

ODISHA DISTRICT GAZETTEERS



SUNDARGARH

**GOPABANDHU ACADEMY OF ADMINISTRATION
[GAZETTEERS UNIT]
GENERAL ADMINISTRATION DEPARTMENT
GOVERNMENT OF ODISHA**

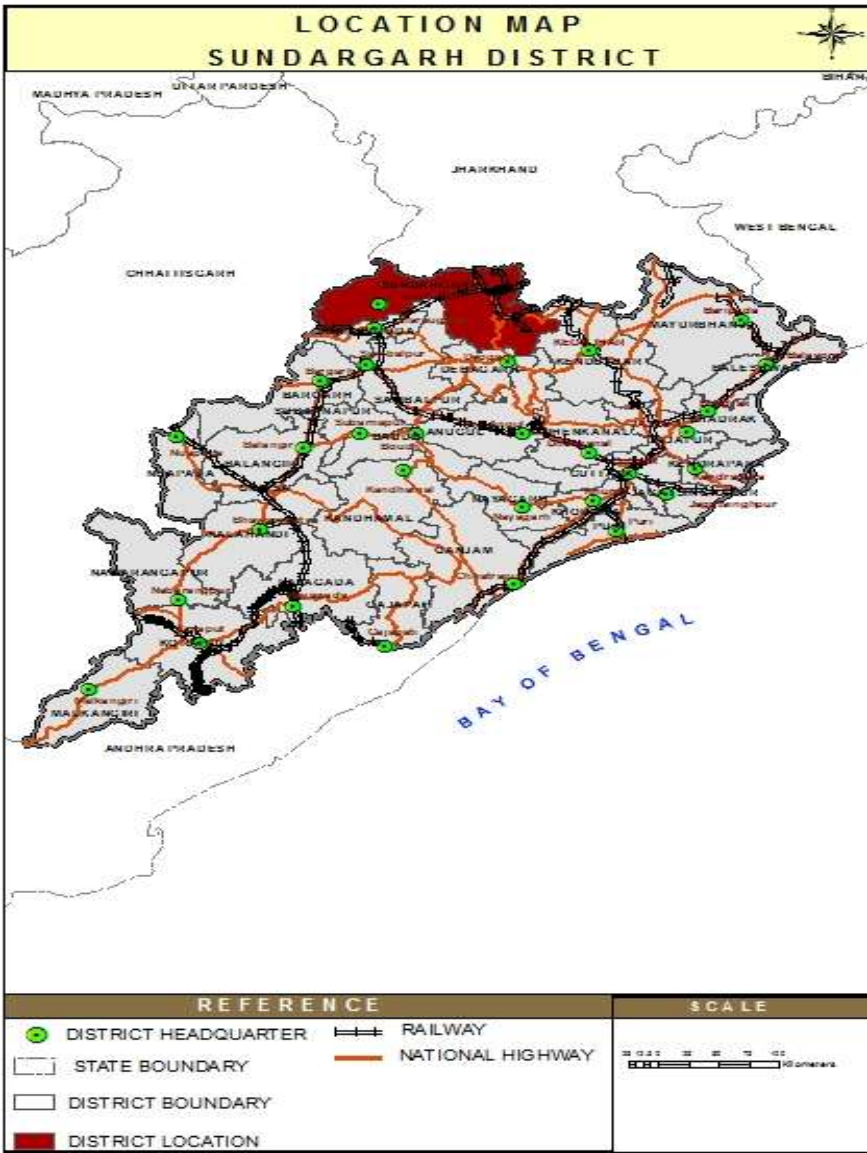
ODISHA DISTRICT GAZETTEERS



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PREFACE

The Gazetteer is an authoritative document that describes a District in all its hues – the economy, society, political and administrative setup, its history, geography, climate and natural phenomena, biodiversity and natural resource endowments. It highlights key developments over time in all such facets, whilst serving as a placeholder for the timelessness of its unique culture and ethos. It permits viewing a District beyond the prismatic image of a geographical or administrative unit, since the Gazetteer holistically captures its socio-cultural diversity, traditions, and practices, the creative contributions and industriousness of its peoples and luminaries, and builds on the economic, commercial and social interplay with the rest of the State and the country at large. The document which is a centrepiece of the District, is developed and brought out by the State administration with the cooperation and contributions of all concerned. Its purpose is to generate awareness, public consciousness, spirit of cooperation, pride in contribution to the development of a District, and to serve multifarious interests and address concerns of the people of a District and others in any way concerned.

Historically, the “Imperial Gazetteers” were prepared by Colonial administrators for the six Districts of the then Odisha, namely, Angul, Balasore, Cuttack, Koraput, Puri, and Sambalpur. After Independence, the Scheme for compilation of District Gazetteers devolved from the Central Sector to the State Sector in 1957. Within the State, the responsibility for developing the Gazetteers was transferred from the Revenue Department to the Gopabandhu Academy of Administration (GAA) in 1999. In this process, the “District Gazetteers” of all thirteen Districts were published as follows: Koraput/1966 (Supplement/1984), Mayurbhanj/1967, Bolangir/1968, Sambalpur/1971, Dhenkanal/1972, Sundargarh/1975, Puri/1977, Kalahandi/1980, Boudh-Khondmal/1983, Keonjhar/1986, Balasore/1994, Ganjam/1995 and Cuttack/1992. The Gazetteers of Balasore/1994, Ganjam/1995 and Cuttack/1992, however, could not capture the implications of the reorganisation of these Districts. Though 10 out of 13 Districts had been reorganised into 27 and the total number of Districts in the State had gone up to 30, the reality remained to be captured in the Districts’ Gazetteers.

Be it so, the time is now ripe to build on the rich cache of Gazetteers available across the Districts in Odisha, and to develop updated documents that capture the essence of each District as it exists today. The Districts have evolved over the last couple of decades as a result of various natural phenomena and unforeseen forces, besides a slew of economic and social sector reforms undertaken at the National, State and local levels. The resulting impacts have been more cataclysmic in some Districts than others,

which are reflective of the complex dynamics at work which determine a District's State of preparedness and receptivity to change or its absorptive capacity. This diversity in impacts across Districts is now captured both in measurable parameters and non-measurable underlying trends and perceptions in the updated District Gazetteers.

Besides catching up with the developments in each of the thirty Districts and the environs, it was felt opportune to capture the major shifts in areas and issues of priority and concern across the Districts by suitably restructuring the document, to recount the post-Independence events in brief for their historic value and evolutionary impact on the District, and to bridge an important lacuna, viz. incorporating the role played by freedom fighters from each District in India's Independence, which was sparingly mentioned in the Gazetteers initially prepared by colonial administrators. Though the updated Gazetteers draw heavily on the past Gazetteers of thirteen undivided Districts, the documents were also restructured to provide for elimination, modification and insertion of some issues in discussion with the Consulting Editors and District Administration in order to present a comprehensive and contemporaneous picture of the Districts.

The task of developing and updating the Gazetteers for the present 30 Districts was initiated in the first week of May 2015. Procedurally, a series of time-bound initiatives taken since then were bed-rocked on the complete and continuous involvement of the District Collector and heads of concerned line departments at the District level in the coverage of issues and developments over time, coupled with specific participation of a number of scholars and experts, including some senior serving and retired civil servants. A standardised synopsis of the District Gazetteer was prepared by GAA to assist in the development of the initial drafts by each District Administration. For this exercise, a Committee was constituted by GAA under the District Collector to steer the development of the initial draft for the respective District. A number of Sub-Committees comprising officials and experts were also constituted, again at District level, for drafting specific and thematic chapters. The initial drafts prepared by the District Administration were received by GAA starting in August 2015. After in-house scrutiny of these drafts, detailed comments and suggestions for bridging information gaps were sent by GAA to enable suitable revisions by the District Administration. A process of continuous monitoring of the development of the next stage of drafts was followed, and the second drafts were received by GAA by the end of October 2015. This revised draft Gazetteer of each District was then placed for scrutiny at two levels – the first by the public at large by hoisting the drafts at the website of GAA (gopabandhuacademy.gov.in), and the second by a set of 30 Experts, one for each District, designated as Consulting Editor.

Simultaneously, Government in General Administration Department (GAD) with the approval of Hon'ble Chief Minister reconstituted the State Advisory Committee (SAC) and State Working Committee (SWC) on Gazetteers vide Notification No. 23473 dated 26 September, 2015. The SAC continues to be headed by Chief Secretary, Government of Odisha. The SWC hereafter was to be chaired by the Director General, GAA, who had also been notified as the ex-officio Chief Editor of Gazetteers, besides being granted functional freedom to prepare and publish the Gazetteers. A series of meetings were held by DG, GAA with the Consulting Editors appointed for refinement of the drafts prepared at the District level to discuss and to ensure accuracy and coherence, quality and content. The Consulting Editors also visited the respective Districts regularly to interact with senior officials, governmental and non-governmental organisations and persons concerned with the preparation of the initial two drafts. The drafts reviewed by DG, GAA, with the Consulting Editors were forwarded to the District Collectors for authentication of content and further improvements in quality, wherever felt necessary.

The final round of discussions with the Consulting Editors was held in GAA in February through till April 2016, and the draft Gazetteers, finalised at this stage again in consultation with the District Collectors, were placed before the SWC. Drafts recommended by it were placed before the SAC for approval.

Sundargarh District remained undivided during the District reorganisation in 1992-94. Under the British rule, Sundargarh was under Sambalpur dominion. After the merger of the ex-princely States of Gangpur and Bonaigarh, Sundargarh District was born on 1st January 1948.

The first gazetteer of the District was published in 1974. As the District remains undivided, much of its past material is derived from the first gazetteer and old data updated. The latest developments taking place in the District in different fields like mining, sports, etc are incorporated in this gazetteer. I must thank the Collector of Sundargarh, Mr. Bhupendra Singh Poonia, IAS, under whose leadership the District level committee and sub-committee consisting of District level officers, local experts, etc. were formed to prepare the initial draft of the District gazetteer.

The draft prepared by the District administration has been fine-tuned by Sri Livinus Kindo, IAS (Retd.), who volunteered to do the job as an act of paying back to the District that brought him up.

Sri Srinibash Rath, IAS (Retd.), who spent three and half years as ADM of Rourkela and later as RDC of Northern Division, graciously agreed to go through the draft adding input to further improve the draft gazetteer. I owe a debt of gratitude to him.

I convey sincere gratitude to the members of the State Working Committee and State Advisory Committee for their valuable inputs and advice. I will be failing in my duty if I do not acknowledge the contribution of my friends and colleagues in the State Administration and particularly those at GAA, namely Dr. Rabinarayan Patra, Deputy Director (Studies), Dr. Chitrasen Pasayat, Deputy Director (Training), Sri Subrat Kuanr, Research Officer, Dr. Rabindra Kumar Swain, Compiler.

Finally, despite optimum efforts to plug the obvious limitations and lacunae in the Gazetteer, factual deficiencies, misspellings and grammatical errors might be found. The responsibility for all its shortcomings doubtless remains mine. With an eye to the future, I urge all readers, including thematic experts, young scholars and luminaries to offer their valuable suggestions for improving the quality and contents of the document for the next addition with the passage of time.

I would like to thank the people of the District of Sundargarh for their contributions over time to the making of the District as we now know it, and commend this document to them and to all other stakeholders within the State and beyond.

Dr. Taradatt, IAS
Chief Editor, Gazetteers &
Director General, GAA

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ABBREVIATIONS

AAU	Agro-met Advisory Unit
ABDO	Additional Block Development Officer
AC	Assembly Constituency
AC (SC)	Assembly Constituency (Scheduled Caste)
ACS	Agricultural Co-Operative Societies
ACZ	Agro Climatic Zone
AD	<u>Anno Domini</u>
ADB	Agriculture Development Bank
ADM	Additional District Magistrate
ADMO	Additional District Medical Officer
ADWO	Assistant District Welfare Officer
AICTE	All India Council for Technical Education
AIP	Agriculture Intensification Programme
AMFU	Agro-Meteorological Field Unit
ANC	Ante-Natal Care
ANM	Auxiliary Nurse Midwife
APD	Additional Project Director
APICOL	Agricultural Production and Investment Corporation of Odisha Limited
APL	Above Poverty Line
ARI	Assistant Revenue Inspector
ARIA	Association for Reintegration's of Indians Abroad
ARWSP	Accelerated Rural Water Supply Programme
ASHA	Accredited Social Health Activist
AWC	Angan Wadi Centre
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy
BC	Before Christ
BDO	Block Development Officer
BKVY	Biju Krishak Vikas Yojana
BPL	Below Poverty Line
BPL	Below Poverty Line

BPUT	Biju Patnaik University of Technology
BRGF	Backward Region Grant Fund (for SC/ST)
BRGF	Backward Region Grant Fund
CBR	Crude Birth Rate
CCA	Cultural Command Area
CCA	Cultural Command Area
CCB	Central Cooperative Bank
CCT	Continuous Casting Technology
CDMO	Chief District Medical Officer
CDPO	Child Development Project Officer
CDR	Crude Death Rate
CEC	Continuing Education Centre
CEP	Continuing Education Programme
CHC	Community Health Centre
CITU	Centre for Indian Trade Unions
CMR	Child Mortality Rate
CMRF	Chief Minister Relief Fund
CP	Central Province
CRSP	Central Rural Sanitation Programme
CSP	City Sanitation Plan
CT	Certified Teachers Training
DANIDA	Danish International Development Agency
DBCS	District Blindness Control Society
DDA	Deputy Director Agriculture
DDH	Deputy Director Horticulture
DDP	Desert Development Programme
DEE	Directorate of Elementary Education
DIC	District Industries Centre
DIET	District Institute of Education and Training
DLC	District Level Committee
DOTS	Directly Observed Treatment Short Course Strategy
DPAP	Drought Prone Area Programme
DPCSSA RTE	District Project Coordination, Sarva Sikshya Abhijan,

	Right to Education
DRDA	District Rural Development Agency
DSTF	Odisha State Treatment Fund
ECCE	Early Childhood Care and Education Centre
EMCP	Enhanced Malaria Control Project
EMS	Environment Management System
ENS	East North East
ERW	Electric Resistance Welded
FCI	Food Corporation of India
FDA	Forest Development Agencies Under National Afforestation Programme
FDA	Forest Development Agency
FFDA	Fish Farmers Development Agency
FICCI	Federation of India Chamber of Commerce and Industry
FLD	Front Line Demonstration
FRA	Forest Rights Act-The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act- 2006
FRC	Forest Rights Committee
FRS	Fair Prier Shop
GDDP	Gross District Domestic Product
GDI	Gender Development Index
GDP	Gross Domestic Product
GM	General Manager
GMM	Gangpur Majdoor Mancha
GOCL	Gulf Oil Corporation Limited
GP	Gram Panchayat
GRIDCO	Grid Corporation of Odisha
GRS	Gram Rojgar Sevaka
HCL	Hindustan Copper/Zinc Limited
HDI	Human Development Index
HRD	Human Resource Development
HSDP	Odisha Health System Development Project
HSL	Hindustan Steel Limited

HYV	High Yielding Variety Paddy
IAP	The Integrated Action Plan in Selected Tribal and Backward Districts
IAS	Indian Administrative Service
ICDS	Integrated Child Development Service
ICS	Indian Civil Service
ICT	Information Communication Technology
IDD	Iodine Deficiency Disorder
IEC	Information, Education and Communication
IEC	Information, Education and Communication
IFA	Iron and Folic Acid
IGH	Ispat General Hospital
IHHL	Individual House Hold Latrine
IIPM	Indian Institute of Production Management
IMR	Infant Mortality Rate
IMR	Infant Mortality Disease
IPDP	Integrated Population and Development Project
IT	Information Technology
ITC	International Trade Centre, Geneva
ITDA	Integrated Tribal Development Agency
ITI	Industrial Training Institute
IWDP	Integrated Watershed Development Programme
IWMP	Integrated Water Management Programme
JFM	Joint Forest Management
JLF	Jharkhand Liberation Force/Front
JMM	Jharkhand Mukti Morcha
JSY	Janani Surakhsya Yojana
JVK	Jama Vikas Kendra
KCC	Kissan Credit Card
KVK	Krishi Vikash Kendra
LWE	Left Wing Extremism
MADA	The Modified Area Development Agency Pockets
MCC	Maoist Communist Centre

MCIT	Ministry of Communications and Information Technology
MCL	Mahanadi Coal Fields Limited
MCL	Mahanadi Coalfields Limited
MCS	Marketing Cooperative Society
MDP	Multi Drug Therapy
MDR	Major District Road
MDT	Multi Drug Therapy
MDWS	Ministry of Drinking Water and Sanitation
MFP	Minor Forest Produce
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MIP	Minor Irrigation Project
MLA	Member of Legislative Assembly
MLE	Multi Lingual Education
MMR	Maternal Mortality Rate
MP	Member of Parliament
MSL	Mean Sea Level
MSME	Micro, Small and Medium Enterprises
MTP	Medical Termination of Pregnancy
NABARD	National Bank for Agriculture and Rural Development
NAC	Notified Area Council
NACP	National Aids Control Programme
NAMP	National Anti-Malaria Programme
NBA	Nirmal Bharat Abhijan
NCDC	National Coal Development Cooperation
NCLP	National Child Labour Programme
NDDB	National Dairy Development Board
NDDC	Net District Domestic Product
NDP	Net Domestic Product
NDWM	National Drinking Water Mission
NE	North East
NFBC	National Family Benefit Scheme

NFCP	National Filaria Control Programme
NFFW	National Food for Work
NFSM	National Food Security Mission
NGO	Non-Government Organisation
NGP	Nirmal Grama Puraskar
NH	National Highway
NIC	National Informatics Centre
NIDDCP	National Iodine Deficiency Disorder Control Programmes
NIT	National Institute of Technology
NLEP	National Leprosy Elimination Programme
NMRC	National Malaria Research Centre
NPCB	National Programme for Control of Blindness
NPEGEL	National Programme for Education of Girls at Elementary Level
NRHM	National Rural Health Mission
NRLM	National Rural Livelihood Mission
NRLM	National Rural Livelihood Mission
NRSC	National Remote Sensivity Centre
NSS	National Sample Survey
NSTC	National Sports Talents Coaching
NTFP	Non-Timber Forest Produce
NUHM	National Urban Health Mission
NUSP	National Urban Sanitation Policy
NVBDCP	National Vector Borne Disease Control Programme
NWDPRA	National Watershed Development Project/Programme for Rain-fed Areas
OAIC	Odisha Agro Industries Corporation
OAS	Odisha Administrative Service
OCAC	Odisha Computer Application Centre
OCC	Odisha Construction Corporation
OCL	Odisha Cement Limited
OCL	Odisha Cements Limited
ODF	Open Defecation Free Area

ODR	Other District Road
ODRAF	Odisha Disaster Rapid Action Force
OERC	Odisha Electricity Regulatory Commission
OFT	On Form Testing
OIIAWMP	Odisha Integrated Irrigated Agriculture and Water Management Project
OLIC	Odisha Lift Irrigation Corporation
OLIC	Odisha Lift Irrigation Corporation
OMFED	Odisha State Cooperative Milk Producers Federation
OPEPA	Odisha Primary Education Programme Authority
OPTCL	Odisha Power Transmission Corporation Limited
ORSAC	Odisha Space Application Centre
OSWAN	Odisha State Wide Area Network
OSWSM	Odisha State Water and Sanitation Mission
OTDC	Odisha Tourism Development Corporation
OUAT	Odisha University Agriculture Technology
PACS	Primary Agricultural Cooperative Societies
PD	Project Director
PDS	Public Distribution System
PHC	Primary Health Centre
PIET	Purusottam Institute of Engineering
PMJDY	Prime Ministers Jan Dhan Yojana
PPTCT	Prevention from Parent to Child Transmission
PRI	Panchayat Raj Institutions
PS	Panchayat Samit / Police Station
PTGs	Particularly Vulnerable Tribal Groups
RCC	Rourkela Chamber of Commerce
RCHP	Reproductive and Child Health Programme
RCMS	Regional Cooperative Marketing Society
RD	Rural Development
REC	Rourkela Engineering College
RGH	Rourkela Government Hospital
RI	Revenue Inspector

RIDF	Rural Infrastructure Development Fund
RIKS	Rourkela Ispat Karmachari Sangha
RKBY	Rashtriya Krishi Bima Yojana
RKVY	Rashtriya Krishi Vikas Yojana
RNTCP	Revised National Tuberculosis Programme
RSP	Rourkela Steel Plant
RTE	Right to Education
RVP	River Valley Project Scheme
RVPWDP	River Valley Project Watershed Development Programme
SAG	Special Area Games Centre
SAI	Sports Authority of India
SAIL	Steel Authority of India Limited
SAP	Surplus Agriculture Products
SBA	Sakshyara Bharat Abhijan
SBM	Swatchh Bharat Mission
SCL	Shiva Cement Limited
SDJM	Sub-Divisional Judicial Magistrate
SDLC	Sub-Divisional Level Committee
SDM	Sub-Divisional Magistrate
SDM	Sub-Divisional Magistrate
SEAR	Steel Employees Association Rourkela
SHG	Self-Help Group
SI	Sub-Inspector
SLSC	State Level Screening Committee
SRE	Security Related Expenditure
SSA	Sarva Sikshsya Abhiyan
SSA	Sarva Sikshya Abhijan
SSI	Small Scales Industries
STA	State Transport Authority
STD	Sexually Transmitted Disease
STPI	Software Technology Park of India
SUDA	State Urban Development Agency

SW	South West
TISCO	Tata Iron and Steel Company Ltd.
TLC	Total Literacy Campaign
TQM	Total Quality Management
TSC	Total Sanitation Campaign
TSP	Tribal Sub-Plan Area
TT	Tetanus Toxide
UEE	Universal Elementary Education
UGPHC	Upgraded Primary Health Centre
ULB	Urban Local Bodies
UNFPA	United Nations Fund for Population Activities
VAW	Village Agriculture Workers
VCR	Vehicle Check Report
VECC	Voluntary Confidential Counselling and Testing Centres
VPNOBB	Virtual Private Network Over Broad Band
VSS	Vana Sangrakshyana Samiti
VTC	Vocational Training Centre
WODC	Western Odisha Development Council
WODC	Western Odisha Development Council
WSW	West South West
ZP	Zilla Parishad
ZSS	Zilla Sakhyara Samiti

Chapter-I

GENERAL

A Brief Historical, Political, Social, Cultural and Geo-Physical Introduction of the District

Two princely States, namely, the State of Gangpur and Bonai, together constitute the present district of Sundargarh. After the cancellation of the dominion of Sambalpur over Gangpur, the state was demarcated with an area of 2942 mile². It is bounded by Jashpur State and Ranchi district of the erstwhile British dominion in north; by Sambalpur, Bonai and Bamara States in south; Raigarh State of the erstwhile Central Province in the west. Ib River is called as the lifeline of Gangpur State. It enters the state from Jashpur. In Sambalpur, it joined the Mahanadi, but after division of Sambalpur district, Ib joins the Hirakud reservoir water at Brajrajnagar in Jharsuguda district. River Brahmani is another lifeline of Sundargarh district and at Panposh, both Sankh and Koel make the river Brahmani at the confluence called the holy shrine Vedvyas. This river system controlled the entire production from agriculture in the state. Habitats are on the both sides of the river. Besides agriculture, Ib river was used as a means of transport. It is said that diamonds were occasionally found in the sands the river. Some group of people, identified as Jhorias searched diamond and gold in the river bed in flowing water.

The place Vedavyas is associated with the Hindu mythology that in the dim past the sage Parasara Muni was camping on a hillock and now named as Parasara Munda on the north side of the river Brahmani. He used to come to the holly confluence for performing the daily ablutions and meditation by boat. It happened one day that he was alone in the boat ferried by the teen aged daughter of the boat man in that boat. Her name was Mastchhyagandha and she was extremely beautiful. The sage was attracted towards her and could not control his lusty passion. The great sage Vyasa was born out of the union between Parasara and Mastchhyagandha. Mastchhyagandha became a Brahmin because of her union with Parasara Muni. Therefore, the river emerging from the holly confluence was christened as the river Brahmani. Later Vyasa turned into a sage and composed many religious scriptures including Puranas. He is the author of the famous Hindu epic "The Mahabharat" which is perhaps the greatest epic of the mankind. As the birth place of sage Vyasa, the place of confluence got the name of Vedavyasa.

Bonaigarh is now locally known as Bonai, a Sub-Division of Sundargarh District. It is 162 Km east of the District Headquarter. Besides, it is also there of headquarters, Tahasil and Block. During the British Raj, Bonaigarh was the capital of Bonai State, one of the Princely States of Chhota-Nagpore States, belonging to Eastern States Agency. Bonai is covered with thick forests. Its adjoining areas with the northern Gangpur are practically denuded of forest.

Both these ex-States were once under the suzerainty of Sambalpur which formed part of the dominions of the Maratha Rajas of Nagpore. They were ceded to the British Government in 1803 by the Maratha Chief Raghujii Bhonsla of Nagpore under the Treaty of Deogaon. But they were restored to him by a special engagement in 1806. They reverted to the British Government under the provisional agreement concluded with Madhuji Bhonsla (Appa Sahib) in 1818, and were finally ceded in 1826. In 1821 the feudal supremacy of Sambalpur over these States was cancelled by the British Government and a fresh *sanad* was granted to the Chiefs. Both these States, for some time, formed a part of the South-Western Frontier Agency on its creation in 1833, but they were transferred to the charge of the Commissioner of Chhota-Nagpore in 1854. Again in 1905 they were transferred from the control of the Commissioner of Chhota Nagpore to that of Odisha and a Political Agent was appointed. The ex-States remained under the control of the Political Agent till their merger with Odisha in 1948.

The Gangpur State had progressed rapidly with industrialisation and urbanisation due to the presence of the railway lines, road networks, and metallic industries, both heavy and light in nature. Whereas the Bonai is rich in mineral resources, but less progressive due to existence of forest covers, less railway lines and big industries.

According to 2011 Census, the District has 20,93,437 population, of which male constitutes 50.68 per cent and females 49.32 per cent. The population growth rate during the last decade of the twentieth century is 14.35 per cent. The annual growth rate is 1.43 per cent. The area of the District is 9712 sq.km and thus, population density in 2011 is 215. Sex ratio (females per 1000 males) works out to be 973 considering the total population of each.

Gin and Evolution of the Name of the District and Significance Thereof

The District was named after its headquarters town "Sundargarh". The town was formerly known by the name Suadihi (Suadi) until sometime in the first decade of the present century. But although the reasons are obscure, Maharaja Raghunath Sekhar Deo, the 18th successor to the *Gadi*, presumably in an unwritten order renamed it as "Sundargarh" which literally means, "Beautiful Fort". It renamed the headquarters of Gangpur ex-State till its merger with Odisha in 1948, when the District of Sundargarh was formed.

Location of the District and Its Adjacent District and Neighboring Boarder State Longitude and Latitude

Sundargarh District forms the north-western part of Odisha State. The District spreads from 21° 35'N to 22° 32'N latitudes and from 83° 32'E to 85°

22'E longitudes. **Sundargarh** also spelled as **Sundergarh** in some of the documents of the Government. Its official website address is www.sundergarh.nic.in. It is bounded by Raigarh District of Chhattisgarh on the west, Jashpur District of Chhattisgarh on the north-west, Simdega District of Jharkhand on the north, west Singhbhum District of Jharkhand State and Keonjhar District of Odisha on the east and Jharsuguda, Sambalpur, Deogarh and Angul Districts of Odisha on the south-east. The town of Sundargarh is the District headquarters.

Geographical Area of the District and a Brief Outline of the Administrative Set-Up:

Sundargarh District is the second largest District in the State accounting for 6.23 per cent of the total area of the State. Geographical area of the District is 9712 km². The District is divided into three Sub-Divisions, viz, Sundargarh, Panposh and Bonai. Of these, two Sub-Divisions, viz, Sundargarh and Panposh originally belonged to the ex-State of Gangpur while the whole of Bonai ex-State became the third Sub-Division. Except Panposh which has its headquarters at Uditnagar, the other two Sub-Divisions are named after their respective headquarters. Bonai derives its name from its forests (Bona in Odia means forest) covering almost nine-tenth of its area.

At present, there are 18 Tahasils and 102 R. I. Circles, 17 Panchayat Samities and 262 Grama Panchayats, one Municipal Corporation, three Municipalities. There are two Police Districts, i.e. Sundargarh and Rourkela with 38 Police Stations in total.

Table 1: Administrative Units of Sundargarh District

Sub-Divisions	Block (No. of GP)	Tahasil (No. of R. I. Circles)	Municipality	Municipal Corporation
Sundargarh	Balisankara (16), Bargaon (13), Hemgiri (19), Kutra (16), Lephipada (17), Rajgangpur (12), Subdega (14), Sundargarh (16), Tangrapali (13)	Balisankara (6), Bargaon, (3) Hemgiri (6), Kutra (7), Lephipada (9), Rajgangpur (7), Subdega (4), Sundargarh(7) Tangrapali (6)	Sundargarh (19 wards) Rajgangpur(20 wards)	
Panposh	Bisra (15), Kuanmunda (20), Nuagaon (20) Lathikata (16)	Biramitrapur (7), Bisra (7), Kuanmunda (2), Lathikata (7), Rourkela (3)	Biramitrapur (11 wards)	Rourkela (erstwhile Civil Township-41 Wards) and Ispat Township- (23 Wards)
Bonai	Bonaigarh (13), Gurundia (13), Koida (12), Lahunipada (17)	Bonei (6), Gurundia (6), Koida (2) Lahunipada (7)		

Police Districts of Sundargarh:

The District is divided into two Police Districts, i.e. Rourkela and Sundargarh. Both the Police Districts are under separate Superintendent of Police and have entirely independent establishment. There are 38 Police Stations including one Energy Police Station in Sundargarh Police District. Besides, there is a separate Superintendent of Police for the Railways at Rourkela that covers, besides Sundargarh, the Districts of Balangir, Rayagada and Koraput under its jurisdiction.

Table 2: Police Districts of Sundargarh

District	Police Station
Sundargarh	1. Town PS, 2. Sadar PS, 3. Bhasma, 4. Hemgiri, 5. Dharuadihi, 6. Talasara, 7. Lephripada, 8. Kinjirikela, 9. Rajgangpur, 10. Kutra, 11. Badgaon, 12. Biramitrapur, 13. Hatibari, 14. Raiboga and 15. Energy PS
Rourkela	1. BrahmaniTarang, 2. Raghunathpali, 3. Udit Nagar, 4. Plant Site, 5. Bondomunda, 6. Tangarapali, 7. Sector- 15, 8. Lathikata, 9. Jhiripani, 10. Sector-7, 11. Chhend, Sector-19, 12. Sector-3, 13. Mahila PS, 14. Lahunipada, 15. Bonai, 16. Koida, 17. Bisra, 18 Tikayatapali, 19. Gurunida, 20. Chandiposh, 21. K Bolanga, 22. Mahulpada,

Natural Divisions of the State:

The State of Odisha can be divided into four broad physiographic divisions, i.e. (1) The Coastal Plains, (2) The Middle Mountains and Highlands, (3) Central Plateaus and (4) The Rolling Uplands of the west. The Odisha Coastal Plains depositional land forms of recent origin and geologically belongs to the Post-Tertiary Period. The 75 metres contour line delimits their western boundary and differentiates them from the Middle Mountainous Region. This region stretches from the West Bengal border, i.e. from the River Subarnarekha on the north to the River Rushikulya in the south. This region is the combination of several deltas of varied sizes and shapes formed by the major rivers of Odisha, such as the Subarnarekha, the Budhabalanga, the Baitarani, the Brahmani, the Mahanadi, and the Rushikulya. Therefore, the coastal plain of Odisha is called the "Hexadeltaic Region" or the "Gift of Six Rivers". It stretches along the coast of the Bay of Bengal having the maximum width in the Middle Coastal Plain (the Mahanadi Delta), narrow in the Northern Coastal Plain (Balasore Plain) and narrowest in the Southern Coastal Plain (Ganjam Plain). The North Coastal Plain comprises the deltas of the Subarnarekha and the Budhabalanga rivers and bears evidences of marine transgressions. The Middle Coastal Plain comprises the compound deltas of the Baitarani, Brahmani and Mahanadi rivers and bears evidences of past 'back bays' and present lakes.

The South Coastal Plain comprises the lacustrine Plain of Chilika Lake and the smaller delta of the river Rushikulya.

The Middle Mountainous and Highlands Region covers about three-fourth of the entire State. Geologically it is a part of the Indian Peninsula which was a part of the ancient landmass of Gondwanaland. The major rivers of Odisha with their tributaries have cut deep and narrow valleys. This region mostly comprises the hills and mountains of the Eastern Ghats which rise abruptly and steeply in the east and slope gently to a dissected plateau in the west running from north-west (Mayurbhanj) to south-west (Malkangiri). The Odisha highlands are also known as the Garhjat. This region is well marked by a number of interfluves or watersheds. The Eastern Ghats is interrupted by a number of broad and narrow river valleys and flood plains. The average height of this region is about 900 metres above the mean sea level (MSL). The highest peak is Deomali.

The Central Plateaus are mostly eroded plateaus forming the western slopes of the Eastern Ghats with elevation varying from 305–610 metres. There are two broad plateaus in Odisha: (i) the Panposh–Keonjhar–Pallahara plateau comprises the Upper Baitarani catchment basin, and (ii) the Nabrangpur–Jeypore plateau comprises the Sabari basin.

The Western Rolling Uplands are lower in elevation than the plateaus having heights varying from 153 metres to 305 metres, covering the Jharsuguda District and gradually merges with the Central uplands.

Land formation

As per the physiographic considerations, the coastal plains of Odisha are composed of thick alluvial deposits brought by the rivers. Thus these regions are newer in origin than the rest parts. All the other physiographic divisions, including the Central Plateaus and Western Rolling Uplands are parts of the peninsular plateau of India. Its topography is rough and rugged owing to erosion by the major rivers. Owing to its older origin, the hills are denuded giving an old and senile landscape to the topography. The Peninsular Plateau of India is formed out of the volcanic activities in its geological history. Intrusion and extrusion of mineral rich beds of rocks is a well marked feature here.

Description of the Hill System, River System in and Rivulets, springs, Waterfalls, Lakes and Tanks, Aquatic Life, Sanctuaries:

Being the part of the Chhota-Nagpore Plateau, major parts of the District has rough and hilly terrain and rich in mineral resources as well. Hills of Sundargarh District may be classified into three broad categories, Bonai hills, Sundargarh hills and Biramitrapur hills. The Bonai hills which further elongate into the Keonjhar District are known for their iron ore resources,

whereas Sundargarh hills famous for coal deposits, which further elongate into Jharsuguda District and Chhatisgarh State as well.

The hills are mainly extensions of the Deccan and Chhota-Nagpore Plateau. In Sundargarh and Panposh Sub-Divisions there are mainly three hill ranges apart from a few isolated outcrops. The one, in the reserved forest blocks of Mahabir Chhatam, Topkurlu, Bhaismunda and Chirobeda on the south-east forming the boundary between Sambalpur and this District, runs east-west direction. The second, in the centres starts from Gurabasa reserved forest in south-west to north-east direction and runs through Kumbahal, Runga, Peruabhadi, Panchra and Brahmani reserved forests ending near the river Sankh. The third, on the western border of the District running south-east to the north-west direction is an extension of the wide range of hills forming the watershed between the river Mahanadi and her affluent Ib. Thus these mountain ranges seem to have started from a point in the middle of the southern boundary of the District and outflanking in three different directions divide the country into separate plains.

The Hemgir plateau is flanked by a system of mountain which starts from Garjanjore (1966' or 599 m.) and runs due south-east up to Bendrichuan (1343' or 409 metres). There is an abrupt swing near the latter due west up to the water parting between the Garjhor and the Jhulenbar after which there is again a gentle bend due north-west up to the border of Raigarh District.

Among the ridges mention may be made of the great ridge, an extension of the Karampada range of Singhbhum, which apparently seems to be the spine of the Toda area in east Bonai. It extends from north-east to south-west and is capped with an immense deposit of high grade hematite. The Rontha plateau (2500'–3000' or 762-914 m) from which descends the Khandadhar water fall is also covered with iron ore. The Bichakhani hill yields millions of tonnes of iron ore which feed the Rourkela Steel Plant. A new railway line has been laid to the foot of the hill at Dumaro for transportation of the iron ore.

The territory covered by Sundargarh and Panposh Sub-Divisions (comprising the ex-State of Gangpur) consists of a long undulating tableland about 700 feet (213 metres) above the sea level dotted with hill ranges and isolated peaks of considerable height. On the west of Sundargarh Sub-Division lies the Hemgir Plateau, nearly 1150 feet (351 metres) high, in the centre of which is located the village Hemgir. To the north of Hemgir the land is considerably hilly while to the south it is relatively plain with a minimum elevation of 709 feet (216 metres) near the Chuanbahal village. The eastern tract of the Sub-Division intervening between Chota-Nagpur plateau and Mahavir range, for the most part, is open and well cultivated, the general

elevation of which varies from 700' to 1000' (213 metres to 305 metres) but that of the reserved forests except, of course, a few patches, comes under 1000' to 1500' (305 metres to 457 metres). Besides, numerous isolated hills and sharp ranges running generally east to west are also evenly distributed throughout the country. On the north the Chota-Nagpur plateau with its foothills gradually falls away to the plain while the Mahavir range in the south, springs abruptly in an irregularly wall of tilted and disrupted rock and forms for some length the boundary between Jharsuguda and Sundargarh District. On the southern border, dense forests linking up with the forest-clad ranges of Bonai Sub-Division are also seen. Didhrapahar, the highest peak 2509' (765 metres) of Sundargarh Sub-Division is located near the tri-junction of Sundargarh Sub-Division, Bonai Sub-Division and Sambalpur District.

The block to the north formed by the broad valleys of the Sankh, the South Koel and the Deo, although interspersed with isolated hills and series of small ridges striking east and west, is generally plain; but the tract to the south is comparatively more hilly and wooded excepting the valley of the Brahmani which extends to an appreciable distance south of Panposh. The region extending from south of Bisra to south of Chirobeda is much broken and hilly; it rises along the Singhbhum and Bonai boundaries to an elevation of 1800' to 2000' (549 metres to 610 metres) the highest peak being Bhaisamunda Pahar 2234' (681metres). In the plains the elevation is about 600' to 700' (183 metres to 213 metres) the lowest point on the Brahmani valley on the Bonai border near Banki village being 575' (175 metres). The land is completely denuded of its fertility and is unsuitable for cultivation.

The principal peaks are Mankarnacha (3664 feet or 1117 metres) and Badamgarh (3525 feet or 1074 metres), both on Keonjhar boundary; Kumritar (3495 feet or 1065 metres), the Bichakani (2964 feet or 903 metres), and Khandadhar (3000 feet or 914 metres), all in Bonai Police Station; Rengalbera (2179 feet or 664 metres) in Banki Police Station; Baghbindha (2650 feet or 808 metres), Raipiri (2620 feet or 799 metres) and the Kantamunda (2524 feet or 769 metres), all in Gurundia Police Station; Chelliatoka (3331 feet or 1015 metres), in Mahulpada Police Station; Balia (3313 feet or 1010 metres) and the Karaspani (2483 feet or 757 metres), both in Korla Police Station. All the above peaks are in Bonai Sub-Division. Besides, some unnamed peaks of considerable heights are also found. No hills of any significant height are found in Panposh Sub-Division. Among the peaks in Sundargarh Sub-Division mention may be made of Man (1935 feet or 590 metres) on the Madhya Pradesh border; Satparlia (1327 feet or 404 metres) and Jogijogan (1471 feet or 448 metres), both in Sundargarh Police Station; Mahabir (1861 feet or 567 metres) in Bargaon Police Station; Didra (2509 feet or 765 metres) in Rajgangpur Police Station on the trijunction of Bonai and Sundargarh Sub-Divisions and Sambalpur District. Other peaks

on the Didra range are Bhaisamunda (2234 feet or 681 metres) and Kichimiri (2050 feet or 625 metres). The last named peak is also in the Rajgangpur Police Station. Andiabira (1455 feet or 443 metres) and Bilpahari (1333 feet or 406 metres) are among the less prominent peaks.

River systems: Among the major river systems of the State, the Mahanadi and Brahmani are the very important ones. Sundargarh District comes within the combined catchment area of both the river systems. The Brahmani is the second largest river in Odisha. It originates as two major rivers like the Sankh and the Koel from the Chota-Nagpur Plateau and both of them join at Vedavyasa near Rourkela forming the major river Brahmani. After a course due south through the Panposh Sub-Division which is not navigable owing to extensive rock barriers and rapids for about 14 miles (22 km) it enters the Bonai Sub-Division and after a course of some 38 miles (61 km) in that Sub-Division flows into the Sambalpur District. The total length of the river in the District is thus 52 miles (83 km). The River Brahmani flows through the Eastern Ghats hills in the Districts of Sundargarh, Deogarh, Kendujhar, Angul, and Dhenkanal and then enters into the coastal plains in Jajpur District, then flow through Kendrapara and finally drains into the Bay of Bengal in Bhadrak District at Dhamara mouth. Combined with the Distributaries of the river Mahanadi and the Baitarani, it forms the fertile composite delta of Mahanadi. The Brahmani River is 799 km long (541 km in Odisha) and its catchment area spreads over 39,033 km² in Odisha.

The Sankh rises on the Banspahar in the west of Ranchi. It enters the District on the north-west of Panposh Sub-Division and after flowing for about eight miles (13 km) in a south-easterly direction forms the boundary of the Panposh, and Sundargarh Sub-Division for a considerable distance and meets the South Koel at Panposh. The total length of the river in the District is about 40 miles (64 km). It drains the eastern part of the Sundargarh Sub-Division. The major feeders in Sundargarh Sub-Division are Badjor nallah (intercepted by the Kansbahal MIP) and Balanda nallah (having Pitamhal MIP) and Dhhina and Lurgi nallahs are its main feeders in the Panposh Sub-Division. The river Sankh hosts the captive water supply reservoir of Rourkela Steel Plant at Mandira named after the village.

The South Koel enters the District from Singhbhum in Bihar from its eastern border close to the Jaraikela railway station and flows almost due west for about 28 miles (45 km) till it joins the Sankh. The Deo, its main tributary on its north, rises in Ranchi District and drains the north-east corner of Panposh Sub-Division. The Katapur Jharia Nala, another small feeder, is on its northern bank. On the south the tributary that deserves mention is Bursuonjhor which rises in the forests of Saranda near Tiriposhi.

On the bed of the river Brahmani, common jasper was found and the local gold-washers (Jhoras) earned a small livelihood by washing gold from the bed. The Brahmani has no other tributary stream of great importance. The hill streams along its course force their water in and most important of these streams is the Kurhadi stream in Bonai. Other smaller hill streams of the Brahmani in east Bonai are the Sarkunda nalla, the Amrudi nalla, the Samji or Saminj nalla, the Rangan nalla, the Korapani nalla all of which are perennial throughout their course. Along the western bank it receives only a few insignificant streams among which Katangmurha nalla and Rukura nalla, may be mentioned; these streams, unlike the eastern ones, dry up in summer. The Chirobeda nalla which is close to Saranda forest area of Bihar drains the south-east corner of the Panposh Sub-Division.

The Ib rises on the Khudia plateau in the ex-State of Jhaspur in Madhya Pradesh and enters the District almost from the north at Tilijore. It flows slightly south-easterly till Gangpurgarh and then due south up to near Bauri Munda gaon where it turns due south-west for a certain distance and again turns due south at the District road near Sundargarh town. It forms the boundary between Sambalpur and Sundargarh for some distance before it leaves the District to meet the Mahanadi at Brajarajnagar. Its length in the District is about 60 miles (96 km). Diamonds had occasionally been found in its bed and gold-washing was being done. Among other places Sundargarh, the headquarters town of the District, is located on its bank. The main tributaries of the Ib are the Tumga and the Ichha along the western bank and the Sapai on the eastern bank. The other effluents are the Gholra, Bor, Sarsagati, Kasi, Bad San Banda, Kasi, Banda and Khorung. Two streams starting from Panchra and Sahajbahal meet at Baruan and the united stream known as Sapai discharges itself into the river Ib Kaintra. The Ichha rises in Danardanpur area and flows into the river Ib at Jamunadhipa. The Tumga starts from Megdega and meets the river Ib at Kopasinga.

Among the smaller rivers mention may be made of the Bhedan, Basundhar, Hingir, Kur, Saphai, Suka, Kuchedega, Bendra, Kutra, Talda, Chodadia and Lilari. The Bhedan which rises in the west Bonai and drains it leaves the District to meet the Ib near Brajranagar in the Sambalpur District. The other rivers which have the origin in this District leave it to meet the big rivers like Mahanadi and Ib in the adjoining Districts.

