

PAHELI

People's Audit of
Health, Education and Livelihood

Survey Report of Odisha



Planning and Coordination Department
Government of Odisha



Planning Commission
Government of India



*Empowered lives.
Resilient nations.*

PAHELI



Planning and Coordination Department
Government of Odisha



Planning Commission
Government of India



*Empowered lives.
Resilient nations.*

© 2012

Government of Odisha

Bhubaneswar

Published by :

Planning and Coordination Department

Government of Odisha

DISCLAIMER:

“People’s Audit of Health, Education & Livelihood” (PAHELI) report is completely based on the survey conducted by the people. It is a reflection of their views, expressions and perceptions about health, education and livelihood. The survey has been undertaken with the support from United Nations Development Programme (UNDP). The findings of the survey and views expressed herein do not necessarily reflect the views of the Government of Odisha or UNDP.

Copy editing, design, layout 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. 1306

BHUBANESWAR

Dated 3/7/12

Message

I am glad that Poverty & Human Development Monitoring Agency under Planning & Co-ordination Department has brought out the first PAHELI report for all the 30 districts of Odisha. PAHELI stands for People's Audit of Health, Education and Livelihoods and captures the voice of the people about the impact of health, education and livelihood programmes in the State. The report is an independent assessment of different development programmes based on people's perceptions about human development indicators, which have been gathered by civil society organizations in all the 30 districts.

It is hoped that this report will serve as a benchmark for future assessments of development outcomes from time to time. This report will also help evolve appropriate development strategies that ensure effective and efficient use of available resources to improve the quality of life of our people.

I would like to thank the UNDP, the Planning Commission and the Government of India for their assistance and support for the preparation of this report. I sincerely hope that this will be useful to policy makers, academics and general public.

(NAVEEN PATNAIK)

Message from Minister, Tourism & Culture, Planning & Co-ordination Department

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



Message

PAHELI is an acronym for People's Audit of Health, Education and Livelihood and the report is an outcome of the bold initiative of the Government of Odisha in 2009-10 to hear the voice of the people about the impact of health, education and livelihood programmes implemented in the State. The report is based on the people's perceptions about human development indicators, which were gathered by civil society organizations with lead support from Human Development Foundation (HDF) and PRATHAM in all 30 districts through carefully designed survey formats that were easily understood by the people. Whereas the report has highlighted several achievements of the State Government, it has also brought out development gaps and deficiencies in implementation of various development programmes.

The survey covered 17,868 households and 60,727 persons were interviewed across the State. It gives me great pleasure to acknowledge the massive efforts made by Poverty & Human Development Agency, Planning & Co-ordination Department and several civil society organizations in preparing the first PAHELI report for all 30 districts of Odisha. It is hoped that this report will serve as a benchmark for future attainments and also help evolve appropriate development strategies that ensure increased well-being of the people.

I hope the PAHELI report will be well received by different stakeholders and decentralized planning process will be suitably reoriented to effectively address the development challenges and meet the reasonable expectations of the people. I also take this opportunity to thank UNDP and Planning Commission, Government of India for their support and assistance.

A handwritten signature in black ink, appearing to be 'Maheswar Mohanty'.

(MAHESWAR MOHANTY)

Message from Chief Secretary

B.K Patnaik

Chief Secretary & Chief Development Commissioner



Message

I am glad that Poverty & Human Development Monitoring Agency, Planning & Coordination Department has prepared the People's Audit of Health, Education & Livelihood's Report (PAHELI) for Odisha. The report is based on the perceptions of the people about the impact of health, education, and livelihood programmes implemented in the State. These human development indicators are closely linked to Millennium Development Goals (MGDs).

Odisha has become the first State to bring out PAHELI report with active support and assistance from UNDP and Planning Commission, Government of India. The report is a validation by the people of the sincere efforts made by the State to accelerate the socio-economic development process and human development indicators. The State has in recent years made significant achievements with regard to poverty reduction, literacy levels, educational infrastructure, healthcare, healthcare infrastructure, nutrition and drinking water supply. Several development gaps and deficiencies in programme implementation have also been brought out.

This PAHELI report, which is the outcome of an interactive process, is expected to provide valuable inputs for preparation of quality district plans which aim at addressing development challenges and meeting reasonable expectations of the people. This report also provides a benchmark against which future attainments may be assessed. I hope that this report will be well received by different stakeholders including policy planners, researchers, people at large and others.

I warmly thank UNDP and Planning Commission, Government of India for their support and guidance for preparation of this report. The efforts of the officials of Poverty & Human Development Monitoring Agency and Planning & Co-ordination Department for preparing this report are also appreciated.

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

(Bijay Kumar Patnaik)

Message from Development Commissioner cum Additional Chief Secretary

Dr. Rabinarayan Senapati, IAS
Development Commissioner
-cum-Addl. Chief Secretary &
Secretary, P & C Department,
Govt. of Odisha.



Phone-0674-2536882 (O)
0674-2536792 (Fax)
0674-2397530 (R)
e-mail- dcplg@nic.in

Bhubaneswar
The 28th July, 2012



Message

I am glad to know that Poverty & Human Development Monitoring Agency (PHDMA) in Planning & Coordination Department has brought out the first People's Audit of Health, Education and Livelihood (PAHELI) report. This report has been prepared by Planning and Coordination Department in partnership with UNDP and Planning Commission, Government of India. It is based on the perceptions of the people about the impact of health, education and livelihood programmes, collected by civil society organizations through carefully designed survey formats easily understood by common citizen.

viii

This report is an outcome of sustained efforts made by officials of PHDMA, Planning & Coordination Department and civil society organizations. The survey covered 17,868 households in all 30 districts of Odisha and 60,727 persons were interviewed in the PAHELI process. This massive effort is heartily acknowledged.

We in the Planning and Coordination Department hope that this report will be useful to policy makers and other stakeholders. 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 the State.

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

(Dr. R.N. Senapati)

Acknowledgement

Odisha has become the first State to bring out the first PAHELI report for all 30 districts with support from United Nations Development Programme (UNDP) and Planning Commission, Government of India. PAHELI is an acronym for People's Audit on Health, Education and Livelihoods. The report is an outcome of the bold initiative taken by the State Government in 2009-10 to hear the voice of the people about the impact of health, education and livelihood programmes implemented in Odisha. It is based on the people's perceptions about human development indicators that have been gathered by civil society organizations with lead support from Human Development Foundation (HDF) and PRATHAM in all 30 districts through carefully designed survey formats. This was a massive effort of the officials of Poverty & Human Development Monitoring Agency (PHDMA), Planning & Co-ordination Department and civil society organizations. The survey covered 17,868 households in 880 villages across Odisha and 60,727 persons were interviewed. Many children, women and men participated in this interactive process. We are grateful to all those children, women, men and organizations whose efforts resulted into the first PAHELI report. Their contributions were immense and deserve special mention.

We are grateful to Sj. Naveen Patnaik, Hon'ble Chief Minister, Odisha for his kind inspiration and supporting the idea of conducting PAHELI. In June 2009, he exhorted all senior officials of the State to work very closely with, and for, people to meet their reasonable development aspirations and address their genuine problems. 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 and Planning & Coordination and Sj. Maheswar Mohanty, Hon'ble Minister, Tourism & Culture, Planning & Coordination for rendering their wholehearted support for this bold initiative.

We are grateful to Shri T.K. Mishra, former Chief Secretary and Chief Development Commissioner and Shri Bijay Kumar Patnaik, Chief Secretary and Chief Development Commissioner, Odisha for their valuable guidance all through the process of PAHELI. The support and guidance of Shri S.P. Nanda, former Development Commissioner & Additional Chief Secretary and Dr. R.N. Senapati, Development Commissioner & Additional Chief Secretary are also gratefully acknowledged. Without their guidance and support, this report would not have been possible.

The support and cooperation from Collectors, Deputy Directors, DPO and their colleagues in all DPMUs, all Project Directors of 30 DRDAs and all other District and Sub-district Level Officers and others who extended their wholehearted support for collection of primary and secondary data are gratefully acknowledged.

We warmly thank, and gratefully acknowledge the support and guidance from, Planning Commission, Government of India and United Nations Development Programme (UNDP). We are also grateful to all officials of Human Development Foundation, PRATHAM and their partner civil society organizations who took great pains and made significant efforts for completing this onerous assignment. Shri Sudarsan Das, Dr. Dhananda Kanta Mishra, Dr. D. K. Ray, Dr. Almas Ali, Shri Subrat Rout, Shri Basudev Panda, Dr. Manmath K. Mohanty, Dr. Pranay Swain, Dr. Smita Mishra Panda and Dr. Haribandhu Panda, all associated with HDF and other civil society organizations, Dr. Rukmini Banerjee, Prof. Wilima Wadhwa, Ms. Sakshi Kapoor and others of ASER Center at New Delhi, Dr. Madhav Chavan and Ms. Usha Rane of PRATHAM and Dr. Babu Ambat and Mr. Darsh Worha of Center for Environment and Development (CED), Kerala deserve special mention for their significant contributions in finalizing this report.

My colleagues in Planning and Co-ordination Department have significantly contributed to this report. We sincerely appreciate the efforts and contributions of Shri R. C. Kar, former Director (DF&C)-cum-Additional Secretary, Shri A. K. Mishra, Director (DF&C)-cum Additional Secretary, Shri B.N Dash and Ms. Neeta Mohanty, both Deputy Directors, Smt. S. Tripathy, Assistant Director, Ms. Alka Jena and Shri Siddharth Mishra, both SEIs and other staff associated with the District Planning Cell.

My colleagues at PHDMA, particularly Shri Chittaranjan Satapathy, Deputy Director, Shri Nirajan Mishra, Chief Accounts Officer, Shri Bimal Kumar Sahu, System Analyst, Shri Manoranjan Barik, Ms. Vaibhavi Bandekar, Ms. Srabani Das, Shri Jisuketan Pattnaik, Shri Mainak Sarkar, Shri Arabinda Acharya, Shri Debashish Dash and others made significant efforts at various stages for completing this report. Their assistance and cooperation are sincerely acknowledged.

We hope this report will help strengthen decentralized planning at district and sub-district levels to accelerate the development process and improve human development indicators in Odisha. We also 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 the State.



(Dr.R.V Singh)

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

Executive Summary

PAHELI stands for People's Audit of Health, Education and Livelihood. The Government of Odisha took a bold initiative in the year 2009-10 to hear the voices of the people about the impact of health, education and livelihood programmes implemented in the State. The report is based on people's perceptions about Human Development Indicators (HDI). This initiative was supported by UNDP under the "Strengthening State Plans for Human Development programme". The survey covered 17,868 households in 880 randomly selected villages of all 30 districts and 60,727 persons were interviewed. The formats used were carefully designed for easy understanding of common people. It included 19 questions on water and sanitation, 16 on life and livelihoods, 9 on child and mother's health and 6 questions on education. The data was gathered by CSOs with lead support from HDF and PRATHAM in all 30 districts.

This PAHELI report has been divided into eight chapters. The first chapter sets in motion the PAHELI process, which discusses the context, scope and time line of the survey, profiles Odisha and gives a brief account of the State's efforts to accelerate the socio-economic development process and HDI. The State has recently made significant achievements as regards poverty reduction, literacy levels, educational infrastructure, healthcare, health infrastructure, nutrition and drinking water supply. Some aspects of life and livelihoods have been discussed in the second chapter. Several indicators including food type and food security, household assets (clothes, houses, land, livestock and others), their employment patterns and migration have been assessed, based on the perceptions of the sampled households.

The status of maternal and child healthcare, safe drinking water and sanitation have been analysed in the next two chapters. The indicators that have been examined include institutional deliveries, administration of iron tablets, and anti-natal check-up for pregnant women, early care of babies through professional inputs and immunisation. It also includes nutritional support to pregnant women and new born babies including their breast feeding, health care of women and children against diarrhea and other killer diseases. Access to safe drinking water, type of sources of drinking water, use of toilets and other sanitation aspects are also covered in the survey.

It is heartening to note that institutional deliveries have been progressively improving over the years. More than 85 percent pregnant women took iron tablets and about 75 percent babies were visited at home by health workers. About 55 percent children under 3 year age group suffered from diarrhea in the month before the survey. Out of them 77 percent babies were treated with Oral Rehydration Solution (ORS). Around 81 percent households reported having access to safe drinking water source close to their homes. However, sanitation conditions in rural areas are far from satisfactory. About 87 percent households reported practicing open defecation.

The fifth chapter has examined the following aspects of literacy and education levels: (i) enrollment of children in pre-schools (i.e., 3-5 year age group), (ii) enrollment of children at primary level (i.e., 6-14 year age group), (iii) quality of education, particularly reading and arithmetic skills at Class-I to II level, (iv) quality of education, particularly reading and arithmetic skills at Class-III to V level, (v) status of functional literacy among adults, (vi) education levels among adults and (vii) reading abilities of adults. About 73 percent children were enrolled in Anganwadi Centres (AWCs) and attended pre-school learning. The percentage of out of school children at the State level stands at 4.6 percent. While 80.4 percent students at Class-I & II had adequate reading skills, 71.8 percent students could recognize numerals and do simple arithmetical operations. However, concerted efforts are needed to enhance quality of education at all levels and in all districts. About 75 percent male adults and 62.8 percent female adults were found to have functional literacy, but efforts are required to improve functional literacy among adults. The next two chapters analyses village development profile and availability of financial resources. It has been observed that about 80 percent villages reported having government primary schools and about 45 percent villages have public health institutions. About 63 percent villages reported having electricity supply for more than eight hours a day. While 53.4 percent villages had all weather road connectivity, only 67.5 percent villages had access to some public or private transport facility.

As the State finances have improved after 2004-05, outlays and expenditures in human development sectors have been rising year after year. It is expected that higher outlays and expenditures in these sectors shall result in improved human development outcomes.

The last chapter summarises the findings and recommendations. Some State level indicators are reported in Table 1.0. The following suggestions, if implemented, may further improve HDIs in Odisha:

- Subsidised 'hand-spun' khadi saree and dhoti scheme may help the very poor households acquire more clothes for their better living and may help create more employment and income opportunities for weavers.
- Many households still use bio-mass for their cooking needs. It is suggested that the use of smokeless chulha, a kind of stove should be promoted on a massive scale, which would help women to cook in a healthy environment.
- More and more women should be encouraged through the Mission Shakti or other interventions to be engaged in income generation activities. This will help households get higher incomes and add to the dignity of women.
- Though the coverage under institutional deliveries and immunisation programmes has improved a lot, however, lot more remains to be done.
- Drinking water supply in rural areas has considerably improved over the years. However, there are significant inter-district disparities that need to be addressed.

- Total Sanitation Campaign (TSC) which has not shown promising results, needs to be significantly improved. Innovative approaches are needed to be adopted to improve sanitation in rural areas where large proportions of the people still resort to open defecation.
- Low cost water purification techniques need to be promoted to address the water contamination issues and to improve water quality.
- More stress should be laid on retention of girls in schools with a view to substantially improve female literacy, particularly in interior tribal districts.
- The regional, social and gender disparities in literacy and other HDIs need be addressed through careful planning and resource allocation. Village level infrastructure needs to be considerably strengthened.
- Greater focus is needed to improve the quality of education in all districts, particularly in interior tribal districts. The reading and arithmetical skills needs to be improved consistently in the problem areas.

Table: 1.0: Summary of development indicators for different sectors

Sl. No.	Sector	Development Indicators	In Percentage
1.	LIFE & LIVELIHOOD	Two or fewer sets of sarees owned by women	28.1
2.		Households with kutcha house or no house	64.5
3.		Firewood used for cooking	88.3
4.		Households using kerosene for light	59.6
5.		Households which holds no animal	31.5
6.		Households without any tangible assets	13.1
7.		Households which have taken no loan	50.7
8.		Households affected by migration	15.2
1.	HEALTH – MOTHER & CHILD	Institutional deliveries	59.4
2.		Mothers who took iron tablets during last pregnancy	87.3
3.		Mothers who had at least one anti-natal check-up	72.7
4.		Babies visited by health worker	74.3
5.		Babies breast-fed within one hour of birth	88.9
6.		Babies exclusively breast-fed for six months	49.7
7.		Children with immunisation card	86.6
8.		Children who suffered from diarrhea during last month	54.9
9.		Children who were administered ORS	77.3
10.		Men whose BMI ¹ is below normal	15.3
11.		Women whose BMI is below normal	22.3

(Contd....)

¹ Body Mass Index

Sl. No.	Sector	Development Indicators	In Percentage
1.	WATER & SANITATION	Households having access to safe drinking water	71.8
2.		Household having water supply availability during summer season	70.0
3.		Households have access to water from public / government sources	59.9
4.		Households having drinking water source at home or close to home in normal times	80.8
5.		Households which take less than one hour for collection of water in normal times	70.5
6.		Drinking water sources affected by bacterial contamination	46.8
7.		Household members prefer to defecate in open field	86.5
1.	EDUCATION	Children enrolled in AWCs in the age group of 3-5years	72.5
2.		Out of school children in 6-14 years age group	4.6
3.		Children in Class-III to V who can read Class-I text	65.4
4.		Children in Class- III to V who can do subtraction	68.8
5.		Women who can read a Class-I text	62.9
6.		Men who can read Class-I text	74.6

Contents

<i>Message from Chief Minister</i>	v
<i>Message from Minister, Tourism & Culture, Planning & Coordination Department</i>	vi
<i>Message from Chief Secretary</i>	vii
<i>Message from Development Commissioner cum Additional Chief Secretary</i>	viii
<i>Acknowledgment</i>	ix
<i>Executive Summary</i>	xi
<i>Abbreviations</i>	xx

Chapter One

Introduction	1
1.1 PAHELI 1	
1.1.1 PAHELI Time Line	1
1.2 Odisha: A Profile	2
1.2.1 Climate	2
1.2.2 Environment	4
1.2.3 Economy	4
1.3 Odisha's Efforts to Improve Human Development Indicators	5
1.3.1 Poverty Reduction	5
1.3.2 Literacy and Educational Infrastructure	6
1.3.3 Health care and Health Infrastructure	8
1.3.4 Nutrition, Drinking Water Supply and Sanitation	8
1.4 PAHELI: Methodology	11
1.4.1 PAHELI Framework	11
1.4.2 PAHELI Principles	12
1.4.3 PAHELI Process	13
1.4.4 Some Features and Limitations of the PAHELI Survey	13
1.5 Summary	14

Chapter Two

Life and Livelihoods	15
2.1 Introduction	15
2.2 Food and Food Security	15
2.3 Ownership of Different Types of Assets	16
2.4 Energy Needs of Rural Households	18
2.5 Livelihoods and Incomes	19
2.6 Migration as a Source of Livelihood	20
2.7 Households Below the Poverty Line	20
2.8 Summary	21

Chapter Three	
Maternal and Child Health	23
3.1 Introduction	23
3.2 Care of Pregnant Women and Child Births	23
3.3 Child Healthcare	24
3.4 Summary	26
Chapter Four	
Drinking Water and Sanitation	28
4.1 Introduction	28
4.2 Sources of Drinking Water	28
4.3 Need for Water and Efforts for Water Collection	29
4.4 Water Pollution and Purification Efforts	31
4.5 Household Sanitation	32
4.6 Summary	33
Chapter Five	
Education	36
5.1 Introduction	36
5.2 Children’s Enrollment and Learning Levels	36
5.3 Literacy Levels of Adults	37
5.4 Summary	39
Chapter Six	
Village Development Profile	42
6.1 Village Infrastructure	42
6.2 School Infrastructure at the Village Level	42
6.3 Health Infrastructure and Facilities at the Village Level	44
6.4 Basic Infrastructure at the Village Level	46
6.5 Summary	49
Chapter Seven	
Availability of Financial Resources	50
7.1 Introduction	50
7.2 Trends in Plan Outlays and Expenditure	50
7.3 Summary	52
Chapter Eight	
Conclusions and Recommendations	53
8.1 Conclusions	53
8.2 Some Recommendations	53

ANNEXURES

Annexure I	68
Validity and Variation of PAHELI Data	68
Why district level estimates at times have significant variations?	68
Possible reasons	69
Variations at the village level	69
Annexure II	72
List of reports and other secondary data reviewed	72
I. Life & Livelihoods	72
II. Water & Sanitation	72
III. Mother and Child Health	73
IV. Education	74
V. Village Information	74
Annexure III	75
District Partners	75
Annexure IV	77
Odisha State Human Development Report Card	77
I. Life and Livelihood	77
II. Water and Sanitation	78
III. Health: Mother and Child	79
IV. Education and Literacy	80
V. Villages of the District	81
List of Tables	
Table 1.0: Summary of development indicators for different sectors	xiii
Table 1.1: ODISHA: Some administrative and demographic information	3
Table 1.2: Some human development indicators in Odisha	9
Table 1.3 PAHELI Frameworks	11
Table 2.1: Content of a typical meal	16
Table 2.2: Sources of food	16
Table 2.3: Ownership of clothes by women	17
Table 2.4: Ownership of livestock	17
Table 2.5: Ownership of durable assets	17
Table 2.6: Ownership of land	18
Table 2.7: Ownership of housing assets	18
Table 2.8: Cooking medium used by households	18
Table 2.9: Daily expenditure on kerosene	19
Table 2.10: Sources of lighting	19
Table 2.11: Major sources of employment	19

Table 2.12:	Sources of household debt	19
Table 2.13:	Household migration patterns	20
Table 2.14:	Households with BPL status	20
Table 2.15:	Some indicators on life and livelihoods by districts	21
Table 3.1:	Care of pregnant women and births of babies	24
Table 3.2:	Breast feeding practices in Odisha	24
Table 3.3:	Complimentary feeding practices for young babies	24
Table 3.4:	Immunisation status of children in 0-36 month age group	25
Table 3.5:	Child healthcare by health workers and at AWCs	25
Table 3.6:	Diarrhea incidence and its treatment	25
Table 3.7:	Some mother and child healthcare indicators by district	27
Table 4.1:	Sources of drinking water	28
Table 4.2:	Type of drinking water sources	29
Table 4.3:	Distances of water sources from habitations	29
Table 4.4:	Quantity of water needed and used	30
Table 4.5:	Frequency of collection of the required water in a day	30
Table 4.6:	Time spent by households in fetching water for their uses	30
Table 4.7:	The periods of water shortages	31
Table 4.8:	Remedial action to mitigate water shortages	31
Table 4.9:	Quality of water used by households	31
Table 4.10:	Purification of drinking water	31
Table 4.11:	Storage of drinking water	32
Table 4.12:	Use of toilets	32
Table 4.13:	Practice of washing hands	32
Table 4.14:	Materials used for washing hands	32
Table 4.15:	District-wise values of some indicators for safe drinking water and sanitation	34
Table 5.1:	Children, in the 3-5 year age group, who attended AWCs	36
Table 5.2:	Children, in 6-14 year age group, who attended primary school	37
Table 5.3:	Reading and arithmetical skills of class I-II level school children	37
Table 5.4:	Reading and arithmetical skills of children at class III-V Level	37
Table 5.5:	Adult men and women who attended school	38
Table 5.6:	Levels of schooling by adults	38
Table 5.7:	Reading ability of adults	38
Table 5.8:	Some educational indicators by district	40
Table 7.1:	Trends of revenue receipts and expenditure: 2003-04 to 2010-11	50
Table 7.2:	Expenditures in education, health and livelihood sectors in Odisha: 2005-12	52
Table 7.3:	Outlays, expenditure and outcome analysis for education sector in Odisha	52
Table 8.1:	Values of some human development indicators at the district level	55
Table 8.2:	Values of some human development indicators at the district level	57
Table A1.1:	Comparison of PAHELI 2009 data with census 2001	69
Table A1.2:	Comparison of PAHELI 2009 and 2006 for Gajapati district	70

List of Figures

Figure 1:	Administrative Map of Odisha	4
Figure 6.1:	School Infrastructure in Sampled Villages	42
Figure 6.2:	Status of School Facilities in the Sampled Villages	43
Figure 6.3:	Availability of AW Centres	43
Figure 6.4:	Location of AW Centres	43
Figure 6.5:	Infrastructural Facilities in AWCs at the Sampled Villages	44
Figure 6.6:	Status of Equipments and Medicines at AWCs in the Sampled Villages	44
Figure 6.7:	Availability of Health Care Facilities in the Sampled Villages	45
Figure 6.8:	Availability of Medicine Store and Ambulance in the Sampled Villages	45
Figure 6.9:	Status of Health Infrastructure and Facilities at the Village Level	46
Figure 6.10:	Status of Village Electrification & Availability of Electricity	46
Figure 6.11:	Status of Rural Road Connectivity, Bus Stop and Transportation	47
Figure 6.12:	Status of Communication Facilities at the Village Level	47
Figure 6.13:	District-wise Status of Village Electrification and Electricity Supply	48
Figure 7.1:	Trends of Plan Outlays and Expenditures in Social Sectors in Odisha	51
Figure 7.2:	Budget Expenditure in Education, Health and Livelihoods in Odisha	51

Abbreviations

AAY	Antodaya Anna Yojana
AIDS	Acquired Immuno-Deficiency Syndrome
ANC	Ante-natal Check-up
ARWSP	Accelerated Rural Water Supply Program
ASER	Annual Status of Education Report
ASHA	Accredited Social Health Activists
AWCs	Anganwadi Centre
BGY	Biju Gramajyoti Yojana
BMI	Body Mass Index
BPL	Below Poverty Line
BRGF	Backward Regions Grant Fund
CDAR	Centre for Development Action Research
CED	Centre for Environment and Development
CoV	Coefficient of Variation
CSO	Civil Society Organizations
CYSD	Centre for Youth and Social Development
DLHS	District Level Household Survey
DPEP	District Primary Education Programme
DPO	District Planning Officer
DRDA	District Rural Development Agency
EFP	Emergency Feeding Programme
GGY	Gopobandhu Gramin Yojana
GIS	Geographical Information System
GP	Gram Panchayat
GSDP	Gross State Domestic Product
HDF	Human Development Foundation
HDR	Human Development Report
HH	Household
HIV	Human Immuno-Deficiency Virus
IAP	Integrated Action Plan
IAY	Indira Awas Yojana
ICDS	Integrated Child Development Services
IMR	Infant Mortality Rate
INR	Indian National Rupee
JSY	Janani Suraksha Yojana

KBK	Kalahandi-Balangir-Koraput
KGBV	Kasturba Gandhi Balika Vidyalaya
LEP	Learning Enhancement Programme
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MDM	Mid-day Meal Programme
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MMR	Maternal Mortality Ratio
NDCP	National Disease Control Programme
NFFWP	National Food for Work Programme
NFHS	National Family Health Survey
NGO	Non- Governmental Organization
NGP	Nirmal Gram Puraskar
NPEGEL	National Programme for Education of Girls at Elementary Level
NRHM	National Rural Health Mission
NSSO	National Sample Survey Organisation
OBC	Other Backward Classes
OPTF	Odisha Poverty Task Force
ORS	Oral Rehydration Solution
OSACS	Odisha State AIDS Control Society
OTELP	Odisha Tribal Empowerment and Livelihood Programme
P & CD	Planning and Coordination Department
PAHELI	People's Audit on Health, Education and Livelihood
PC & PNDT	Pre Conception & Pre Natal Diagnostic Techniques
PDS	Public Distribution System
PHC	Primary Health Centre
PHDMA	Poverty and Human Development Monitoring Agency
PMGSY	Pradhan Mantri Gram Sadak Yojana
PPP	Public- Private Partnership
PPS	Probability Proportional to Size
PRI	Panchayat Raj Institutions
RBC	Red Blood Cell
RCH	Reproductive and Child Health
RGNDWM	Rajiv Gandhi National Drinking Water Mission
RKS	Rogi Kalyan Samiti
RLTAP	Revised Long Term Action Plan
RTE	Right to Education
SC	Scheduled Caste
SCCW	State Council of Child Welfare
SGRY	Sampoorna Grameen Rozgar Yojana
SGSY	Swarnajayanti Gram Sworozgar Yojana

SHG	Self Help Group
SNP	Supplementary Nutrition Programme
SRS	Sample Registration System
SSA	Sarva Sikhya Abhiyan
SSPHD	Strengthening State Plans for Human Development
ST	Scheduled Tribe
STD	Sexually Transmitted Disease
SWAB	Social Welfare Advisory Board
TPDS	Targeted Public Distribution System
TSC	Total Sanitation Campaign
UEE	Universalisation of Elementary Education
UNDP	United Nations Development Programme
W&CDD	Women and Child Development Department

1. Introduction

1.1 PAHELI

PAHELI is an acronym for People’s Audit of Health, Education and Livelihood. The Government of Odisha (GoO) took a bold initiative in the year 2009-10 to hear the voices of the people about the impact of health, education and livelihood programmes that have been implemented by the State with or without support from Government of India (GOI). The PAHELI survey was commissioned in all 30 districts in the year 2009-10. The task was assigned to the Human Development Foundation (HDF), which was supported by PRATHAM, a well known national level civil society organisation (CSO) and other CSOs. This initiative was also supported by United Nations Development Programme (UNDP) under the banner of “Strengthening State Plans for Human Development”. The UNDP had earlier commissioned a pilot PAHELI survey in Gajapati district of Odisha and six other districts of the Country. The pilot survey provided the motivation and format for PAHELI in all 30 districts in the year 2009-10.

