	63.7	36.3

Child suffering from diarrhea one

In Percent

Total children	Diarrhea	No diarrhea
150	52.7	47.3



ORS treatment month prior to survey In Percent

Of children who had diarrhea, those which were treated with ORS
74.0

Adult Nourishment based on height and weight In Percent

Total	Below normal	Normal	Above normal
Men-489	21.7	60.5	17.8
Women-537	36.7	36.3	27

**IV: EDUCATION & LITERACY**

Total refers to the total children/adult men/ adult women surveyed in the district. All other numbers in boxes represent the % of the total referred to in the above sentence.

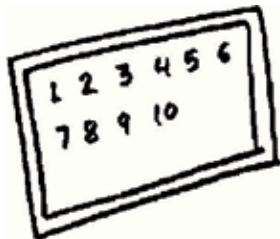
Pre-School Enrolment of children in the 3-5 year old age group In Percent

Total children (3-5)	Anganwadi/balwadi or ICDS centre/preschool
81	75.3



School Enrolment of children in the 6-14 year old age group In Percent

Total children (6-14)	In school	Out of school
541	96.0	4.0



Reading and Arithmetic ability among children enrolled in Standards III - V

Total children	Can read a Std 1 level paragraph	Can do subtraction
208	27.4	32.4



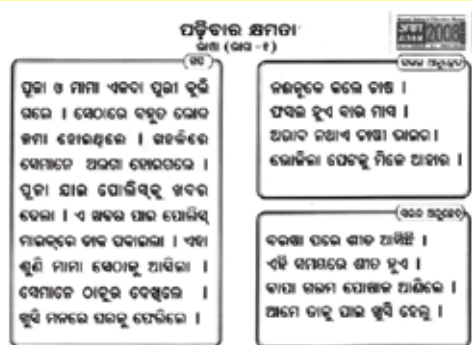
Adult Education and Reading

Adult Men Adult Women  
School Enrolment School Enrolment In Percent

Total Men	With Schooling	No Schooling	Total Women	With Schooling	No Schooling
669	75.2	24.8	616	48.1	51.9

Ability to read a Standard I paragraph Ability to read a Standard I paragraph In Percent

Total Men	Can Read	Can't Read	Total Women	Can Read	Can't Read
406	64.5	35.5	349	46.4	53.6



## V.VILLAGES OF THE DISTRICT

Total villages visited: 28.

All figures represent the total number of villages surveyed



This section is based on observations by the survey team and on responses from member of the Panchayat.

### Access to electricity

### Presence of electricity at the time of the survey

Yes	No	Yes	No
57	43	29	71

### Transport related facilities

Villages with	Yes	No
Tar Road	43	57
Bus Stop	29	71



### Communication related facilities

Villages with	Yes	No
Post Office	50	50
Few Cell Phones	50	50
STD Booth	25	75
Internet Access	4	96

### Other facilities

Villages with	Yes	No
Bank	7	93
PDS Shop	32	68

### Education related facilities

Villages with	Yes	No
Private Primary School	46	54
Government Primary School	71	29
Government Middle School	89	11
Government Secondary School	18	82
Private Secondary School	14	86



### Medical related facilities

Villages with	Yes	No
Medicine Shop	7	93
Ambulance	4	96
Government Hospital	14	86
Private Doctor	21	79
Private Hospital	21	79



### National Schemes

Villages with	Exists	Does not exist
Sampoorna Gramina Rozgar Yojana	68	32
Indira Awaas Yojana	55	45
Pradhan Mantri Gram Sadak Yojana	43	57

## Annexure 4.1 BPL Survey in 1992 and 1997, Kandhamal

### Annexure 4.1 A BPL Households Comparison in Kandhamal: 1992 and 1997

Sl. No.	Name of the Block	1992 BPL Survey			1997 BPL Survey			Variation in Percentage
		Total No of House Holds (Rural)	Total No of BPL House Holds	Percentage of BPL House Holds	Total No of House Holds (Rural)	Total No of BPL House Holds	Percentage of BPL House Holds	
1	Baliguda	11,373	9,438	82.99	15,191	13,712	90.26	7.26
2	Chakapada	8,378	7,254	86.58	10,609	8,507	80.19	-6.40
3	Daringbadi	14,839	14,178	95.55	21,556	19,359	89.81	-5.74
4	G. Udayagiri	6,261	5,630	89.92	7,661	4,735	61.81	-28.12
5	Khajuripada	9,526	8,411	88.30	11,824	8,248	69.76	-18.54
6	Kotagarh	6,840	6,430	94.01	9,192	8,045	87.52	-6.48
7	Nuagaon	9,476	8,699	91.80	11,101	8,449	76.11	-15.69
8	Phiringia	16,263	12,477	76.72	17,150	12,657	73.80	-2.92
9	Phulbani	6,158	5,993	97.32	8,448	6,576	77.87	-19.48
10	Raikia	9,275	8,514	91.80	11,769	8,147	69.22	-22.57
11	Tikabali	9,315	8,203	88.06	11,953	7,848	65.66	-22.41
12	Tumudibandha	6,037	5,575	92.35	8,881	7,687	86.56	-5.79
	<b>Total</b>	<b>113,741</b>	<b>100,802</b>	<b>88.62</b>	<b>145,335</b>	<b>113,970</b>	<b>78.42</b>	<b>-10.21</b>

**Annexure 4.1B BPL Households Comparison in All Districts: 1992 and 1997**

Sl. No.	Name of the Districts	1992 BPL Survey		1997 BPL Survey			Variation in %	
		Total No of HH (Rural)	Total No of BPL HH	BPL HH (%)	Total No of HH (Rural)	Total No of BPL HH		BPL HH (%)
1	Angul	183,237	126,343	68.95	203,152	120,581	59.36	-9.60
2	Balangir	238,968	181,195	75.82	329,700	201,310	61.06	-14.77
3	Balasore	314,008	264,088	84.10	349,446	257,606	73.72	-10.38
4	Bargarh	210,971	147,027	69.69	291,901	176,241	60.38	-9.31
5	Bhadrak	199,323	179,130	89.87	205,185	136,849	66.70	-23.17
6	Boudh	66,776	54,145	81.08	89,617	71,872	80.20	-0.89
7	Cuttack	253,293	187,783	74.14	335,998	176,002	52.38	-21.75
8	Deogarh	48,237	33,833	70.14	55,298	43,571	78.79	8.65
9	Dhenkanal	163,168	137,670	84.37	203,032	127,159	62.63	-21.74
10	Gajapati	87,454	82,478	94.31	112,029	68,763	61.38	-32.93
11	Ganjam	452,732	340,435	75.20	548,308	301,585	55.00	-20.19
12	Jagatsinghpur	161,946	108,827	67.20	172,300	90,895	52.75	-14.45
13	Jajpur	252,138	179,838	71.33	280,769	169,595	60.40	-10.92
14	Jharsuguda	58,439	34,158	58.45	68,164	33,415	49.02	-9.43
15	Kalahandi	241,294	206,961	85.77	307,835	193,054	62.71	-23.06
16	Kendrapara	188,768	116,990	61.98	219,436	131,424	59.89	-2.08
17	Keonjhar	211,611	175,533	82.95	286,923	220,820	76.96	-5.99
18	Khordha	184,484	142,850	77.43	226,800	134,192	59.17	-18.26
19	Koraput	188,169	162,931	86.59	264,707	221,846	83.81	-2.78
20	Malkangiri	79,865	67,737	84.81	108,870	89,138	81.88	-2.94
21	Mayurbhanj	363,869	315,084	86.59	482,176	374,867	77.74	-8.85
22	Nabarangpur	151,834	137,504	90.56	215,429	158,684	73.66	-16.90
23	Nuapada	94,039	78,652	83.64	127,022	99,465	78.31	-5.33
24	Nayagarh	152,455	132,219	86.73	183,437	124,576	67.91	-18.81
25	Phulbani	113,741	100,802	88.62	145,335	113,970	78.42	-10.21
26	Puri	207,887	155,279	74.69	236,721	163,639	69.13	-5.57
27	Rayagada	141,862	122,061	86.04	188,499	135,785	72.03	-14.01
28	Sambalpur	137,286	99,155	72.23	150,799	90,141	59.78	-12.45
29	Sonepur	91,909	57,250	62.29	110,098	80,396	73.02	10.73
30	Sundergarh	225,696	167,622	74.27	285,141	185,969	65.22	-9.05
	<b>Odisha</b>	<b>5,465,459</b>	<b>4,295,580</b>	<b>78.60</b>	<b>6,784,127</b>	<b>4,493,410</b>	<b>66.23</b>	<b>-12.36</b>

## Annexure 4.2 Kharif and Rabi Crop Details in the District

### Annexure 4.2 A Kharif Production Details (A=Area, Y=Yield, P=Production)

#### Area, Productivity, and Production trend of different Kharif crops in Kandhamal

Sl. No.	Year	Area in ha			Yield Rate in kg / ha			Production in M.T.		
		2006-2007			2007-2008			Programme for Kharif'2009		
	Crop	A	Y	P	A	Y	P	A	Y	P
1	2	3	4	5	6	7	8	9	10	11
1	Local Paddy	6,050	1,953	11,818	6,045	2,305	13,935	5,550	2,400	13,320
2	HYV Paddy	43,800	2,694	117,991	43,950	2,836	124,651	44,450	3,150	140,011
<b>Total Paddy</b>		<b>49,850</b>	<b>2,604</b>	<b>129,809</b>	<b>49,995</b>	<b>2,772</b>	<b>138,586</b>	<b>50,000</b>	<b>3,067</b>	<b>153,331</b>
3	Local Maize	6,148	1,470	9,040	6,092	1,450	8,835	6,300	1,530	9,638
4	HYV Maize	9,931	1,720	17,079	9,737	1,710	16,653	10,600	1,750	18,549
<b>Total Maize</b>		<b>16,079</b>	<b>1,624</b>	<b>26,119</b>	<b>15,829</b>	<b>1,610</b>	<b>25,488</b>	<b>16,900</b>	<b>1,668</b>	<b>28,187</b>
5	Ragi	1,650	720	1,188	1,994	700	1,395	2,000	740	1,480
6	Jowara	431	470	202	390	470	183	400	485	194
7	Bajara	189	400	76	194	400	78	200	400	80
8	Small Millet	481	260	125	450	260	117	500	275	138
<b>Total cereal</b>		<b>68,680</b>	<b>2,294</b>	<b>157,519</b>	<b>68,852</b>	<b>2,409</b>	<b>165,847</b>	<b>70,000</b>	<b>2,620</b>	<b>183,410</b>
9	Mung	980	325	318	1,285	320	411	1,300	360	468
10	Biri	4,450	372	1,654	4,528	370	1,674	4,600	400	1,839
11	Arhar	5,100	950	4,848	5,052	950	4,797	5,300	980	5,196
12	Other Pulses	1,172	650	762	1,772	650	1,151	1,240	670	831
<b>Total Pulses</b>		<b>11,702</b>	<b>648</b>	<b>7,582</b>	<b>12,637</b>	<b>636</b>	<b>8,033</b>	<b>12,440</b>	<b>670</b>	<b>8,334</b>
<b>Total Food Grain</b>		<b>80,382</b>	<b>2,942</b>	<b>165,101</b>	<b>81,489</b>	<b>3,045</b>	<b>173,880</b>	<b>82,440</b>	<b>3,290</b>	<b>191,744</b>
13	Groundnut	992	1,600	1,587	795	1,600	1,272	900	1,670	1,503
14	Niger	11,750	280	3,287	12,065	280	3,380	11,300	300	3,394
15	Til	720	225	162	710	225	160	800	250	201
16	Caster	479	930	445	384	930	357	450	970	438
17	Sunflower	155	700	109	160	720	115	200	745	149
<b>Total Oilseed</b>		<b>14,096</b>	<b>397</b>	<b>5,590</b>	<b>14,114</b>	<b>374</b>	<b>5,284</b>	<b>13,650</b>	<b>416</b>	<b>5,685</b>
18	Mesta	102	430	44	90	430	39	100	450	45
19	Sunhemp	54	430	23	52	430	22	50	460	23
20	Cotton	32	220	7	43	220	10	50	230	11
<b>Total Fiber</b>		<b>188</b>	<b>394</b>	<b>74</b>	<b>185</b>	<b>384</b>	<b>71</b>	<b>200</b>	<b>395</b>	<b>79</b>
21	Sugarcane	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total Agri. Crops</b>		<b>94,666</b>	<b>1,804</b>	<b>170,765</b>	<b>95,788</b>	<b>2,080</b>	<b>199,235</b>	<b>96,290</b>	<b>2,051</b>	<b>197,508</b>
22	Sweet Potato	863	5,550	4,790	990	6,000	5,940	1,000	6,192	6,192
23	Other Veg.	15,550	9,600	149,276	15,110	10,500	158,654	14,700	11,000	162,038
<b>Total Vegetables</b>		<b>16,413</b>	<b>9,387</b>	<b>154,066</b>	<b>16,100</b>	<b>10,223</b>	<b>164,594</b>	<b>15,700</b>	<b>10,715</b>	<b>168,230</b>
24	Turmeric	12,488	5,440	67,931	12,712	6,000	76,267	12,500	6,100	76,252
25	Ginger	2,340	5,760	13,479	2,303	6,500	14,969	2,400	6,550	15,721
26	Chilly	830	530	440	856	600	514	900	620	558
<b>Total Spices</b>		<b>15,658</b>	<b>5,227</b>	<b>81,850</b>	<b>15,871</b>	<b>5,781</b>	<b>91,750</b>	<b>15,800</b>	<b>5,856</b>	<b>92,531</b>
<b>Total Hort. Crops</b>		<b>32,071</b>	<b>7,356</b>	<b>235,916</b>	<b>31,971</b>	<b>8,018</b>	<b>256,344</b>	<b>31,500</b>	<b>8,278</b>	<b>260,761</b>
<b>Grand Total</b>		<b>126,737</b>	<b>3,209</b>	<b>406,681</b>	<b>127,759</b>	<b>3,566</b>	<b>455,579</b>	<b>127,790</b>	<b>3,586</b>	<b>458,269</b>