All these rivers of the District are practically dry from the end of the cold weather till the rains and there is no systematic navigation on them. Their beds abound with great boulders and constant barriers of massive rock, forming in the cold and hot weathers large deep pools, the sanctuary of quantities of fine fish. Due to the presence of massive rocks and boulders in their beds only small boats ply on the Brahmani and Ib and in the rainy season can go down the Ib to its junction with the Mahanadi. Transportation

of timbers to the coastal Districts through river Brahmani which was being carried on until recent years has been almost abandoned due to the development of road and rail communications. The country is intercepted with numerous smaller streams, some of which are of considerable size; in the rainy season these hill streams sweep down in torrents rendering communication with the interior at this period of the year almost impossible

The Mahanadi River originates in the State of Chhattisgarh in the Amarakantak Plateau. The Ib River is a tributary of the Mahanadi. It joins the Mahanadi flowing directly into the Hirakud Reservoir. The IB originates in hills near Pandrapet at an elevation of 762 metres (2,500 feet). It passes through Raigarh District and Jashpur District of Chhattisgarh and Jharsuguda and Sundargarh District of Odisha and finally meets the Mahanadi at Hirakud Dam. The Ib river valley is famous for its rich coal belt, Ib Valley Coalfield. Major portions of Mahanadi Coalfields are situated on the banks of the Ib. Many industries have flourished on the banks of the river Ib. The Ib valley areas are counted as one of the most important industrial zone of eastern India. The river runs for a distance of about 252 kilometres (157 miles) and drains an area of 12,447 square kilometres.

Table 3: Basic Facts about the Rivers of Odisha

Sl.No.	Name of the River Basin	Catchment Area (sq. km)			Water Resources (MCum)	
		Total Area	Within Odisha	% to Geo. Area of the State	75 % Dependable	Average
1	Mahanadi	141134	65628	42.15	48732	59155
2	Brahmani	39116	22516	14.46	14011	18577
3	Baitarani	14218	13482	8.66	5434	7568
4	Kolab	20427	10300	6.61	8885	11089
5	Rushikulya	8963	8963	5.76	2782	3949
6	Vansadhara	11377	8960	5.75	3881	5083
7	Indravati	41700	7400	4.75	4451	6265
8	Burhabalanga & Jambhira	6691	6354	4.08	2521	3111
9	Nagavali	9275	4500	2.89	2322	2853
10	Subernarekha	19277	2983	1.92	2308	2308
11	Bahuda	1118	890	0.57	213	438
	Draining into Sea		3731	2.40		
	Total			100.00	95540	120397

Waterfalls: The Khandadhar in the Bonai Sub-Division which drops over the southern face of the Chelliatoka range (3,331 feet or 1,015 metres) from a height of 800 feet (244 metres) presents fine scenery from miles away. In a sweeping description Cobden-Ramsay writes:

“In the wild hill tracts of Mayurbhanj, Keonjhar, Bonai, Kalahandi and at Barmul in Daspalla the soft beauty of the hill-clad ranges is relieved by wild precipitous bluffs scored and seamed by the storms of ages: in the rains

raging torrents flashing for miles in the sunlight hurl themselves in fine waterfalls to the slopes below: the finest of these waterfalls drops over the sheer southern face of the Chheliatoka range (3308 feet) in Bonai". He further describes, "In the high lands of Kalahandi, Keonjhar, Mayurbhanj and Bonai clear pellucid hill streams flow perennially, babbling over stone and rushing in tinkling waterfalls between grass-clad banks and sedgy shores, shaded by towering trees many are the deep silent pools with the banks fringed with masses of the white lilies and the silence broken only by the gentle gurgle of the stream as it slowly trickles from the pools or by the splash of some rising fish: here the kingfisher darts to and from in all his glory and birds of every hue imaginable brightens the scene: in the rains these streams become wild tearing torrents sweeping all before them"

Tanks: Tanks are found almost in every village which serves as baths and sources of drinking water. They are also used for purposes of agriculture. To ensure supply of drinking water, during the summer most of the villages have also wells. Majority of the tanks dug during the Zamindari period have been neglected and though earthen embankment is still valiant and strong, but the water body has become unusable due to over growth of ipomeas in the tank. During renovations no plan has covered clearance of ipomeas growth.

With the erection of the Steel Plant at Rourkela, the Hindustan Steel Ltd. authorities have constructed a dam across the river Sankh at Mandira, about 12 miles (19 km) above its confluence with the South Koel which ensures regular water supply both to the plant site and to the township throughout the year. A separate weir on the South Koel has also been put for supplying drinking water to Rourkela.

A number of minor irrigation projects have been worked out since the formation of the District in 1948 by throwing embankments across flood catchment areas which provide water facilities to the villagers for agriculture as well as domestic purposes. The important Minor Irrigation Projects of the District are given in Chapter IV.

Geological Formation, Mines, Minerals and Rocks:

The rock formations found in Sundargarh District belong mainly to the Gangpur and Iron-ore series of Precambrian Age and to a minor extent to the other younger formations such as Gondwans in the west. The rocks of the Gangpur series are the oldest of all and prevalent in the area covered by the former Gangpur State. The important rock types of Gangpur series are represented by mica-schists, quartzite, phyllites, calcitic and dolomitic marbles and lime stone, carbon phyllites, which are over-lain by the rocks of iron ore series, viz. mica- schists, phyllites and quartzites. The rocks of the Iron ore series are well exposed in the whole of Bonai area and in some part

of the ex-State of Gangpur. These two groups of rocks are separated by a persistent zone of crushed conglomerate and quartzite, known as Raghunathpali conglomerate. Two groups of sedimentary known as Dhanjori group and the Kolhan series are recognised in the Bonai Sub-Divisions which are younger than the Iron ore series as well as the Bonai granites (Singhbhum Granite). Rock formations of Gondwana Age exposed to the west of the river Ib in the Hemgir area of Sundargarh Sub-Division.

The Stratigraphy of the District in general, is represented by the following geological sequence:

Table 4: Stratigraphy of Sundargarh District

Recent		Superficial laterite and alluvium Himgir sandstones
Permian to		(Kamthi-Raniganj) Barakars Talchirs
Upper		
Carboniferous		
	Unconformity	.....
Precambrian	Iron Ore Series.	Granite, pegmatite & vein quartz (main period of diastrophism) Basic igneous rocks, amphibolites and epidiorites mica-schists and phyllites with quartzites and carbonaceous phyllitic zones. Sheared conglomerate (zone of thrust) (Raghunathpali stage)
	Gangpur Series.	Mica-schists and phyllites with zone of Carboniferous rocks (Laingar stage) calcitic & dolomitic marbles (Birmitrapur stage) mica-schists and phyllites with a zone of carbonaceous rocks (Kuarmunda stage) phyllites with Gonditic rocks (Ghoriajor stage).
	.....	Base not seen.

Rocks of the Gangpur: A major portion of the former Gangpur State, in between Birmitrapur, Gatitangar, Jariakela, Dharuadihi, Sundargarh and Lefripara is occupied by the rocks of the Gangpur series. Majority of the ridges and hills of the area are formed of Carbonaceous Phyllites.

Mica-schist, limestone and dolomite underlie the soil and alluvium of plain country throughout the area and area exposed along the stream and river sections. A few thin beds and lenses of lateritised gonditic rocks containing manganese ore occur amidst the area, along a narrow zone between Kinjirma and Bargaon at the western part and extend through Pandrisilla in the middle of the area. The country lying to the south of the railway line between Jariakela and Bamra is underlain by mica-schists and phyllites of the Iron ore series. The line of ridges extending over a length of 90 km to the north of railway line between Jariakela and Bamra is of sheared conglomerates and quartzite, which form a well marked horizon indicating a zone of thrust at the junction of the Gangpur series and Iron ore series.

Occasional veins and dykes of quartz traverse the mica-schists and phyllites in the area.

The area around Sundargarh and to its north and north-east is occupied by gneisses and granites which form the southern continuation of the Ranchi granites. Pegmatite and quartz veins traverse these gneisses and granites.

Exposures of the coal bearing Gondwana sandstone, shale carbonaceous shale, occur to the west of the Ib River. The country is covered with thick soil and alluvium ranging from 6.1 mt the low mounds and hills occurring here and there amidst the plains are capped by laterites derived from the weathering of the underlying rocks, mainly sandstones.

The rocks of the Gangpur series have been folded into an anticlinorium plunging to the east with the axis of the fold running in an east-west to ENE-WSW direction. The structure of the Gangpur anti-clinorium very well brought out by the outcrops of limestone and dolomite with the associated lower and upper horizons of the carbon phyllites there are minor synclinal folds at Dublabera, Hatibari and Lanjiberna. The general strike of the rocks in the area varies from EW in the eastern and central part to NE-SW between Lanjiberna and the Ib River at the western part. The strike suddenly changes to WNW-ESE towards Lefripara, i.e., to the west of the Ib river. The dip of the rocks in the northern part is to the North and that in the southern part is to the south. The amount of dip is usually steep (60°-90°).

In the recent years, a few geologists have done considerable amount of work on the structure of this area, but have expressed different views regarding the structure. The following rock formations are met within the Bonai area.

Table 5: Stratigraphy of Bonai area

Recent	.....	Alluvium
Precambrian	Newer Dolerite	Quartz refs aplitic granite and genesis dolerite and gabbro
	Kolhan Series	Carbonaceous phyllites and quartzites. shales and phyllites quartzites and conglomerates.
	.....	Unconformity
	Basic and ultra basic rocks.	Meta-gabbro and metadolerites
	Volcanies	Peridotites and pyroxenites.
	Dhanjori Group	Ferruginous shales or altered lava and tuffs Lava flows tuffs, hornblende chlorite rocks and amphibolites.
	.....	Calcareous schists, quartzite, quartz-sericite-schists, sericite-chlorite phyllites greywacke, grits and conglomerates.
	Singhbhum granite	Unconformity.....
	Volcanic in the Iron-ore series	Bonai granite and genesis
	.....	Lava flows, hornblende-chlorite rocks and amphibolites.
Iron-ore series	Iron-ore stage	Banded granulites phyllites, banded hematite quartzite, tuffs, cheris lavas.

In the eastern part of the Bonai area, typical rocks of the iron-ore series represented by phyllites, banded hematite, quartzite, tuffs, cherts and lavas are found.

Banded granulites occur as bodies enveloped by the Bonai granite at SWS and SE of Rengalbera ($22^{\circ} 00'$: $84^{\circ} 46'$) and at Lahunipara ($21^{\circ} 53'$: $84^{\circ} 56'$). These rocks are considered to be the metamorphosed equivalents of the banded formations of the iron-ore stage of the iron-ore series.

Near Kantapali ($21^{\circ} 54'N$: $84^{\circ} 48'E$), there are chloritic rocks and lavas overlying mica-schists. Associated with the Volcanics there is a band of conglomerate with concordant dip and containing water-worn pebbles of lava, quartzite and vein-quartz. The principal exposures of mica-schists are found south and south-west of Darjin and west of Kantapali. Quartzites form a prominent range of hills extending in a general NE-SW direction diagonally across the area. The Bonai granite is exposed in the plains west of Darhin ($21^{\circ} 56'N$: $84^{\circ} 54'E$). It shows intrusive relation to the rocks of the Iron ore series.

Overlying the Iron ore series and probably the Bonai granite too with an unconformity, is a group of rocks namely quartzite, quartz-schists, phyllites, greywackes, grits and conglomerates. The conglomerates occur at or near the base of the argillaceous members of the group. They contain pebbles and cobbles of banded jasper, chert and granite. This group probably corresponds to the Dhanjopri group of eastern Singhbhum. These rocks exposed around Darjin, Bonaikela and Joraldi, etc. Lavas and tuffs, overlying the Dhanjori formations are exposed around Kuljhari ($21^{\circ} 59'N$ and $84^{\circ} 51'E$) and near Rengalbera ($22^{\circ} 00'N$ and $84^{\circ} 6'E$). The volcanic S-W of Kuljhari has developed the mineral chloritoids. Those around Rengalbera are thoroughly altered.

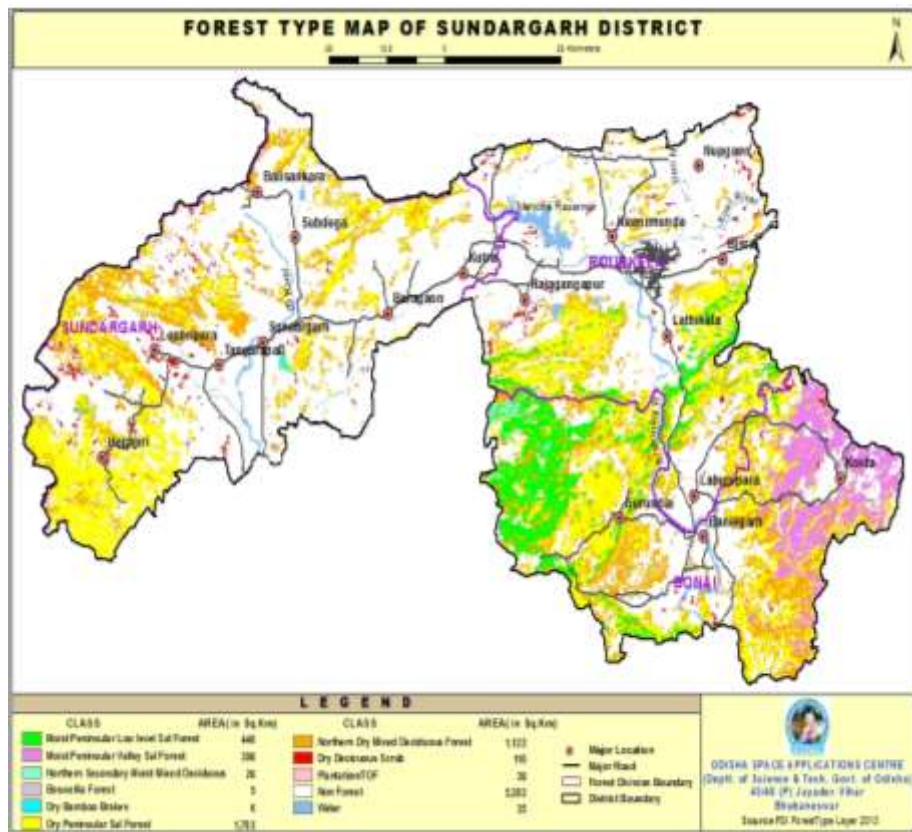
Gabbro, peroxenites and peridotites have introduced into Dhanjori formations particularly along the horizons of conglomerate. They are more or less continuously exposed over the whole length of Dhanjori. The intrusions are evidently guided by the synclinal structure of the Dhanjoris. Basic and ultra-basic rocks are also found in the Bonai granite as Xenolithic patches, whereas a younger suite is seen in the form of dyke. Dolerites are found intrusive into the Iron-ore series, the Bonai granite and the Dhanjori formations. They are found in the Kolhan and the aplitic granite.

Kolhan formations are exposed around Tamra ($21^{\circ} 59'N$ and $84^{\circ} 47'E$). There is a possibility that the main outcrop around Kuljhari may be of Kolhan Age. In the southern and western portions the unconformity between the rocks and the underlying Dhanjoris is quite evident.

These two sedimentary layers together form a synclinorium plunging towards NNE in the area lying north and west of Darjin ($21^{\circ} 53'N$ and $84^{\circ} 48'E$), north-east of Bonaikela ($21^{\circ} 56'N$ and $84^{\circ} 46'E$).

The aplitic granite exposed in the area west of Bargaon and Bonaikela shows intrusive relation with the Dhanjoris and older rocks. It also appears to be post Kolhan as indicated by the configuration of Kolhan outcrops against the intrusive force of this granite. There is no dolerite dykes in the aplitic granite. Prominent reefs of quartz are found traversing the mica-schists and the Bonai granite south of Darjing.

Basing upon the geological formations, the occurrence of minerals is distributed in the District. The detailed account of distribution of minerals in the District is given in Chaper-IV, Industry.



Flora and Fauna

Forest constitutes about 40.4 per cent of the total area of the District. It plays an important role in the economy of this tribal dominated District. The forests seen in the District are of the following types: (a) Moist Deciduous Sal Forest (b) Dry Deciduous Sal Forest (c) Dry Mixed Deciduous Forest and (d) Dry Bamboo Forest

The principal forest products of the District are Bamboo, Timber (Bija, Asan, and Sal) and Kendu leaves. The minor forest products like Siali leaves, Myrobalans, char Seeds, Broom Stick, Kusum Seed, Sunari bark; Mahua seed, honey, lac, sabai grass etc. are also available in the District. The Sundargarh Forest Division and Bonaigarh Forest Division with forest areas of 2154.73 km² look after the management of the entire forest areas of the District and 1833.33 km² respectively. Out of this Reserve Forest area are 1489.75 km² and 1162.24 km². Protected and other forest area of 664.98 km² and 671.69 km² for Sundargarh Forest and Bonaigarh Forest Division respectively.

The District has not been surveyed by the Botanical Survey of India. The general treatment of Botany of the Feudatory States of Odisha by Cobden-Ramsay runs thus: "The narrower Valleys are often terraced for rice cultivation and these rice fields and their margins abound in marsh and water-plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but where undulating is usually clothed with a dense scrub-jungle in which *Dendrocalamus strictus* is prominent. The steep slopes of the hills are covered with dense forest mixed with many climbers. *Sal* (*shorea robusta*) is gregarious; and among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, and *Adin*, which are found also on the lower Himalayan slopes mixed with these, however, are a number of trees and shrubs, characteristic of Central India, such as *Cochlospermum*, *Soymida*, *Boswellia*, *Hardwickia* and *Bassia*, which do not cross the Gangetic plain.

Hooker and Thompson have divided the flora of Bihar and Odisha into four Botanical provinces, northern part of Odisha comprising one of them. Bihar and Odisha as a whole is characterised by complete absence of *Cupuliferac* a general scarcity of laurels and myrtles and by a few or very few, *Ranunculaceae*, *Mangoliaceae*, *Cruciferae*, *Guttiferaceae*, *Rosaaceae*, *Umbekkiferae* and comparatively few *Orchidaceae*. Further, except for the genus *Ficus*, it possesses comparatively few of the *Urticalees*. On the other hand, it possesses marked positive features in the presence, practically throughout, of the sal tree (but no other *Dipterocarp*) and in the almost general association with the *sal* in large numbers of individuals, if not species, of *Terminalia*, *anogeissus*, *Bassia* (the Mohwa), *Butea* *Scleichera*,

Rubiaceae (notably *Gardenia andwendlandia*), *Acanthaceae*, *Bauhinia Diospspyrous Zizyphus*, *Cleistanthus*, *Nuctanthes* and of the grasses *ischaenum anguisit-folium*, (Sabai) and *Heteropagon Contortus* (spear grass). The presence of *Soymida febrifusa* and *Cleistanthus Ocollinus* in some localities is the effect of excessive browsing. The hilltops contain more of thorny species such as *Gardenia*, *Zizyphus* or trees which can remain leafless for about six to eight months a year i.e., *Sterculia urens*, *Annogeissus* or *Cochlospermum sepsis*. As per Champion's classification of flora of India, this District falls under Peninsular Sal type and dry deciduous mixed forest.

A type forest is met in Raiboga, Birmitrapur, and even up to Kuarmunda where the Sal forests exhibit a 'shola' type of vegetation. The undergrowth consists of only grass and in drier areas Sal, once removed, is replaced by grass.

The striking feature of the Bonai forest is the proportionately high percentage of pole crops between 8" to 12" diameter and scarcity of large trees. This unusual condition is due to shifting cultivation in the past and uncontrolled sleeper operation resulting in over exploitation.

Forests: The forests occupy an area of 2665 miles² (5826 km²) or over 70 per cent of that of the District: reserved forests cover 995 miles² (2562 km²) and protected forests 1670 miles² (3264 km²) the entire forest area is under the administrative control of two Divisional Forest Officers with headquarters at Bonaigarh and Sundargarh. Sundargarh Division comprises 563 miles² (1440 km²) reserved and 860 miles² (2200 km²) protected forests and Bonai Division covers 432 miles² (1122 km²) reserved and 810 miles² (1064 km²) protected forests. The formation of Sundargarh Forest Division which started after the merger of Gangpur ex-State was concluded after transfer to its control of the forest areas of ex-Zamindary EStates, Sargipali, Raiboga, Nagar and Hatibari on 15 June 1957 and Sarapgarh and Hemgir on 1 December 1963 under the provisions of the Odisha Estates Abolition Act.

The forests are northern tropical dry deciduous type. The crop is a mixed one with Sal (*Shorea robusta*) as the dominant species. The eastern half of Bonai and the Rajgangpur range of Sundargarh Division contain better quality of vegetation. The Sal which is the principal timber tree and more or less gregarious in these forests varies from a fairly pure to a mixed crop and occurs throughout the area. The Koirā forests and some portions of Toda Reserve contain best quality of Sal. A Sal forest is a delightful sight early in March at the commencement of the hot weather, when the trees come into leaf and flower. The following are the principal associates of Sal, commonly found in all the forests.

Asan or Sahaj (*Terminalia tomentosa*) being more durable than Sal is usually preferred for building houses. The wood of Kurum (*Adina cordifolia*) is used for making combs. The Bija or Piasal (*Pterocarpus marsupium*) is an excellent wood, next in quality to Sal and teak and from this tree true gum is obtained. The wood of the Gambhari (*Gmelina arborea*) being very light is excellent for furniture. The Kusum (*Schleichera trijuga*) is a very hard wood but its value consists in propagation of lac, its fruit is also eaten by aboriginal people. The Aonla, (*Phyllonthus emblica*) the leaves of which are used for tanning gives a good strong polo. The sour fruit is used medicinally, and is made into pickle and preserved. The flower of Mahula or Mahua (*Bassia latifolia*) is used as food by the poorer classes and for manufacture of country liquor; thick oil is also pressed from its seed and used both for cooking and lighting. The outer covering of its fruit is also eaten. The Karda (*laistanthus colimus*) gives a very hard and durable wood. The fruit of Char (*Buchanania latifolia*) is used as an ingredient of sweetmeats. The wood of Amltas, locally known as Sunari (*Casia fysiula*) is also used for house poles, this handsome tree is better known as the Indian laburnum, with its clusters of golden yellow flower which appear in April and May, and the soft brown pulp round the seeds is used medicinally. The Tendu locally known as Kendu (*Diospyros melanxylon*) are common in all forests. From its heart wood good ebony is obtained. Its leaves are used for making Biri and fruits serve as an article of food for the aboriginals. The Khair (*Acacia Catechu*) is an excellent wood. Its most important product is the resinous extract known as catechu. The Shisam or Sisoo (*Dalberga latifolia*) another common tree, does not grow to a very large size and gives a very light wood excellent for furniture. Bandhan (*ougeinia dalbergioides*) also gives very strong wood. Among other fruit trees mango is commonly found in all the forests. A large number of edible root and indigenous drugs are also found.

The conspicuous shrubs are Dhatuki (*Woodfordia fruticosa*), Telai (*Wendlandia excreta*), Harssinghar (*Nyctanthes arbour-trists*) and Kurdu (*Gardenia Gummifera*). Climbers are not abundant. The principal grass, Sabai or Panasi (*Eulaliopsis binata*) is used for paper pulp, rope making, and also used as fodder in young stage.

The provisions of the Odisha Forest Act, 1972 are in force from 15 July 1972. Management of the forests are conducted strictly according to the prescriptions of the working plans. Indiscriminate felling is completely banned rendering homogenous growth of vegetation possible.

For meticulous conservation of forests recorded as such regardless of having forest growth of any nature the Government of India passed the Forest (Conservation) Act 1980. As such there was a complete ban on use of forests for non-forest purposes. Before enforcement of the Forest (Conservation) Act in 1980, some people who were traditional forest

dwellers including the Scheduled Tribes had cleared the forests in patches and were harvesting forest produce for usufruct use and for cultivation. The Act of 1980 entirely prohibited any non-forest use of forest land that included cultivation of crop planting of fruit trees and enjoying usufruct of the forest. In order to alleviate the above situation, the Government of India enforced the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 which came into force with effect from 13 December 2005. The new Act was implemented with the objective to recognise the rights of the Schedule Tribes and other traditional forest dwellers on forest land for cultivation and usufruct enjoyment which is heredity but not transferable. The right on forest land is recognised both for individual families and for communities.

Fauna:

In keeping with the extensive and splendid forests, the District is the above of numerous big game and rich in varieties of animal lives. The forests of Sundargarh Division are comparatively poorer than Bonai in regard to wild life.

Mammals:

Elephant, *elephas maxmimus indicus* (Hati) is fairly numerous. They are mostly seen in the east and west of Bonai and usually move in herds, occasionally causing serious damage to the standing crops, especially rice fields near the jungles.

Wild buffalo, *Bubalus bubalis* (Bana Mainshi) "The wild buffalo", States L.E.B. Cobden-Ramsay "was at one time quite plentiful in Gangpur State (present Sundargarh and Panposh Sub-Divisions) along the valley of the Brahmani and at Kumarkela some twelve miles west, but the advent of the railway proved his death-knel, and today there is not a single specimen left in Gangpur or bonai. In 1900 the sole survivor, a solitary bull, was killed by a villager in the north-east corner of Bonai. Occasionally a solitary buffalo crosses the border from Jashpur to Gangpur.

Bison, *Bos gaurus* (Gayal), a very retiring animal, is generally seen in the denser and remoter forests. It often lives in small herds and generally grazes in close proximity to elephants.

Carnivore: Among the principal carnivore may be mentioned the tiger, panther, hyaena, wild-dog, jackal and fox.

Tiger, *panther tigris* (Bagha) at the enumeration in 1968 numbered 28. The Census of 1972 put their figure at six, two in Bonai and four in Sundargarh Division. In the past, Bonai forests had an unenviable reputation for the number of man-eating tigers with which they were infested. The

aboriginal women frequently fell prey to these beasts when they entered the jungle for gathering roots and leaves.

Panther, *Panthera pardus* (Kalara-patria) is found in great numbers in almost all the forests. It seldom exceeds two meters in length. It is mostly found in small hills adjoining the cultivated area, where it levies toll from the flocks of goats and sheeps. It is seldom found in the largest and more extensive forests. Black Panther (*Panthera parades negri*) is also met with in Bonai forests. A man-eating leopard is much more dangerous than a man-eating tiger.

Hunting leopard, *Acinonyx jubatus* (Chita), now extinct used to abound in the forests West of Sundargarh in Hemgir area. Jungle cats, *Felis chaus* (Bana Biradi) and *Felis bengalensis* are fairly common in the forests. They usually frequent both the forest and open grass country and are very destructive to smaller ground games, such as peat-flow, patridge and hare, etc. Large civet cat, *Viverra zibetha* and the palm civet *Paradoxurus hermaphrodites*- The former is met with but not common while the latter is fairly common and seen mostly in areas adjoining the villages. They are very destructive to poultry.

Common grey mongoose, *Herpestes edwardsi* (Hatianeula), is occasionally seen in rocky hills in Sundargarh. It is usually larger in size and more yellow in colour than the common mongoose and has the tail tipped with black. Jackal, *Canis aureus* (Bilua) is found all over the District usually in the shrub jungle near the villages and avoids dense forests.

Common fox, *Vulpes bengalensis* (kokisiali) is found in all the open parts of the District and is seldom seen in dense forests. It feeds chiefly on small birds and animals. It makes a fine pet when tamed.

Giant squirrel, *Ratufa indica bengalensis* (Gunduchi musa) is a very handsome squirrel, and is common in all the dense forests and lives in the branches of the tallest trees. The colour is chiefly of a chestnut red above with the rump and tail black, the lower parts are buff. They are easily tamed and make very amusing pets when taken young. Their delicate flesh is much appreciated by the forest tribes. The common stripped squirrel, *Funambulus pennant* is plentiful.

Common giant flying squirrel, *Petaurista ptaurista* "although this variety of the large flying squirrel", writes Cobden-Ramsay "is supposed to be peculiar to Burmah, Mr. F. D. Whiffin has obtained several specimens in Gangpur and Bonai and in each case the colour has been the same ash coloured above and white on the valley. A specimen was sent by Mr. Whiffin to the Calcutta Museum in 1892. They are entirely nocturnal in their habits, and feed on fruits, nuts and insects and breed in the holes of trees. With the

parachute extended they have been seen to cover a flight of quite 100 yards”.

Common porcupine, *Hystrix indica* (Jhinka) is met with in all the rocky hills. It is rarely seen due to its nocturnal habits. It feeds chiefly on roots.

Hare, *Lepus nigricollis* (Thekya) is found but rarely, mostly in bushy jungles.

Pangolin, *Manis crassicaudata* (Bajrakapta) is a quaint animal, seldom met with. It lives in deep burrows and feeds chiefly on insects, its favourite diet being the white ant. It grows from two to 2.5 feet (60 to 75 centimetres) in length and is covered with scales of a light olive colour.

Hyaena (Gadhia) is very common and is to be found over any carcass. They are nocturnal in habit and at times carry off dogs and goats.

Wild dog, *Cuon alpinus* (Baliala kukura) is very rare but extremely destructive to game. They are of two varieties. The larger variety appears to be most common than the small light coloured one. The larger variety stands higher than a jackal and in the cold season has a bright chestnut brown coat: the ears are erect, the tail very bushy with a dark tip. The smaller variety is grey in colour. It is said to be most destructive to game, hunting in far larger packs than the larger ones. Tigers and leopards are known to have been killed by them.

Wolf exists but is very rare and is found only in pairs. They are destructive to goats and sheep.

Common Indian sloth bear, *Melurus ursinus* (Bhalu) is found all over the forests generally in caves in the hot and wet weathers and in heavy grass and bushes during the cold weather. It feeds chiefly on the mahua flowers (*Basia latifolia*), berries and white ants. They are a menace to sugarcane and maize.

Sometimes a bear develops carnivorous tendencies. They seldom attack man except when disturbed, yet many people are killed or injured by them a mother bear with cubs is formidable when met at close quarters. They are often met in group of two or three, a mother and cubs or a male and female together.

Ratel or honey-badger, *Mellivora capensis* measure about three feet (one metre) in length. The upper part of its body is ashy grey and the rest coal-black. It is entirely nocturnal in habits and is seldom seen. It lives chiefly in rocky caves in the hills and feeds on lizards, insects and honey.

Sambar, *Cervus unicolor*, the largest of Indian deer, is found in all the fairly thick forests and generally frequents the high and most inaccessible

hills. It is nocturnal in its habits grazing chiefly at night and returning to the hill tops for rest during the day.

Spotted deer, *Axis axis* (Chital) is common in all the forests. It is generally found in small herds preferring open forests close to water and is seldom met in more hilly tracts; they are gregarious in their habits and less nocturnal than the Sanbar and care little for the neighbourhood of man.

Indian mouse deer, *Tragulus meminna*, the smallest of its tribe is found only in dense forests living in the hollows of trees on the ground. Owing to its diminutive size it is seldom seen. It stands 10 to 12 inches (25 to 30 centimetres) at the withers and in colour is brown with white or buff spots and longitudinal stripes.

Muntjac or barking deer, *Muntiacus muntjak* (Kutra) occurs but is seldom seen. It is often heard and easily recognised by its dog like bark.

Nilgai (*Boselaphus tragocamelus*) is found especially in open forests, where it feeds largely on wild berries. One of its favourite fruits is the Aonla (*Phyllanthus emblica*) which it devours in large quantities. It is generally found in small herds.

Four-horned antelope (*Tetracerus quadricornis*) locally known as Charisinga, is fairly common. The female and young male so much resembles the barking deer that are frequently mistaken for the latter animal.

Among *Langur* or *Hanuman* (*Presbytes entellus*) and the *Bandar* (*Macaca mullata*), the former is plentiful. They are found both in the forests and in cultivated areas. *Lungur* is usually destructive to crop, especially to gram and pulse. It is regarded as sacred animal having religious importance. Indian boar, *sus cristatus* (Ghusuri) is very destructive to crops. The otter, *Lutra perspicillata* (Ud) is also found in this District.

Birds: A fair number of game birds are met with in the District. The common peafowl, *Pavo cristatus* (Mayura), the National Bird of India, is not many now due to rampant devastation of forest in mining and industrialisation. One can find them in Mahavir RangBonai Mountain ranges and Surguda. Two kinds of spurfowl, *Galloperdix spadicea* the common red spurfowl and *Galloperdix lunulata* the painted spurfowl are found almost in all the forests, but the latter is not very common.

Black partridge (*Francolinus francolinus*) and grey partridge (*Francolinus pondicerianus*) are present but seen rarely. Hornbill (*Tockus birostris*) is often met with in forest tracts.

During the cold weather great flocks of geese, ducks and teal are found in the District. The two species of whistling teals and the little cotton teal are common.

The common sandgrouse, *Pterocles exustus* and the painted sandgrouse, *Pterocles indicus* are also met with in the water reservoirs of Mandira, Pitamahar, Saraphgarh and Ichha Dam. The *jungle bush quail (Harla)* is found in all the forests. The tragedy has occurred in the extinction of vulture in the District in the last decade for the use of dicyclophenac sodium medicine by the vets. The feeding on dead carcasses of animals having been treated by this deadly antibiotic led to unfailing death of vultures that were never a bird of preservation, even by ornithologist. The jungle bush quail is in all the forests known as *Titir* and *Gundru* in local language. Another quail like bigger bird known as *Askal* in local tribal tongues are already extinct.

Reptiles: The District is quite rich in other common reptiles, both terrestrial and aquatic. Crocodiles are not found in the rivers. *Godhi* or monitor lizard (*Varanus monitor*) is commonly seen. They are likely to be exterminated soon due to the rising commercial value of their skin. Various species of snakes occur in the District. Among the principal poisonous snakes may be mentioned the two varieties of cobra, *Naja naja kaouthia*, locally known as Tampa and *Naja naja naja*, Naga or Gokhara and the handra-boda or the Russel's Viper (*Vipera russelli*), the Kaudia Chiti or the common Krait (*Bungarus caeruleus*). The common non-poisonous snakes are the Ajagara (*Python molurus*), the Dhamana (*Ptyas muscocus*), the Kandanalala (*Natrix stolata*), the Dhanda (*Natrix piscator*), the Domundia (*Eryx conicus*) and the Telia sapa (*Typhlops brahminus*).

Fish: Numerous populations of fishes of different sizes are found in large deep pools in the beds of the rivers, tanks and water reservoirs. The principal among them are Rohi (*Labeorohita*); Mirikali (*Cirrhinay mrigala*); Bhakur (*Catla Catla*); Sala (*Ophiocephalus marulius*); Seula (*Ophiocephalus steiatus*); Balia (*Wallagoattu*); Ilishi (*Hilsa ilisha*) and various other scaled and non-scaled minoes species. Besides sweet water prawn (*Macrobrachium Malcon Sonii* and *Macro-Brachium Rosen Bargii*) are found in the rocky beds of rivers. These freshwater prawns normally live and grow in the estuaries and migrate to fresh water habitat where they breed.

Conservation of wild life: The shooting and hunting of wild animals and birds used to be regulated under the provisions of the Wild Birds and Animals Protection Act, 1912 and the Odisha Government Reserved Forests Shooting Rules, 1938. Cases of unauthorized shooting are severely dealt with. Recently the Odisha Forest Shooting Rules, 1973 have been enforced in the entire State and apply to all the Reserved and Protected Forests. These Rules have been framed under the Odisha Forest Act, 1972 (Odisha Act 14 of 1972) and repeal the corresponding rules made under the Indian Forest Act, 1972 (Act 16 of 1972) and the Madras Forest Act, 1882 (Madras Act 5 of 1882). They aim at controlling and regulating the hunting, shooting, fishing, poisoning of water, setting traps on snares and collection of wild life

in the reserved and protected forests. Hunting and shooting of any game during close season as specified in schedule III of these rules separately in respect of each bird and animal are strictly prohibited. List of species declared protected under these rules, which are found throughout the year in majority are given in **Appendix-I (Protected Species throughout the Year)**.

Climatic Conditions and Weather

The climate of the District is characterised by a hot dry summer and well disturbed rainfall in south-west monsoon season. The cold season commences in November and lasts till the end of February. The hot season follows thereafter and continues till about the end of June. The south-west monsoon season starts from mid-June and continues to the end of September, October and November constitute the post-monsoon season.

Rainfall: Records of all rainfall are available for only two stations in the District for 42 and 68 years. Appendices II to III give the rainfall at these two stations and for the District. The average annual rainfall in the District is 1647.6 mm (64.86"). The rainfall is fairly uniform in the whole District. About 86 per cent of the annual rainfall is received during the monsoon months extending over June to September, July being the month with heaviest rainfall. The variation in the rainfall from year to year is not large. In the period 1901 to 1948 the annual rainfall was the highest in 1943 when it amounted to 138 per cent of the normal. The lowest annual rainfall which was 73 per cent of the normal occurred in 1924. In the same 48 year period, the annual rainfall less than 80 per cent of the normal occurred in only two years. It will be seen from **Appendix III** that the rainfall in the District was between 1400 mm and 1900 mm (55' 12" and 74' 80") in 37 years out of 47. On an average there are 78 rainy days (i.e. days with rainfall of 2.5 mm to 10" cents or more) in a year in the District. The heaviest rainfall in 24 hours recorded in the District was 33.5 mm (13' 13") at Bonai on 20 July 1920.

Temperature: There is no meteorological observatory in the District. The following description of the climate is based on the records of the meteorological observatories in the neighbouring Districts where the climatic conditions are very similar to those in this District. The hot season commences by about the beginning of March when temperatures begin to rise. May is the hottest month with the mean daily maximum temperatures at about 41° C (105.3° F) and the mean daily minimum at about 27° C (80.6° F). Maximum temperature may reach 47° C (116.6° F) in the month of May or early part of June. The onset of the monsoon by about mid-June brings some relief. In between spells of rain the weather is oppressive due to the high moisture content of the air. In September due to breaks in the monsoon, the day temperatures increase slightly and this increase continues

during October, but the nights become progressively cooler from October. From about the middle of November, day temperatures also begin to decrease rapidly. December is usually the coldest month with the mean daily maximum temperature at about 27° C (80.6° F) and the mean daily minimum at about 12° C (53.6° F). In the wake of western disturbances passing across northern India in the cold season, the District is sometimes affected by cold waves when the minimum temperature may go down to 4° or 5° C (38.2° F or 41.0° F).

Humidity: The relative humidity is high in the south-west monsoon season. Later the humidity decreases and during the winter season the air is fairly drier. The driest part of the year is the summer season when the relative humidity is low especially in the afternoons when they are about 20 to 30 per cent.

Cloudiness: During the south-west monsoon season the skies are heavily overcast with clouds. In the latter half of summer and the post monsoon months there is moderate cloudiness. In the rest of the year the skies are generally clear or lightly clouded.

Winds: Winds are generally light to moderate with some increase in force in late summer and the south-west monsoon season. In the post monsoon and winter months winds are mainly from directions between north and east. In March winds are variable in direction. By April the westerly and the south-westerly become more common and these are predominant during the period from May to September.

Special weather phenomena: Storms and depressions from the Bay of Bengal during the monsoon season cross the east coast of India and move in a westerly to north-westerly direction. These cause wide spread rain and strong winds. Occasionally storms from the Bay of Bengal in October may also affect the months of the year, their frequency being the least in November and December and highest during the monsoon season. Occasional dust storms and raising winds occur in the summer months.

APENDIX-I
Protected Species throughout the Year

English Name	Local Name
BIRDS	
The common peafowl (<i>Pavo cristatus</i>)	Mayura
ANIMALS	
Marbled Cat (<i>Pardofelis marmorata</i>)	Meghua Chita Biradi
Wild Buffalo (<i>Bubalus bubalis</i>)	Bana Maini
Indian Pangolin (<i>Manis crassicaudata</i>)	Bajrakapta
Crocodile (<i>Crocodylus porosus</i>)	Kumbhira
Govila (<i>Gavialis gangeticus</i>)	Thantia Kumbhira
Black Buck (<i>Antelope cervicapra</i>)	Bali Harina
Four horned Antelope (<i>Tetracerus quadricornis</i>)	Chousingha
Tiger (<i>Panthera tigris</i>)	Mahabala Bagha

(Except man eater and cattle lifters when specially declared dangerous by the competent authority).

APPENDIX- II

Rainfall in Sundargarh District

HYDROMET DIVISION, NEW DELHI
INDIA METEOROLOGICAL DEPARTMENT
DISTRICT RAINFALL (mm) FOR LAST FIVE YEARS

District: SUNDARGARH

Note:

(1) The District Rainfall in millimetres (R/F) shown below are the arithmetic averages of Rainfall of Stations under the District.

(2) per cent Dep. are the Departures of rainfall from the long period averages of rainfall for the District.

(3) Blank Spaces show non-availability of Data.

YEAR	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per	R/F	per
2009	0.0	-100	0.0	-100	0.8	-95	0.9	-93	71.0	110	90.1	-62	448.6	10	305.7	-25	120.7	-51	89.1	33	22.2	296	0.0	-100
2010	1.2	-92	2.2	-87	0.0	-100	6.3	-48	36.1	7	139.6	-42	265.7	-35	276.4	-32	133.8	-46	56.9	-15	10.2	82	42.7	1054
2011	0.2	-99	15.1	-7	2.5	-86	78.8	447	54.0	36	219.3	1	288.0	-22	376.1	1	558.8	157	27.5	-45	0.0	-100	0.0	-100
2012	37.7	95	24.2	48	0.0	-100	32.3	124	1.4	96	201.3	-7	304.0	-17	572.2	53	252.8	16	47.2	-6	33.9	285	11.2	120
2013	6.7	-65	10.2	-37	3.7	-79	54.7	280	27.6	30	169.4	-22	455.4	24	377.9	1	188.7	-13	209.9	316	0.0	-100	0.0	-100

Chapter-II

HISTORY

Pre-History and Early Historical Perspective of the District:

The New Year day of 1948 was a historic day for the people of Sundargarh, as on this day the District was formed taking together the two principle States of Gangpur and Bonai. There are evidences of man living in this region since the Old Stone Age, in the form of stone tools in crude forms used by them for hunting. Stone tools of this age have been discovered as Bishalbury, Jangara and Satakuta in this region. The stone tools of the middle age have been found at Bishalbury, Bhanjagarh, Bhaludunguri, Bonaigarh, Bisra, Jhirpani, Jagarnathpur, Khadiakudar, Khuntagaon, Tumkela Ghat and Kurhadi. The stone tools of the new Stone Age have been discovered at Bhaludunguri and Jangara. The discovery of the stone tools of the old, middle and new age proves the continuity of human habitation in the District through the ages. Man used rock shelters in the new age. Such rock shelters are found at Manikmunda, Lekhamunda, Tongo, Imlimunda, Petenmunda, Dolamunda, Chirenmunda, Ushakupa, Baurikupa, Rajamachan and Bhalupani in Kanika area in Hemgiri Tahasil, Ushakothi in Lephripada Tahasil, Akhanda Parbat near Belsara in Tangarapali Block and Mahavir Parbat in Bargaon Block.

Rock Shelter and Art: A significant part of the pre-historic archaeology is rock art. Rock art is a global phenomenon dating back to about 30000 years, paintings, engravings and bruising are found executed on bare rock faces in the naturally formed caves and rock shelters are the earliest written and visual documents of the pre-historic man. Art in any form is an exposition of human creativity with great deal of diversity. They are the genuine reflections of their mind; inner thoughts and belief are of great help to us in determining the contemporary environment, means of subsistence and the mode of man nature relationship. In the absence of any authentic record about the pre-historic man these fragmentary evidences provide us clues to their society, religion, rituals, costumes, implements, technology and contemporary flora, fauna etc.

These are found at Manikmunda, Lekhamunda, Ushakothi and Tongo. At Ushakothi situated near Rajbahal in Lephripada Tahasil, paintings are found in the rock shelters whereas engravings are found in only two of them, i.e. Rishikund and Sitakund. At Manikmunda, extensive rock shelter is adorned with about 60 specimens of paintings in monochrome in dark red, orange red, white and yellow and the only specimen of an engraving of a serpentine. Lekhamunda group of rock shelters in Kanika area of Hemgiri comprised twelve painted rock shelters, have the richest repository of rock

art in Odisha. These rock shelters are scattered over Chhenga pahad and Garjan pahad. In these rock shelters, there are 502 specimens of paintings and 36 specimens of engravings, identified so far, though it appears that originally many more painting and engravings were executed which have been washed away and disfigured.

The rock shelter of Imlimunda ($21^{\circ} 56' 54''$ North latitude, $83^{\circ} 36' 55''$ East longitude, MSL- 840 feet) is situated in Dhanubauns Reserve Forest of Hemgiri Tahasil. The rock shelter measure 17 m x 6.80 m x 10 m in length, depth and height oriented east and west the rock shelter faces towards south. There are 24 engravings.

The rock shelter of Ushakupa ($22^{\circ} 07' 23''$ North latitude and $80^{\circ} 36' 55''$ East longitudes, MSL- 1290 feet) situated in Jamkani Reserve Forest. A stream named Ushakupa nalla is flowing east-west of the shelter. The rock shelter measures 18 m x 10 m x 9 m in length, depth and height and its orientation is north-south, facing towards east. There are 153 paintings of fish, frog, tortoise, broom pattern and geometric patterns in ochre and yellow colour.

The rock shelter of Baurikupa ($22^{\circ} 07' 31''$ North latitude and $80^{\circ} 35' 59''$ East longitudes, MSL- 1370 feet) situated in north-west of Ushakupa. It measures 17.4 m x 10 m x 3.5 m in length, depth and height. The hang of the rock shelter is made of boulder, conglomerate of white quartzite pebbles and limes. There are eight number of grinding holes found in the floor, 21 engravings of triangles, deer and frog.