The PAHELI survey report, which is not based on Government data, is about the perceptions of the people on health, education and livelihood. These human development sectors are the focus of the UN Millennium Development Goals (MDG). The people’s perceptions about health, education and livelihoods were gathered by CSOs through carefully designed formats, easily understood by ordinary people. In other words, the report provides a status of MDG in different districts as perceived by the people.

This report is organised into eight chapters. The first chapter provides a brief introduction of Odisha to the reader. The chapter also describes the PAHELI process, its unique features and limitations. The values of some human development indicators that have been identified to reflect the status of health, education and livelihoods has also been summarised. The second chapter discusses on Life and Livelihoods. While the third chapter analyses Maternal and Child Health (MCH), the fourth chapter describes the status of Drinking Water and Sanitation.

1.1.1 PAHELI Time Line

The time line for the PAHELI survey was as follows:

Time Line	Activity(ies)
June 2009	Initiating the survey work
July 2009	Designing the questionnaire
	Undertaking field testing
August – September 2009	Field work and data collection
October-November 2009	Data processing
December 2009	Analysing district data sheets
January-March 2010	Report writing
March 2010	Submission of draft report

The status of Education is discussed in the fifth chapter and the status of village development infrastructure is summarised in chapter six. Allocations and utilisation of funds in different districts is elaborately described in the next chapter. The summary conclusion and main recommendations of the report is presented in the last chapter.

1.2 Odisha: A Profile

Odisha extends from 17°49' to 22°34' North Latitude and from 81°27' to 87°29' East Longitude. It is surrounded by West Bengal in the north-east, Bihar and Jharkhand in the north, Andhra Pradesh in the south-east, Chhattisgarh in the west and Bay of Bengal in the east. It has a coastline of about 480 kilometres (km) and its total area is 1,55,707 square kms. The State is broadly divided into four physiographic zones namely, Coastal Plains, Central Table Land, Northern Plateau and Eastern Ghats. These are further sub-divided into ten Agro-climatic zones including North Western Plateau, North Central Plateau, North Eastern Coastal Plain, East and South Eastern Coastal Plain, North Eastern Ghat, Eastern Ghat High Land, South Eastern Ghat, Western Undulating Zone, Western Central Table Land and Mid Central Table Land. The State has different soil types ranging from fertile alluvial deltaic soils in the Coastal Plains, mixed red and black soils in the Central Table Land, red and yellow soils with low fertility in the Northern Plateau and red, black and brown forest soil in Eastern Ghat region. The soil types differ widely from highly acidic to slightly alkaline and from light sandy to stiff clays. About four lakh hectare (ha) area is exposed to saline inundation, 3.54 lakh ha to flooding and 0.75 ha to water logging. Mahanadi is the largest river that crosses through the State and its big delta merges into the deltas formed by Brahmani and Baitarani rivers. The deltas are fertile and are provided with irrigation facilities.

The State is divided into 30 districts, 58 sub-divisions, 316 tahasils, 314 blocks and 6,234 gram panchayats (GP). There are 51,349 villages including 47,529 inhabited villages and 3,820 uninhabited villages. There are 103 Urban Local Bodies including 35 Municipal Corporations and Municipalities and 68 Notified Area Councils. Odisha has 147 Assembly constituencies, 21 Lok Sabha constituencies and 10 Rajya Sabha seats. The total population of the State as per 2011 census is 4,19,47,358 which includes 2,12,01,678 males and 2,07,45,680 females. The decadal growth rate of population is 13.97 percent in the 2001-11 periods. The rural growth of population is only 11.71 percent and urban growth is 26.80 percent. Figure 1 maps all 30 districts and Table 1.1 summarises certain administrative and demographic information about Odisha.

1.2.1 Climate

The State has a tropical climate, characterised by high temperature, high humidity, medium to high rainfall and short mild winters. As per Köppen's climatic classifications, most part of Odisha comes under the Aw² having a tropical Savannah type of climate. The south-west

² The Köppen Climate Classification System is the most widely used for classifying the world's climates. Most classification systems used today are based on the one introduced in 1900 by the Russian-German climatologist Wladimir Köppen. Köppen divided the Earth's surface into climatic regions that generally coincided with world patterns of vegetation and soils. The Köppen system recognizes five major climate types based on the annual and monthly averages of temperature and precipitation. Each type is designated by a capital letter.

A - Moist Tropical Climates are known for their high temperatures year round and for their large amount of year round rain. Further subgroups are designated by a second, lower case letter which distinguish specific seasonal characteristics of temperature and precipitation.

w - There is a dry season in the winter of the respective hemisphere (low-sun season).

Aw - Tropical Savannah with winter dry season.

monsoon normally sets in early June in the coastal plain, and by early July in the rest of the State. By mid-October, the south-west monsoon generally withdraws from Odisha. As per Thornthwaite's classification, Odisha comes under the sub-humid category, implying deficient winter rains. The normal rainfall of the State is 1,451.2 mm. About 75 percent to 80 percent of rainfall is received from June to September. Floods, droughts and cyclones occur almost every year with varying intensities.

Table 1.1: ODISHA: Some administrative and demographic information

Total Area (sq km)	1,55,707
Total population (2001 census)	3,88,04,660
(a) Total Males	1,86,60,570
(b) Total Females	1,81,44,090
Total population (2011 census)	4,19,47,358
(a) Total Males	2,12,01,678
(b) Total Females	2,07,45,680
Density of population per sq km (2011 census)	269
Sex ratio (Females per 1000 males; 2011 census)	978
Total literates and literacy rate excluding 0-6 year age population (2011 census)	2,71,12,376 (73.45%)
(a) Total male literates and literacy rate (2011 census)	1,53,26,036 (82.40%)
(b) Total female literates and literacy rate (2011 census)	1,17,86,340 (64.36%)
Number of Districts	30
Number of Sub-Divisions	58
Number of Tahasils	316
Number of Blocks	314
Number of Gram Panchayats	6,234
Total Number of Villages (Inhabited; 2001 census)	47,529
Total Number of Villages (Un-inhabited; 2001 census)	3,820
Total Number of Villages, 2001 census	51,349
Number of Urban Local Bodies	103
Number of Municipal Corporations	03
Number of Municipalities	32
Number of Notified Area Councils	68

Figure 1: Administrative Map of Odisha



1.2.2 Environment

Odisha is well endowed with forests and rich bio-diversity. It has 37.34 percent land under forest cover. Its natural endowments include Similipal National Park, Chilika Lake, Bhitarkanika Wild Life Sanctuary and mangrove forests. Odisha accounts for 11 percent of nation's water resources and is rich in several minerals including iron ore, bauxite, chromite, manganese and coal. As industrialisation is increasing in the State, several environmental problems have emerged in industrial pockets.

1.2.3 Economy

The State comprises 4.74 percent of India's total land area and about 3.47 percent of Country's population. About 84 percent population lives in rural areas. Odisha's economy grew and diversified at a very slow pace and the long-term real growth rates could not exceed 6 percent per annum from 1950s to 2000. However, the scenario changed during the first decade of the 21st century, when the State economy grew at an average annual rate of above 9 percent in real terms at 2004-05 prices. The per capita Gross State Domestic Product (GSDP) has also grown at an impressive rate of 7.95 percent per year in real terms at 2004-05 as against less than 2.50 percent per annum during the period 1950-2000. The economy has also diversified at a fast pace in the last decade. The share of the Agriculture and allied sectors in the GSDP has been declining and that of the Industry and the Service sectors has been rising over the years.

As per 2001 census, total workers accounted for were 142.76 lakh which was 38.79 percent of the total population of the State. Out of total workers, main workers accounted for 67.2 percent

share. Cultivators and agricultural labourers constituted 57.7 percent of the main workers and depended mostly on agriculture and allied sectors for livelihood. The total cultivable land is nearly 65.59 lakh ha and can be classified into three categories namely low (16 lakh ha), medium (19 lakh ha) and rest as up-lands. Though agriculture provides direct or indirect employment to more than 60 percent people, it contributes to only about 20 percent share to the State's GSDP as per Odisha Economic Survey, 2011-12. Kharif is the main cropping season and paddy is the principal crop (42 lakh ha) during the season. Cultivation during rabi season is mainly confined to irrigated areas and areas with residual moisture. Other important crops include pulses (arhar, mung, biri, kulthi), oil seeds (groundnut, til, mustard and niger), fibres (jute, mesta, cotton), sugarcane, vegetables, various spices, mango, banana, coconut and cashew nut. Forestry, fishery and animal husbandry also play an important role in contributing to the livelihood and income of the rural population. This sector has grown at an average annual rate of 3.59 percent in real terms at 2004-05 prices during 2001-2010 period.

About a quarter of Odisha's GSDP comes from the Industrial sector which includes manufacturing, mining and quarrying, electricity, gas and water supply. The industrial growth in the State has mostly taken place in the areas where raw materials, water and power are adequately available. The State can be divided into following industrially active zones including Rourkela-Rajgangpur area, Ib valley, Hirakud area, Talcher-Angul area, Choudwar area, Balasore, Chandikhol, Paradeep, Khordha-Tapanga, Joda-Barbil and Rayagada areas. Many of these industries are into mining and mineral processing. This sector has grown at an average annual rate of 12.67 percent in real terms at 2004-05 prices during the period 2001-2010.

The Services sector in the recent years has grown considerably and contributes to about 55 percent of the total GSDP of the State. This sector includes banking, finance, insurance, real estate, public administration, trade, hotels and restaurants, construction, transport, communication and other services. The sector has recorded an average annual growth rate of 9.75 percent in real terms at 2004-05 prices during the period 2001-2010.

1.3 Odisha's Efforts to Improve Human Development Indicators

In recent past, the State has made significant achievements in terms of economic growth, poverty reduction, other socio-economic and human development indicators. The State Government has made sustained efforts to improve the welfare of marginalised sections including Scheduled Tribes (ST), Scheduled Castes (SC) and women to bridge social and gender gaps in development indicators. Special attention has been given to depressed regions including the undivided Kalahandi-Balangir-Koraput (KBK) districts, other backward tribal districts and Western Odisha with a view to reduce regional disparities. Table 1.2 summarises some human development indicators in Odisha mainly on the basis of Government statistics.

1.3.1 Poverty Reduction

The State registered the highest poverty reduction of 20.2 percentage point from 57.2 percent in 2004-05 to 37 percent in 2009-10 as per the Tendulkar Committee methodology. The rural areas

of the northern NSS region (i.e., Angul, Bargarh, Deogarh, Dhenkanal, Jharsuguda, Keonjhar, Mayurbhanj, Sambalpur and Sundargarh districts) reported the highest poverty reduction of about 29 percentage point from 70.60 percent in 2004-05 to 41.66 percent in 2009-10. While the southern region (i.e., Balangir, Boudh, Gajapati, Ganjam, Kalahandi, Kandhamal, Koraput, Nabarangpur, Nuapada, Malkangiri, Rayagada and Subarnapur) recorded 21 percentage point poverty reduction, the coastal region consisting of the remaining nine districts had 16.30 percentage point poverty reduction between 2004-05 to 2009-10. Among the social classes, Other Backward Classes (OBC) group reported the highest poverty reduction of about 27 percentage points, SC group about 21 percentage points, ST about 18 percentage points and others about 13 percentage points in rural Odisha from 2004-05 to 2009-10. The real per capita income at 2004-05 prices increased from Rs.10,622 in 1999-2000 to Rs.25,708 in 2010-11.

The State Government has implemented several anti-poverty programmes including Swarna Jayanti Gram Rojgar Yojana (SGRY), Swarna Jayanti Gram Swarozgar Yojana (SJGSY), National Food for Work Programme (NFFWP), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and other programmes for generation of wage employment and gainful self-employment. Apart from these, other food security / nutrition programmes such as heavily subsidised rice at the rate of Rs two a kg for all Below Poverty Line (BPL) households, Targeted Public Distribution Programme (TPDS), Antodaya Anna Yojana (AAY), Mid-day Meal Programme (MDM), Emergency Feeding Programme (EFP), and Supplementary Nutrition Programme (SNP) are also being implemented in the State to provide relief against deprivation.

Area specific poverty alleviation schemes such as Drought Prone Area Programme (DPAP), Revised Long Term Action Plan (RLTAP) and Biju KBK Plan for development of the KBK districts, Biju Kandhamal O Gajapati Yojana, Backward Regions Grant Fund (BRGF), Integrated Action Plan (IAP) and Gopobandhu Gramin Yojana (GGY) have also been implemented in the State to address regional disparities. The State Government has also given emphasis on skill up-gradation and community livelihood programmes such as Western Odisha Rural Livelihood Programme (WORLP) and Odisha Tribal Empowerment and Livelihood Programme (OTELP).

1.3.2 Literacy and Educational Infrastructure

In 1951 the overall literacy rate in the State was only 15.8 percent and the female literacy was just 4.5 percent. However, there has been a sharp increase in the overall literacy rate from 63.1 percent in 2001 to 73.45 percent in 2011. The male literacy rate stands at 82.40 percent, and the female literacy rate at 64.3 percent. The literacy in Odisha has increased five times from 15.8 percent in 1951 to 73.45 percent in 2011, growing at an annual compound rate of 2.59 percent as against 2.35 percent per annum at the national level from 18.33 percent in 1951 to 74.04 percent in 2011. Whereas the male literacy has increased about three times from 27.32 percent in 1951 to 84.40 percent in 2011, the female literacy has accelerated from a low base of 4.52 percent in 1951 to 64.36 percent in 2011, showing an increase of 14 times.

Though both male and female literacy are fast approaching national averages, there is still a gap of about 18 percentage points between male and female literacy. Social and regional

disparities play a huge role in widening the gap. The ST female literacy has increased from a very low level of 4.76 percent in 1981 to 23.23 percent in 2001, which is significantly lower than SC and general female literacy. Though the ST male literacy has increased from 23.27 percent in 1981 to 51.48 percent in 2001, it is still way beyond the general male literacy. And while the SC male literacy has almost bridged its gap with the general male literacy in 2001, the SC females are catching up fast. But the rural female literacy which has more than doubled from 21.90 percent in 1981 to 47.22 percent in 2001, still has a substantial gap in comparison to urban areas. Whereas the coastal region has reported literacy rate of 81.54 percent (male: 88.69 percent, female: 74.14 percent), the southern region has a literacy of only 57.58 percent (male: 69.53 percent, female: 45.89 percent) and northern region shows 72.21 percent (male: 81.60 percent, female: 62.67 percent) as per 2011 census. This indicates there are acute regional, social and gender disparities as regards literacy levels, that needs to be bridged soon.

There has been a considerable expansion in the number of educational institutions, enrollment and number of teachers at all levels since 1947-48. While in 1947-48, there were 6,814 primary schools with 16,520 teachers and 2.55 lakh students, in 2011-12, the number of primary schools stands at 53,814 with 1.37 lakh teachers and 44.89 lakh students. Similarly upper primary schools and secondary schools are 24,377 and 7,974 respectively.

In 2011-12, the State has 11 universities and 2,098 general colleges including 96 government colleges, 609 aided colleges, 153 block grant colleges, 990 non-government (unaided) colleges, 236 self-financing colleges, and 14 other colleges as per Odisha Economic Survey, 2011-12. There are 101 engineering colleges including 8 government engineering colleges, and 77 private engineering schools / polytechnics including 13 government engineering schools / polytechnics. There are 610 industrial training institutes / centres. In the field of medical education, the State Government has three medical colleges, one dental college, one pharmacy college, three ayurvedic colleges, four homeopathic colleges and one nursing college. Besides, there are three medical colleges, two ayurvedic colleges, two homeopathic colleges and thirty two pharmacy colleges and eleven nursing colleges in the private sector.

In the last five years, the number of schools and colleges as well as the enrollment of students has increased significantly. The District Primary Education Programme (DPEP) was launched in Odisha in 1996-97 with a view to achieve the long cherished goal of universalisation of primary education in the State through district specific planning. The Sarva Sikhya Abhiyan (SSA) program has been implemented in the State. The National Programme for Education of Girls at Elementary Level (NPEGEL) and Kasturiba Gandhi Balika Vidyalaya (KGBV) have also been implemented in the educationally backward blocks of the State. A number of other initiatives including 100-seated hostels for ST and SC girls have been constructed to improve literacy levels and bridge social and gender gaps in literacy levels. Integrated Child Development Services (ICDS) projects under Women & Child Development Department (W&CDD) also impart pre-primary education through anganwadies. Odisha has the potential to do better than the national average if greater attention is paid to improve educational services to ST communities in the interior tribal districts.

1.3.3 Healthcare and Health Infrastructure

Odisha has made significant achievements in reducing its Infant Mortality Rate (IMR) to 61 as per 2010 Sample Registration System (SRS) report. Maternal Mortality Ratio (MMR), as per 2007-09 SRS report, has come down to 258 per 100,000 live births. Five major diseases, also called Panchvyadhi (malaria, leprosy, diarrhea, acute respiratory infections and scabies) contribute to about 70 percent of patient load in the primary health institutions and affect a large number of poor people. Odisha accounts to about one-third of malarial deaths in India. The State Government launched the Panchvyadhi Chikitsa scheme in 2001 to provide free treatment, including free medicines, for these diseases. The scheme has also prescribed clinical protocols to be followed by all doctors and public health institutions for treatment of these diseases.

In 1951, Odisha had 365 public health institutions with 3,112 hospital beds and 1,083 doctors, which had one doctor for each 13,500 persons. In 2010-11, there were 1,944 public health institutions, comprising 140 hospitals, 378 community health centres, 1,227 primary health centres and 210 mobile health units. In addition, private health institutions included 213 hospitals, 378 nursing homes, 1,318 diagnostic centres, 207 pathology labs and 9,621 beds. Besides these 4,020 allopathic health institutions, there are five ayurvedic hospitals with 468 beds, four homoeopathic hospitals with 125 beds, 619 ayurvedic, 561 homoeopathic and nine Unani dispensaries. In addition, there are 6,688 sub-health centres in public sector. Presently, there is one doctor for about 8,300 persons, which shows a considerable expansion in health infrastructure and services.

The National Rural Health Mission (NRHM) was mounted in Odisha in 2005 to improve healthcare and health indicators in rural areas. The main components of NRHM are Reproductive and Child Health-II (RCH), Immunisation, National Disease Control Programme (NDCP) and other initiatives. The main activities under NRHM include: (i) Accredited Social Health Activist (ASHA), (ii) Mainstreaming AYUSH, (iii) Untied funds to Sub-Centers, (iv) Formation of Rogi Kalyan Samities (RKS), (v) Mobile Medical Unit and (vi) Strengthening of PHC/CHC/UGPHC to Indian Public Health Standards.

1.3.4 Nutrition, Drinking Water Supply and Sanitation

Nutritional status of women in Odisha, as indicated in NFHS-3 survey, shows that about 41.4 percent of women in the State had Body Mass Index (BMI) below 18.5, indicating high prevalence of nutritional deficiency. Prevalence of severe malnutrition among children, mothers, old and indigent people was also a matter of serious concern in the State. While about 61.2 percent women suffer from anemia as against the national average of 55.3 percent and 65 percent children remain anemic and suffered from chronic energy deficiency.

Sustained access to safe drinking water and sanitation which is critical for healthy living, has been included under the minimum need programme. Odisha has improved the coverage of safe sources of drinking water including piped water supply, tube wells and shallow wells in rural as well as urban habitations. But water quality in many pockets is a serious concern that needs

to be taken care of. While in some areas, the content of fluoride in ground water is much more than the safety level, many areas show a very high iron concentration. But the major concern lies with majority of the rural population in several parts of the State, who are still not tuned to appreciate the value of safe drinking water.

Sanitation habits of people in many districts are generally far from satisfactory. As per 2001 census estimates, only eight percent of the total rural population had access to basic sanitation facilities. As a result, incidence of diarrhea in interior Odisha is still very high and a major source of infant and other deaths. Other indicators are given in Table 1.2.

Table 1.2: Some human development indicators in Odisha

Sl. No	Type of HDI	Status
1.	Poverty and livelihoods	Odisha witnessed highest poverty reduction of 20.2 percentage points from 57.2 percent in 2004-05 to 37.0 percent in 2009-10 as per Tendulkar Committee methodology
		Core poverty groups include ST (66.03 percent), SC (47.117 percent) in 2009-10
		Southern NSS region (12 southern districts) reported highest poverty incidence (52.35 percent), followed by northern NSS region (nine northern districts) at 41.66 percent in 2009-10
		Real per capita income at 2004-05 prices increased from Rs.10,622 in 1999-2000 to Rs.25,708 in 2010-11
		74.83 percent of rural households and 35.80 percent of urban households in Odisha still use the firewood as fuel for cooking (Census 2001)
2.	Primary Education	Overall literacy rate in 2011 is 73.45 percent (Male: 82.40 percent, Female: 64.36 percent)
		Highest literate district: Khordha: 87.51 percent (Male: 92.55 percent, Female: 82.06 percent)
		Lowest literate district: Nabarangpur: 48.20 percent (Male: 59.45 percent, Female: 37.22 percent)
		Odisha has been allocating resource of about 6 percent of GSDP
3.	Women	Odisha has 53,814 primary schools and 24,377 upper primary schools
		Odisha returned 2,07,45,680 females, yielding the sex ratio of 978 in 2011
		Rayagada reported highest sex ratio of 1048 females and Nayagarh the lowest at 916 females per 1000 male in 2011 census
		Married women taking part in household decision making in Odisha is 41.8 percent (urban: 44.5 percent, rural: 41.2 percent; National Family Health Survey (NFHS-III, 2005-06)

(Contd....)

Sl. No	Type of HDI	Status
4	Child Mortality	Infant Mortality Rate is 61 per 1000 live births (urban: 43, rural: 63) as against national average of 47 (SRS, December 2011)
		65.0 percent of children had some degree of anemia (Male: 63.5 percent, Female: 66.6 percent as per NFHS-III, 2005-06)
		Children under five years of age who were stunted is 45.0 percent, wasted 19.5 percent or underweight is 40.7 percent as per NFHS-III, 2005-06
		Children between 12 to 23 months, who were fully immunised are 62.4 percent (urban: 74.4 percent, rural: 61.0 percent) as per DLHS-3, 2007-08
		Mothers who had more than three or more antenatal check up were 54.6 percent (urban: 74.7 percent, rural: 52.0 percent) as per DLHS-3, 2007-08
5.	Maternal health	Ever-married women who had anemia were 61.2 percent as per NFHS-III, 2005-06
		Institutional delivery were reported at 44.3 percent (urban: 74.4 percent, rural: 44.4 percent) as per DLHS-3, 2007-08 and have increased above 80 percent in recent times
		About 48 percent women suffered from nutritional deficiency as per NFHS-III, 2005-06
		Contraceptive use among currently married women between 15-49 years of age was 50.7 percent (urban: 59.4 percent, rural: 49.0 percent) as per NFHS-III, 2005-06
6.	HIV/AIDS, Malaria and other Diseases	Total HIV positive cases reported by December 2011 were 23, 865 (Male: 14,816, Female: 9,049)
		Number of AIDS cases were 1,542 (highest in Ganjam: 501)
		Number of deaths due to AIDS were 1,321 (highest in Ganjam: 431)
		Transmission routes for HIV in Odisha as per OSACS reports were sexual route: 82.64 percent, parent to child: 6.43 percent, infected syringes and needles: 2.04 percent, blood & blood products: 0.95 percent, unspecified: 3.56 percent and ANC 4.39 percent.
		Awareness regarding HIV/AIDS as per NFHS-III, 2005-06 were, among ever-married age group of 15- 49 years have ever heard of AIDS - Female: 66.0 percent (urban: 87.5 percent, rural: 61.4 percent) and Male: 78.4 percent (urban: 93.6 percent, rural: 74.6 percent)
7.	Drinking water and sanitation	Of 1,41,928 rural habitations, 68,858 had full coverage and 73,070 partial coverage to safe drinking water in 2010-11
		92.29 percent of rural households and 40.31 percent of urban households did not have toilet facilities in their houses as per census 2001.