NA- Not Available

**Annexure 4.2 B Area, Productivity and Production of Rabi Crops in Kandhamal: 2008-2009**

Area = Area in Hectare (A)		Yield = Productivity in kg/ha (Y)					(P) = Production in MT.			
Sl. No.	Crop	Rabi 2006-2007			Rabi 2007-2008			Rabi 2008-20t09		
		A	Y	P	A	Y	P	A	Y	P
1	2	3	4	5	6	7	8	9	10	11
1	Hybrid Paddy	NA	NA	NA	NA	NA	NA	20	7,000	140
2	Paddy (HYV)	172	3,150	542	207	3,213	665	200	3,460	692
3	Wheat	106	1,104	117	148	1,115	165	150	1,390	209
4	Maize	88	1,455	128	132	1,447	191.0	170	1,730	294.0
5	Ragi	3	723	2.1	5	582	2.9	10	825	8.2
<b>Total Cereals</b>		<b>369</b>	<b>2,140</b>	<b>789.1</b>	<b>492</b>	<b>2,082</b>	<b>1,024.4</b>	<b>550</b>	<b>2,442.1</b>	<b>1,343.1</b>
6	Gram	90	351	31.5	99	358	35.4	100	420	41.9
7	Mung	88	240	21.1	109	248	27.0	200	326	65.1
8	Biri	170	250	42.4	134	258	34.6	200	380	75.9
9	Kulthi	14,200	205	2,913.4	14,342	213	3,054.0	14,500	330	4,783.3
10	Field Pea	444	440	195.2	452	438	198.1	470	500	235
<b>Total Pulses</b>		<b>14,992</b>	<b>214</b>	<b>3,203.8</b>	<b>15,136</b>	<b>221.28</b>	<b>3,349.3</b>	<b>15,470</b>	<b>336.2</b>	<b>5,201.3</b>
11	Sunflower	45	530	23.83	51	536	27.3	60	600	35.9
12	Safflower	4	210	0.84	4	223	0.89	NA	NA	NA
13	Mustard	14,747	210	3,099.5	15,222	218	3,325.4	15,250	300	4,575
14	Til	212	205	43.40	201	213	42.7	230	300	69
15	Groundnut	11	1,190	13.09	17	1212	20.61	20	1,420	28.3
<b>Total Oil seed</b>		<b>15,019</b>	<b>212</b>	<b>3,180.7</b>	<b>15,495</b>	<b>220.52</b>	<b>3,417.0</b>	<b>15,560</b>	<b>302.6</b>	<b>4,708.3</b>
16	Onion	147	4,550	668.9	140	4,644	650.1	150	6,000	900
17	Potato	1,276	4,720	6,021.7	1,317	4,850	6,387.6	1,450	6,000	8,700
18	Other Veg	3,216	9,650	31,035.8	3,701	9,749	36,081.9	3,415	11,000	37,565
<b>Total Veg</b>		<b>4,639</b>	<b>8,132</b>	<b>37,726.6</b>	<b>5,158</b>	<b>8,359.8</b>	<b>43,119.7</b>	<b>5,015</b>	<b>9,404.7</b>	<b>47,165</b>
19	Chilly	198	380	75.2	237	392	92.8	245	435	106.6
20	Garlic	95	2,350	223.3	103	2,392	246.3	100	3,000	300
21	Corriender	75	315	23.6	101	3,760	32.3	100	350	35
<b>Total Spices</b>		<b>368</b>	<b>876</b>	<b>322.2</b>	<b>441</b>	<b>842.36</b>	<b>371.4</b>	<b>445</b>	<b>992.5</b>	<b>441.6</b>
22	Tobacco	84	330	27.7	91	338	30.7	50	400	20
23	Sugarcane	6	42,000	252	8	42,488	339.9	10	50,000	500
<b>Grand Total</b>		<b>35,477</b>	<b>NA</b>	<b>NA</b>	<b>36,821</b>	<b>NA</b>	<b>NA</b>	<b>37,100</b>	<b>NA</b>	<b>NA</b>

NA- Not Available



## Annexure 4.3 Horticulture Crop Production Details for Kandhamal

Block wise comparison of horticulture production (MT), area (ha) and yield (MT/ha)

P- Production, Y-yield / productivity

### Fruits:

Block	2004-05					2008-09				
	Area	%	P	%	Y	Area	%	P	%	Y
1	2	3	4	5	6	7	8	9	10	11
Phulbani	836	6.77	5,643	6.64	6.75	1,037	6.92	6,254	6.72	6.03
Khajuripada	923	7.48	6,415	7.54	6.95	1,125	7.51	7,008	7.53	6.24
Phiringia	1,204	9.75	8,572	10.08	7.12	1,454	9.70	9,326	1.20	6.41
G.Udayagiri	942	7.63	5,883	6.92	6.25	1,174	7.83	6,469	6.95	5.51
Tikabali	1,157	9.37	9,024	10.61	7.8	1,397	9.32	9,698	10.42	6.94
Raikia	1,266	10.25	9,267	10.90	7.32	1,544	10.30	9,877	10.62	6.39
Chakapada	5,204	9.75	8,608	10.12	7.15	1,378	9.20	9,420	10.12	6.83
Baliguda	1,200	9.71	8,886	10.45	7.40	1,424	9.50	9,419	10.11	6.61
K.Nuagaon	998	8.08	6,686	7.86	6.7	1,217	8.12	7,400	7.95	6.08
Daringbadi	1,126	9.12	6,925	8.19	6.15	1,417	9.45	7,632	8.20	5.38
Kotagarh	834	6.75	4,962	5.84	5.95	1,079	7.20	5,687	6.11	5.27
Tumudibandha	660	5.34	4,130	4.85	6.26	742	4.95	4,886	5.25	6.58
<b>Kandhamal</b>	<b>16,350</b>	<b>100.00</b>	<b>85,001</b>	<b>100</b>	<b>81.80</b>	<b>14988</b>	<b>100.00</b>	<b>93,076</b>	<b>91.18</b>	<b>74.27</b>

### Coconut:

Block	2004-05					2008-09				
	Area	%	P	%	Y	Area	%	P	%	Y
1	2	3	4	5	6	7	8	9	10	11
Phulbani	105.00	29.91	51.76	3235	0.49	98.00	28.00	52.92	31.88	0.54
Khajuripada	65.00	18.52	32.32	20.20	0.50	64.00	18.28	33.28	20.05	0.52
Phiringia	44.90	12.80	21.28	13.30	0.47	45.00	12.86	21.60	13.00	0.48
G.Udayagiri	40.80	11.63	16.81	10.50	0.41	42.00	12.00	18.06	10.88	0.43
Tikabali	27.50	7.84	10.52	6.58	0.38	28.00	8.00	11.20	6.75	0.40
Raikia	25.80	7.35	11.28	7.05	0.44	26.00	7.43	10.00	6.02	0.38
Chakapada	20.50	5.84	8.16	5.10	0.40	22.00	6.28	10.51	6.33	0.47
Baliguda	17.50	4.98	6.48	4.05	0.37	17.00	4.86	6.46	3.91	0.38
K.Nuagaon	2.50	0.71	0.83	0.52	0.33	3.00	0.86	1.42	0.85	0.47
Daringbadi	NA	NA	NA	NA	NA	1.50	0.43	NA	NA	NA
Kotagarh	1.50	0.42	0.56	0.35	0.37	2.00	0.57	0.55	0.33	1.27
Tumudibandha	NA	NA	NA	NA	0.00	1.50	0.43	NA	NA	NA
<b>Kandhamal</b>	<b>351.00</b>	<b>100</b>	<b>160</b>	<b>3302.65</b>	<b>4.17</b>	<b>350</b>	<b>100</b>	<b>166</b>	<b>100</b>	<b>5.35</b>

NA- Not Available

**Annexure 4.3 (continued..) Block wise comparison of horticulture production (MT), area (Ha) and yield (MT/Ha) P- Production, Y-yield / productivity: Floriculture:**

2004-05						2008-09				
Block	Area	%	P	%	Y	Area	%	P	%	Y
1	2	3	4	5	6	7	8	9	10	11
Phulbani	2.00	52.91	14.5	51.41	7.25	26	23.67	173.2	20.64	6.66
Khajuripada	NA	NA	NA	NA	NA	13	11.82	85.8	10.23	6.60
Phiringia	NA	NA	NA	NA	NA	7	6.36	40.0	4.77	5.71
G.Udayagiri	NA	NA	NA	NA	NA	10	9.09	86.0	10.25	8.60
Tikabali	NA	NA	NA	NA	NA	4	3.63	34.0	4.25	8.50
Raikia	NA	NA	NA	NA	NA	3	2.72	23.0	2.74	7.66
Chakapada	NA	NA	NA	NA	NA	4	3.63	31.0	3.69	7.75
Baliguda	1.00	26.40	8.5	30.14	8.50	14	12.72	103.0	12.28	7.35
K.Nuagaon	NA	NA	NA	NA	NA	9	8.18	80.0	9.54	8.89
Daringbadi	0.78	20.63	4.2	18.45	5.38	14	12.73	121.0	14.42	8.64
Kotagarh	NA	NA	NA	NA	NA	4	3.63	40.0	4.77	8.00
Tumudibandha	NA	NA	NA	NA	NA	2	1.82	22.0	2.62	11.00
<b>Kandhamal</b>	<b>3.78</b>	<b>100</b>	<b>27.2</b>	<b>100</b>	<b>21.13</b>	<b>110</b>	<b>100</b>	<b>839</b>	<b>100.20</b>	<b>95.36</b>

NA- Not Available

**Spices:**

2004-05						2008-09				
Block	Area	%	P	%	Y	Area	%	P	%	Y
1	2	3	4	5	6	7	8	9	10	11
Phulbani	887	5.58	1,857	5.37	2.09	964	5.40	2,141	5.27	3.96
Khajuripada	877	5.52	1,470	4.25	1.67	992	5.56	1,733	4.24	1.75
Phiringia	2,141	13.47	4,771	13.80	2.23	2,231	12.50	5,220	12.80	2.34
G.Udayagiri	1,548	9.74	2,800	8.10	1.80	1,750	9.80	3,874	9.50	2.21
Tikabali	1,160	7.30	2,420	7.00	2.08	1,428	8.00	3,222	7.90	2.26
Raikia	2,384	15.00	5,400	15.62	2.26	2,500	14.00	5,927	14.53	2.37
Chakapada	661	4.16	1,148	3.32	1.73	714	4.00	1,713	4.20	2.40
Baliguda	636	4.00	1,331	3.85	2.09	741	4.15	1,733	4.24	2.34
K.Nuagaon	1,605	10.10	3,630	10.50	2.26	1,984	11.11	4,820	11.82	2.43
Daringbadi	2,336	14.70	5,587	16.16	2.39	2,620	14.68	5,710	14.00	2.18
Kotagarh	930	5.85	2,807	8.12	3.01	1,071	6.00	2,651	6.50	2.47
Tumudibandha	730	4.60	1,352	3.91	1.85	855	4.80	2,039	5.00	2.28
<b>Kandhamal</b>	<b>15,895</b>	<b>100.02</b>	<b>34,573</b>	<b>100</b>	<b>25.50</b>	<b>17,850</b>	<b>100</b>	<b>40,783</b>	<b>100</b>	<b>28.99</b>

**Vegetables:**

Block	2004-05					2008-09				
	Area	%	P	%	Y	Area	%	P	%	Y
1	2	3	4	5	6	7	8	9	10	11
Phulbani	1,524	5.95	19,347	5.73	12.695	1,514	5.75	20,841	5.80	13.76
Khajuripada	3,425	13.37	42,441	12.57	12.39	3,489	13.25	44,907	12.50	12.87
Phiringia	3,432	13.40	47,270	14.00	13.77	3,423	13.00	50,296	14.00	14.69
G.Udayagiri	2,077	8.11	28,800	8.53	13.87	2,370	9.00	31,766	8.84	13.40
Tikabali	2,372	9.26	31,772	9.41	13.39	2,475	9.40	33,052	9.20	13.35
Raikia	3,074	12.00	43,893	13.00	14.28	3,292	12.50	47,724	13.28	14.49
Chakapada	1,409	5.50	18,233	5.40	12.94	1,422	5.40	19,759	5.50	13.89
Baliguda	1,435	5.60	18,739	5.55	13.05	1,633	6.20	20,118	5.60	12.32
K.Nuagaon	2,628	10.26	35,182	10.42	13.39	2,633	10.00	37,542	10.45	14.26
Daringbadi	1,640	6.40	20,528	6.08	12.50	1,712	6.50	21,914	6.10	12.80
Kotagarh	1,732	6.76	21,770	6.35	12.38	1,646	6.25	22,920	6.38	13.92
Tumudibandha	870	3.39	9,996	2.96	11.49	726	2.75	8,421	2.35	11.60
<b>Kandhamal</b>	<b>25,618</b>	<b>100</b>	<b>337,971</b>	<b>100</b>	<b>156.145</b>	<b>26,335</b>	<b>100</b>	<b>359,260</b>	<b>100</b>	<b>161.38</b>

## Annexure 4.4 NTFP Price and Collection in Kandhamal (1999)

### Category-wise collection/production of Non-timber Forest Produce and its availability in Kandhamal District

Sl. No.	Name of NTFP	Season of availability	Avg. Annual Collection (In tons or specified unit)	Procurement Price (Rs/1000 kg or per specified unit)	Approximate Value in Rs.
1	Antia	Apr-May	16.00	1,000	16,000
2	Dhantari Lata	Dec-Jan	12.00	500	6,000
3	Jungle Jute	Feb-March	6.00	1,000	6,000
4	Siali Fibre	April-May	90.00	5,000	450,000
5	Semual Cotton	April-May	3.00	50,000	150,000
6	Siali Fibre	April-May	9.00	50,000	4,500
7	Cane	April-May	0.20	12,000	2,400
8	Dry Grass	April-May	30.00	5,000	150,000
9	Hill broom	Dec-Feb	120.00	8,000	96,000
10	Gsenduli Gum	Jan-April	6.00	3,000	18,000
11	Sal resin	March-June	6.00	50,000	300,000
12	Anal	Nov-March	80.00	3,000	240,000
13	Bahada	Nov-March	30.00	1,500	45,000
14	Banahaldi	Jan-Feb	40.00	10,000	400,000
15	Gunja	May-June	0.10	self consumption	
16	Landabaguli	March-April	8.00	5,000	40,000
17	Londhamedha	Mar-April	25.00	2,000	50,000

Sl. No.	Name of NTFP	Season of availability	Avg. Annual Collection (In tons or specified unit)	Procurement Price (Rs/1000 kg or per specified unit )	Approximate Value in Rs.
18	Nageswar Flower	Jan-Feb	0.005	50,000	250
19	Nux Vomica	Dec-Feb	1	40,000	40,000
20	Patlagada	Oct-Jan	0.01	4,000	400
21	Rohini Flower	Feb-Apr	8	2,000	16,000
22	Baghanakhi Seeds	Apr-May	0.4	5,000	2,000
23	Banatulasi Seeds	Feb-April	32	500	160,000
24	Cashewnut	Mar-April	3	20,000	60,000
25	Char seeds	April-June	10	50,000	500,000
26	Gaba Seeds	May-June	5	5,000	25,000
27	Gilla Seeds	Nov-Dec	8	1,000	8,000
28	Karanja Seeds	Feb-March	5	8,000	40,000
29	Kusum Seeds	May-June	10	9,000	90,000
30	Mahua Seeds	April-May	4,000	5,000	20,000,000
31	Mango Kernel	April-July	800	1,000	800,000
32	Neem Seeds	May-June	10	85,000	850,000
33	Sal Seeds	May-June	1,500	3,000	4,500,000
34	Sikakai Seeds	Feb-Mar	3	7,000	21,000
35	Arrow Root	Feb-April	5	60,000	300,000
36	Mohua Flower	Feb-Mar	600	5,000	3,000,000
37	Mushroom	July-Oct	20	30,000	600,000
38	Tamarind	Jan-May	4,900	5,000	24,500,000
39	Kendu Leaves	April-May	2,000	8,000	16,000,000
40	Khajuripati	Feb-May	500	1,000	500,000
41	Siali Leaves	Dec- Feb	60,000 chalds	Rs. 6/chalds	3,600,000
42	Versungaha Leaves	Jan-Dec	40	5,000	200,000
43	Mat Reed	Sept-May	60	5,000	300,000
44	Sabai grass	October	0.5	4,000	2,000
45	Thatch grass	Nov-Feb	50	5,000	250,000
46	Benechera	Jan-Feb	50	5,000	1,000,000
47	Phenfena Bark	Mar-May	60	2,000	120,000
48	Hardia	Nov-March	1	2,000	2,000
49	Kamala Gundi	Feb-March	10	5,500	55,000
50	Marking Nut	Nov-March	96	1,000	96,000
51	Sunari Bark	April-May	80	5,000	400,000
52	Bamboo	Oct- June	32,000	600	161,240,100
53	Honey	Jan – Dec	25	60,000	1,500,000
54	Bel	March-June	800	2,000	1,600,000
55	Bhuineem	Jan-Dec	10	3,000	30,000
56	Sal Seeds	May-June	1,500	30,000	4,500,000
57	Sal Leaves	Jan-Dec	150,000 chaki	Rs. 4/chaki	600,000
<b>Total</b>					<b>249,325,750</b>