The rock shelter at Petenmunda ($21^{\circ} 58' 08''$ North latitude and $83^{\circ} 32' 49''$ East longitude, MSL-980 feet) situated in Dhanubauns Reserve Forest. The shelter measures 34 m x 125 m x 6 m in length, depth and height and its orientation is north-east and south-west. As it is a border area with Chhatisgarh, the nearest villages of Odisha State are Jamjharria and Taparia at a distance of 22 km towards the north-east of the rock shelter. There are 25 paintings of deer, honey comb pattern, triangles and reptiles found in monochrome red. A series of grinding holes of varying dimensions are found on the floor of the shelter, facing towards east. There are 153 paintings of fish, frog, tortoise in broom pattern and geometric patterns in ochre and yellow colour.

The rock shelter at Dholamunda is situated in the same forest ($21^{\circ} 58' 60''$ North latitude, MSL-980 feet) at a distance of 700 metres south-west of Petenmunda on the left bank of Dholamunda nallah. It measures 11.4 m x 6.4 m x 3.5 m in length, depth and height and faces towards west. A portion of the shelter has collapsed.

The rock shelter of Cherenmunda-I ($21^{\circ} 57' 36''$ North latitude and $83^{\circ} 32' 55''$ East longitude, MSL- 930 feet) situated in Chirenkhola of Dhanubauns

Reserve Forest. The rock shelters measures 20.8 m x 5.25 m in length and depth respectively. The only picture of a deer drawn on the floor yielded microliths of blades, flakes and cores. There are seven conical grinding holes on the floor of the shelter. The rock shelter at Cherenmunda-II (21° 57' 35" North latitudes and 83° 32' 57" East longitudes, MSL- 980 feet) measures 11.08 m x 3.5 m x 3.2 m in dimension. There are pigmented engravings on the face of the rock shelter and six conical grinding holes of varying sizes on its floor.

The rock shelter at Rajamachan (21° 58' 15" North latitude and 82° 32' 33" East longitude, MSL- 990 feet) is on the right of Barkhapata nalla that flows to Sapnei. The rock shelter measures 30 m x 4.4 m x 6.5 m. The shelter has one engraving of a triangle with a hole in pigmented ochre.

The rock shelter named Bhalupani (21° 58' 15" North latitude and 83° 32' 17" East longitudes, MSL 1040 feet) located on the summit of the hill. The shelter measures 29.5 m x 4 m x 7.15 m. It faces towards east. There are 16 engravings in pigments with other triangles along with the paintings of deer and foot print. There are five conical grinding holes.

The rock shelter of Gastimunda-I (21° 57' 31" North latitudes and 83° 32' 56" East longitudes, MSL- 860 feet) is situated 12 km from Jamkharia in Dhanubauns Reserve Forest. It measures 15 m x 3.8 m x 5.5 m. Nearest village to the place is Odbahal in Chhatisgarh State in south-west direction. Paintings of tortoise in dark ochre and 26 engravings and geometric motif are found in the shelter.

On the opposite of Gastimunda-I, is Gastimunda-II (21° 57' 29" North latitude and 83° 32' 55" East longitudes, MSL- 850 feet). The rock shelter measures 16.7 m x 5.2 m x 4.7 m and faces towards east. It is a two storied shelter. On the top store there are paintings of fice peacock and other animals in ochre. Microliths of blades, flakes and cores are found on the floor.

The rock shelter at Manikmunda is situated in the reserve forest at a distance of eight km from Hemgir. It is the second largest painted rock shelter so far discovered in Odisha. The shelter is adorned with 57 specimens of paintings and one engraving near water source. The paintings are found to have been drawn in the pre-historic age. Similar pre-historic paintings have been found at Singhanpur in Chhatisgarh, Ulapgarh in Sambalpur District and Gudahandi in Kalahandi District.

Copper Plate Inscription: Copper plate inscriptions have been discovered in Sundargarh District belong to Tunga dynasy, Maurya dynasy and Parama Sekhar dynasty of Gangpur State. The Bonai copper plate grant of Vinita Tunga was sent by Rai Bahadur Sarat Chandra Roy from Bonai State to Mahamahopadhyaya Haraprasad Sasthri who edited the plate in the

Journal of Bihar and Odisha Research Society. The inscription is engraved on a single copper plate measuring 9" by 6½". The royal shield soldered on it bears in relief a couchant figure of deer. The charter was issued by 'Sri Vinita Tunga Deva' whose name also appears in the seal. Vinita Tunga is mentioned in the grant as son of Khadga Tunga and the grandson of Vinita Tunga-I, who belonged to the Sandilya gotra and came from Rohtasi (Rohtasgarh). He was ruling over Yamagartta Mandala and he was endowed with sub-ordinate title like *Maharaja Ranak*. The donor was a Brahmin named Harsanala, belonging to the Harita gotra. The village Konjari mentioned in the grant has been identified as Keonjhar.

The Bonai copper plate grant of Udaya Varaha was also published by Haraprasad Sastri. In this inscription, he wrongly read Bonai Mandala as Talai Mandala. The record reveals that the Bonai Mandala was ruled by kings belonging to the Maurya family which originally came from Chitrakuta. The charter was issued by Udaya Varah.

The Barpali copper plate grant has been discovered from the Barpali village in Bargaon Block. The charter was issued by King Hambhir Dev, who used imperial titles like Maharajadhiraja and Maharaja. The record States that Hambhir Dev donated a village named Barapali to Rajguru Sri Narayan Bisi on the occasion of solar eclipse. Barapali mentioned in the plate is obviously identical with the village Barapali. The king might have been a member of the Parama Sekhar Royal family, who ruled the Gangpur State till 1948, i.e. the date of merger with the present day Odisha.

Stone Inscription: A stone inscription was discovered at Akarshila village at a distance of 24 km from Bonaigarh on the Bamara Bonaigarh road. In 1936, under the direction of Rai Bahadur Chunilal Ray, the then Diwan of the State of Bonai, a photograph of the inscription was sent to Calcutta. Shri S. N. Mishra reports, "The word TA-LA-LI which was on the top of the inscription was read without any difficulty, but reading of the other lines was difficult because of their worn-out condition and also because of surrounding stones blur the scene. We believe, the word, '*Ta-La-Li*' is confusion Bonai. However, further examination of the inscription is necessary to throw light on this matter."

Coinage: In June 1969, the Superintendent of Odisha State Museum, Bhubaneswar brought four gold coins together with broken pieces of a gold chain having eight rings, and broken bits of one gold ring from the Nizarat Office, Bonai. On examination, it was noticed that the collection contained one gold coin of Krushna King Huvishka. The other three pieces, bearing various figures on one side only, are not coins but copy of Huviska's coin and were meant to be decorative. The gold coin of Huviska, weighing 8.500 grams, is a unique discovery, and a valuable addition to the knowledge

about Krushna coinage. The condition of the coin is fairly good. It was used as pendant, provided with perforated projection at the top for suspension. The find of Krushna gold coin in Sundargarh District is interesting, a number of imitation Krushna coins of both Kaniska and Huvisha coins (all in copper) have been found in the Districts namely Balasore, Puri, Ganjam, Keonjhar and Mayurbhanj. We have a number of theories attempting to explain the discovery, but till now it remains as the subject of controversy. Some scholars suggest that the territory was once conquered by the Kushanas, but it has not been substantiated. The use of gold coin and other three pieces representing copy of Huvishaka's coin for ornament purpose seem to suggest that the Kushana coin was not the currency of Odisha and had come only for ornament purpose. Though, Odisha in all probability was not conquered by Kushanas, foreign influence cannot be altogether ruled out. This finds corroborations in the Asanpat inscriptions in which king Satrubhanja has been styled as Devaputa. Some scholars have attempted to explain the presence of the Kushana coin in Odisha by assuming the Murunda occupation of the territory.

Religions: Sundargarh District contains a number of temples; these have not been exhaustively surveyed or even counted. Most of these temples being built comparatively in later times do not possess any artistic or architectural importance. But when classified on religious basis, they throw light on the influence and popularity of different religions in the region.

The Bonai copper plate grant of Udaya Varaha, which describes the king as a Parama Saugata (devout Buddhist) reveals that the region came under the influence of Buddhism. It is believed that the Varha rulers built a Vihara on the bank of the Brahamani River at the modern village of Akharsita. S. N. Mishra thinks that the Buddhist images which have been placed in front of a Siva temple at Deogaon, five kilometres to the west of Bonaigarh, might have been the image of that Vihara.

Temples in honour of lord Jagannath at Sundargarh, Bargaon, Rajboga, Talpata, Kumarkela, Kupsinga, Rupidihi, Karamdihi, Bonai etc. show that people have great reverence for lord Jagannath of Puri. The Samalai temple at Sundargarh indicates the hold of goddess Samalai of Sambalpur on the religious life of the people.

Saivism was also a popular religion in this region and there are number of Saiva shrines of which mention may be made of Dhabaleswara at Subdega, Dhabaleswara at Tilega, Dhabaleswara at Deogaon, Siva temple at Sukhabandh, Majhardeva temple at Sundargarh, Jhadeswar temple at Jouda and Kopeswara and Baneswar temple at Bonai. The Chandrasekhar temple at Panposh attracts a number of devotees from distant places particularly on the day of Sivaratri.

Gopalijew is worshipped at Bonai, while shrines in honour of Banshidhari exist at Deogaon, Kandakala, Bhaludungri, Kalaiposh, Jhirdapali etc. Shri Ranjit is worshipped at Indrapur and at Sundargarh. The Radha Krishna cult had its influence upon the people and a Raja of Bonai who appears to have been a follower of this cult, created a temple for the worship of Radha and Krishan. Stray images are found at different places in the District. Among the stray sculptures mention may be made of images of Ganesa and Durga found at the fortress of Junagarh. Several detached sculptures including an image of Bhairava are to be found in front of a Siva temple at Sukhabandh near Hemgir. These architectural fragments evidently belonged to an earlier temple which stood at the place.

The District contains the remains of a few forts which offer examples of the military architecture. The forts are Belsaragarh near Tangarpali, Jamsaragarh near Bisra, Junagarh near Hemgir and Masabiragarh in Lefripara Police Station. In the Bonai Sub-Division, an elevated place near village Khadiakhdar, which was probably the remains of a mud fort, is called Bhanjagarh, for according to local tradition the Bhanja kings of Keonjhar used it as a camping place in their wars with the rulers of Bonai. Archaeological excavation and exploration of the forts may reveal to some extent their history. Of all the forts mentioned above, the old fort at Junagarh is the largest of the ruined ones. Juangarh is about five kilometres to the south-west of Hemgir. Situated on the top of a hill and surrounded by hills which served as ramparts, it is a naturally formed hill fortress. A perennial stream flows on all the four sides of the central hill which houses the main fortress. Thus the stream serves the purpose of a natural moat. The top of the central hill is approached by a flight of steps. On the top there is a huge piece of stone from which one can have a good view of surrounding rampart-like mountains. The armed guards placed on the ramparts could communicate through signs with the king if he stood at this spot. It is believed that the fort belonged to the local Kesari King who ruled in the area several centuries ago.

Ancient and Medieval History: Traditionally, the territory of what is now called Sundargarh District formed a part of Dakshin Kosala. Kosala was an important Mahajanapada of northern India and it continued as a single unit at least up to the rise of Mauryas. But at a later period, a new Kingdom called Kosala grew in the Vindhya region. Evidently, it was designed as Dakshina Kosala in order to distinguish it from Uttara Kasala. It is difficult, however, to say when and how the term Dakshina Kosala came into currency. Pargiter believes that Rama's long stay in the region gave rise to this term, while Dr. D. C. Sircar asserts that South Kosala was colonised by the Ikshvaku princes of Ayodhya. By the time of poet Kalidasa, South Kosala had been already known as distinct political unit, for in the Raghuvamsa he

seems to suggest that Kusavati, the capital of Kusa, was located on the Vindhyhan ranges. The territorial limit of South Kosala varied depending upon the ability and power of its ruler. In the widest sense, South Kosala comprised the modern Districts of Sambalpur, Sundargarh, Balangir, and Kalahandi in Odisha.

An inscription 3th-4th Century A.D. discovered from Asanpat in Keonjhar District reveals that a king named Satrubhanja ruled over the kingdom of Vindhyavati, which probably denoted a vast kingdom extending up to the Vindhyas. It is thus apparent that Sundargarh region was also under the control of King Satrubhanja. The Vindhyavati, ruled by Satrubhanja, may be said to be the same as South Kosala. It is known from the Allahabad pillar inscription that South Kosala was ruled by Mahendra in the middle of the fourth century A.D. Mahendra is mentioned as one of the 12 kings defeated by Samudragupta. This proves the extension of the Gupta influence over South Kosala which may have included, besides the Districts of Raipur, Bilaspur, and Sambalpur, a portion of Sundargarh District. The Balaghat plates and the Ajanta inscription seem to suggest that South Kosala was controlled by the Vakatakas. However, it is not possible to be definite as to what relation Sundargarh region had with the Vakatakas.

From the early medieval period different portions of the present Sundargarh District were under the control of different ruling families. Brief historical sketches of these ruling families, based on available evidence, are given below.

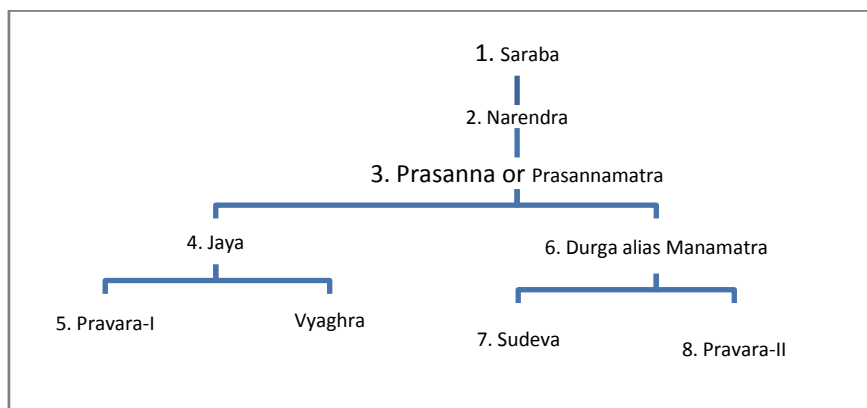
Towards the close of the fifth century A.D. a chieftain named Sarabha founded a kingdom in the eastern part of South Kosala with Sarabhapura as the headquarters. Sarabha, the founder of the dynasty, is identical with Sarabharaja, maternal grandfather of Goparaja of the Eran Inscription (Gupta year (191-511 A.D.) of the time of Bhanugupta. It is known from the Pipardula and Kurud grants that he was the father of Maharaja Narendra. Scholars like Dr. V. V. Mirashi and L. P. Pandey identify the city of Sarabhapura, apparently named after Sarabha, with Sarapgarh in the former Gangpur State, now included in the Sundargarh District of Odisha. However, it may be mentioned that there is difference of opinion among the scholars as regards the correct identification of Sarabhapura. The identification with Sarapgarh of Sundargarh District seems to be quite satisfactory in the present State of our knowledge. It is evident that in course of time Sarabhapura came to be known as Sarabhagarh when the suffix 'pura' was replaced by 'garh' both conveying more or less the same meaning. The name Sarapgarh is quite likely a variant of Sarabhagarh.

Sarabha was succeeded by his son Narendra. The next successor was a king named Prasanna. He is also known to us from a number of gold and

silver coins on which his name is mentioned as Prasannamitra. After Prasannamitra the throne of Sarabhapura probably passed to his son Jayaraja also called Maha Jayaraja but his real name appears to be Jaya. The Mallar plates reveal that Jayaraja had two sons, namely Pravara and Vyaghra. Prasannamitra had another son named Manamatra who also become the ruler. It is known from the Kauvaatal plates that his real name was Durgaraja (mentioned as Maha-Durgaraja in the record). The next important ruler of Sarabhapura was Sadevaraja (styled as Maha-Sudevaraja in the inscriptions), who was the son of Durgaraja-Manamatra. He was a very powerful ruler. The extent of his dominion is indicated by his copper plate grants, viz Khariar, Arang, Kauvatala, Saranggarh, Raipur, etc. While the earlier kings of the family are known to have ruled from Sarabhapura, Mahasudevaraja issued his charters both from Sarabhapura and Sripura. It appears that Mahasudevatraja founded the city of Sripura (identified with modern Sirpur in the Raipur District of Chhattisgarh) and developed it as his secondary capital. The past Sarbhapuriya king so far known was Pravara-1 (also called Maha-Pravara-1). He was the son of Manamatra, and therefore, he may be regarded as a brother of Mahasudevaraja. In his reign, Sripura was the capital of the Sarbhapuriyas. The Kurdiya plates dated in the third regnal year of Maha Pravara-1 was issued from Sripura. We have no information about the reign or achievement of any of his successors. The Panduvamsais invaded South Kosala during the reign of Nannadeva and completed the conquest during Tivaradeva sometime in the seventh Century A.D.

D. C. Sircar and G. Bhattacharya give the following genealogy of the Sarabhapuriya kings¹ on the basis of available evidence:

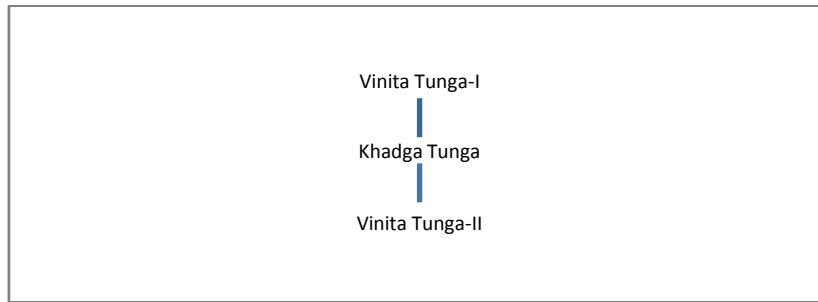
Figure 1: Family Genealogy of Sarbhapuriya Kings



¹ EI. Vol. XXXIV, p. 47

The *Yamagartta mandala* flourished in the second half of the ninth Century A.D. under the rule of the Tungas. So far five copper plate grants² of the Tunga rulers have been brought to light. The copper plate grant discovered from Bonai³ gives the following genealogy of the Tunga kings.

Figure 2: Family Genealogy of Vinita Tunga



It is mentioned that Vanita Tunga-I, the grandfather of Vanita Tunga-II came from a place called Rohitasa (Rohitagiri) which has been identified with modern Rohitasgarh in the Sahbad District of Bihar. The Charter reveals that Vanita Tunga was an influential feudatory chief. In the record, he is described as Maharaja Ranaka, lord of the eighteen Gandramas, and as one who obtained the five great sounds. Vanita-II is also known from his Kharga-prasad copper plate (897 A.D.) where he is styled as Maharaja Vanita Tunga.

A collateral branch of the Tunga family is known from the Talcher plates of Gayada Tunga. The exact relationship between the rulers of two branches is not definitely known, and as such the genealogy and chronology of the Tungas are not yet satisfactory settled. Vendunga mentioned in one copper plate of Gayada Tunga has been identified with Balanga in Bonai. The names of territorial units and other places mentioned in the copper plates of the Tunga rulers indicate that Yamagarta Mandala was an extensive territory comprising northern part of Dhenkanal District, the ex-State of Pallahara, and some portions of Keonjhar and Sundargarh Districts.

Epigraphic evidence points to the existence of a royal family (Varahas) ruling in the Bonai Mandala about the 10th century A.D. The Bonai Mandal, known to us from the Bonai Copper Plate grant of Udaya Varaha comprised, according to Dr. N. K. Sahu, the eastern portion of modern Sundargarh

² Vide a descriptive catalogue of Tunga copper plates given in OHRJ, Vol. XI, No. 4, facing p. 252.

³ JBORS, Vol. VI. Pp.238-40

District and a part of modern Deogarh District. He also identifies Rokela Visaya mentioned in the grant with modern Rourkela. The Bonai copper plate grant reveals the existence of a group of three kings who belonged to the Mayura family, viz. Udaya Varaha, his son Tejo Varaha, and the latter's son Udaya Varaha who issued the above mentioned grant. The record describes Udaya Varaha as a Parama Saugata (devout worshipper of Buddha) and as Maharaja Ranaka who ruled over the Bonai Mandala. It is known from the grant that the family hailed from Chitrakuta, which may be identified with Chitor or Chitorgarh in Rajasthan. There is some truth in this tradition; for we know of the Mauryas or Moris as ruling over Chitor in the early medieval period. The Arabs, starting from their base at Sindh overran Chitor between 723 A.D. and 738 A.D. It was probably after this misfortune or at a somewhat later date, a scion of the Mauryas came to Odisha and established authority over the Bonai Mandala. The peacock emblem of the Varahas further lends support to the theory that the Varahas were an offshoot of the Mauryas. The Maurya family of Bonai mandala probably had some family connection with the Tungas. They had close connections with the Adibhanja royal family of Khijinga Mandals, and Pandita Binayak Misra suggests that Mayurabhanj owed its origin to the names of Mayura and Bhanja families. The peacock emblem was also adopted by the later kings of Bonai in their seals, and the name Bonai, mentioned in the copper plate of Udaya Varaha also continues till today.

The Somavamsis: The glorious and eventful phase started in the history of Dakshina Kosala with the coming into prominence of the Somavamsis. Several records give an account of the family beginning with Udayana who flourished in the first half of the 6th century A.D. Indrabala, the son successor of Udayana, held the post of Sarvadhikaradhikrita and Dutaka under Sarabhapuriya King Mahasudevaraja. The respectful manner in which Indrabala's successor Nannadeva is spoken of in the record of the Sarabhapuriyas indicates that he was a high official under the Sarabhapuriyas. After the death of Pravararaja-II the Somavamsis who were the feudatories of the Sarabhapuriyas converted their gubernatorial status into a royal one. Mahasivagupta Tivaradeva, the son of Nannadeva, wrested the whole of Dakshina Kosala from the hands of the Sarabhapuriyas, and called himself Kosaladhipati. Tivaradeva was an ambitious ruler and eventually he became an enemy of Dharamaraja, the Sailodbhava King of Kongodamandala (Ganjam-Puri region of coastal Odisha). He made alliance with Madhava, a brother of Dharamaraja, but in the war that followed he was defeated by Dharamaraja. Thus his ambition to establish mastery over Utkala was foiled. Tivaradeva was succeeded by Chandragupta, but the Adhabhara plates seem to suggest that Nanna-II succeeded his father Tivaradeva. The next known rulers of the family were Harshagupta and Balarajuna who ruled from their capital at Sirpur.

About the middle of the 9th century A.D. the Somavamsis were ousted from the Sirpur region by the rising power of the Kalachuris, and under Janamejaya I Mahabhavagupta, who was probably the son and successor of Balarjuna, they established a new kingdom in the Balangir-Sonepur region. This is borne out by the discovery of copper plate grants of the family from the District of Balangir. Janamejaya I was a powerful ruler, and with him began the age of great Somavamsis in Odisha. He assumed imperial titles like Maharajadhiraja and called himself Kosalendra and Trikalingadhipati. Towards the close of his career, his kingdom was no longer confined to the Balangir-Sonepur region, but extended as far as the Baudh region. Ranahhanja of the Bhanja family who exercised control over the Baudh region was probably defeated by Janamejaya. This supposition is quite consistent with the testimony of the Brahmesvara temple inscription which reveals that Janamejaya had killed with his Kunta the King of Odra. Janamejaya I Mahabhavagupta also established matrimonial relationship with Bhaumakara ruling family, his daughter Prithvimahadevi being given in marriage to Bhaumakara ruler Subhakardeva IV.

Mahasivagupta Yayati I who became ruler after Janamejaya was a worthy successor of his illustrious father. The hostilities with the Kalachuris were continued during his reign. He seems to have attempted to establish mastery over Utkal in secret league with his sister Prithvimahadevi. Sometime after his 15th regnal year, he shifted his capital, probably due to expansion of his territory to the east, to Yayatinagar which Dr. N. K. Sahu identifies with modern village Jakati on the Mahandadi 11.2 km to the west of Baudh.

The son and successor of Yayati I was Bhimaratha Mahabhavagupta. His reign was peaceful, and he seems to have devoted his attention for the consolidation of the Somavamsi dominions. It is known from a copper plate inscription found from village Kudopali in Sambalpur District that Ranaka Punja, son of Boda, was ruling over Bamanda Pattti as a feudatory of King Mahabhavagupta who may be identified with Bhimaratha. Bamanda Pattti is identified with modern Bamanda. In all probability he also administered a part of the Sundargarh District under the Somavamsis.

The next ruler on the Somavamsi throne was Dharmartha Mahasivagupta. His Khandapara plates, which refers to the Antarudra Vishaya in the Puri District definitely proves that Somavamsis had already become the masters of the coastal region of Odisha by defeating the Bhaumakaras. Dharmaratha died childless, and he was succeeded by his step brother Indraratha. Indraratha, who was probably the same ruler as Naghusa or Nahusha, was defeated and killed by Rajendra Chola sometime in 1022-23 A.D. His death was followed by a period of anarchy but fortunately for the kingdom, Chandihara, son of Abihmanyu was chosen as

the ruler, and he ascended the throne as Yayati II Mahasivagupta. Yayati II was one of the great rulers of the Somavamsi dynasty and his striking achievement was the construction of the famous Lingaraja temple at Bhubaneswar.

Yayati II was succeeded by his son Udayotakesari Mahabhavagupta. By his time, the Somavamsis had been able to establish a vast empire, and for convenience of administration, Udyotakesari divided his dominions into two political divisions, viz., Kosala and Utkal. While he himself directly administered the Utkal region, the Kosala division was assigned to Abihmanyu, and on his death, it was controlled by Kumara Somesvara, who is known to us from his Kelga plates. After Udyotakesari, his son Janamejaya II became the ruler. No record issued by this monarch has been discovered as yet, but the Nuapatna copper plates prove that during his 5th regnal year, Yuvaraja Dharamaratha was the ruler of Paschima Kalinga. In all likelihood, after him, Kosala passed into the hands of the Tehugu chodas in about 1070 A.D. In the Utkal region, the rule of the Somavamsis, however, continued. Janamejaya II was succeeded by Puranjaya, and Kanadeva. The latter ruled till the Gangas under Chodaganga Deva gave a blow to the Somavamsis and stepped into their place in the coastal region early in the 12th century A.D.

The Telugu Chodas and the Kalachuris: Though the exact political condition of the region after the Somavamsis is far from clear, a brief reference to history of South Kosala of which it formed a part, may be useful for our purpose. As noted above about 1070 A.D. Yasoraja-I, the Telugu Choda Lieutenant of Chhindaka Naga King Someswara established supremacy over Kosala. The available copper plate grants of this Telugu Choda family show that Suvarnapura, modern Sonepur, was their political headquarters. Yasoraja I, Someswara II, Yasoraja II, Yasoraja III and Someswara-III of the Telugu Choda line are known to have ruled the South Kosala. But by the time the Telugu Chodas occupied Kosala, the Kalachuris organised their power in Dahala with headquarters at Tummana. In course of time, rivalry started between these powers and it ultimately led to the defeat of the Telugu Chodas. The Kalachuri king Jajalladeva imprisoned Bhujavala of Suvarnapura and defeated Somesvaradeva in 1119 A.D. Bhujavala has been identified with Telugu Choda king Samesvaradeva III and after his defect; Kalachuris could occupy the South Kosala region.

The Gangas: Ananta Varman Chodaganga Deva of the Ganga dynasty conquered Utkal sometime in 1112 A.D. and in course of time, extended his kingdom from the Ganga to the Godavari. As great warrior as he was, he naturally desired to conquer western Odisha and invaded the Kosala territory which was then under the Kalachuris. It is known from the Kharod stone inscription that Kalachuri king Ratnadeva-II, the grandson of Jajalladeva,

defeated Chodaganga Dev. Kamanavadeva, the son of Chodaganga, also followed the footsteps of his father in waging war against the Kalachuris but he was defeated. The Ganga-Kalachuri conflict which had been continuing for a long time, reached a critical stage in the reign of Ganga monarch Anangabhima III. The Chatesvara inscription reveals that Vishnu, the able general of Anangabhima III won a decisive victory over the Kalachuri King of Tummana in battles fought in the banks of the Bhima, in the outskirts of the Vindhyas, and the sea shore. As a result of this, extensive tracts of land in western Odisha passed into the hands of the Gangas. A study of certain maufi grants reveals that Raja Anangabhima Deva had actually visited the Sambalpur region. The Khamvesvari temple inscription proves that Sonepur region was definitely under the control of the Imperial Gangas during the time of Bhanudeva (1264-1279 A.D.) and placed under the charge of a Governor. These circumstantial evidences suggest that Bonai and Gangpur region was under the Ganga hegemony. It seems that after the conquest of the territory the Gangas allowed some feudatory chiefs to directly administer the territory and themselves remained contest with the tributes paid by them. It was probably during the time of the Gangas that Bonai and Gangpur were consolidated as separate political units, and regarded as feudal States. Local traditions of Gangpur mention the existence of a Kesari line with sixteen kings who ruled over Gangpur. It is said; they had their headquarters variously at Belsaragarh. Junagarh, Masabiragarh, etc. The names of the Kesari kings, which vary in different Statement about them, appear to be mostly imaginary, but the tradition about the rule of local Kesari dynasty is too strong to be ignored. The tradition persists till today and the earlier reference to this tradition appear in the writings of Colonel Dalton, and Hunter. Regarding this Kesari dynasty CWE. Connolly in his Settlement Report of 1911 observes as follows:

“The earliest chiefs of Gangpur that there is any information of belonged to the Kishori Bans, and were descendants of the famous Kishori Bans of Puri, who after their defeat by the Mahrattas fled in the directions, one line setting here.

Making allowances for his apparent mistakes, from all that could be gathered from the tradition, it would appear that some of the scions of the Somavamsis (famous as Kesari Kings in the traditions), on their defeat by the Gangas, migrated to Gangpur region and established their authority. These Kesari rules were apparently allowed to carve a self-contained principality in the Gangpur region and continued as vassals of the Imperial Gangas. The last of these Kesari rulers, whose name is given as Raja Deo Kesari in one tradition, was an oppressive ruler, and eventually he was murdered together with his family members by a powerful Bhuiyan leader named Madan Pradhan. The consequent political confusion that prevailed

provided the opportunity for the progenitor of the Paramara-Sekhara family to seize the land.

The Chauhans: The Chauhan dynasty, which played a very important role in the political and cultural history of western Odisha, started its rule about the middle of the 4th century A.D. with Patna, modern Patnagarh in Balangir District as the headquarters. The available evidence makes us believe that Ramai Deva was the founder of the Chauhan dynasty in Patna. The extent of Patna kingdom under Ramai Devi is, however, not definitely known. Vatsaraja Deva (C.1386-1410 A.D.) the third ruler of the dynasty, was a capable warrior, and he extended his kingdom by waging a number of successful wars against his neighbours. It is known from *Kashalananda Vavya*, a semi-historical work on the Chauhan rule by Pandit Gangadhar Misra, that the contemporary chiefs of Bonai, Bamanda, Bastar, Baud, Gangpur, Khimindi and Nandapuri were defeated by him and became his vassals. From this account it seems that the area covered by present Sundargarh District comprising Bonai and Gangpur came under the Chauhan supremacy. However, Major H.B. Impey, who was the Deputy Commissioner of Sambalpur and who also happened to be the first British writer to give a brief historical sketch of Chauhan rule, credits one Prithvisimha Deva with these conquests. He takes him to be the fourth ruler of Patna, and referring his military achievements, he States, "The fourth Maharaja Pirthee Singh Deo subjugated and made tributary to Patna, the three dependencies of Sirgooja, named Bunaee, Gangpoor, and Bamra, and annexed to Patna itself by dispossession from the Rajah of Bamra the Zamindaree of Rehracole and so much of the lands (now) of Sumbulpore on the left bank of the Mahanuddy, as were contained between Rehracole and Bamra to the east, Bamra and Gangpoor to the north and the west by the Eebe to its sudden bend west ward and from thence by a line running south, to the spot at the extremity of the present city of Sumbulpore where now the jail bridge stands". Pirthee Singh Deo of Major Impey's account can be no other ruler than Vatsaraja Deva of the *Koshalananda Kavya*. In this connection, it may also be mentioned that Cobden-Ramsay observes that Gangpur, Bonai and other neighbouring States submitted to Baijal Deva, without a fight. He makes Baijal Deva 'the third chief from Ramai Deva', but in reality Vatsaraja Deva was the third Chauhan ruler of Patna. Therefore, his account about the activities of Vaijal Deva actually applies to Vatsaraja Deva who is credited with these conquests by the *Koshalananda*. But as this *Kavya*, is in the nature of a royal panegyric, being composed by the court poet of Chauhan ruler Baliar Singh, the question of its authenticity cannot be satisfactorily determined in the absence of corroborative evidence. However, it seems certain that Vatsarajadeva was a powerful ruler of Chauhan family. After Vatsaraja Deva rulers like Vaijal Deva I, Bhojaraja Deva, Parataparudra Deva I, Vikramaditya Deva I, Vaijal Deva II and Bajra

Hiradhara Deva ruled over the Patna kingdom which, in course of time, incorporated the neighbouring territories including Sambalpur. Namsimha Dava was the last great Chauhan ruler of Patna. About the middle of the 16th century, probably to meet the problem of Kalachuri aggressions, Narasimha Deva allowed his brother Balaram Deva to carve out the semi-independent kingdom of Sambalpur. Balaram Deva was an ambitious ruler and under him, the new kingdom grew rapidly. From his time onwards, Sambalpur became a strong power and the glory of Patna began to decline. A great warrior as he was, he launched vigorous military campaigns against the adjoining States. He defeated the Haihaya ruler, and compelled him to cede Sarangarh, Raigarh, Sakti etc. He then directed his armies against the Ganga kingdom of Bamanda, and there he reinstated Ramachandra Deva as a feudatory of Sambalpur. After this, his territory touched that of Surguja as Gangpur was then a vassal State of the former. In course of time, conflict started between Sambalpur and Surguja, and Balaram Deva sent an expedition against the latter through Gangpur. Tradition relates that the soldiers of Sambalpur camped at a place called 'Suadih' which has, at a later time, developed into the present town of Sundargarh. The ruler of Gangpur acknowledged the supremacy of Balaram Deva without any war and gave him his daughter Kamal Kumari who became the chief queen. The king of Gangpur also enjoyed a special privilege as a vassal; unlike others he could go to Sambalpur Durbar accompanied with open umbrellas. After passing through Gangpur, Balaram Deva attacked Surguja and reduced it to a vassal State. He also married princesses of Surguja royal family and brought to Sambalpur the Anantasayi image of Visnu, probably as a trophy of his victory. The image is now worshipped at Sambalpur in a separate temple. After Balaram Deva, his son Hrudayanarayan Deva, through the Gangpur princess Kamal Kumari, became the ruler of Sambalpur. He was succeeded by Balabhadra Deva and the most significant event of his reign was the war against Baudh. After him, Madhukara Deva became the ruler. He had six queens of whom the Gangpur princess was the chief queen. Madhukara Deva had five sons viz. Baliar Singh, Madan Gopal, Banshi Gopal, Aniruddha Singh and Ananta Singh. Of these, the eldest prince Baliar Singh succeeded his father. He proved to be an ambitious ruler. It was during his reign that his court poet Pandit Gangadhar Misra wrote the "Koshalananda Kavya" in Sanskrit. The Koshalananda reveals that Baliar Singh was a great warrior. He had two favourite horses Parjang and Phatejang who accompanied the king in all important expeditions. The most remarkable military incident of his reign, as known from the Kosalananda, was the invasion of Bonai. In the war, Indra Deva, the lord of Bonai was defeated, and was obliged to acknowledge the over-lordship of Maharaja Baliar Singh. Baliar Singh also crushed the pride of a Bhanja ruler and overran his territory 'Yamatangi' Siba Prasad Dash identifies Yamatangi with Bonai and States

that it was Indradeva Bhanja of Bonai who became a vassal of Sambalpur. But this suggestion does not seem to be correct. The Koshalananda mentions Indradeva as the ruler of Bonai. The title of Indra Deva is peculiar to the Kadamba rulers of Bonai and none of them is known to have assumed the surname 'Bhanja'. From this it would appear that Bhanja of Yamatangi and Indra Deva of Bonai were two different rulers who sustained defeat in the hands of Baliar Singh. Yamatangi probably stands for the Yamagartta Mandala which comprised portions of Keonjhar and Dhenkanal Districts. The ruler of Yamatangi probably belonged to the Keonjhar Bhanja line. There can be no doubt about the conquest of Bonai by Baliar Singh. The Kashalananda being a contemporary record, its account should be taken as authentic. Baliar Singh was undoubtedly the most powerful ruler of Chauhan dynasty of Sambalpur.

Gopinath Sarangi in his 'Chikitsa Manjari' describes him as possessing the valour of a lion, and at whose name the enemies got terrified like deer. Under Baliar Singh, Sambalpur became very powerful commanding supremacy over a cluster of 18 garhs (States). These Garhs according to Major H. B. Impey are as follows:

Table 6: List of Garhs as per Major H. B. Impey

1. Patna	6. Gangpur	11. Raigarh	16. Bindra- Nuagarh
2. Sambalpur	7. Baudh	12. Bargarh	17. Khariar
3. Sonapur	8. Athmallick	13. Shakti	18. Borasambar
4. Bamanda	9. Phuljhar	14. Chandrapore	
5. Rairakhol	10. Bonai	15. Sasrangarh	

From this it would appear that Baliar Singh established hegemony over almost the whole of western Odisha including some of the Chhattisgarh States mentioned above. From that time onwards, the Chauhan rulers of Sambalpur styled themselves as the lord of 18 Garhs, indicating the confederation of 18 States under the hegemony of Sambalpur.

The chief of 17 semi-independent States continued to use the title of Raja and could exercise supreme authority in internal affairs in their respective States. But they paid annual tribute to the Maharaja of Sambalpur. This political arrangement lasted till the advent of the British to this region. The Sundargarh tract, comprising Bonai and Gangpur, also continued under the Chauhan supremacy till the year 1818 A.D.

District under Various Dynasties- Marathas, Mughals and Other Foreign Rulers

Relations with the Marathas and the British: In 1751, Aliwardi Khan ceded the territory to the south of the river Suvarnarekha to the Marathas but the Sambalpur region remained outside their territorial limits. It was in 1794 that Jayanta Singh, the ruler of Sambalpur, being harassed by the Marathas, made peace with them by agreeing to pay an annual tribute of Rs. 32, 000 cutcha coins. The ruler of Bonai and Gangpur were subordinate to the Raja of Sambalpur and acknowledged him as their overlord. They paid tribute to the Raja of Sambalpur who accounted with the Marathas. This arrangement continued till 1800, when the fort of Sambalpur was finally occupied by the Marathas. After occupation of the territory the Maratha Government was seldom able to collect tributes regularly; they took by force and tortures whatever they could obtain from all which fell into their public accounts. In these circumstances, the Raja of Bonai became virtually 'independent' of the Maratha authorities.

In the meanwhile, the British invaded Odisha and the fort of Barabati at Cuttack, which was the headquarters of the Marathas, fell on October 14, 1803. As a result of this, Cuttack became a separate Subah under the British. Soon after, British took a diplomatic step to conquer the territories which were outside the Cuttack Province by persuading the Rajas to solicit British protection by entering into an alliance with the Company on payment of five gold mohurs annually as wish of courtesy. Major Broughton conquered Sambalpur in January 1804, and the Maratha Governor Tantia Pharnavis withdrew to Nagpore. In the meanwhile, the treaty of Dragon has been signed with the Marathas on December 17, 1803, by which Raghujji Bhonsla ceded to the East India Company in perpetual sovereignty, the province of Cuttack, including the port and District of Balasore. The tenth Article of the Treaty further provided that 'certain treaties have been made by the British Government with feudatories' of Senah Saheb Soubah. These Treaties are to be confirmed ". This provision was meant to cover the engagement concluded by the British with the tributary chiefs of Odisha. Raghujji Bhonsla became reluctant to surrender Sambalpur and its dependencies which had submitted to the British authority. The British Government informed the Marathas that the Company's protection had been assured to the Rajas and that these territories can only be restored to the Marathas if the chieftains and the Zamindars themselves consented to return to the Bhonsla Government. In a petition, received by the British on the March 29 1804, the Rani of Sambalpur, and the principal Zamindars refuse to return to the Maratha authority, and informed the British that they "voluntarily surrendered to the British Government "and were willing to pay to the British Government without excuse of irregularity any sum the

Government would fix upon them. The unwillingness of the chieftains strengthened the hands of Wellesley who directed the Resident at Nagpore to inform Raghujji Bhonsla that the Rajas of Sambalpur, Patna, etc. had been taken under the British protection which the Bhonsla had to recognise and ratify as a part of the 10th Article of the Treaty of Deogaon failing which war would be renewed. It was with much reluctance that Raghujji accepted it, and the transfer was legally confirmed by the 10th Article of the Treaty of Deogaon. Thus Bonai and Gangpur were also ceded to the British Government by the Treaty of Deogaon.

After Wellesley left India, the British followed a policy of peace and non-intervention, and decided to transfer Sambalpur and the adjoining territories to Bhonsla. Captain Roughsedge was deputed to Sambalpur to open negotiations with the Rani of Sambalpur and other Zamindars. After prolonged discussions, the Chiefs, except Raja of Raigarh, were persuaded to return to the Maratha authority. Accordingly, Bonai and Gangpur were also restored to Raghujji Bhonsla by a special agreement in 1806. The two States continued under the Marathas till 1818, when they reverted to the British Government under the provisional agreement concluded with Madhoji Bhonsla (Appa Sahib). Formerly, Sambalpur Garhjats including Bonai and Gangpur were dependent on the king of Sambalpur; when they were ceded to the British Government in 1818. "advantage was taken of the circumstances under which Sambalpur and Patna were found to annul the dependency of the other Zamindars on these two chiefs ; and in 1821, separate Sanads were granted to each Zamindar, and separate engagements taken ". Thus Gangpur and Bonai ceased to be 'estates' of Sambalpur. They were formally and finally ceded to the British under the treaty of 1826. With regard to tribute, the British Government fixed it on a lower scale than that which was levied under the Marathas and fresh settlements were made in 1827.

After the Kol insurrection of 1831-33 a new province called South Western Frontier Agency under an officer designated Agent to the Governor General, was constituted under Regulation XIII of 1833. Bonai and Gangpur were under the jurisdiction of this Agency. In 1864, the designation of the Agency was altered from South-West Frontier Agency to Chutia Nagar (Chota Nagpore) and the agent to the Governor General became Commissioner. It was administered as a non-regulation province under the control of the Lieutenant –Governor of Bengal.

In 1860, Sambalpur group of States, with the exception of Bonai and Gangpur were transferred to the Superintendent of Tributary Mahals, Cuttack and subsequently on April 30, 1862, Sambalpur was made over to the newly constituted Central Provinces. Bonai and Gangpur however, continued to remain with Chotanagpur. In 1863, for the administration of

Justice, the Government of Bengal issued rules for the guidance of chiefs of Tributary Mahals of Chotanagpur. The chiefs were empowered to pass sentences of imprisonment up to two years, and they could not also impose fines not exceeding Rs.50/-. However, subject to confirmation by the Commissioner of Chotanagpur, they were vested with judicial powers of sentences of imprisonment up to five years and fines not exceeding Rs. 200/-. They had no power of whipping and all orders passed by them were liable to revision by the Commissioner.

In 1891, the Secretary of State in Council decided that Chotanagpur States do not form part of British India, and accordingly new Sanads were granted to Bonai and Gangpur in 1899 which regulated their relations with the British Government. The Sanad granted to Raja Raghunath Sekhar Deo of Gangpur is given in **Appendix-V (Copy of Sanad granted to the Chief of Gangpur State in 1899)** in order to show his powers and position vis-a-vis the British.

On October 16, 1905, the two States were transferred from the control of the Commissioner of Chotanagpur and placed under the charge of Commissioner of Odisha. On partition of Bengal in 1905 the Sanads of Bonai and Gangpur were superseded by Sanads of December 23, 1905 fixing their tribute for a period of 14 years and appointing the Commissioner of Odisha as the officer to be consulted by the Chiefs in place of Commissioner of Chotanagpur. In 1906, the post of a "Political Agent was created for the Odisha States under the Commissioner of Odisha. In 1912, the Bihar and Odisha Province was constituted, and the control over the Feudatory States of Odisha was transferred to the new Government at Patna. Revised Sanads were granted to Chiefs of Bonai and Gangpur in 1915 in which the clause requiring payment of nazrana on succession was omitted. The Sanads were again revised in 1919 to bring them more in to conformity with those granted to the heirs of other Odisha States. The Odisha States continued to be under the Commissioner of Odisha Division till 1922, when the Political Agent was designated as Political Agent and Commissioner, Odisha Feudatory States, and was placed directly under the Governor of Bihar and Odisha. In 1924, the tribute fixed for these two States was enhanced. With effect from April 1, 1933, prior to the introduction of provincial autonomy, the States were placed in direct political relation with the Government of India through the Political Agent, Odisha States and Resident for the Eastern States Agency. In 1937, revised Sanads were granted to the Rajas of Odisha. Since 1942 Bonai was under the direct management of the Political Agent, Odisha States, Sambalpur. The States became independent with the lapse of British paramountcy on August 15, 1947.