1.4 PAHELI: Methodology

PAHELI is a rapid assessment of the prevailing status of human development in a district and covers four major human development sectors: life and livelihood, water and sanitation, mother and child health and education. The initiative was taken by the Planning & Co-ordination Department of GoO, to mount the PAHELI survey with financial support from UNDP. The field survey process was facilitated by Human Development Foundation (HDF) and PRATHAM with the help of district NGO partners. One of the objectives of this initiative was to generate district human development report cards for all 30 districts and one for the State as per the people's own perceptions. Periodical PAHELI type surveys may also be used to track the progress of the MDG at the district level.

PAHELI process used participatory approach, basic indicators, simple tools prepared in Odiya and easily replicable processes for collecting primary data. It combined activities, observations and questions and wherever possible, pictorial survey tools were used. The use of pictorial survey tools were found useful as it enhanced participation of local people and surveyors. This approach may prove helpful in other thematic surveys at village, panchayat, block or district levels.

1.4.1 PAHELI Framework

In designing, developing, executing and analysing PAHELI, balancing rigor and simplicity was a key consideration, be it the tool-kit, the data collection processes, analysis of data or the presentation of the district human development report cards. Table 1.3 provides an overview of the development of PAHELI framework.

Table 1.3 PAHELI Framework

Processes	Indicators	Method of data collection	Dissemination of key indicators	Related Government schemes & norms
	Identify 4-5 Key elements in a sector	Data Collection - measures and methods -easy to use by local data collection team, easy to understand by the respondent, common people and replicable	Simple analysis that is easy to comprehend	Key norms of related schemes outlined for dissemination and action
	In Household: Current status, access to provision and quality	Methods - Combination of survey, activities and observations	Design and layout of report cards, display, dissemination and discussion is facilitate	Processing underlying schemes for improving coverage and usage

(Contd....)

Processes	Indicators	Method of data collection	Dissemination of key indicators	Related Government schemes & norms
	In facility, provisions- Current functioning and participation	Data Collection activities are carefully handled for easy understanding of the people, generate interest and create awareness on the scenario	Dissemination at different levels built into the design of the effort	
Outcomes	Key Indicator List	Tool-kit (methods & measures) that can be widely used	Report card that can be easily disseminated	Simple guidelines for linking Government provisions and schemes

1.4.2 PAHELI Principles

Some of the key features in designing the framework for PAHELI are:

Simplicity of tools and methods: Easy to comprehend tools were created to ease the use by common people at the village, block and district level.

The Respondent: The respondent for the household questions was an adult woman in the household. The pictorial survey and associated activities made the PAHELI process much more engaging and participative than usual surveys.

Local Volunteers: PAHELI was carried out by a local organisation at the district level. Volunteers spent 2-3 days in a village. For the people to participate on a voluntary basis on large scale at local level, the design considered possible constraints of time and money.

'Common Design' across All Districts: The idea was to adopt a simple design that would enable comparisons of key indicators across districts.

Choice of Key Human Development Indicators: Indicators chosen are such that they have a direct bearing on the day-to-day lives of the people, and can be linked to national goals and MDGs.

Simple Dissemination: Presentation of findings in formats which are simple to understand, disseminate and can lead to informed action by the concerned people at different levels and in particular at the local level.

Linking the indicators and survey information: Indicator are linked to the objectives of main national development schemes keeping in view the fact that the process and results will contribute to improve the performance of national programmes at the local level.

1.4.3 PAHELI Process

The process which followed designing and carrying out PAHELI was as important as the results and findings of the survey. The design of survey tools emerged through consultative processes held with partners. From each of the participating districts, partners were identified, who were specifically grass-root practitioners or NGOs, having a strong interest and experience on issues of human development. The identification and orientation of local groups was critical to the sustained impact of the PAHELI efforts. Several workshops were held to develop and refine the PAHELI tools.

The village list was provided centrally by the Chief Statistical Advisor to the project and was not allowed to be replaced. Each district received a list of villages with appropriate block information along with data from the 2001 census on total number of households and population. Using standard Probability Proportional to the Size (PPS) sampling technique, 30 villages for each district were randomly selected. In each village, 20 households were randomly selected as standard sample size. Further, in each village every fifth household was selected till the target was reached for the purpose of data collection. This method allowed villages with larger populations to have a higher chance of being selected in the sample. This sampling strategy helped to generate a representative picture of each of the surveyed districts.

1.4.4 Some Features and Limitations of the PAHELI Survey

Some features and limitations of the PAHELI survey are as follows:

- It is a cross-sectoral mapping of the status of human development as perceived by households and villages at the district level, using primary data.
- It uses pictorial survey format to engage the interest of participants, make the results of the survey more directly accessible, and of more interest to them. Other activities are conducted with participants to raise awareness and also to collect data. These activities include asking children to read, solve basic arithmetic questions, testing water and salt in each household and also measure the height and weight of infants.
- It is entirely carried out by local agencies having an active interest in local development issues. It is hoped that local groups shall utilize the data and information generated by PAHELI, for furthering the development agenda of the district.
- The main limitation of the PAHELI survey is that the sample size at the district level has been small. The small sample size at the district level has been dictated by the availability of resources for the purpose. The size of sample at the district level was around 600 or even less than that. Therefore, this limitation should be kept in view while interpreting the results at the district level.

1.5 Summary

This introductory chapter sets in motion the PAHELI process, which discusses the context, scope and time line of PAHELI. This is a bold initiative as it captures people's voices about the impact of health, education and livelihoods interventions that have been implemented by the State Government. The survey was conducted in the year 2009-10 in all 30 districts with lead support from HDF and PRATHAM and also with active co-operation of carefully identified local CSOs, having an interest in local development issues.

The second section briefly profiles Odisha and gives an account of its location, administrative and demographic structure, climate and environment. Odisha has a rich natural resource endowment including water, forests and mineral. The State's economy, that grew and diversified at a very slow pace up to the end of the last century, has grown and diversified at a very fast pace in recent times. During the last decade, the economy has grown at an average annual rate of above nine percent in real terms at 2004-05 prices. Though 60 percent population of the State still depends on agriculture and allied sectors for their income and livelihoods, the share of these sectors has come down to about 20 percent of the State's GSDP. The share of the industry sector has grown to about 25 percent and that of the services sector dominates the economy at about 55 percent.

The third section gives a brief account of the State's efforts to accelerate the socio-economic development process and to improve human development indicators. This section highlights the State's achievements in terms of poverty reduction, literacy and educational infrastructure, healthcare and health infrastructure as well as nutrition, drinking water supply and sanitation. The last section outlines the methodology, framework and principles that have shaped the PAHELI survey. PAHELI offers several unique features which include: (i) a cross-sectoral mapping of the status of human development as perceived by households and villages at the district level, using primary data, (ii) using pictorial survey format to engage the interest of participants, hence making the results of the survey more directly accessible, creating interest in them, raising awareness and simultaneously collecting data. These activities include asking children to read, solve basic arithmetic questions, testing water and salt in each household and also measuring the height and weight of infants, and (iii) it is entirely carried out by local agencies having an active interest in local development issues. It is hoped that local groups shall utilize the data and information generated by PAHELI, for furthering the development agenda of the district. The PAHELI format included 19 questions on water and sanitation, 16 on life and livelihoods, 9 on mother and child health and 6 questions on education. Besides, the format also attempted to capture the extent of village infrastructure, school and anganwadi infrastructure.



2. Life and Livelihoods

2.1 Introduction

Life and livelihoods are important aspects of human development, as the people's lives are shaped the way they earn their livelihoods. The first UN Millennium Development Goal is to reduce poverty and hunger to half by 2015. This chapter discusses some aspects of life and livelihoods, mainly in rural areas in all 30 districts of Odisha. The objective is to ascertain food security of households, the assets (clothes, houses, land, livestock and others) they hold and the main source of their income / livelihood. While some variables like the type of houses (kutcha, pucca) are directly observable and hence becomes easy to collect and collate, some like the household income, exact status of land ownership, some other assets, consumption and expenditure, depends on how accurately the respondent choose to reveal.

To lead a life in rural area, households need to have access to work and assets such as land, livestock and other capital goods. It depends on their available skill and level of knowledge to make a living out of it. One may also take the help of loans either to have a working capital or for their consumption needs. But if they do not get adequate livelihood opportunities in their own settings, they may migrate to other areas where they think they would have better opportunities based on their skills, knowledge, awareness and other capabilities. While in some cases, they migrate to mitigate their vulnerabilities, others may go out in search of greener pastures. Apart from assets and potential risks, rural livelihoods can be enhanced by the opportunity to work. Employment or work has several dimensions. For the study at hand, only the most basic indicators have been chosen such as: nature of work, labour status, days of work and earnings from work. Tables 2.1 to 2.14 summarise the survey results with regard to selected parameters for the State. The base number in each Table indicates the sample size for the given indicator.

2.2 Food and Food Security

PAHELI survey made an attempt to ascertain the type of food rural households consumed and the sources of their staple diet. With a view to ascertain the content of a typical meal, 17,250 households (base) were sampled in all 30 districts. The survey revealed that 30.6 percent households had access to rice and dal, 59.3 percent to rice, dal and vegetables and 6.8 percent included some other items with rice, dal and vegetables. However, the poorest 3.3% households had only rice for their meals. Though the composition of food is generally a proxy to measure the economic status of a household, the availability of food items and habits of the people also influence it. For example, a tribal household living close to a forested region may have good access to meat more frequently and may not have sufficient access to dal at all times. On the other hand, many urban or rural households may have occasional access to

non-vegetarian items in their food. Moreover, tribal households generally are not habitual to take milk or milk products. The content of the food item primarily depend on the availability of a food item in a given area and the ability of the people to buy or procure different food items. Rice and dal is, however, a staple food for rural families, particularly the poor ones. The survey results are summarised in Table 2.1.

Table 2.1: Content of a typical meal

Table 2.1	Household having a typical meal (percent)			
	Only rice	Rice and dal	Rice, dal and vegetables	Rice, dal, vegetables and other
BASE-17,250	3.3	30.6	59.3	6.8

It was also examined as to how or from which sources rural households procured their food. In all, 18,653 households were surveyed across all 30 districts for this purpose. It suggests that around 39.6 percent households met their food needs from agriculture, 12.9 percent from Public Distribution System (PDS) and 42.1 percent met the same by doing labour or other works. Besides, there were rural families that met their food need partially from agriculture and partially from wage labour. It needs a clarification that people's access to PDS in Odisha is generally good. The PDS rice is also accessed by all including farmers, labourers and others in varying degrees and at different times. The State has also introduced a scheme of rice at Rs.2 per kg with a view to improve the economic access of the people to food and to ensure food security for all. Table 2.2 summarises the outcomes of the survey.

Table 2.2: Sources of food

Table 2.2	Households accessing food from different sources (percent)			
	Agriculture	PDS	Labour	Others
BASE-18,653	39.6	12.9	42.1	13.9

2.3 Ownership of Different Types of Assets

This section explores different types of assets that rural households generally have. The assets examined in this section include clothes for women, livestock, consumable and productive durable assets as well as land and housing. The asset profile of households also signifies their economic status.

Table 2.3 analyses data regarding number of sarees or sets of clothes owned by women in a household. The analysis brings out that, out of total 17,345 women surveyed, 32.9 percent women had four or more sets of clothes, 39 percent had three sarees or sets of clothes, 25.5 percent had two sets and 2.6 percent women managed with just one saree or set of clothes.

Table 2.3: Ownership of clothes by women

Table 2.3	Women own sets of clothes (percent)			
	One saree / set of clothes	Two sarees / set of clothes	Three sarees / set of clothes	Four or more sarees / set of clothes
BASE-17,345	2.6	25.5	39.0	32.9

Livestock is an important asset, especially among rural households. This enables households to get additional income and cope better during distress. Therefore, an attempt was made to study the number of households having different types of livestock. Out of 15,790 households surveyed, 5.5 percent had goats / lambs, 41.6 percent had cows and buffaloes and 21.4 percent had a mix of large and small animals. Around 31.5 percent households did not have any livestock. Table 2.4 summarises the livestock ownership status.

Table 2.4: Ownership of livestock

Table 2.4	Households owning livestock (percent)			
	None	Goats / lambs	Cows / buffaloes	Any others
BASE-15,790	31.5	5.5	41.6	21.4

Households also own a variety of durable assets either to facilitate consumption or help augment production. An attempt was made to find out various durable assets that are owned by rural households. Out of the 16,071 households surveyed, 86.9 percent households had some assets. Around 13.1 percent families reported that they did not own any durable asset. It also reveals that 74.5 percent households had their own means of transportation and 56.3 percent had productive durables. Table 2.5 reports the status of ownership of durable assets.

Table 2.5: Ownership of durable assets

Table 2.5	Households owning durable assets (percent)			
	No asset	Some assets	Productive assets	Transport assets
BASE- 16,071	13.1	86.9	56.3	74.5

Land is an important asset for both housing and agricultural purposes. The ownership of land is also perceived as a status symbol. The survey, therefore, explored land ownership by households as reported by respondents. However, land records were not examined. Of the 15,403 households surveyed, only 71.2 percent households owned some land and the rest 28.8 percent had no land. Of those households, which owned some land, 50.5 percent reported owning both homestead and agricultural land, 37.3 percent owned only homestead land and 12.2 percent had only agricultural land. Table 2.6 summarises the outcome of this survey.

Table 2.6: Ownership of land

Table No. 2.6	Households owning land (percent)			
	No Land	Of 71.2 percent households who owned some land		
		Only agriculture	Only homestead	Both type land
BASE- 15,403	28.8	12.2	37.3	50.5

House is also an important asset and the type of house possessed by a household also signifies economic status of the family. For this purpose, 17,348 households were surveyed and the results are summarised in Table 2.7. The analysis suggests that 62.1 percent households had kutcha houses, 14.5 percent reported pucca houses, 21.0 percent had semi-pucca houses and 2.4 percent did not own any house. Of the total households having pucca houses, 54.2 percent had them under Indira Awas Yojana (IAY) and the remaining 45.8 percent constructed with their own resources.

Table 2.7: Ownership of housing assets

Table 2.7	Households with housing assets (percent)				
	No house	Kutcha	Semi-pucca	Of 14.5% hh with pucca houses	
				Thru' IAY	Own Pucca
BASE-17,348	2.4	62.1	21.0	54.2	45.8

2.4 Energy Needs of Rural Households

This sub-section examines how rural households meet their energy needs both for cooking purposes and lighting their houses. Of the 17,278 households that were surveyed, it is revealed that 88.3 percent households used firewood for cooking and only 6.7 percent used gas or smokeless chulha, a kind of stove. Only 1.3 percent households mentioned that they used kerosene stoves and 3.7 percent had coal stoves. Table 2.8 summarises the results of survey.

Table 2.8: Cooking medium used by households

Table 2.8	Households using different cooking medium (percent)			
	Firewood	Coal stove	Kerosene stove	Gas/Bio-gas/Smokeless
BASE-17,278	88.3	3.7	1.3	6.7

It was also attempted to ascertain how much funds a household spent on kerosene both for cooking and lighting purposes. Out of 16,786 households surveyed, 10.6 percent reported no expenditure on kerosene. About 74.1 percent households spent up to Rs.10, 6.6 percent spent Rs.10-15 and 8.7 percent spent more than Rs.15 on an average for kerosene. Table 2.9 summarises these results.

Table 2.9: Daily expenditure on kerosene

Table 2.9	Households spending money on kerosene (percent)			
	Nil	Up to Rs. 10	Rs. 10-15	More than Rs. 15
BASE-16,786	10.6	74.1	6.6	8.7

Out of 17,303 households surveyed, about 59.6 percent used kerosene for lighting purposes, 39.6 percent used electricity and others used gas, solar and bio-gas. Table 2.10 reports the results of this survey.

Table 2.10: Sources of lighting

Table 2.10	Households having main source of light (percent)				
	Kerosene	Electricity	Gas	Solar	Bio-gas
BASE-17,303	59.6	39.6	0.3	0.3	0.2

2.5 Livelihoods and Incomes

This section analyses various options for livelihoods and incomes. Out of 40,421 adults surveyed, 27.5 percent reported to be daily wage earners, 23.7 percent cultivators, 11.9 percent self-employed and 4.9 percent salaried employees. Around 2.7 percent households were artisans and 29.3 percent unemployed. Table 2.11 reports the survey results.

Table 2.11: Major sources of employment

Table 2.11	Respondents with main source of employment (percent)					
	Daily wage	Cultivator	Artisan	Self-employed	Salaried	Unemployed
BASE-40,421	27.5	23.7	2.7	11.9	4.9	29.3

An attempt was made to get an idea on how families met their financial needs. In all 17,243 respondents were surveyed for this purpose. About 51 percent respondents reported that they never took any loan. Of the 49.3 percent households who accessed credit for their different needs, 17.7 percent took loan from formal financial institutions, 12.4 percent from SHGs and 17.3 percent from informal sources. Table 2.12 summarises results of this survey.

Table 2.12: Sources of household debt

Table 2.12	Households having debt by sources (percent)				
	No loan	Not aware	Informal sources	Formal sources	SHG
BASE-17,243	50.7	1.9	16.8	17.7	12.4

2.6 Migration as a Source of Livelihood

Migration has always been an important source of livelihood. While some households or their members migrate to other areas for higher income, some migrate under distressed conditions when they do not find adequate opportunities in their local settings. In order to get an idea of the pattern and type of migration in rural areas, 17,092 respondents were surveyed. The results showed 84.8 percent respondents never migrated. Some members of 10.3 percent households had seasonal migration in search of better income and all members of 3.8 percent households migrated for higher income. Only about 1.1 percent households migrated under distressed conditions unable to find any other means to sustain themselves. Table 2.13 summarises the results of the survey.

Table 2.13: Household migration patterns

Table 2.13	Household migration patterns (in percentages)			
	Nil	Full family, seasonal	Few members, seasonal	Distress
BASE-17,092	84.8	3.8	10.3	1.1

2.7 Households Below the Poverty Line

Like rest of India, Odisha also conducts periodical surveys to find out households which are below the poverty line. There are two measures of poverty in India. The Planning Commission of India has been estimating BPL people (i.e., BPL headcount ratio) on the basis of NSS data on consumption. This measure gives a general picture of how many poor people are there in a State. This measure, however, does not list out who the poor are. The second measure is used by the Ministry of Rural Development, which ascertains the households which are poor on the basis of certain prescribed criteria. This is done on the basis of a census which is popularly called as BPL census, this measure identifies who the BPL households are. These two measures are not comparable. In order to ascertain the extent of BPL households in different districts, 16,347 households were surveyed. The results of the survey indicated that about 59 percent households had a BPL card and about 41 percent did not have BPL card and were perhaps above poverty line. Table 2.14 summarises the results of the survey.

Table 2.14: Households with BPL status

Table 2.14	Households with BPL status (percent)	
	With BPL Card	Without BPL Card
BASE-16,347	59.1	40.9

The southern districts like Malkangiri, Koraput, Rayagada and Nuapada along with Mayurbhanj in the north show a very high incidence of poverty. It is to be noted that as per the NSS 55th round in 1999-2000, Odisha had 47.2 percent BPL persons (not households) as per the Planning Commission estimates. On the other hand, as per the procedures prescribed by

Ministry of Rural Development, the State Panchayati Raj Department had conducted a BPL census in 1997, which is still in use. As per the 1997 BPL census, the State reported about 67 percent BPL households (not persons). The Planning Commission measures for 2004-05 and 2009-10 are based on the Tendulkar Committee methodology which is different from the previous estimates up to 1999-2000.

2.8 Summary

This chapter has examined some aspects of life and livelihoods, mainly in rural areas in all 30 districts of Odisha. Several indicators including food type and food security, household assets (clothes, houses, land, livestock and others), their employment patterns, migration, and BPL status of households have been assessed based on the perceptions of the sampled households. The outcomes of the household surveys have been summarised in Table 2.1 through 2.14.

Some findings of the survey on life and livelihoods are summarised in Table 2.15 by districts along with their median, standard deviation, co-efficient of variation (COV) and maximum/minimum values. The parameters having a comparatively low COV indicate less disparity among districts (e.g., kutcha housing and use of fire wood for cooking), whereas indicators that display a high COV (e.g., number of meals a day, number of sarees owned by women), imply a large disparity among districts.

Table 2.15: Some indicators on life and livelihoods by districts (Percent)

District name	Two or less sarees	Kutcha or no house	Fire-wood for cooking	Use of Kero-sene for Lighting	Land-less	Household With no Loan	Migrating Household	House hold without iodized Salt
Angul	51.8	63.7	53.3	76.0	12.7	57.8	28.4	77.2
Balangir	24.6	80.3	68.4	64.7	33.3	37.3	30.2	30.9
Balasore	5.9	77.4	69.4	26.6	35.5	31.9	21.0	9.9
Bargarh	9.6	72.2	79.1	55.1	7.3	51.8	3.5	11.7
Boudh	28.6	78.1	82.0	79.4	0.0	37.5	15.4	73.5
Bhadrak	26.9	73.8	82.9	24.1	29.0	32.2	17.3	31.0
Cuttack	2.8	36.0	85.0	36.4	6.3	62.5	7.4	30.2
Deogarh	12.6	81.9	85.1	86.1	34.2	32.7	3.8	69.4
Dhenkanal	21.0	59.8	85.8	46.5	11.6	62.2	3.2	28.2
Gajapati	30.5	59.6	88.2	56.0	0.0	71.8	20.5	10.0
Ganjam	17.8	30.5	88.6	51.1	51.8	33.9	27.5	64.1
Jagatsinghpur	3.1	29.2	89.9	47.3	45.9	46.4	7.1	29.7
Jajpur	12.6	45.7	90.4	29.8	51.0	46.3	5.2	3.6
Jharsuguda	15.1	70.1	90.4	58.0	4.4	62.5	0.8	4.3

(Contd....)

District name	Two or less sarees	Kutcha or no house	Fire-wood for cooking	Use of Kero-sene for Lighting	Land-less	Household With no Loan	Migrating Household	House hold without iodized Salt
Kalahandi	43.5	56.8	90.6	82.1	35.9	43.0	23.7	25.3
Kandhamal	70.7	64.7	90.9	88.5	43.7	49.0	11.6	51.4
Kendrapara	28.6	70.1	92.0	46.9	46.8	64.9	23.9	14.5
Keonjhar	40.0	70.9	93.0	77.4	27.2	38.7	16.0	21.5
Khordha	20.3	56.7	93.1	38.6	58.6	51.5	14.8	55.8
Koraput	7.5	56.1	93.5	79.8	52.7	39.5	11.0	35.3
Malkangiri	29.8	76.9	94.3	87.7	1.1	53.6	18.0	48.1
Mayurbhanj	20.1	74.5	94.4	82.7	27.6	74.4	21.7	8.6
Nabarangpur	63.7	79.8	94.6	96.0	7.5	55.7	11.7	76.6
Nayagarh	40.7	57.0	94.8	51.5	46.3	62.4	23.8	65.0
Nuapada	31.4	60.6	94.8	53.9	7.6	59.1	11.8	17.4
Puri	44.8	49.4	96.0	31.1	27.8	19.1	27.0	56.7
Rayagada	38.2	70.9	97.2	62.7	3.7	72.6	19.1	35.3
Sambalpur	19.4	73.7	97.2	56.2	32.9	56.3	9.0	33.6
Subarnapur	52.9	80.8	97.6	69.9	25.7	50.7	8.2	46.6
Sundargarh	31.4	80.2	98.8	58.2	11.5	62.7	13.7	10.4
Odisha	28.1	64.5	88.3	59.6	28.8	50.7	15.2	35.8
STDEV	17.4	14.8	10.0	20.3	18.5	13.9	8.4	23.1
VARIANCE in percentage	61.60	22.96	11.27	33.83	71.26	27.42	55.04	64.55
MAX	70.7	81.9	98.8	96.0	58.6	74.4	30.2	77.2
MIN	2.8	29.2	53.3	24.1	0.0	19.1	0.8	3.6



3. Maternal and Child Health

3.1 Introduction

MCH has attracted attention of health and development community the world over. The UN MDGs also prescribe that IMR should be reduced by two-third and MMR by three-fourth between 1990 and 2015. Out of the 26 million infants born in India each year, about 2.3 million die before reaching the age of five and about 1.2 million during the first month of their birth³. This chapter, therefore, discusses the status of MCH in different districts of Odisha. The key indicators include institutional deliveries, administration of iron tablets and anti-natal check up of pregnant women, early care of babies through professional inputs and immunisation, nutritional support to pregnant women and new born babies including breast feeding, health care of women and children on diarrhea and other killer diseases.

There is a consensus among experts that malnutrition manifests itself in children in the age group of 3-5 years. Many infants in 6-12 month age group also suffer from malnutrition to some extent, if they are not provided with adequate nutrition. Child health experts and nutritionists consider four practices as important for laying a strong health and nutritional foundation for children. These include: (i) breast feeding within one hour of birth, (ii) commencing of breast feeding from the first day onwards, (iii) exclusive breast feeding until 6 months, and (iv) complementary feeding with mashed solids from 6 month onwards.

There are well established protocols for pregnant women and mothers. The key questions that need be addressed are: (i) whether mothers take good care of themselves before child birth, (ii) whether a child is born under safe conditions and with professional assistance, (iii) whether good infant feeding practices are followed by mothers in rural households, and (iv) whether babies are adequately immunised and well treated against diarrhea and other killer diseases. The following Table 3.1 through 3.6 summarises the results of the survey that was mounted to assess the status of health of mothers and infants on the basis of these questions.