## Annexure 4.5 NREGS Data on Kandhamal

**Annexure 4.5A: Employment Generated for the Financial Year 2008-09 in NREGS Online (As on 30.09.2009)**

Sl. No.	Name of the Block	No. of House Holds as per BPL 2002 Survey	No. Registered		Job Card Issue	Employment Demanded		Employment Offered		Employment Provided			No of Families
			HH	Persons		HH	Persons	HH	Persons	HH	Persons	Persons days	
1	Baliguda	15,272	12,441	32,885	12,441	1,264	2,071	1,250	2,049	1,202	1,964	27,714	13
2	Chakapada	11,289	9,535	27,067	9,532	1,179	2,266	1,179	2,266	1,122	2,116	22,328	5
3	Daringabadi	22,503	18,642	47,109	18,642	965	1,875	965	1,875	913	1,792	22,542	1
4	G. Udaygiri	7,885	5,993	17,315	5,989	941	1,524	941	1,520	607	1,005	12,608	0
5	Khajuriapada	12,023	10,280	28,341	10,280	2,370	5,486	2,370	5,486	1,025	2,124	26,108	0
6	Kotagarh	12,539	10,584	28,537	10,579	1,940	3,593	1,940	3,593	1,936	3,589	48,662	7
7	Nuagaon	10,193	8,977	21,504	8,977	533	892	533	886	532	878	11,619	0
8	Phiringia	18,323	16,145	46,189	16,119	2,790	6,446	2,790	6,446	2,770	4,985	63,511	2
9	Phulbani	9,028	6,972	19,788	6,972	1,000	1,735	999	1,734	982	1,688	21,787	0
10	Raikia	12,509	10,554	28,018	10,552	873	1,219	873	1,219	793	1,105	17,923	5
11	Tikabali	12,184	8,693	24,877	8,651	1,495	2,675	1,430	2,560	1,355	2,396	30,088	2
12	Tumudibandha	9,288	7,493	19,123	7,491	1,288	2,217	1,284	2,209	957	1,681	22,695	7
<b>Total</b>		<b>153,036</b>	<b>12,6312</b>	<b>340,753</b>	<b>126,225</b>	<b>16,638</b>	<b>31,999</b>	<b>16,554</b>	<b>31,843</b>	<b>14,194</b>	<b>25,323</b>	<b>327,585</b>	<b>41</b>

**Annexure 4.5 B Caste-Wise Cumulative No. of Job card Issued & Caste-Wise Cumulative No. of Person Days Generated in NREGS (As on 30.09.2009)**

Sl. No.	Blocks	Cumulative No. of HH issued job cards (Till the reporting month)				Cumulative Person days generate (Till the reporting month)				
		SC	ST	Others	Total	SC	ST	Others	Total	Women
1	Baliguda	2,281	5,828	4,332	12,441	4,012	12,438	11,264	27,714	10,314
2	Chakapada	2,624	4,253	2,655	9,532	3,759	13,845	4,724	22,328	9,486
3	Daringbadi	4,158	11,277	3,207	18,642	3,254	15,612	3,676	22,542	10,486
4	G.Udayagiri	1,192	3,784	1,013	5,989	2,172	8,750	1,686	12,608	4,770
5	K.Nuagaon	1,911	5,385	2,984	10,280	3,351	15,942	6,815	26,108	11,185
6	Khajuriapada	3,623	5,422	1,534	10,579	20,517	23,850	4,295	48,662	20,715
7	Kotagarh	2,446	5,150	1,381	8,977	1,855	4,669	5,095	11,619	4,625
8	Phiringia	3,167	9,261	3,691	16,119	11,701	40,148	11,662	63,511	24,213
9	Phulbani	1,637	4,036	1,299	6,972	5,209	10,687	5,891	21,787	8,510
10	Raikia	2,319	5,752	2,481	10,552	2,757	11,498	3,668	17,923	6,145
11	Tikabali	2,325	4,894	1,432	8,651	7,675	16,417	5,996	30,088	12,203
12	Tumudibandha	1,890	4,367	1,234	7,491	6,440	12,949	3,306	22,695	9,754
<b>Total</b>		<b>29,573</b>	<b>69,409</b>	<b>27,243</b>	<b>126,225</b>	<b>72,702</b>	<b>186,805</b>	<b>68,078</b>	<b>327,585</b>	<b>13,2406</b>

## Annexure 5.1 Trend of Enrolment in Secondary Classes: 2006-2009

**Annexure 5.1A Secondary Enrolment 2006-07**

Sl. No.	Name of the Block	CLASS-VIII						CLASS-IX						CLASS X					
		All Community		SC		ST		All Community		SC		ST		All Community		SC		ST	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	Baliguda	399	270	171	93	143	78	342	214	130	74	124	44	294	178	131	60	102	58
2	Chakapada	193	162	57	46	87	67	156	106	57	33	57	30	143	104	46	39	61	38
3	Daringbadi	523	318	208	125	248	149	355	264	128	131	181	99	325	221	134	103	138	98
4	G. Udayagiri	223	219	71	60	129	150	203	261	60	78	127	165	196	186	62	60	126	113
5	Khajuripada	302	186	103	70	161	82	232	140	97	59	96	53	219	108	102	49	77	37
6	K. Nuagaon	322	275	69	47	165	271	324	230	51	36	169	110	266	176	34	28	152	98
7	Kotagarh	175	91	55	38	79	23	105	52	20	22	49	10	78	34	19	14	34	9
8	Phiringia	376	198	70	51	200	125	312	172	60	40	169	95	278	108	68	6	34	43
9	Phulbani	182	64	56	21	95	29	184	56	47	15	114	22	158	55	38	14	82	18
10	Raikia	377	356	129	121	225	193	320	257	123	89	170	144	180	165	62	45	95	93
11	Tikabali	227	250	66	83	152	146	230	215	78	73	135	136	191	217	64	86	115	116
12	Tumudibandha	197	73	91	36	82	18	164	77	57	42	83	16	124	69	44	40	54	9
13	Phulbani (M)	262	292	57	51	47	37	325	292	100	66	62	64	289	264	77	55	53	55
14	G. Udayagiri (NAC)	171	213	28	62	73	87	290	280	59	49	82	99	176	243	38	57	79	109

**Annexure 5.1B Secondary Enrolment 2007-2008**

Sl. No.	Name of the Block	CLASS-VIII						CLASS-IX						CLASS X					
		All Community		SC		ST		All Community		SC		ST		All Community		SC		ST	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	Baliguda	449	361	145	112	142	123	426	282	150	81	140	79	321	212	101	62	128	61
2	Chakapada	256	196	75	52	113	80	193	143	59	44	76	61	144	88	47	27	29	29
3	Daringbadi	521	380	201	145	237	193	407	279	178	120	183	116	292	248	113	98	112	100
4	G.Udayagiri	196	258	60	88	130	163	198	233	65	63	120	163	171	204	50	52	109	147
5	Khajuripada	369	246	137	96	135	91	245	178	93	63	111	70	236	133	116	54	88	46
6	K.Nuagaon	310	235	62	32	155	42	308	241	53	41	148	112	244	157	31	25	129	76
7	Kotagarh	151	98	26	29	56	22	85	49	26	20	38	13	82	49	15	22	39	9
8	Phiringia	405	239	86	56	243	136	346	183	80	48	193	105	306	123	75	35	162	54
9	Phulbani	251	189	79	39	127	121	186	124	51	32	95	63	138	60	28	16	70	14
10	Raikia	433	421	111	134	243	248	282	260	83	111	136	146	178	164	42	41	106	91
11	Tikabali	227	254	64	83	144	145	244	260	78	92	148	156	214	246	73	96	141	117
12	Tumudibandha	179	66	95	36	110	23	161	73	64	49	100	17	115	65	50	46	58	15
13	Phulbani (M)	333	339	79	49	48	42	290	283	75	37	58	37	319	277	67	43	61	37
14	G.Udayagiri (NAC)	201	205	59	62	86	75	200	193	49	55	85	79	150	207	39	49	48	99



## Annexure 5.1C Secondary Enrolment 2008-2009

Sl. No.	Name of the Block	CLASS-VIII						CLASS-IX						CLASS-X					
		All Community		SC		ST		All Community		SC		ST		All Community		SC		ST	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	Baliguda	470	288	163	102	165	108	372	249	96	93	146	86	347	187	135	62	115	50
2	Chakapada	248	224	75	58	86	91	223	72	49	91	75	198	109	56	24	57	58	106
3	Daringbadi	463	369	187	144	208	222	401	329	178	158	168	163	307	254	144	115	117	127
4	G.Udayagiri	244	203	65	82	215	203	195	252	60	77	160	167	180	211	63	53	107	151
5	Khajuripada	290	181	158	148	156	138	269	176	107	81	120	63	199	146	96	55	110	66
6	K.Nuagaon	331	241	87	54	123	178	296	229	103	58	121	95	227	190	54	50	81	87
7	Kotagarh	146	93	25	30	59	21	89	56	26	26	38	49	78	49	14	22	37	9
8	Phiringia	334	162	114	59	239	172	346	179	87	55	269	141	248	130	64	41	169	85
9	Phulbani	167	85	63	44	147	115	201	62	77	35	113	83	125	70	36	30	78	47
10	Raikia	309	306	103	108	149	196	296	260	138	111	176	182	161	142	75	47	116	96
11	Tikabali	325	118	102	128	162	158	338	290	116	92	155	140	216	292	82	102	116	134
12	Tumudibandha	187	68	87	36	100	37	182	85	79	52	107	59	125	69	55	43	59	29
13	Phulbani (M)	392	211	104	85	75	65	360	179	89	72	70	62	286	180	67	69	47	44
14	G.Udayagiri (NAC)	202	195	69	42	145	91	191	186	57	53	77	81	146	190	47	54	58	85

## Annexure 5.2 Out of School Children as per SSA Micro Planning 2007 Status & Age Wise Break-up of Out of School Children

Sl. No.	Block/ Municipal Zone	Never Enrolled												Drop Out												Grand Total of 6-14 age Group					
		6-8 years				8-11 years				11-14 years				6-8 years				8-11 years				11-14 years									
		B	G	T		B	G	T		B	G	T		B	G	T		B	G	T		B	G	T		B	G	T			
1	Baliguda	120	110	230	5	14	19	34	37	71	24	19	43	49	38	87	107	111	218	339	329	668									
2	Chakapada	28	41	69	6	8	14	9	9	18	5	5	10	9	11	20	36	44	80	93	118	211									
3	Daringbadi	125	116	241	25	28	53	31	31	62	25	33	58	50	66	116	88	76	164	344	350	694									
4	G.Udayagiri	3	4	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	6	14	21	14	35	32	24	56									
5	K.Nuagaon	47	56	103	4	3	7	16	18	34	5	16	21	17	18	35	66	69	135	155	180	335									
6	Kahjuripada	20	22	42	10	8	18	7	7	14	8	13	21	20	18	38	67	72	139	132	140	272									
7	Kotagarh	96	81	177	23	21	44	45	50	95	32	32	64	64	66	130	167	187	354	427	437	864									
8	Phiringia	129	139	268	21	36	57	23	24	47	25	33	58	52	66	118	125	143	268	375	441	816									
9	Phulbani	43	49	92	17	20	37	13	13	26	6	8	14	12	16	28	28	26	54	119	132	251									
10	Raikia	39	47	86	4	9	13	6	9	15	7	9	16	14	17	31	27	33	60	97	124	221									
11	Tikabali	33	29	62	14	8	22	23	21	44	6	5	11	13	9	22	39	48	87	128	120	248									
12	Tumudibandha	62	37	99	2	10	12	22	11	33	25	28	53	39	43	82	74	81	155	224	210	434									
13	G.Udayagiri (NAC)	2	NA	2	1	NA	1	NA	NA	NA	NA	NA	NA	NA	2	2	3	2	5	6	4	10									
14	Phulbani (M)	58	30	88	4	5	9	10	6	16	1	3	4	3	5	8	16	30	46	92	79	171									
	<b>Kandhamal</b>	<b>805</b>	<b>761</b>	<b>1,566</b>	<b>136</b>	<b>170</b>	<b>306</b>	<b>239</b>	<b>236</b>	<b>475</b>	<b>169</b>	<b>204</b>	<b>373</b>	<b>350</b>	<b>381</b>	<b>731</b>	<b>864</b>	<b>936</b>	<b>1,800</b>	<b>2,563</b>	<b>2,688</b>	<b>5,251</b>									

NA - Not Available

## Annexure 5.3 Management and Section Wise Schools in Kandhamal, DISE 2007-2008

Sl. No.	Block/Municipal Zone	Govt. Schools						Govt. aided Schools						Pvt. Recognised Schools						Pvt. Un-recognised Schools						Total					
		Primary Only	PS to UPS	PS to HS	UPS only	UPS to HS	HS only	Total	Primary Only	PS to UPS	PS to HS	UPS only	UPS to HS	HS only	Total	Primary Only	PS to UPS	PS to HS	UPS only	UPS to HS	HS only	Total	Primary Only	PS to UPS	PS to HS	UPS only	UPS to HS	HS only	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Baliguda	86	50	NA	1	5	2	144	1	1	NA	1	3	1	1	1	NA	3	6	NA	NA	1	1	2	87	52	3	1	5	7	155
2	Chakapada	89	32	1	4	2	3	131	NA	NA	NA	NA	NA	2	NA	1	NA	2	5	1	NA	NA	NA	1	92	32	2	4	2	5	137
3	Daringbadi	157	50	2	1	1	2	213	NA	NA	1	2	3	1	NA	NA	NA	3	4	NA	1	1	NA	2	158	51	3	1	2	7	222
4	G.Udaygiri	61	19	NA	3	NA	1	84	NA	NA	NA	4	4	1	NA	NA	NA	4	5	NA	NA	1	1	1	62	19	NA	3	NA	10	94
5	K.Nuagaon	99	28	NA	2	2	3	134	NA	NA	NA	1	1	2	NA	1	NA	5	8	NA	NA	NA	NA	NA	101	28	1	2	2	9	143
6	Khajuripada	111	38	NA	2	1	5	157	NA	NA	NA	NA	NA	1	NA	NA	NA	5	6	NA	1	NA	NA	1	112	39	NA	2	1	10	164
7	Kotagarh	88	29	NA	NA	1	1	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	1	NA	NA	NA	NA	NA	88	29	NA	NA	1	2	120
8	Phiringia	133	47	NA	3	2	5	190	NA	NA	NA	1	1	1	NA	NA	NA	4	5	NA	1	NA	1	2	134	48	NA	3	2	11	198
9	Phulbani	70	32	1	NA	2	NA	105	NA	NA	NA	4	4	NA	NA	NA	NA	2	2	NA	NA	NA	NA	NA	70	32	1	NA	2	6	111
10	Raikia	88	29	2	6	1	3	129	NA	NA	NA	1	5	4	NA	1	1	NA	6	NA	NA	NA	NA	NA	92	29	3	7	2	7	140
11	Tikabali	72	28	1	4	NA	3	108	NA	NA	NA	NA	NA	1	1	NA	NA	3	5	NA	NA	NA	NA	NA	73	29	1	4	NA	6	113
12	Tumudibandha	74	28	1	NA	2	1	106	NA	1	NA	NA	1	1	NA	NA	NA	1	2	NA	NA	NA	NA	NA	75	28	2	NA	2	2	109
13	G.Udaygiri (NAC)	6	4	NA	1	2	NA	13	NA	NA	NA	NA	NA	3	2	NA	NA	1	6	NA	NA	NA	NA	NA	9	6	NA	1	2	1	19
14	Phulbani (M)	14	8	NA	NA	3	NA	25	NA	1	NA	1	2	2	NA	5	NA	NA	7	NA	NA	NA	NA	NA	16	8	6	NA	3	1	34
	<b>Kandhamal</b>	<b>1,148</b>	<b>422</b>	<b>8</b>	<b>27</b>	<b>24</b>	<b>29</b>	<b>1,658</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>18</b>	<b>24</b>	<b>20</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>34</b>	<b>45</b>	<b>25</b>	<b>23</b>	<b>21</b>	<b>32</b>	<b>39</b>	<b>1,169</b>	<b>430</b>	<b>22</b>	<b>28</b>	<b>26</b>	<b>84</b>	<b>1,759</b>