History of the Raja families of Ex-States of Bonai and Gangpur: In course of time, in the Sundargarh region, there developed two self contained political units, viz. Gangpur and Bonai, each having a distinct series of rulers. The accounts of these Raj-families are presented below:

The ruling family claims a mysterious and foreign origin. They say that they came from Sakuldip or Ceylon, and that the founder of the family was abandoned by his mother under a Kadamba tree. Being thus on the point of falling into the hands of an enemy, the infant was rescued by a peacock, which swallowed him, and kept him in its maw until the danger was passed. In gratitude for this service the peacock was adopted as the family crest. In reference to this early connection with the Kadam tree they describe themselves as 'Kadam Bansi Rajputs'. The legendary account of the circumstances of the origin, as given in the tradition, is valueless for historical purposes. Commenting on the tradition about the origin from Sakul Dwipa or Ceylon, Hunter observed in 1877, "Looking, however, to their position as rulers over powerful Bhuiya vassals, who hold the bulk of the land, command the militia of the State, and have even the right of conferring the tilak or token of investiture on the chief, there can be no doubt that the Raja of Bonai was originally nothing more than the head of the Bhuiya clan. If Colonel Dalton's theory be correct, that the Bhuiyas formed a portion of the army with which Rama invaded Ceylon, and were in fact, the veritable apes of the Ramayana, it would seem as if the family of the chief had taken advantage of an ancient legend, to conceal their obviously ancestry under the fiction of Cinghalese decent. The theory of the alleged Ceylonese origin of the Bonai Raj family appears to be absurd, and later Durbar sources connect the ruling house with the Kadamba branch of Rathor Rajputs. They are kshtriya by caste and belong to the Lunar dynasty. The emblem of the State is peacock. One peculiarity of the Raja family is that the ruler on succession to the gadi always takes his grandfather's surname.

The Raj-family had chequered history and it moulded the destiny of Bonai till the merger of the State in 1948. In course of time, a branch of the Kadambas of Bonai also ruled over Rairakhol. There are no authentic records for reconstruction of the history. Local Odiaworks like Kadamba Gatha of Pandit Madan Mohan Misra and Vamsavali of Pandit Gopinath Misra Kavibhusana throw some light on the traditional account. Raja Pratap Bhanu Deo founded the State is said to have been divided into five principalities ruled by aboriginal Zamindars who were more or less independent of one another. The progenitor of the Kadamba Raj-family drove out four of these aboriginal Zamindars with the help of one Zamindar and subjugated the land.

Our knowledge about the history of the Raj family before the advent of the British suffers from much uncertainty due to paucity of reliable materials.

It is believed that Makaradhwaja Govinda Deo, who was the 28th in descent from the founder of the Kadamba family, shifted his capital to the present town of Bonaigarh. It is known from the Vamasavali of Pandit Gopinath Misra Kabibhusana that there was a boundary dispute between Bamanda and Bonai which resulted in a war in the reign of Raja Kali Chandra Indra Deb of Bonai (1626 A.D. to 1660 A.D.). The Kadamba Gatha relates that Dulha Deva, king of Bamanda, after destroying the subdued country entered in to Kantasara, a village in the Bonai State. In this was the King of Bonai got military assistance from his uncle Raja Gopinath Harichandan of Talcher. However, there is no authentic record to corroborate this tradition; but being neighbouring States, there seems to have been occasional hostility between the two.

In 1804, Rajah Indira Deo was the ruler of Bonai. Bonai came under the control of the East India Company in 1818 under the provisional agreement concluded with Madhuji Bhonsla (Appa Sahib). During the Kol insurrection of Singhbhum (1820-1821), the peace of Bonai was affected. The main centres of depredation of Lurka Kols were Bamanghati, Keonjhar and north-east quarter of Bonai. The rebellion was, however, suppressed by the British Government. The chiefs of Bonai, Mayurbhanj, and Keonjhar were asked to extend facilities for the movement of British troops through their territories.

Bonai was finally ceded to the British under the treaty of 1826, when Raghujii Bhonsla III attained majority. It was administered by the Governor General's Agent for the S.W. Frontier Agency Major J.R. Ouseley, Agent to the Governor-General, who toured Bonai in 1840 has left a contemporaneous account which forms the earliest authentic record on the political and economic condition of the State. The territory then ruled by Raja Indra Deo was in a backward and chaotic condition being plundered by marauding bands of Thakurs from the neighbouring States. Major Ouseley has mentioned that the annual Government jama of Bonai was Rs. 200, whereas the amount probably collected by him was Rs. 6000. He estimated that jama would be increased to Rs. 1, 00, 000 in full cultivation. However, no improvement could be marked with regard to cultivation. Touring in 1863-64, Colonel T. Dalton found Bonai for the most part a mass of uninhabited hills, only of the whole $1 \frac{1}{2}$ th being under cultivation. He noticed 83 deserted village sites in the State. Raja Chandra Deo, who succeeded Indra Deo was an imbecile ruler, and during his insanity the State was administered by his eldest son Dayanidhi Deo. The State paid an annual tribute of Rs. 200 to the British Government. Besides, it had to furnish a contingent of armed men for military service if required by the Government. During the Keonjhar disturbances of 1867-68, the rural levy from Bonai amounted to a dozen match lock-man, and between forty and fifty archers. Dayanidhi Deo rendered good service during this rising and on August 1,

1868, twenty five insurgent Bhuiyan leaders surrendered to him. This broke the backbone of the movement and paved the way for the capture of Ratna Naik and Nanda Naik on the 15th August 1868. For his valuable services, the title of Bahadur was conferred upon him by the Governor General. The Sawnt, the Bhuiyan Zamindar of Bonai the Danpat and Mahapater (the two Gond Jagirdars of Bonai) were also presented with swords and shields.

Bonaigarh was the capital of the State. Hunter gives the following description of the place, Bonaigarh the residence of the chief, occupies a picturesque bend of the river Brahmani in latitude $28^{\circ} 49'$ and longitude $85^{\circ} 0'$, the site being 505 feet above sea level. The garh or fort itself, has the river on three sides, and is further defended by high mud wall and moat. Within this enclosure are about 150 houses, including those of the chief, his court house and jail.

Regarding the ruling family he remarks, "The family live in good style, and are not in debt. They say themselves that the net income of the State does not amount to more than Rs. 5000 (\$500) per annum. Their expenses, however, must largely exceed this, as they dress well, keep two elephants and several horses, and in spite of their marked aboriginal features, have married into good Rajput families."

After managing the affairs of the State as Tikait, Dauyanidhi Deo succeeded to the gadi, under the title of Raja Bahadur Indra Deo on September 12, 1876. The State began to progress during his reign. Under the orders of J.E.K. Hewitt, the Commissioner of Chotanagpur, the first land revenue settlement was conducted in certain areas in 1879. The settlement, made with the indigenous padika, was confined to cultivable wet lands only. The land lying within the zamindary areas were not covered by the settlement. Hewitt fixed the rates of rent in consultation with king's leading men and the raiyats. This brought to an end the hostility between the Chief and the Swant, the recognised head of the Bhuiyans who was the only Zamindar in the State. The quarrel between the Chief and the Swant which had begun in 1871 had caused much distress to the people. When there was a satisfactory settlement, the raiyats were left unmolested to carry on their pursuits. The Chief granted various concessions to people to prevent them from immigrating to neighbouring States. He even encouraged Mundas, Oraons, and others people from Ranchi and Singhbhum to come to his State and occupy jungle areas on easy terms. In 1883, hostility started between the Chief and his Gond Jagirdars over the question of rents and cesses. This culminated in a veritable rising in 1888. Raja Udit Narayan Singh Deo of Saraikala rendered good service to the British during this Bonai rising of 1888. At last a compromise was effected in 1889 between the conflicting parties by W.H. Grimley, Commissioner of Chota Nagpore Division. Raja Nilambar Chandra Deo, who succeeded his father Raja

Bahadur Dayanidhi Indra Deo, was not an able ruler, and during his reign the affairs of the State lapsed into a very chaotic condition. The Raja caused many complications by leasing out certain forests to timber merchants without reference to the Commissioner. As this was in contravention of the Government to order, agreements made by the Raja were revised by the Commissioner in December 1901. Raja Nilambar Chandra Deo died on February 19, 1902 and his eldest son Dharani Dhar Deo was recognised as the Chief under the title of Raja Indra Deo. He was born on the 13th December 1882 at Bonaigarh and was educated at Deogarh in Bamra. As he was a minor at the time of the death of his father, the State was brought under the Government management and G. M. Shanahan became the manager of the State on a salary of Rs. 300 per month. E.A.Gait, Chief Secretary to the Government of Bengal makes the following observation about the Chief in 1907.

The present Chief is an intelligent lad, but hardly trained and educated. He has been brought to Ranchi for education and placed under the guardianship of a special tutor-guardian appointed with the sanction of Government. A most serious charge in connection with the murder of one Brinda Keot was preferred against him during the year, and from an enquiry held under Government orders by Mr. officiating Commissioner W. Muada it appeared that the two very gross outrages were committed on the persons of two of the subjects viz. Brinda and Madhab keot; that there was no doubt that these outrages were committed with the knowledge of the minor chief, though perhaps the perpetrators went further than he would have desired to go, and that the minor chief was aware of the efforts which had been made to hush up the case which ended in the death of Brinda keot. However, as it was considered that the minor chief was led into these evil courses by bad adviser, it was considered that it would suffice to require the minor chief to remain at Ranchi under the charge of a suitable tutor for such period as may serve to satisfy, his Honour the Lieutenant-Governor that he is fit to exercise the responsible functions of a Ruling Chief.”

Raja Dharanidhar Indra Deo, who was the 57th ruler of the Bonai-Kadamba line, married the daughter of Basudev Sudhal Deb KCIE, the late Raja of Bamra. For organising the revenue administration, the Survey and Settlement work in the State was started in 1910 and completed in 1913 by W.G.Kelley. In 1930, Indra Bilas Mukherjee started a Revisional Settlement, but it was stopped on financial reasons before the completion of the work.

In 1935, a Nayabadi Settlement was made by N. C. Pattnaik. This brought on additional revenue of Rs. 16,000 to the State. Another settlement was made in 1940-41 for 167 villages exempting raiyats from the Bethi service in lieu of an enhanced rate of rent.

Raja Dharanidhar Indra Deo was an enlightened ruler. Under the patronage of the ruler Dharanidhar a recreation club was established at Bonaigarh in 1933. Reading the signs of time, he introduced certain reforms in the administration. With a view to save the haliyas from the tyranny of unscrupulous sahuokaras, the Halia Regulation of 1943 was passed imposing various restrictions in respect of advances, wages, the period of service etc. With the object of solving the problem of agricultural indebtedness, the practice of kadhia loan was stopped. An arbitrary tax called Tika Pancha realised from the Gountia, and the purohita tax (imposed on the priests for their profession) were abolished. In August 1943, there was unprecedented flood in the Brahmani which affected nearly 66 villages. The Durbar distributed help and gave Tacavi loans to the affected people. With a view to associating the people in administration of the State, Panchayats were organised under the Bonai State Panchayat Order of 1943. To placate the hill Bhuiyan, Bhuiyan Durbar was held in 1944 at Bonaigarh on the Dasahara day, in which Bhuiyan Sardars were presented with red pagrees and rewards.

In spite of the efforts of the Durbar for improving the condition of the people, no substantial change could, however, be marked in the material condition of the people. For touring in the interior of the State, Bamadeb Misra, Dewan of Bonai observed in 1944 "I have been started to find the people suffering from malnutrition and poverty in spite of abundant natural resources of the State".

Raja Dharanidhar Indra Deo had no children. He adopted Kadamba Kesari Deo, the eldest son of his late younger brother Hira Bajradhar Deo as his son on 13 May 1935. Dharanidhar Indra Deo was the last ruler of Bonai. A new chapter began in the history of the State when it merged with Odisha on 1 January 1948.

Gangpur: The early history of the Gangpur Raj family is shrouded in obscurity. The ruling chiefs of Gangpur claim descant from the Paramara clan of Rajputs of Dharanagar or Ujjain through Raja Vikramaditya. It is said that during the Mahamedan period, two brothers came from Dharanagar. The elder brother settled in Panchet-Kasipur in the District of Manbhum where he established a kingdom; Gangadhar Sekhar Deo the younger brother came to Gangpur. Tradition preserves an interesting anecdote regarding his coming to Gangpur. Referring to this, Rani Janaki Rathnaya Ammerjee, who was the Regent of Gangpur State from 1936-44 States as follows:-

"There was a quarrel between Gangadhar and his elder brother at Sikharbhum, in Manbhum District. Gangadhar being helpless left his home and went towards Suruguja. On the way he saw a Brahmin who prophesied

that Gangadhar would be Raja. Gangadhar told the Brahmin that if he would be a Raja, he would allow the Brahmin and his descendants to sit on his Gadi for 2 hours every year. The Brahmin accompanied Gangadhar. They arrived at Masabira near Laikera village, Police Station Lephripara. The Bhuiyan family (ancestor of the Zamindar of Sargipali) made him king. In the meantime the brother of Gangadhar sent his emissaries in search of Gangadhar. But the Bhuiyan Zamindar of Sargipali concealed Gangadhar on a platform, made in the midst of a tank, and the emissaries failed to find out Gangadhar and went back to Sikharbhum. The State is called Gangpur after the name of Gangadhar Deo.”

A second version of the story exists, according to which there was anarchy in the region following the collapse of Kesari vamsa. The leading men felt the necessity of a King, and they stole a child of the Sikhar family from Sikharbhum or Panchet and elected him as their chief. It is difficult to extract historical information from such oral traditions. It seems that several countries ago, a soldier of fortune or a prince who was or claimed to be Rajput Kshatriya of Paramar clan found the country an easy prey and became its master. The aboriginal Bhuiyans, who inhabited these area were either subjugated or accepted the new ruler. Traditions about the early history of several of the Odisha Sates suggest that this is how they came into existence.

Gangadhar Sekhar Deo, who was the first ruler according to traditions, came to the reign at a critical time. When the last ruler of the local Kesari dynasty was murdered by Madan Pradhan of Kirmadand, the territory plunged into a State of anarchy. In the absence of a king, life and property became insecure. Gangpur then appears to have been divided into a number of principalities which were held by Bhuiyan families. When marauders and rebels oppressed the people, it is said, Madan Mohan Singh, Zamindar of Hemgir, Bharathi Majhi, Zamindar of Sargipali and Prahllad Gartia, Zamindar of Sarapgarh secured help from the Rajas of Raigarh and Palikot and suppressed the rebellion. Later on, they invited or stole one son from the Sikhar family of Sikharbhum and acknowledged him as their chief. It is said that the Majhi of Sargipali, who was an influential Bhuiyan leader, put vermilion on the forehead of Gangadhar Sekhar Deo and helped him to subjugate the other Bhuiyan people. Gangadhar Sekhar was installed as Raja at Masabiragarh. Afterwards, he established a new capital of Gangpurgarh. The extent of his territory is not definitely known.

There appears to be some inconsistency in different Statements about the names of the early members of the Gangpur Raj family. The Gangpur Durbar sources give the names of seventeen kings before Raja Raghunath Sekhar Deo with Raja Gangadhar Sekhar Deo as the progeny; while from archival records we get a somewhat different genealogy of the ancestors of

Raja Raghunath Sekhar Deo. The genealogical table of the Gangpur Raj family preserved in the Odisha State Archives was compiled in 1860, therefore, its evidence, should be taken as more authentic. But in this chronological table also we find certain apparent mistakes.

Though there is some confusion about the names of the kings of Sekhar family for some generations, the authenticity of King Hambhira Deo, known from his Barapali copper plate, cannot be doubted. It is also certain that Indra Sekhar Deo was the ruler of Gangpur when Sambalpur came under the East India Company, for his name appears as one of the Principal Zamindars in a letter dated 26 March 1804 addressed to Lt. Colonel Broughton. According to the tradition preserved by the Durbar of Gangpur, Indra Sekhar Deo had his capital at Gangpurgarh but he subsequently removed his capital to Raibogagarh when Pratap Majhi, the Zamindar of Sargipali defied his authority and made preparations to attack Gangpurgarh. After Indra Sekhar Deo his son Parasuram Sekhar Deo became the ruler. He received the first Sanad from the British Government in 1827 A.D. He had his capital at Nibarangpur, near modern Rajgangpur. He was a powerful monarch, and it is said that he attacked Sargipali to take revenge on Pratap Majhi who had been a bitter enemy of his father. Pratap Majhi escaped but later on when he was found addressing a meeting at Kupsinga, he was dramatically stabbed to death with a spear by Raja Parasuram Sekhar Deo from horseback. After Parasuram Sekhar Deo, Raja Jagadev Sekhar Deo came to the throne, and he shifted the capital to Jagatgarh. In all probability, he is no other than Indrajit Sekhar Deo mentioned by Major J.R. Ouseley as the Raja of Gangpur in 1840. In his tour diary of 1840, Major Ouseley recorded that the annual Government Jama of Gangpur was Rs. 500 whereas the amount collected by the Raja was about Rs. 10,000. Ouseley believed that the collection would have been increased to Rs. 1,00,000, if all lands were brought under cultivation. The next successor to the throne was Chandrabhanu Sekhar Deo a cousin brother of Jagadev Sekhar Deo. Chandrabhanu Sekhar Deo had three queens, Kunajamani Kumari, Sarabanga Sundari and Asha Kumari. Of these, the second queen Sarabanga Sundari, who was a daughter of Bonai family, gave birth to a posthumous son named Madan Mohan Sekhar Deo, who survived only for six months. As there was no lineal descendant, there arose a dispute for succession to the gadi between Gajraj Sekhar Deo and Raghunath Sekhar Deo who respectively the second son and the grandson of Danardan Sekhar Deo, Kharposhdar of Birbira. Raghunath Sekhar Deo the only son of Pitambar Sekhar Deo, the eldest son of Danardan Sekhar Deo. Rani Kunjamani Kumari supported his claim. When the matter came up before the Bengal Government for decision, Danardan Sekhar Deo was considered as the legal heir, and therefore, he was recognised as the Chief. Danardan Sekhar Deo further shifted the capital to Suadihi. He was killed by the family

priest while proceeding to Ranchi for attending a Durbar, and Raghunath Sekhar Deo succeeded to the Gadi in November 1858, when he was a minor. Rani Kunjamani Kumari and after her death, Gajraj Sekhar Deo the uncle of Raghunath Sekhar Deo, managed the affairs of the State as Sarbarakhar during his minority. Raghunath Sekhar Deo took over the charge of the State on January 27, 1871. But, after a few years he was implicated in a murder case of two women who were suspected as witches. Hunter makes the following observation on the Chief.

“The present chief, Raja Raghunath Sekhar is (1875) suspended and under arrest at Ranchi for having been concerned in the murder of two women as reputed witches. The estate is in charge of the Rani and the judicial and police duties of the Raja are carried on by two of the most influential Jagirdars of Gangpur “. It is said that Raghunath Sekhar Deo fell victim to the intrigue of his uncle Gajaraj sekhara Deo who wanted to get the Gadi for himself. However, after the disposal of the murder case and stay at Ranchi for one year, Raghunath Sekhar Deo was again entrusted with the administration of the State. He has his capital at Suadihi. Hunter reports that the residence of the Raja at Suadi on the river Ib, in latitude $23^{\circ} 10'$ and longitude $84^{\circ} 5'$ is a collection of low thatched buildings, one of which is used as a court house. There is also a school at which Odia and Hindi are taught to about 30 boys. This Suadihi, which was mentioned earlier by Dalton was renamed as Sundargarh by Raghunath Sekhar Deo.

In the sphere of revenue administration, Raghunath Sekhar Deo introduced Nazarkut settlement in some village in 1874 A.D. Though the system of assessment made by seeing only was defective and was a sort of guess work, it helped to raise the revenue. While the revenue of the State, according to the Jamabandi prepared by Gajraj Sekhar Deo in 1865, was Rs. 5, 200 and a number of abwabs the Nazar-karut-Settlement increased the revenue to Rs. 15, 000 in addition to supplies of rice and pulses. In 1900 A.D. there was another Settlement by which the rents of kuttet villages increased by 25 per cent and non-kuttet villages by 50 per cent. In the mean while, the Chief ousted some aboriginal Gaontias by granting leases in favour of some rich Hindu bidders of Sambalpur. Great discontentment was consequently generated and eventually, it culminated in a rebellion in 1897, which was only suppressed by the British assistance. To improve the administration, the British Government appointed in 1900 A.D. Babu Surendranath Majumdar, Deputy Magistrate and Deputy Collector as Dewan, with executive and judicial powers. However, he could not pull on well with the Chief, and in June 1902, J.A. Craven, Deputy Magistrate and Deputy Collector was appointed as Dewan of the State. E. A. Gait, Chief secretary to Government of Bengal makes the following observation on the Chief in 1907 ; “The only bar to progress is the Chief himself, an uneducated

and ignorant man, of a grasping and suspicious nature, who has obstinately opposed all efforts at reform excepting when likely to further his own personal interests. "The regime of Raghunath Sekhar Deo was unusually long (he ruled from 1871 to 1917) and this ensured the continuity in administration. When Bengal-Nagpore Railways offered for the construction of railways, he made a free gift of all lands required by the Railways and helped the authorities by giving large quantities of material for the construction. Because of railway communications the untapped mineral resources like lime stone and dolomite, could be utilised. The effect has been a great development of trade and employment of thousands of subjects in the quarries. In 1899 Raghunath Sekhar Deo was granted Sanad by the British Government. His reign also witnessed some remarkable changes in the administration of Gangpur which was transferred from the control of the Commissioner of Chhotanagpur to the charge of the Commissioner of Odisha in 1905. The first regular survey and settlement of the State was taken up in 1907 and completed in 1911 by C.W.E. Connolly, a member of Bengal Provincial Civil Service. In 1915, His Excellency the Viceroy and Governor-General of India was pleased to confer upon Raja Bahadur Raghunath Sekhar Deo, the title of Maharaja as a personal distinction. A new kachery building was constructed by him at Sundargarh at an expenditure of Rs.1,67,218. The old Kachery building was converted into a hostel for boys attending Sundargarh Middle English School. The new magnificent court buildings were formally opened by the Lieutenant Governor of Bihar and Odisha on 20 December 1915. Maharaja Raghunath Sekhar Deo died on 10 June 1917 and was succeeded by his grandson Bhawani Sankar Sekhar Deo. But as he was a minor, J. A. Craven, formerly Dewan of Gangpur was posted as Superintendent of State. He was a 'sound and capable officer' and with the help of missionaries, he recruited as many as 1081 persons mostly from the Oraon class to serve in the labour corps of the First world-war. These men did very good work in France with the Chhotanagpur corps. After receiving training in the actual administration of the State, Bhawani Shankar Sekhar Deo received charge of the State on 16 May 1919 and was formally invested with the powers at a Durbar held by J. F. Grunning, Commissioner of the Odisha Division, at Sambalpur on 2nd February 1920. He was a ruler with liberal ideas and he acquainted himself with the needs and conditions of the people. On the whole, he observed "Economic conditions are good as can be expected, but the majority of the cultivators, particularly in the western half of the State, are poor despite low rents. It is a remarkable fact that the substantial cultivator is extremely well off and his prosperity continues to increase; the poor cultivator, is however, very poor and the reasons to me are obvious. One is that the system of bethi as we have it here is wrong ; the poor cultivator who has to cultivate his fields single handed, has to render the same amount of bethi as his wealthy

neighbour with two or three or more hired labourers or family member. Bethi hardly affects the latter whereas it makes all difference in the world to the former."Even though he was not prepared to give complete freedom from bethi and begar, he wanted that the system be revised so as to equalise the burden. He was also a patron of learning; Bhavani Shankar High School established by him at Sundargarh, was named after him. His reign witnessed many changes in the traditional life. Number of motor bus services increased, even an automatic fly shuttle loom imported from Manchester made its appearance in Gangpur, Referring to the progress in different branches of administration, the ruler reported in 1926; "We have excellent communications and public buildings which are in course of yearly improvement and on which we spend nearly a quarter of our income. There are eight State hospitals and dispensaries now in the State, which is one to an area of every three hundred square miles, and male and female vaccinators who perform compulsory and revaccination of the people. We have fifty-nine State Primary Schools in which teaching is given free of cost, primary education being compulsory there are in addition a Training School for teachers, three Middle Vernacular ; one Middle English and five Girls schools ; and there are one hundred and thirty Mission Schools, a large number of which complying with our conditions, are given. We have two veterinary assistants who tour the State; there are thirteen Police Stations, each in charge of a Sub-Inspector of Police of whom several have been trained at the Hazaribagh Training College". The same ruler who was interested in the welfare of the people could also spend Rs. 78, 000 on the marriage ceremony of his sister. During his reign, Sir Henry Wheeler, Governor of Bihar and Odisha with Lady Wheeler visited Gangpur in January 1926. Raja Bhawani Shankar Sekhar Deo died on May 5, 1930 at the early age of 32. He was succeeded by his eldest son Bir Mitra Pratap Sekhar Deo. Raja Bir Mitra Pratap Sekhar Deo was born on March 10, 1920 and as he was a minor at his time of the father's death, the State was placed under the direct management of the British Government. On 20 December 1935, his mother Rani Janaki Rathnaya Amarjee was made the Regent at a Durbar held at Sundargarh by Lt. Colonel A.S. Meeck, the Agent to the Governor-General, Eastern States Agency. At first certain departments of the State were placed under her administrative control. However, on 15 November 1936 full regency powers were conferred upon her. The Superintendent of the State became her Dewan and exercised executive powers. The Chief Judge had full control over the judicial branch of the administration. Raja Bir Mitra Pratap had his education at Raj Kumar College, Raipur. He visited Europe twice and during his second visit he died of Pneumonia in London on June 26, 1938. The town of Biramitrapur has been named after him. On his death, his younger brother Raja Bira Udit Pratap Sekhar Deo ascended the Gadi. His succession to the Gadi was celebrated in a Durbar held on 26

December 1938 by the Political Agent, Odisha States. He was born on September 25, 1923, and during his minority the Rani Sahiba J.R. Ammerjee continued as the Regent. She was the daughter of the Zamindar of Kurupam in the Vizagapatam District. She held the Regency from 1936 to November 27, 1944 when Raja Bira Udit Pratap Sekhar Deo was invested with ruling powers by H. J. Todd, the Resident for the Eastern States Agency, in a special Durbar.

Raja Bira Udit Pratap Shekhar Deo was an enlightened Ruler. During his tenure, village panchayats were formed for managing the affairs at grass root level under the Village Panchayat Act. He used to tour Munda villages even in inaccessible pockets for finding out the progress of welfare activities meant for development of Mundas. He used to take keen interest in promoting higher education in Gangpur State and had created a separate fund for providing financial assistance to deserving and meritorious students for getting higher education outside the Gangpur State. During his administration, the Gangpur State was transferred from Ranchi Agency to the Odisha State's Agency as a part of the erstwhile Odisha province. He was the last Ruler of the Gangpur State until the Rulers transferred power to Government of India on 15th December 1947 after the country achieved independence. Even after merger of the State, he used to take interest in the welfare and development of the Sundargarh District. He had donated more than 100 acres of his private land for establishment of Educational institutions, Hospitals and Government buildings in Uditnagar areas of Rourkela (civil township) to provide State support for speedy construction of the Rourkela Steel Plant in 1955-56. In his memory, the Uditnagar Township within the Rourkela Civil Township has been established. It may not be out of place to mention that he was a Minister in the Cabinet of the coalition Government headed by late R. N. Singhdeo as Chief Minister.

The title of C.B.E. was conferred upon Shrimati Ammerje on the New Years' Day of 1945. During her regency the revenue of the State was doubled. A general hospital, lighting and water supply system were completed at Sundargarh. On 10 October 1944 she set up a Council. The Regent was the President of the Council the Dewan was the Vice-President, and there were two other ministers. Bir Udit Pratap Sekhar Deo also continued the Council form of Government. He was an enlightened ruler. Under the village Panchayat Act, Panchayats were formed. The ruler toured in the Munda villages and took interest in their welfare. Raja Bira Udit Pratap Sekhar Deo was the last ruler of Gangpur, and during his administration, the State merged with Odisha in 1945. This ushered in a new chapter in the history of Gangpur.

Uprising and Freedom Movement in the District & Merger of Princely States:

Bira Surendra Sai, a claimant to the throne of Sambalpur had been kept in jail at Hazaribagh. The mutineers during Sepoy Mutiny of 1857 got him out. It is presumed that he must have travelled through Sundargarh District to his home in Sambalpur. But there is nothing on record to show any incident during that period. It is, however, obvious that he must have had the sympathy of the population to be able to go through long tracts of country without being caught and handed over to the British. Ultimately he was kept in jail at Asirgarh in Raipur District of Chhattisgarh. His son Mitra Bhanu who had been in jail at Asirgarh was released in 1877 on the security of his father-in-law, the Raja of Bonai who kept him at Bonai for 30 years. During this period two petitions to the British authorities to allow him to visit his native village Khinda near Sambalpur had been rejected. Ultimately it was allowed in 1907. These facts could hardly be taken into account of a freedom struggle.

When Raja Raghunath Sekhar Deo of Gangpur became greedy about 1897 A.D. and started displacing aboriginal Gaontias in order to replace them by Agharias and rich people from Sambalpur, an agitation started under the leadership of the aboriginal Gaontia, Madri Kalo which ended in the Raja giving up his attempt. The following extract from the report of Sir Edward Gait, Chief Secretary to the Government of Bengal, is interesting.

“The discontent had been smouldering for some years until in February 1897 it took the shape of open revolt by the malcontents, which culminated in a series of more or less serious dacoities and a general blackmailing of the villages in the disturbed tracts. It was at length found necessary to depute the Deputy Commissioner of Singhbhum with an armed body of British Police to assist the Chief in restoring order and in arresting the insurgent leaders.

These disturbances can hardly be called a freedom movement as they originated from the attempt on the part of the Raja to displace aboriginal Gaontias and culminated in pacification with the help of British police.

The Non-Co-operative movement of 1921 the Civil Disobedience movement of 1930, and the quit India Movement of 1942 did not touch the District; even though Mahatma Gandhi's social reform had deep influence on the Harijans. Bhawani Shankar Sekhar Deo, the Ruling Chief of Gangpur, wrote in 1924.

The Gandas still continue their abstinence movement; this is a people cognate to or the same as the Pan. After Mr. Gandhi was sentenced to imprisonment, this tribe or the most of them took or vow of abstinence from intoxicating liquors and flesh till he was released. The movement has

nothing to do with non-co-operation; it is purely the religious and social side of what for want of a better term, one calls the Gandhian movement. Having taken the vow and kept it, the Gandas are now attempting to raise their social status, this being the logical and natural sequence in India of the formers. Quite harmless meetings are occasionally held.

The sensible view of the Raja of Gangpur in 1924 is quite unusual; as to most other Rajas and other loyal citizens the name of Gandhi was like a red rag to a bull. Even though the political storms which were blowing over India did not touch either Gangpur or Bonai, some of their subjects did leave the District to take part in the various movements. In 1927 Dwarikanath Kusum was imprisoned at Nagpur for joining the Gandhian movement. The Salt Making Movement of 1930 in the costal districts attracted Balabhadra Tanti who was detained at Bonai for a week. The following persons took part in the movement.

In 1921, Ghasiram Tanti, Jagan Tanti and Balabhadra Tanti were interested in the Non-Co-operation Movement of Mahatama Gandhi; but there was actually no such movement in the ex-Gangpur State. In 1930, there was no Civil Disobedience Movement as occurred elsewhere in India. But Balabhadra Tanti took part in the Salt Satyagraha in the Coastal areas of Odisha. Chhala Tanti, Ghasiram Tanti and Kendu Tanti were on their way to join the Salt Satyagraha but were arrested at Baudh and detained there for a week.

A serious agrarian movement took place in 1938 as a consequence of the enhancement of rent of the Munda tenants of north Gangpur. They were all Christians. The inspiration obviously came from Ranchi, even though the Mundas of Ranchi were paying higher rent than the Christian Mundas of Gangpur. The Raja brought to missionaries from Ranchi to pacify the Christian Mundas, but their speeches failed to produce any effect. It gradually gathered strength and ended in what is known as the Simko firing of 1939. This was purely an agrarian movement. It cannot go into an account of a freedom struggle. On February 9, 1939 a largely signed petition was submitted to the Regent Rani of Gangpur making a number of demands including abolition of Bethi and Begari. But these demands were not passed very far. What was pressed was the enhancement of rent. Nirmal Munda, a Christian, was the leader of the movement. The attempt to arrest him led to the Simko firing of 25 th April 1939.

On this occasion strong representation was made by the Congress leaders of India asking for enquiry and redress etc. This was made the reason for the Congress leaders of Odisha demanding the taking over of Gangpur State by the Government. They also praised the bravery of the Mundas. However, this agrarian movement cannot be called a freedom struggle.

In 1938 under the patronage of the British Commissioner of the Chhotanagpur Division, the missionaries had brought Jaipal Singh to Ranchi to start the Jharkhand movement as a counter blast to the unexpectedly over-whelming victory of the Congress in the General Elections, 1936-37. It is not without significance that at the same time a no-rent campaign started among the Christian Mundas of the adjoining areas of ex-Gangpur State, even though the Munda of Gangpur were paying lower rent than the Mundas of Ranchi. The Source of inspiration of the movement is obvious.

In 1946 Praja Mandalas were formed in the ex-States of Bonai and Gangpur. It gradually gathered strength until the Ruler transferred power to the Government of India on the 15th December 1947.

Post Independence History of Sundargarh

The post-Independent history of Sundargarh District is a calm submission of the dictates of the policies and programme of patriotic calls of progress, both of Government of India and the State Government. Thus, Rourkela Steel Plant was set up on about 20000 acres of land mostly of indigenous tribals, who were displaced and rehabilitated in the alien setting. This thing also happened for the displaced people from about 12000 acres of land in the captive reservoir of the Steel Plant, Mandira Dam. The development of industrialisation commenced both its linkage effects as well as backwash effects. Many flourished but many also perished. The post independence history will focus **political movement, declarartion of the Scheduled Area in 1950, reorganisation of constituencies, caste consciousness and rise of extremist elements in the district.**

- a) **Political movement-** The first general election was a total vote of the Congress symbol in the pair of bullocks, "jodhi bolodo" in all the constituencies. The rise of ex-rulers' party, the Ganatantra Parishad was steadily seen to capture electors imagination but did it so only in 1957 Assembly election. The Jharkhand Party of ChhotaNagpore origin also landed in the fray to win Adivasis and their sentiments on 'Jharkhand Alag Prant', but could win MLAs only in 1974. The list of MP, MLA, Ministers elected in different elections will bear out the changing political movement in the district.
- b) **Promulgation of Constitution (Scheduled Tribe) Order 1950** had a great majority of people (62per cent) empowered to enjoy privileges in reservation in jobs and services. Their lands were protected from transfer to non-tribes by another enactment called 'The Odisha Scheduled Areas Transfer of Immovable Properties (by Scheduled Tribe) Regulations 1956, known as Regulation-II of 56 and in 1996 the Panchayat (Extension to Scheduled) Areas Act was enacted to further empower the tribes of Scheduled areas. Sundargarh fully

included therein, enjoying all privileges enshrined as the Schedule-V area. The tribal social activists have, however, taken the entire gamut of development activities in the District in the 'backwash effect' perspective and put up resistance so far.

- c) **Reorganisation of the 7 constituencies** of the District has also had a shift in the leverage of political power almost in the line of **gerrymandering**. Out of two unreserved MLA constituencies, namely Sundargarh and Rourkela, now after delimitation, Sundargarh is a Scheduled Tribe constituency from 2009 and only Rourkela an unreserved one, whereas Raghunathpali is a Scheduled Caste constituency from 2009. Other Assembly Constituencies have also undergone reorganisation. **Sundargarh AC** No-36, created in 1951 has become No-135 in 1974, which became No-9 in 2009 after delimitation as S.T. constituency. **Talsara AC** was created in 1961 as ST Constituency and was renumbered as serial NO-81 in 2009. **Birmitrapur AC** was created in 1974 as serial 138(ST) and was assigned serial No-10 in 2009 under delimitation. **Raghunathpali (ST) Constituency** was serial 140 which under delimitation was made SC Constituency No 11 in 2009. **Rajgangpur AC (ST) No-37** was assigned serial No-43 in 1957, No-64 in 1961, No-123 in 1967 and No-13(ST) in 2009 under delimitation. **Bonai AC (ST)** was created in 1951 in serial-39 which was assigned serial-145 in 1957. The serial was changed to 66 in 1961, 126 in 1967, and 14 in 2009 under delimitation. **Rourkela AC** has been a General Constituency, but serialisation has been changed, from 125 in 1967 to No-139 in 2000 and No-12 in 2009 and in the process of delimitation, the areas have been added and deleted to make it a General Constituency.
- d) **Caste consciousness** is very much reflected in both development and electoral perspectives right from the beginning. Dominant classes like Bhuiyans, Aghariyas, Kultas, Mahakuds, Brahmins, Khandyats and a few Oraons and Munda Gaontia classes followed the line of intermediaries and their feudatory ambience among the general public for a long time after independence until service class among the ruled also created their hegemony and put up tough competition to them in all fields. The big landholders had to leave their major parts of holding fallow when agricultural labour class became privileged beneficiaries of the social legislation measures. Caste consciousness followed the political line very effectively, but the Executive and the Judiciary branches of the Government continued to be dominated by the upper castes as caste consciousness of Scheduled Tribes and Scheduled Castes failed to measure up to the standard required for Executive and Judiciary.

- e) **Rise of extremists elements** in the District is a purely 'imported phenomenon' from West Bengal and Bihar / Jharkhand. The pace of development in Sundargarh District was matchless compared to Chhotanagpur in Bihar, which became Jharkhand in 2002, right from 1950s. There being no 'social boundary' marking the State boundary, the free ingress of people from Bihar carried ideologies as also ammunitions. The intensification of extremist elements in the names of Jharkhand Liberation Force, Pahadi Chita and other brand names have actually flown in origin from Maoist Communist Centre (MCC) from West Bengal and Bihar. They have thrived with local support, if not patronage. They played havoc in the District mainly in 2006 and some years after looting the contractors doing roads, bridges etc, burnt JCBs and also killed a couple of them. They have easy access to the District through Manoharpur and Jaraikela Railway stations and escape through Nuagaon and Odgaon. Their camp at Odgaon was attacked and destroyed which has somewhat demoralised and subdued them.

Table 7: Members of Rajya Sabha from Sundargarh

Sl. No.	Name of the MP, Rajya Sabha	From	To
1	Harihar Patel (No party affiliation)	3.4.1958	2.4.1964
2	Debananda Amat (Indian National Congress)	6.3.1973	2.4.1974
3	Ganeswar Kusum (Indian National Congress)	3.4.1984	2.4.1990
4	Maurice Kujur (Indian National Congress)	3.4.1996	2.4.2002
5	Dilip Ray (Biju Janata Dal)	3.4.1996	2.4.2002
6	Frida Topno (Indian National Congress)	7.8.1998	2.4.2002
7	Dilip Ray (Independent)	3.4.2002	2.4.2008
8	Mangala Kisan (Biju Janata Dal)	3.4.2008	2.4.2014
9	Dilip Tirkey (Biju Janata Dal)	4.4.2012	3.4.2018

Table 8: Member of Lok Sabha from Sundargarh

Year	Name of the Elected Representative to the Lok Sabha from Sundargarh	Party affiliation
1952	Shibanarayan Singh Mohapatra	Indian National Congress
1957	Kalo Chandramani	Ganatantra Parishad
1962	Yagnyanarayan Singh	Ganatantra Parishad
1967	Debananda Amat	Swatantra Party
1971	Gajadhar Majhi	Indian National Congress
1977	Debananda Amat	Janata Party
1980	Christopher Ekka	Indian National Congress
1984	Maurice Kujur	Indian National Congress
1989	Debananda Amat	Janata Dal
1991	Frida Topno	Indian National Congress
1996	Frida Topno	Indian National Congress
1998	Jual Oram	Bharatiya Janata Party
1999	Jual Oram	Bharatiya Janata Party
2004	Jual Oram	Bharatiya Janata Party
2009	Hemananda Biswal	Indian National Congress
2014	Jual Oram	Bharatiya Janata Party

Table 9: Members of Bidhan Sabha from Sundargarh Constituency

Year of Election	AC No. and Name	Name of the Elected Representative to the Odisha Legislative Assembly from Sundargarh Constituency (Party affiliation)
1951	36 - Sundargarh	Krupanidhi Nayak (Congress), Harihar Patel (Ganatantra Parisad)
1957	36 - Sundargarh	Udit Pratapsekhar Deo (Ganatantra Parisad), Gangadhar Pradhan (Ganatantra Parisad)
1962	36 - Sundargarh	Harihar Patel (Ganatantra Parishad)
1967	36 - Sundargarh	Harihar Patel (Swatantra Party)
1971	36 - Sundargarh	Dibyalochan Sekhar Deo (Odisha Jana Congress)
1974	135 - Sundargarh	Dibyalochan Sekhar Deo (Congress)
1977	135 - Sundargarh	Kishore Chandra Patel (Congress)
1980	135 - Sundargarh	Kishore Chandra Patel (Congress)
1985	135 - Sundargarh	Bharatendra Sekhar Deo (Janata Party)
1990	135 - Sundargarh	Bharatendra Sekhar Deo (Janata Party)
1995	135 - Sundargarh	Kishore Chandra Patel (Congress)
2000	135 - Sundargarh	Sankarsan Naik (Bharatiya Janata Party)
2004 Bye-election	135 - Sundargarh	Sushama Patel (Bharatiya Janata Party)
2009	9 - Sundargarh (ST)	Jogesh Kumar Singh (Congress)
2014	9 - Sundargarh (ST)	Jogesh Kumar Singh (Congress)

Table 10: Members of Bidhan Sabha from Talasara Constituency

Year of Election	AC No. and Name	Name of the Elected Representative to the Odisha Legislative Assembly from Talasara Constituency (Party affiliation)
1961		Gangadhar Pradhan (Ganatantra Parishad)
1967		Gangadhar Pradhan (Swatantra Party)
1971		Gangadhar Pradhan (Swatantra Party)
1974		Premananda Kalo (Congress)
1977		Ignes Majhi (Janata Party)
1980		Gajadhar Majhi (Indian National Congress)
1985		Gajadhar Majhi (Indian National Congress)
1990		Ranjit Bhitiria (Janata Dal)
1995		Gajadhar Majhi (Indian National Congress)
2000		Gajadhar Majhi (Indian National Congress)
2004		Gajadhar Majhi (Indian National Congress)
2004		Prafulla Majhi (Indian National Congress)
Bye Election		
2009	8 - Talasara (ST)	Prafulla Majhi (Indian National Congress)
2014	8 - Talasara (ST)	Prafulla Majhi (Indian National Congress)

Table 11: Members of Bidhan Sabha from Biramitrapur Constituency

Year of Election	AC No. and Name	Name of the Elected Representative to the Odisha Legislative Assembly from Raghunathpali Constituency (Party affiliation)
1974	138 - ST	Christodas Lugun (Independent)
1977	138 - ST	Prem Chand Bhagat (Janata Party)
1980	138 - ST	Junas Bilung (Congress-I)
1985	138 - ST	Remis Kerketa (Congress)
1990	138 - ST	Satya Narayan Pradhan (Janata Dal)
1995	138 - ST	George Tirkey (JMM)
2000	138 - ST	George Tirkey (JMM)
2004	138 - ST	Nihar Surin (JMM)
2009	10 - ST	George Tirkey (Independent)
2014	10 - ST	George Tirkey (Samata Kranti Dal)

Table 12: Members of Bidhan Sabha from Raghunathpali Constituency

Year of Election	AC No. and Name	Name of the elected representative to the Odisha Legislative Assembly from Raghunathpali Constituency (Party affiliation)
1974	140 Raghunathpali	Agapit Lakra (Congress)
1977	140 Raghunathpali	Rabi Dehuri (Janata Party)
1980	140 Raghunathpali	Nelson Sorengi (Congress-I)
1985	140 Raghunathpali	Frida Topno (Congress)
1990	140 Raghunathpali	Rabi Dehuri (Janata Dal)
1995	140 Raghunathpali	Mansid Ekka (JMM)
2000	140 Raghunathpali	Shankar Oram (Bharatiya Janata Party)
2004	140 Raghunathpali	Halu Mundari (JMM)
2009	11 Raghunathpali (SC)	Subrat Tarai (Biju Janata Dal)
2014	11- Raghunathpali (SC)	Subrat Tarai (Biju Janata Dal)

Table 13: Members of Bidhan Sabha from Rourkela Constituency

Year of Election	AC No. and Name	Name of the Elected Representative to the Odisha Legislative Assembly from Rajgangpur Constituency (Party affiliation)
1967	125	Rajkishore Samantray (Praja Socialist Party)
1971	125	Shyama Sundar Mahapatra (Odisha Jana Congress)
1974		Dhananja Mohanty (Congress)
1977		Brajakishore Mohanty (Janata Party)
1980		Gurupada Nanda (Congress-I)
1985		Dilip Ray (Janata Party)
1990		Dilip Ray (Janata Dal)
1995		Prabhat Mohapatra (Congress)
2000	139	Ajit Das (Biju Janata Dal)
2004	139	Sarada Prasad Nayak (Biju Janata Dal)
2009	12	Sarada Prasad Nayak (Biju Janata Dal)
2014	12	Dilip Ray (Biju Janata Dal)

Table 14: Members of Bidhan Sabha from Rajgangpur Constituency

Year of Election	AC No. and Name	Name of the Elected Representative to the Odisha Legislative Assembly from Rajgangpur Constituency (Party affiliation)
1951	37- Rajgangpur	Aagpit Lakra (Independent)
1957	43- Rajgangpur	Shanti Prakash Oram (Independent)
1961	64- Rajgangpur	Rangabalav Amat (Congress)
1967	123- Rajgangpur	Premchand Bhagat (Independent)
1971	123- Rajgangpur	Ignes Majhi (Jhadakhand)
1974	137- Rajgangpur	Khristopher Ekka (Congress-I)
1977	137- Rajgangpur	Braja Mohan Kisan (Janata Party)
1980	137- Rajgangpur	Mukharam Naik (Congress-I)
1985	137- Rajgangpur	Mangala Kisan (Janata Dal)
1990	137- Rajgangpur	Mangala Kisan (Janata Dal)
1995	137- Rajgangpur	Mangala Kisan (Janata Dal)
2000	137- Rajgangpur	Mangala Kisan (Biju Janata Dal)
2004	137- Rajgangpur	Gregory Minj (Congress)
2009	13- Rajgangpur (ST)	Gregory Minj (Congress)
2014	13- Rajgangpur (ST)	Mangala Kisan (Biju Janata Dal)

Table 15: Members of Bidhan Sabha from Bonai Constituency

Year of Election	AC No. and Name	Name of the Elected Representative to the Odisha Legislative Assembly from Bonai Constituency (Party affiliation)
1951	39- Bonai	Nilamani Singh Dandapat (Gana Parishad)
1957	45- Bonai	Arjjuna Nayak (Gana Parishad)
1961	66- Bonai	Hemanta Prasad Mohapatra (Ganatantra Parishad)
1967	126- Bonai	Hemanta Prasad Mohapatra (Independent)
1971	126- Bonai	Hemanta Prasad Mohapatra (Independent)
1974	141- Bonai	Benudhar Nayak (Congress)
1977	141- Bonai	Hemanta Kumar Singh Dandapat (Janata Party)
1980	141- Bonai	Basanta Kumar Singh Dandapat (Congress)
1985	141- Bonai	Basanta Kumar Singh Dandapat (Congress)
1990	141- Bonai	Jual Oram (Bharatiya Janata Party)
1995	141- Bonai	Jual Oram (Bharatiya Janata Party)
2000	141- Bonai	Dayanidhi Kisan (Bharatiya Janata Party)
2004	141- Bonai	Laxman Munda (CPM)
2009	14- Bonai (ST)	Bhimsen Choudhury (Bharatiya Janata Party)
2014	14- Bonai (ST)	Laxman Munda (CPM)

APPENDIX- III

Tour Diary of J. R. Ouesley on Bonai, 1840

Bonie was situated at a distance of two long and three ordinary marches from Keonjhar. The country was called by the name owing to its forest State in which it was, with some exception, supposed to have existed for many Centuries. A small portion of the country was under cultivation although the country was particularly well-adapted to it. The Raja Indra Deo, a Rajput, and an elderly man, had several sons; but all appeared to be in a degraded State, of ignorance and depravity. The Raja experienced great difficulty in keeping his people in order, he complained of neighbours the Rajas of Gangpur and Bamra being unable to check the inroads of plundering Thskurs under them who visited his villages carrying off cattle and committing murders constantly. The productions were the same as those of Keonjhar, chiefly rice. But much could be done if taken directly under British management. The forest produce were Hurra, Dhawra, Resin and Wild silk. The wood could be applied to every purpose of architectural requisites. Some of the Sukua trees were of enormous size and height, and besides these there were a great variety of other superb timber. Near Bonie on the Brahmani a river about 600 ft. wide (sandy bed of 400 ft included) was a small town with a Garh or Killa in which the Raja resided. The Killa was surrounded with a wet ditch and bamboo fence. At some distance from Joreikela on the dawk road 3 miles and 4 furlongs north, there were gold dust washing in the sands of Brahmani and the gold was reported to be excellent. Ouseley could procure a little at the market price of Rs. 15 per a tola weight (but the price varied from Rs.12 to Rs. 15). For want of leisure he could not trace up the gold to the place it was washed down from. Cheria Paut: Near the Kalapani dawk station about 12 miles east of Bonie were the Charia Paut table land from whence rushed down one of the most beautiful waterfalls that could be imagined. The rock was Parphyry and ribbon Jasper capable of being cut and polished and made into the most beautiful chimney pieces and tables. Great abundance of wild animals were started to exist on the Cheria Paut where also inhabited villages were. Tigers abounded, but from having so much prey in the jungle, few accidents occurred.