3.2 Care of Pregnant Women and Child Birth

Out of total 4,460 babies surveyed throughout the State, 59.4 percent babies were reported to be born in a health institution. While 56.6 percent took birth in public health institutions, 2.8 percent were born in private health institutions. But 40.6 percent babies were delivered at home. About 87.3 percent pregnant women took iron supplements to avoid anemic conditions and 72.7 percent had at least one pre-natal check-up. Widespread anemia from iron deficiency exists among Indian women, particularly pregnant women. This deficiency affects safe

³ Source: Report of the Working Group on Integrating Nutrition with Health for 11th Five Year Plan, Government of India, Department of Women and Child Development.

motherhood as well as child weight. Anemia among women has increased over the past seven years (i.e., from NFHS II to NFHS III), from 52 percent to 56 percent among married women and from 50 percent to 58 percent among pregnant women. In this context, provision of iron tablets for at least 3 months for pregnant women is an important step towards safe motherhood and healthy children. Table 3.1 summarises the results of the survey as regards care of pregnant women and institutional or assisted deliveries of babies.

Table 3.1: Care of pregnant women and births of babies

Table 3.1	Pregnant women who (percent)		Where babies were born (percent)		
	Took iron supplement	Had at least one pre-natal check-up	Health Institution		Home
			Public	Private	
BASE- 4,460	87.3	72.7	56.6	2.8	40.6

3.3 Child Healthcare

The World Health Report, 2002 suggests that malnutrition causes 60 percent of the 10 million child deaths globally during first 6 months and up to 5 years of age. It further suggests that breast feeding within one hour of birth and exclusive breast feeding for first 6 months play a major role in addressing this problem. Therefore, ascertaining the breast feeding behavior was considered important. Out of 4,353 babies surveyed throughout the State, about 89 percent children were reported to be breast-fed within one hour of birth. With regard to the initiation of breast feeding, it was reported that approximately 95 percent babies had been fed on the first day of birth. Table 3.2 summarises the results of the survey regarding breast feeding behavior.

Table 3.2: Breast feeding practices in Odisha

Table 3.2	Babies who were breast-fed (percent)			
	Within one hour of birth	On day of birth	One day after birth	Two days after birth
BASE- 4,353	88.9	94.5	96.0	96.4

Out of 3,405 babies surveyed for complementary feeding practices, about 45.8 percent babies were exclusively breast-fed during the first 6 months and 6.2 percent babies were given solid food before completion of 6 months. About 44.1 percent babies were given solid food within 6-9 months and 49.7 percent after 10 months of their age. Table 3.3 summarises the results of this survey.

Table 3.3: Complimentary feeding practices for young babies

Table 3.3	Babies who were given complementary feeding (percent)			
	Only breastfed till 6 months	Solid food before 6 months	Solid food in 6-9 months	Solid food after 10 months
BASE- 3,405	45.8	6.2	44.1	49.7

By the age of one year, children are expected to receive a BCG vaccination against tuberculosis, a measles vaccination, and three doses each of polio and DPT vaccine. Within three years of age, children are expected to have full vaccination coverage. In order to assess the status of immunisation among children in 0-36 month age group, 4,167 babies were surveyed in all 30 districts. It was observed that 13.4 percent children had no immunisation card. Of those who had immunisation cards, 36.4 percent children received complete immunisation and 7.4 percent babies received only polio drops. About 1.6 percent children received no immunisation within the prescribed age group. Table 3.4 reports the results of this survey.

Table 3.4: Immunisation status of children in 0-36 month age group

Table 3.4	No Immunisation card	Immunisation status of children in 0-36 month age (percent out of 86.6 percent of children receiving immunisation card)			
		Full Immunisation	Partial Immunisation	Only Polio	No Immunisation
BASE- 4,167	13.4	36.4	54.6	7.4	1.6

Out of 4,167 babies surveyed for visits of health workers at home and services received at anganwadi centers (AWCs) for polio and other services, 79.5 percent babies were reported to have been seen by health workers for polio at home. And about 79 percent were examined at AWC. To track immunisations, it is essential to have an accurately maintained immunisation card, which is also a basic indicator to show some contact with the health system. Table 3.5 reports the results of the survey.

Table 3.5: Child healthcare by health workers and at AWC

Table 3.5	Children (0-36 month age) receiving health care (percent)			
	Polio at home	Polio and others at home	Polio at AWC	Polio and others at AWC
BASE 4,167	79.5	79.4	27.6	62.8

With a view to ascertain the onslaught of diarrhea among children, parents of 4,108 children in 0-36 month age group were surveyed throughout the State. This was done to understand the incidence of diarrhea within one month of the time in which the questionnaire was administered. It was observed that about 55 percent children suffered from diarrhea in the particular period and from them about 77 percent had been treated with Oral Rehydration Salts (ORS) and about 23 percent were not treated with ORS. Table 3.6 summarises the outcomes of this survey.

Table 3.6: Diarrhea incidence and its treatment

Table 3.6	Children (0-36 month) suffering from, and receiving treatment against, diarrhea (percent)		
	Last month	Treated with ORS	Not treated with ORS
BASE – 4,108	54.9	77.3	22.7

3.4 Summary

This chapter has analysed the status of MCH care. Some aspects that have been addressed are: (i) whether pregnant women take good care of themselves before child birth, (ii) whether a child is born under safe conditions and with professional assistance, (iii) whether good infant feeding practices are followed by mothers in rural households and (iv) whether babies are adequately immunised and well treated against diarrhea. Table 3.1 through 3.6 summarises the outcomes of the surveys. Some healthcare indicators are also given in Table 3.7 for each district. The standard deviation and CoV of the analysed results reflect inter-district disparities in this regard. The indicators with higher CoV imply higher disparity among districts. For example, there is significant inter-district variability regarding child birth at home. On the other hand, there is low inter-district variability on the proportion of mothers taking iron pills and adopting early breast feeding.

Some highlights of the findings along with the recommendations are as follows:

- About 57 percent children were born in public health institutions. Khordha district reported the least number of home deliveries at 7.4 percent, whereas Nabarangpur reported highest at 71.7 percent.
- About 87 percent pregnant women took iron tablets. Bargarh district reported cent percent results and Ganjam showed a low 68.4 percent compliance. About 73 percent pregnant women had at least one pre-natal check-up during their pregnancy. The district-wise comparison showed that Sundargarh reported the highest compliance of 95.8 percent, whereas Boudh had lowest of 48.6 percent.
- While 74.3 percent babies were visited at home by health workers, Bhadrak reported low with only 52 percent and Gajapati showed highest results with 97 percent.
- About 55 percent children under 3 year age group suffered from diarrhea in the month before the survey. Here district-wise variations have been observed. Rayagada surprisingly reported lowest cases of diarrhea at 31 percent, and Jagatsinghpur highest at 90 percent. Regarding children having diarrhea and treated with ORS Statewide, 77 percent babies were treated with ORS, highest being at Balangir which recorded 97.4 percent.

Table 3.7: Some mother and child healthcare indicators by district (Percent)

District	Children born at home	Children suffered from Diarrhea	Children given ORS	Mothers took iron tablets	Mothers with at least one check-up	Babies visited by Health Workers	Breast feeding on the 1st day	Babies only breast-fed for 6 months
Angul	47.6	47.9	87.9	82.3	71.2	82.7	92.9	74.5
Balangir	27.6	77.8	97.4	97.5	74.4	84.5	96.6	26.3
Balasore	35.2	70.1	83.6	82.8	77.0	67.5	91.1	48.6
Bargarh	17.1	37.4	72.1	100.0	79.3	89.5	88.5	50.5
Boudh	51.1	40.9	63.6	92.8	48.6	72.4	80.9	48.0
Bhadrak	29.9	73.8	85.7	81.6	85.4	52.2	87.9	58.5
Cuttack	18.0	43.7	92.1	94.4	80.2	78.4	95.5	62.8
Deogarh	39.8	44.4	80.4	94.3	59.7	93.1	73.5	48.9
Dhenkanal	35.7	70.2	56.3	83.0	59.0	80.3	93.1	17.8
Gajapati	64.0	63.6	95.7	98.4	71.0	97.4	91.0	87.7
Ganjam	24.6	59.7	54.9	68.4	67.0	55.9	92.3	66.7
Jagatsinghpur	11.3	90.1	81.3	92.9	79.1	75.8	94.3	39.3
Jajpur	14.5	47.1	79.2	78.1	70.8	65.4	96.6	48.9
Jharsuguda	25.7	36.6	81.1	97.1	64.7	93.8	99.0	63.9
Kalahandi	52.2	59.1	78.8	90.8	72.5	76.3	83.4	47.1
Kandhamal	56.9	52.7	74.0	76.1	66.7	72.8	80.0	54.0
Kendrapara	32.5	62.4	64.7	83.8	60.3	76.4	96.1	68.7
Keonjhar	41.7	66.4	77.7	84.4	63.2	61.3	79.2	34.4
Khordha	7.4	50.8	69.2	93.3	63.3	72.2	88.7	81.1
Koraput	66.0	59.3	79.7	77.9	55.4	74.4	90.4	48.1
Malkangiri	61.0	31.9	52.2	81.2	69.0	67.5	76.4	29.9
Mayurbhanj	42.2	63.4	71.3	77.8	68.6	74.3	92.7	50.4
Nabarangpur	71.7	52.3	68.9	87.7	88.0	88.8	85.5	36.7
Nayagarh	36.1	61.1	77.9	80.7	77.5	55.5	98.6	70.5
Nuapada	49.6	51.9	94.1	96.5	75.8	78.6	91.2	20.4
Puri	15.2	45.7	95.2	96.0	89.6	83.3	93.9	50.0
Rayagada	58.0	30.8	89.3	90.9	90.0	87.6	83.9	57.8
Sambalpur	31.7	41.0	78.0	94.2	93.2	69.1	80.5	38.2
Subarnapur	28.2	50.9	84.0	88.4	94.8	56.6	94.4	65.0
Sundargarh	30.6	61.4	77.1	91.6	95.8	55.7	89.7	31.6
Odisha	40.6	54.9	77.3	87.3	72.7	74.3	94.5	45.8
STDEV	17.4	14.0	11.9	8.0	12.2	12.4	6.8	17.3
VARIANCE in percent	46.56	25.56	15.29	9.16	16.58	16.58	7.61	33.96
MAX	71.7	90.1	97.4	100.0	95.8	97.4	99.0	87.7
MIN	7.4	30.8	52.2	68.4	48.6	52.2	73.5	17.8



4. Drinking Water and Sanitation

4.1 Introduction

Accessing safe drinking water and sanitation facilities has been perceived as a basic need for healthy life. Therefore, it is considered an integral part of human development paradigm. The UN MDG is to reduce the number of people in the World without sustainable source of clean drinking water and basic sanitation to half by 2015. The PAHELI survey has also explored several dimensions of drinking water and sanitation behavior in all 30 districts of Odisha, the outcomes of which are discussed in this chapter.

The chapter analyses eleven issues pertaining to drinking water and three parameters of sanitation aspects. The issues that have been considered relevant for drinking water include: (i) sources of drinking water, (ii) distance of drinking water source from habitations, (iii) quantity of water used, (iv) frequency with which water is collected daily, (v) time spent in collecting water, (vi) type of drinking water source, (vii) water scarcity, (viii) remedial actions to deal with water scarcity, (ix) contamination in drinking water, (x) efforts to purify drinking water, and (xi) storage of drinking water. The basic sanitation behavior that has been examined in this report focuses on three aspects: (1) use of toilets, (2) practice of hand-washing, and (3) materials used for hand-washing. Tables 4.1 through 4.14 summarise the results of the survey. Some aspects of drinking water and sanitation by districts are listed in Table 4.15.

4.2 Sources of Drinking Water

An attempt was made to get an understanding of various sources that are used by communities for assessing drinking water both in normal times and during summer season. In all, 17,424 households were surveyed in 30 districts for this purpose. The analysis of the survey results indicates that 71.8 percent households used hand pumps, 19.7 percent used wells, 4 percent collected their drinking water from nearby rivers and 3.1 percent depended on water tankers even during normal time. It was also observed that 1.4 percent households used pond water for drinking purposes. As the availability of water during summers becomes scarce, the dependence on certain water sources gets affected. It was observed that during summers, 70.0 percent households used hand pumps, 19.2 percent used wells, 5.5 percent collected their drinking water from nearby rivers and 3 percent depended on water tankers. However, 2.3 percent households collected water from ponds for drinking purposes during summers. Table 4.1 summarises the results of the survey on sources of drinking water.

Table 4.1: Sources of drinking water

Table 4.1 BASE-17,424	Households using drinking water from (percent)				
	River	Pond	Well	Hand pumps	Tanker
Normal Times	4.0	1.4	19.7	71.8	3.1
Summer season	5.5	2.3	19.2	70.0	3.0

The State has been striving to create sources of safe drinking water nearer to habitations. All over Odisha, 16,745 households were surveyed to get an idea on the type of sources of drinking water nearer to their habitation. The results indicated that 59.9 percent households used safe drinking water sources created by the Government, 19.6 percent used privately created sources and 6.1 percent used community created water sources. Table 4.2 reports these results.

Table 4.2: Type of drinking water sources

Table 4.2	Percentage of drinking water drawn from source owned by (percent)			
	Government installed	Private	Community	Don't know
BASE – 16,745	59.9	19.6	6.1	14.4

It was also ascertained as to how far households travelled to collect drinking water. In all, 17,425 households were surveyed to get an idea on the distance a household travelled to fetch water for consumption purpose. The results indicate that 80.8 percent households collected drinking water from sources very near to habitation, 16.8 percent travelled less than one km, and 2.4 percent covered a distance of more than one km. During summers, 70.7 percent households collected drinking water from sources very near to habitation, 21.6 percent travelled less than one km, and 7.7 percent covered a distance of more than one km. Table 4.3 reports the results of the survey.

Table 4.3: Distances of water sources from habitations

Table 4.3	Households travelling distances to collect water (percent)		
	More than 1 km	Less than 1 km	Nearby/home
Base – 17,425			
Normal times	2.4	16.8	80.8
Summer season	7.7	21.6	70.7

4.3 Need for Water and Efforts for Water Collection

The amount of water needed by a household for consumption is an important dimension. In all, 16,492 households were surveyed to get an idea on the quantity of water required by a household on a daily basis for their consumption for cooking, domestic and other uses. The water requirement was measured in terms of buckets of normal size as used by villagers. It was revealed that 28 percent households required up to two buckets, 54.4 percent from three to five buckets, 16.5 percent around 6-10 buckets, and 2.1 percent required more than 11 buckets of water per day only for cooking purpose. About 12.7 percent households needed up to two buckets, 48.3 percent 3-5 buckets, 31.4 percent about 6-10 buckets and 7.6 percent needed 11 or more buckets of water per day for domestic purpose. Further, 14.5 percent households required up to two buckets, 38.5 percent from 3-5 buckets, 35 percent around 6-10 buckets and 12 percent needed more than 11 buckets per day for other purposes. Table 4.4 summarises the survey results.

Table 4.4: Quantity of water needed and used

Table 4.4	Households needing and using buckets of water (percent)			
Base – 16,492	Up to two	Three to five	Six to 10	More than 11
Cooking	28.0	54.4	16.5	2.1
Domestic	12.7	48.3	31.4	7.6
Other	14.5	38.5	35.0	12.0

A survey was also undertaken to understand the number of times a household collected water for use. For this purpose, 17,416 households were surveyed and the results indicated that 72.3 percent households collected water for more than two times, 26.5 percent about two times and 1.2 percent only once. The variance may be due to the distance travelled by households for collection of water. Households with less distance collected water more frequently. Table 4.5 summarises these results.

Table 4.5: Frequency of collection of the required water in a day

Table 4.5	Households daily frequency for water collection (percent)		
	Once	Twice	More than twice
BASE-17,416	1.2	26.5	72.3

With regard to the time spent by households to collect water for their use, 17,448 households were surveyed and the results indicated that 70.5 percent households spent less than one hour, 25.3 percent spent one to two hours and 4.2 percent more than two hours in a day during normal times. During summers, 55.4 percent households spent less than 1 hour, 36 percent 1-2 hours and 8.6 percent more than 2 hours per day for collection of water. Table 4.6 summarises the results of the survey.

Table 4.6: Time spent by households in fetching water for their uses

Table 4.6	Households spending time for daily water collection (percent)		
Base – 17,448	More than 2 hrs	1-2 hrs	Less than 1 hr
Normal times	4.2	25.3	70.5
Summer season	8.6	36.0	55.4

It has been observed from the above surveys that in summer months, households generally face some water shortages. Therefore a survey was conducted to understand the period during which the households experience water shortages and the measures taken to mitigate it. To determine the periods of water shortages, 15,789 households were surveyed. The survey result indicated that 25.8 percent households faced water shortages for 1-2 months, 46 percent for around 3-4 months and 4.7 percent for more than 4 months. The results of the survey are summarised in Table 4.7.

Table 4.7: The Periods of Water Shortages

Table 4.7	Households facing water shortage for (percent)			
	No shortage	1-2 months	3-4 months	More than 4 months
BASE – 15,789	23.5	25.8	46.0	4.7

In all, 17,122 households were surveyed to understand the measures taken to overcome water shortages. It may be observed from Table 4.8 that 48.1 percent households reduced their use of water, 12.4 percent households used un-potable water and 3.7 percent households migrated to other places. However, 35.8 percent households reported that they did nothing to overcome water shortage, which indicates that there might not be any acute shortage of water. The results of the survey are summarised in Table 4.8.

Table 4.8: Remedial action to mitigate water shortages

Table 4.8	Households remedial action to meet water shortage (percent)			
	Migration	Lessen use	Use un-potable water	Do nothing
BASE – 17,122	3.7	48.1	12.4	35.8

4.4 Water Pollution and Purification Efforts

With an objective to get an idea on the safety level of the available drinking water, used by people, water samples were collected from 4,585 households in all 30 districts. The analysis of the test shows that 46.8 percent households used contaminated water for their consumption and 53.2 percent had access to safe drinking water as indicated in Table 4.9.

Table 4.9: Quality of water used by households

Table 4.9	Households using contaminated or safe water (percent)	
	Safe	Contaminated
BASE – 4,585	53.2	46.8

A survey was also carried out to find the steps taken by households to purify water for their consumption. To understand it, 17,223 households were surveyed. The results of analysis indicate that 79 percent households took no step to purify water to be used by them. About 10 percent households filtered water before use, 7.5 percent boiled water before use and 3.6 percent used bleaching powder or halogen tablets for water purification. The results are given in Table 4.10.

Table 4.10: Purification of Drinking Water

Table 4.10	Households efforts and methods for water purification (percent)				
	No Effort	Boiling	Halogen tablets	Bleaching powder	Filtration
BASE - 17,223	79.0	7.5	0.6	3.0	9.9

About 17,264 households were surveyed to understand the process of storing water for consumption. The results of the survey indicate that 81.9 percent households stored water in metal containers, 12.4 percent used earthen pots and 5.7 percent used plastic containers. Table 4.11 summarises the results.

Table 4.11: Storage of Drinking Water

Table 4.11	Households used following containers for storing water (percent)		
	Earthen	Metal	Plastic
BASE - 17,264	12.4	81.9	5.7

4.5 Household Sanitation

The State Government and Gol have been promoting the use of toilets, so effort was taken to find out the number of households using toilets. Out of 17,386 households surveyed for the purpose, it was observed that 86.5 percent households still defecated in the open, 11.5 percent households used private toilets and only two percent used public toilets. The results are summarised in Table 4.12.

Table 4.12: Use of toilets

Table 4.12	Households who used toilets (percent)		
	Used public toilet	Used private toilet	defecated in open
BASE - 17,386	2.0	11.5	86.5

The State as well as Central Governments have also been promoting hand washing behavior after the use of toilet and before & after eating. To understand their behaviour regarding this, 17,370 households were surveyed. The results summarised in Table 4.13 suggest that about 92 percent households washed hands before eating, 72.3 percent households washed hands after toilet use and 37.3 percent people washed hands at all times.

Table 4.13: Practice of washing hands

Table 4.13	Households practicing washing of hands (percent)			
	Never	Before eating	After toilet use	At all times
BASE - 17,370	1.04	92.4	72.3	37.3

A survey of 16,092 households was undertaken to find out the materials used by households for washing hands. The results indicate that 49.1 percent households washed hands with soap, 27.1 percent used mud and about 10 percent used ash. About 14 percent households used other materials which they did not specify. Table 4.14 summarises the results of the survey.

Table 4.14: Materials used for washing hands

Table 4.14	Households used the following materials for washing hands (percent)			
	Soap	Ash	Mud	Others
BASE – 16,092	49.1	9.8	27.1	14.0

4.6 Summary

This chapter has analysed eleven issues pertaining to drinking water and three parameters of sanitation aspects. The issues include: (i) sources of drinking water, (ii) distance of drinking water source from habitations, (iii) quantity of water used, (iv) frequency with which water is collected daily, (v) time spent in collecting water, (vi) type of drinking water source, (vii) water scarcity, (viii) remedial actions to deal with water scarcity, (ix) contamination in drinking water, (x) efforts to purify drinking water, (xi) storage of drinking water, along with (i) use of toilets, (ii) practice of hand-washing, and (iii) materials used for hand-washing. Tables 4.1 through 4.14 summarised the results of the surveys. District-wise values of key indicators related to drinking water and sanitation are summarised in Table 4.15, which also lists the maximum, minimum, Standard Deviation and CoV for each parameter.

Some major observations of the surveys on drinking water and sanitation are as follows:

- About 72 percent households reported having access to hand pumps, bore wells and piped water supply. However, in summer months, some hand pumps do not function. Kandhamal district reported the least access at 24.5 percent, while Bhadrak reported highest access at 98 percent.
- Public sources of safe drinking water were of the order of 60 percent, though there were inter-district variations.
- About 81 percent households reported having access to drinking water close to home or at home. Angul district reported poorest access to drinking water source at or near home with only 62 percent. And Jharsuguda reported the highest access with 98 percent households having access.
- About 71 percent households spent less than one hour in fetching water. Jajpur district had least number of such families with only 36.3 percent, while Balasore reported the highest number with 93 percent households spending less than an hour to fetch water.
- Of all samples of water that were tested for contamination, 47 percent households were found using contaminated water. Nuapada district had serious water quality problems, reporting contamination at 93 percent and Bargarh a low of only 9 percent.
- Water shortage was expected for a minimum of 1-2 months by 26 percent households in a year. Only 24 percent households reported that they did not experience any water shortage.
- Sanitation conditions in rural areas are far from satisfactory. About 87 percent households which were surveyed reported practicing open defecation.

Table 4.15: District-wise values of some indicators for safe drinking water and sanitation (Percent)

District	Water Supply by hand pump	Water stored in Metal Container	Source of water at or close to home	No purification	Bacterial Contamination of drinking water	Water collection- more than three times a day	Time taken less than one hr to collect water	Water shortage- Greater than four Months a Yr	Open Defecation	Washing hands before eating	Washing hands after going to toilet
Angul	54.8	85.1	61.8	84.5	57.6	33.3	51.0	5.7	92.0	90.3	39.2
Balangir	88.7	84.6	71.2	89.1	66.7	49.5	89.5	4.2	93.6	91.3	74.0
Balasore	97.2	73.9	82.9	94.5	59.0	82.4	92.8	5.7	62.4	82.5	49.3
Bargarh	92.8	88.4	97.0	96.4	8.9	69.3	85.7	0.3	90.0	95.2	97.0
Boudh	75.6	73.0	82.6	89.5	44.9	49.6	59.5	11.4	93.1	57.8	32.3
Bhadrak	97.7	77.2	95.5	95.6	9.9	80.5	92.5	2.0	70.1	93.7	77.8
Cuttack	77.8	81.8	77.8	62.3	59.0	79.0	62.0	0.5	77.3	99.3	98.3
Deogarh	70.2	75.3	91.8	94.0	21.3	85.4	62.1	3.3	95.4	99.0	95.2
Dhenkanal	25.7	74.5	80.2	79.2	78.6	46.8	72.3	7.6	87.6	99.3	88.4
Gajapati	45.4	91.3	64.2	19.8	58.9	2.5	58.8	8.1	74.4	88.8	85.2
Ganjam	45.8	88.8	79.9	80.9	23.5	25.5	86.7	6.1	81.2	77.2	14.5
Jagatsinghpur	97.3	57.5	90.2	96.1	83.8	80.8	81.5	0.0	83.1	99.8	100.0
Jajpur	41.9	75.5	80.3	58.3	46.6	34.2	36.3	3.1	80.9	96.8	68.6
Jharsuguda	87.2	74.4	97.6	87.6	41.1	58.8	81.8	0.6	92.2	88.3	95.2
Kalahandi	91.8	92.9	69.1	54.6	45.1	39.9	61.9	3.6	88.2	89.8	68.5
Kandhamal	24.5	96.8	81.2	57.4	50.0	31.5	77.6	0.9	93.7	94.9	59.3
Kendrapara	95.3	87.6	83.1	95.8	48.9	79.3	61.0	2.4	85.3	98.7	84.5

(Contd....)

District	Water Supply by hand pump	Water stored in Metal Container	Source of water at or close to home	No purification	Bacterial Contamination of drinking water	Water collection- more than three times a day	Time taken less than one hr to collect water	Water shortage- Greater than four Months a Yr	Open Defecation	Washing hands before eating	Washing hands after going to toilet
Keonjhar	78.2	92.1	68.1	67.1	40.8	13.4	59.1	11.6	92.5	99.5	92.4
Khordha	52.6	61.2	82.3	90.0	78.6	17.7	81.7	6.5	85.0	71.7	71.0
Koraput	47.7	96.2	82.7	63.5	24.0	13.8	58.5	10.2	92.8	96.4	56.0
Malkangiri	81.6	96.4	81.1	67.2	69.0	11.9	67.7	11.1	92.6	93.9	60.1
Mayurbhanj	45.0	92.2	88.1	78.4	89.7	58.3	90.8	5.1	90.3	99.7	91.4
Nabarangpur	92.1	92.8	79.7	89.0	28.6	15.0	64.7	3.0	99.5	96.8	92.7
Nayagarh	62.5	80.7	78.7	85.0	29.9	5.5	71.2	5.1	81.3	99.0	87.9
Nuapada	80.3	80.0	72.5	38.3	92.8	41.2	76.1	5.0	88.7	96.6	71.0
Puri	93.7	66.1	88.1	99.3	56.6	52.6	39.1	4.7	72.8	99.3	82.0
Rayagada	86.7	89.6	78.5	81.9	19.9	17.0	69.9	5.5	88.4	87.1	48.2
Sambalpur	78.1	74.0	84.8	85.8	45.5	47.3	68.8	3.3	91.5	94.9	79.4
Subarnapur	67.2	73.1	65.6	92.1	53.2	51.8	65.0	4.0	92.1	97.5	70.5
Sundargarh	75.1	84.3	86.1	81.3	20.8	29.4	85.5	4.4	92.1	95.3	37.1
Odisha	71.8	81.9	80.8	78.6	46.8	43.4	70.5	4.7	86.5	92.4	72.3
STDEV	22.0	10.5	9.3	18.8	23.1	25.5	14.8	3.2	8.4	9.4	22.2
VARIANCE in percent	30.65	12.76	11.48	24.00	47.69	58.80	21.08	67.27	9.74	10.22	30.73
MAX	97.7	96.8	97.6	99.3	92.8	85.4	92.8	11.6	99.5	99.8	100.0
MIN	24.5	57.5	61.8	19.8	8.9	2.5	36.3	0.0	62.4	57.8	14.5



5. Education

5.1 Introduction

Education, employable skills and awareness are of considerable importance for human development. The UN MDG prescribe that primary education should be universalised and gender disparity in literacy and education should be eliminated at all levels by 2015. The State, therefore, lays greater emphasis on spreading education among all sections of the society and improving the quality of education at all levels. Odisha has taken a number of initiatives to improve level of education among all classes including ST, SC and women across all districts. This chapter discusses the status of primary education and adult literacy in Odisha.