NA- Not Available

## Annexure 5.4 School Infrastructure as per Conditional Survey, 2006

Sl. No.	Block/Urban Zone	Schools Type (PS/UPS)	Total no. of schools	Total no. of pucca classroom	No. of repairable classroom	No. of UPS with HM room	No. of schools with D/water acility	No. of schools with Toilet facility	No. of schools with Girls toilet	No. of schools with access ramp	No. of schools with Boundary Wall	No. of schools with playground	No. of schools with Kitchen for Mid Day Meal
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Baliguda	PS	86	82	84	NA	74	23	5	3	75	7	20
		UPS	56	166	146	52	54	25	20	6	48	10	10
2	Chakapada	PS	89	67	95	NA	84	52	25	4	28	4	25
		UPS	39	65	64	39	39	28	14	10	22	14	14
3	Daringbadi	PS	157	93	123	NA	131	45	27	12	99	33	27
		UPS	54	85	103	45	45	26	9	10	39	13	9
4	G. Udayagiri	PS	61	45	73	NA	47	26	12	4	19	14	12
		UPS	22	41	48	22	17	7	3	1	14	7	3
5	K. Nuagaon	PS	99	103	98	NA	88	25	17	8	80	9	17
		UPS	32	95	57	32	32	18	11	9	31	8	11
6	Khajuripada	PS	111	119	89	NA	88	41	24	7	30	12	30
		UPS	41	128	87	41	41	18	12	7	21	12	12
7	Kotagarh	PS	88	46	65	NA	69	12	5	3	53	7	5
		UPS	30	65	58	25	25	9	3	3	22	9	3
8	Phiringia	PS	133	153	104	NA	110	46	21	14	72	8	21
		UPS	52	137	91	42	42	27	17	8	38	11	17
9	Phulbani	PS	70	46	69	NA	59	41	28	1	41	7	30
		UPS	35	81	77	31	31	22	18	5	32	7	18
10	Raikia	PS	88	98	95	NA	75	38	8	6	45	23	8
		UPS	38	121	59	38	36	20	13	3	34	22	13
11	Tikabali	PS	72	94	58	NA	65	38	17	5	32	11	17
		UPS	33	15	60	32	32	15	11	2	20	11	11
12	Tumudibandha	PS	74	46	45	NA	55	16	4	5	48	3	4
		UPS	31	70	64	29	29	14	7	6	28	4	7
13	G. Udaygiri NAC	PS	6	8	6	NA	6	1	1	NA	4	2	1
		UPS	7	25	15	7	7	3	2	NA	6	5	2
14	Phulbani (M)	PS	14	12	15	NA	11	5	3	1	12	1	3
		UPS	11	54	20	11	10	7	5	3	8	3	5
	Kandhamal	PS	1148	1,012	1,019	NA	962	409	197	73	638	141	220
		UPS	481	1,148	949	446	440	239	145	73	363	136	135

Source: Conditional Survey 2006, SSA, NA- Not Available

### Note

1. Upper Primary School (UPS) refers to Classes VI, VII and VIII, either as a separate school or in attachment with primary, secondary or high schools.
2. Column 5 refers to schools that are building less (if any) as well as those running in kuccha/ tent/ rented premises

## Annexure 6.1 Health Indicators, DLHS-3 and DLHS-2

Indicators	DLHS – 3		DLHS - 2	
	Total	Rural	Total	Rural
<b>Marriage and Fertility, (Jan 2004 to 2007-08)</b>				
Percentage of girl's marrying before completing 18 years	31.4	29.2	26.2	33.2
Percentage of Births of Order 3 and above	33.6	34.4	47.0	48.2
Sex Ratio at birth	100	100	NA	NA
Percentage of women age 20-24 reporting birth of order 2 & above.	49.2	50.3	NA	NA
Percentage of births to women during age 15-19 out of total births	9.0	9.0	NA	NA
<b>Family planning (currently married women, age 15-49)</b>				
<b>Current Use :</b>				
Any Method (%)	32.3	32.0	47.1	37.6
Any Modern method (%)	23.8	23.4	34.9	27.9
Female Sterilisation (%)	16.7	16.8	22.9	22.1
Male Sterilisation (%)	0.6	0.4	1.3	1.5
IUD (%)	0.4	0.4	1.5	0.9
Pill (%)	5.6	5.5	6.6	3.3
Condom (%)	0.4	0.3	2.2	0.2
<b>Unmet Need for Family Planning:</b>				
Total unmet need (%)	27.8	28.7	17.4	14.0
For spacing (%)	11.1	11.4	6.2	5.2
For limiting (%)	16.7	17.3	11.2	8.8
<b>Maternal Health:</b>				
Mothers registered in the first trimester when they were pregnant with last live birth/ still birth (%)	50.9	48.8	NA	NA
Mothers who had at least 3 Ante-Natal Care visits during the last pregnancy (%)	52.9	50.5	37.1	26.2
Mothers who got at least one TT injection when they were pregnant with their last live birth / still birth (%) #	99.1	99.6	84.6	82.3
Institutional births (%)	25.3	24.1	32.4	25.8
Delivery at home & other places assisted by a doctor/nurse /LHV/ANM (%)	2.4	2.4	14.3	11.0
Mothers who received post natal care within 48 hours of delivery of their last child (%)	99.6	99.5	NA	NA
<b>Child Immunisation and Vitamin A supplementation:</b>				
Children (12-23 months) fully immunized (BCG, 3 doses each of DPT, and Polio and Measles) (%)	51.4	51.0	60.2	59.6
Children (12-23 months) who have received BCG (%)	94.2	94.0	92.3	91.9
Children (12-23 months) who have received 3 doses of Polio Vaccine (%)	69.9	68.8	69.7	70.5
Children (12-23 months) who have received 3 doses of DPT Vaccine (%)	63.5	62.2	71.0	72.8
Children (12-23 months) who have received Measles Vaccine (%)	83.4	82.8	74.1	74.8

NA- Not Available

Indicators	DLHS - 3		DLHS - 2	
	Total	Rural	Total	Rural
<b>Child Immunisation and Vitamin A supplementation: (Contd...)</b>				
Children (9-35 months) who have received at least one dose of Vitamin A (%)	64.1	63.6	NA	NA
Children (above 21 months) who have received three doses of Vitamin A (%)	10.6	9.8	NA	NA
<b>Treatment of childhood diseases (children under 3 years based on last two surviving children)</b>				
Children with Diarrhoea in the last two weeks who received ORS (%)	37.3	38.0	51.5	48.5
Children with Diarrhoea in the last two weeks who were given treatment (%)	53.6	52.6	63.7	58.2
Children with acute respiratory infection/fever in the last two weeks who were given treatment (%)	41.3	39.9	NA	NA
Children had check-up within 24 hours after delivery (based on last live birth) (%)	21.0	20.1	NA	NA
Children had check-up within 10 days after delivery (based on last live birth) (%)	26.7	25.2	NA	NA
<b>Child feeding practices (Children under 3 years)</b>				
Children breastfed within one hour of birth (%)	55.7	55.3	NA	NA
Children (age 6 months above) exclusively breastfed (%)	60.5	59.9	NA	NA
Children (6-24 months) who received solid or semisolid food and still being breastfed (%)	93.8	93.5	NA	NA
<b>Knowledge of HIV/AIDS and RTI/STI among Ever married Women (age 15-49)</b>				
Women heard of HIV/AIDS (%)	42.0	40.4	44.1	24.2
Women who knew that consistent condom use can reduce the chances of getting HIV/AIDS (%)	18.7	18.1	10.4	8.2
Women having correct knowledge of HIV/ AIDS (%)	61.2	60.2	NA	NA
Women underwent test for detecting HIV/ AIDS (%)	0.5	0.5	NA	NA
Women heard of RTI/STI (%)	12.7	12.9	46.9	33.8
<b>Knowledge of HIV/AIDS among Un-married Women (age 15-24)</b>				
Women heard of HIV/AIDS (%)	55.7	53.5	NA	NA
Women who knew that consistent condom use can reduce the chances of getting HIV/AIDS (%)	13.2	11.7	NA	NA
Women having correct knowledge of HIV/ AIDS (%)	84.2	82.4	NA	NA
Women underwent test for detecting HIV/ AIDS (%)	1.1	1.3	NA	NA
Women heard of RTI/STI (%)	15.8	15.9	NA	NA
<b>Women facilitated/motivated by ASHA for</b>				
Ante-Natal Care (%)	15.9	16.1	NA	NA
Delivery at Health Facility (%)	8.5	8.9	NA	NA
Use of Family Planning Methods (%)	2.2	2.3	NA	NA

NA- Not Available

## Annexure 7.1-7.4 Components of Food Security Index for all Districts

### Annexure 7.1 Food Security Outcome Index

Food Security Outcome Index						
District	Under Five Mortality		Under Weight Children		Food Security Outcome Index	
	Value	Rank	Value	Rank	Value	Rank
Angul	119	9	45.7	14	0.485	12
Balangir	119.6	10	47.8	18	0.467	13
Balasore	116.2	7	31.5	8	0.600	5
Bargarh	109.6	3	59.9	30	0.410	21
Baudh	143.3	22	45.9	15	0.402	22
Bhadrak	130.6	18	50	20	0.414	20
Cuttack	128.1	14	13.9	3	0.692	3
Deogarh	148.5	23	29.9	6	0.504	11
Dhenkanal	130	16	30	7	0.565	6
Gajapati	165.1	29	50.7	23	0.294	28
Ganjam	127.1	13	54.9	25	0.389	24
Jagatsinghpur	117.4	8	27.8	5	0.624	4
Jajpur	125	12	47.4	16	0.452	15
Jharsuguda	95.6	2	9.9	1	0.830	1
Kalahandi	157.4	26	40.6	11	0.395	23
Kandhamal	186.5	30	48.7	19	0.237	30
Kendrapara	134	19	35.9	10	0.508	9
Keonjhar	129	15	50.6	21	0.415	19
Khordha	114	5	44.9	13	0.507	10
Koraput	153.4	24	43.5	12	0.386	25
Malkangiri	158.3	27	56.1	26	0.276	29
Mayurbhanj	90.6	1	47.7	17	0.564	7
Nabarangpur	156.2	25	33.4	9	0.452	14
Nayagarh	130.3	17	10.7	2	0.708	2
Nuapada	135.9	20	57	28	0.344	26
Puri	135.9	20	27.7	4	0.563	8
Rayagada	162.9	28	50.6	21	0.302	27
Sambalpur	122.8	11	52.4	24	0.422	16
Sonepur	109.9	4	58.2	29	0.422	17
<b>Sundergarh</b>	<b>114.9</b>	<b>6</b>	<b>56.4</b>	<b>27</b>	<b>0.418</b>	<b>18</b>

## Annexure 7.2 Availability Index as per Food Security Atlas 2008

Availability Index								
Districts	Per Capita Agricultural Output		Share of Forest Area		Irrigation Extent		Rural Connectivity	
	Value (Rs.)	Rank	Value (%)	Rank	Value (%)	Rank	Value (%)	Rank
Angul	1,275	14	43.66	22	22.18	23	28.31	26
Balangir	1,679	8	23.44	11	14.86	28	40.58	18
Balasore	1,081	27	9.09	4	37.67	9	41.05	17
Bargarh	2,633	1	20.89	8	44.38	8	45.15	11
Baudh	1,804	6	37.10	17	47.43	7	25.87	27
Bhadrak	1,264	15	3.73	1	62.37	4	43.12	14
Cuttack	1,022	28	21.18	9	57.28	6	62.72	2
Deogarh	1,555	10	56.12	28	29.15	16	60.12	5
Dhenkanal	1,460	12	37.83	20	27.23	18	38.80	19
Gajapati	1,194	22	64.16	29	24.54	20	29.27	25
Ganjam	1,183	23	36.17	14	64.11	3	43.27	13
Jagatsinghpur	1,213	20	6.60	3	78.11	1	57.30	6
Jajpur	1,251	16	24.91	13	28.49	17	61.93	3
Jharsuguda	1,562	9	9.09	4	20.26	25	47.08	9
Kalahandi	2,168	3	37.56	19	34.51	11	41.52	16
Kandhamal	899	30	74.64	30	13.57	29	20.53	30
Kendrapara	1,233	18	9.80	6	21.52	24	35.24	22
Keonjhar	1,236	17	37.35	18	22.88	21	46.49	10
Khordha	911	29	21.45	10	36.05	10	64.11	1
Koraput	1,449	13	23.80	12	30.61	14	22.20	28
Malkangiri	2,565	2	54.12	26	30.80	13	21.16	29
Mayurbhanj	1,152	24	42.13	21	29.74	15	42.14	15
Nabarangpur	1,752	7	46.50	23	5.80	30	45.13	12
Nayagarh	1,481	11	49.06	24	26.31	19	52.86	7
Nuapada	1,145	25	36.66	15	19.24	26	61.20	4
Puri	1,205	21	4.59	2	65.13	2	49.38	8
Rayagada	1,219	19	37.07	16	22.87	22	33.54	23
Sambalpur	1,992	5	54.18	27	33.92	12	30.64	24
Sonepur	2,118	4	17.52	7	58.99	5	36.34	21
<b>Sundergarh</b>	<b>1,120</b>	<b>26</b>	<b>51.08</b>	<b>25</b>	<b>19.08</b>	<b>27</b>	<b>38.04</b>	<b>20</b>