It could not be expected that the Raja who was unable to live respectably would go to any extent in procuring the improvement of the people. No reports of offences or crimes now made, but it was believed that many offences were overlooked for the payment of a sufficient bribe. The complaints against the post office people were as general as elsewhere.

APPENDIX- IV

Report on Lieutenant Colonel T. Dalton's Tour in Bonai and Gangpur during 1863-64

Bonai is a small hilly District lying very snugly isolated from all civilisation, between Sarundah the wildest part of Singhbhoom and the Tributary Mahals of Keonjhar, Bamra and Gangpur. It is 58 miles in greatest length from east to west and 37 miles in greatest breadth from north to south, with an area of 1, 297 square miles. It is for the most part a mass of uninhabited hills, only 12th of the whole being under cultivation, but about its centre, on both banks of the Brahamani River, which bisects it, there is a beautiful valley containing sites of upwards of twenty good, and for the most part coterminous villages, the houses well sheltered by very ancient mango and tamarind trees, with a due proportion of graceful palms. The tal and date appear to grow very luxuriantly in the valley, and sugarcane thrives there. Many of the villages lie close to the river and their luxuriant groves meet and form long undulating lines of high and wellwooded bank. On all sides, at the distance of a few miles are hills, some nearly three thousand feet above the level of the valley, and thus a very pleasing and varied landscape is disclosed at every turn of the broad and rapid rock broken stream.

The Brahmini river in its progress from Gangpore has forced its way through the barrier of hills, separating the two Districts, and enters the valley, I am describing after a course of eight miles through a beautiful glen, in a succession of rapids and loughs, the latter swarming with alligators. The shortest route from Gangpur to Bonai is by a rugged path through this pass; but is only practicable in the dry weather.

Bonaigarh, where the Rajah resides, is in the valley, occupying a bend of the river in latitude 28^o 49'N. and longitude 85^o E being 508 feet above the sea level. It has the river on three sides, and is surrounded by a mud wall and moat, within which are about 150 houses, including those of the chief, his court –house, and jail; the village altogether, inside and outside the guruh, contains about 300 houses, but nothing that can be called a bazaar. The inhabitants are the Brahmins and other retainers of the Rajah, his own family, including most of the collateral branches, legitimate and illegitimate; people practising trades workers in brass and pewter, potters, weavers, smiths; and people of low caste, Gonds, Pahans, Ghassees and Domes. Ooriah is the language spoken, and the costume and customs followed are those of the Odisha provinces. This includes a lavish use of saffron in their ablutions, hair neatly dressed with silver ornaments, and a general tidy appearance. They have good features and are rather fair complexioned. The young girls, till they attain the age of puberty, are very scantily dressed. The only garment usually worn by them is a "Kopin" a scarf, round the loins and

between the legs. This is national and classical, as we find from the images of the oldest temples, that it was the favourite costume of the Hindu goddesses, who thus enjoyed the full play of their limbs. The young people of both sexes are fond of adorning themselves with wreaths of bright yellow flowers.

There are 217 inhabited villages in Bonai, and from the number of houses returned by the topographical survey recently completed, the population may be estimated at fifteen thousand six hundred souls. About one half of the agricultural population is of the "Bhooya" caste or race. They are doubtless the earliest settlers, and it was from their hands that the ancestor of the present Rajpoot Rajah first obtained his insignia as chief. The Bamra and Gangpore Rajas are reported to have in the same manner derived their chieftainships from the Bhooya aborigine and when a succession to the Raj takes place in any of these Districts, the acknowledged head of the Bhooya clan goes through a ceremony of making over to the new chief the country and the people. The person who claims this prerogative in Bonai is titularly called "Sawunt". He holds, at the very trifling quit-rent of Rs.18 a year, twelve villages with their hamlets, and claims to be the hereditary Dewan of Bonai, but the chief neither employs nor acknowledges him as such. There are two other similar tenures with the title of "Dhunput" and "Mahapater" and subordinate to them are certain privileged heads of villages called Naiks. Under the Swunt Dhunput, or Mahapater, the subordinate officers of the Bhooya militia, all the able-bodied males of the tribe are bound at the requisition of the chief or of the Government, to turn out for service fully armed and equipped. There are no military tenures in the hands of people of any other caste. The Bhooyas thus have great power in the little State. Nor is it only in consequence of their being thus organised as a military body; I find they have also charge of the oldest temples and shrines, and discharge the duties of levities to the exclusion of Brahmins. Yet the temples are dedicated to Hindu gods. Whatever their origin may be, **the Bhooyas** are now completely Hinduized. They have no peculiar language or customs of their own. In Bonai and the southern part of Gangpore they speak Ooriah in the northern parts of Gangpore and Jushpore, Hindi. They are a dark-complexioned race, with rather high cheek-bones, but with nothing else in feature or form to distinguish them as of extraneous origin. According to their own traditions, they were once a great people in Eastern India and had a king of their own but were dispersed by invasion from the West. They are now found in all the Districts between Cuttack and Behar, but they are most numerous in this and the adjoining eStates, and here may be found the most civilised and respectable and the most primitive of the family. While in the low-lands, they dwell in villages, clothe themselves decently and otherwise follow the customs, adopt the manners, and, I may add the intriguing nature of the

more civilised Brahminical races. In the hills of Bonai they are found as naked, as simple as truthful and unsophisticated as the wildest of the Cole tribes. There are a great number of Bhooyas in the Singhbhoom District and it is said that they were driven out of the west portion of it, by the advance and spread of the Lurka Coles.

The Bhooyas call themselves 'children of the wind' or 'pawun buns', this would established their affinity to the Apes, as Hunooman is called 'pawun-ka-poot', the son of the wind.

The Bonai hills shelter some thousands of the race commonly called Coles, who all represent themselves as having at some period emigrated from Singhbhoom or Chota Nagpore. They have not benefited by the change. Their brethren on the Chota-Nagpore, plateau and in the plains of Singhbhoom are better off and better looking. The emigrants must be the most un-improvable of the race, who, finding that the old country is becoming too civilised for them, fly from the clearances they have made, hide themselves in the hill forests, and elapse into the condition of savages.

Amongst the races of Bonai yet to be noticed are the Kolitas, a very enterprising and respectable class of cultivators that are found in these regions, Sambalpore and strange to say Assam.

A very large proportion of the purely Hindu part of the Assamese population are **Kolitas**, and in accounting the different races that are found in the province, the antecedents of the Kolitas have always been a difficulty. They have more of the peculiarcities of the Indo-Chinese stock. They are considered, in Assam, as of very pure caste, next in dignity to Kaists, and are on this account much in request amongst the higher classes as house servants. Another difficulty in Assam was to account for what was called the Bhooya dynasty, of which traces are found all through the valley, and it is recorded in their history, that the north bank of the Brahmapootra have Bishnath was known as the country of the Barra Bhooya, long subsequent to the subjugation of the Districts of the southern bank by the Ahoms. It appears to me, that there is a strong reason for supposing that the purely Hindu portion of the Assamese Sudra population was originally from this part of India. There is, in idiom especially, a strong resemblance between the Assamese and Ooriah languages, and though the Ooriah written character did not take root in Assam, this may be owing to all the priestly families having been introduced from Bengal.

The appearance of the Bonai Kalitas reminded me very much of the Assam Kolitas, and I may mention that Ram Chunder, the seventh Avatar, is the favourite object of workship with both.

Of the mineral and other resources of Bonai, I have not much to say, Iron is produced, but the hills are for the most part quite unexplored, and

their riches, if they possess any, unknown. The population with so much room for expansion, does not increase. They are 83 deserted village' sites, and what are now small hamlets appear to have been at one time large villages. The cause is not apparent, as the people of the more civilised class are well to do and content, and rent very low, and as in all tributary mahals, fixed. It is Rs. 2-8 for a hall of 17 khundeas. Nevertheless the chief tells me he is obliged to grant of manner all extraneous, indulgences to his ryots to induce them to remain.

Wild beasts are very numerous, and in their ravages lie one great difficulty that villages bordering on or in the jungles have to contend against the ryots complain not of loss of life but of the destruction of crops. They say they have to raise grain for the beasts of the forest as well as for their own families. On this account very little cotton is cultivated, though the soil is well adapted for it.

The store of Sal timber in Bonai is immense, but the isolated and almost inaccessible position of the forests will prevent their being utilised for years to come, except for the resin, to obtain which so many noble trees are girdled and killed. Together with the Sal, are found vast quantities of the Asan tree on which the tusser silk-worm feeds and a considerable quantity of the wild tusser is exported from Bonai, but it is not much cultivated as the mass of the population look upon it as an impure or unorthodox occupation and non but people of the lowest castes, the Domes, Ghasees, Phans and Gonds practice it. (The Gonds are out of their element in Bonai and are thus classed).

We meet with no Rajput or Khetree family except that of the chief. Nothing can be more absurd than the tradition handed down to account for this possession of power by one Khetree family over an alien population. The Nagbunsi family of Chota-Nagpore admit that they are sprung from child found by and brought up in a 'Moondah' family, and that this child was made chief of the whole Moondah race. It is I think highly probable that the chiefs of Bonai and Gangpore were originally Bhooyas who becoming leaders of their people and Rajahs, and allying themselves by marriages with other Rajahs were gradually admitted into the fraternity of Rajpoots or Khetrees. It may be said indeed of both of them, that the inter-marriage with families of better certified khetree descent has not yet obliterated their Bhooya lineaments, for they bear a very remarkable likeness to that race in feature.

GANGPORE

This is a very extensive estate lying between Chota-Nagpore, Jushpore, Oodeypore, Sumbulpore, Bamra, Bonai and Singhbhum. It is kidney-shaped. Its greatest length from east to West is about 97 miles, and in breadth from north to south it varies from 15 to 50 miles. The topographical

survey of the eState is not yet complete and its area cannot therefore be computed with accuracy, but I estimate it at double the size of Bonai or about 3, 000 square miles. Of this area not more thAn a tenth is under cultivation.

The Sunkha and Keol rivers from the plateau of Chota-Nagpore unite near Gurjun in Gangpore and form the Brahmini. The Eab, another river of some magnitude, flows through Gangpore South on its way to the Mahanuddee. The ordinary level of Gangpore is about 700 feet above the sea; the highest hill yet noted by the topographical surveyor is 2,240 not much above the general level of the Chota-Nagpore plateau. The descent, however, from the plateau to the ordinary level of Gangpore is gradual, and there is a tolerable road. As in Bonai, the majority of the population are Bhooya, and they were no doubt the first settlers. All the Zamindars under the Rajah are of that race, and hold their eStates as fiefs at low fixed rates and terms of service. Consequently the Rajah is under the necessity of adopting a conciliatory policy towards some of them at least. There are generally one or two in opposition, but fortunately for the lord Paramount the great vassals are too jealous of each other readily to combine. The largest eState is held by the vassal who bears the title of Mahapater. Its border on Singhbhoom extends to the Brahmini river and comprises 100 villages for which the Mahapater pays only Rs. 200. This part of Gangpore was at one time more densely populated than it is at present, but all the more peaceably disposed of the old inhabitants including it is said, several colonies of Brahamins, were slaughtered or driven out of the country by the Lurka Coles. To the south, another great vassal, under the title of Guhoutea, holds the Hamzeer eState, consisting of 84 villages, and an unlimited run of hill and forest. Gangadhar the Gurhoutea boasts that he can travel twenty four miles in a direct line over his own ground without seeing a human habitation, all through hill and forest, which united to enormous tracts of hill and forest of Raigurh and Sambalpore forms perhaps the most extensive uninhabited region in all-India. The third of these vassals has his eState on the North- west of Gangpore and holds the passes in to the country from Jushpore and Chhota-Nagporee. This eState is in advance of the passes, and looks as if it had been filched from Jushpore, to which from the geographical features it ought to belong.

The chief is of the "Seekur" family and claims connectionship with the Rajah of Pachete. His ancestor the first Rajah of Gangpore was, we are told, invited by the Bhooyas to take charge of their country; from which, it is said, they had just expelled a Rajpoot family called the "Kaiserbuns" but as I Stated above, I think it more probable that the ruling family are descended from the original Bhooya chiefs. The traditions, assigning to them a nobler birth, are founded on the supposition that the Rajpoots of Cshetryas were

the only class qualified to rule, that where there was no one of this class over a nation or a people, "the Guddee" was vacant, and a Cshetrya had only to step in and take it. The Cshetrya must have wandered about the knights-errant of old, in search of these vacant Guddee, as we do not find in the country any descendants of the followers whom they must have had, if they came in other fashion to oust the native chiefs and seize the country.

It was admitted to me that until these Tributary Mahals came under British rule, a human sacrifice was offered every third year before the shrine of Kali as Suadeeh, where the present Rajah resides. The same triennial offering was made in Bonai and Bamra, Bhooya priests officiating at all three shrines. This fact appears to me to be confirmatory of the theory that the Hindus derived from the aboriginal races the practice of the human sacrifices.

In the above named Districts, the practice of widows going 'Suttee' was also generally followed in the family of the chiefs and in Brahmin families, up to a recent date; many of the grandmothers of the present generation of and Brahmins having so distinguished themselves. One man was pointed out to me as having lost his mother by the rite of suttee. He would not say lost; he no doubt regards her as canonized by the act.

A rather romantic story of a suttee that occurred some fifty years ago in Gangpore is related.

A Brahmin took a dislike to a girl he had just married, and turned her out of door, a wedded maid. She took refuge with her parents, who were poor, and who soon after died, leaving her destitute; then she wandered from village to village subsisting on alms and leading a wretched widowed life. Her husband married a second time and sons and daughters were born to him and grew up about him, and in the fullness of years he died. His second wife had preceded him, so this corpse was placed alone on the funeral pile, and the torch was about to be applied to it, when a poor emaciated and meanly clad female stepped forward, and as the first, the faithful and only surviving wife of the deceased, claimed the right of suttee. Her request was complied with Bathed, anointed, clothed, and adorned with flowers like a bride, she ascended the pile and clinging to the corpse of the husband who had so cruelly discarded her, and for the first time in her life pressing her lips to his, his flames arose and their ashes were mingled together.

There is no doubt still a strong sentiment in favour of suttee in the Tributary Mahals, and States under native government. Its prohibition has not been long enforced in the eastern parts of Rewa. Not long ago, in that territory, on the death of a Brahmin, his widow, notwithstanding the probation, was so vehement in her desire to join her husband on the pyre

that her relatives as the only method of restraining her, locked her up. When the ceremony was over they proceeded to release her, but found that her spirit too had fled. She had attained her object, as my informant declared, by a special interposition of providence in her behalf.

Proceeding north- west from Nugra and the banks of the Brahmini river, you enter the Nuagurh division of Gangpore and come to **Laingurh** near the confluence of several streams, which was once the capital and promises to be so again, as the present Raja is just now building there. It is very prettily situated, and the garh on a little hill in the centre of the valley has a commanding position, but I fear it is not a healthy site, from the number of enlarged spleens and cases of skin disease I observed amongst the people. There are many fine old village sites in Nuagurh, now occupied by impoverished squatters, mostly Oraons from Chota –Nagporee.

The old inhabitants have died off or removed to more civilised and securer regions further south. The shabby huts of the squatters huddled together under the shade of the grand old trees, the monuments of the more civilised race that preceded them, look as much out of place as mud cabins in a street of palaces. The Rajah and other Zamindars give these new settlers, when they first come, three years of absolute immunity from demands of every kind. In the fourth year they are called on to pay a light assessment. It is difficult to describe on what principle it is imposed, but in old settled villages of Oraons it does not amount, including rent and contribution, to more than Rs. 1-8 per house or family. The soil in this part of Gangpore appears very fertile, and there is still available much of the slightly swampy rich looking land that gives the best crops of rice. I find "Sirosha" now in flower growing in great luxurians. It is sold here at one mound for the rupee.

The Coles are evidently a good pioneering race, fond of new clearings and the luxuriant and easily raised crops of the virgin soil, and have constitutions that thrive on malaria ; so it is perhaps in the best interest of humanity and cause of civilisation that they be kept moving by continued Aryan population. Ever armed with bow, arrows and pole-axe, they are prepared to do battle with the beasts of the forest, holding even the king of the forest, the "Bun Rajah ", that is the tiger, in little fear. Mixed up with them are members of the Kherria tribe, who are as yet a mystery to me, and I will say nothing more about them till I learn more. I am assured that they have no affinity with either Moondahs or Oraons, i.e. with those who are generally called Coles.

Borgaon, near the Mahabeer hill on the borders of Bamra, is the largest village Gangpore possesses on this side. It contains 160 houses -20 of Brahmans, 20 of Telis oil pressers, 22 of various Hindu Ooriah castes, and the remainder Oraons and Kherriaahs. The two latter coming in contact with Brahmans, have at once succumbed and become their farm labourers. It

appears to make little difference in the condition of Oraon emigrants, whether they are farm servants or farmers on their own account; they have the same wretched huts, scanty apparel, and generally uncared-for appearance, as if they had in despair given up all ideas of rendering themselves attractive; but the wonder is that they remain in this dependent position, when they can get land on such easy terms and become farmers themselves.

The village pays direct to the Rajah a rent of Rs. 34 magun or contribution Rs. 34 land 64 maunds of rice. The price of rice is from one maund to two maunds for the rupee. On births, deaths and marriages in the Rajah's family, the villagers are called on for additional contributions, and when that family, as it is just now, is a large one, the extra charge comes to from Rs. 30 to 40 a year. The total demand is therefore about Rs.1.60 a year, and from the extent of land under cultivation, I do not think this would amount to more than three annas a beegah on the cultivated area. It is evidently a very old village site, surrounded by extensive groves of mangoes, and with several tanks of very insalubrious water over grown with water lilies. Hills are seen on all sides, but the most remarkable feature in the land-scape is the great Mahabeer hill ; a mass of rock tilted up, and shewing towards Bergaon, an uneven wall of disrupted ends, forming a cliff of fantastic outline, nearly 2, 000 feet high.

The tutelary deity of this hill is favourite object of worship with the Bhooyas, and is more or less revered by all the country. The top of the hill or rock being difficult of access, Mahabeer has studied the convenience of his votaries, and entered an appearance down below in the form of a stone, in a sacred grove or 'Surna' at the foot of the hill. The idea of a 'Surna' is pretty and poetical. It is or ought to be a fragment of the primitive forest left when the first clearance was made, as a refuge for the sylvan deities whom the clearing might have disturbed. The best villages and most thriving portion of the population in Gangpore are found on both banks of the Eeb river, as we approach the boundaries of Sumbulpore. Here the very industrious and respectable looking caste called Agureahs are first met with. They are found in Gangpore, Sumbulpore, Raegurh, Raipore and Ruttenpore. They number about 5000 in the three first places named. According to their tradition, they are called Agureahs from having, ages ago, come from Agra.

They were a proud Cshettrya or Khettree family a stiff-necked generation, and refusing, when making an obeisance, to bow their heads, the Raja lowered some of them summarily by cutting them off. They therefore left Agra and wandered south through Central India till they came to Sumbulpore and eventually settled in these regions. Acquiring lands, and determining to devote themselves entirely to the tilling of the soil, they divested themselves of their "paitas" making them over to the Brahamins, and no longer styling themselves or being styled Khettrees they became known as Aguriahs.

They bury their dead, and for this departure, from the usual custom of Hindus, they can assign no specific cause, but that they gave up the practice of incremation when they resigned their pretensions to be esteemed Khettrees. They nevertheless now profess to be vishnoovis divided in to two denominations, "Ramanudyas" and 'Kubeer Punthees'. The Vishnoovi doctrines they have probably taken up, since their migration to tracts bordering on Odisha and approximating the great fane of Juggernath. They say they gave up the worship of Kali when they resigned their 'Paitas' and took to the plough. It is probable that they were Boodhists, obliged to leave the Gangetic provinces for refusing to conform to Brahminism.

Their physique decidedly supports the tradition of their Khettree extraction; they are distinguished amongst the dark, coarse-featured aborigines of this country, as a tall, fair, well-made and handsome race, resembling the Rajpoots in everything but swagger. That went with the 'Paitas' as a farewell offering to Kali. The women, who are not very jealously secluded, have good features and a neat and cleanly appearance.

The latter are subjected to no field labour, their sole business being to look after the domestic arrangements, to gin cotton and to spin. They do not weave. Their spun thread is made over to the weavers, who are paid in kind for their labour. Their villages, laid out in streets, are comparatively well kept, and their own houses in these villages substantial, clean, and comfortable. Munguspore, near the Sumbulpore boundary is, I think, the largest. It contains 200 houses, those of the Aguriahs occupying the centre of the village surrounded by huts of Coles and others of the primitive races, whose services they have secured as their farm labourers, and who are not allowed to hold lands, but repaid for their labour at the rate of three seers of dhan per diem, and a modicum of clothing doled out annually.

The soil in this part of Gangpore is exceedingly rich, producing magnificent crops of sirosha, sugar-cane and tobacco, besides the staple rice. The plants of the country tobacco grown by the Aguriahs are the finest I ever saw, and they grow more cotton than they require for their own use, though they do not stint themselves in raiment. I am certain the soil and climate is well suited for the finer kinds of cotton.

Proceeding north up the Eeb from this, the Arabia Felix of Gangpore, we came again upon untidy Bhooya villages, and their patches of cultivation, separated by miles of the monotonous Sal forests, and there is no change in the features of the country or the population, till we come to the eState of Bhugwan Manjee, which as above mentioned, does not appear as if it belonged to Gangpore, as it is separated by a range of hills and approached by a very narrow and difficult pass. We are still amongst Bhooyas, but here they speak Hindi instead of Ooriah, and the peculiarities of Ooriah costume and decoration are rarely met with.

APPENDIX- V

Copy of Sanad granted to the Chief of Gangpur State in 1899.

Whereas the status and position with reference to the British Government of the Tributary Mahal of Gangpur in Chota-Nagpore has hitherto been undefined, and doubts have from time to time arisen with regard thereto; His Excellency the Viceroy and Governor-General in Council is pleased to grant to you, Raja Raghunath Sikhar Deo, the following sanad, with a view to assuring you that the British Government will continue, as long as you remain loyal to the crown and abide by the conditions of the sanad, and of your other engagements with the British Government, to maintain you in the position and privileges which you have heretofore enjoyed or which are now conferred upon you :-

SANAD

- (i) You, Raja Raghunath Sikhar Deo, son of Lal Pitambar Sikhar Deo, are hereby formally recognised as the Feudatory Chief of the Gangpore State and you are permitted, as hereto fore, to generally administer the territory of the said Gangpor State, subject to the conditions hereinafter prescribed. In like manner your heirs and successors shall become entitled to your privileges and liable to your obligations; provided that, no succession shall be valid until it has been recognised by His Excellency the Viceroy and Governor-General in Council.
- (ii) You shall, during the next twenty years, pay a tribute or peshkash of rupees one thousand two hundred and fifty, and this amount may be revised thereafter, if His Excellency the Viceroy and Governor-General in Council should so direct. Your successors shall pay nazarana to the British Government on succession in accordance with the general rules on that subject for the time being in force.
- (iii) You shall conform in all matters, concerning the preservation of law and order and the administration of justice generally, within the limits of your State, to the instructions issued from time to time for your guidance by His Honour the Lieutenant Governor of Bengal. You will appoint such officers, and pay them such emoluments as, on full consideration of the circumstances and of such representations as you may wish to make, may, from time to time, appear necessary to His Honour the Lieutenant- Governor of Bengal, for the proper hearing of cases and administration of justice in your State. It will also be competent to nominate for appointment by His Honour as Honorary Magistrate from time to time.

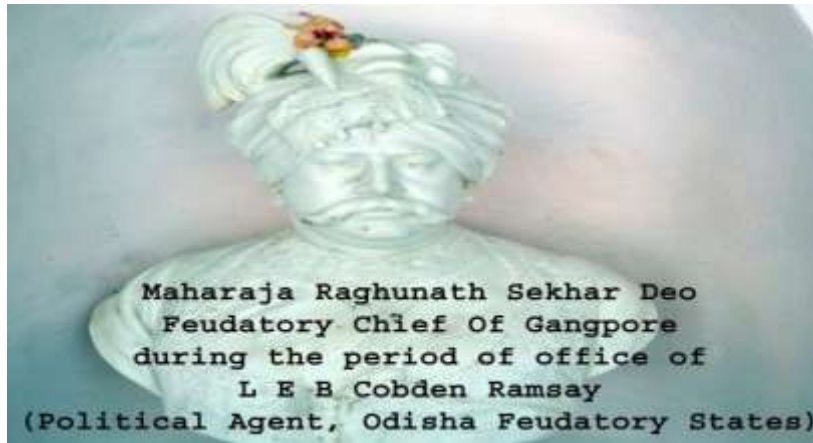
- (iv) You shall deliver up any offender from British or other territory who may take refuge in your State. You shall aid British officers who may pursue criminals into your territory, and, in the event of offenders from your own state taking refuge in British or other territory, you shall make a representation on the matter to the authorities concerned.
- (v) You shall administer justice fairly and impartially to all alike.
- (vi) You shall recognise and maintain the rights of all your people and you shall on no account oppress them or suffer them to be in any way oppressed.
- (vii) You shall consult the Commissioner of Chota Nagpore in all important matters of administration and comply with his wishes. The settlement and collection of the land revenue, the imposition of taxes, the administration of justice, arrangements connected with excise, salt and opium, the concession of mining, forest and other rights disputes arising out of any such concession, and disputes in which other States are concerned, shall be regarded as specially important matters, and in respect to them you shall at all times conform to such advice as the Commissioner may give you.
- (viii) The right to catch elephants in your State is granted to you as a personal concession and as a matter of favour, but this concession is liable to withdrawal whenever it may seem desirable either on account of abuse or for other reasons, and it will not necessarily be granted to your successor.
- (ix) All questions as to boundaries between your State and British or other territory will be dealt with by the Commissioner of Chotanagpore or such other officer as the Government of India or His Honour the Lieutenant-Governor of Bengal may appoint, other generally, or specially in that behalf, with two assessors, one of whom is to be nominated by yourself, unless in any such case you should prefer that the question should be decided by such Commissioner or other officer alone in which case the question shall be referred for his decision accordingly.

Calcutta, the 8th March 1899.

CURZON OF KEDLESTON,
Viceroy and Governor-General of India



Rock Art Shelter of Ushakupa (Painting-2)



: Left- Maharaj Raghunath Sekhar Deo, Right- Rock Art Shelter of Baurikupa- Engravings



Chapter-III

PEOPLE AND DEMOGRAPHY

Size and Growth Rate of Population, Birth & Death Rates

Sundargarh District has a total population of 20,93,437 as per the Census 2011. In population it is the 6th largest District, following Ganjam, Cuttack, Mayurbhanj, Balasore and Khurda Districts and by area the 2nd largest after Mayurbhanj District. The District of Sundargarh is constituted by thirteen towns including five Census Towns and 1764 villages spread over 17 Panchayat Samities, coming under three Sub-Divisions, 18 Tahasil, one Municipal Corporation, three Municipalities and 1764 villages. Some of the important facts and figures on the population of Sundargarh District compared between the year 2001 and 2011 as per Census figures is given as follows.

**Table 16: Facts and Figures on the Population of Sundargarh District,
2001 and 2011 Census**

Description	2011	2001
Actual Population (persons)	20,93,437	18,30,673
Male (persons)	10,61,147	9,35,601
Female (persons)	10,32,290	8,95,072
Population Growth (decennial)	14.35per cent	16.34per cent
Area (sq. km)	9,712	9,712
Density/km ²	216	188
Proportion to Odisha Population	4.99 per cent	4.97 per cent
Sex Ratio (Per 1000)	973	957
Child Sex Ratio (0-6 Age)	946	970
Average Literacy (per cent)	73.34	64.86
Male Literacy (per cent)	81.01	75.34
Female Literacy (per cent)	65.48	53.88
Total Child Population (0-6 Age) (persons)	2,63,160	2,64,988
	(12.57per cent)	(14.47per cent)
Male Population (0-6 Age) (persons)	1,35,204	1,34,537
Female Population (0-6 Age) (persons)	127,956	130,451
Literates (persons)	1,342,322	1,015,485
	(64.12per cent)	(55.47per cent)
Male Literates (persons)	7,50,147	6,03,510
	(70.69per cent)	(64.50per cent)
Female Literates (persons)	5,92,175	4,11,975
	(57.36per cent)	(46.02per cent)
Child Proportion (0-6 Age) (per cent)	12.57	14.47
Boys Proportion (0-6 Age) (per cent)	12.74	14.38
Girls Proportion (0-6 Age) (per cent)	12.40	14.57

Among the three Sub-Divisions, Panposh is the most populous. This Sub-Division was constituted in the year 1948. It has envisaged the highest growth of population among all the Sub-Divisions of the District within the period ranging from 1951 to till date. The reasons for such acceleration of the growth rate are elaborated in table-17. In 1951 as per the Census records, its population was only 1,61,451 persons. In 2011, the population reached to 9,75,969. There has been 504.49 per cent increase in the population within a span of sixty years. The era of industrialisation started from Panposh Sub-Division in the year 1952, when the Integrated Steel Plant at Rourkela came in the pipeline. Thereafter, industrial activities were intensified after 1952, the year of declaration for establishment of an integrated steel plant at Rourkela. The steel plant became operational in the year 1959.

Population growth in Sundargarh Sub-Division has also been high due to the industrial developments which have taken place in and around Rajgangpur town as well as general increase in population in the rural areas of the Sub-Division. Bonai Sub-Division has been witnessing slow growth of population. Some vital aspects of the population of the District as per the findings of the Census 2011 figures is mentioned in table no. 16. Distribution of population in different Police Stations of the District as in the year 2001 and 2011 is mentioned in **Appendix-VI (Police Station-wise Distribution of Population)**.

Table 17: Important Events with Dates

Year	Important Events
1918	Railway Line through present day Rourkela established on Goikera–Jharsuguda Station under the then BNR Railways and now under Chakradharpur Division of South Eastern Railways.
1926	Rourkela Railway Station became a railway junction after the opening of Rourkela – Biramitrapur Railway line.
1931	Old Rourkela station area termed as urban area by the Census.
1945	Establishment of Panposh as Sub-Division Head Quarter under the then Nagara State.
1948	Sundargarh District craved out of Sambalpur District on 1st January.
1952	Declaration of Establishment of Public Sector Integrated Steel Plant at Rourkela by Central Government after signing of MOU with Krups and Demag Company of West German, for the establishment of Integrated Steel Plant at Rourkela (Later becomes SAIL , RSP).
1954	Hindustan Steel Limited (HSL) formed for managing Rourkela Steel Plant
1955	Land Acquisition for Rourkela Steel Plant and Steel Township started
1955	Establishment of Notified Area Council (NAC) for Rourkela
1957	Construction work for Rourkela Steel Plant started.

1958	First Coke oven battery lighted at Rourkela
1959	First Blast Furnace inaugurated by the then President of India, Dr. Rajendra Prasad at Rourkela Steel Plant on 3rd February 1959. With this production process, Rourkela Steel Plant started operating officially. Blooming and Slabbing Mill commissioned at Rourkela.
1960	Plate Mill and ERW Pipe Plant Commissioned at Rourkela Steel Plant
1961	<ol style="list-style-type: none"> 1. Hot Strip Mill Commissioned at Rourkela Steel Plant. 2. Establishment of Regional Engineering College (REC), currently known as NIT) at Rourkela, the second Engineering College of Odisha.
1962	<ol style="list-style-type: none"> 1. Fertiliser Plant Commissioned at Rourkela 2. Special Police District for Rourkela established with a Superintendent of Police as its head.
1963	Establishment of Notified Area Council (Steel Township) for Rourkela Steel Plant Township
1967	Expansion of Blast Furnace IV and commissioning
1967	Rourkela became separate Vidhan Sabha (Odisha Legislative Assembly) Constituency.
1976	Establishment of Rourkela Regional Improvement Trust (RRIT).
1982	Ispat Doordarshan Kendra setup by Rourkela Steel Plant.
1995	<ol style="list-style-type: none"> 1. Declaration of Rourkela Steel Township area as Industrial Township and abolition of NAC (ST). 2. Formation of Rourkela Development Authority (RDA) by abolition of Rourkela Regional Improvement Trust. 3. F.M. Radio Station at Rourkela inaugurated as 9th Radio Station and 3rd FM Station of Odisha.

Growth Rate of Population: The history of population growth in the District is quite phenomenal. The population of the areas now comprising Sundargarh District was 2,77,173 in the year 1901. There was a significant growth of 30.7 per cent during the decade 1901-11. The growth rate suddenly fell to 4.2 per cent during the next decade 1911-12 due to epidemic diseases (influenza, cholera and small-pox) which burst over the District in 1918-19 and drought havoc on the population. The decade from 1911-21 is known as the decade of great divide in the population history of India. Up to 1951, the growth rate was quite low. From 1951 onwards up to 1971, the growth took place at a much accelerated rate. In the subsequent decades, the growth rate has been falling continuously. But the size of the population has become quite big. A small positive change in the growth rate is also quite significant. The size of the population of the District in 2011 is 20,93,437, registering a growth rate of 655 per cent in 100 years.

The growth rate of population in the District is usually higher than the average growth rate of population of the State. Comparatively greater increase in population during 1951-61 may be attributed to the industrial advancement of the District. During this decade a cement factory and allied industries were set up at Rajgangpur and a modern steel plant started

production at Rourkela. The construction of a fertiliser plant at Rourkela, and the development of mining industry in Biramitrapur and other areas of the District were the additional causes of prosperity. Between 1951 and 1961 many educational institutions came up, the first to be established was a college at Sundargarh, which is the present day Sundargarh Government College. Regional Engineering College (REC) came later and now it has become National Institute of Technology (NIT). Government Science College was established at Rourkela for spread of education in the District. Besides, large scale industrialisation has provided incentive for participation by the people from all over India. The decade 1961-71 witnessed substantial rise in the population by 35.8 per cent due to agricultural prosperity combined with large scale industrialisation and the relative absence of natural calamities. In the last decade, i.e. 2001-11, the growth rate of population became 14.35 per cent.

The decennial growth of population between 1901 and 2011 for the District is given in table-18.

Table 18: History of Population Growth in Sundargarh District

Year	Persons	Males	Females	Decennial Variation	Percentage decade Variation	Population density/ Km ²
1901	2,77,173	1,41,493	1,35,680	--	--	-
1911	3,62,138	1,82,149	1,79,989	+84,965	+30.65	-
1921	3,77,449	1,88,344	1,89,105	+15,311	+4.23	-
1931	4,36,860	2,16,985	2,19,875	+59,411	+15.74	-
1941	4,90,708	2,43,296	2,47,412	+53,848	+12.33	-
1951	5,52,203	2,74,401	2,77,802	+61,495	+12.53	56
1961	7,58,617	3,96,214	3,62,403	+2,06,414	+37.38	78
1971	10,30,758	5,30,836	4,99,922	+2,72,141	+35.87	107
1981	13,37,871	6,92,749	6,45,122	+3,07,113	+29.79	138
1991	15,73,617	8,12,707	7,60,910	+2,35,746	+17.62	162
2001	18,30,673	9,35,601	8,95,072	+2,57,056	+16.34	188
2011	20,93,437	10,61,147	10,32,290	+2,62,764	+14.35	216

Birth rate and death rates are the components of population change. In the year 1961, the Crude Birth Rate (CBR) of the District was 27.7 and the Crude Death Rate (CDR) was 9.99. As per the Annual Health Survey Report, 2011-12, the Crude Birth Rate in the District is 17.9 and the Crude Death Rate is 7.2. Improved access to the modern health services has reduced the gap between the birth rate and the death rate. There is significant difference in the Crude Birth Rate between urban and rural areas. The Annual Health Survey Report, 2011-12 reveal that the CBR in rural areas in the District is 19.1 whereas in urban areas it is 15.6. Similarly, the CDR is 8.5 in rural areas and 4.5 in the urban areas. The natural growth rate in the District was thus 10.8. In rural areas the Natural Growth Rate is 10.6 and in urban area it is 11.1.

Rural & Urban Population Distribution:

As per the Census 2011 the percentage of rural population in the District is 66.33. In the year 1951, the figure was 97.21 percent. The percentage of population in rural areas has been declining and there has been increase in the percentage of urban population. Thus the rural and the urban gap is gradually narrowing.

The percentage of the population in the urban area was 2.79 percent only in the pre-industrial time of the District, i.e. in 1951. Rapid industrialisation and consequent demand for urbanisation attracted 23.25 per cent, 34.37 per cent population in the year 1971 and 2001 respectively. The urban population as per 2011 Census is 33.67 per cent of the total population. There has been continuous increase in the urban population due to urbanisation triggered by industrial growth which started after 1951. The phenomenal growth in urban population occurred around 1971. During the last decade, there has been marginal growth in the percentage of rural population over the urban population.

Table 19: Rural-Urban Population in Sundargarh District

Year	Per cent of Rural Population	Per cent of Urban Population
1951	97.21	2.79
1971	76.75	23.25
2001	65.63	34.37
2011	66.33	33.67

Rural Population: As per the 2011 Census, rural population of the District is concentrated in 1762 villages out of which 49 are uninhabited. Rural population in Sundargarh District is 13,55,340, i.e. 66.33 per cent of the total population of the District. The percentage of rural population in the State is 83.31 per cent.

As per 2011 Census, there are 752 small villages having population less than 500. These villages constitute 43.9 per cent of the total number of inhabited villages. There are 513 villages in the District where the population is less than 100 but more than equal to 500 persons. Such villages constitute 29.9 per cent of the total villages. There are 332 villages having population of more than or equal to 1000, but less than 2000 persons. They constitute 19.38 per cent of the inhabited villages. There are 113 villages having population between 2000 to 4999 persons, constitution 6.6 per cent of the inhabited villages. Big villages having population of 5000 to 9999 are only three in number. There is no village in the District having population more than 10000. Details of population size wise villages and the amenities available in each category are detailed in **Appendix-VII (Distribution of Villages according to Population Range and Amenities Available-2011)**.

Table 20: Rural Population, Comparison between Census 2011 and 1971

Village with No. of Population	No. of Villages		Percentage of No. of Villages in this Class to Total No. of Villages		Total Population		Percentage of Rural Population in this Class to Total Rural Population	
	2011	1971	2011	1971	2011	1971	2011	1971
Less than 200	274	439	18.47	27.08	29780	51509	2.20	6.51
200-499	478	642	27.08	39.61	161831	216309	11.94	27.34
500-999	513	379	29.06	22.38	368352	264976	27.17	33.5
1,000-1,999	332	131	18.81	8.08	453934	174861	33.49	22.10
2,000-4,999	113	29	6.40	1.79	324827	76249	23.97	9.64
5,000-9,999	3	1	0.18	0.06	17216	7169	1.27	0.91

The general trend of rural population from 1971 to 2011 is that there has been decrease in the villages having population less than 200 and 200 to 499. Similar trend is noticed in the percentage of population contained in these village sizes. The population sizes in the villages are increasing. Modern amenities like education, health facilities, drinking water, postal services, telephone, mobile network, transport services, banking services have become gradually more accessible to the people. 1628 villages, i.e. 95.04 per cent of the villages have education institutions, 1706 villages, i.e. 99.59 per cent of villages have access to safe drinking water, 1605 villages, i.e. 93.7 per cent villages have telecommunication facility and 1397, i.e. 81.55 per cent of the villages are electrified as in the year 2011. Most of the villages having G. P. roads and connected by Samiti road networks were included in the 'feeder route policy' of STA from 1998. Medical facility, post offices, and transport facility by all means, banking service, service of the Credit Co-operative Societies and pucca roads are available to 33.04 per cent, 26.15 per cent, 44.6 per cent, 0.18 per cent, 0.41 per cent and 62 per cent of the villages respectively.

Urban Population: Urban population as per 2011 Census in Sundargarh District is 7,38,097. In the year 1951 it was just 15,367. Over the last five decades there has been 210.37 per cent increase in the urban population. The spurt in the urban population was registered at a decennial rate of 783.45 per cent between 1951 and 1961. In 1952, the plan for establishment of the steel plant at Rourkela came up. The work of establishment of the factory started in the year 1957. In the year 1959, the first blast furnace of the Rourkela Steel Plant was inaugurated by Dr. Rajendra Prasad, the then President of India. In the mean time, the NAC at Rourkela was constituted. Large scale land acquisition for establishment of the Steel Plant at Rourkela took place and the Steel Plant worked as a growth pole of industrialisation and urbanisation in this part of the District. The following table shows the growth of urban population in the District since 1951.