The chapter deals with seven basic issues, which include: (i) enrollment of children in pre-schools (i.e., 3-5 year age group), (ii) enrollment of children at primary level (i.e., 6-14 year age group), (iii) quality of education, particularly reading and arithmetic skills at class I and II level, (iv) quality of education, particularly reading and arithmetic skills at class III-V level, (v) status of functional literacy among adults, (vi) education levels among adults and (vii) reading abilities of adults. The questions were administered at the household level. An attempt has been made to assess whether children have basic learning levels, can they read fluently, write with ease and do simple arithmetical operations. The chapter also includes a brief discussion on the number of literates in different districts by 2011.

5.2 Children's Enrollment and Learning Levels

In public sector, AWCs, run by W&CDD provide pre-school education to children in the age group of 3-5 years. In addition, some private schools also impart pre-school education to young children. To understand how well children are prepared during pre-school, a sample of 2,241 children was collected from all over the State. This was done to ascertain how many of them attended AWCs. The results of the survey indicated that 72.5 percent children attended AWCs and were imparted pre-school education. This meant that 27.5 percent children did not attend AWCs. However, the survey did not cover private schools that imparted pre-school education. Table 5.1 summarises the survey results.

Table 5.1: Children, in the 3-5 year age group, who attended AWCs

Table 5.1	Children between 3-5 years who attended Anganwadies (percent)	
	Attended AWCs	Not attended AWCs
BASE – 2,241	72.5	27.5

A sample of 13,004 children, in the age group of 6-14 years, was drawn all over the State to ascertain the number of children who attended primary schools. The survey results indicated

that 95.5 percent children attended primary school. Out of them, 92.8 percent children attended government primary school, 2.4 percent children attended private school and 0.2 percent children attended other schools. Only 4.6 percent children did not attend any school. The results are summarised in Table 5.2.

Table 5.2: Children, in 6-14 year age group, who attended primary school

Table 5.2	Children (6-14 year age group) attending (percent)			
	Government school	Private School	Other School	No School
BASE – 13,004	92.8	2.4	0.2	4.6

To understand the quality of primary education in the State, a sample of 3,180 children was drawn from across all the districts. The sampled children were given appropriate texts to read and recognise numbers. It was observed that about 80.4 percent children from Class I-II level could read alphabet, words, sentences and paragraphs and 71.8 percent children could recognise numerals and do simple arithmetical operations such as addition, subtraction, multiplication and division. The survey results have been summarised in Table 5.3.

Table 5.3: Reading and arithmetical skills of class I-II level school children

Table 5.3	Children with reading and arithmetical skills (percent)	
	Could read alphabet and higher texts	Could recognise numerals and do simple arithmetic
BASE - 3,180	80.4	71.8

A survey was also undertaken to find out the quality of primary education at Class III-V level in the schools in Odisha. A sample of 3,180 children was drawn from all over the State. The sampled children were given appropriate higher order texts to read paragraphs and stories and do complicated arithmetical operations. It was observed that 65.4 percent children could read higher order texts as well as stories and 68.8 percent children could do complicated arithmetical operations such as addition, subtraction, multiplication and division. The survey results have been summarised in Table 5.4.

Table 5.4: Reading and arithmetical skills of children at class III-V level

Table 5.4	Class III-V Children with reading and arithmetical skills (percent)	
	Reading paragraph / stories	Arithmetical skills
BASE – 3,180	65.4	68.8

5.3 Literacy Levels of Adults

A sample of 26,962 adult men and 22,700 adult women was drawn from all the districts to ascertain their educational background and literacy levels. Among other questions, they were specifically asked whether they had ever been to school. The respondents were also given a Class-I paragraph to read. The survey results indicate that 81.3 percent men and 66.9 percent women attended school. The survey results are summarised in Table 5.5.

Table 5.5: Adult men and women who attended school

Table 5.5	Adult men and women who attended school (percent)	
	Attended	Not attended
Men - 26,962	81.3	18.7
Women – 22,700	66.9	33.1

The survey also further examined the level of schooling by adults. For this purpose, a sample of 26,113 men and 21,906 women was drawn. It was observed that from 26,113 men, 33.5 percent attended primary school, 16.4 percent middle school, 26.8 percent secondary school, 2.5 percent senior secondary school and 1.4 percent higher educational institution. Of 21,906 women, 27.6 percent attended primary school, 14.9 percent middle school, 21.2 percent secondary school, 1.3 percent senior secondary school and 0.7 percent higher educational institution. Around 34.3 percent women and 19.4 percent men were found to be illiterate. The survey results are summarised in Table 5.6.

Table 5.6: Levels of schooling by adults

Table 5.6	Adults who attended school at the level (percent)					
	Illiterate	primary	Middle	Secondary	Senior secondary	Higher Education
Men-26,113	19.4	33.5	16.4	26.8	2.5	1.4
Women-21,906	34.3	27.6	14.9	21.2	1.3	0.7

With a view to get an idea on the reading abilities of adults, a sample of 18,079 men and 15,536 women was drawn from all districts. The respondents were given a text from Class-I course to read. It was observed that 74.6 percent men and 62.9 percent women could read the given text. The analysis of the survey results is summarised in Table 5.7.

Table 5.7: Reading ability of adults

Table 5.7	Adult men and women who could read Standard I text (percent)	
	Men who could read	Women who could read
Base: Men – 18,079	74.6	62.9
Women – 15,536		

5.4 Summary

This chapter examined various aspects of literacy and education levels. This was done through survey questions administered at the household level. (i) enrollment of children in pre-schools (i.e., 3-5 year age group), (ii) enrollment of children at primary level (i.e., 6-14 year age group), (iii) quality of education, particularly reading and arithmetic skills at class I-II level, (iv) quality of education, particularly reading and arithmetic skills at class III-V level, (v) status of functional literacy among adults, (vi) education levels among adults and (vii) reading abilities of adults. The findings show that regional, social and gender disparities is still a major issue regarding literacy levels and quality of education. The disparities continue in spite of considerable progress made in recent years to tackle them. The key indicators for each district have been summarised in Table 5.8.

Some highlights of analytical results are as follows:

- About 73 percent children are enrolled in AWCs and attend pre-school learning. Koraput reported lowest enrollment of 39 percent while Balangir highest at 98 percent. For low enrollment districts, an awareness campaign needs to be mounted to bring children to AWCs.
- In the 6-14 year age group, there were 4.6 percent out of school children at the State level. While Malkangiri district reported highest 22 percent out of school children, Angul, and Puri reported the lowest, almost zero percent. Efforts need to be made to bring all out of school children back to school.
- While 80.4 percent students of Class-I & Class-II have adequate reading skills, 71.8 percent students can recognise numerals and do simple arithmetical operations. However, the students who do not have such skills are still very high with 19.6 percent and 28.2 percent respectively. Similarly, at Class-III to Class-V level, only 65.4 percent students have adequate reading skills and 68.8 percent have arithmetical skills. There are also inter-district variations in quality of education. Concerted efforts are needed to enhance quality of education at all levels and in all districts.
- About 75 percent male adults and 63 percent female adults have functional literacy at the State level. There are inter-district disparities as regards functional literacy among adults. Efforts are required to further improve functional literacy among adults.

Table 5.8: Some educational indicators by district

District	Enrollments in Anganwadies	Enrollments in Govt. Schools	Reading skills of children of Class III – V	Arithmetical skills of children of Class III – V	Women who can read	Men who can read
Angul	47.4	100.0	69.8	66.0	94.3	96.5
Balangir	97.7	98.1	76.2	79.8	68.6	78.5
Balasore	63.8	97.6	89.0	93.7	78.8	89.4
Bargarh	88.2	96.2	61.6	63.7	69.3	79.4
Boudh	65.7	96.8	47.4	46.6	81.0	86.3
Bhadrak	79.0	95.0	90.7	89.3	80.9	87.9
Cuttack	80.9	98.4	97.4	97.4	73.3	85.3
Deogarh	94.3	93.1	60.5	66.7	59.0	65.6
Dhenkanal	89.1	96.3	82.5	85.1	64.3	74.1
Gajapati	58.2	89.2	56.3	67.3	47.5	61.0
Ganjam	45.2	93.6	58.0	60.4	53.0	67.6
Jagatsinghpur	45.1	92.1	50.0	62.8	54.6	71.6
Jajpur	77.1	97.4	77.1	92.7	82.6	88.0
Jharsuguda	87.6	95.1	63.0	65.7	55.4	67.7
Kalahandi	54.9	88.7	46.1	51.8	64.7	70.8
Kandhamal	75.3	93.7	27.4	32.4	46.4	64.5
Kendrapara	78.2	93.3	77.0	83.6	64.2	80.6
Keonjhar	67.1	90.1	65.9	58.0	60.1	73.4
Khordha	60.4	96.4	74.9	79.9	69.4	76.6
Koraput	39.4	81.5	61.5	61.8	47.5	69.4

(Contd....)

District	Enrollments in Anganwadies	Enrollments in Govt. Schools	Reading skills of children of Class III – V	Arithmetical skills of children of Class III – V	Women who can read	Men who can read
Malkangiri	69.2	69.9	76.4	76.8	17.6	26.4
Mayurbhanj	80.6	88.2	56.0	47.4	76.6	82.4
Nabarangpur	77.9	86.4	57.0	68.5	68.8	79.5
Nayagarh	60.0	93.6	77.9	82.6	63.1	77.5
Nuapada	72.6	91.9	36.8	40.5	68.8	83.6
Puri	92.0	99.8	92.2	96.5	72.5	76.4
Rayagada	82.6	96.7	60.0	45.7	29.2	44.7
Sambalpur	86.3	92.0	59.6	60.2	63.8	73.7
Subarnapur	78.3	94.4	65.1	69.0	49.1	65.3
Sundargarh	66.7	88.8	70.3	55.0	77.2	85.4
Odisha	72.5	92.8	65.4	68.8	62.9	74.6
STDEV	15.6	6.0	16.2	17.3	16.0	13.8
VARIANCE in percent	21.68	6.50	24.54	25.33	25.25	18.53
MAX	97.7	100.0	97.4	97.4	94.3	96.5
MIN	39.4	69.9	27.4	32.4	17.6	26.4



6. Village Development Profile

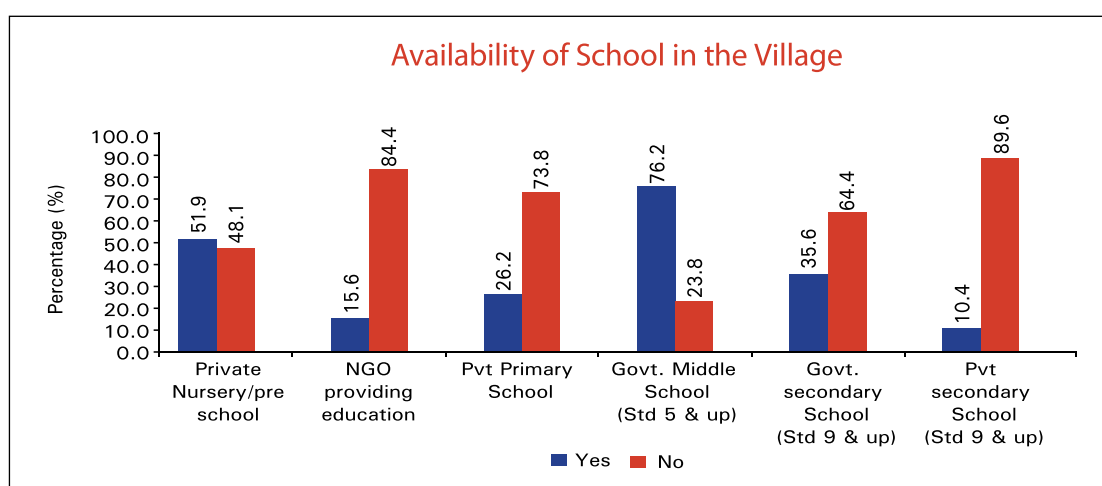
6.1 Village Infrastructure

The PAHELI survey has focused mainly on households and individuals in sampled villages. In all, 880 villages were sampled using PPS sampling technique across 30 districts. In each of these sampled villages, the PAHELI team collected some additional information to supplement the data from surveys of households and individuals. In this chapter, information collected was on the basis of observations and interviews. In addition, PRI members were also interviewed for additional information. The desired data was also collected by way of group discussions with senior people of the villages.

6.2 School Infrastructure at the Village Level

About 52 percent villages have nursery or pre-schools run by private organisations. Some 15 percent villages have private schools or schools run by NGOs. In districts like Bargarh, Mayurbhanj, Dhenkanal and Khordha, about 80 percent or more villages have government primary schools. Districts like Gajapati, Kalahandi and Keonjhar have less number of villages having school. About 76 percent villages have government middle schools and about 36 percent have government secondary schools. Figure 6.1 summarises the availability of schools in sampled villages by management.

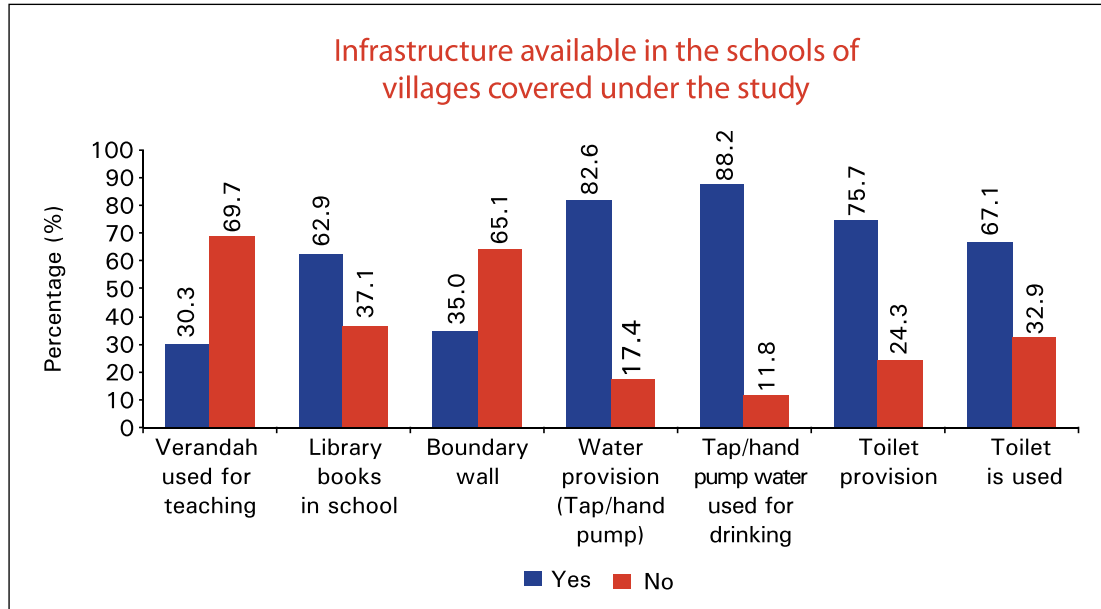
Figure 6.1: School Infrastructure in Sampled Villages



Nearly 500 schools were visited to assess the status of infrastructure. It was observed that 30.3 percent schools did not have sufficient class rooms and used open space or verandah for teaching purposes. About 83 percent schools had the facility for tap water or hand pump within the school premises. Out of those schools where tap/hand pump water is available, nearly 88 percent schools were found using the facility. Water from 12 percent taps / hand

pumps was not used for drinking by the students and others. About 76 percent schools were found to have at least one toilet of which 67 percent were in use. Figure 6.2 gives the status of facilities in schools in the sampled villages.

Figure 6.2: Status of School Facilities in the Sampled Villages



About 94 percent villages have AWCs. Out of this, nearly 58 percent functioned in or near the school premises. The rest of were located far away from the schools. Figure 6.3 gives the status of villages with AWCs and Figure 6.4 provides the status of locations of AWCs vis-à-vis the locations of schools.

Figure 6.3: Availability of AW Centres

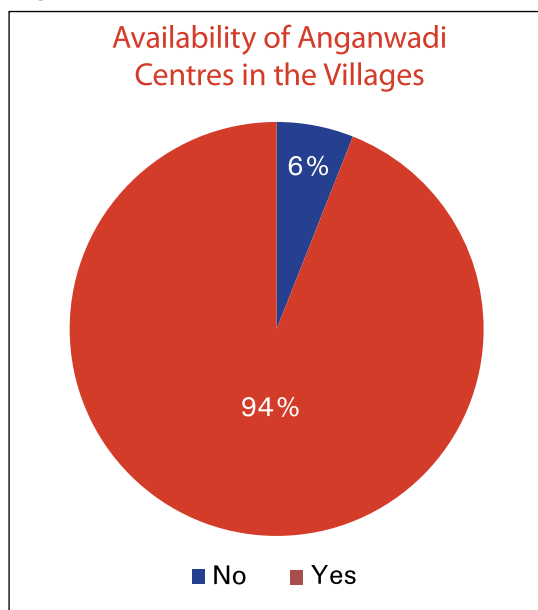
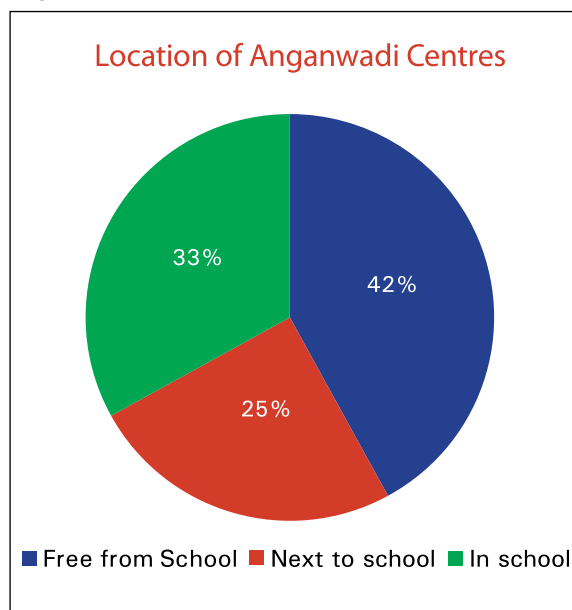


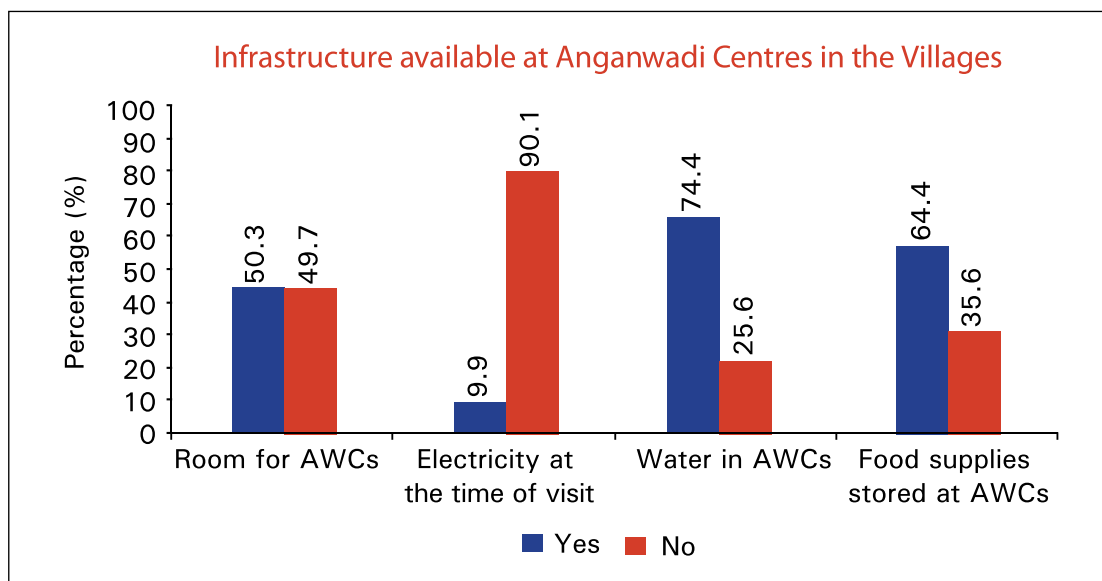
Figure 6.4: Location of AW Centres



The type of infrastructure and facilities of AWCs was also assessed. The survey results indicated that about 50.3 percent AWCs have a separate room specifically for conducting their activities. About 74.4 percent have water facility available in or nearby the centre. While

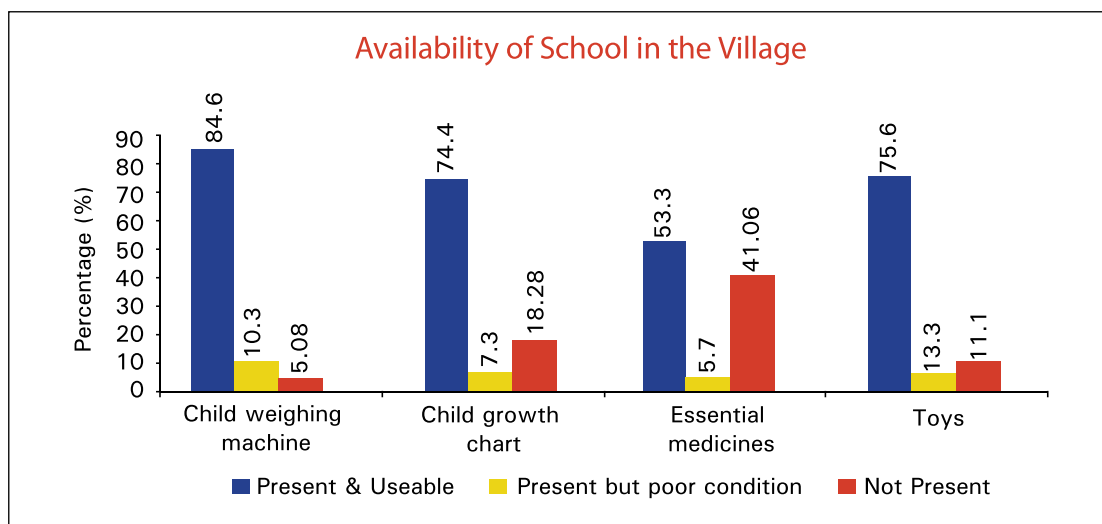
around 9.9 percent had supply of electricity at the time of visit, 64.4 percent stored their food supply in the centre. Figure 6.5 analyses the availability of infrastructural facilities in AWCs.

Figure 6.5: Infrastructural Facilities in AWCs at the Sampled Villages



Observations were also made regarding the availability of desired equipments at AWCs. It was found that weighing machines were available in usable condition in 85 percent AWCs. Nearly 75 percent have child growth monitoring charts and toys for children. Around 53.3 percent, which is more than half had essential medicines. Figure 6.6 summarises the infrastructural facilities.

Figure 6.6: Status of Equipments and Medicines at AWCs in the Sampled Villages



6.3 Health Infrastructure and Facilities at the Village Level

About 15.3 percent villages have a sub-health centre and 16.7 percent villages have a PHC. About 32 percent villages have a government hospital within their easy reach and 10.6 percent have a private hospital. While only 19 percent villages had medicines in a nearby store, a meager 9 percent villages have access to an ambulance service. In districts like Jajpur, Rayagada,

Sambalpur and Sundargarh, some NGOs also provide health services in about 15 percent villages. Figure 6.7 displays the availability of healthcare facilities in villages and Figure 6.8 shows the availability of medicine shops and ambulance facility near the villages.