## Annexure 7.3 Access Index as per Food Security Atlas, 2008

District	Average Per Capita Expenditure		Agricultural Labourers		Rural Wage Rate		Proportion of SC and ST	
	VALUE (Rs.)	RANK	VALUE (%)	RANK	VALUE (%)	RANK	VALUE (%)	RANK
Angul	286	14	31.2	8	38.4	15	29.9	9
Balangir	259	17	43.3	21	29.4	25	39.8	15
Balasore	251	5	35.4	12	45.8	8	31.4	11
Bargarh	268	16	43.6	22	34.1	21	40.0	16
Baudh	233	20	40.8	19	22.1	30	34.9	14
Bhadrak	377	3	30.2	6	58.2	1	24.7	7
Cuttack	408	2	30.4	7	56.1	3	25.7	8
Deogarh	224	23	46.0	24	24.5	29	49.7	19
Dhenkanal	277	15	36.4	13	43.2	12	32.3	12
Gajapati	316	9	47.6	26	45.2	9	62.7	23
Ganjam	316	9	43.2	20	45.2	9	23.2	6
Jagatsinghpur	318	8	27.9	3	52.9	5	22.8	4
Jajpur	421	1	31.4	9	56.2	2	31.1	10
Jharsuguda	224	23	32.5	10	27.7	26	58.1	20
Kalahandi	221	26	52.5	29	34.4	19	48.1	17
Kandhamal	233	20	37.6	14	35.8	17	71.3	26
Kendrapara	325	7	26.2	1	53.1	4	21.1	3
Keonjhar	298	11	39.8	17	44.2	11	59.1	21
Khordha	358	4	28.2	4	50.1	6	22.8	5
Koraput	206	28	44.9	23	35.9	16	69.4	25
Malkangiri	206	28	26.8	2	41.0	14	81.5	30
Mayurbhanj	287	13	40.1	18	34.5	18	67.0	24
Nabarangpur	195	30	54.1	30	30.4	23	71.4	27
Nayagarh	288	12	33.8	11	46.5	7	19.9	1
Nuapada	233	20	47.8	27	32.4	22	49.6	18
Puri	335	6	28.4	5	42.2	13	20.0	2
Rayagada	221	26	49.9	28	34.4	19	76.7	29
Sambalpur	224	23	38.2	15	25.7	28	60.7	22
Sonepur	259	17	46.4	25	26.5	27	33.8	13
<b>Sundergarh</b>	<b>239</b>	<b>19</b>	<b>38.8</b>	<b>16</b>	<b>30.4</b>	<b>24</b>	<b>75.0</b>	<b>28</b>

## Annexure 7.4 Absorption Index as per Food Security Atlas, 2008

Absorption Index						
District	Access to Safe Drinking Water		Access to PHCs		Absorption Index	
	VALUE (%)	RANK	VALUE (%)	RANK	VALUE (%)	RANK
Angul	39.35	28	16.31	23	0.268	29
Balangir	73.87	12	24.30	12	0.519	9
Balasore	86.33	2	33.87	5	0.658	2
Bargarh	83.26	4	47.62	1	0.742	1
Baudh	64.31	15	6.77	30	0.337	23
Bhadrak	88.63	1	28.55	7	0.632	4
Cuttack	50.05	23	22.80	14	0.375	19
Deogarh	56.16	20	9.05	29	0.308	27
Dhenkanal	31.34	30	23.38	13	0.276	28
Gajapati	43.29	25	19.68	20	0.315	26
Ganjam	57.89	17	19.67	22	0.389	18
Jagatsinghpur	77.98	9	36.16	4	0.629	5
Jajpur	42.37	27	27.11	10	0.365	20
Jharsuguda	62.81	16	31.87	6	0.513	10
Kalahandi	81.23	6	20.99	18	0.533	8
Kandhamal	32.03	29	19.18	21	0.249	30
Kendrapara	73.74	13	22.20	16	0.503	12
Keonjhar	52.39	21	14.81	25	0.33	25
Khordha	42.97	26	39.19	3	0.457	16
Kroaput	67.26	14	22.35	15	0.468	13
Malkangiri	82.06	5	16.14	24	0.504	11
Mayurbhanj	43.09	24	21.37	17	0.331	24
Nabarangpur	80.37	7	28.41	8	0.585	7
Nayagarh	51.47	22	19.99	19	0.363	21
Nuapada	84.29	3	25.55	11	0.586	6
Puri	75.59	11	39.57	2	0.641	3
Rayagada	78.11	8	13.24	28	0.461	14
Sambalpur	56.48	19	13.48	27	0.343	22
Sonepur	76.28	10	14.10	26	0.457	15
<b>Sundergarh</b>	<b>56.98</b>	<b>18</b>	<b>2.05</b>	<b>9</b>	<b>0.453</b>	<b>17</b>

## Annexure 7.5 Target BPL Household for IAY

**Table 5: Target BPL Households for IAY**

Block	Eligible HH as per 2002 BPL Survey							Quota for 2008-09			
	Number of HH				Percentage of HH						
	Total	ST	SC	Other	ST	SC	Other	Total	ST	SC	Other
Baliguda	115,272	6,727	2,823	5,722	44.05	18.5	37.47	178	95	41	42
Chakapada	11,289	5,039	3,181	3,069	44.64	28.2	27.19	132	70	31	31
Daringbadi	22,503	12,900	5,070	4,533	57.33	22.5	20.14	262	139	61	62
G.Udayagiri	7,885	4,810	1,547	1,528	61.00	19.6	19.38	92	49	22	21
K.Nuagaon	12,023	5,948	2,207	3,868	49.47	18.4	32.17	140	75	33	32
Khajuripada	12,539	6,169	4,222	2,148	49.20	33.7	17.13	146	78	34	34
Kotagarh	10,193	5,752	2,648	1,793	56.43	26.0	17.59	119	64	28	27
Phiringia	18,323	10,078	3,732	4,513	55.00	20.4	24.63	213	113	49	51
Phulbani	9,028	4,926	2,186	1,916	54.56	24.2	21.22	105	56	25	24
Raikia	12,509	6,470	2,655	3,384	51.72	21.2	27.05	146	78	34	34
Tikabali	12,184	6,319	3,277	2,588	51.86	26.9	21.24	142	76	33	33
Tumudibandha	9,288	5,336	2,266	1,686	57.45	24.4	18.15	108	58	25	25
<b>TOTAL</b>	<b>153,036</b>	<b>80,474</b>	<b>35,814</b>	<b>36,748</b>	<b>632.70</b>	<b>284.0</b>	<b>283.40</b>	<b>1,783</b>	<b>951</b>	<b>416</b>	<b>416</b>

Source: DRDA, Kandhamal

## Annexure 7.6 Beneficiaries under Social Security Schemes

Name of the Block	NOAP (2005)		SOAP (2005)	
	Number of Beneficiaries Covered	Amount Distributed (in Lakhs)	Number of Beneficiaries Covered	Amount Distributed (in Lakhs)
Baliguda	471	5.65	1,375	16.50
Chakapada	325	3.90	1,018	12.22
Daringbadi	661	7.93	2,159	25.91
G.Udayagiri	256	3.07	1,167	14.00
Kahjuripada	383	4.60	1,236	14.83
Kotagarh	290	3.48	958	11.50
Nuagaon	361	4.33	1,115	13.38
Phiringia	538	6.46	1,739	20.87
Phulbani	421	5.05	1,075	12.90
Raikia	379	4.55	1,210	14.52
Tikabali	385	4.63	1,243	14.91
Tumudibandh	273	3.28	895	10.74
G.Udayagiri (NAC)	65	0.78	288	3.46
<b>Phulbani (M)</b>	<b>100</b>	<b>1.20</b>	<b>616</b>	<b>7.39</b>

Source: District Statistical Handbook Kandhamal, 2005

# Annexure 8 G. P. Profile

## 1. Phiringia

Sl. No.	Name of GP	General Profile			Demographic Profile								Education			Provision for Safe Drinking Water		Health & Sanitation		
		No. of Villages	No. of HHS	No. of BPL HHS	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHS with Toilets	
1	PHRINGIA	22	1,140	817	7,041	3,566	3,475	1444	3142	595	502	5	3	2	93	3	1	9	786	
2	*DINDIRAGAM*	11	485	300	2,098	1,072	1,026	NA	NA	NA	NA	1	3	1	23	10	NA	3	299	
3	BANDHAGADA	16	740	369	3,009	1,421	1,588	530	1,362	240	266	4	1	1	43	NA	NA	3	230	
4	RATANGA	18	807	602	3,651	1,819	1,832	774	1,428	345	348	3	2	1	65	NA	NA	4	436	
5	POBINGIA	25	1,011	724	4,482	2,253	2,229	516	3,256	396	366	8	4	1	63	20	NA	8	279	
6	JAYESAPANGA	32	1,012	868	4,490	2,316	2,174	650	2,873	449	370	8	2	1	36	14	1	7	252	
7	DIMIRIGUDA	16	887	600	4,190	2,073	2,117	478	2,466	400	382	7	3	NA	45	5	NA	7	165	
8	LUISING	30	653	623	3,224	1,592	1,632	377	2,400	328	329	9	1	NA	46	87	1	5	191	
9	NUAPADAR	10	841	596	3,795	1,826	1,969	545	2,180	333	343	9	2	1	55	1	1	8	307	
10	TALADANDIKIA	12	665	221	3,080	1,516	1,564	297	2,394	270	279	6	3	1	25	2	NA	5	117	
11	POLABRUDI	33	768	415	3,344	1,660	1,684	675	1,917	316	345	6	1	NA	35	12	NA	4	76	
12	SADINGIA	52	953	623	4,460	2,257	2,203	526	2,759	433	377	12	1	1	53	19	NA	7	97	
13	KRANDIBALI	31	803	507	3,051	1,450	1,601	384	1,989	237	308	8	2	1	42	10	1	3	90	
14	KELAPADA	12	986	794	4,386	2,214	2,172	940	1,679	331	350	3	1	1	55	1	1	8	786	
15	SALAGUDA	21	845	631	2,881	1,405	1,476	855	1,630	251	269	10	1	NA	42	4	1	4	100	
16	GOCHHAPADA	14	989	579	3,901	2,044	1,857	829	1,897	331	311	7	3	1	36	3	1	4	77	
17	BALANDAPADA	15	997	708	4,073	1,998	2,075	1,003	2,411	406	348	12	1	1	60	5	1	5	300	
18	PAIREJU	29	604	483	2,833	1,414	1,419	532	2,102	270	298	9	3	NA	42	5	1	4	17	
19	BHRUNGIJODI	13	552	431	2,636	1,326	1,310	209	2,174	233	211	6	1	NA	23	7	NA	4	233	
20	KASINIPADAR	19	722	619	3,572	1,755	1,817	660	1,901	309	328	11	1	1	46	4	1	7	423	
21	<b>Block Total</b>	<b>431</b>	<b>16,460</b>	<b>11,510</b>	<b>74,197</b>	<b>36,977</b>	<b>37,220</b>	<b>12,224</b>	<b>41,960</b>	<b>6,473</b>	<b>6,330</b>	<b>144</b>	<b>39</b>	<b>15</b>	<b>928</b>	<b>212</b>	<b>11</b>	<b>109</b>	<b>5,261</b>	

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)						SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land	Forest land	No. of SHGs		
1	PHRINGIA	280	NA	55	35	2	7	176	265	320	NA	2,595.79	740.40	740.40	NA	44.40	1,855.39	35		
2	*DINDIRAGAM*	180	NA	30	20	NA	NA	15	30	210	NA	2,036.63	436	436	1,600.63	47.36	NA	6		
3	BANDHAGADA	280	NA	20	20	NA	NA	35	30	345	NA	NA	957.35	957.35	NA	NA	NA	23		
4	RATANGA	465	NA	35	22	1	NA	32	35	217	NA	NA	609.20	609.20	NA	NA	NA	11		
5	POBINGIA	265	NA	125	55	NA	NA	30	35	501	NA	NA	744	744	NA	NA	NA	24		
6	JAJESAPANGA	350	NA	400	30	NA	NA	12	10	110	100	NA	NA	NA	NA	NA	NA	25		
7	DIMIRIGUDA	250	NA	200	60	NA	NA	12	15	200	150	2,829.28	800.78	NA	2,028.50	NA	NA	30		
8	LUJISING	360	NA	60	22	NA	NA	20	15	176	NA	NA	NA	NA	NA	NA	NA	19		
9	NUJAPADAR	250	NA	90	45	4	NA	40	55	200	157	NA	NA	NA	NA	NA	NA	40		
10	TALADANDIKIA	300	NA	180	25	NA	NA	15	11	134	NA	2,506.40	943.59	NA	NA	NA	NA	27		
11	POLABRUDI	250	NA	110	23	NA	NA	15	8	120	242	NA	NA	NA	NA	NA	NA	21		
12	SADINGIA	170	NA	250	25	NA	NA	16	23	0	154	NA	NA	NA	NA	NA	NA	49		
13	KRANDIBALI	122	NA	35	20	NA	NA	30	12	538	46	NA	NA	NA	NA	NA	NA	40		
14	KELAPADA	112	NA	50	15	NA	NA	32	30	747	7	3,113.30	NA	NA	NA	NA	NA	16		
15	SALAGUDA	520	NA	170	14	NA	NA	13	14	20	94	NA	NA	NA	NA	NA	NA	19		
16	GOCHHAPADA	355	NA	360	35	NA	NA	50	25	164	NA	3,541.44	NA	NA	NA	NA	2,117.06	41		
17	BALANDAPADA	204	NA	563	26	1	NA	25	15	115	48	NA	NA	NA	NA	NA	NA	36		
18	PAIREJU	60	NA	289	17	NA	NA	NA	8	109	NA	NA	NA	NA	NA	NA	NA	16		
19	BHRUNGJODI	140	NA	200	60	NA	NA	35	20	50	47	2,656.95	NA	NA	NA	NA	NA	10		
20	KASINIPADAR	240	NA	150	26	NA	NA	22	12	115	24	3,465.47	NA	NA	NA	41.36	NA	33		
<b>21</b>	<b>Block Total</b>	<b>5,153</b>	<b>NA</b>	<b>3,372</b>	<b>595</b>	<b>8</b>	<b>7</b>	<b>625</b>	<b>668</b>	<b>4,391</b>	<b>1,069</b>	<b>22,745.251</b>	<b>5,231.317</b>	<b>3,486.948</b>	<b>3,629.129</b>	<b>133.119</b>	<b>3,972.451</b>	<b>521</b>		

NA - Not Available

## 2. Phulbani

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water			Health & Sanitation		
		No. of villages	No. of HHs	No. of BPL HHs	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/CHCs/HSCs	No. of AWCs	No. of HHs with Toilets	
1	DUDUKI	25	634	667	2,966	1,473	1,493	462	2,029	310	266	2	1	1	40	50	NA	4	2	
2	KEREDI	11	761	528	3,148	1,578	1,570	678	1,241	248	220	6	1	NA	35	30	NA	4	NA	
3	TUDIPAJU	16	554	490	2,872	1,521	1,351	613	1,790	204	203	12	6	NA	26	17	3	4	1,200	
4	DADAKI	17	633	540	2,862	1,517	1,345	645	1,601	280	233	7	1	1	84	37	2	4	900	
5	MINIA	23	730	576	3,107	1,534	1,573	182	2,059	268	273	6	2	1	51	35	1	6	20	
6	ALLAMI	21	700	NA	2,924	1,511	1,413	724	1,871	228	221	6	9	1	57	22	NA	5	10	
7	BISIPADA	16	819	778	3,701	1,836	1,865	871	1,505	291	294	11	2	1	67	40	1	6	NA	
8	GANJUGUDA	16	864	593	3,317	1,613	1,704	691	1,700	243	285	7	1	2	63	7	NA	6	450	
9	JAMUJHARI	23	700	730	3,051	1,505	1,546	724	1,930	324	300	7	3	1	61	15	NA	3	NA	
10	GUMAGARH	15	889	724	3,180	1,562	1,618	763	1,607	284	267	7	1	1	56	36	1	6	849	
11	KATRINGIA	33	982	1,000	3,848	1,893	1,955	533	2,480	388	377	12	2	1	66	1	1	4	800	
<b>12</b>	<b>Block Total</b>	<b>216</b>	<b>8,266</b>	<b>6,626</b>	<b>34,976</b>	<b>17,543</b>	<b>17,433</b>	<b>6,886</b>	<b>19,813</b>	<b>3,068</b>	<b>2,939</b>	<b>83</b>	<b>29</b>	<b>10</b>	<b>606</b>	<b>290</b>	<b>9</b>	<b>52</b>	<b>4,231</b>	