Table 21: Urban Population in Sundargarh District

Year	Persons	Decade Variation	Percentage Decade Variation	Males	Females
1951	15,367	--	--	8,077	7,290
1961	1,35,760	+1,20,393	+783.45	83,287	52,473
1971	2,39,685	+1,03,925	+76.55	1,33,907	1,05,778
2001	5,45,338	-	-	2,88,917	2,56,421
2011	7,38,097	+1,92,759	+35.34	3,85,079	3,53,018

Though percentage of urban population in the District has witnessed significant rise from 1951 to 2011; the steady increase in the growth rate of urban population has been interrupted in the last decade, i.e. 2001 to 2011. In 1951, the urban population was just 2.79 per cent of the total population, whereas it steadily increased to 34.37 per cent in 2001. The Census statistics of 2011 finds that the percentage of urban population has reduced to 33.67 per cent.

The Census of India identified only five urban areas in the District in 1971 Census. As per 2011 Census, there are 16 urban areas identified in the District as per the norms of the Census. The urban population of the District numbering 7,38,097 persons according to the Census of 2011 is distributed in the towns as follows.

Table 22: Distribution of Urban Population in Sundargarh District

Sl. No.	Name of the Town	Status of Towns	Population	
			1971	2011
1	Rourkela Steel Town	Notified Area Council	1,25,426	2,10,317
2	Rourkela Civil Town	-do-	47,076	2,72,721
3	Biramitrapur	Municipality	28,063	33,442
4	Rajgangpur	-do-	21,876	51,362
5	Sundargarh	-do-	17,244	45,036
6	Banei	Census Town		7,080
7	Hatibabndh	Census Town		8,938
8	IDL Factory and other colony	Out Growth		6,093
9	Jalda	Census Town		15,789
10	Koida	-do-		6,763
11	Kuanmunda	-do-		9,043
12	Kulunga Industrial EState	Out Growth		47,319
13	Lathikata	Census Town		7,405
14	OCL Industrial Town	-do-		2,397
15	Panposh	Census Town		9,923
16	Tensa	Census Town		4,469
		TOTAL	2,39,685	7,38,097

Age, Sex and Occupational Composition

Age-Sex composition: As per the Census-2011 figures, 263160 (12.57 per cent) of the population are children below 6 years. The percentage of children population below six years for the State of Odisha is 12.56 per cent. The population in the working age-group, i.e. 16 to 64 years is in constant rise throughout. The increasing trend of the working population to the total population has positive bearing on the economy of the District.

Table 23: Age composition of Population of Sundargarh District 1961 to 2001

Year	per cent of Population in the Age Groups		
	0-15 years	16-64 years	65 and above
1971	43.1	54.22	2.67
1981	40.04	57.18	2.77
1991	35.4	58.6	5.5
2001	33.38	59.67	6.77

Sex-ratio: Sex-ratio in the District, as per 2011 Census is 973 against the State figure of 979. Sex ratio in rural areas is 1005, whereas in urban areas it is 917. Sex-ratio among the SCs and STs in the District as per 2011 Census is given in the following table. Following the trend of sex ratio in rural areas in the State, the sex ratio in the rural areas of the District is always higher than that of the urban areas. Remarkable low sex-ratio in the urban areas is noticed in the year 1961, after which it is in constant rise.

Table 24: Sex-ratio of the State and District, 1901-2011

Census Year	State (Odisha)			District (Sundargarh)		
	Total	Rural	Urban	Total	Rural	Urban
1901	1,037	1,039	967	959	959	-
1911	1,056	1,058	947	988	988	-
1921	1,086	1,089	963	1,004	1,004	-
1931	1,067	1,071	924	1,013	1,013	-
1941	1,053	1,058	914	1,017	1,017	-
1951	1,022	1,029	881	1,012	1,016	903
1961	1,001	1,015	807	915	990	630
1971	988	1,002	845	942	993	790
1981	981	999	859	931	988	814
1991	971	988	866	936	987	842
2001	972	987	895	957	994	889
2011	979	989	932	973	1,005	917

Source: Census tables, Census of India- 2011

Sex-ratio among the different sections of the society is different. The sex ratio among the scheduled castes and scheduled tribes is more comfortable than the overall sex ratio figures both in rural and urban areas. This indicates a condition of uncomfortable sex-ratio among the other sections of population than the SCs and STs in the District. Sex ratio among SC and ST in urban areas vary from town to town. As per 2011 Census, the average sex-ratio among SCs in urban areas was 959 which is lower than the District average. In the same Census, the sex-ratio for the STs in the urban areas was 1009.

Table 25: Sex-Ratio among SCs and STs, 2011 Census

Overall Sex Ratio			Sex-ratio among Scheduled Castes			Sex-ratio among Scheduled Tribes		
Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1005	917	973	1006	959	987	1018	1009	1016

Source: District Statistical Handbook-2011, Sundargarh

Occupational composition: As per 2011 Census, main and marginal workers together are 8,73,227 persons, i.e. 41.47 per cent of the population. There are 12,20,210 non-workers, who constitute 58.29 per cent of the population of the District. Among the main workers, 80.48 per cent are men and 19.52 per cent are women. The men and women main workers respectively constitute 40.59 and 10.11 per cent of the total population of the District. There are 3, 38,115 marginal workers, who constitute 16.15 per cent of the total population of the District. Among the marginal workers, 45.54 per cent are men and 54.46 per cent are women. Among the non-workers, 39.04 per cent are men and 60.96 per cent are women. Out of the main and marginal workers, 1,84,273 (21.1 per cent) are cultivators, 2,53,327 (29.10 per cent) are agricultural labourers, 26,970 (3.08 per cent) are workers in household industries and 4,80,657 (55.04 per cent) are other workers.

Table 26: Workers and Non-Workers of Sundargarh District (Census-2011)

Category		Odisha		Sundargarh District	
		Total	per cent	Total	per cent
Total Workers (Main & Marginal)	Persons	1,75,41,589	41.79	8,73,227	41.71
	Males	1,19,02,655	56.11	5,84,687	55.1
	Females	56,38,934	27.16	2,88,540	27.95
(i) Main Workers	Persons	1,07,07,543	25.51	5,35,112	25.56
	Males	87,94,413	41.46	4,30,698	40.59
	Females	19,13,130	9.21	1,04,414	10.11
(ii) Marginal Workers	Persons	68,34,046	16.28	3,38,115	16.15
	Males	31,08,242	14.65	1,53,989	14.51
	Females	37,25,804	17.95	1,84,126	17.84
Non Workers	Persons	2,44,32,629	58.21	12,20,210	58.29
	Males	93,09,481	43.89	4,76,460	44.9

Category	Odisha		Sundargarh District		
	Total	per cent	Total	per cent	
	Females	1,51,23,148	72.84	7,43,750	72.05
Category of Workers (Main & Marginal)					
(i) Cultivators	Persons	41,03,989	23.4	1,84,273	21.1
	Males	33,75,350	28.36	1,41,620	24.22
(ii) Agricultural Labourers	Females	7,28,639	12.92	42,653	14.78
	Persons	67,39,993	38.42	2,53,327	29.01
(iii) Workers in household industry	Males	34,81,836	29.25	1,05,394	18.03
	Females	32,58,157	57.78	1,47,933	51.27
(iv) Other Workers	Persons	7,83,080	4.46	26,970	3.09
	Males	4,39,215	3.69	18,007	3.08
	Females	3,43,865	6.1	8,963	3.11
	Persons	59,14,527	33.72	4,08,657	46.8
	Males	46,06,254	38.7	3,19,666	54.67
	Females	13,08	23.2	88,991	30.84

Block-wise composition of the working population can be referred from the table at

Appendix- VIII (Distribution of workers by sex in four categories of economic activities in Block, 2011).

Languages

The District has wide range of languages. Being located in the western part of the State, the principal language is Kosali-Sambalpuri. On the other hand due to concentration of people from almost all parts of the State in large numbers, Odia language is also spoken among such population. Due to the impact of the tribal languages on the Kosali-Sambalpuri language, there has been a distinct Sundargarh dialect. A comparison among these three language/dialects is given as follows.

Table 27: Comparison among the Languages/Dialects

Sambalpuri-Kosali	Sundargarh dialect	Odia
Niko	Bane	Bhala
Apne Narduchhe	Tapne Batkuchhe	Se dauduchhi
Kanduchhe	Roo-Chhe	Kanduchhi
Kenta	Kentu	Kemiti
Khabad	Labad	Phopad
Tukli	Daki	Toki
Verbal forms		
Nai Jain	Ni Jaisin	Jibinahin
Nain Karen	Ni Karsin	Karibinahi
Karisarichhen	Karisarichhena	Karisailini

Karisarichhena (NA) is always used after the finite verb as an emphasis. But these differences are gradually evaporating due to quick development of communications and mobilisation of population for the development of industries in this District. Standardization of primary

education in Odia language is also responsible to a great extent in gradually removing these variations of the language.

In total 36 languages including tribal languages are spoken in the District as in the year 1961. Next to Odia other important languages are Mundari, Kurukh / Oraon, Hindi, Kharia, Kisan, Laria, Bengali, Urdu, Ho, Kol, Telugu, Kui, Bhumij, Malayalam, Punjabi and Tamil. The number of speakers of other languages like Bengali, Telugu, Malayalam, Punjabi and Tamil is insignificant. Among the non-tribal languages the popularity of Hindi is only next to Odia. In terms of number of speakers tribal languages, namely, Mundari and Kurukh / Oraon occupy the second and third position respectively.

Further, it is interesting to analyse the pockets of concentration of language groups which bear testimony to the peculiar history of the region. Those who have migrated in search of cultivable land, employment, trade and commerce have introduced their mother-tongues in the District. Thus Bengali, Urdu, Telugu, Malayalam, Gujrati and Laria mother-tongues are found in this District. Laria, Bengali, Kharia, Kisan and Turi showed concentration in the Sadar Sub-Division while Kora, Urdu, Oraon, Mundari, Binjhia and Gujrati in the Panposh Sub-Division. The Bonai Sub-Division showed concentration of tribal languages like Ho, Kol, Kui, Bhumij and non-tribal languages like Telugu and Malayalam, Odia spoken through the length and breadth of the District, but the Odia spoken in the District of Sundargarh is slightly different from the Odia spoken in the District of Sambalpur, Bolangir and Kalahandi.

Multi-lingual Schooling: Multi-lingual schools have come up in the District in the line with Sarva Sikhya Abhiyan and students are imparted in Multi-Lingual Education (MLE) with tribal languages of the District. The languages are Khariya, Paudi-Bhuiyan, Munda and Oraon. The details of the enrolment are discussed in the Chapter-XI, Education and Culture. Munda is taught in 42 schools, Oraon in 50 Schools and Paudi-Bhuiyan in seven schools. Concentration of Munda speaking schools is in Kuanrmunda, Nuagaon, Badgaon, Rajgangpur, Bonei and Koida Block. Paudi-Bhuiyan is concentrated in Lahunipada Block. Oraon population is found mainly in Subdega, Balisankara, Kutra, Rajgangpur and Bisra Blocks and Oraon schools are located in Subdega, Balisankara, Kutura, Rajgangpur, Lathikata and Bisra Blocks.

Script: Odia is the predominant script written by Odia speaking populations. Odia is the medium of instruction in the schools run by the State Government. The tribal languages do not have any script of their own and are mostly used as spoken languages. When needed to write they usually prefer Odia script while a few use Devanagari script. People speaking other modern Indian languages use their respective scripts.

Literacy and Work Force Participation Rate:

The District has a high concentration of population belonging to the categories of Scheduled Tribes and Scheduled Castes. Owing to the industrial advancement and consequential urbanisation, populations from outside the region have been added to the District. Industrial and urban scenario has quite strong bearing on the State of literacy in the District, despite dominance of tribal population. The literacy rates in the District in the year 1991, 2011 and 2011 were 52.97 per cent, 64.86 per cent and 73.3 per cent respectively. The literacy rates in the State of Odisha during the corresponding period were 49.09 per cent, 63.08 per cent and 72.9 per cent respectively. Quantitatively, the overall literacy rate of the District is relatively at a healthy State as compared to that of the State average. But qualitatively, the literacy figures of the District are still uncomfortable. In the year 2011 female literacy in the District was 65.5 per cent only against male literacy of 81 per cent. The contrast between the literacy rate of men and women in rural and urban areas is still sharper. Literacy rate is 66.6 per cent in the rural areas whereas it is 85.3 per cent in the urban areas. Sharp contrast is seen in the literacy rate among male and female both in the urban and rural areas in the District. 66.6 per cent of the rural population are literates. 75.6 per cent of males and 57.7 per cent of females are literates in the rural areas. Total literacy rate in urban areas, male literacy rate and female literacy rate are 85.3 per cent, 90.2 per cent and 80.0 per cent respectively. A comparative analysis of literacy in the Sundargarh District vis-a-vis the State of Odisha reveals that the average literacy rate in Sundargarh is slightly higher than the average literacy rate of the State. But the quality of literacy in rural and urban areas of the District as compared to the rural and urban areas of the State is yet to improve.

Table 28: Comparison of Literacy Rate of Sundargarh District with the Literacy Rate of Odisha

	Literacy among all Classes (per cent)			Literacy in Rural Areas (per cent)			Literacy in Urban Areas (per cent)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
State of Odisha	81.6	64.0	72.9	79.6	60.7	70.2	90.7	80.4	85.7
Sundargarh dist.	81.0	65.5	73.3	75.6	57.7	66.6	90.2	80.0	85.3

Literacy among women in all spheres of the District is low. The status of literacy among SCs and STs in the District in rural areas, i.e. in the Block areas is given at **APPENDIX- IX: Number of scheduled castes and scheduled tribe literates and illiterates, literacy rate by sex in CD Blocks, 2011**. From the statistics, it is seen that literacy among women is generally low in the District. The gap in male and female literacy is wider in rural areas.

In 2010-11, there are 1921 primary schools with total pupil strength of 7496. Along with the general schooling system, the Zilla Sakhyarata Samiti takes initiatives to improve the condition of literacy in the District. Total

Literacy Campaign (TLC) was launched in 1990 and continued up to 1992. The number of illiterates in the target age group of 9 to 45 years were identified through a survey and enrolled in the literacy centres. The literacy centres were managed by Volunteer Educators. A slogan came up in the wake, "Each one, teach one". Later, the slogan was changed to "Each one, teach ten". Under this scheme, village libraries were established. In the next phase, the Adult Literacy Programme resurfaced in the name of Post Literacy Programme (PLC). The programme period was from 1993 to 1997 and population in the age group of 15 to 35 years was the target group, which included both the TLC pass outs as well as dropouts. The Village Library, in its new nomenclature as Jan Vikas Kendra (JVK) catered as both reading centre as well as library. From 2005 to 2007, the Adult Literacy Programme took the name of Continuing Education Programme (CEP). The CEP gave rise to Continuing Education Centres (CEC), Nodal Continuing Education Centres with wider varieties of activities, i.e. library and reading room, vocational training, sports and cultural activities, information centre, charchamandal (group discussion) and literacy classes. The latest trend in the Adult Education Programme is Sakhyara Bharat Abhiyan, which was launched in the District on 2nd February 2011. The administrative set up of the programme included two numbers of Preraks per Grama Panchayat, one Co-ordinator for the Block, four numbers of Co-ordinators for the District with one Loka Sikhya Kendra per Grama Panchayat. The target age group was 15 thereto 80 years. In the survey conducted at the inception of the programme it was found that the District had 2,97,661 illiterates including 1,26,958 males and 1,70,703 females. Teaching learning classes are organised by the Preraks and Voluntary Teachers in the Adult Education Centres with the help of teaching learning materials.

Work Force Participation Rate: As per the Census 2011, the number of workers in Sundargarh District is 8,73,227 which constitute 41.7 per cent of the total population of the District. The work participation rate in 2001 as per Census 2011 was 40.4 per cent. With rise in the population, the number of workers has been increased and the work participation rate has got marginal growth rate of +1.3 per cent between 2001 and 2011. The divide of work participation rate in rural and urban scenario is quite contrasting. In 2011, the rate in rural areas was 46.6 per cent whereas it was 28.4 per cent in urban areas. The corresponding figures in 2001 were 46.2 per cent and 33.6 per cent respectively. The urban work participation rate has been lower than that of the rural areas. During the decade 2001 to 2011, there has been decline of 0.4 per cent in the rural work participation rate and significant increase of 5.2 per cent in the urban work participation rate. A comparison between the work participation rate figures of Sundargarh District and the corresponding figures of the State of Odisha is given in the following table.

Table 29: Rural-Urban Work Participation Rate: Sundargarh District and the State of Odisha

Year	2001			2011			Change		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Sundargarh	46.6	28.4	40.4	46.2	33.6	41.7	-0.4	5.2	1.3
Odisha	40.2	30.6	38.8	43.2	34.8	41.8	3	4.2	3

As per the Census 2011, the work participation rate among the males is 55.10 per cent and among the females it is 27.95 per cent. Among the total workers, 5,35,112 persons are main workers who constitute 61.27 per cent of the total workers and the balance workers are marginal workers. Among the main workers 80.48 per cent are males workers and the rest are female workers. Marginal workers constitute 38.72 per cent of the total working population. Among them 45.54 per cent are males and the rest are female. Marginal workers are classified into two groups, i.e. those who are employed above 90 days up to 180 days in a year and the second category is those who are employed for less than 90 days. Sundargarh District has higher percentage of main workers than the corresponding figure for the State of Odisha. The trend indicates that the employment opportunity in the urban areas have expanded, resulting in increasing work participation rate in such area. Figures on the work participation rate among different categories of workers in Sundargarh District and the State of Odisha is given in the following table.

Table 30: Work-Participation Rate among Different Categories of Workers in Sundargarh District and State of Odisha- 2011

	Total Workers	Main Workers	per cent of Persons as Main Workers to the Total Workers	Marginal workers			
				3 to 6 Month Employment		Less than 3 Month Employment	
				Persons	per cent of Total Workers	Persons	per cent of Total Workers
Sundargarh	873227	535122	61.28	266709	30.54	71406	8.18
Odisha	17541589	10707543	61.04	5597143	31.91	1236903	7.05

Work participation rate among the Scheduled Castes and the Scheduled Tribes in the District is more than the overall work participation rate. As per 2011 Census, the overall work participation rate was 41.71 per cent. Among the SCs and STs, the rate was respectively 42.09 per cent and 44.80 per cent which is higher than the District average. The detailed account of the aspect is elaborated in the following table.

Table 31: Work Participation Rate among SC and ST in Sundargarh District 2011

	Scheduled Caste			Scheduled Tribe		
	Male	Female	Total	Male	Female	Total
Total population	96465	95195	191660	526856	535493	1062349
Total workers	52919	27756	80675	289677	186239	475916
Non workers	43546	67619	111165	137179	349254	486433
Work participation rate per cent	54.86	29.16	42.09	54.98	34.78	44.80
per cent of non-working population to total population	45.14	71.03	58.00	26.04	65.22	45.79
Main Workers						
(i) Cultivator	6057	1041	7098	78664	14673	93337
(ii) Agricultural labourer	4732	2342	7074	25274	14640	39914
(iii) Household insdustry worker	1834	777	2611	3629	1408	5037
(iv) Other workers	26118	7142	33260	79830	26855	106685
Total Main Workers	38741	11302	50043	187397	57576	244973
per cent of Main Workers to the Total Workers	73.21	40.72	62.03	64.69	30.92	51.47
Marginal Workers						
(i) Cultivator	1479	1086	2565	21969	15095	37064
(ii) Agricultural labourer	6178	10611	16789	48558	91865	140423
(iii) Household industry worker	720	913	1633	2404	2960	5364
(iv) Other workers	5801	3664	9465	29349	18743	48092
Total Marginal Workers	14178	16274	30452	102280	128663	230943
per cent of Marginal Workers to the Total Workers	26.79	58.63	37.75	35.31	69.08	48.53

Castes and Tribes

Sundargarh District is predominantly a tribal District. As per the Census 2011 figures, 50.74 per cent of the population of the District is scheduled tribes. The percentage of scheduled caste population is 9.15 per cent of the total population of the District. The population of other castes is 40.11 per cent, which includes population of different religious communities those who are not coming under any scheduled caste or tribe. There is a decline in the growth and volume of tribal population in the District from 1951 to 2011 Census. Population Census of the District right from 1951 shows a decline in the Scheduled Tribe Population uniformly at the rate -3 per cent decennially.

Table 32: Trend in Growth of ST population in Sundargarh District

Sl. No.	Census year	ST population (per cent)	Decline (per cent)
1	1951	61.00	-
2	1961	58.00	(-)3.00
3	1971	55.00	(-)3.00
4	1981	53.23	(-)2.77
5	1991	50.73	(-)2.5
6	2001	50.19	(-)0.54
7	2011	50.76	(+)0.51

The main cause of decline in the Scheduled Tribe population of the District is the inflow of non-tribal population in the industry and mines right from the fifties. On the other hand large scale displacement of ST household in Rourkela Steel Plant and Mandira Dam, led to migration outside the District for settlement in the most compelling conditions. The stabilisation of the percentage of ST population from 2001 onwards has become due to growth of workforce participation rate of Scheduled Tribes in the mines and industries.

Table 33: Scheduled Caste and Scheduled Tribe Population of Sundargarh District and the State of Odisha, 2011

	Total Population			Scheduled Caste Population			Scheduled Tribe Population (per cent to Total Population)		
	Male	Female	Total	Male	Female	Total (per cent to total population)	Male	Female	Total (per cent to total population)
Sundargarh	1061147	1032290	2093437	96465	95195	191660 (9.15)	526856	535493	1062349 (50.74)
Odisha	21212136	20762082	41974218	3617808	3570655	7188463 (17.12)	4727732	4863024	9590756 (22.84)

Tribal are a major part of the population of this District for which the District is one among the scheduled Districts of the country. According to Census of India report, percentage of tribal population of this District was 50.19 in 2001. The people inhabiting the Panposh Sub-Division are mainly Mundas and Oraons. The Bhuiyans inhabiting the Bonai Sub-Division appearance belong to a different race than the dark complexioned Mundas and Oraon. Persons belonging to the Kisan tribe are also the major inhabitants of this District along with Oraons, Gond etc. They are farmers and food gatherers by profession. They are famous for their singing and dancing along with their hospitality. They speak the Kisan language along with Sadri, Sambalpuri, Odia, Hindi and English. Kutra Block is well known for Kisan tribe.

Among the other castes, Agarias are the dominant ones. They are usually not seen in such large numbers in other parts of the State. They are predominantly agrarian community, land owners of large holdings. They have played vital roles in the economy of the District through the ages due to their association with agriculture.

Caste plays an important role in the social life of the people of the District. The traditional division of occupation of different castes has changed considerably due to the impact of modern education, urbanisation and industrialisation. A brief account of the principal castes is presented below.

Agaria: The Agarias, a dominating caste of industrious agriculturists, are mostly found in Sundargarh, Lephripara, Tangarpali and Bhasma Police Station areas. They speak a local dialect called Laria, which is akin to Ardha-Magadhi language. According to the local tradition the forefathers of the Agarias were Rajputs who lived around Agra in Uttar Pradesh about 400 years ago. Since they migrated from Agra they are designated as Agarias. Out of the total 84 clans of Agarias, 44 clans came to Odisha and adopted cultivation as their occupation by the order of the then Gajapati king of Odisha. They put-off their sacred threads and gave them to the youngest brother who was termed as Disondhi. They all agreed to support him with the produce of their field.

The Agrias are usually tall, fair complexioned and well built. **Dalton**⁴ writes that they have high Aryan features and tawny complexion; they look like Rajput and are very industrious and intelligent. They are divided into three sub-castes, namely Choudhury, Naik and Patel. Their caste symbol is the dagger, but it is differently named for the above three classes. The Choudhurys call their symbol 'Kuil Katar', the Naik call it 'Jamdarh Katar', while Meghanada Katar' is the symbol of the Patels. Child marriage was a rule among the Agarias in the past, but at present it is rare. Widow marriage is allowed in their society. Brahmin priests officiate in their socio-religious

⁴ E T Dalton- Descriptive Ethnology of Bengal

functions. The Agarias of the District of Sundargarh and Sambalpur have formed a caste assembly since 1904, which is a well-knit organisation looking into all caste matters and the general welfare of the community.

Badhei: The Badheis are found in all the Sub-Divisions of the District. They prepare various kinds of agricultural implements and wooden furniture to meet the requirements of the local people. Cultivation is their subsidiary occupation apart from their traditional caste calling of carpentry. Widow marriage is in vogue in their society. Customarily Lord Biswakarma, the god of instruments and engineering skill, is worshipped in the month of Asvin (September-October).

Bhandari: The Bhandaris are found in almost all the villages and towns of the District. They are barbers. They render their traditional services on the occasions of marriage and death to the clean castes. The women are also required to render services at the time of child birth and other social functions. They get remuneration both in cash and in kind. In town they maintain hairdressing salon.

Bania: The Banias are also known as Sunaris in this District. They are found in almost all the towns of the District. They make ornaments of gold and silver. There are two groups among them. The Jharua group prepares only gold ornaments but the Odia group deal in both gold and silver ornaments. They do not differ much from one another in regard to food, dress, speech and other customs and practices, but marital relationship is forbidden between the two groups. Child marriage is strictly prohibited among them.

Brahmin: The Brahmins do not form a major caste group in the District. Their traditional profession is priesthood and at present several of them are engaged in agriculture, business and some other professions. Broadly, there are three classes of Brahmins in the District: (a) Aranyaka or Jharua, (b) Utkaliya or Odia, and (c) Raghunathia. The Aranyakas who claim to be the original inhabitants of the District, are found mostly in Sundargarh and Bargaon Police Station areas. Their traditional occupation is priesthood. They have retained their traditional profession more or less till today. They bear the surname of Purohit, Pujhari, Bisi, Panda, Panigrahi, Joshi, etc. The Utkaliya Brahmins, according to the prevalent opinion, are immigrants from the coastal District of Odisha, their main occupation is agriculture. The surnames of these categories of Brahmins generally are Nanda, Mishra, Mahapatra, Pati, Pani etc. The Raghunathia Brahmins are mostly found in Sundargarh Sub-Division. They are considered to be the migrants from the District of Sambalpur. Their principal occupation is to act as cooks; agriculture as a secondary calling is gradually being adopted by some of them. They bear the surname of Natha, Dhara, Behera, etc.

Out of three classes of Brahmins, the Raghunathias are regarded as low class Brahmins. They take cooked meals in the houses of Odias and Jharua Brahmins but Jharua Brahmin do not take cooked food in the houses of Raghunathia Brahmins. The Odia Brahmins do not accept cooked food from the Jharua or Raghunathias. Though, intermarriage is forbidden among these three classes of Brahmins, marriages involving the three caste groups have taken place in recent years. Generally while performing the sacred thread ceremony the Jharua are to conduct nine out of ten religious rites and all the ten rites are observed by the Odia Brahmins. The Odias are mostly the believers in the Saiva cult whereas the Jharuas are Vaishnavas.

Gouda: The Goudas are the herdsmen and milkmen. They are also known as Ahir, Goala, Golla, Gopa and Idaiyan in different parts of India. The traditional occupation of this caste is rearing cattle and selling milk and milk products. At present, most of them have left their traditional occupation and have taken to agriculture. Some members of the poorer section of the community act as water suppliers. They are found in large number in Sundargarh Sub-Division and sparsely in Panposh and Bonai Sub-Divisions. They are divided into the following sub-castes, Gopapuria, Mathurapuria, Jharia and Magdha. Each sub-caste is endogamous. Among educated people inter sub-caste marriage is being performed and encouraged. They are comparatively found to have a high ritual status. Higher castes accept water from them. They do not bear the stigma of polluting food and water by their touch. Their co-operation is required on social occasions such as marriage and religious performances.

They observe the day of full moon of the month of Phalguna (February-March) as their caste festival. Cattle worship is performed by them on the full moon day of the month of Asvina (September- October). They worship Lord Krishna and trace their origin from his dynasty. They bear the surname of Gahir, Naga, Bagha, Dangua, Hansa, Bhainsa, Sunani, Mahakuda, Harna, Dharei and Chandan in the District.

Guria: The Gurias have mostly migrated from the coastal Districts of Odisha and have settled down in almost all the towns of Sundargarh District. The term 'Guria' is derived from 'Gur' meaning unrefined sugar. The traditional occupation of this caste is to prepare sweetmeats. Apart from their customary calling many of them have taken to agriculture. The caste group is divided into two classes: Odia and Jharua. In the past intermarriage and interdinning were strictly forbidden between the two classes but nowadays such restrictions are no longer observed.

Hansi: The Hansis customarily weave cloths for the local market. The cloths made by them are somewhat finer than those woven by the Panas or Gandas of the locality.

Jhora: The Jhoras are the boatmen and fishermen of the District and are found generally in Bonai and Panposh Sub-Divisions. In the past they were also engaged in collecting gold particles from the sands of the river Brahmani and its tributary streams. The Jhoras are believed to be of Gond extraction and of Dravidian origin.

Kaltuya: The Kaltuyas are substantial cultivators and they occupy a very dominant position in Bonai Sub-Division. Partly because of their numerical preponderance and partly for their landed wealth they are considered as a dominant caste. They are the followers of Ramananda, the Vaishnavite teacher of the 13th century. On festive occasions they gather and worship at the temple of Radha-Krishna located at Bionai. According to local tradition, they were the original inhabitants of Mithila. In course of time their forefathers left the place and settled in Sambalpur. Subsequently they emigrated from Sambalpur into Bonai.

About Kaltuyas of Bonai, Colonel Dalton in his book "*Ethnology of Bengal* (1872)" says "they form a considerable portion of the agricultural population of Sambalpur and appear as the best cultivators and most substantial people in Bonai. I found them occupying villages together with Gonds and Khonds; but these, the probable representative of the aborigines of the place, had nearly all fallen into the position of farm servants to the Kaltuyas, who had large substantial, well-stocked farmyards and very comfortable houses. I was freely admitted into their domiciles and the women and children were all presented to me. They afterwards came to my tent and sat there. The *Pardah* system of excluding females was entirely unknown to them. Though doubtless, best part Aryan in blood, there is, I think, a slight deterioration arising from admixture with the less comely aborigines. Their colour varies from coffee to tawny yellow. The mouths are well formed, though large; eyes generally large, full and clear, many hazels. I especially observed that many of the fair sex were distinguished by well marked eyebrows and long eyelashes. The noses are not aquiline or prominent, but there is no remarkable deficiency of nasal bone, though this feature is often inclined towards the pug species. They have straight foreheads, but a want of breadth across the temples which takes from the oval of the face. The men show moustache and beard, but little whisker. They are well proportioned and about the average height of Hindus in the Lower Provinces. The Kaltuyas generally allow their girls to grow to maturity before they give them away in marriage."

Kamara: The Kamaras are commonly found in Sundargarh Sub-Division. They are broadly divided into two groups: Kothimada Kamaras and Dhuka Kamaras. The Kothimada Kamaras at the time of smelting or forging iron implements pump the air bag by their legs, whereas Dhuka Kamamras pump it by their hands. They do not, however, have any specific social

distinctions with regards to food, clothing, ornaments, etc. and there exists no marital restriction between the two groups. Unlike the marriage customs of other castes, the bride goes to the groom's house in ceremonial fashion. Widow marriage is allowed in their society.

Kansari: The Kansaris are found mostly in Bonai and Panposh Sub-Divisions. They make brass and bell-metal utensils for domestic use and cheap brass ornaments such as anklets, bracelets, rings, etc., for poorer classes. The work on brass is of inferior quality for which circulation of these materials is confined to local markets. Their principal deity is goddess Kali. The goddess is represented and symbolised by an iron rod.

Karan: The Karans are a small minority group in the District. They are of two categories, viz., Jharua and Odia. Most of them are agriculturists and some follow other vocations. There is no restriction between the two groups in matrimonial relationship. The surnames of the Karans are Mohanty, Bakshi, Bohidar, Pruseth, etc.

Keuta: The Keutas are found in Sadar, Talsara, Lephripara, Bhasma, Raiboga, Bonai and Raghunathpali Police Stations. Their principal occupation is fishing; preparation of puffed and flattened rice is their subsidiary source of income. Some of them are also engaged in cultivation and business. They are of two groups: Kodie-gharias and Das-gharias. Marriage is not permissible between the two.

Goddess Samalesvari is worshipped in their families. Though, according to gradation, married women do not apply vermilion on their forehead, yet they are using vermilion now-a-days. On the full moon day of the month of Chaitra (March and April), they perform Dahi Puja on the bank of the river IB at Jagatgarh and worship fishing implements.

Khyatriyas: The Khyatriyas are not many in the District of Sundargarh. The Gangpur Raj family claims descent from the Paramara Clan of Rajputs and the Bonai Raj family, though their origin is not clear, claim to be Kadam Banshi Rajputs. The kith and kin of the former ruling families mostly live in the towns of Sundargarh and Bonai. Besides, the people of Khyatriya community are also found scattered in other parts of the District. The social hierarchy they claim to be next to the Brahmins and observe *upanayan*. With the change of time the Khyatriyas, like other higher castes, have been engaged in various occupations.

Kosta: It is generally believed that the forefathers of the Kostas migrated from Chhattisgarh and Raigarh area since long and settled down in Barpali, Sambalpur and Sundargarh. In this District they are found in considerable number only in the Sadar Sub-Division. Generally they weave tassar cloth to meet the needs of the local people. Since demands for these cloths have been considerably reduced nowadays, they are gradually giving up weaving and taking to other occupation.

Kumbhar: The name of the caste Kumbhar is derived from Kumbha, an earthen pitcher. They prepare various types of earthen pots and earthen toys for the local market. Besides, they manufacture roofing tiles and bricks. Two classes of Kumbhars viz., Jharua Kumbhars and Udia (Odia) Kumbhars are found in the District.

Kurmi: The Kurmis are chiefly found in Bisra Police Station. According to prevalent opinion the Kurmis of this District are immigrants from Ranchi in Chota Nagapur and from Madhya Pradesh. Their usual surname is Mahanto. They speak Odia and Kurmali, a colloquial Hindi of the Maithili group. Their traditional calling is agriculture. Nowadays several of them are carrying on business and also some educated men are service holders in the Government offices.

Marriage is strictly confined to their caste. Cross-cousin and inter-caste marriages are not allowed. Child marriage is still in vogue to some extent among them though the present tendency is towards adult marriage. They worship Hindu gods and goddesses such as Siva, Durga and Kali along with Karama and Tushu, Brahmins act as priests and perform all socio-religious functions in their society.

They accept food from the Brahmins. Food-stuff prepared by the Gurias (the confectioner caste) is also accepted by them. The educated Kurmis do not usually follow the customary taboos so far as taking food from others is concerned. They are a hard working people and are economically self-sufficient to a great extent. Begging is considered derogatory to their caste prestige; as a result it is discouraged in their community.

Mali: Selling of flowers and garlands is the chief occupation of the Malis. They also prepare artistic and decorating materials out of Sola (pith), such as crowns for the brides and grooms, and toy boats, etc. they are also taking recourse to other types of profession because of insufficient income from their traditional calling. In their society, usually women play a very important role and in case of partition of patrimony women used to get equal share with men even before the Hindu Code were enacted.

Routia: The Routias are found mostly in Panposh and Sundargarh Sub-Division. Originally their ancestors, it is believed, were serving in royal households, for which they are called 'Routia'. They are supposed to have migrated to this District from Chota Nagpore long ago. They are divided into three sections, viz., Bargahari, Pachasi and Chhotgahari. Clan exogamy is strictly maintained within their caste, but cross cousin marriage is allowed. Their main occupation is agriculture.

Sundhi: There are not many Sundhis in the District. Their traditional occupation is to deal with wine. Most of them are understood to have given up their customary occupation and have taken to business and agriculture. There are two sections of Sundhis: Jharua and Odias. The Jharuas are original inhabitants whereas the Odia Sundhis are migrants from coastal District of Odisha. The Odia Sundhis do not establish any marital relationship with the Jharuas. Widow re-marriage is not allowed in their society.

Teli: The Telis are mostly found in Bargaon area of Sundargarh Sub-Division. The main occupation of the caste is oil pressing. They are divided into two sub-castes. One section presses oil by the help of the bullocks and the other extracts oil by manual labour. They are gradually changing their traditional occupation due to the impact of industrialisation and urbanisation. They are conscious of their hierarchical status. The practice of hyper gamy is found to be prevalent and child marriage is no longer in vogue.

Scheduled Castes: Persons belonging to the Scheduled Castes are the part of the population in 1225 number of inhabited villages of Sundargarh District. As per the census 2011, they are absent in 488 villages. The detailed account of presence of SC and ST population in different Blocks of the District is given in the following table. In the past people belonging to Scheduled Castes suffered from various social and religious disabilities. Most of them were considered untouchables due to their traditional professions which were considered as unclean by the castes Hindus. Their economic as well as educational backwardness is also responsible for such depressed position in the society. Untouchability is now outlawed and the backward population is being given some special privileges for their improvement. As per the Census 2011, they are concentrated in 488 villages out of the 1713 number of inhabited villages. Brief account of some of the important Scheduled Castes of Sundargarh District and their cultural traits is given after the following table.

Table 34: Concentration of Scheduled Caste Population in Sundargarh District- 2011

Sr. No.	Name of C.D. Block	Total villages	Inhabited villages	Number of inhabited villages having scheduled castes population	Number of inhabited villages having scheduled tribe population
1	Hemgir	153	143	122	137
2	Lephripara	108	108	80	108
3	Tangarapali	80	80	70	79
4	Balisankara	101	100	66	99
5	Subdega	63	63	53	63
6	Sundargarh	86	85	77	85
7	Baragaon	69	69	65	69
8	Kutra	54	54	47	54
9	Kuanmunda	107	105	70	104
10	Nuagaon	120	119	79	119
11	Bisra	69	69	48	68
12	Lathikata	82	81	61	81
13	Rajagangapur	76	72	47	72
14	Gurundia	146	140	77	137
15	Baneigarh	117	104	79	102
16	Lahunipara	220	214	116	208
17	Koida	111	107	68	107
	Total	1762	1713	1225	1692

Badaik: The Badaiks seem to have migrated from Chota Nagpore in Bihar. They are mostly found in Lephripara Police Station. The Badaiks are divided into two sections, viz., Badaik and Panika Badaik. The Brahmin priest performs their socio-religious functions and ordinarily the barber and washer man serve them. In this respect there exists no discrimination between them and the neighbouring caste groups. They are mainly cultivators. They supplement their income as agricultural labourers and also by weaving cheap cotton cloth.

Chamara: The Chamaras are found mostly in Bargaon and Talsara Police Stations. They are mainly engaged in agriculture and household industries such as basket making and leather work. At present some of them are serving in public and private firms and have taken to other occupations. Remarriage of a widow is allowed among them and caste endogamy is followed. Their staple food consists of cereals such as jowar, gulji, etc. Rice beer and liquor made of Mahua are their favourite drinks.

Dhanwar: The Dhanwars are found in Hemgir and Talsara Police Stations. They are mainly Hindus. They speak Laria language along with Sambalpuri. They live on hunting animals with the help of their bows and arrows, hence they are known as Dhanwar. According to a legend, about 2,000 years ago they were moving in forest in batches. Then they were wearing bark of a tree while some of them remained naked. They were eating the flesh of the wild animals. At first they were known as Lodha Sabar and later they were called Dhanwar.

There are two types of Dhanwars: Jhara Dhanwar and Dhanwar. They consider turmeric plants as their gotra (Clan God). In their society widow marriage is permissible. Divorce is allowed. In socio-religious functions Brahmin priests do not perform the worship. The barber and washer-man render services to them.

The economic condition of the Dhanwars appears to be very miserable. Most of them are illiterates. According to the 1961 Census, only five males and one female were found to be literate including one man who read up to primary standard.

Dhoba: Dhobas are found almost in every village. Their traditional occupation is to wash garments. Their services are essential for the Hindus on social occasions such as marriage, post funeral rites and child birth.

Dom: They are also locally known as Dombo or Duria Dom. They are mainly engaged in household industries, such as basket making and some earn their livelihood as agricultural labourers and cultivators. In addition to their normal work some of them were engaged in tanning and curing to supplement their income.

Ganda: They are found mostly in Sundargarh and Bonai Sub-Divisions. They are divided into four sub-groups such as Odia, Laria, Kandhria and Kabhria. The Odia Gandas are those who speak Odia language. The Laria Gandas are those who reside in villages bordering Chhattisgarh and speak Laria. The Kandhria Gandas are so called because they live among the Kandhas. The Kabhrias are Kabirpanthis or followers of Kabir. Marriage between the two groups - the Odia and the Laria is permissible. They also eat, drink and smoke together but not with the Kandhria or Kabhrias. The Kabhrias do not eat fish or meat. **The Kandhria gandas eat beef, pork and fowl but refrain from eating monkey and snakes. The Odia and the Laria Gandas neither kill a cow nor eat beef. But Kandhrias do both.**

The Gandas claim to be higher in caste hierarchy than the Chamar, Ghasi and Hari/Hadi. They worship the Hindu gods and goddesses and especially worship Mahalakshmi. **Child marriage is still prevalent among them.** If a girl is unmarried when she attains puberty she is married to a bow or an arrow tied to a post made of mahua wood. Divorce is allowed. The Gandas weave coarse cloth. They are also professional pipers, drummers and are regularly employed as musicians on the occasion of marriages of caste Hindus. Most of them are cultivators and agricultural labourers. In the past they served as village watchmen.

Ghasi or Ghasia: Out of 54,647 Ghasis in Odisha, in the Census of 1961, 4,065 were enumerated in this District. They are found in majority in Sundargarh Sub-Division and sparsely in Panposh and Bonai Sub-Divisions. They are divided into the sub-castes, such as Sonnati, Simar-Lokha and Hari/Hadi. They work as musicians at weddings. Their chief means of livelihood are agriculture, livestock, forestry, bamboo work, etc. tanning and scavenging are their subsidiary occupation. In the villages Ghasi women usually act as midwives at the time of child birth. The incidence of literacy among them is very low. Widow marriage is allowed. Divorce is very common. They are economically and educationally backward.

Pana or Pano: The Panas were 17,209 (8,205 males and 9,004 females) according to the 1961 Census. They are mostly concentrated under Bargaon and Talsara Police Stations. They are Hindus and worship deities namely Durga, Kali and Mahadev. Girls are married after they come of age. Marriage among the cross-cousins is in practice. Divorce is affected only with the sanction of the Caste Panchayat. Though their traditional occupation is weaving, some of them were also employed as village chowkidars. They have adopted agriculture as their subsidiary source of income. They are economically and educationally backwards.

Panatanti: Much is not known about the origin of the Panatantis. They are largely employed as weavers and call themselves Patar Pana or Buna Pana. Patra Panas are now known as Panatantis who are a recent accretion to the Tantis. Many of them are cultivators and agricultural labourers although household industry and other services are popular. They are educationally very backwards.

Pab or Pap: The Paps are found mostly under Hemgir, Bhasma and Sundargarh Police Stations. The term Pab or Pap, it seems, has been derived from the word *pada* (feet). According to a legend the people of this caste were staying near Hirakud in Sambalpur District. They had rebelled against the ruler of Sambalpur for which they were ruthlessly suppressed and killed. A section of these people surrendered to the king by holding his *pada* (feet). From that time onwards this section of people were known as *pada* which subsequently become Pab or Pap. Being banished by ruler, they left Sambalpur and a group of them came here and settled down in some villages in the Sundargarh Sub-Division. They are divided into two divisions: Dalapatia Pap and Pap, but both have a common gotra called *Naga*. They have a spoken dialect of their own but it has no scrip. The language commonly use by them is Kosali-Sambalpuri. Most of the Paps are poor and landless. Generally they collect fuel, leaves, mahula flower and other forest products and sell in weekly markets. They observe most of the Hindu and Adivasi festivals and worship *Ratimaya Devi* and *Duleha Devta* as their family deities.

Turi: According to the 1961 Census the population of Turis in Sundargarh District was 1,634. Out of the total population, 1,632 lived in rural areas and only two persons were found in urban settlements. They are mainly engaged in household industries such as basket making and mat making. Among them a few are cultivators and agricultural labourers. Literacy among the Turis is very low. They are Hindus and worship the gods and goddesses of the Hindu Pantheon and observe Hindu festivals as well.

Scheduled Tribes: The numerically important Scheduled Tribes in Sundargarh District are Oraon, Munda, Kharia, Kisan, Bhuiyan and Gond. In Census reports, during British Rule, the tribal population was classified as Hindu, Christian or Animists. The distinction between Hindu tribals and Animist tribals is often arbitrary. A large number of tribal people have adopted Hindu religion and worship Hindu gods and goddesses excepting those living comparatively isolated for a long time. But gradually with the spread of education, implementation of various development projects and establishment of industries they have come in close contact with their Caste Hindu neighbours. In general, the tribal people believe in a Supreme Being residing in the Sun. They believe in ancestral spirits and a number of natural and malevolent spirits.

Earlier, the tribal people were leading a primitive way of life and inhabited in the remote and less accessible areas of the District where educational/school facility was not available. Subsequently, schools were established by the Durbar administration in a large number of villages, but the tribal people looked upon them as useless encumbrance. In the past, if a parent was taken to task for irregular attendance of his children, he would in perfect good faith, offer to attend on their behalf. From their early childhood they are used to assist their parents in various economic pursuits and attendance at school is of secondary importance.