Figure 6.7: Availability of Health Care Facilities in the Sampled Villages

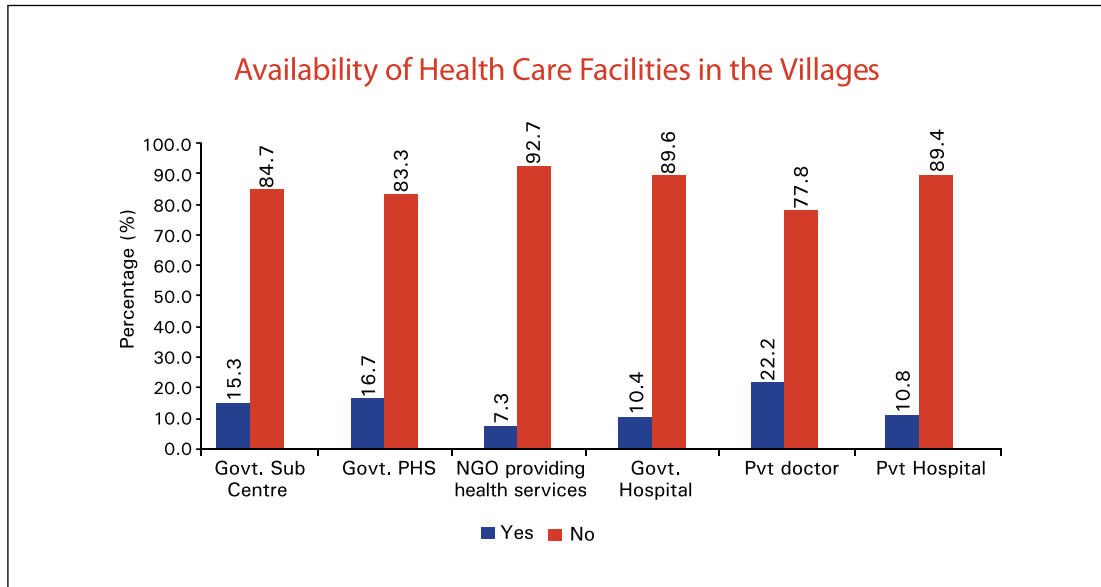
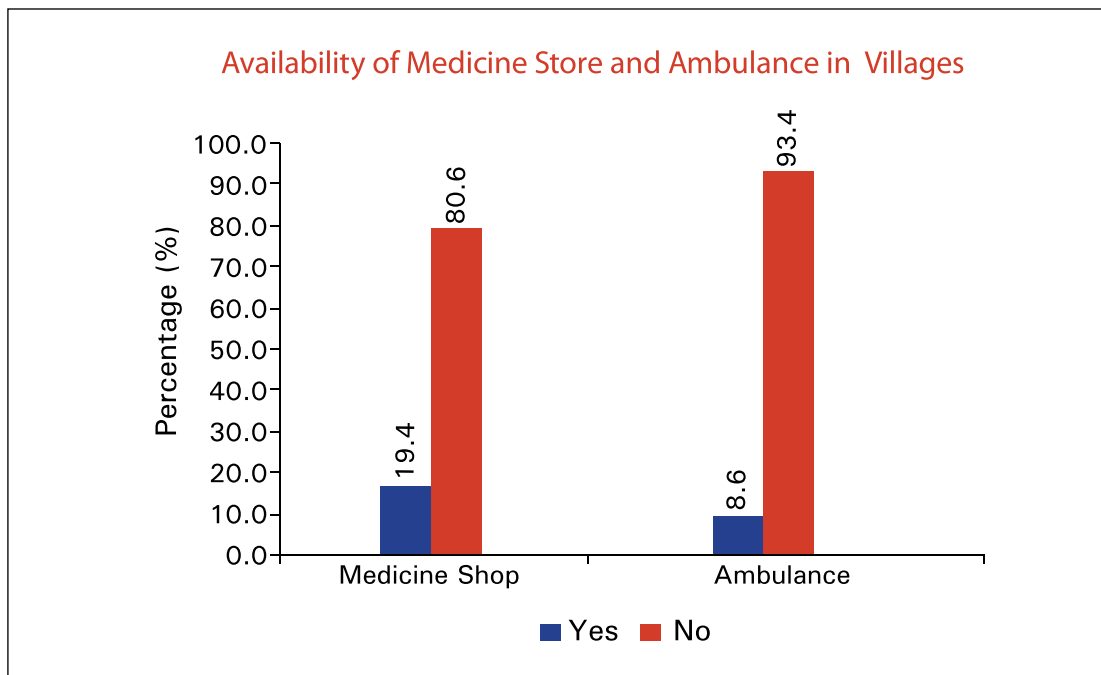


Figure 6.8: Availability of Medicine Store and Ambulance in the Sampled Villages



An attempt was made to assess the status of health infrastructure and facilities in the sampled villages. It was found that 72 percent village health institutions had their own buildings. Nearly half of the village health institutions which is around 48.4 percent, have a delivery room. About 60 percent health institutions have electricity connection which is generally available. Figure 6.9 indicates the status of health infrastructure and facilities at the village level.

Figure 6.9: Status of Health Infrastructure and Facilities at the Village Level

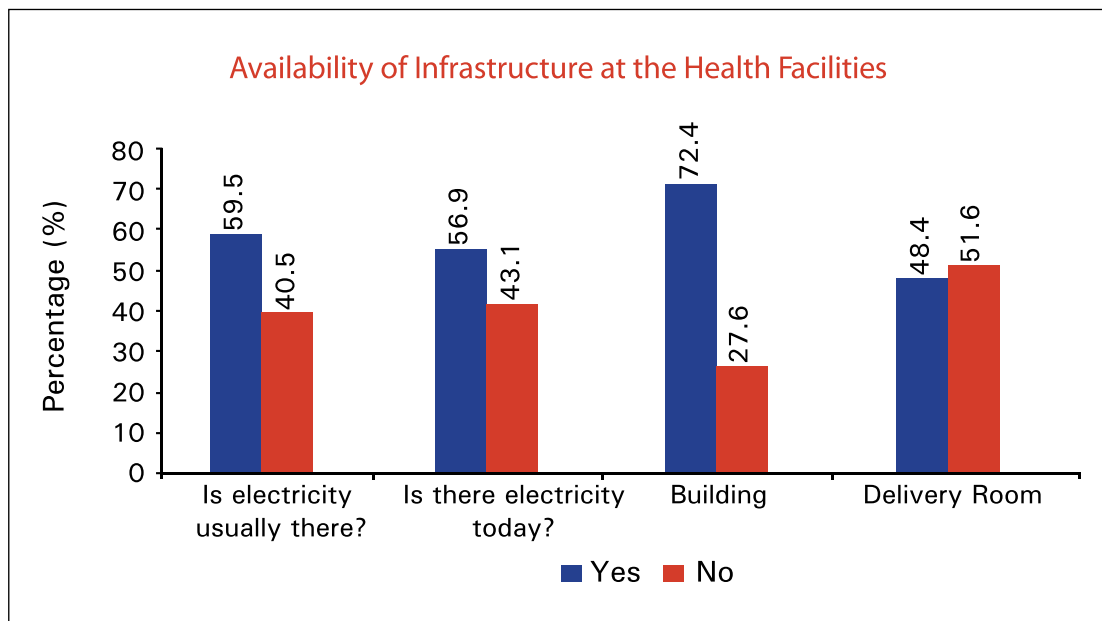
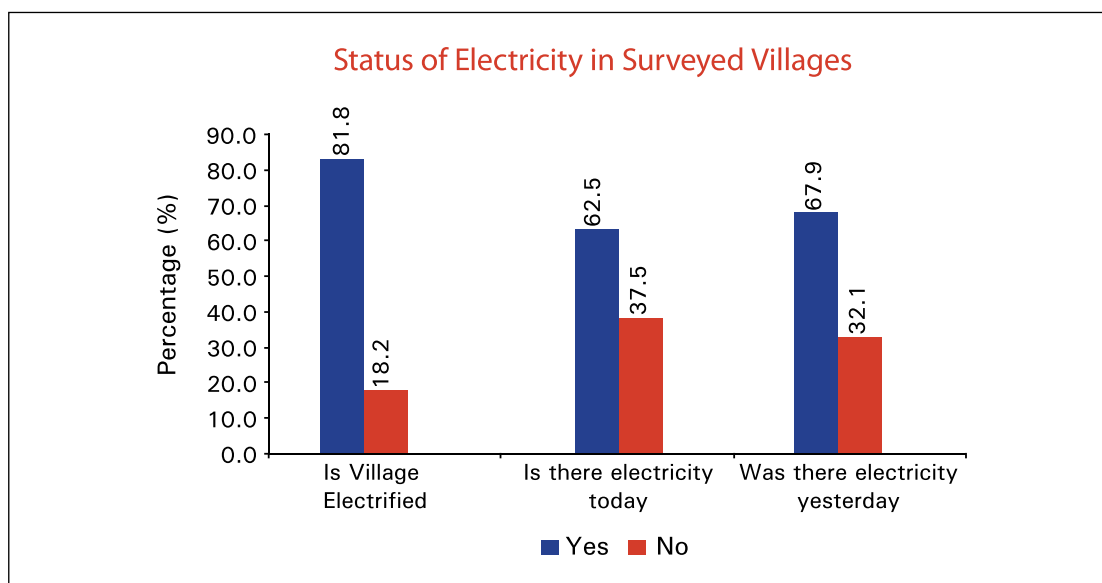


Figure 6.10: Status of Village Electrification & Availability of Electricity



6.4 Basic Infrastructure at the Village Level

The availability of basic infrastructure and services like road connectivity, electricity and other facilities at the village level was also examined. Though it was found that about 82 percent villages were electrified, however, actual availability of electricity is still a general concern in rural areas. At the time of survey, 62.5 percent villages reported to have electricity supply for more than eight hours a day. About 53.4 percent villages had all weather road connectivity. With regard to the availability of transportation facilities, about 67.5 percent villages responded positively and were using transport facilities. Figures 6.10, 6.11 and 6.12 give the status of some basic infrastructure facilities including village electrification, electricity supply, road connectivity, bus stop, transport and communication facilities in the sampled villages.

Figure 6.11: Status of Rural Road Connectivity, Bus Stop and Transportation

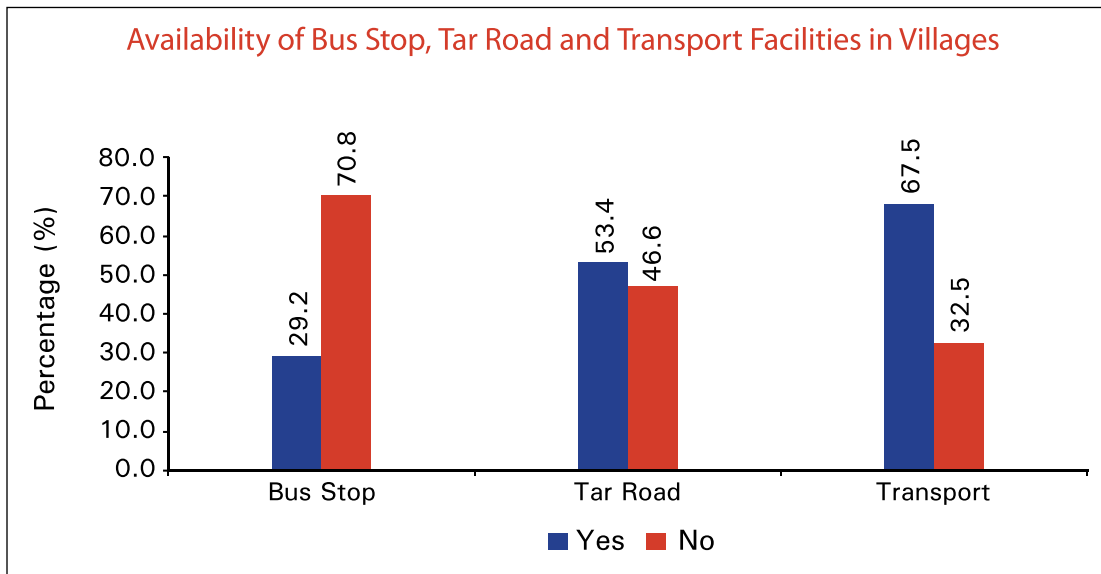
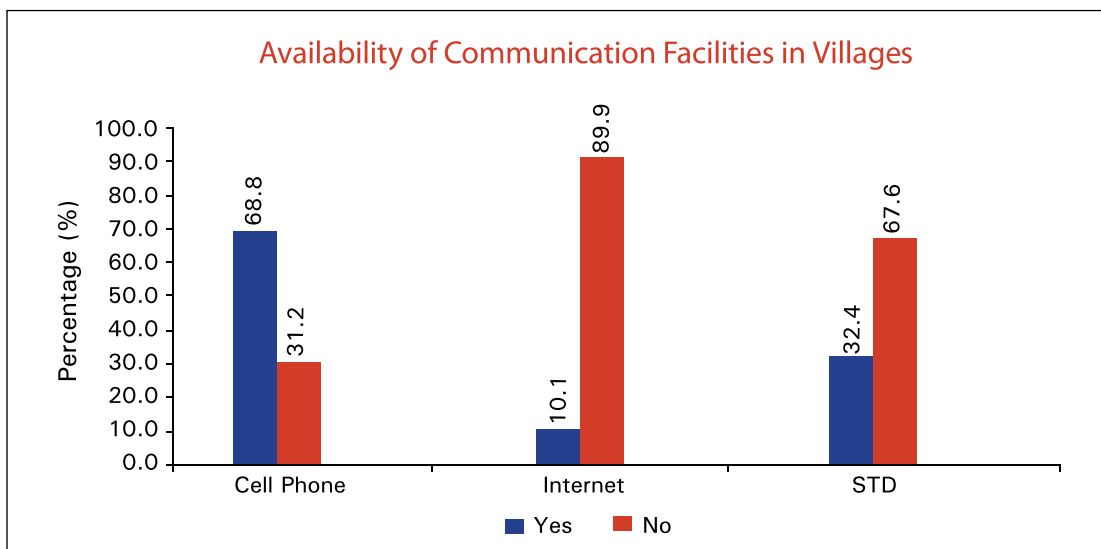


Figure 6.12: Status of Communication Facilities at the Village Level

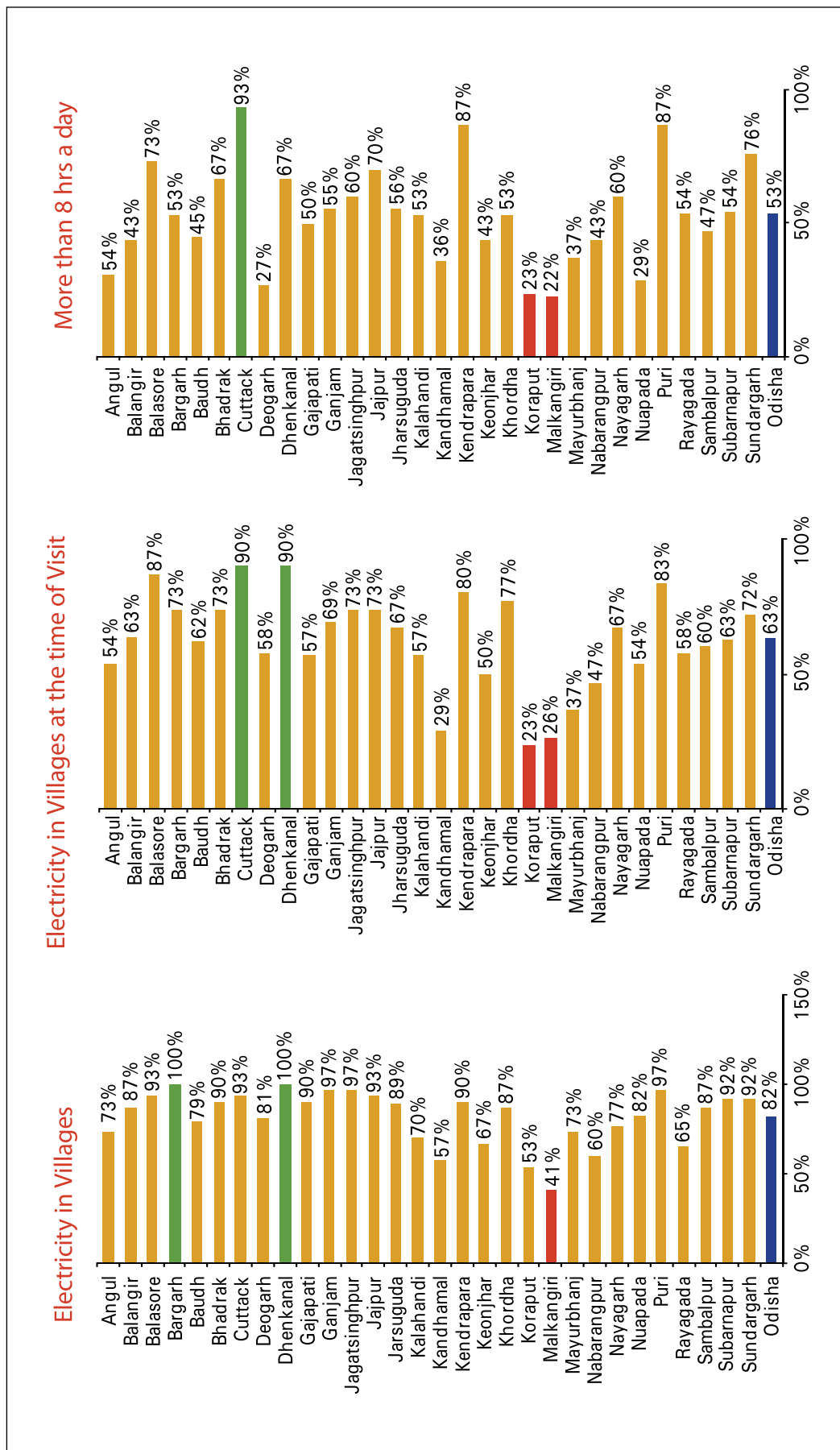


The village infrastructure information presented above is a good indicator of the State level development status and also correlates well with secondary information from census 2001⁴. However, the sample size at the district level is generally small and, therefore, the district level indicators should be studied keeping the small sample sizes in view.

Figure 6.13 analyse the status of electrification and supply of electricity in the sampled villages. It appears that Malkangiri reported the lowest percentage of electrified villages, whereas districts such as Bargarh and Dhenkanal reported 100 percent electrification of villages. Even in terms of availability of electricity, Koraput and Malkangiri were on the lower side, and districts like Cuttack, Dhenkanal and Kendrapada had better electrification.

⁴ Compared in Appendix

Figure 6.13: District-wise Status of Village Electrification and Electricity Supply



6.5 Summary

This chapter has analysed the status of village development infrastructure. Some highlights of which are as follows:

- About 80 percent villages have government primary schools and about 45 percent villages have a public health institution. Only 7 percent villages had access to ambulance facilities.
- About 63 percent villages reported having electricity supply for more than 8 hours a day.
- While 56.4 percent villages have all weather road connectivity, only about 30 percent villages have bus stop and 67.5 percent villages have access to some public or private transport facility.
- About 83 percent villages have communication facilities such as cell phones.



7. Availability of Financial Resources

7.1 Introduction

The PAHELI survey has also attempted to analyse available resources and their utilisation for earmarked development programmes that have a direct bearing on human development. In India, development funds are made available from two broad sources, that is, GOI and State Governments. There are several central flagship programmes such as Sarva Shiksha Abhiyan (SSA), NRHM, Accelerated Rural Water Supply Scheme (ARWSS), Total Sanitation Campaign (TSC), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Gram Sadak Yojana (PMGSY), IAY and others that directly contribute towards human development and improve the quality of life. The State Government has also launched a number of flagship programmes including Mo Kudia, Biju KBK Plan, Gopabandhu Grameen Yojana, Biju Kandhamal O Gajapati Yojana and Biju Gramajyoti Yojana that have been designed to accelerate the development process and fill the gap in development funding. The available financial information has been analysed for the period from 2002-03 to 2007-08.

7.2 Trends in Plan Outlays and Expenditure

It is significant that the State's finances began to improve after 2004-05. Table 7.1 analyses the financial position of the State including revenue receipts, revenue expenditure, revenue deficit and fiscal deficit. It may be observed that the State remained revenue surplus from 2005-06 to 2009-10. This analysis is based on the budget analysis carried out by CYSD⁵.

Table 7.1: Trends of revenue receipts and expenditure: 2003-04 to 2010-11

(Rs in Crore)

Year	Revenue Receipt	Revenue Expenditure	Revenue Deficit	Fiscal Deficit
2003-04	9,440.24	10,861.16	-1,420.92	-13,312.98
2004-05	11,850.19	12,372.49	-522.3	-5,069.12
2005-06	14,084.72	13,603.52	481.2	-1,314.04
2006-07	18,032.62	15,772.02	2,260.6	-1,027.55
2007-08	21,967.19	17,723.27	4,243.92	-521.84
2008-09	24,610.01	21,190.12	3,419.89	-2,076.64
2009-10	26,430.21	25,291.59	1,138.62	-3,754.07

The State's financial situation has shown constant improvement after 2004-05. This prompted the State to continuously enhance plan outlays year after year in human development sectors

⁵ Peoples' Expectations: Odisha State Budget 2012-13 by Odisha Budget and Accountability Centre, CYSD, Bhubaneswar

such as health, education and livelihoods. Figure 7.1 indicates the trend of plan outlays and expenditure on social sectors from 2003-04 onwards.

Figure 7.1: Trends of Plan Outlays and Expenditures in Social Sectors in Odisha

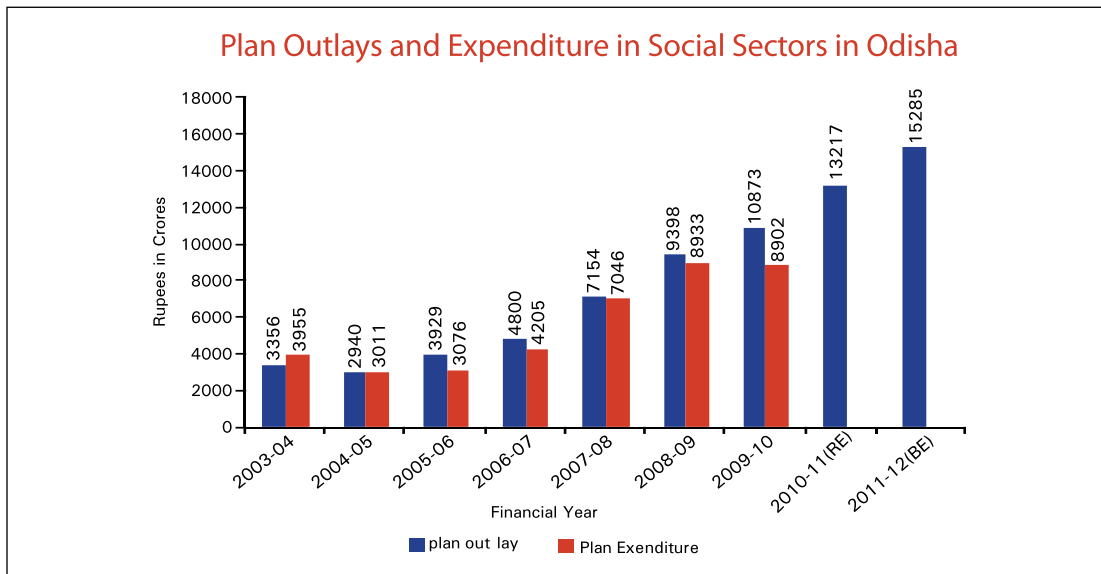
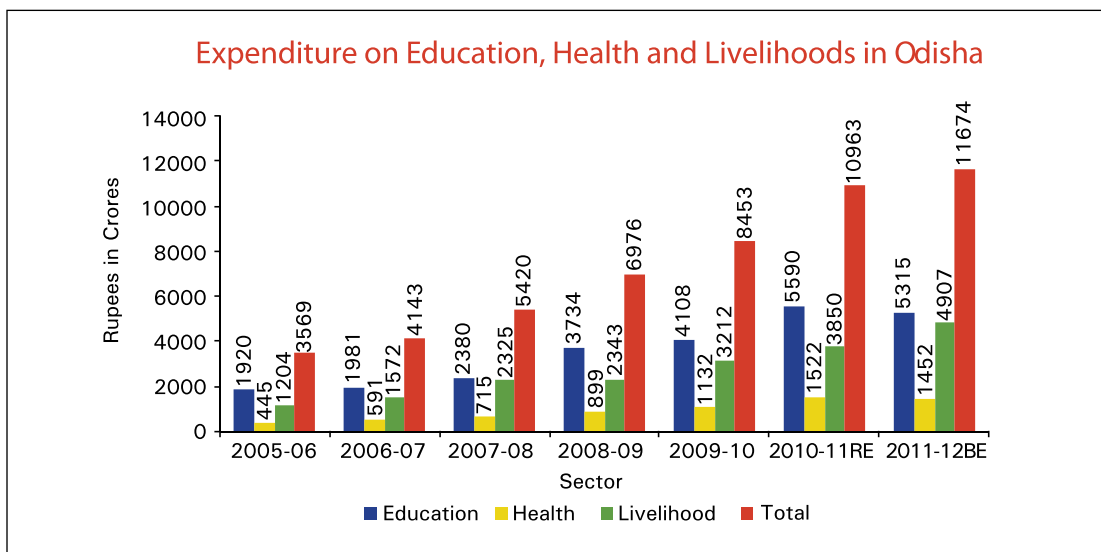


Figure 7.2: Budget Expenditure on Education, Health and Livelihoods in Odisha



A simple analysis of the budget outlays both plan and non-plan for the Departments of School and Mass Education, Health and Family Welfare, Agriculture, Rural Development and Panchayati Raj has been carried out. Table 7.2 shows the budgetary provisions for human development sectors such as education, health and livelihoods. Figure 7.2 displays year-wise allocations and expenditures on human development sectors such as education, health and livelihoods. It can be seen from Table 7.2 and Figure 7.2 that budget expenditures in social sectors have been growing over time. It is expected that higher outlays and expenditures shall result in improved human development indicators.

Table 7.2: Expenditures in education, health and livelihood sectors in Odisha:**2005-12**

(Rs in Crore)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11 RE	2011-12 BE
Education	1,920.47	1,980.74	2,379.56	3,734.08	4,107.65	5,590.07	5,315.44
Health	444.59	590.55	715.31	899.13	1,132.48	1,522.17	1,451.66
Livelihood	1,203.86	1,571.99	2,324.64	2,342.84	3,212.39	3,850.40	4,907.10
Total	3,568.93	4,143.29	5,419.51	6,976.05	8,452.52	10,962.64	11,674.20

Table 7.3, which is based on the ASER 2011 report, analyses relationship between allocations, expenditure and outcomes in the Education Sector. It is clear from Table 7.3 that while both fund allocations and utilisations has significantly increased in the education sector, the outcomes have also been gradually improving.

Table 7.3: Outlays, expenditure and outcome analysis for education sector in Odisha

Year	2005	2006	2007
Allocation (Rs. In crore)	640	654.4	939.6
Expenditure (Rs. in crore)	280.6	371.7	637.5
Average Expenditure Per District over three years (Rs. in crore)		43	
Total Out of School Children (in percent)	8.8	9.1	8.0
Pupil : Teacher Ratio	37	35	33
Children in Class-I who could not read letters (in percent)	50.7	39.2	36.6
Class-III children who could read Class- I&II Text (%)	45.4	47.3	44.0

7.3 Summary

This chapter analyses outlays, expenditures and outcomes in human development sectors. As the State finances have improved after 2004-05, outlays and expenditures in human development sectors have been rising year after year. It is expected that higher outlays and expenditures in these sectors shall result in improved human development outcomes.