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)					SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land	Forest land	No. of SHGs	
1	DUDUKI	800	NA	100	NA	NA	NA	15	1	400	NA	18,06	10,28	28,34	NA	NA	NA	25	
2	KEREDI	1,500	NA	600	200	2	1	15	25	1,500	4	772	426	346	NA	NA	NA	30	
3	TUDIPAJU	1,500	12	800	25	NA	2	150	250	600	NA	1,456	664	792	NA	NA	NA	48	
4	DADAKI	800	4	650	3	2	1	210	120	350	NA	1,040	587	453	NA	NA	NA	70	
5	MINIA	1,000	10	200	NA	2	5	10	60	700	NA	2,434.17	1,491.98	942.19	NA	NA	NA	18	
6	ALLAMI	900	17	70	2	5	8	10	25	1,500	NA	968	622	346	NA	NA	NA	30	
7	BISIPADA	650	NA	300	50	2	1	45	150	500	NA	2,723.84	1,686.85	1,037	NA	NA	NA	40	
8	GANJUGUDA	1,500	10	400	21	5	4	15	22	1,000	NA	1,340	686	654	NA	NA	NA	3	
9	JAMUJHARI	500	3	300	2	3	1	7	30	250	NA	1,161	546	615	NA	NA	2	24	
10	GUMAGARH	1,500	NA	45	NA	20	NA	100	60	1,500	2	1,280	687	593	NA	NA	NA	35	
11	KATRINGIA	100	NA	300	NA	NA	NA	8	20	500	7	24,68	14,78	39,43	NA	NA	NA	34	
<b>12</b>	<b>Block Total</b>	<b>10,750</b>	<b>56</b>	<b>3,765</b>	<b>303</b>	<b>41</b>	<b>23</b>	<b>585</b>	<b>763</b>	<b>8,800</b>	<b>13</b>	<b>13,217.755</b>	<b>7,421.887</b>	<b>5845.963</b>	<b>NA</b>	<b>NA</b>	<b>2</b>	<b>357</b>	

NA- Not Available

## 3. Kotagarh

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water			Health & Sanitation		
		No. of villages	No. of HHS	No. of BPL HHS	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHS with Toilets	
1	KOTAGHAR	10	1,340	89	5,502	2,828	2,674	1,540	1,531	548	531	6	3	1	51	34	1	9	102	
2	JUDABALI	13	903	630	3,219	1,559	1,660	709	1,725	332	311	7	4	0	30	15	1	7	NA	
3	ORA	14	810	608	3,554	1,813	1,741	1,216	2,276	465	462	6	1	1	20	3	NA	6	NA	
4	GUGURMAH	13	1,242	837	2,982	1,474	1,508	451	2,462	353	390	10	3	0	30	11	NA	8	NA	
5	SRIRAMPUR	13	1,020	878	3,901	1,939	1,962	1,077	2,033	389	414	5	3	1	24	8	1	8	NA	
6	MARLONG	9	1,400	820	5,158	2,576	2,582	456	3,104	664	677	7	1	NA	11	2	NA	4	NA	
7	SUBRNAGIRI	16	1,262	1,062	5,061	2,517	2,544	727	3,010	655	568	10	5	NA	30	8	1	12	4	
8	DURGAPANGA	20	964	735	3,377	1,680	1,697	470	1,583	342	366	10	2	1	47	2	1	10	6	
9	MADAGUDA	17	962	755	3,723	1,834	1,889	327	2,350	449	476	13	1	NA	30	5	NA	9	NA	
10	PARIGADA	21	823	715	4,383	2,202	2,181	65	3,391	564	550	7	1	NA	15	3	NA	6	NA	
11	*PAKARI*	7	1,500	842	2,500	1,346	1,154	NA	NA	NA	NA	6	1	1	17	8	NA	6	NA	
12	<b>Block Total</b>	<b>144</b>	<b>12,226</b>	<b>7,971</b>	<b>43,360</b>	<b>21,768</b>	<b>21,592</b>	<b>7,038</b>	<b>23,465</b>	<b>4,761</b>	<b>4,745</b>	<b>87</b>	<b>25</b>	<b>5</b>	<b>305</b>	<b>99</b>	<b>5</b>	<b>85</b>	<b>112</b>	

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHS)										Land use Pattern (ha.)					SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land		Forest land
1	KOTAGHAR	700	NA	50	10	NA	2	200	35	343	NA	5705.31	532.94	914.68	NA	497.12	242.003	25
2	JUDABALI	855	NA	1	5	NA	NA	25	8	10	NA	NA	373.20	NA	NA	2.51	NA	34
3	ORA	321	NA	280	12	NA	NA	30	6	161	NA	2043	402.43	185.98	97.9	0.2	1,641.32	41
4	GUGURMAH	400	NA	400	NA	NA	NA	2	6	86	4	2042	492.43	339.93	67.32	1	1,549.8	16
5	SRIRAMPUR	504	NA	312	NA	NA	NA	1	203	NA	3048	676.23	326	62.54	0.8	2,372.9	20	
6	MARLONG	549	NA	28	4	NA	NA	1	2	216	NA	2701	902.45	179.4	522.49	0.22	1,713.62	22
7	SUBRNAGIRI	450	NA	104	45	NA	NA	15	3	635	NA	4398	1,152.89	416.59	401.9	21.28	3,240.86	55
8	DURGAPANGA	570	NA	345	NA	NA	9	10	30	NA	1,2864	3,555.99	2,114.56	589.86	20.61	9,035.9	31	
9	MADAGUDA	363	NA	379	5	NA	NA	12	NA	203	NA	2966	549.23	323.09	84.07	NA	2,418.65	35
10	PARIGADA	320	NA	310	4	NA	NA	1	188	NA	NA	2536	587.00	299.36	93.14	NA	1,948.32	27
11	*PAKARI*	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	187.75	97.9	0.2	NA	28
12	<b>Block Total</b>	<b>6,532</b>	<b>NA</b>	<b>2,209</b>	<b>85</b>	<b>NA</b>	<b>2</b>	<b>294</b>	<b>72</b>	<b>2,075</b>	<b>4</b>	<b>38,303.305</b>	<b>9,224.786</b>	<b>5,287.34</b>	<b>2,017.12</b>	<b>543.944</b>	<b>24,161.373</b>	<b>334</b>

NA - Not Available

#### 4. Daringbadi

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water		Health & Sanitation			
		No. of villages	No. of HHS	No. of BPL HHS	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/CHCs/HSCs	No. of AWCs	No. of HHS with Toilets	
1	BUDAGUDA	24	1,126	976	3,300	1,648	1,652	199	1,482	372	369	7	3	1	10	1	NA	4	NA	
2	SRANIKETA	20	1,189	929	4,067	1,996	2,071	419	2,720	377	373	4	3	1	1	NA	NA	8	245	
3	DANEKBADI	27	920	706	4,559	2,196	2,363	318	3,125	661	673	6	3	NA	33	2	NA	4	25	
4	KIRIKUTI	30	884	862	3,985	1,936	2,049	320	2,546	425	452	8	3	NA	6	NA	NA	6	15	
5	BADABANGA	21	852	142	3,789	1,859	1,930	228	3,231	379	385	4	4	1	7	2	NA	7	5	
6	SIMANBADI	13	726	659	3,133	1,549	1,584	236	1,550	302	313	4	2	1	13	NA	1	3	NA	
7	TILLORY	17	840	854	3,611	1,797	1,814	279	2,797	401	397	7	4	1	41	NA	NA	5	53	
8	GUMIKIA	47	660	609	3,520	1,730	1,790	12	2,785	368	356	7	2	NA	NA	NA	NA	2	NA	
9	DARINGBADI	39	1,925	1,230	8,520	4,112	4,408	1,315	4,378	835	809	12	9	4	9	NA	1	11	430	
10	*SIRKABANGA*	16	745	533	6,786	3,190	3,596	NA	NA	NA	NA	10	1	1	1	1	NA	4	NA	
11	PARTAMAHA	34	1,280	1,056	4,817	2,407	2,410	437	3,668	588	551	15	3	1	3	2	NA	6	50	
12	SONPUR	14	1,100	880	3,984	1,916	2,068	28	2,650	552	570	5	1	1	NA	NA	NA	3	NA	
13	BAMUNIGAM	15	980	880	4,928	2,467	2,461	243	880	492	439	5	4	2	1	NA	NA	7	10	
14	JHINGRIGUDA	14	945	889	3,573	1,694	1,879	235	1,788	366	380	6	3	NA	3	NA	NA	6	NA	
15	SIANGBALLI	27	959	909	4,317	2,074	2,243	586	3,161	478	493	5	3	1	15	1	NA	8	120	
16	DASINGBADI	27	811	756	4,071	2,008	2,063	877	2,393	556	527	5	2	1	14	1	1	7	10	
17	BRHMARBADI	20	731	569	3,223	1,584	1,639	586	1,947	400	420	5	2	1	6	2	NA	4	20	
18	SARAMULI	19	820	730	2,924	1,434	1,490	20	1,725	346	340	6	1	1	3	1	1	4	1	
19	HATIMUNDA	17	742	696	3,470	1,676	1,794	177	2,198	393	382	8	3	1	5	NA	NA	9	50	
20	GADAPUR	14	911	781	3,935	2,051	1,884	177	1,704	421	401	4	2	1	2	1	1	6	25	
21	TAJUNGIA	15	1,360	1,095	4,329	2,074	2,255	319	2,770	563	604	7	3	1	6	1	NA	8	20	
22	KATINGIA	18	1,200	960	4,205	2,022	2,183	58	1,500	476	466	8	3	1	3	NA	NA	5	NA	
23	KUMBHARIGAON	30	995	950	3,565	1,699	1,866	233	2,137	413	398	10	2	1	10	NA	NA	7	NA	
24	GREENBADI	37	791	609	3,705	1,921	1,784	792	2,648	449	418	5	3	1	47	4	1	7	400	
25	<b>Block Total</b>	<b>555</b>	<b>23,492</b>	<b>19,260</b>	<b>100,316</b>	<b>49,040</b>	<b>51,276</b>	<b>8,094</b>	<b>55,783</b>	<b>10,613</b>	<b>10,516</b>	<b>163</b>	<b>69</b>	<b>24</b>	<b>239</b>	<b>19</b>	<b>6</b>	<b>141</b>	<b>1,479</b>	

(Contd...)



Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)						SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land	Forest land	No. of SHGs		
1	BUDAGUDA	50	NA	NA	42	NA	30	18	986	NA	NA	NA	NA	NA	NA	NA	NA	32		
2	SRANIKETA	341	NA	NA	250	NA	NA	40	35	523	NA	NA	NA	NA	NA	100	20	20		
3	DANEKBADI	600	NA	NA	NA	NA	NA	5	15	300	NA	NA	NA	NA	NA	NA	20	20		
4	KIRIKUTI	20	NA	NA	21	NA	NA	16	16	811	NA	NA	NA	NA	NA	NA	25	25		
5	BADABANGA	215	NA	NA	3	NA	NA	10	24	600	NA	NA	NA	NA	NA	300	25	25		
6	SIMANBADI	80	NA	NA	15	NA	NA	61	22	546	NA	NA	NA	NA	NA	120	20	20		
7	TILLORY	140	NA	NA	20	NA	NA	25	12	643	NA	NA	NA	NA	NA	NA	35	35		
8	GUMIKIA	220	NA	NA	2	NA	NA	6	10	416	NA	NA	NA	NA	NA	60	15	15		
9	DARINGBADI	80	NA	0.8	2	NA	NA	18	2	NA	NA	NA	NA	NA	NA	NA	25	25		
10	*SIRKABANGA*	319	NA	NA	12	NA	NA	11	21	384	NA	NA	NA	NA	NA	100	27	27		
11	PARTAMAHA	782	NA	NA	11	NA	NA	7	17	391	NA	NA	NA	NA	NA	20	20	20		
12	SONPUR	587	NA	NA	NA	NA	NA	2	11	500	NA	NA	NA	NA	NA	NA	13	13		
13	BAMUNIGAM	280	NA	NA	120	NA	NA	100	80	400	NA	NA	NA	NA	NA	NA	35	35		
14	JHINGIRIGUDA	235	NA	NA	NA	NA	NA	NA	10	700	NA	NA	NA	NA	NA	50	22	22		
15	SIANGBALLI	328	NA	NA	17	NA	NA	15	25	574	NA	NA	NA	NA	NA	NA	40	40		
16	DASINGBADI	289	NA	NA	16	NA	NA	52	110	344	NA	NA	NA	NA	NA	20	22	22		
17	BRHMARBADI	1,382	NA	NA	6	NA	NA	23	25	400	NA	NA	NA	NA	NA	15	19	19		
18	SARAMULI	300	NA	NA	10	NA	NA	12	30	468	NA	NA	NA	NA	NA	60	11	11		
19	HATIMUNDA	340	NA	NA	8	NA	NA	30	20	344	NA	NA	NA	NA	NA	50	17	17		
20	GADAPUR	35	NA	NA	20	NA	NA	22	27	797	NA	NA	NA	NA	NA	15	22	22		
21	TAJUNGIA	813	NA	NA	7	NA	NA	10	60	470	NA	NA	NA	NA	NA	10	18	18		
22	KATINGIA	200	NA	NA	13	NA	NA	10	300	677	NA	NA	NA	NA	NA	50	20	20		
23	KUMBHARIGAON	300	NA	NA	20	NA	NA	25	20	620	NA	NA	NA	NA	NA	300	10	10		
24	GREENBADI	215	NA	NA	100	NA	NA	10	50	416	NA	NA	NA	NA	NA	50	18	18		
<b>25</b>	<b>Block Total</b>	<b>8,151</b>	<b>NA</b>	<b>0.8</b>	<b>715</b>	<b>NA</b>	<b>32</b>	<b>528</b>	<b>1,928</b>	<b>11,324</b>	<b>NA</b>	<b>670</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>1,320</b>	<b>531</b>	<b>531</b>		