The Christian Missionaries operating in Sundargarh District were the pioneers in spreading western education and culture among the converted tribals. After Independence a number of schools were set up by the State Government. Gradually the tribal people are being attracted for higher education as a stepping stone for better employment.

According to the 1961 Census, 10.21 per cent (45,008 persons) of the Scheduled Tribe population were literate. As per the 2011 Census, the percentage of literacy among tribals has increased to 63.21 per cent. The impact of industrialisation, urbanisation and spread of technical education leading to enlarged employment scenario has attracted the Scheduled Tribe people. Agriculture is the predominant activity followed by the ST people. Besides, some of them have been adept to their traditional occupational activity in household industries like, hand-pounding of rice, rope-making, basket weaving, pottery, etc., as a source of livelihood. The rich forest of the District has provided them with seasonal employment. They collect minor forest produce (MFP) as a subsidiary occupation. The steel and fertiliser plant at Rourkela, the cement factory at Rajgangpur and the numerous mines in Sundargarh District have provided gainful employment to a number of tribal people.

During the last one hundred years the tribals of the District have changed considerably. The opening of railways and construction of roads were responsible for their contact with outsiders. Besides, the rapid growth of industrial and mining centres, establishment of hospitals, schools and various government offices have contributed remarkably to the change in the social, cultural and economic life of the tribals in the last decades. They have developed political consciousness and are taking active part in organising political parties and trade union in the District. But these simple and gullible people are often exploited by self seekers and political opportunists.

Accounts of important tribes of the District are as follows.

Oraon: Cobden Ramsay has recorded in his gazetteer* that the Oraons of Gangpur ex-State were immigrants from Chhota Nagpore and some Oraons had migrated to Bonai from Singhbhum. Previously they

mostly served as agricultural labourers and never attempted to procure lands for cultivation. But gradually they felt an urge to possess lands and are now cultivating rice, small millets, vegetables, etc. Well-to-do Oraons of the District employ labourers called 'Dhangars'⁵ when engaged for one year and over. Besides, they have acquired proficiency in some cottage industries like rope making and mat weaving which are generally done by the females.

The Oraons are found mainly in Rajgangpur, Talsara, Bisra, Biramitrapur and Sundargarh polices station. They are short stature, narrow-headed and broad nosed. The colour of the skin is dark-brown often approaching black; their hair is black and coarse with an occasional tendency to curl. The colour of the iris is dark and no obliquity is traceable in the opening of the lids. Projecting jaws and thick lips are some of the peculiar physical characteristics of the Oraons. By nature they are cheerful and light-hearted.

The Oraons are divided into 18 number of exogamous clan (gotra or varga) such as Bando, Barwa, Tigga, Kisspotta, Lakra, Tirky, Gidhi, Khakha, Kerketta, Toppo or Lang Toppo, Ekka, Khalkho, Beck, Barla, Kindo (Kinduar), Minj, Tirru, Bakhla, Bara, Khess, Kujur, Munjniar and more, which are named after some birds, fish, animals, plants of minerals. The individual totems are regarded as sacred and are respected by them as ancestors. Although the totemic objects are toboodooed for use by the particular tribal group, there are some relaxations. For example, the members of *Bek* totem do not eat raw salt but can take any food in which salt is being mixed. The clan is patrilineal. But marriage with a maternal aunt or cousin on the mother's side is not permissible. Marriage with members of other tribes is strictly prohibited.

The Oraons have their own tribal council for each village. The headman is called Pahan. He presides over all socio-religious functions of the village. He is assisted by Naegas, the religious head and also by the old and leading Oraons in settling disputes. The Pahan renders honorary services but in case of settlement of disputes, widow marriage and divorce he is remunerated. The Oraons always approach their tribal panchayat called 'Paadha' consisting of elected Raja, the 'Bel', the head minister, the 'Diwan', the writer, Sampadak, the 'Khajanchi' and the guardian, the 'Kartaha'. The legal forum of this tribe decides all disputes.

Munda: The Mundas are found more or less in all the Districts of Odisha but their concentration in Sundargarh is the highest. They live mainly in the northern and north-eastern part of the District. They are more numerous in Bisra, Kamarposh Balang, Raiboga, Biramitrapur, Raghunathpali, Rajgangpur, Bargaon and Talsara Police Stations.

⁵ S.C.Roy-The Oraon of ChhotaNagpore-The Brahmo Mission Press,Pp-325

They are divided into a number of groups, like Erenga Munda, Mahali Mundas and Mundas. The totems of Mundas are drawn from large number of exogamous groups called '*Kili*'. According to Munda tradition, all members of the same 'kili' are descendants from one common ancestor. Mundas are exogamous as regards 'kilis' they are endogamous with respect to other tribes.⁶ Thus, there can be no valid marriage between a Munda and members of other 'kolhan' tribe, such as Santhals, Khadias, the Asurs or the Birhors. Even Santhal, Mundari, HO, and other Mundas speak akin to each other groups. Now Santhals have developed their script '**OL CHIKI**' that encompasses many words, styles and pronunciation matching the Munda clan as a whole. Their physical appearance is distinguishable in terms of skin colour that is dark brown, often approaching black. Their head is long; nose is thick, broad, and depressed at the root; their lips are thick and the cheek-bones appear to be prominent. They are strong and stout and possess a good physique. Most of them are less than medium statured. They look fresh and cheerful.

The Mundas are divided into 24 different exogamous clans. The clans are totemistic and derive their names from some natural objects, such as, trees, creepers, fish, bird, snake, animals, insects, plant, etc. The members of the clan do not eat the totemic objects. They believe that all the members of a clan are descended from a common ancestor. The clan is patrilineal.

To perform the socio-religious functions of the village a representative called *Pahan* is selected. He worships to propitiate the local spirit to save the village from the ravages of wild animals, and to ensure successful hunts insects and good harvests. As head of the village Panchayat he also settles disputes; punishments are inflicted upon deviants for violating tribal customs. If the culprit is dissatisfied with the decision, he is at liberty to refer the matter to the head of the *Parha*. Generally a *Parha* consists of eight to twelve villages. Each *Parha* is managed by a committee or Panchayat. The office bearers are known as 'Raja', 'Diwan', 'Thakur', 'Lal', 'Pande', and 'Karta'. They have borrowed these titles from their Hindu neighbours. Usually complaints are lodged before the 'Raja' or 'Diwan' by the *Parha* of the village in which the offence has been committed. Then necessary arrangements are made to call the assembly of the *Parha*. All the members of the clan are entitled to attend the assembly. Then the 'Raja' as President, explains the complaints or cause of the dispute to the assembly. After confirming evidence and Statements from the witnesses he declares their decision. The most common complaints are concerning marriage. If the offender repents then he is simply fined. The fine is usually realised by the 'Diwan'. In the past, the decisions of the Panchayat were honoured but at present parties dissatisfied with decision go to the Courts of law.

⁶ S.C.ROY-The Mundas and their country-Crown Press Publication; page-217

Khariya: The Kharias are found chiefly in the north-western Districts of Dhenkanal, Sambalpur, Sundargarh and Mayurbhanj. In Sundargarh District they are scattered in Talsara and Rajgangpur Police Stations of Sundargarh Sub-Division; Bisra and Raiboga Police Stations of Panposh; and Gurundia and Bonaigarh Police Stations of Bonai Sub-Division.

They are broadly divided into three sections, namely the **Pahari**, the **Dhelki**, and the **Dudh Kharia**. The Pahari or hill Kharias are the most primitive and depend mainly on food gathering economy. They collect honey, silk cocoon, lac, edible herbs and tubers and other minor forest products. The Dhelki and Dudh Kharias have adopted cultivation and are somewhat better off than the hill Kharias. They do not have marital relationship with each other. The Hill Kharias live remote villages situated on the tops or slopes of hills. But Dhelki and Dudh Kharias live in villages along with other castes and tribes.

Their household articles constitute a few date palm leaf mats, string costs, earthen vessels, metal and aluminium utensils and bamboo baskets. Besides, they possess hunting, fishing and agricultural implements. Drums and flutes are the popular musical instruments of the tribe. The traditional occupation of the Kharias was to carry palanquin, but at present they are mostly agriculturists. Besides agriculture they also depend on daily wages.

The social organisation of the **Hill Kharias** differs widely from the **Dudh** or **Dhelki Kharias**. The **Hill Kharias** have no regular clan organisation. Though they claim to belong to some clan or *gotra* as **Nag, Saluk or Sal**, they do not maintain any taboo in eating and killing totemic animals and plants. They also do not observe clan exogamy. The Dhelki Kharias are divided into eight clans, namely, Muru (tortoise), Soren (Stone), Samad (deer), Barliha (a kind of fruit), Charha (a bird), Hansa (eel), Mail (dirt), and Topno (a bird). The Dudh Kharias recognise nine clans as the original clans of the tribe who came to Chota Nagpore along the banks of the river Koel from the north-west. These are **Dungdung (eel) Kulu (tortoise), Kerketta (quail), Bilung (salt), Soreng (stone), Baa (paddy), Tete (lap wing bird), Kiro (tiger), and Topo (a bird)**.

The Pahari, Dhelki and Dudh Kharias are strictly endogamous. They never allow any marital relationship with one another. Boys generally marry at the age of twenty one while the girls marry at the age of fifteen or sixteen.

The senior most man of the village is selected as priest. He is known as Dehuri among the Hill Kharias, Kalo among the Dhelki, and Pradhan among the Dudh Kharias. In addition to the priest, the council of elders decides all important local problems. The council of elders also raises funds for public worship. They are invited to attend all social functions like child birth, marriage, funeral ceremony, etc.

Kisan: The Kisans are a tribe of settled cultivators and agricultural labourers. It is probable that the tribe has acquired its Hindi appellation from the devotion of the people of the tribe to the occupation of agriculture. The origin and ancestry of the tribe is obscure. They migrated to this District from Chhota-Nagpur area of Bihar and from Madhya Pradesh. The tribe is divided into 18 numbers of exogamous and totemistic clans like Oraons. Each clan is further subdivided into a number of sub-clans basing of the names of the villages from where the forefathers of the members of the sub-clan originally came. The Kisans in Bonai Sub-Division have taken the call name of their employers when they served as farm labourers and thus majority of them are called 'Pradhan' by title name while invariably maintaining their totems (Lakra, Kindo, Bahla, Toppo, Ekka, Kujur, Panna, Giddhi, Kispotta, Minj, Tigga, etc.) and the name of the tribe as 'Kissan'.

Cultivation is the principal occupation of the Kisans and the festivals they observe are mostly agricultural. Nuakhia in the month of Bhadrab (August-September) is their most important festival. Every Kisan village has a tribal council consisting of old and experienced members. The headman is called Mukhia who is assisted by the "Katwal". The tribal council resolves all caste disputes. Over and above the tribal council they have the Kisan Mahasabha which sits irregularly.

Totemic similarities are worth noting among Oraons, Mundas, Khadias and Mundas in Sundargarh District.

Table 35: Totemic Classification of Tribes

Tribe	Totem	Oraon	Munda	Kisan	Kharia
Oraon	Lakra	Lakra	Lakra(Kula)	Lakra	Kiro
Oraon	Ekka	Ekka	Horo	Ekka	Kullu
Oraon	Xess	Xess	Baba	Xess	Baa
Oraon	Minj	Minj	-	Minj	Dungdung
Oraon	Toppo	Toppo	-	Toppo	Toopo
Oraon	Tigga	Tigga	Manki	Tigga	-
Oraon	Soreng	-	Soren	-	Soreng
Oraon	Beck	Beck	-	Beck	Bilung
Oraon	Barla	Barla	Barla	Bahla	-
Oraon	Kerketta	Kerketta	Kerketta	-	Kerketta
Oraon	Tirky	Tirky	Tirky	Tirky	-
Orao	Tete	-	Bage	-	Tete

Bhuiya: The Bhuiyas are mostly found in Bonai Sub-Division. They are chiefly noted for their fidelity, hospitality and love for liberty. They are frank and honest and are very fond of dance and music. While dancing a young man is at liberty to escape with a girl whom he intends to marry. Thereafter a group of relatives of the girl follow to search them out in the forest and ultimately marriage is performed. The tribe is divided into four principal classes, namely, Paharia Bhuiyan, Khandait Bhuiyan, Rajkoli Bhuiyan and

Paraja Bhuiyan. The Paharia Bhuiyan generally live in hills and are known as Hill Bhuiyan. This section retains almost all the characteristics of the tribe. The other three classes generally live in the plains and depend on agriculture. They are considered as a degenerate class. Many customs and practice prevalent among them have been influenced by the Hindu traditions.

In lieu of clan-exogamy, they practice village exogamy. According to prevalent norms, they will not enter into marital alliances in the villages where their agnatic kins live. Village for marital alliances is called a Bandhu village.

Binjhia: They are mainly concentrated in Biramitrapur and Raiboga Police Stations under Panposh Sub-Division. They are mostly agriculturist. They speak Jaspuri, a crude type of Hindi. Due to their long association with the local people many Odia words have infiltrated into their dialect. Consequently both Odia and Hindi are prevalent among them. They are divided into seven exogamous groups, viz., Matha, Majhi, Karji, Padhan, Badek, Mirdha and Parasganjha. Marriage with cross-cousin is prevalent in their society, but they prefer to marry father's sister's daughter. Their marital rituals are similar in style to those of the neighbouring Hindus. Brahmin priests perform their marriage ceremony.

Gonds: Like the Bhuiyan, the Gonds are also a Dravidian tribe of considerable influence in the District. They are mainly found in Bonai and Sadar Sub-Division with concentration in Bonaigarh, Sundargarh and Rajgangpur Police Stations. The Gond headmen in Bonai are called mahapater and dandapat who used to hold fiefs on terms of military service under the ex-Ruler. The Jhoras or Jhora Gonds found in both the ex-States of Bonai and Gangpur are believed to be of Gond extraction, their traditional occupation being gold-washing, fishing and boating. Educationally, the Gonds are somewhat better than the Bhuiyans having a slightly higher percentage of literate and educated among them. They are thoroughly Hinduised and speak Odia as their mother-tongue.

Khonds: They probably immigrated from Baudh but have long occupied a menial position in the society as farm labourers and have lost all the typical characteristics of their race owing to culture contact.

Inter-Caste Relations:

There have been radical changes in inter-caste relations due to the impact of industrialisation and urbanisation. The movement of Mahatma Gandhi against the social disabilities of the untouchables has broken the barrier between them and the high castes. Untouchability is now punishable under law and practically absent in the present day society. People of various castes dine together in hotels and restaurants. Spread of education

among the masses and appointment in various public and private undertakings have shrunk the traditional difference between various castes. Briefly speaking, change in customary callings, economic mobility, introduction of adult suffrage irrespective of castes and administrative safeguard for backward classes, etc, has created a new environment of social transformation. Inter-caste marriages are now tolerated. Three inter-caste couples were united with marriage in 2011-12. In the next year, i.e. 2012-13, four couples performed inter-caste marriage. 15 couples performed inter-caste marriage in 2013-14 and 17 couples in the year 2014-15. The government provides incentive @ Rs. 50,000.00 per couples performing inter-caste marriage. However, the caste consciousness still prevails and to accelerate the process of liquidation of this age-long social stigma, economic upliftment of the backward classes and proper social education of the people are needed.

Opposite to the inter-caste marriages, atrocities towards the persons of Scheduled Caste are in rise in the District since the year 2011-12. Information on no. of confirmed cases of inter-caste conflicts and atrocities against the Scheduled Caste persons in the District is given in the following table.

Table 36: Cases of Atrocities against Scheduled Caste Persons in Sundargarh District from 2011-12 to 2015-16

Sl. No.	Year	Cases of Atrocity confirmed	Amount of Monetary Compensation Paid/ Due to the Victims (Rs.)
1	2011-12	10	2,37,500/-
2	2012-13	21	5,67,500/-
3	2013-14	26	11,75,000/-
4	2014-15	59	15,25,000/-
5	2015-16 (up-to-date)	37	7,67,500/-

The individual tribes maintain their identity based on clans and dialects, but they have cordial relationship and reciprocity between themselves. Sometimes marriage between members of two different tribes, though not socially approved, is tolerated after the observance of certain ceremonies. Although social relationship of converted Christians is almost confined within their own group, they do not hesitate at times to participate in the social life of the tribes to which they originally belonged.

Manners, Customs and Traditions:

During the period of pregnancy a Hindu mother is subjected to various taboos for a safe delivery like restriction to cut anything during an eclipse and wearing of amulets to ward off the evil eye. After delivery on the sixth day the ceremony called Sasthi is observed in which Sasthi Devi, the goddess of fate is worshipped. The period of birth pollution is observed for

twelve days. The child is named on the 21st days and it is observed with rejoicing. Another important ritual is Mundan or the first shaving of the child which is observed generally at the age of one. Besides, there are other important rituals like the ear boring, and upanayana (sacred thread ceremony) mostly confined to Brahmin and Khyatriya communities.

In tribal societies the expectant mother has to observe many restriction of movement in order to save herself from malevolent spirits. After delivery a number of practices are followed most of which have similarities with those of the Hindus. In a Bhuiyan family birth brings pollution for 8 days. An elderly woman of the community acts as midwife and attends the mother and newborn. The baby is named after a dead ancestor. Restrictions on food and movement are imposed on a Kharia woman during pregnancy. The Oraons observed the first stage of purification on the 7th or the 8th day after the birth, when the remnant of the navel cord wilts off. The house is cleaned and all the earthen pots are replaced. The child is given to wear a thread on the waist.

Burial Systems and Funeral Rites:

Every village or town has its own cremation ground called ***Smasanas*** or ***Masna***. Usually a deceased is cremated in the Hindu society. The dead body of a child, a sannyasi or a person suffering from leprosy or pox is buried. The last rites are generally performed by the eldest son of the deceased. Muslims and Christians have their separate burial grounds. The tribals bury the dead bodies in the family ossuary. Some rich tribal families practice cremation.

The Oraons put the dead body in a pit with the head towards the north and the face upwards. The first stage of purification takes place on the 5th day whereas the last day of purification is observed after a few months. The caste priest arranges a libation as the departed spirit is called.

The Bhuiyan adopt both cremation and burial for disposing of the dead. Usually persons dying of cholera, small pox, snake bite etc., or the dead body of a pregnant woman are buried. The Kisans after disposing of the dead body make a diminutive effigy of the deceased and worship it. On the next full moon day of Margasira (November- December) the effigy is thrown away into a river and the final purification ceremony ends.

Generally Mundas erect big memorial stones in the burial ground called *sasan*. After a memorial stone is erected a goat or sheep is slaughtered by the priest and a feast held in which friends and relations take meat and rice beer.

Among Kharias burial is common, but important persons are generally cremated. In the burial ground the corpse is put in a pit. A utensil, a few

grains of paddy, oil, and some coins are also deposited in the pit along with the corpse. The mourning is observed up to the 12th day. On the final day friends and relations are invited and entertained with a feast after which death pollution ends.

RELIGIONS:

Hindus are the majority community in the District. In 1951, the Hindu population was 85.98 per cent of the population of the District. In 2011, this has reached to 74.26 per cent. Share of Hindu population to the total population is gradually decreasing in the District. On the other hand the share of Christian population is on the rise. It was 13.3 per cent in 1951 and in 2011 it was 18.66 per cent. The share of Muslim population is marginal compared to the Hindu and Christian population, but on the rise. In 1951, Muslims were 0.94 per cent to the total population. In 2011, Muslim population became 3.46 per cent of the total population. Population of Buddhists and Jains was not recorded in 1951. From 1961 onwards, the presence of such population was recorded. Owing to the industrial activities in the District, people from around the country have gradually concentrated in the District for the purpose of employment in different sectors of the economy.

Table 37: Population of different Religions in Sundargarh District, 1951-2011

Religious community	1951		1961		1971		2011	
	No.	per cent	No.	per cent	No.	per cent	No.	per cent
Buddhists	0	0.00	28	0.004	171	0.02	710	0.03
Christians	71,943	13.03	1,06,342	14.018	1,70,639	16.55	385011	18.66
Hindus	4,74,776	85.98	6,40,760	84.464	8,28,236	80.35	1532352	74.26
Jains	0	0.00	29	0.004	510	0.05	720	0.03
Muslims	5,213	0.94	10,530	1.388	22,567	2.19	71391	3.46
Sikhs	271	0.05	928	0.122	4,597	0.45	5713	0.28
Other Religions and Persuasions	0	0.00	0	0.000	3,290	0.32	59986	2.91
Religions not Stated	0	0.00	0	0.000	708	0.07	7553	0.37

The majority of the people in this District profess Hinduism. The 1961 Census reveals that most of the tribal belong to Hindu religion but each tribe is having its specific faith and they all believe in totemism, magic and sorcery. They also believe in the existence of the malevolent and benevolent spirits. The malevolent spirits are supposed to be the cause of death and diseases and as such are appeased by the offerings of fowls and goats made with elaborate tribal rituals.

The Hindu worship Samalei, Siva, Jagannath, Krishna, Hanuman and other deities of which the temples dedicated to Jagannath and Banshidhar (Krishna) appear to be numerous. The Hindus in general gather on festive occasions like Durga Puja, Sivaratri, RathaJatra, Dola Jatra, Ramanabami etc. and worship. Usually when a child in the family falls ill, the parents make vows to offer special Puja to some deities, such as Samalei, Siva or the village deity. Soon after recovery, the Puja is offered in proper manner; until this is done a fresh danger of a more serious magnitude is apprehended. Housewives also offer Puja to Siva with the hope of having his grace in getting male issues. Mangala Thakurani is propitiated so that there may not be any epidemic of cholera or smallpox in the village.

It is said that this region was under the influence of Bidhism at about the 10th Century A.D. The territory was once a centre of Tantric cult. Some Tantric diagrams (Yantras) and a mithuna figure has been discovered on the ancient fort at Junagarh. Tantric rites, even Hanuman sacrifices, were practised in some Devi temples. Lt. Colonel Dalton writes, " It was admitted to me that until these Tributary Mahals came under the British Rule, a hanuman sacrifice was offered every third year before the shrine of Kali at Suadeeh, where the present Raja (of Gangpur) resides. The same triennial offering was made in Bonai and Bamra; Bhooya priests officiating at all three shrines".

Mahima Dharma: This religion is also called Alekha Dharma because the only God is believed in is Param Brahma, one of whose attributes is Alekha which means indescribable. The followers of Mahima cult are found in Sundargarh, Panposh and Bonai Sub-Divisions.

Christianity: The Christian population in the District is mostly spread over in the rural areas of Sundargarh and Panposh Sub-Divisions. Most of these Christians belong to the Scheduled Tribes and were converted to Christian faith by the Christian missions operating in the area. The Lutheran mission started their activities in the Raiboga Police Station area as early as 1870. A branch of the German Evangelical Mission, with its headquarters at Kumarkela, has been at work since 1899 and has made several converts. The Roman Catholic Jesuit Mission with headquarters near Ranchi, in Bihar, established their first mission station at Kesramal near Rajgangpur in 1908, also claims many converts chiefly among the Oraons. While following the religious festivals and rituals of their new faith these converted Christians also observe some of the customs and festivals which belong to their tribal past.

Islam: The Muslims of the District mostly belong to the Sunni, Wahabies Ahle-Hadish and Quadians (Ahmadies) sects. All these sections of Muslims (except the Ahmadies) profess a common faith although they differ from one another in certain belief and practices.

Sikhsim: The Sikhs residing in the District are mostly immigrants from outside the State. In 1971 they numbered 4,597 in the District which was the highest in the State. They are mostly found in urban areas and their concentration in the Rourkela Steel Township is more. The Gurudwar at Rourkela-1, founded in 1956, is supposed to be the oldest in the District. There are also other Gurudwaras located at Rajgangpur, Biramitrapur, Kansbahal and Rourkela Sector-18. The chief festivals observed by the Sikh community are the birthday of Guru Nanak and Guru Govind Singh, the days of Martyrdom of Guru Arjuna Singh and Guru Teg Bahadur and Baisakhi.

Property and inheritance: As regards property and inheritance, the Hindu of the District is governed by Hindu Law and the Muslims by the Mohammedan Law. The Hindu Succession Act, 1956 has amended and codified the law on the subject. It has defined the rights of Hindu women to property and has conferred rights on them which they did not enjoy previously. The most outstanding features of the law is that it has placed both the sons and the daughters on an equal footing by virtue of which they can share the property of their parents in equal proportions.

In tribal societies the rules of law are not strictly followed. Particularly in remote places far away from the Government headquarters, they take recourse to traditional customs and ethical principles or deciding cases of inheritance. For example, among the Oraons, Mundas and Kharias, the daughters do not get any share from the immovable assets of the parents. In case of no male issue the nearest relations of the father inherit the property except where the father leaves a 'will' for the daughter. Further, the daughter may claim the property if her husband stays with her at the residence of her father. In course of time her sons inherits everything belonging to their maternal grandfather.

Marriage and Morals: Traditionally, a Hindu marriage is monogamous though polygamy is in vogue under special circumstances, but at present according to law there has been strict regulation to maintain the monogamous pattern*. A Christian or a tribal is invariably monogamous.

Almost every caste and tribe maintains clan exogamy. Marriage with prohibited degree of kins is not allowed. The Bhuiyans and the Oraons generally marry outside the village. There is no restriction on marriage among the Bhuiyans within the same sept. Among Kharias, rules of avoidance with younger brother's wife and wife's elder sister are strictly followed.

Dowry system is prevalent in the society and the problem is more acute among the so called educated and the sophisticated society. Among the tribal giving away a daughter in marriage is considered as an economic loss, as a corollary to the loss, alternatively exchange of sisters take place. In the

absence of such a reciprocal system, the girls' parents are duly compensated by a payment of bride price, which includes some money in cash and a few heads of cattle.

Divorce is rare among the upper caste Hindus. They also do not allow remarriage. But these are permissible under certain circumstances among many castes and tribes. Divorce on the grounds of sterility, impotency, neglect of household duties and adultery is common. If adultery is committed between a Bhuiyan man and woman the matter ends in marriage, but if the man belongs to another caste, the woman is outcasted.

Civil Marriage: The Government of India's Special Marriage Act was first passed in 1872. It was substituted by the Special Marriage Act, 1954 with certain modifications. This new Act was enforced on the first day of January, 1955 and the Government of Odisha framed the rules to implement the Act in the same year. Under these rules Civil Marriages are registered by the Sub-Registrar.

FAIRS, FESTIVALS AND CEREMONIAL PRACTICES:

The District with its alluring legend and history contains many temples and shiners where people of different faiths congregate on many religious and festive occasions. Vedavyasa a beauty spot near Rourkela, located at the confluence of the rivers – Sankha and Koel, is a famous place of pilgrimage for the Hindus. Its sanctity is due to the location of Lord Siva. According to local tradition sage Vyasa, the celebrated author of "The Mahabharata" is said to have been born here. Fairs and melas are common in the District and area held throughout the year. Some of these fairs have a religious origin. On such festive occasions the people get scope to rejoice and also avail the opportunity of purchasing many articles from outside traders who come with their merchandise from distant places. Tribal dance, chow dance, opera and magic shows, etc are some of the usual features of these melas.

A list of some important fairs of the District is given in appendix-III

The people observe a number of festivals in accordance with their respective religious beliefs. Besides the Hindu festivals, the tribals also celebrate some peculiar festivals of tribal origin. The Christians, Muslims, Jains, Sikhs and Buddhists celebrate festivals enjoined by their respective religions.

The important Hindu festivals of the District are Mahavisuva Sankranti Akshaya Tritiya, Raja, Ratha Jatara, Janmastami, Ganesh puja, Durgapuja, Dasahara, Kumarpurnima, Kalipuja or Dipavali, Makar and Saraswati Puja. Besides, Nuakhai Bhai Jauntia, etc are observed as important social festivals.

Most of the tribal festivals synchronise with their agricultural operations. They have also adopted many Hindu festivals due to years of close cultural contact with their Hindu neighbours. Their principal festivals are Makar Sarji; Mialjao, Alsua Trutia (Muthi Chhina), Gaja pausa purnima (Pus Punei), Karama, Ind, Dola jatra or Faguna jatra.

Home, Community and Social Lives

Housing: Most of the houses of the District are small huts made of mud, bamboo, grass and tiles. Tiles roofs are common and about 70 per cent of the dwelling houses have been built with mud tiles, called *Khapar*, and about 60 per cent of the houses have mud walls. The impact of economic development has brought in some changes in the type of houses in the rural areas. Costly building materials like iron sheets, rods, asbestos, cement bricks are gradually being used to construct houses in rural and urban areas by the people of the higher income group.

Adibasi settlements are usually built on undulating lands and in some rare cases they also construct their huts on the top or on the slopes of hills. Tribes like the Kharias and the Hill Bhuiyas who are mostly dependent upon the forest for their living prefer to remain in its proximity. An Adibasi hut is always kept neat and clean. The huts are very small in size and the space inside is scanty for a family dwelling. The interior is divided into two compartments. An Adibasi village maintains separate dormitories for the youths. There are usually located at the entrance of the village having separate halls for boys and girls to sleep.

The cattle shed is constructed as a part of the house and compost pits are dug near the dwellings. Conditions in most of the towns of the District are far from satisfactory. Congested markets, narrow and ill maintained lanes and slums are common. But the picture of the well planned steel township at Rourkela is an exception. It is neat and well maintained having many modern facilities.

Furniture and decorations: The possession of furniture varies with the economic status of a person and his social standing. In an average household absence of costly furniture is noticed. The proper section of the population possess a Khatia (indigenous cot) strung with rope. A well to-do family usually has chairs, tables, admirals, stools, teapots, cots, etc. Radios and transistors, attractive wall clocks and fans, etc. are no longer articles of luxury but of comfort and necessity for the upper strata of society.

The tribals use mats which their women weave with date palm leaves. In a very few tribals homes are found one or two string stools (called Machia-'kando- by Oraons and Pidha by Mundas) to sit on similar seats made of straw while taking their food. All these furniture are made by the tribes themselves.

Among the tribes, the Oraons in particular are very meticulous in keeping their houses neat and clean. They wash the floors and walls of their houses with cow dung almost twice a week and keep the courtyard and the surroundings clean. On special festival occasions the floors and walls of the other caste people are washed with cow-dung and alpana designs are drawn on the wall. The drawings of birds, animals, flowers and geometrical designs are also found on the walls.

Dress: The common dress of the people is a dhoti for the male and a sari for the female. A humble cultivator never bothers to cover the upperportion of the body and occasionally wears a banyan or a Kurta (half shirt) made of cheap mill made cloth. In winter he uses a coarse cotton chaddar. Use of shoes or chappals was very rare, but has become very common in rural areas. The traditional tribal dress is a loin cloth and a coarse towel. In past the Oraons were using banna-kareya (multi-coloured loin cloth) which is no longer popular and are used only by some older people in remote villages.

The women-folk wear colourful saris and generally preferred the hand loom saris woven by local weavers due long lasting quality, but now they use both coars and fine saris, towels and shawl even in the village areas . Use of blouse as an upper garment is limited to the females in general as the wage rates of all categories of labourers have gone up by several revisions of the 'minimum wages from 1990s in Odisha. The Christian tribal women have come to mark a distinction for themselves because of 'decent code of conduct' applicable on occasions that have become almost habit for them.

In remote tribal villages small children go naked or use narrow loin cloth between the legs, but use of half pants has become very common now including those 'Bormuda' types.. In recent years there has been a remarkable change in the dress among the urban people and the young students. Bush shirts and drain pipe trousers have become very popular among the males.

Ornaments: A variety of ornaments are worn by the females. The people belonging to low income group were beads, and bell metal, lac and plastic ornaments. Those who can afford go in for silver and gold ornaments. The principal indigenous ornaments are Sinthi, chaurimundi, panpattar and jhumpa for head; khagla, Kanthimal, and hansuli for neck; dhal, bali, karnaphula, phasia, and baulkadhi for ears; dandi, makaphula, motha, phuli and basuni for nose; Batha tada, bahna suta and anant for arms; kataria and handuria for wrist; kardhani and anta suta for waist; and pajhari, goda mudi and jhauntia for feet. These ornaments are popular only in rural areas. Women of well to do families generally use gold necklaces, trinkets and other silver or brass ornaments. Young girls wear plastic and silver

ornaments and other modern ornaments including bracelets, armlets, chains and ear-rings. Nose ornaments which disappeared temporarily are again becoming popular. The ornaments like banduria and kaaturia have pointed protrusions and are massive and strong. Instead of fulfilling the urge for decorating the body such ornaments were probably used for defense. They are gradually losing popularity. This aversion is invariably marked among the women of the urban areas. Males in the urban areas do not generally wear any ornament except rings.

The traditional tribal ornaments are now becoming obsolete. Usually they procure cheap metal or plastic ornaments from village huts or from distant markets. Flowers, feathers, wild nuts and cowry shells are also used by the tribals for decoration.

Personal decoration: The tribals are very fond of personal decoration. At the time of social functions, both men and women wear gaudy costumes. The girls adorn their hair with jungle flowers. Sometimes, they decorate their head with so much flowers that their coiffure is hardly visible. Generally the coiffure is of Sambalpuri type. The Khosa or the hair knot is set to the right or left at the back but the educated girls coil the plaited hair and fix hair pins. The men generally cut their hair short and shave their beards. Among women tattooing on face and other parts of the body is common but the educated girls are averse to it. The use of modern cosmetics is limited only to the sophisticated few; even the use of soap is rare.

Food and drink: Rice is, of course, the principal food, but it is supplemented by millets. Maize and pulses form a large part of the dietary of the people. About 30 years ago use of wheat and wheat products were almost confined to a few rich families, but on account of the rising prices of rice and supply of wheat at comparatively cheaper rates many people are now changing over to wheat for their night meal. Besides, bread has become very popular among the urban people. The poorer section of the community, specially the tribals, supplement their food by many kinds of edible roots, fruits and flowers collected from the forest.

Generally the people take three meals a day, but those with meager resources can hardly afford this throughout the year. A poor man's meal consists of boiled rice, either hot or soaked in water, chilly, onion, salt fried edible leaves (sago) or boiled pulses (dal). Flattened rice (chuda) or puffed rice (murhi or lia) is usually served as tiffin.

All kinds of fish and meat are relished but the taste and habit differ from one caste or community to another. Goat meat and mutton are preferred. The Hindu community and some Adivasis do not eat beef and pork. Some tribals even relish the meat of bear, crab, tortoise, etc.

Milk is hardly included in a common man's diet. Most of the tribals do not drink milk at all. Different kinds of sweets and savouries are prepared by the house wife on special occasions and during festivals.

Mustard oil is the main cooking medium. Ghee is rarely used due to its scarcity and high price. Hydrogenated oil has almost replaced ghee in many kitchens. Cheaper edible oil extracted from mahua seeds is generally used by the poorer people throughout the District.

Tea has been accepted as a popular beverage in almost all sections of population. Tea stalls are found on road side and can be found in every big village even in the remote corner of the District. Drinking of country liquor (handia/ kusuna) is customary with the Adivasis. Besides, people drink daru (country liquor social more in the industrial and mining areas. Both country and foreign liquor are sold on festivals and social occasions.

Smoking of tobacco is very popular among the males. The tribals use kahali i.e. a cheroot made of country tobacco enclosed in sal leaves. Besides, bidis and factory made cigarettes are sold throughout the District. Chewing of betel leaves is also common. Smoking of ganja is forbidden.

Folk dance and music: Dance and music are the part of life of the tribal people of the District. After the tiresome day they congregate in the evening and sing and dance to the tune of high pitched madul, pheckka, gini and flute. No festival and ceremony is considered complete which goes without a dance performance in which both men and women participate. Because of the impact of Christianity some tribal people have relinquished many of their customs, rites and dances. Christian missionaries discourage folk dancing and it is forbidden to the followers of Christianity. The tribes do not need any special preparation by way of customs or ornaments to begin a dance, and they perform it at their own sweet will.

Though much akin to each other, each tribe maintains its own characteristic dance which they have preserved for centuries. But during recent years it is not surprising to find Adibasi belles singing in popular film tunes in remote villages.

Brief accounts of some important communal dances are given below.

1. **Oraon dance:** The dance always takes place in the open air, in front of the 'akhada' (village club house) which is close proximity to the village headman's house. Whenever the young men go to the akhada (literally means pendal) and beat drums, the girls come out of their houses to join them. They have characteristic round dance. Each dance is synchronised with the beat of drum and the song of the occasion like Fagun, Jeth yatra, Sarhul, Karma, Eind, Sohrai, Jadura and Damkach. Marriage songs and dances are many exactly matching the nuptial occasion, such as

Ghardekhi, Lotapani, Madwa and Bidai. In other than Nuptial occasions, mandar and dhulki is used as drums. In Nuptial occasions use of Dhank, Nagera, Sahnai and Bhenr is obligatory. The young men or women begin the dance by holding each others hands headed by an expert dancer. Then the rhythm of the drum changes, giving indication for change of song matching the steps. They make circles bending forward and backward, placing left leg in the front and the right leg in the back and vice versa. The hands are placed on the neighbour's waist band and are crossed. The steps of the dance vary with the change in the rhythm of the drums beats. Peculiar characteristics of the dance are displayed when dancers sit down and move their legs knees bent as if in 'puchi' frolick. Nuptial dances have more rhythmic movements exerting violent physical postures. The new comers can't catchup without prior practice. On the occasion of Barat' the Oraons play war dance called 'Painki' in the welcome ritual from the bride side. The swords, spears and bamboo sticks are used in the '**painki** dance' with marital decorations doning turban, ghunghru and chawnwar made of yak hair. Acrobatics are displayed by the expert fun makers appearing in the scene. They are usually elderly persons in funny dresses and drunk. They provide much amusement to women and children.

2. **Kharia dance:** The Kharias of Sundargarh District perform dance during the festivals of Phaguna Punnei, Bhai Jauntia, Karma, Biha, etc. Though they perform the common round dance, their steps are different. Both men and women take part in the dance. While dancing Biha, baramasi and Jatra songs which are in the Khadia/Sadri dialect. The Kharia girls wear different types of ornaments and adorn their coiffure with flowers and leaves. Madal remains the only accompanying instrument of their dance.
3. **Kisan dance:** The Kisan perform Phagua, jadur, Karama, Jhumar, Eind and Biha dance on different occasions. Each dance has its own peculiar steps and movements. Their dance is also of round type in which both men and women take part. Kisan dance has more variety in dance steps matching the songs and most often they use local incidents falling into the occasion framing their 'impromptu' songs which other tribes don't. In Biha and marriage dance they sing marriage songs in their own dialect. **Madal** is the musical instrument used in all their dances with 'perforated' dhank and '**humbo**' i.e. the horn of bison which has one side small hole opening that the blower uses to blow in for producing musical notes.
4. **Changu dance:** The change dance is still prevalent among the hill Bhuiyans living in the wild highlands of the inaccessible hill ranges of Bonai. The Bhuiyan boys and girls of the same village or the neighbouring villages are free to dance together at their sweet will and

during the dance a young man is at liberty to seize the hand of a girl he intends to marry and escape with her to the jungle. Such marriages are not infrequent and have customary social sanction. The Changu dance of the Bhuiyans possesses some peculiar characteristics, though it is not as lively as the dance of the some other tribes. The men having a Changu (a crude kind of tambourne nearly two feet of diameter) each march round hopping in a circle, beating these. They sing Chhanda, Choupadi and other amorous songs mostly composed by the village composers. The girls while dancing are usually veiled and dance opposite to the boys. When they move forward, the boys move backward and vice-versa. Hip movements predominate in the dance.

5. **hoomer dance:** Jhoomer dance is prevalent among the Mundas of Bonai area. As it is danced in accompaniment to the Jhoomer song, it has been named so. It is a group participated by both men and women. Mahantos also do the jhoomer dance, but only men take part. Chitra Parva, Karama and Kali Puja are some of the festivals on the occasion of which this dance takes place. Movements of hips, wrists and wavy movements of the body are some of the peculiar characteristics of this dance. The dance looks very beautiful for its symmetrical movements and is marked for its harmonious blending of rhythm and movement.
6. Bandi bottle means a broken bottle. It is not known why it has been named so. This dance is performed in fairs, festivals and on some auspicious occasions. Two or three boys dress themselves as girls and dance with amorous movements. Another person dances with them with loose movements not pertaining to any style. All of them sing and dance, love song being common. The songs are repeated by a band of chorus singers. Sometimes story songs from the mythologies are also sung. Dholak and brass cymbals are played in accompaniment to the dance. Sometimes the movements and the songs are vulgar. It provides light type of entertainment.
7. **Chhow dance:** Chhow dance is prevalent in Bonai and usually performed during the Chaitra Parva. It is not an indigenous dance of this area. It is said that the tradition has been imbibed from Saraikala, the seat of the Chhow dance. As the ruler of Bonai took fancy in this dance, they brought dance teachers from Saraikala who taught the art to the local technique of folk dances have been infused into it, especially the techniques of Jhoomer, Kol, and Munda dances clearly discernible. As chow dance is connected with some rituals, it is not danced during other times of the year.

8. **Gouda dance:** The Gouda dance is prevalent among the Gouda caste people of Hemgir area. In the month of *Pausa* (December- January), they assemble and dance with beating of drums and sticks accompanied with song. Only male members take part in the performance.

The above mentioned dances are important folk dances in the District Sundargarh which have been handed down through generations and are maintained in a fluid tradition, which manifest the temperament, art, culture, customs and the creed of the people. The impact of the modern sophisticated civilization has not been able to efface them yet.

Folk songs: For the tribal people of Sundargarh, music is predominantly a matter of tradition, of ritual, of physical or spiritual well-being. Music plays an important part in the village life. Music is associated not only with dance, songs proper but also with rituals associated with spring customs, wedding and other ceremonies. Almost all the tribes sing in their own dialect expecting on a few occasions when they sing Odia songs (In local dialects) but with tribal accent.

Folk songs play an important part in the village life of the people. Beginning from the pain to pleasure, they cover the entire gamut of human emotions. As folk songs are liable to growth and change, these songs are also changing in Sundargarh. But it is a pity that the impact of the modern industrial civilisation is sophisticating their genuine characteristics.

Recreation: Hunting, fishing, and cock- fighting are the traditional pastime of the rural people. Dance and music also constitute the most popular and favourite pastime. The festival and other social functions round the year never leave them in want of mirth. They trek long distances to fair and market to enjoy social life as well as fun and gaiety. Occasionally opera parties and itinerant cinema and circus visit the rural areas. During that short period the people forget their drab daily routine work and enjoy their life. Community radio listening sets supplied by the Government to different institutions of the District also draw good audience.

In urban area cinema is a common source of entertainment. Recreation clubs, associations, sports, games, variety shows and religious discourses, etc., provide recreation to the people of the District. Hockey and football matches are popular and draw large crowds. In inter- District and all Odisha athletic meets Sundargarh District has earned distinction role in offering recreation to the people.

Impact of abolition of Zamindari system: The former princely States of Gangpur and Bonai constitute the present District of Sundargarh. In these two ex-States there were estate holders who were known by different names, Viz., Zamindar, Jagirdar, Kharposhdar and Pragandar. Besides, commensurate with the feudal order various service tenures were also in

vogue which kept in such tenure holder in the State of semi-slavery. With the merger of the feudatory States of Odisha with Odisha province on the 1st January, 1984, and the subsequent abolition of all intermediary interest in land the age long feudal rule in the area came to an end and direct contact between the Government and the tenants was established. The abolition of the intermediary system brought in a rational system of land revenue collection and cultivators were assured of their right over the land they cultivated. This was an important change and vital for the socio-economic life of the people. Under the change circumstances the common man feels more secured and free. The rapid industrialisation of the District and the spread of education have helped in a steady rise in the living standard of the people and in broadening their mental horizon. The tribal population is also getting accustomed to the modern way of life.

Migration, Displacement and Rehabilitation:

Migration, displacement and rehabilitation in the District have become the central issues since the rise of the era of industrialisation. The number of displaced persons in Sundargarh District from 1946 to 1951 was 681 (367 males and 314 females), out of which 86 (55 males and 31 females) were from West Pakistan (present Pakistan and 595 (312 males and 283 females) from East Pakistan (Present Bangladesh). All these were settled in different parts of the District. Various facilities were provided to rehabilitate them and loans were also given to enable them to become self-sufficient.

When the Rourkela Steel Plant (RSP) was established, Ac.19722.690 of land was acquired from 32 villages and handed over to RSP. Due to the acquisition, 2,975 families were uprooted. Arrangement was made to resettle the displaced families in the resettlement colonies of Jhiripani and Jalda villages and in other 15 resettlement colonies, i.e. (1) Sankarla, (2) Tainsar, (3) Sukuda, (4) Silikuta, (5) Ulandajharan, (6) Hatidharsa, (7) Kacharu, (8) Raghudharsa, (9) Bartagutu, (10) Ursa, (11) Kadlibahal, (12) Rantokenduberna, (13) Gahami, (14) Champajharan and (15) Amgaon. In these colonies 684 families were resettled. To help the displaced persons to resettle and rehabilitate themselves the following assistance has been given and expenditure incurred which are shared equally between Hindustan Steel Limited and the State Government:

- (a) A plot of land measuring 60' X 40' in the resettlement colonies free of cost for construction of houses by each family.
- (b) A subsidy to each family ranging from Rs. 200/- to Rs. 400/- for the construction of new houses.
- (c) Grant of cultivable waste land in lieu of acquired cultivated land free of cost up to a maximum of 33 acres to each recorded tenant and

(d) Land reclamation subsidy of Rs. 100/- per acre to each family.