8. Conclusions and Recommendations

8.1 Conclusions

PAHELI which stands for People's Audit of Health, Education and Livelihood, form the core of human development. These development issues are also largely focused by United Nations MDG. The PAHELI survey was commissioned in all 30 districts during the year 2009-10. The report is not based on government data. Rather, it is based on the people's perceptions about health, education and livelihoods, which were gathered by CSOs through carefully designed formats, easily understood by ordinary people. The innovative formats developed in Odisha encouraged the active participation of the respondents. The PAHELI methodology also provides an effective tool to undertake rapid assessment as to how various development programmes has brought about changes in the lives of the people on day-to-day basis. One of the objective of PAHELI, both in terms of content and methodology, is to enable people to effectively use this process and the survey results to diagnose their problems, identify development gaps and articulate their felt needs. The results have been summarised as the State averages in Table 8.1 and as district specific values in Table 8.2 for some human development indicators. Table 8.1 also presents the range of values, that is, the maximum and minimum values along with the names of the concerned districts.

As a diagnostic tool, PAHELI was intended to be easy to understand, amenable to a participatory approach, and adaptable so as to be used at different levels – village, block or district. The most important aspect of PAHELI is the participation and engagement of local people and other non-government stakeholders. The survey has acknowledged the considerable benefits that the State sponsored development processes have brought to the people. It has also highlighted the gaps in the development processes and raised certain issues that need attention. As the PAHELI survey captures the voices of the people, remedial action as regards observed development gaps and felt concerns of the local people by the State officials at the appropriate levels is expected to raise the satisfaction of the local people. The following recommendations have been made with a view to address some of the felt concerns of the local people and to further add to the development processes.

8.2 Some Recommendations

As this report has focused mainly on three sectors, that is, livelihoods, health and education, some recommendations have been made with regard to each of these sectors. Some State level indicators are reported in Table 8.1. The following suggestions, if implemented, may further improve human development indicators in Odisha:

- Subsidised 'hand-spun' khadi saree and dhoti scheme may help the very poor households acquire more clothes for their better living and may help create more employment and income opportunities for weavers.
- Many households still use bio-mass for their cooking needs. It is suggested that the use of smokeless chulha should be promoted on a massive scale. This will help women to cook in a healthy environment.
- More and more women should be encouraged through the Mission Shakti or other interventions to be engaged in income generation activities. This will help households get higher incomes and add to the dignity of women.
- Though the coverage under institutional deliveries and immunisation programmes has improved considerably, yet, lot more remains to be done.
- Drinking water supply in rural areas has considerably improved over the years. However, there are significant inter-district disparities that need to be addressed.
- TSC which has not shown any promising improvement needs to be addressed. Innovative approaches are needed to be adopted to improve sanitation in rural areas where large proportions of the people still resort to open defecation.
- Low cost water purification techniques need to be promoted to address the water contamination issues and to improve water quality.
- More stress should be laid on retention of girls in schools with a view to substantially improving female literacy, particularly in interior tribal districts.
- The regional, social and gender disparities in literacy and other human development indicators need be addressed through careful planning and resource allocation. Village level infrastructure should also be considerably strengthened.
- Greater focus is needed to improve the quality of education in all districts, and particularly in interior tribal districts. The reading and arithmetical skills should be continuously improved in the problem areas.

Table 8.1: Values of some human development indicators at the state level

Sl. No.	Sector	Human Development Indicator	Mean	Maximum	Minimum
				Values (Percent)	
1.	LIFE & LIVELIHOOD	Women owning two or less sets of sarees	28.1	70.7 (Kandhamal)	2.8 (Cuttack)
2.		Households with kutcha house or no house	64.5	81.9 (Deogarh)	29.2 (Jagatsinghpur)
3.		Households using firewood for cooking	88.3	8.8 (Sundargarh)	53.3 (Angul)
4.		Households using kerosene for lighting	59.6	96 (Nabarangpur)	24.1 (Bhadrak)
5.		Households which have no animal / cattle	31.5	66.2 (Ganjam)	0.0 (Boudh)
6.		Households without any tangible assets	13.1	44.5 (Rayagada)	0.0 (Boudh)
7.		Households who have taken no loan	50.7	74.4 (Mayurbhanj)	19.1 (Puri)
8.		Households affected by migration	15.2	30.2 (Balasore)	0.8 (Jharsuguda)
9.	HEALTH – MOTHER & CHILD	Institutional deliveries	59.4	92.9 (Khordha)	28.3 (Nabarangpur)
10.		Mothers who took iron tablets during last pregnancy	87.3	100 (Bargarh)	68.4 (Ganjam)
11.		Mothers who had at least one ante-natal check-up	72.7	95.8 (Sundargarh)	48.6 (Boudh)
12.		Babies visited by health workers	74.3	97.4 (Gajapati)	52.2 (Bhadrak)
13.		Babies breast-fed within one hour of birth	88.9	99.0 (Jharsuguda)	73.5 (Deogarh)
14.		Babies exclusively breast-fed for 6 months	49.7	87.7 (Gajapati)	17.3 (Dhenkanal)
15.		Children with immunisation cards	86.6	100 (Dhenkanal)	55.1 (Deogarh)
16.		Children who suffered from diarrhea the previous month	54.9	90 (Jagatsinghpur)	30.8 (Rayagada)
17.		Children who were administered ORS	77.3	97.4 (Balangir)	52.2 (Malkangiri)
18.		Men whose BMI was found below normal	15.3	43.4 (Mayurbhanj)	7.2 (Khordha)
19.		Women whose BMI was found below normal	22.3	46.2 (Gajapati)	6.7 (Khordha)

Sl. No.	Sector	Human Development Indicator	Mean	Maximum	Minimum
				Values (Percent)	
20.	WATER & SANITATION	Households having access to safe drinking water in normal times	71.8	97.7 (Bhadrak)	24.5 (Kandhamal)
21.		Households accessing safe water in summer season	70.0	97.1 (Balasore)	23.7 (Dhenkanal)
22.		Households drawing water from public/ Government created source (hand pump)	59.9	96.1 (Bargarh)	29.1 (Ganjam)
23.		Households having drinking water source at home or close to home in normal times	80.8	97.6 (Jharsuguda)	61.8 (Angul)
24.		Households spending less than one hour to fetch water in normal times	70.5	92.8 (Bhadrakh)	36.3 (Jajpur)
25.		Households using contaminated water source ntamination	46.8	92.7 (Nuapada)	8.9 (Bargarh)
26.		Households resorting to open defecation	86.5	99.5 (Nabarangpur)	62.4 (Balasore)
27.		EDUCATION	Children enrolled in AWC (3-5 year age)	72.5	97.7 (Balasore)
28.	Out of school children (6-14 year age group)		4.6	21.9 (Malkangiri)	0.0 (Angul)
29.	Children in Class- III to V who could read class I text		65.4	97.4 (Cuttack)	27.4 (Kandhamal)
30.	Children in Class-III to V who could do arithmetic operations		68.8	97.4 (Cuttack)	32.4 (Kandhamal)
31.	Women who could read Class-I text		62.9	94.3 (Sundargarh)	17.7 (Angul)
32.	Men who could read Class-I text		74.6	96.5 (Angul)	26.4 (Malkangiri)

Table 8.2: Values of some human development indicators at the district level (Percent)

Sl. No.	SECTOR	Human Development Indicators	Districts						
			Angul	Balangir	Balasore	Bargarh	Boudh	Bhadrak	Odisha
1	LIFE & LIVELIHOOD	Women owning two or less sets of sarees	51.8	24.6	05.9	09.6	28.6	26.9	28.1
2		Households with kutcha or no house	63.7	80.3	77.4	72.2	78.1	73.8	64.5
3		Households using firewood for cooking	53.3	68.4	69.4	79.1	82.0	82.9	88.3
4		Households using kerosene for lighting	76.0	64.7	26.6	55.1	79.4	24.1	59.6
5		Households which have no animal /cattle	00.3	46.7	09.8	51.6	00.0	14.5	31.5
6		Households without any tangible assets	01.3	24.1	03.2	08.3	00.0	05.5	13.1
7		Households who have taken no loan	57.8	37.3	31.9	51.8	37.5	32.2	50.7
8		Households affected by migration	28.4	30.2	21.0	03.5	15.4	17.3	15.2
9	HEALTH – MOTHER & CHILD	Institutional deliveries	52.4	72.4	64.8	82.9	48.9	70.1	59.4
10		Mothers who took iron tablets during last pregnancy	82.3	97.5	82.8	100.0	92.8	81.6	87.3
11		Mothers who had at least one ante-natal check-up	71.2	74.4	77.0	79.3	48.6	85.4	72.7
12		Babies visited by health workers	82.7	84.5	67.5	89.5	72.4	52.2	74.3
13		Babies breast-fed within one hour of birth	92.9	96.6	91.1	88.5	80.9	87.9	88.9
14		Babies exclusively breast-fed for 6 months	74.5	26.3	48.6	50.5	48.0	58.5	49.7
15		Children with immunisation cards	90.4	97.3	86.2	67.5	80.4	100.0	86.6
16		Children who suffered from diarrhea last month	47.9	77.8	70.1	37.4	40.9	73.8	54.9
17		Children who were administered ORS	87.9	97.4	83.6	72.1	63.6	85.7	77.3
18		Men whose BMI was found below normal	20.5	22.2	12.1	13.8	12.1	23.3	15.3
19		Women whose BMI was found below normal	18.8	26.0	22.3	26.4	23.9	33.3	22.3

(Contd....)

Sl. No.	SECTOR	Human Development Indicators	Districts								
			Angul	Balangir	Balasore	Bargarh	Boudh	Bhadrak	Odisha		
20	WATER & SANITATION	Households having access to safe drinking water in normal times	54.8	88.7	97.2	92.8	75.6	97.7	71.8		
21		Households accessing water in summers	51.0	85.1	97.0	91.3	75.0	96.2	70.0		
22		Households having drinking water source at home or close to home in normal times	61.8	71.2	82.9	97.0	82.6	95.5	80.8		
23		Households spending less than one hour to fetch water in normal times	51.0	89.5	92.8	85.7	59.5	92.5	70.5		
24		Households using contaminated water source	57.6	66.7	59.0	08.9	44.9	09.9	46.8		
25		Households resorting to open defecation	92.0	93.6	62.4	90.0	93.1	70.1	86.5		
26	EDUCATION	Children enrolled in AWCs (3-5 year age)	47.4	97.7	63.8	88.2	65.7	79.0	72.5		
27		Out of school children (6-14 year age group)	00.0	00.8	01.2	03.2	00.0	00.8	04.6		
28		Children in Class-III to V who could read class I text	69.8	76.2	89.0	61.6	47.4	90.7	65.4		
29		Children in Class-III to V who could do arithmetical operations	66.0	79.8	93.7	63.7	46.6	89.3	68.8		
30		Women who could read Class-I text	94.3	68.6	78.8	69.3	81.0	80.9	62.9		
31		Men who could read Class-I text	96.5	78.5	89.4	79.4	86.3	87.9	74.6		

Table 8.2: Values of some human development indicators at the district level (Percent)

Sl. No.	SECTOR	Human Development Indicators	Districts								Odisha
			Cuttack	Deogarh	Dhenkanal	Gajapati	Ganjam	Jagatsinghpur	Odisha		
1	LIFE & LIVELIHOOD	Women owning two or less sets of sarees	02.8	12.6	21.0	30.5	17.8	03.1	28.1		
2		Households with kutcha or no house	36.0	81.9	59.8	59.6	30.5	29.2	64.5		
3		Households using firewood for cooking	85.0	85.1	85.8	88.2	88.6	89.9	88.3		
4		Households using kerosene for lighting	36.4	86.1	46.5	56.0	51.1	47.3	59.6		
5		Households which have no animal /cattle	35.1	20.6	30.2	43.0	66.2	21.2	31.5		
6		Households without any tangible assets	08.3	11.0	14.3	29.0	29.2	06.9	13.1		
7		Households who have taken no loan	62.5	32.7	62.2	71.8	33.9	46.4	50.7		
8		Households affected by migration	07.4	03.8	03.2	20.5	27.5	07.1	15.2		
9	HEALTH – MOTHER & CHILD	Institutional deliveries	82.0	60.2	64.3	36.0	75.4	88.7	59.4		
10		Mothers who took iron tablets during last pregnancy	94.4	94.3	83.0	98.4	68.4	92.9	87.3		
11		Mothers who had at least one ante-natal check-up	80.2	59.7	59.0	71.0	67.0	79.1	72.7		
12		Babies visited by health workers	78.4	93.1	80.3	97.4	55.9	75.8	74.3		
13		Babies breast-fed within one hour of birth	95.5	73.5	93.1	91.0	92.3	94.3	88.9		
14		Babies exclusively breast-fed for 6 months	62.8	48.9	17.8	87.7	66.7	39.3	49.7		
15		Children with immunisation cards	96.6	55.1	100.0	100.0	89.3	100.0	86.6		
16		Children who suffered from diarrhea last month	43.7	44.4	70.2	63.6	59.7	90.1	54.9		
17		Children who were administered ORS	92.1	80.4	56.3	95.7	54.9	81.3	77.3		
18		Men whose BMI was found below normal	10.1	10.4	12.7	46.2	18.6	16.1	15.3		
19		Women whose BMI was found below normal	23.4	17.6	16.1	37.2	26.5	20.1	22.3		

(Contd....)

Sl. No.	SECTOR	Human Development Indicators	Districts									
			Cuttack	Deogarh	Dhenkanal	Gajapati	Ganjam	Jagatsinghpur	Odisha			
20	WATER & SANITATION	Households having access to safe drinking water in normal times	77.8	70.2	25.7	45.4	45.8	97.3	71.8			
21		Households accessing water in summers	77.5	69.3	23.7	42.6	41.0	97.1	70.0			
22		Households having drinking water source at home or close to home in normal times	77.8	91.8	80.2	64.2	79.9	90.2	80.8			
23		Households spending less than one hour to fetch water in normal times	62.0	62.1	72.3	58.8	86.7	81.5	70.5			
24		Households using contaminated water source	59.0	21.3	78.6	58.9	23.5	83.8	46.8			
25	Households resorting to open defecation	77.3	95.4	87.6	74.4	81.2	83.1	86.5				
26	EDUCATION	Children enrolled in AWCs (3-5 year age)	80.9	94.3	89.1	58.2	45.2	45.1	72.5			
27		Out of school children (6-14 year age group)	00.2	03.2	01.5	07.6	04.0	01.2	04.6			
28		Children in Class- III toV who could read Class-I text	97.4	60.5	82.5	56.3	58.0	50.0	65.4			
29		Children in Class- III toV who could do arithmetical operations	97.4	66.7	85.1	67.3	60.4	62.8	68.8			
30		Women who could read Class-I text	73.3	59.0	64.3	47.5	53.0	54.6	62.9			
31	Men who could read Class-I text	85.3	65.6	74.1	61.0	67.6	71.6	74.6				

Table 8.2: Values of some human development indicators at the district level (Percent)

Sl. No.	SECTOR	Human Development Indicators	District						
			Jajpur	Jharsuguda	Kalahandi	Kandhamal	Kendrapada	Keonjhar	Odisha
1	LIFE & LIVELIHOOD	Women owning two or less sets of sarees	12.6	15.1	43.5	70.7	28.6	40.0	28.1
2		Households with kutcha or no house	45.7	70.1	56.8	64.7	70.1	70.9	64.5
3		Households using firewood for cooking	90.4	90.4	90.6	90.9	92.0	93.0	88.3
4		Households using kerosene for lighting	29.8	58.0	82.1	88.5	46.9	77.4	59.6
5		Households which have no animal /cattle	26.1	34.0	52.8	18.5	24.8	23.5	31.5
6		Households without any tangible assets	07.3	04.1	22.5	18.3	11.7	09.8	13.1
7		Households who have taken no loan	46.3	62.5	43.0	49.0	64.9	38.7	50.7
8		Households affected by migration	05.2	00.8	23.7	11.6	23.9	16.0	15.2
9	HEALTH - MOTHER & CHILD	Institutional deliveries	85.5	74.3	47.9	42.5	67.5	58.3	59.4
10		Mothers who took iron tablets during last pregnancy	78.1	97.1	90.8	76.1	83.8	84.4	87.3
11		Mothers who had at least one ante-natal check-up	70.8	64.7	72.5	66.7	60.3	63.2	72.7
12		Babies visited by health workers	65.4	93.8	76.3	72.8	76.4	61.3	74.3
13		Babies breast-fed within one hour of birth	96.6	99.0	83.4	80.0	96.1	79.2	88.9
14		Babies exclusively breast-fed for 6 months	48.9	63.9	47.1	54.0	68.7	34.4	49.7
15		Children with immunisation cards	76.9	87.5	91.4	63.7	88.1	92.0	86.6
16		Children who suffered from diarrhoea last month	47.1	36.6	59.1	52.7	62.4	66.4	54.9
17		Children who were administered ORS	79.2	81.1	78.8	74.0	64.7	77.7	77.3
18		Men whose BMI was found below normal	12.1	17.5	13.4	21.7	08.9	14.5	15.3
19		Women whose BMI was found below normal	10.1	26.0	22.8	36.7	13.1	17.2	22.3

(Contd....)

Sl. No.	SECTOR	Human Development Indicators	District							
			Jajpur	Jharsuguda	Kalahandi	Kandhamal	Kendrapada	Keonjhar	Odisha	
20	WATER & SANITATION	Households having access to safe drinking water in normal times	41.9	87.2	91.8	24.5	95.3	78.2	71.8	
21		Households accessing water in summers	42.3	78.7	89.5	25.1	94.7	73.9	70.0	
22		Households having drinking water source at home or close to home in normal times	80.3	97.6	69.1	81.2	83.1	68.1	80.8	
23		Households spending less than one hour to fetch water in normal times	36.3	81.8	61.9	77.6	61.0	59.1	70.5	
24		Households using contaminated water source	46.6	41.1	45.1	50.0	48.9	40.8	46.8	
25	Households resorting to open defecation	80.9	92.2	88.2	93.7	85.3	92.5	86.5		
26	EDUCATION	Children enrolled in AWCs (3-5 year age)	77.1	87.6	54.9	75.3	78.2	67.1	72.5	
27		Out of school children (6-14 year age group)	01.3	04.2	10.6	04.1	01.0	08.0	04.6	
28		Children in Class- III to V who could read Class-I text	77.1	63.0	46.1	27.4	77.0	65.9	65.4	
29		Children in Class- III to V who could do arithmetical operations	92.7	65.7	51.8	32.4	83.6	58.0	68.8	
30		Women who could read Class-I text	82.6	55.4	64.7	46.4	64.2	60.1	62.9	
31	Men who could read Class-I text	88.0	67.7	70.8	64.5	80.6	73.4	74.6		

Table 8.2: Values of some human development indicators at the district level (Percent)

Sl. No	SECTOR	Human Development Indicators	District								Odisha
			Khordha	Koraput	Malkangiri	Mayurbhanj	Nabarangpur	Nayagarh	Odisha		
1	LIFE & LIVELIHOOD	Women owning two or less sets of sarees	20.3	07.5	29.8	20.1	63.7	40.7	28.1		
2		Households with kutcha or no house	56.7	56.1	76.9	74.5	79.8	57.0	64.5		
3		Households using firewood for cooking	93.1	93.5	94.3	94.4	94.6	94.8	88.3		
4		Households using kerosene for lighting	38.6	79.8	87.7	82.7	96.0	51.5	59.6		
5		Households which have no animal /cattle	40.7	33.9	14.7	09.5	28.5	35.1	31.5		
6		Households without any tangible assets	12.2	28.0	06.7	05.9	26.2	09.7	13.1		
7		Households who have taken no loan	51.5	39.5	53.6	74.4	55.7	62.4	50.7		
8		Households affected by migration	14.8	11.0	18.0	21.7	11.7	23.8	15.2		
9	HEALTH - MOTHER & CHILD	Institutional deliveries	92.6	34.1	38.5	57.8	28.3	63.9	59.4		
10		Mothers who took iron tablets during last pregnancy	93.3	77.9	81.2	77.8	87.7	80.7	87.3		
11		Mothers who had at least one ante-natal check-up	63.3	55.4	69.0	68.6	88.0	77.5	72.7		
12		Babies visited by health workers	72.2	74.4	67.5	74.3	88.8	55.5	74.3		
13		Babies breast-fed within one hour of birth	88.7	90.4	76.4	92.7	85.5	98.6	88.9		
14		Babies exclusively breast-fed for 6 months	81.1	48.1	29.9	50.4	36.7	70.5	49.7		
15		Children with immunisation cards	75.9	81.4	86.5	96.9	99.6	78.5	86.6		
16		Children who suffered from diarrhea last month	50.8	59.3	31.9	63.4	52.3	61.1	54.9		
17		Children who were administered ORS	69.2	79.7	52.2	71.3	68.9	77.9	77.3		
18	Men whose BMI was found below normal	06.7	12.6	12.5	31.2	20.8	11.1	15.3			
19	Women whose BMI was found below normal	07.2	20.2	42.9	43.4	22.6	21.6	23.3			

(Contd....)

Sl. No	SECTOR	Human Development Indicators	District							
			Khordha	Koraput	Malkangiri	Mayurbhanj	Nabarangpur	Nayagarh	Odisha	
20	WATER & SANITATION	Households having access to safe drinking water in normal times	52.6	47.7	81.6	45.0	92.1	62.5	71.8	
21		Households accessing water in summers	52.9	46.9	78.4	46.1	91.5	57.4	70.0	
22		Households having drinking water source at home or close to home in normal times	82.3	82.7	81.1	88.1	79.7	78.7	80.8	
23		Households spending less than one hour to fetch water in normal times	81.7	58.5	67.7	90.8	64.7	71.2	70.5	
24		Households using contaminated water source	78.6	24.0	69.0	89.7	28.6	29.9	46.8	
25	EDUCATION	Households resorting to open defecation	85.0	92.8	92.6	90.3	99.5	81.3	86.5	
26		Children enrolled in AWCs (3-5 year age)	60.4	39.4	69.2	80.6	77.9	60.0	72.5	
27		Out of school children (6-14 year age group)	01.0	16.8	21.9	10.5	11.4	03.4	04.6	
28		Children in Class- III to V who could read Class-I text	74.9	61.5	76.4	56.0	57.0	77.9	65.4	
29		Children in Class- III to V who could do arithmetical operations	79.9	61.8	76.8	47.4	68.5	82.6	68.8	
30		Women who could read Class-I text	69.4	47.5	17.6	76.6	68.8	63.1	62.9	
31	Men who could read Class-I text	76.6	69.4	26.4	82.4	79.5	77.5	74.6		

Table 8.2: Values of some human development indicators at the district level (Percent)

Sl. No.	SECTOR	Human Development Indicators	District							
			Nuapada	Puri	Rayagada	Sambalpur	Subarnapur	Sundargarh	Odisha	
1	LIFE & LIVELIHOOD	Women owning two or less sets of sarees	31.4	44.8	38.2	19.4	52.9	31.4	28.1	
2		Households with kutcha or no house	60.6	49.4	70.9	73.7	80.8	80.2	64.5	
3		Households using firewood for cooking	94.8	96.0	97.2	97.2	97.6	98.8	88.3	
4		Households using kerosene for lighting	53.9	31.1	62.7	56.2	69.9	58.2	59.6	
5		Households which have no animal /cattle	55.2	31.6	60.4	37.4	36.3	19.0	31.5	
6		Households without any tangible assets	12.8	08.8	44.5	08.0	11.7	11.6	13.1	
7		Households who have taken no loan	59.1	19.1	72.6	56.3	50.7	62.7	50.7	
8		Households affected by migration	11.8	27.0	19.1	09.0	08.2	13.7	15.2	
9	HEALTH – MOTHER & CHILD	Institutional deliveries	50.5	84.9	42.0	68.3	71.8	69.4	59.4	
10		Mothers who took iron tablets during last pregnancy	96.5	96.0	90.9	94.2	88.4	91.6	87.3	
11		Mothers who had at least one ante-natal check-up	75.8	89.6	90.0	93.2	94.8	95.8	72.7	
12		Babies visited by health workers	78.6	83.3	87.6	69.1	56.6	55.7	74.3	
13		Babies breast-fed within one hour of birth	91.2	93.9	83.9	80.5	94.4	89.7	88.9	
14		Babies exclusively breast-fed for 6 months	20.4	50.0	57.8	38.2	65.0	31.6	49.7	
15		Children with immunisation cards	97.3	88.9	84.4	78.3	87.3	80.0	86.6	
16		Children who suffered from diarrhoea last month	51.9	45.7	30.8	41.0	50.9	61.4	54.9	
17		Children who were administered ORS	94.1	95.2	89.3	78.0	84.0	77.1	77.3	
18		Men whose BMI was found below normal	08.9	14.5	17.7	13.5	15.3	18.0	15.3	
19		Women whose BMI was found below normal	18.6	22.0	40.0	20.8	25.4	27.4	22.3	

(Contd....)

Sl. No.	SECTOR	Human Development Indicators	District							
			Nuapada	Puri	Rayagada	Sambalpur	Subarnapur	Sundargarh	Odisha	
20	WATER & SANITATION	Households having access to safe drinking water in normal times	80.3	93.7	86.7	78.1	67.2	75.1	71.8	
21		Households accessing water in summers	80.2	92.5	86.0	75.7	67.5	71.6	70.0	
22		Households having drinking water source at home or close to home in normal times	72.5	88.1	78.5	84.8	65.6	86.1	80.8	
23		Households spending less than one hour to fetch water in normal times	76.1	39.1	69.9	68.8	65.0	85.5	70.5	
24		Households using contaminated water source	92.8	56.6	19.9	45.5	53.2	20.8	46.8	
25		Households resorting to open defecation	88.7	72.8	88.4	91.5	92.1	92.1	86.5	
26	EDUCATION	Children enrolled in AWCs (3-5 year age)	72.6	92.0	82.6	86.3	78.3	66.7	72.5	
27		Out of school children (6-14 year age group)	06.4	00.0	02.1	06.7	03.8	02.4	04.6	
28		Children in Class- III to V who could read class-I text	36.8	92.2	60.0	59.6	65.1	70.3	65.4	
29		Children in Class- III to V who could do arithmetical operations	40.5	96.5	45.7	60.2	69.0	55.0	68.8	
30		Women who could read Class-I text	68.8	72.5	29.2	63.8	49.1	77.2	62.9	
31		Men who could read Class-I text	83.6	76.4	44.7	73.7	65.3	85.4	74.6	



Annexures

Annexure I

Validity and Variation of PAHELI Data

Why district level estimates at times have significant variations?