NA - Not Available

## 5. Chakapada

Sl. No.	Name of GP	General Profile			Demographic Profile							Education				Provision for Safe Drinking Water			Health & Sanitation		
		No. of villages	No. of HHs	No. of BPL HHs	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHs with Toilets		
1	BAPALMENDI(B)	8	811	558	2,670	1,283	1,387	907	1,144	212	226	6	2	1	70	40	NA	5	5		
2	SANKARKHOLE	24	1,383	914	8,000	3,919	4,081	1,279	4,236	649	573	13	4	2	105	24	1	10	30		
3	BAPALMENDI(L)	9	938	770	3,466	1,753	1,713	1,388	1,667	317	284	10	2	1	40	2	NA	5	NA		
4	KUSUMENDI	17	1,061	990	4,930	2,450	2,480	1,863	1,795	385	374	17	4	1	72	2	1	7	500		
5	*ARABAKA*	12	800	632	2,667	1,137	1,530	NA	NA	NA	NA	13	1	1	60	20	NA	4	100		
6	CHAKAPADA	8	1,079	602	8,754	4,502	4,252	1,918	3,897	690	632	8	4	2	60	7	NA	8	100		
7	CHAHALI	31	1,275	835	3,425	1,732	1,693	544	2,435	306	308	11	6	1	45	4	1	7	NA		
8	APASARA	13	1,14	936	4,314	2,115	2,199	686	2,310	380	351	10	4	1	39	5	1	6	25		
9	*KAKHARUJHOLE*	12	614	584	3,158	1,570	1,588	NA	NA	NA	NA	13	5	1	40	81	1	8	NA		
10	BRAHMANPAD	10	1,587	984	5,886	2,974	2,912	1,750	2,281	483	497	8	2	1	40	6	1	12	NA		
<b>11</b>	<b>Block Total</b>	<b>97</b>	<b>9,662</b>	<b>7,805</b>	<b>47,270</b>	<b>23,435</b>	<b>23,835</b>	<b>10,335</b>	<b>19,765</b>	<b>3,422</b>	<b>3,245</b>	<b>109</b>	<b>34</b>	<b>12</b>	<b>571</b>	<b>191</b>	<b>6</b>	<b>72</b>	<b>760</b>		

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)					SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land	Forest land	No. of SHGs	
1	BAPALMENDI(B)	1,010	NA	30	90	NA	NA	250	21	1,450	150	1,123	273.4	208.1	179.8	56.2	935.8	24	
2	SANKARKHOLE	2,088	NA	57	111	NA	NA	121	98	2,631	116	2,078	422.29	300.24	379.6	96.7	1038.5	28	
3	BAPALMENDI(L)	1,577	NA	48	75	NA	NA	87	80	1,946	79	1,059	341.6	231.4	281.3	79.23	612.2	20	
4	KUSUMENDI	424	NA	NA	22	NA	NA	10	27	530	44	1,278	542.2	498.3	177.1	146.3	977	28	
5	*ARABAKA*	1,066	NA	34	52	NA	NA	46	55	1,360	54	1,226	288.13	211.4	189.7	58.3	623.4	30	
6	CHAKAPADA	343	NA	38	32	12	NA	65	52	505	33	932	466.8	378.2	198.3	123.1	1479	30	
7	CHAHALI	510	NA	31	20	8	NA	25	12	637	32	927	344.3	231.5	112.2	162.4	1451.2	35	
8	APASARA	445	NA	17	15	3	NA	20	18	557	39	973	368.5	322.3	232.1	92.3	1387	25	
9	*KAKHARUJHOLE*	215	NA	19	12	2	NA	12	10	307	37	721	307.3	212.1	189.3	84.6	1538	22	
10	BRAHMANPAD	2,454	10	135	53	2	NA	45	63	3043	81	1,008	2043	178.6	146.5	64.3	1238.5	34	
<b>11</b>	<b>Block Total</b>	<b>10,132</b>	<b>10</b>	<b>409</b>	<b>482</b>	<b>31</b>	<b>NA</b>	<b>681</b>	<b>436</b>	<b>12,966</b>	<b>665</b>	<b>11,325</b>	<b>5397.52</b>	<b>2772.14</b>	<b>2085.9</b>	<b>963.43</b>	<b>11280.6</b>	<b>276</b>	

NA-Not Available

## 6. Tumdibandha

Sl. No.	Name of GP	General Profile			Demographic Profile						Education			Provision for Safe Drinking Water			Health & Sanitation		
		No. of villages	No. of HHs	No. of BPL HHs	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHs with Toilets
1	TUMDIBANDHA	18	1,567	1,181	7,432	3,670	3,762	1,708	1,966	719	755	9	3	1	62	16	1	12	337
2	*BILAMAL*	19	902	433	2,458	1,196	1,262	NA	NA	NA	NA	5	2	NA	28	3	1	3	NA
3	JHIRIPANI	36	1,209	802	3,463	1,679	1,784	970	2,243	394	394	9	3	NA	15	NA	1	6	NA
4	SIRLA	10	683	486	2,786	1,375	1,411	100	2,202	334	334	4	3	NA	20	5	NA	4	NA
5	BELGAHR	17	933	468	5,619	2,802	2,817	1,754	3,086	551	540	7	1	1	32	15	1	5	15
6	LANKAGADA	38	1,800	735	4,014	1,920	2,094	493	2,874	424	433	11	3	NA	97	4	NA	8	NA
7	GUMMA	26	1,025	914	3,742	1,854	1,888	984	2,287	317	327	11	3	1	5	3	NA	6	NA
8	MUNDIGADA	21	1,326	1,000	5,350	2,655	2,695	997	3,687	555	504	12	4	1	125	NA	NA	9	561
9	KUTAMGADA	27	1,058	925	5,655	2,848	2,807	632	3,315	668	638	10	3	1	45	30	1	14	NA
<b>10</b>	<b>Block Total</b>	<b>212</b>	<b>10,503</b>	<b>6,944</b>	<b>40,519</b>	<b>19,999</b>	<b>17,713</b>	<b>7,638</b>	<b>21,660</b>	<b>3,998</b>	<b>3,871</b>	<b>78</b>	<b>25</b>	<b>5</b>	<b>429</b>	<b>76</b>	<b>5</b>	<b>67</b>	<b>913</b>

(Contd.,)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)					SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Uncultivated Land	Irrigated land	Forest land		No. of SHGs
1	TUMDIBANDHA	32	67	4	21	91	143	938	55	NA	NA	NA	NA	NA	NA	NA	NA	4	115
2	*BILAMAL*	376	7	NA	NA	11	10	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	298	35
3	JHIRIPANI	328	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	717.46	31
4	SIRLA	205	NA	358	1	NA	NA	9	5	105	2,527	1427.57	422.64	548.39	NA	1103.9	23	23	
5	BELGAHR	205	NA	350	16	NA	NA	30	32	300	8,524	5650.67	1845.55	2253.59	NA	2730.72	28	28	
6	LANKAGADA	535	NA	717	4	NA	NA	2	6	536	1,466	1019.03	497.02	292.01	NA	447	11	11	
7	GUMMA	420	NA	390	NA	NA	NA	5	210	NA	1,741	1352.81	385.4	542.97	NA	337.55	25	25	
8	MUNDIGADA	600	NA	70	28	NA	NA	15	23	590	3,490	2743.47	1091.36	776.67	NA	747.66	33	33	
9	KUTAMGADA	421	NA	255	7	NA	NA	10	6	359	3,958	2860.07	790.96	377.35	26	1097	45	45	
<b>10</b>	<b>Block Total</b>	<b>3,122</b>	<b>74</b>	<b>2,144</b>	<b>77</b>	<b>102</b>	<b>153</b>	<b>1204</b>	<b>132</b>	<b>2,100</b>	<b>21,706</b>	<b>15053.62</b>	<b>5032.93</b>	<b>4790.98</b>	<b>26</b>	<b>7483.29</b>	<b>346</b>	<b>346</b>	

NA- Not Available

### 8. G. Udayagiri

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water		Health & Sanitation		
		No. of villages	No. of HHs	No. of BPL HHs	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHs with Toilets
1	KATINGIA	7	1,200	630	4,977	2,425	2,552	829	2,906	423	425	13	2	1	27	NA	NA	12	NA
2	RATINGIA	10	1,050	400	3,519	1,723	1,796	659	2,152	256	232	7	3	1	33	NA	NA	7	20
3	LINGAGADA	8	812	461	3,104	1,553	1,551	258	2,319	224	190	7	2	1	25	NA	1	7	175
4	MALLIKAPODI	13	1,500	723	4,948	2,392	2,556	149	3,156	335	297	14	3	1	100	NA	NA	10	200
5	GRESINGIA	10	775	505	3,303	1,631	1,672	340	2,439	263	233	7	2	2	45	NA	1	9	150
6	TALERIMIHA	14	1,200	576	2,744	1,376	1,368	366	2,081	220	228	8	2	1	52	NA	1	4	800
7	RAIKALA	10	950	538	3,093	1,434	1,659	305	2,211	230	270	6	2	1	40	NA	1	7	50
8	KALINGA	8	2,000	650	4,943	2,429	2,514	805	2,688	336	361	6	3	1	3	NA	NA	8	5
<b>9</b>	<b>Block Total</b>	<b>62</b>	<b>9,487</b>	<b>4,483</b>	<b>30,631</b>	<b>14,963</b>	<b>15,668</b>	<b>3,711</b>	<b>19,952</b>	<b>2,287</b>	<b>2,236</b>	<b>68</b>	<b>19</b>	<b>9</b>	<b>325</b>	<b>NA</b>	<b>4</b>	<b>64</b>	<b>1,400</b>

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)										Land use Pattern (ha.)					SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land	Forest land	No. of SHGs
1	KATINGIA	300	NA	100	4	NA	NA	150	75	500	70	5,000	3,500	1,500	2,000	NA	500	11
2	RATINGIA	500	NA	300	NA	NA	NA	26	50	100	74	900	650	500	150	NA	30	27
3	LINGAGADA	200	NA	200	70	NA	NA	30	150	162	NA	1,500	1,000	600	400	500	1,200	30
4	MALLIKAPODI	400	NA	50	20	NA	NA	15	250	685	80	10,000	6,250	3,750	2,500	1,500	400	46
5	GRESINGIA	80	NA	50	6	NA	NA	10	40	439	150	500	300	180	120	NA	150	45
6	TALERIMIHA	350	NA	125	5	NA	NA	5	630	70	70	1,250	750	700	50	NA	125	30
7	RAIKALA	100	NA	60	100	NA	NA	20	70	500	100	12,500	7,500	6,000	1,500	NA	15,000	16
8	KALINGA	400	NA	400	3	NA	NA	22	50	1,000	125	834	218	114	502.37	62.50	60	42
<b>9</b>	<b>Block Total</b>	<b>2,330</b>	<b>NA</b>	<b>1,285</b>	<b>208</b>	<b>NA</b>	<b>NA</b>	<b>278</b>	<b>690</b>	<b>4,016</b>	<b>669</b>	<b>32,484</b>	<b>20,168</b>	<b>13,344</b>	<b>7222.372</b>	<b>2062.5</b>	<b>17,465</b>	<b>247</b>

NA-Not Available

## 9. Tikabali

Sl. No.	Name of GP	General Profile			Demographic Profile								Education			Provision for Safe Drinking Water			Health & Sanitation		
		No. of Villages	No. of HHS	No. of BPL HHS	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/CHCs	No. of AWCs	No. of HHS with Toilets		
1	KATIMAH	10	2,000	750	3,523	1,776	1,747	737	2,279	287	273	8	2	NA	65	1	1	5	NA		
2	BEHERAGAON	16	1,500	856	4,201	2,122	2,079	864	2,466	381	320	11	2	NA	140	6	1	9	10		
3	TIKABALI	14	4,000	580	6,738	3,453	3,285	1,798	1,155	483	434	6	5	2	81	NA	NA	11	300		
4	PIKARADI	15	3,000	469	3,396	1,636	1,760	291	2,719	307	291	7	2	1	45	11	NA	10	200		
5	GADAGUDA	7	1,400	625	3,421	1,646	1,775	480	2,044	285	231	5	4	1	62	NA	NA	8	NA		
6	BADIMUNDA	4	650	356	2,491	1,207	1,284	500	1,515	234	216	2	2	1	140	17	1	5	300		
7	KAINJHAR	30	1,500	1,196	5,235	2,631	2,604	1,120	2,541	475	430	17	3	1	80	25	1	12	40		
8	GUTINGIA	15	5,000	772	6,683	3,252	3,431	1,659	3,836	581	568	5	3	1	60	NA	2	9	110		
9	*PADANG*	4	1,050	200	3,000	1,470	1,530	NA	NA	NA	NA	3	1	1	25	NA	NA	4	NA		
10	GARDINGIA	9	530	204	2,487	1,198	1,289	477	1,720	249	247	5	4	1	15	20	1	6	NA		
11	PABURIA	12	1,163	561	4,418	2,169	2,249	1,313	2,536	399	344	5	2	1	73	15	1	9	400		
12	BURBINAJU	7	992	706	4,095	1,950	2,145	576	2,724	355	356	7	4	2	10	NA	NA	11	10		
<b>13</b>	<b>Block Total</b>	<b>119</b>	<b>22,785</b>	<b>7,275</b>	<b>49,688</b>	<b>24,510</b>	<b>25,178</b>	<b>9,815</b>	<b>25,535</b>	<b>4,036</b>	<b>3,710</b>	<b>81</b>	<b>34</b>	<b>12</b>	<b>796</b>	<b>95</b>	<b>8</b>	<b>99</b>	<b>1,370</b>		

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)						SHGs
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unused Land	Irrigated land	Forest land	No. of SHGs	
1	KATIMAH	2,000	NA	NA	NA	NA	NA	NA	2,000	NA	NA	NA	1,165	560	NA	NA	1,200	12	
2	BEHERAGAON	370	NA	NA	15	NA	NA	14	22	1,026	53	1,438	596	771	NA	1,436	15		
3	TIKABALI	3,000	NA	NA	NA	NA	1000	NA	3,000	NA	NA	1,133	425	354	NA	NA	45		
4	PIKARADI	1,500	NA	NA	NA	NA	NA	80	1,500	NA	NA	1,332	546	13	NA	NA	20		
5	GADAGUDA	150	NA	NA	NA	NA	50	50	1,100	50	NA	932	330	NA	NA	NA	17		
6	BADIMUNDA	300	NA	NA	NA	NA	15	NA	300	NA	NA	759	330	NA	NA	NA	11		
7	KAINJHAR	500	NA	NA	NA	30	NA	50	800	NA	NA	1,612	725	100	20	1,600	22		
8	GUTINGIA	3,250	NA	500	66	NA	100	100	850	140	24,000	8,000	6,500	1,500	400	600	150		
9	*PADANG*	35	NA	20	30	NA	20	23	862	50	8,750	4,400	4,000	400	NA	2,900	18		
10	GARDINGIA	300	NA	48	5	NA	7	25	1,050	NA	1,050	1,000	800	200	400	700	6		
11	PABURIA	300	3	NA	50	NA	100	100	600	NA	2,000	1,800	1,500	300	500	300	51		
12	BURBINAJU	400	NA	150	50	NA	20	50	222	NA	300	200	150	50	200	200	15		
<b>13</b>	<b>Block Total</b>	<b>12,105</b>	<b>3</b>	<b>718</b>	<b>216</b>	<b>30</b>	<b>17</b>	<b>1,434</b>	<b>500</b>	<b>12,360</b>	<b>293</b>	<b>40,003</b>	<b>22,014</b>	<b>16,471</b>	<b>3,688</b>	<b>1,370</b>	<b>8,936</b>	<b>382</b>	