The sampling strategy which is used, generates a representative picture of each district. The estimates obtained are then collated at the State level. Since estimates are generated at the district level, the minimum sample size calculations had to start at the district level itself. The sample size was determined on the basis of the following considerations: (i) incidence of what is being measured in the population, (ii) incidence of what was being attempted to be measured and was unknown in the population, (iii) 95 percent confidence level of estimates, and (iv) margin of error. Sample size calculations can be done in various ways, depending on what assumptions are made about the underlying population. With 50 percent incidence, 95 percent confidence level and five percent absolute precision, the minimum sample size required in each strata was 384. This derivation assumed that the population proportion is normally distributed. On the other hand, a sample size of 384 would imply a relative precision of 10 percent. If we were to require a five percent relative precision, the sample size would increase to 1600. It is to be noted that all the sample size calculations required estimating the incidence in the population. In this case, an estimate of the incidence from previous ASER and PAHELI surveys was present. However, incidence varies across different indicators. For example, the incidence of reading ability is different from the incidence of dropouts. In addition, one often wants to measure things that are not binary for which one needs more observations. Given these considerations, the sample size was decided to be 600 households in each district.

68 In PAHELI, PPS sampling technique was used randomly to select 30 villages from the census lists of the district as in case of ASER. The set of assessment tools used for education related questions were also that of ASER. These suggest district estimates may vary beyond the randomness inherent in the sampling.

In this survey, different local groups were engaged in data collection. In some districts, the estimates generated by both survey efforts (PAHELI and ASER) are similar and fall within a reasonable range of variation like five percent in the case of enrollment and 10 percent in the case of learning. However, in some districts, there are significant variations in the estimates. Sample size of households has been determined for an absolute margin error of \pm five percent for a confidence level of 95 percent at the district level. For some indicators, the actual number of observations may be much less than the sample size due to low incidence rate in the population and hence the margin of error may be found to be higher. Theoretically, repeated sampling using the same sampling strategy and tools should generate similar estimates from the district population. Therefore, it is important to explore the possible causes/reasons for the divergences, if any,

Possible reasons

Variations at the village level

Villages sampled for ASER and those for PAHELI in some districts had different sets of underlying characteristics than those in the other districts.

For PAHELI, surveyors were trained for three days for collecting data from four different sectors. The time used for understanding the test procedures for the education sector was likely to be lower. Though this issue is significant, yet it is difficult to measure. However comparisons on this front have not been attempted in this report.

Comparison with selected Secondary Data

The steps involved in PAHELI exercise are; (i) sample and survey design (ii) training (iii) primary household survey, (iv) data collection and data entry, (v) data processing and analysis, and (vi) report writing and dissemination. Each of these steps involved large teams to execute the work as per the action plan. This needed to be done as accurately as possible so that non-sampling error gets minimized. Although it is difficult to directly compare the PAHELI data with secondary information, given the nature of the indicators chosen for PAHELI, an attempt was made to validate the PAHELI outcomes by comparing them with 2001 census data as shown in Table A1.1. It may, however, be clarified that this comparison is not entirely valid as the gap of time between two events is more than eight years. Moreover, while one is a census, the other is only a small sample.

Table A1.1 Comparison of PAHELI 2009 data with Census 2001 (percent)

Sl. No.	Parameter	PAHELI 2009	CENSUS 2001	Remark
	Household			17,868 vs. 62,22,511 households
1	Housing	61	61	Thatch roof
			66	Mud wall
			81	Mud floor
2	Water	81	54	Near premises
	A. Distance		14	In the premises
			68	Total
	B. Source	72	29	Hand pumps
			31	Bore wells
			60	Total
		20	20	Well
3	Light	59	80	Kerosene
		40	19	Electricity
4	Toilet	12	4	

(Contd....)

Sl. No.	Parameter	PAHELI 2009	CENSUS 2001	Remark
5	Cooking	87	75	Firewood
			10	Crop residue
			10	Cow dung
			95	Total bio-mass fuel
6	Banking	19	20	

Table A1.1 brings out some interesting results. First, the categories of surveys used in census 2001 and the PAHELI 2009 survey have substantial differences. Second, wherever categories are the same, the PAHELI 2009 survey suggests significant improvements in those areas. This suggests that the State interventions have substantially improved in areas on the welfare of the local people. For example, the PAHELI survey indicates substantial improvements in the matter of housing, supply of drinking water, energy or village electrification and toilets.

The PAHELI 2009 survey outcomes may also be validated by comparing them with the PAHELI 2006 data for Gajapati district. In this case, the villages used in earlier survey and the district partners who conducted the surveys were different. But in case of those variables that change slowly, such as kutcha houses or use of bio-mass fuels, there is some match. In case of other variables, there are major variations and the PAHELI 2009 survey indicates substantial improvement in the values of the targeted variables. That is, the State interventions have shown quality results and the local people have benefited. In some cases, the situation seems to have deteriorated, for example as in case of contaminated water sources. Although, this comparison suggests limited validation, it gives some confidence in the robustness of the PAHELI survey outcome.

Table A1.2: Comparison of PAHELI 2009 and 2006 for Gajapati District

(percent)

Sl. No.	Parameter	PAHELI 2006	PAHELI 2009
I. Life and Livelihoods			
1	Two or fewer clothes per woman	60	31
2	Number of kutcha house	56	60
3	Biomass fuel / kerosene for cooking	98	98
4	No ownership of livestock	34	43
5	Banks loans	15	21
6	Use of iodised salt	45	72
7	Household member did not migrate	67	80

Sl. No.	Parameter	PAHELI 2006	PAHELI 2009
II. Water and Sanitation			
1	Pond or tank	7.3	5.3
2	Distance to water source – in or near home	67	64
3	Contaminated water source	27	41
4	Open defecation	94	74
III. Health – Mother and Child			
1	Intake of iron tablets	77	98
2	Birth of children – at home / unassisted	85	64
3	Children visited by health worker	68	97
4	Babies breast-fed	79	91
5	Child immunisation card	83	100
IV. Education			
1	AWC enrollments (3-5 year age)	25	58
2	School enrollment (6-14 year age group)	74	92
3	Class-III to V students who can read Class-I para	55	56
4	Class-III to V students who can subtract	58	67

Annexure II

List of reports and other secondary data reviewed

I. Life & Livelihoods

Millennium Development Goals and appropriate indicators for monitoring progress (www.mdgs.un.org)

Abhijit V Banerjee, Roland Benabou, Dilip Mukherjee; Understanding Poverty ; New York: Oxford University Press, 2006

Planning Commission's estimate of poverty for rural India (www.planningcommission.gov.in/news/prmar07.pdf)

Food Security Atlas of Rural India , MS Swaminathan Research Foundation (www.mssrf.org/fs/atlas/rural.htm)

Census figures, 1981 and 1991, Proportion of households living in pucca houses (www.indiastat.com)

Indira Awaas Yojana and it's salient features, "Bharat Nirman, A time bound plan for rural infrastructure by the Government of India in partnership with State Governments and Panchayati Raj Institutions: 2005- 2009", (<http://www.bharatnirman.gov.in/housing.html>)

National Rural Employment Guarantee Act

Ministry of Rural Development, Government of India. "National Rural Employment Guarantee Act, 2005 (NREGA) Operational Guidelines" New Delhi, India. 2005, (http://nrega.nic.in/Nrega_guidelines.pdf).

Ministry of Rural Development, Government of India. "NREGA Helpline", New Delhi, India. 2005. (<http://nrega.nic.in/help.doc>)

II. Water & Sanitation

Global Human Development Report, 2006, Beyond scarcity: Power, poverty and the global water crisis, United Nations Development Program, (www.hdr.undp.org/en/reports/global/hdr2006)

WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation, 2006 – Meeting the MDG drinking water and sanitation target, the Urban and Rural Challenge of the Decade,

(www.wssinfo.org/pdf/JMP_06.pdf)

Department of Drinking Water Supply, Ministry of Rural Development, for details on the Rajiv Gandhi National Drinking Water Mission and Accelerated Rural Water Supply Program, (www.ddws.nic.in)

Millennium Development Goals, Progress Report, 2006, United Nations, (www.mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2006/MDG_Report2006.pdf)

Total Sanitation Campaign, Department of Drinking Water Supply, Ministry of Rural Development, (www.ddws.nic.in/tsc-nic/html/index.html)

Nirmal Gram Puraskar, Department of Drinking Water Supply, Ministry of Rural Development, (www.ddws.nic.in/tsc-nic/html/nirmal_gram.htm)

Government of India norms for safe drinking water, Department of Drinking Water Supply, Ministry of Rural Development, (www.ddws.nic.in)

For details on 1981 and 1991 Census , Access to Safe Drinking Water, (www.indiastat.com)

Budgetary provisions for 2007-08 for Water and Sanitation, (www.indiabudget.nic.in/ub2007-08/bs/speecha.htm)

For details on 1991 and 2001 Census figures relating to Sanitation Coverage in the country, Rural & Urban, (www.indiastat.com)

Swajaldhara Scheme, Department of Drinking Water Supply, Ministry of Rural Development - "Swajaldhara Guidelines." (www.ddws.nic.in/swajaldhara)

Accelerated Rural Water Supply Guidelines (AWRSP), Department of Drinking Water Supply, Ministry of Rural Development, (www.ddws.nic.in/awrsp)

Total Sanitation Campaign, Department of Drinking Water Supply, Ministry of Rural Development, (www.ddws.nic.in/tsc-nic)

III. Mother and Child Health

11th Five Year Plan – Report of the Working Group on Integrating Nutrition with Health, Government of India, Department of Women and Child Development, (www.wcd.nic.in/integratingnutwithhealth.pdf)

United Nations Millennium Development Goals - Progress Chart, 2006 (www.mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2006/MDGProgressChart2006.pdf)

India's 10th five year plan goals for Mother and Child Health – Tenth Five Year Plan Document, (www.planningcommission.nic.in/plans/planrel/fiveyr/welcome.html)

National Family Health Survey – III (2005-2006), Ministry of Health and Family Welfare, Government of India, (www.mohfw.nic.in/factsheets%20pdf/IN.pdf)

Mother's Health Care during and post pregnancy – National Family Health Survey – 2 (1998-99) and 3 (2005-06), (<http://www.nfhsindia.org/nfhs2.htm>; <http://www.nfhsindia.org/nfhs3.html>)

The World Health Report, 2002 by the World Health Organisation (WHO), (www.who.int/whr/2002/en)

Census of India, 2001 for details of the percentage of India's population below the age of six years, (www.censusindia.gov.in/Census_Data_2001/Census_data_finder/Census_Data_Finder.aspx)

World Health Organisation, Growth Charts for estimating Child Malnutrition levels of surveyed districts, (www.who.int/childgrowth/software/en/)

For details on the ban introduced by the Government of India on the sale of un-iodised salt, (www.unicef.org/infobycountry/india_27575.html)

The World Health Report, 1995, 2000 and 2004 for Body Mass Index calculation details, (www.who.int/whr/1995/en; www.who.int/whr/2000/en; www.who.int/whr/2004/en)

“National Rural Health Mission: Mission Document.” Ministry of Health & Family Welfare, Government of India, (www.mohfw.nic.in/NRHMMissionDocument.pdf)

“Integrated Child Development Services” scheme guidelines, Ministry of Women and Child Development, Government of India, (wcd.nic.in/childdet.htm)

“Janani Suraksha Yojana: Guidelines for Implementation.” Ministry of Health & Family Welfare, Government of India,

(www.mohfw.nic.in/layout_09-06.pdf)

“Guidelines on Accredited Social Health Activists (ASHA).” Ministry of Health and Family Welfare, Government of India, ([www.mohfw.nic.in/Guidelines on ASHA-Annex.pdf](http://www.mohfw.nic.in/Guidelines%20on%20ASHA-Annex.pdf))

IV. Education

Progress towards Education Goals in India, Social and Rural Research Institute, IMRB and Annual Status of Education Report, 2006

(www.ssa.nic.in/research/outschool.asp)

(www.pratham.org)

V. Village Information

Bharat Nirman Goals, A time-bound plan for rural infrastructure by the Government of India in partnership with State Governments and Panchayat Raj Institutions, 2005-2009, (www.bharatnirman.gov.in/download.pdf)

Details on Government Schemes –

1. Sampoorna Grameen Rozgar Yojana, (www.rural.nic.in/book01-02/ch-2.pdf)
2. National Rural Employment Guarantee Act, (www.nrega.nic.in)
3. Pradhan Mantri Gram Sadak Yojana, (www.pmgysy.nic.in)
4. Indira Awaas Yojana, (www.sirsa.gov.in/htfiles/IAY.pdf)
5. Sarva Shiksha Abhiyan, (www.ssa.nic.in)

Annexure III

District Partners

(percent)

District/	District Coordinator	Contact details	NGO
I			
Mayurbhanj	Subharanjan Patnaik	At/P.O.-Digdhar, Via-Thakurmunda, Dist-Mayurbhanj, PIN-757038 Ph. 9438151666	PRATHAM
Bhadrak	Anup Behera	At-Tambakhuri, P.O.-Rajaghat, via-Amardaroad, Dist-Mayurbhanj, PIN-756030 Ph.9437295087	Unnayan
Balasore	Md. Shakil	At-Tambakhuri, P.O.-Rajaghat, via-Amardaroad, Dist-Mayurbhanj, PIN-756030 Ph. 9338191409	Unnayan
Kendrapada	Niranjan Sahoo	Ph. 9938960028, jbss@sify.com	JBSS
Jajpur	Satyabhama Rath	Ph. 9438589837 satyabhamarath@yahoo.co.in	SONSKAR
Keonjhar	Suchitra Sen	Ph. 9438023362	PRATHAM
II			
Jagatsinghpur	Ms. Kanaka Lata Das	Ph. 9439253222, 9861561665 upcars.paradip@gmail.com	UPCAR
Cuttack	Parikshit Sahu	9337252333, 0671 2358531 gensecywcws1@hotmail.com	WCWS
Khordha	Smrutihara Biswal	Ph. 9090038544 smrutihara@gmail.com	Gramya Unnayan Manch
Nayagarh	Sarat Kumar Jena	C/o D. C. Nayak, Ph. 9437141800	Amla Club
Dhenkanal	Bikash Kumar Swain	Ph. 9437663537, 9861148890, 9338720469 awhan@rediffmail.com	AWHAN
Puri	Chaitanya Prasad Patel	C/o N.A. Shah Ansari, Young India, Konark, Ph. 9437036471, 9439408904 ansari.youngindia@gmail.com	Young India

District/	District Coordinator	Contact details	NGO
III			
Sambalpur	Tulasi Ballava Dash	Ph. 9938616271, 9437050103 ranjanpanda@gmail.com	MASS
Jharsuguda	Batakrushna Kundu	Ph. 9861886256	HDF
Deogarh	Umakanta Behera	Ph. 9861342527 umakanta_behera@yahoo.com	HDF
Angul	Gobinda Sankhari	C/o Manoj Mahapatra Ph. 9437191043 manojvyk@rediffmail.com	VYK
Bargarh	Nalinikanta sahu	Ph. 9861068480 batakrushna.kundu@gmail.com	HDF
Sundargarh	Saroj Kar	Ph. 9438018647	PRATHAM
IV			
Balangir	Bijaya Ku. Hota	Mr. Rajendra Ph. 9937045065, 9853152844 rys.rk@rediffmail.com	RYS
Subarnapur	Ashutosh Hota	Mr Gaurishyam Panda Ph. 9973216892, 9437194908, 6654220199 raresonepur@hotmail.com	RARE
Boudh	Tuleswar Baikar	C/o Mr. Rajendra, Ph. 9437657989, 9437194954, ycdaboudh@yahoo.co.in	YCDA
Phulbani	Santosh Mishra	Ph. 9437723752	PRATHAM
Nuapada	Pabitra Mohan Pradhan	Ph. 9437122576, 9437072910 (Biswajit Padhi) greensrusti@rediffmail.com	SRUSTI
Kalahandi	Dr. Ranjan Ku. Moharana	Ph. 9437122636 janaswasthya@yahoo.co.in	JSA
V			
Gajapati	N. N. Panda	Vill – Ranadevi Paralakhemundi Ph. 09437059041	AID India
Ganjam	Manorama Tarai	C/o Gopal Sahu, Ph. 9439312454, 9861331557 odisha_gs@yahoo.co.in	ODISHA
Nabarangpur	Nanda Bisoi	C/o Gopal Sahu, Ph. 9938063848, 9438222204 avanabarangpur@yahoo.co.in	AVA
Rayagada	Krishna Chandra Panda	Ph. 9938558200, 9437033349 usorayagada@yahoo.com	USO
Koraput	Sarbeswar Barada	C/o Sarat Patnaik Ph. 9438445442, 9437233540 sarat.pattnaik@gmail.com	KFA
Malkangiri	Ramahari Bal	C/o N. K. Pradhan, Ph. 9437125426, 9437037005 parivarttan@yahoo.co.in	Parivarttan

Annexure IV

Odisha State Human Development Report Card



I. Life and Livelihood

Adult women were asked questions regarding the household.

Sets of clothing owned by the woman of the house (percent)

Total HH	two or fewer	More than two sets
17,345	28.1	71.9

Type of house (percent)

Total HH	No house	Kutcha	Semi-Pucca	Pucca
17,348	2.4	62.1	21.0	14.5

Source of household fuel for cooking food (percent)

Total HH	Firewood	Coal	Kerosene	Gas
17,278	88.3	3.7	1.3	6.7

Ownership of animals for the household (percent)

Total HH	None	Goat & Lambs	Cows & Buffaloes	Any other
15,790	31.5	5.5	41.6	21.4

Assets owned (percent)

Total HH	No assets	Some Assets	Productive Assets	Transport Assets
16,071	13.1	86.9	56.3	74.5

Loans & Types of Loans (percent)

Total HH	With any kind of loan	Of families with loans, those with bank loan
17,243	49.3	17.7

Use of iodized salt during cooking Migration (percent)

Total HH	Iodine	No Iodine	Total HH	HH who did not migrate
15,879	64.2	35.8	17,092	84.8

NOTE:

1 Numbers in boxes may not add to 100 either due to a minor category not being reported here or due to missing data.



II. Water and Sanitation

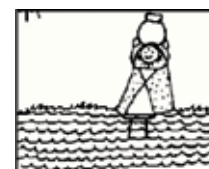
Total HH refers to the total no. of households surveyed in the district.

All other numbers in boxes represent the percentage of total households surveyed.

Adult women were asked questions regarding the household.

Main source of water supply (percent)

Total HH-17,424	River or stream	Pond or tank	Well	Hand pump, tubewell or tap	Tanker
Normal times	4.0	1.4	19.7	71.8	3.1
Summer months	5.5	2.3	19.2	70.0	3.0



Main supplier of water (percent)

Total HH	Government	Private source	Community source	Don't know
16,745	59.9	19.6	6.1	14.4



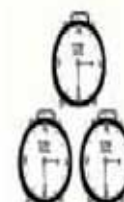
Distance traveled daily to access drinking water source (percent)

Total HH-17,425	One km. or more	Less than one km.	In home/ close to home
Normal times	2.4	16.8	80.8
Summer times	7.7	21.6	70.7



Time taken each day to collect water for all needs of the household (percent)

Total HH-17448	One hour or more	Less than one hour
Normal times	29.5	70.5
Summer times	44.6	55.4



Water shortage experienced by the household in a year (percent)

Total HH	One to two months	Three to four months	More than four months	None
15,789	25.8	46.0	4.7	23.5



Bacterial contamination of drinking water in the household (percent)

Total HH	Safe	Contaminated
4,585	53.2	46.8



Access to sanitation for members of the household (percent)

Total HH	In an open area	In a public toilet	In a latrine in house/ close to house
17,386	86.5	2.0	11.5

NOTE:

1. Numbers in boxes may not add to 100 either due to a minor category not being reported here or due to missing data.





III. Health: Mother and Child

Total refers to the children and mothers surveyed in district.

All other numbers in boxes represent the percentage of the total referred to in the above sentence.

Mothers were asked these questions.

Intake of Iron tablets while pregnant Minimum of one Pre-natal check up undertaken (percent)

Total mothers	Yes	No	Don't know	Total mothers	Yes	No	Don't know
4,386	87.3	11.7	1.0	4,215	72.7	25.5	1.8

Birth place of child (percent)

Total children	At home	In Government hospital	In private hospital
4,460	40.6	56.6	2.8

Child visited by a health worker one month prior to the survey Babies breast-fed (percent)

Total children	Yes	No	Total children	Yes	No
4,119	74.3	25.7	4,353	88.9	11.1

Commencement of regular breast feeding practices for the child (percent)

Total children	First day	Second day	After two days
3,932	94.5	96.0	96.4

Exclusive breast feed given to child for the first six months (percent)

Total children	Yes	No
3,595	49.7	50.3

Number of months after birth, child is given solid foods (percent)

Total children	From birth till five months	Six to nine months	10-12 months	After 12 months
3,405	6.2	44.1	34.5	15.2

Child immunisation card (percent)

Total children	Yes	No
4,167	86.6	13.4

Child suffering from diarrhea one month prior to survey ORS treatment (percent)

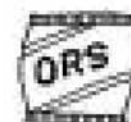
Total children	Diarrhea	No diarrhea	Of children who had diarrhea and treated with ORS
4,108	54.9	45.1	77.3

Adult nourishment based on height and weight (percent)

Total	Below normal	Normal	Above normal
Men-14,777	15.3	52.3	32.4
Women-15,226	22.3	54.7	23.0

NOTE:

1. Numbers in boxes may not add to 100 either due to a minor category not being reported here or due to missing data



IV. Education and Literacy

Total refers to the total children/adult men/ adult women surveyed in the district.

All other numbers in boxes represent the percentage of the total referred to in the above sentence.

Pre-School enrollment of children in the 3-5 year old age group (percent)

Total children	
(3-5 years)	AWC/balwadi or ICDS centre/pre-school
2,241	72.5



School enrollment of children in the age group of 6-14 year (percent)

Total children		
(6- 14 years)	In school	Out of school
13,004	95.4	4.6



Reading and arithmetic ability among children enrolled in Class-III to V (percent)

Total children	Can read Class-I level paragraph	Can do subtraction
4,212	65.4	68.8



Adult education and reading

Adult men

Adult women

School enrollment

School enrollment (percent)

Total men	With schooling	No schooling	Total men	With schooling	No schooling
26,962	81.3	18.7	22,700	66.9	33.1

Ability to read a Class-I paragraph Ability to read a Class-I paragraph (percent)

Total men	Can read	Can't read	Total women	Can read	Can't read
18,079	74.6	25.4	15,536	62.9	37.1

ଉତ୍ତର ପରୀକ୍ଷା: ୧

କାହାଣୀ ପଢ଼ନ୍ତୁ	କାହାଣୀ ପଢ଼ନ୍ତୁ	ଗଣନା	ସମସ୍ତ
୩	୩୫	୫୫	୧) ୧୧୮ (
୧	୧୨	୮୪	୨) ୨୨୯ (
୮	୫୨	୩୧	୩) ୮୮୧ (
୫	୫୨	୪୫	୪) ୫୫୫ (

କମ୍ପ୍ୟୁଟରରେ ଉପରୋକ୍ତ ଫଳାଫଳ ଗଣନା କରାଯାଇଛି ।

ପଢ଼ିବାକୁ କ୍ଷମତା
ପାଠ୍ୟ (ପଠ୍ୟ - ୧)

(କ)

ପୁରୀ ଓ ନାମା ଏକତା ପୁରୀ ବୁଲି
ଗଲେ । ଖେଳରେ ବହୁତ ଲୋକ
କମା ହୋଇଥିଲେ । ଖେଳରେ
ସେମାନେ ଅନନ୍ଦ ହୋଇଗଲେ ।
ପୁରୀ ଯାଇ ପୋଲିସ୍ ଡିଭିଜନ୍
ଦେଲା । ଏ ଉପର ପାଇ ଫୋଲିସ୍
ନାମକରେ ଉପ ପଦାଳନା । ଏହା
ଶୁଣି ନାମା ସେଠାରୁ ଆସିଲା ।
ସେମାନେ ତାହାର ଦେଖିଲେ ।
ଶୁଣି ନାମକରେ ପାଇକୁ ଫେରିଲେ ।

(ଖ)

ନରକରେ ଭଲେ ତାଣ ।
ପ୍ରସବ ହୁଏ ବାରି ନାଏ ।
ଅନ୍ଧାଦ ନନ୍ଦ୍ୟ ଦନ୍ତା ଭାନ୍ତା ।
ଭୋଲିକା ପେଟକୁ ମିଳେ ଆହାର ।

(ଗ)

ବରଷା ପରେ ଶାନ୍ତ ଅମିଳି ।
ଏହି ସମୟରେ ଶାନ୍ତ ହୁଏ ।
ବାପା ଭଲ ଯୋଜନା ଆଣିଲେ ।
ଆମେ ତାକୁ ପାଇ ଶୁଣି ଦେଲୁ ।

NOTE:

1. Gender disaggregated results are not shown here due to small sample size.
2. Subtraction level: 2 digit numerical problems with borrowing.
3. Adults were asked to read a simple four sentence paragraph of Class-I level.



V. Villages of the District

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
(percent)

Yes	No	Yes	No
81.8	18.2	62.5	37.5



Transport related facilities

(percent)

Villages with	Yes	No
Tar road	53.4	46.6
Bus stop	29.2	70.8



Communication related facilities

(percent)

Villages with	Yes	No
Post office	43.7	56.3
Few cell phones	68.8	31.2
STD booth	32.4	67.6
Internet access	10.1	89.9



Other facilities

(percent)

Villages with	Yes	No
Bank	16.2	83.8
PDS shop	52.3	47.7

Education related facilities

(percent)

Villages with	Yes	No
Private nursery/pre-school	51.9	48.1
Private primary school	26.2	73.8
Government middle school	76.2	23.8
Government secondary school	35.6	64.4
Private secondary school	10.4	89.6

Medical related facilities

(percent)

Villages with	Yes	No
Medicine shop	19.4	80.6
Ambulance	6.6	93.4
Government hospital	10.4	89.6
Private doctor	22.2	77.8
Private hospital	10.6	89.4



81

National schemes

(percent)

Villages with	Exists	Does not exist
SGRY	47.5	52.5
IAY	68.7	31.3
PMGSY	32.4	67.6
SSA	75.0	25.0



* In some cases there are 'Don't Know' answers in small proportions, therefore the percentage may not add to hundred.