NA- Not Available

## 10. Raikia

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water			Health & Sanitation		
		No. of villages	No. of HHs	No. of BPL HHs	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs	No. of AWCs	No. of HHs with Toilets	
1	GUMAMAHA	21	1,250	1,193	5,748	2,907	2,841	674	3,362	490	458	14	4	1	75	50	1	10	NA	
2	RANABA	32	1,100	581	3,734	1,871	1,863	722	1,112	350	337	9	5	NA	36	12	NA	6	NA	
3	DODINGIA	5	553	336	2,015	990	1,025	51	1,685	168	153	2	1	NA	27	5	NA	5	25	
4	KARADA	20	900	932	3,079	1,586	1,493	673	1,432	249	232	3	1	NA	28	10	NA	5	NA	
5	PETAPANGA	25	975	950	4,443	2,260	2,183	363	3,340	335	361	12	3	NA	50	5	NA	9	NA	
6	MANDAKIA	10	1,317	853	5,391	2,684	2,707	351	4,067	409	426	9	2	1	54	9	NA	9	NA	
7	RAIKIA	5	2,174	989	9,899	4,739	5,160	927	3,989	749	734	10	5	4	60	20	2	11	1,500	
8	INDRAGADA	22	750	91	4,182	2,125	2,057	946	1,667	389	401	2	1	NA	22	10	1	6	NA	
9	SUGUDABADI	8	1,280	1,318	4,429	2,165	2,264	735	2,273	358	341	3	2	2	1,813	NA	NA	NA	35	
10	MANIKESWARI	18	1,365	695	5,170	2,513	2,657	1,283	3,070	454	443	15	3	1	80	15	NA	9	NA	
<b>11</b>	<b>Block Total</b>	<b>153</b>	<b>11,664</b>	<b>7,938</b>	<b>48,090</b>	<b>23,840</b>	<b>24,250</b>	<b>6,725</b>	<b>25,997</b>	<b>3,951</b>	<b>3,886</b>	<b>79</b>	<b>27</b>	<b>9</b>	<b>2,245</b>	<b>136</b>	<b>4</b>	<b>70</b>	<b>1,560</b>	

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)											Land use Pattern (ha.)					SHGs
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Uncultivated Land	Irrigated land	Forest land	
1	GUMAMAHA	300	NA	1,000	5	NA	NA	100	50	3,545	20	3,985.32	408.34	615.48	NA	317.31	185.00	10
2	RANABA	1,092	NA	9	NA	NA	NA	8	1,092	NA	NA	4,625.22	635.75	928.78	NA	514.12	325.00	15
3	DODINGIA	300	NA	NA	9	NA	NA	50	175	42	3,807.14	515.17	838.72	NA	530.21	182.01	28	
4	KARADA	60	NA	4	NA	NA	25	8	4,908	7	3,815.32	482.45	720.33	NA	224.22	210.00	9	
5	PETAPANGA	30	NA	NA	NA	NA	NA	5	65	NA	4,915.41	820.39	975.78	NA	388.77	217.01	NA	
6	MANDAKIA	400	NA	NA	12	NA	10	145	85	8	4,000.12	378.48	829.57	NA	315.21	199.01	56	
7	RAIKIA	1,625	4	3	12	NA	1,280	2,400	3,000	102	6,780.22	675.39	719.63	NA	595.22	232.01	52	
8	INDRAGADA	3,735	NA	NA	NA	NA	15	3,736	118	4,010.20	528.73	867.17	NA	615.88	200.01	NA	NA	
9	SUGUDABADI	1,054	NA	1	3	NA	870	732	1,610	7	4,375.12	580.2	692.54	NA	520.13	175.01	26	
10	MANIKESWARI	975	NA	NA	NA	NA	12	54	487	NA	4,822.12	558.74	738.72	NA	343.21	128.01	5	
<b>11</b>	<b>Block Total</b>	<b>9,571</b>	<b>4</b>	<b>1,017</b>	<b>29</b>	<b>NA</b>	<b>1</b>	<b>2,297</b>	<b>3,467</b>	<b>18,703</b>	<b>304</b>	<b>45,136.171</b>	<b>5,583.64</b>	<b>7,926.72</b>	<b>NA</b>	<b>4,364.274</b>	<b>2,053.062</b>	<b>201</b>

NA-Not Available

## 11. K. Nuagaon

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water		Health & Sanitation		
		No. of villages	No. of HHS	No. of BPL HHS	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHS with Toilets
1	GANDIRGAON	8	617	NA	2,742	1,419	1,323	423	1,939	238	205	8	2	1	21	NA	1	5	5
2	BALIGADA	5	587	297	2,471	1,190	1,281	137	1,811	275	291	3	2	1	10	6	1	6	1
3	SIRTIGUDA	18	1,617	1,220	6,070	2,959	3,111	313	3,467	611	591	17	3	1	31	NA	1	12	183
4	CHANCHEDI	8	754	475	3,103	1,566	1,537	219	2,322	265	205	7	3	1	61	NA	1	6	28
5	KANJAMENDI	7	1,237	514	5,349	2,739	2,610	849	2,223	429	430	7	7	2	79	NA	NA	7	70
6	KUDUTELI	27	1,033	615	3,969	1,963	2,006	392	1,748	374	368	8	2	1	43	NA	1	7	69
7	MAHASINGI	33	1,600	1,170	6,226	3,079	3,147	810	1,561	552	556	14	4	1	40	32	NA	7	50
8	SAINPADA	11	427	NA	2,905	1,401	1,504	348	1,630	276	289	6	3	1	11	NA	NA	5	7
9	BANDAGUDA	24	1,700	930	5,054	2,487	2,567	645	3,483	474	490	13	3	1	24	NA	1	10	40
10	SARANGADA	9	1,500	986	5,831	2,858	2,973	569	2,200	373	415	8	2	2	20	NA	1	8	200
11	GUNJIBADI	23	1,016	615	3,682	1,829	1,853	269	1,896	334	342	14	12	1	20	NA	NA	8	NA
<b>12</b>	<b>Block Total</b>	<b>140</b>	<b>12,088</b>	<b>6,822</b>	<b>47,402</b>	<b>23,490</b>	<b>23,912</b>	<b>4,974</b>	<b>24,280</b>	<b>4,201</b>	<b>4,182</b>	<b>105</b>	<b>43</b>	<b>13</b>	<b>360</b>	<b>38</b>	<b>7</b>	<b>81</b>	<b>653</b>

(Contd...)

Sl. No.	Name of GP	Sources of Livelihood (No. of HHS)											Land use Pattern (ha.)					SHGs
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Unutilized Land	Irrigated land	Forest land	
1	GANDIRGAON	183	NA	180	18	NA	NA	31	41	164	NA	838	776	349	NA	842	28	
2	BALIGADA	83	NA	320	6	NA	NA	NA	21	125	32	642	334	225	NA	1,143	11	
3	SIRTIGUDA	404	3	646	50	NA	32	41	541	541	NA	1,237	716	395	200	437	63	
4	CHANCHEDI	181	NA	218	26	NA	15	18	206	90	976	727	619	249	NA	632	11	
5	KANJAMENDI	240	NA	420	115	1	NA	83	24	24	354	1,612.24	798	NA	NA	833	25	
6	KUDUTELI	173	NA	218	38	NA	40	45	519	NA	1,438	998.33	713.22	439.07	37.2	237	73	
7	MAHASINGI	500	10	300	50	1	5	35	684	NA	3,000	1,000	800	200	190	1,000	25	
8	SAINPADA	83	NA	121	7	NA	16	11	189	NA	723	384	216	339	NA	112	12	
9	BANDAGUDA	500	NA	400	NA	NA	35	61	704	NA	1,013.34	921.39	830.1	91.29	NA	30	32	
10	SARANGADA	200	NA	200	1	NA	100	102	897	NA	850	812	520	292	38	400	50	
11	GUNJIBADI	223	NA	203	25	NA	22	13	530	NA	1,073	845	702	228	50	1,113	25	
<b>12</b>	<b>Block Total</b>	<b>2,770</b>	<b>13</b>	<b>3,226</b>	<b>336</b>	<b>2</b>	<b>5</b>	<b>412</b>	<b>4583</b>	<b>476</b>	<b>13,751.58</b>	<b>8,770.724</b>	<b>7,024.316</b>	<b>2,807.36</b>	<b>515.2</b>	<b>6,779</b>	<b>355</b>	

NA- Not Available

## 12. Baliguda

Sl. No.	Name of GP	General Profile			Demographic Profile							Education			Provision for Safe Drinking Water		Health & Sanitation		
		No. of villages	No. of HHS	No. of BPL HHS	Total Population	Population Male	Population Female	Total Population SC	Total Population ST	Population Male 0-6 years	Population Female 0-6 years	No. of Primary Schools	No. of Upper Primary Schools	No. of Secondary Schools	No. of Tube Wells	No. of Sanitary Wells	No. of PHCs/ CHCs/ HSCs	No. of AWCs	No. of HHS with Toilets
1	BARAKHAMA	8	940	624	7,245	3,548	3,697	882	2,811	696	746	6	1	1	25	4	1	7	165
2	PARAMPANGA	25	751	800	3,975	1,939	2,036	134	2,727	438	464	8	2	NA	34	NA	NA	8	NA
3	RUTUNGIA	13	600	549	3,313	1,652	1,661	273	2,417	296	322	11	1	1	9	1	NA	NA	NA
4	BATAGUDA	12	3,015	435	6,388	3,224	3,164	625	3,477	698	618	10	1	1	27	NA	NA	8	NA
5	BALIGUDA	14	1,100	4,045	16,817	8,729	8,088	3,414	2,109	1,256	1,228	16	5	7	48	62	1	19	2800
6	SALAGUDA	14	750	600	2,932	1,446	1,486	295	1,906	268	272	7	2	1	42	NA	NA	7	350
7	*REDINGIA*	18	850	832	3,100	1,650	1,450	NA	NA	NA	NA	4	1	1	4	1	NA	5	175
8	KHAMANKHOLE	27	798	676	4,033	1,993	2,040	614	1,685	407	408	11	2	NA	28	NA	NA	8	NA
9	SUDRA	24	1,050	1,000	5,464	2,741	2,723	594	3,777	589	591	12	3	1	75	2	NA	12	100
10	*MEDI/AKIA*	14	727	585	2,771	1,700	1,071	NA	NA	NA	NA	4	1	1	35	NA	NA	3	NA
11	KUTIKIA	12	800	700	2,898	1,491	1,407	144	2,072	318	298	7	NA	1	32	1	NA	4	NA
12	BUDRUKIA	16	800	900	3,455	1,599	1,856	329	2,359	339	350	10	1	1	50	NA	NA	9	5
13	LANDAGAM	11	1,100	900	3,100	1,520	1,580	643	793	289	277	9	2	1	22	NA	NA	7	100
14	SINDRIGAM	13	1,450	838	3,950	1,952	1,998	447	2,640	418	395	10	3	1	26	17	NA	10	4
15	Block Total	221	14,731	13,484	69,441	35,184	34,257	8,394	28,773	6,012	5,969	125	25	18	457	88	2	107	3,699
16	<b>District Total</b>	<b>2,593</b>	<b>163,145</b>	<b>107,422</b>	<b>632,645</b>	<b>314,260</b>	<b>315,578</b>	<b>100,362</b>	<b>330,537</b>	<b>56,697</b>	<b>55,206</b>	<b>1,191</b>	<b>450</b>	<b>143</b>	<b>7,899</b>	<b>1,518</b>	<b>68</b>	<b>1,029</b>	<b>23,104</b>

(Contd...)



Sl. No.	Name of GP	Sources of Livelihood (No. of HHs)										Land use Pattern (ha.)						SHGs	
		Agriculture	Fishery	Forestry	Artisanship	Poultry	Dairy	Business	Services	Daily Wages	Others	Total Land	Cultivable Land	Cultivated Land	Uncultivated Land	Irrigated land	Forest land	No. of SHGs	
1	BARAKHAMA	315	NA	NA	NA	NA	NA	15	20	750	NA	NA	4,002.31	515.46	610.67	NA	458.78	203.01	20
2	PARAMPANGA	100	NA	NA	NA	NA	NA	25	12	800	5	NA	4,098.41	511.34	620.68	NA	497.24	202.00	15
3	RUTUNGIA	85	NA	1	NA	NA	NA	15	28	152	7	NA	407.11	515.68	664.72	NA	622.15	192.01	6
4	BATAGUDA	800	NA	NA	NA	NA	NA	NA	20	500	10	NA	4,200.30	508.47	717.53	NA	789.12	185.01	10
5	BALIGUDA	1,705	7	1	NA	NA	NA	239	1,230	1,315	NA	NA	7,608.21	835.56	1,044.65	NA	715.13	258.00	108
6	SALAGUDA	90	NA	NA	NA	NA	NA	NA	10	650	15	NA	4,880.23	535.92	716.27	NA	498.22	205.00	20
7	*REDINGIA*	93	NA	NA	NA	NA	NA	NA	7	750	NA	NA	3,533.20	514.55	712.75	NA	378.13	198.01	30
8	KHAMANKHOLE	78	NA	NA	NA	NA	NA	NA	20	700	60	NA	3,840.11	433.58	619.72	NA	458.21	186.00	12
9	SUDRA	135	NA	NA	NA	NA	NA	NA	15	900	22	NA	5,008.21	635.52	820.21	NA	498.11	218.01	30
10	*MEDIKAKIA*	117	NA	NA	NA	NA	NA	NA	10	600	12	NA	5,002.11	603.92	815.72	NA	495.22	193.00	23
11	KUTKIA	348	NA	NA	NA	NA	NA	NA	2	480	125	NA	3,932.30	435.93	620.54	NA	410.12	182.00	32
12	BUDRUKIA	450	NA	NA	NA	NA	NA	NA	15	335	NA	NA	4,518.11	502.53	705.04	NA	385.20	233.01	25
13	LANDAGAM	95	NA	NA	7	NA	NA	24	5	900	NA	NA	4,454.31	622.65	715.13	NA	324.22	182.00	25
14	SINDRIGAM	750	NA	NA	2	NA	NA	45	19	1,115	10	NA	4,110.22	575.35	650.18	NA	425.22	185.01	35
15	Block Total	5,161	7	2	13	NA	NA	363	1,413	9,947	266	NA	59,595.149	7,746.46	10,033.81	NA	6,955.048	2,822.066	391
16	District Total	87988	174	23698.8	3514	234	320	8871	11,331	10,3220	4,324	NA	305,252.211	116,565.004	8,3661.547	29,256.698	17,766.2725	86,274.842	4,304

NA- Not Available

Source: No of Village & BPL HH from GP  
No.House Hold From Census of India 2001  
Demographic profile from Census of India 2001  
Education From from Bolck Resource coordinators/Cluster coordinators  
Provision for Safe Drinking Water from GP Office/Bolck Resource coordinators/Cluster coordinators  
Health Sanitation from GP Office/Bolck Resource coordinators/Cluster coordinators  
Forest Resource, Land use Pattern From GP Office/Bolck Resource coordinators/Cluster coordinators  
Source of Livelihood Pattern from GP Office/Bolck Resource coordinators/Cluster coordinators  
Land use Pattern from GP Office/Bolck Resource coordinators/Cluster coordinators  
\*\*All Datas of New GP are from GP Office/Bolck Resource coordinators/Cluster coordinators\*\*