As in 1990, the number of families settled in each colony was reported by the RLO and the RSP as follows.

Table 38: Land Schedule different Reclamation Camp/ Resettlement Colonies offered to the Displaced Persons and Recorded in their favour.

SI. No.	Name of the reclamation camp	Total no. of raiyats	Total area allotted	Agricultural land	Total area allotted in the reclamation colony
1	Sankarla	2		8.97	
2	Tainsar	43	6.45	154.33	
3	Sukuda	16	3.20	105.32	
4	Silikuta	77	21.00	566.06	
5	Ulundajharan	37	1.20	83.20	
6	Hatidharsa	52	10.40	236.37	
7	Kacharu	25		62.13	
8	Raghudharsa	19		82.86	
9	Bartagutu	4	0.08	24.15	
10	Usra	11	2.20	57.00	
11	Kadlibahal	7	3.53	50.44	
12	Rantokenduberna	13		75.23	
13	Gahami	67	17.35	378.99	
14	Champajharan	41	5.40	323.24	
15	Amgaon	270	83.87	1774.74	
	TOTAL	684	155.40	3983.12	4318.52
Resettlement colonies					
1	Jhiripani	1611 plots			88.60
2	Jalda ABC				98.28
	Total	3398 plots			186.88

The Mandira Dam was built by Hirakud Dam organisation for the Hindustan Steel Limited. The work started in February 1957 and was completed in June 1959. For the construction of the Dam, 31 villages were acquired and 1193⁷ families were affected. Arrangement was made to resettle the Mandira Dam displaced families in six re-settlement colonies, i.e. (1) Lachhda, (2) Jhandapahad, (3) Laing, (4) Usra, (5) Jaidega and (6) Bankibahal. Out of the 1193 families only 639 families were settled in these colonies. Other displaced families resettled in their old villages according to their choice. Each displaced family was provided with Government land for agriculture purpose at the rate Ac. 5.00 in maximum.

⁷ Office of the Special Officer-cum-ADM Rourkela, letter no. 14/8 dated 14.12.1995

Due to the establishment of the **Utkal Machinery Limited at Kansbahal**, 236.27 acres of land were acquired from four villages of Kansbahal (129.65 acres), Panposh (97.08 acres), Dheluan (5.38 acres) and Chungimati (4.21 acres) of Sundargarh Sub-Division. As a result, altogether 34 families having a total population of 183 were uprooted. The displaced persons were rehabilitated at Kansbahal Resettlement Colony. Each displaced family has been allotted a plot of homestead land. Out of these displaced families, 13 families were given a subsidy @ Rs. 400/- each and 6 families @ Rs. 300/- each for construction of their new houses.

The Volume of Migration in the District was very low up to 1951. After independence, people from the erstwhile East Pakistan, now Bangladesh have been settled in and around Rourkela. According to the 1961 Census, due to rapid industrialisation and urbanisation this District attracted a large number of migrants who constituted 16 per cent of the total population then. The majority of migrants hail from Bihar, Jharkhand, Madhya Pradesh, Chhatisgarh, West Bengal, Punjab and Andhra Pradesh. In 1961 there were 2,677 persons belonging to different foreign countries who were temporary residents in this District then. These people came mostly from West Germany and other European countries at the time of establishment of the steel factory at Rourkela with West-German collaboration. Migrants born outside the District, outside the State and outside the Country, as per 1961 Census are indicated below:-

Table 39: Migrant Population in Sundargarh District- 1961

Place of Birth	Males	Females	Parsons	Percentage
Person born at place of enumeration.	2,85,637	1,80,448	4,66,085	61.4
Persons born elsewhere in the District of enumeration	47,283	1,23,626	1,70,909	22.5
Persons born in other District of the State	24,266	22,021	46,287	6.1
Born in other States in India	36,822	34,327	71,149	9.4
Born in countries outside India	1,733	944	2,677	0.4
Unclassifiable	473	1,037	1,510	0.2
Total	3,96,214	3,62,403	7,58,617	100.0

Availability of plenty of minerals, especially coal, iron ore, bauxite, manganese, zinc, limestone etc has attracted many industries to the District. These industrial and mining units have directly created huge demand for work force of different kinds, like, highly skilled, skilled, semiskilled and unskilled population. Employment in the service sector has increased in order to cater different services to the growing population in the District.

Apart from the land provided to the displaced persons in the resettlement colonies, employment was provided in the Rourkela Steel Plant (RSP) to 4671 persons. In case of Mandira dam project, employment was provided to 578 persons.

Special Development Schemes of Tribal Development:

Integrated Tribal Development Agencies (ITDA) have been set up for intensive development of Scheduled Tribe areas with infrastructure schemes and beneficiary oriented schemes. Under Article 275 of the Constitution of India, common infrastructures like hostels, bridges and roads have been built in the District through the three ITDAs. Under the same scheme, quality education centres called Ekalavya Model Residential Schools (ERMS) have been set up under Odisha Model Tribal Educational Society (OMTES) at Lahunipada, Laing and Bhawanipur (Kirei), out of 13 such schools in the State. These schools impart all streams of education upto +2 at 100per cent government cost.

The ITDAs have also taken up financing of subsidy to the bankable projects to the Scheduled Tribe Loanees under Differential Rate of Interest (DRI) loans as well as normal loans for crop husbandry, animal husbandry, transport and household and cottage industries. Besides, award of stipend to Scheduled Tribe students in all the educational institutions including their own schools like Ashram Schools, Shevashrams and High Schools is carried out.

The rate of stipend in the latest revision is Rs. 7500.00 per boy and Rs. 8000.00 per girl per annum for boarders in Class-I to X. Day Scholars from Class-I to V are not given any stipend, whereas, day scholars in Class-VI and VII get Rs. 180.00 per boy and Rs. 240.00 per girl per annum. The rate of stipend for Class-VIII Day Scholars is Rs. 240.00 and Rs. 300.00 respectively per boy and girl per annum. Over and above these rates the day student in Class-IX and X are given scholarship at the rate of Rs.1500.00 per annum from centrally funded scheme. The corresponding rate for the boarders is Rs.3500.00 per annum. Besides, adhoc grant for day scholar boys and girls of class-IX and X for purchase of books is given at the rate of Rs. 750.00 per annum and the corresponding rate for the boarders is Rs. 1000.00 per annum. For education of Scheduled Tribe girls in the secondary level, Kanyashrama have been established at 21 important tribal concentrated pockets of the District, i.e. Khuntgaon (Lahunipada), Tudalaga (Bargaon), Jampali (Rajgangpur), Kumjharia (Kuanrmunda), Balisankara, Tilekiani (Balisankjara), Ratobirkea (Lathikata), Gurunida, Baidipali (Bonai), Soyamba (Koida), Jamudihi (Koida), Bisra, Nuagaon, Lahanda (Nuagaon), Dahijira (Kutra), Baragad (Sundargarh), Chhatasargi (Subdega), Chhatenpali (Lephripada), Chhotbanga (Lephripada), Khajuribania (Hemgiri) and Telendihi (Tangarapali). The girl students are provided school expenses and fooding and lodging.

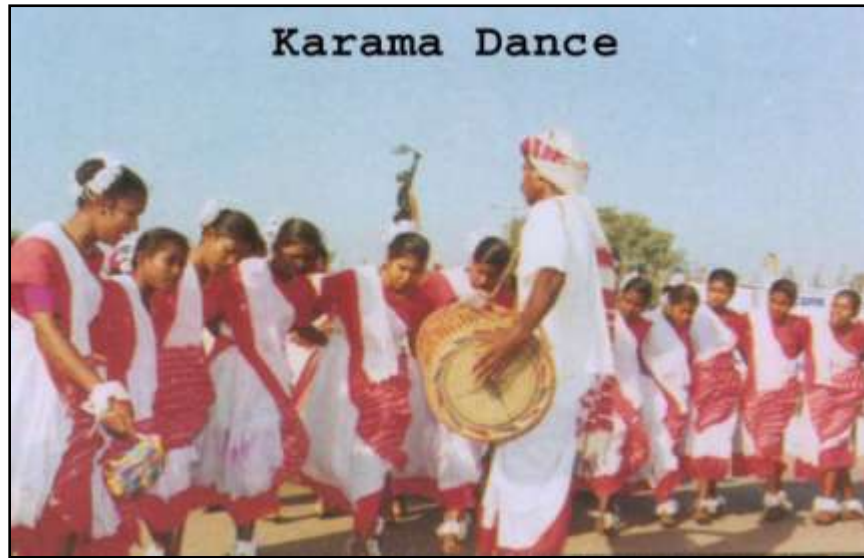


Plate: 1- Karama Dance (Top), Bamboo artisans at workshop (Bottom)



Plate: 2- Artisans at making of bamboo artifacts (top), Decorative bamboo products (bottom)



Plate: 3- Terracotta products (top), Painted terracotta (bottom)

APPENDIX- VI- Police-station-wise distribution of population (rural and urban) of Sundargarh District-2001 and 2011

Sl.No.	Sub-Districts (Police Stations)	Population						Percentage decadal variation 2001-2011			Percentage urban population	
		Total	2001 Rural	Urban	Total	2011 Rural	Urban	Total	2011 Rural	Urban	2001	2011
01	Hemgir	75694	75694	0	84559	84559	0	11.71	11.71	0.00	0.00	0.00
02	Lephripara	64399	64399	0	70547	70547	0	9.55	9.55	0.00	0.00	0.00
03	Bhasma	39874	39874	0	42101	42101	0	5.59	5.59	0.00	0.00	0.00
04	Dharuadihi	32834	32834	0	35427	35427	0	7.90	7.90	0.00	0.00	0.00
05	Sundargarh Town	40943	2522	38421	48969	3933	45036	19.60	55.95	17.22	93.84	91.97
06	Sundargarh	65558	65558	0	74134	74134	0	13.08	13.08	0.00	0.00	0.00
07	Kinjirkela	51095	51095	0	57452	57452	0	12.44	12.44	0.00	0.00	0.00
08	Talasara	71643	71643	0	80443	80443	0	12.28	12.28	0.00	0.00	0.00
09	Baragaon	70258	70258	0	77943	77943	0	10.94	10.94	0.00	0.00	0.00
10	Kutra	58330	58330	0	66462	66462	0	13.94	13.94	0.00	0.00	0.00
11	Rajagangapur	143722	87699	56023	166131	102449	63682	15.59	16.82	13.67	38.98	38.33
12	Raiboga	36474	36474	0	43474	43474	0	19.19	19.19	0.00	0.00	0.00
13	Biramitrapur	80315	50868	29447	96881	54396	42485	20.63	6.94	44.28	36.66	43.85
14	Hatibari	53452	53452	0	61931	61931	0	15.86	15.86	0.00	0.00	0.00
15	Bisra	85463	85463	0	98455	98455	0	15.20	15.20	0.00	0.00	0.00
16	Bondamunda	12220	12220	0	14399	14399	0	17.83	17.83	0.00	0.00	0.00
17	Brahmani Tarang	49043	49043	0	57664	57664	0	17.58	17.58	0.00	0.00	0.00
18	Raghunathapali	22420	1162	21258	26095	1368	24727	16.39	17.73	16.32	94.82	94.76
19	Tangrapali	5022	5022	0	5851	5851	0	16.51	16.51	0.00	0.00	0.00
20	Lathikata	22000	15104	6896	24846	17441	7405	12.94	15.47	7.38	31.35	29.80
21	Chandiposh	18585	18585	0	21864	21864	0	17.64	17.64	0.00	0.00	0.00
22	Kamarposh Balang	35508	35508	0	42854	42854	0	20.69	20.69	0.00	0.00	0.00
23	Koida	33211	33211	0	40824	34061	6763	22.92	2.56	0.00	0.00	16.57
24	Lahunipara	66890	62654	4236	77841	73372	4469	16.37	17.11	5.50	6.33	5.74
25	Gurundia	30960	30960	0	35256	35256	0	13.88	13.88	0.00	0.00	0.00
26	Tikaetpali	21055	21055	0	23589	23589	0	12.04	12.04	0.00	0.00	0.00
27	Banei	54529	54529	0	61804	54724	7080	13.34	0.36	0.00	0.00	11.46
28	Mahulapada	16263	16263	0	19191	19191	0	18.00	18.00	0.00	0.00	0.00
29	Raurkela (M)	2,59,553	0	2,59,553	320040	0	320040	23.30	0.00	23.30	100.00	100.00
30	Raurkela (ITS)P.S.	2,13,360	0	2,13,360	216410	0	216410	1.43	0.00	1.43	100.00	100.00
	District Total	1830673	1201479	629194	2093437	1355340	738097	14.35	12.81	17.31	34.37	35.26

APPENDIX- VII Distribution of villages according to population range and amenities available, 2011

Population range	Number\ Percentage	Number of inhabited villages in each range	Education*	Medical^	Drinking water	Post office #	Type of amenity available Telephone **	Transport communications §	Banks®	Agricultural credit societies	Approach by pucca road	Power supply
1	2	3	4	5	6	7	8	9	10	11	12	13
1-499	Number	752	669	161	745	68	644	232	0	0	367	525
	Percentage		88.96	21.41	99.07	9.04	85.64	30.85	0	0	48.8	69.81
500-999	Number	513	512	148	513	113	513	230	0	0	330	438
	Percentage		99.81	28.85	100	22.03	100	44.83	0	0	64.33	85.38
1000 – 1999	Number	332	331	164	332	172	332	201	0	0	265	318
	Percentage		99.7	49.4	100	51.81	100	60.54	0	0	79.82	95.78
2000 – 4999	Number	113	113	90	113	92	113	98	0	5	97	113
	Percentage		100	79.65	100	81.42	100	86.73	0	4.42	85.84	100
5000 – 9999	Number	3	3	3	3	3	3	3	3	2	3	3
	Percentage		100	100	100	100	100	100	100	66.67	100	100
10000 +	Number	0	0	0	0	0	0	0	0	0	0	0
	Percentage		0	0	0	0	0	0	0	0	0	0
District Total	Number	1713	1628	566	1706	448	1605	764	3	7	1062	1397
	Percentage		95.04	33.04	99.59	26.15	93.7	44.6	0.18	0.41	62	81.55

Note:-

* Education includes all education facilities.

^ Medical includes all medical facilities.

Post office includes post office, telegraph office and Post and telegraph office.

§ Transport communication includes bus service, railway facility and navigable waterways.

@ Bank includes Commercial Bank and Cooperative Bank.

** Telephone includes Telephone, PCO and Mobile

APPENDIX- VIII

Distribution of workers by sex in four categories of economic activity in Blocks, 2011

Sr. No.	Name of CD Block	Persons/ Males/ Females	Total population	Total workers (main + marginal workers)	Category of Workers							
					Cultivators		Agricultural labourers		Household industry workers		Other workers	
					Number	per cent	Number	per cent	Number	per cent	Number	per cent
1	Hemgir	Persons	84559	42832	12210	28.51	18159	42.40	906	2.12	11557	26.98
		Males	42670	26166	9434	36.05	7617	29.11	513	1.96	8602	32.87
		Females	41889	16666	2776	16.66	10542	63.25	393	2.36	2955	17.73
2	Lephripara	Persons	78808	42362	9942	23.47	25810	60.93	1350	3.19	5260	12.42
		Males	39454	23522	7470	31.76	11602	49.32	682	2.90	3768	16.02
		Females	39354	18840	2472	13.12	14208	75.41	668	3.55	1492	7.92
3	Tangrapali	Persons	64374	30561	6256	20.47	14133	46.25	1205	3.94	8967	29.34
		Males	32171	18744	4739	25.28	7170	38.25	521	2.78	6314	33.69
		Females	32203	11817	1517	12.84	6963	58.92	684	5.79	2653	22.45
4	Balisankara	Persons	85690	43825	11178	25.51	25796	58.86	827	1.89	6024	13.75
		Males	42087	24208	9093	37.56	10903	45.04	470	1.94	3742	15.46
		Females	43603	19617	2085	10.63	14893	75.92	357	1.82	2282	11.63
5	Subdega	Persons	64254	32087	6589	20.53	18492	57.63	546	1.70	6460	20.13
		Males	31951	18042	5367	29.75	7821	43.35	323	1.79	4531	25.11
		Females	32303	14045	1222	8.70	10671	75.98	223	1.59	1929	13.73
6	Sundargarh	Persons	70911	35705	8208	22.99	16217	45.42	1070	3.00	10210	28.60
		Males	35523	20874	6122	29.33	7039	33.72	575	2.75	7138	34.20
		Females	35388	14831	2086	14.07	9178	61.88	495	3.34	3072	20.71
7	Baragaon	Persons	71242	37933	10552	27.82	17941	47.30	688	1.81	8752	23.07
		Males	35599	21055	7677	36.46	6798	32.29	421	2.00	6159	29.25
		Females	35643	16878	2875	17.03	11143	66.02	267	1.58	2593	15.36
8	Kutra	Persons	80470	36057	14246	39.51	11806	32.74	1065	2.95	8940	24.79
		Males	40380	22367	10076	45.05	4955	22.15	604	2.70	6732	30.10

9	Kuanrunda	Females	40090	13690	4170	30.46	6851	50.04	461	3.37	2208	16.13
		Persons	97870	37928	12795	33.73	8084	21.31	1915	5.05	15134	39.90
		Males	48848	26526	10679	40.26	3527	13.30	1253	4.72	11067	41.72
10	Nuagaon	Females	49022	11402	2116	18.56	4557	39.97	662	5.81	4067	35.67
		Persons	106156	47608	17935	37.67	17817	37.42	943	1.98	10913	22.92
		Males	52730	29469	13777	46.75	7344	24.92	545	1.85	7803	26.48
11	Bisra	Females	53426	18139	4158	22.92	10473	57.74	398	2.19	3110	17.15
		Persons	68629	26795	7164	26.74	4239	15.82	1406	5.25	13986	52.20
		Males	34308	18144	5349	29.48	1630	8.98	838	4.62	10327	56.92
12	Lathikata	Females	34321	8651	1815	20.98	2609	30.16	568	6.57	3659	42.30
		Persons	82324	35309	9871	27.96	8680	24.58	1657	4.69	15101	42.77
		Males	41324	23200	8035	34.63	2894	12.47	1214	5.23	11057	47.66
13	Rajagangapur	Females	41000	12109	1836	15.16	5786	47.78	443	3.66	4044	33.40
		Persons	95142	39458	10426	26.42	11914	30.19	983	2.49	16135	40.89
		Males	47369	25325	8593	33.93	4047	15.98	599	2.37	12086	47.72
14	Gurundia	Females	47773	14133	1833	12.97	7867	55.66	384	2.72	4049	28.65
		Persons	66988	32430	12437	38.35	12431	38.33	1038	3.20	6524	20.12
		Males	33187	18674	9027	48.34	4966	26.59	581	3.11	4100	21.96
15	Baneigarh	Females	33801	13756	3410	24.79	7465	54.27	457	3.32	2424	17.62
		Persons	62811	27450	8318	30.30	12845	46.79	827	3.01	5460	19.89
		Males	31031	17095	7070	41.36	5656	33.09	649	3.80	3720	21.76
16	Lahunipara	Females	31780	10355	1248	12.05	7189	69.43	178	1.72	1740	16.80
		Persons	99526	48044	14981	31.18	19732	41.07	1155	2.40	12176	25.34
		Males	49510	27518	10499	38.15	7607	27.64	674	2.45	8738	31.75
17	Koida	Females	50016	20526	4482	21.84	12125	59.07	481	2.34	3438	16.75
		Persons	75586	29118	7384	25.36	6137	21.08	629	2.16	14968	51.40
		Males	37926	19480	5718	29.35	1874	9.62	424	2.18	11464	58.85
Total		Females	37660	9638	1666	17.29	4263	44.23	205	2.13	3504	36.36
		Persons	1355340	625502	180492	28.86	250233	40.01	18210	2.91	176567	28.23
		Males	676068	380409	138725	36.47	103450	27.19	10886	2.86	127348	33.48
		Females	679272	245093	41767	17.04	146783	59.89	7324	2.99	49219	20.08

APPENDIX- IX: Number of scheduled castes and scheduled tribe literates and illiterates, literacy rate by sex in CD Blocks, 2011

Sr.No.	Name of CD Block	Number of literates and illiterates SC						Literacy rate (SC)			Gap in male-female literacy rate (SC)
		Number of literates			Number of illiterates			P	M	F	
		P	M	F	P	M	F				
1	Hemgir	7403	4220	3183	4855	1971	2884	69.51	79.09	59.89	19.2
2	Lephripara	6093	3497	2596	4249	1705	2544	66.72	76.17	57.17	19
3	Tangrapali	6375	3470	2905	3326	1308	2018	74.09	82.17	66.31	15.86
4	Balisankara	4120	2343	1777	3416	1366	2050	62.79	72.76	53.17	19.59
5	Subdega	3191	1742	1449	2131	868	1263	68.27	76.5	60.45	16.05
6	Sundargarh	6718	3768	2950	3480	1377	2103	74.18	82.65	65.6	17.05
7	Baragaon	3550	1984	1566	2329	981	1348	69.25	78.02	60.63	17.39
8	Kutra	3161	1822	1339	2570	1074	1496	63.65	73.06	54.17	18.89
9	Kuanrunda	2724	1570	1154	2697	1123	1574	57.96	67.88	48.35	19.53
10	Nuagaon	3832	2244	1588	3989	1686	2303	56.28	65.79	46.73	19.06
11	Bisra	2188	1279	909	1638	640	998	65.71	76.82	54.59	22.23
12	Lathikata	2388	1355	1033	2120	895	1225	62.14	70.5	53.77	16.73
13	Rajagangapur	2838	1611	1227	2352	954	1398	63.42	73.43	53.79	19.64
14	Gurundia	2261	1252	1009	1437	545	892	71.42	81.72	61.75	19.97
15	Baneigarh	5274	2941	2333	2723	995	1728	75.36	85.92	65.26	20.66
16	Lahunipara	3682	2060	1622	2744	1080	1664	66.51	76.87	56.79	20.08
17	Koida	2099	1288	811	1900	748	1152	63.47	76.67	49.85	26.82
	Total	67897	38446	29451	47956	19316	28640	67.27	76.8	57.89	18.91

Sr.No.	Name of CD Block	Number of literates and illiterates (ST)						Literacy rate (ST)			Gap in male-female literacy rate (ST)
		Number of literates			Number of illiterates			P	M	F	
		P	M	F	P	M	F				
1	Hemgir	23508	13281	10227	14804	5834	8970	69.59	79.01	60.25	18.76
2	Lephripara	26128	14686	11442	20290	8430	11860	64.14	72.61	55.78	16.83
3	Tangrapali	19335	11080	8255	15034	6093	8941	64.02	73.68	54.43	19.25
4	Balisankara	33295	18203	15092	24132	9857	14275	66.7	75.2	58.69	16.51
5	Subdega	26682	14808	11874	18650	7625	11025	67.11	75.7	58.8	16.9
6	Sundargarh	22750	12900	9850	14642	5717	8925	68.4	78.11	58.83	19.28
7	Baragaon	26486	14700	11786	19806	8234	11572	65.14	73.21	57.26	15.95
8	Kutra	36898	20455	16443	25142	10536	14606	67.97	75.66	60.34	15.32
9	Kuanmunda	43899	24507	19392	34692	14633	20059	64.68	72.73	56.75	15.98
10	Nuagaon	37410	21110	16300	32823	13472	19351	61.67	70.6	52.98	17.62
11	Bisra	21258	12067	9191	16815	6818	9997	64.12	73.62	54.83	18.79
12	Lathikata	34805	19862	14943	26993	10830	16163	65.05	75	55.3	19.7
13	Rajagangapur	43482	24434	19048	35642	14881	20761	64.14	72.85	55.61	17.24
14	Gurundia	27488	15765	11723	25707	10550	15157	61.43	71.69	51.51	20.18
15	Baneigarh	19509	11180	8329	16209	6348	9861	63.95	75.17	53.27	21.9
16	Lahunipara	28211	16666	11545	39330	16699	22631	50.88	61.19	40.92	20.27
17	Koida	22729	13857	8872	33891	14158	19733	50.46	62.26	38.94	23.32
	Total	493873	279561	214312	414602	170715	243887	63.21	72.46	54.19	18.27

P= Persons, M= Male, F= Female

APPENDIX- X: Scheduled Caste and Scheduled Tribe Population in different Blocks of Sundargarh District- 2011

Sr.No.	Name of CD Block	Total population	Total scheduled castes population	Total scheduled tribes population	Percentage of scheduled castes population to total population	Percentage of scheduled tribes population to total population
1	Hemgir	84559	12258	38312	14.5	45.31
2	Lephripara	78808	10342	46418	13.12	58.9
3	Tangrapali	64374	9701	34369	15.07	53.39
4	Balisankara	85690	7536	57427	8.79	67.02
5	Subdega	64254	5322	45332	8.28	70.55
6	Sundargarh	70911	10198	37392	14.38	52.73
7	Baragaon	71242	5879	46292	8.25	64.98
8	Kutra	80470	5731	62040	7.12	77.1
9	Kuanmunda	97870	5421	78591	5.54	80.3
10	Nuagaon	106156	7821	70233	7.37	66.16
11	Bisra	68629	3826	38073	5.57	55.48
12	Lathikata	82324	4508	61798	5.48	75.07
13	Rajagangapur	95142	5190	79124	5.46	83.16
14	Gurundia	66988	3698	53195	5.52	79.41
15	Baneigarh	62811	7997	35718	12.73	56.87
16	Lahunipara	99526	6426	67541	6.46	67.86
17	Koida	75586	3999	56620	5.29	74.91
	Total	1355340	115853	908475	8.55	67.03

APPENDIX- XI: Religious population in different Police Stations of Sundargarh District- 2011

Area		Total			Hindu			Muslim		
		Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Sub-District – Hemgir	Rural	84559	42670	41889	81433	41039	40394	991	556	435
Sub-District – Lephripara	Rural	70547	35375	35172	62347	31251	31096	298	159	139
Sub-District – Bhasma	Rural	42101	21184	20917	41583	20914	20669	63	36	27
Sub-District – Dharuadihi	Rural	35427	17687	17740	32793	16335	16458	55	32	23
Sub-District – Sundargarh Town	Total	48969	24753	24216	40804	20749	20055	3668	1965	1703
Sub-District – Sundargarh Town	Rural	3933	1999	1934	3310	1674	1636	93	56	37
Sub-District – Sundargarh Town	Urban	45036	22754	22282	37494	19075	18419	3575	1909	1666
Sub-District – Sundargarh	Total	74134	36813	37321	67371	33500	33871	212	119	93
Sub-District – Kinjirkela	Rural	57452	28444	29008	39766	19813	19953	359	189	170
Sub-District – Talasara	Rural	80443	39684	40759	50340	24825	25515	2540	1337	1203
Sub-District – Baragaon	Rural	77943	38984	38959	57638	28869	28769	398	225	173
Sub-District – Kutra	Rural	66462	33283	33179	37018	18643	18375	2516	1306	1210
Sub-District – Rajagangapur	Total	166131	83683	82448	87230	44529	42701	8039	4278	3761
Sub-District – Rajagangapur	Rural	102449	51081	51368	44994	22471	22523	894	492	402
Sub-District – Rajagangapur	Urban	63682	32602	31080	42236	22058	20178	7145	3786	3359
Sub-District – Raiboga	Rural	43474	21658	21816	12630	6331	6299	477	245	232
Sub-District – Biramitrapur	Total	96881	48656	48225	49185	24875	24310	4018	2085	1933
Sub-District – Biramitrapur	Rural	54396	27190	27206	22484	11225	11259	149	70	79
Sub-District – Biramitrapur	Urban	42485	21466	21019	26701	13650	13051	3869	2015	1854
Sub-District – Hatibari	Rural	61931	30686	31245	31090	15630	15460	539	289	250
Sub-District – Bisra	Rural	98455	49054	49401	57648	28763	28885	6601	3258	3343
Sub-District – Bondamunda	Rural	14399	7298	7101	8576	4410	4166	75	39	36
Sub-District – Brahmani Tarang	Rural	57664	28736	28928	28492	14272	14220	497	256	241
Sub-District – Raghunathapali	Total	26095	13239	12856	20152	10245	9907	57	34	23
Sub-District – Raghunathapali	Rural	1368	681	687	1332	668	664	0	0	0

Sub-District – Raghunathapali	Urban	24727	12558	12169	18820	9577	9243	57	34	23
Sub-District – Tangarapali	Rural	5851	2994	2857	2661	1379	1282	5	2	3
Sub-District – Lathikata	Total	24846	12826	12020	17739	9179	8560	1218	613	605
Sub-District – Lathikata	Rural	17441	8913	8528	11544	5918	5626	1014	506	508
Sub-District – Lathikata	Urban	7405	3913	3492	6195	3261	2934	204	107	97
Sub-District – Chandiposh	Rural	21864	10903	10961	9116	4563	4553	96	52	44
Sub-District – Kamarposh Balang	Rural	42854	21470	21384	31018	15518	15500	240	133	107
Sub-District – Koida	Total	40824	20810	20014	34078	17289	16789	839	531	308
Sub-District – Koida	Rural	34061	17090	16971	28706	14380	14326	223	129	94
Sub-District – Koida	Urban	6763	3720	3043	5372	2909	2463	616	402	214
Sub-District – Lahunipara	Total	77841	38742	39099	66071	32852	33219	1184	651	533
Sub-District – Lahunipara	Rural	73372	36364	37008	62587	30985	31602	1004	556	448
Sub-District – Lahunipara	Urban	4469	2378	2091	3484	1867	1617	180	95	85
Sub-District – Gurundia	Rural	35256	17419	17837	19170	9565	9605	84	44	40
Sub-District – Tikaetpali	Rural	23589	11655	11934	21517	10665	10852	35	20	15
Sub-District – Banei	Total	61804	30680	31124	57875	28710	29165	1155	603	552
Sub-District – Banei	Rural	54724	26984	27740	51938	25604	26334	185	99	86
Sub-District – Banei	Urban	7080	3696	3384	5937	3106	2831	970	504	466
Sub-District – Mahulapada	Rural	19191	9769	9422	18047	9186	8861	36	17	19
Sub-District – Raurkela (M)	Urban	320040	169095	150945	262440	139412	123028	25978	13850	12128
Sub-District – Raurkela (ITS)	Urban	216410	112897	103513	186524	97742	88782	9118	4886	4232

Area		Christian			Sikh			Buddhist		
		Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Sub-District – Hemgir	Rural	2006	1012	994	23	13	10	4	3	1
Sub-District – Lephripara	Rural	7720	3878	3842	7	2	5	3	1	2
Sub-District – Bhasma	Rural	399	201	198	7	4	3	0	0	0
Sub-District – Dharuadihi	Rural	2509	1286	1223	3	1	2	1	1	0
Sub-District – Sundargarh Town	Total	4047	1809	2238	131	65	66	4	1	3
Sub-District – Sundargarh Town	Rural	485	248	237	40	20	20	0	0	0
Sub-District – Sundargarh Town	Urban	3562	1561	2001	91	45	46	4	1	3
Sub-District – Sundargarh	Total	5884	2875	3009	33	17	16	6	1	5
Sub-District – Kinjirkela	Rural	15614	7616	7998	2	1	1	38	20	18
Sub-District – Talasara	Rural	26269	12868	13401	14	5	9	30	16	14
Sub-District – Baragaon	Rural	19817	9838	9979	5	4	1	16	10	6
Sub-District – Kutra	Rural	24632	12187	12445	17	10	7	25	14	11
Sub-District – Rajagangapur	Total	56758	27927	28831	506	258	248	91	47	44
Sub-District – Rajagangapur	Rural	44901	22402	22499	171	88	83	55	27	28
Sub-District – Rajagangapur	Urban	11857	5525	6332	335	170	165	36	20	16
Sub-District – Raiboga	Rural	27045	13388	13657	5	4	1	42	27	15
Sub-District – Biramitrapur	Total	31490	15627	15863	91	47	44	29	14	15
Sub-District – Biramitrapur	Rural	20989	10482	10507	14	10	4	18	8	10
Sub-District – Biramitrapur	Urban	10501	5145	5356	77	37	40	11	6	5
Sub-District – Hatibari	Rural	22649	11050	11599	41	21	20	20	11	9
Sub-District – Bisra	Rural	19426	9648	9778	38	20	18	16	10	6
Sub-District – Bondamunda	Rural	2923	1464	1459	0	0	0	6	2	4
Sub-District – Brahmani Tarang	Rural	16404	8077	8327	10	5	5	26	15	11
Sub-District – Raghunathapali	Total	5211	2615	2596	25	12	13	14	10	4
Sub-District – Raghunathapali	Rural	36	13	23	0	0	0	0	0	0
Sub-District – Raghunathapali	Urban	5175	2602	2573	25	12	13	14	10	4
Sub-District – Tangarapali	Rural	558	312	246	1	1	0	4	2	2

Sub-District – Lathikata	Total	3046	1581	1465	23	16	7	2	1	1
Sub-District – Lathikata	Rural	2105	1073	1032	4	2	2	2	1	1
Sub-District – Lathikata	Urban	941	508	433	19	14	5	0	0	0
Sub-District – Chandiposh	Rural	7729	3866	3863	0	0	0	19	11	8
Sub-District – Kamarposh Balang	Rural	11377	5708	5669	7	3	4	17	8	9
Sub-District – Koida	Total	5481	2742	2739	12	7	5	5	4	1
Sub-District – Koida	Rural	4717	2342	2375	6	3	3	5	4	1
Sub-District – Koida	Urban	764	400	364	6	4	2	0	0	0
Sub-District – Lahunipara	Total	10065	4984	5081	11	8	3	8	3	5
Sub-District – Lahunipara	Rural	9273	4577	4696	6	4	2	8	3	5
Sub-District – Lahunipara	Urban	792	407	385	5	4	1	0	0	0
Sub-District – Gurundia	Rural	11831	5758	6073	1	1	0	7	2	5
Sub-District – Tikaetpali	Rural	1270	614	656	0	0	0	0	0	0
Sub-District – Banei	Total	2138	1039	1099	15	8	7	6	4	2
Sub-District – Banei	Rural	1972	959	1013	14	7	7	4	2	2
Sub-District – Banei	Urban	166	80	86	1	1	0	2	2	0
Sub-District – Mahulapada	Rural	992	509	483	0	0	0	71	36	35
Sub-District – Raurkela (M)	Urban	23557	11696	11861	4051	2132	1919	140	68	72
Sub-District – Raurkela (ITS)	Urban	16164	7890	8274	634	330	304	60	32	28

Area (1)	(2)	Jains			Other religions and persuasions (incl. Unclassified Sect.)			Religion not Stated		
		Persons (21)	Males (22)	Females (23)	Persons (24)	Males (25)	Females (26)	Persons (27)	Males (28)	Females (29)
Sub-District – Hemgir	Rural	0	0	0	2	2	0	100	45	55
Sub-District – Lephripara	Rural	5	2	3	51	22	29	116	60	56
Sub-District – Bhasma	Rural	0	0	0	1	0	1	48	29	19
Sub-District – Dharuadihi	Rural	2	2	0	15	7	8	49	23	26
Sub-District – Sundargarh Town	Total	5	3	2	2	1	1	308	160	148
Sub-District – Sundargarh Town	Rural	0	0	0	0	0	0	5	1	4
Sub-District – Sundargarh Town	Urban	5	3	2	2	1	1	303	159	144
Sub-District – Sundargarh	Total	5	4	1	252	127	125	371	170	201
Sub-District – Kinjirkela	Rural	5	3	2	1557	741	816	111	61	50
Sub-District – Talasara	Rural	8	4	4	1111	559	552	131	70	61
Sub-District – Baragaon	Rural	5	3	2	10	7	3	54	28	26
Sub-District – Kutra	Rural	9	4	5	2052	1032	1020	193	87	106
Sub-District – Rajagangapur	Total	40	23	17	12409	6175	6234	1058	446	612
Sub-District – Rajagangapur	Rural	4	2	2	10473	5201	5272	957	398	559
Sub-District – Rajagangapur	Urban	36	21	15	1936	974	962	101	48	53
Sub-District – Raiboga	Rural	1	0	1	3180	1617	1563	94	46	48
Sub-District – Biramitrapur	Total	14	9	5	11086	5586	5500	968	413	555
Sub-District – Biramitrapur	Rural	2	2	0	10357	5230	5127	383	163	220
Sub-District – Biramitrapur	Urban	12	7	5	729	356	373	585	250	335
Sub-District – Hatibari	Rural	2	2	0	7465	3622	3843	125	61	64
Sub-District – Bisra	Rural	7	2	5	14109	7043	7066	610	310	300
Sub-District – Bondamunda	Rural	3	1	2	2761	1358	1403	55	24	31
Sub-District – Brahmani Tarang	Rural	2	1	1	11975	5979	5996	258	131	127
Sub-District – Raghunathapali	Total	5	3	2	595	303	292	36	17	19
Sub-District – Raghunathapali	Rural	0	0	0	0	0	0	0	0	0
Sub-District – Raghunathapali	Urban	5	3	2	595	303	292	36	17	19

Sub-District – Tangarapali	Rural	1	0	1	2598	1285	1313	23	13	10
Sub-District – Lathikata	Total	1	1	0	2676	1343	1333	141	92	49
Sub-District – Lathikata	Rural	1	1	0	2640	1325	1315	131	87	44
Sub-District – Lathikata	Urban	0	0	0	36	18	18	10	5	5
Sub-District – Chandiposh	Rural	1	1	0	4795	2361	2434	108	49	59
Sub-District – Kamarposh Balang	Rural	2	2	0	90	41	49	103	57	46
Sub-District – Koida	Total	5	4	1	236	134	102	168	99	69
Sub-District – Koida	Rural	5	4	1	236	134	102	163	94	69
Sub-District – Koida	Urban	0	0	0	0	0	0	5	5	0
Sub-District – Lahunipara	Total	4	2	2	271	131	140	227	111	116
Sub-District – Lahunipara	Rural	4	2	2	271	131	140	219	106	113
Sub-District – Lahunipara	Urban	0	0	0	0	0	0	8	5	3
Sub-District – Gurundia	Rural	3	0	3	3730	1870	1860	430	179	251
Sub-District – Tikaetpali	Rural	0	0	0	709	340	369	58	16	42
Sub-District – Banei	Total	3	2	1	524	263	261	88	51	37
Sub-District – Banei	Rural	2	1	1	523	262	261	86	50	36
Sub-District – Banei	Urban	1	1	0	1	1	0	2	1	1
Sub-District – Mahulapada	Rural	0	0	0	0	0	0	45	21	24
Sub-District – Raurkela (M)	Urban	538	283	255	3087	1522	1565	249	132	117
Sub-District – Raurkela (ITS)	Urban	45	27	18	2637	1312	1325	1228	678	550

APPENDIX- XII: Rural Urban Distribution of Religious Population in Sundargarh District - 2011

	Rural					Urban					Total				
	Male	Female	Total	per cent	Sex-ratio	Male	Female	Total	per cent	Sex-ratio	Male	Female	Total	per cent	Sex-ratio
Hindu	468396	468753	937149	70.71	1001	312657	282546	595203	80.64	904	781053	751299	1532352	74.26	962
Muslim	10222	9457	19679	1.48	925	27588	24124	51712	7.01	874	37810	33581	71391	3.46	888
Christian	154251	157281	311532	23.51	1020	35814	37665	73479	9.96	1052	190065	194946	385011	18.66	1026
Sikh	246	223	469	0.04	907	2749	2495	5244	0.71	908	2995	2718	5713	0.28	908
Budhist	235	208	443	0.03	885	139	128	267	0.04	921	374	336	710	0.03	898
Jain	43	35	78	0.01	814	345	297	642	0.09	861	388	332	720	0.03	856
Other religions	40296	10667	50963	3.85	265	4487	4536	9023	1.22	1011	44783	15203	59986	2.91	339
Religions not Stated	2379	2647	5026	0.38	1113	1300	1227	2527	0.34	944	3679	3874	7553	0.37	1053

APPENDIX- XIII: Fairs and Festivals in Sundargarh District

Sl. No.	Occasion	Name of the Place	Month
FESTIVALS IN RURAL AREAS			
1	Makara Jatra	Karamdihi, P.S. Sundargarh	January
2	Gokulastami	Sargi pali, P.S. Lephripara	December
3	Shivaratri	Tumapali, P.S. Hemgir	February
4	Dashara	Kanika, P.S. Hemgir, Badgaon, Subdega	October
5	Jhulan Jatra	Dharuadihi, P.S. Bhasma	August
6	Shivaratri	Rashipatra, P.S. Talsara,	
7	Ramnavami	Bargaon, Hemgir, Subdega, Balishankra	April
8	Birth day of Jesus Christ	Gaibira, Telendih, Hemgir, Kusumdegi, Kesramal, Jhunmur, Kahupani, Singarmunda, Salangabahal, Bonai, Barsuan, Kantapali, Kahuchuan, Kalunga, Kansbahal, Saonamara Kirelega, Barilapta, Raedihi, Sikajor and more than 250 village churches in the District.	December
9	Good Friday & Easter	All feasts & festivals in sl 8	April
10	Rath Jatra	Kuanmunda, Sahajbahal, Pamura, Subdega, Kutura, Badgaon, Karamdihi, Nuagaon, Kansbahal, Panchora,	July
11	Bojar Danda Jatra	Dalki, P.S. Raiboga	February
12	Indra Jatra	Khunt gaon, P.S. Bonai	October
13	Jagar Jatra,	Panposh, raghunath pali	february
14	Chaitra Parrb	Bonaigarh, P.S. Bonaigarh	April
15	Indra Jatra	Pankadihi, Gurundia	December
16	Makar Jatra	Sole, Gurundia	January
17	Id-ul-fitre	Badgaon, Raspatra, Bandega Bisra, Khatkurbahal	
18	Id-ul-zuha	Badgaon, Raspatra, Bandega, Bisra, Khatkurbahal	

FESTIVALS IN URBAN AREAS

1	Ramnavami	Sundargarh town, Rajgangour, Rourkela,	April
2	Ratha Jatra	Sundargarh Town, Rajgangour, Rourkela, Bimitrapor,	July
3	Dasahara	Sundargarh Town, Rajgangpur, Rourkela, Bimitrapur,	October
4	Durga Puja	Rajgangpur Town, Rourkela, Sundargarh, Bimitrapur.	October
5	Ratha Jatra	Biramitrapur Town	July
6	Vedavyasa Mela (Shiva Ratri/ Jagar Amabasya)	Vedavyasa, Rourkela	February/ Marc
7	Id-ul-fitre	Sundargarh, Rajgangpur, Rourkela, Bimitrapur	
8	Id-ul-zuha	Sundargar, Rajgagpur, Rourkela	
9	Chistmas	Sundararh, Rajgangpur, Rourkela, Bimitrapur, Jolda, Jhirpanij	Dec-25th
10	Good Friday & Easter	Rourkela, Jhirpani, Jalda, Rajgangpur, Bimitrapur, Sundargarh	April

Chapter- IV

AGRICULTURE AND IRRIGATION

Physiographic and Agro Climatic Conditions:

Topographically, the District exhibits widely diversified tracts of mountains, dotted with hill ranges and isolated peaks, inaccessible forests and extensive river valleys and rich bio-diversity. The average elevation of the land is 700 feet (213 metres) above the mean sea level. Except the river valleys, the soil fertility is generally low in the District owing to its coarseness and composition.

As per Census 2011, 41.47 per cent of the population of the District constitutes its work force. Out of 8,73,227 workers in the District, 4,37,600 persons are cultivators and agricultural labourers. Thus, 50.11 per cent of the work force is engaged in agriculture. In the year 1971 the percentage of population engaged in agriculture was 59.6, 59.6 per cent of the total population depended on agriculture for their living. Despite lower soil fertility, the employment in agriculture in the District is considerably high. In the circumstance of industrial growth in the District and diversification of employment opportunity, agriculture holds considerable size of working population.

The configuration of the land being undulating, the success of cultivation depends upon irrigation. The District has 9,71,244⁸ hectares of geographical area. In 1971, the District had 2,19,622⁹ hectares of land, i.e. 22.6 per cent of the total geographical area put to agricultural use. At present total land in agricultural use amounts to 3,39,100 hectares, which is 34.9 per cent of the total geographical area. As per the figures in 2013, the gross irrigated area is 95,700 hectares, i.e. 28 per cent of the land in agriculture and net irrigated areas was 69,600 hectares which amounts to just 17 per cent. There is inadequate irrigation facility in the District. The rain fed agricultural land area is still at 72 per cent of the total land in agriculture. The cultivators still have to depend mostly on rain fall. Besides, they use the age old primitive type of implements. The weak and unhealthy cattle maintained in an uneconomic manner further contribute to backwardness in agriculture.

Agro-Climate: The State of Odisha has been divided into 10 number of Agro-Climatic Zone. Sundargarh District comes under Zone-6, i.e. North-western Plateau, the Agro-met Advisory Unit is located at Kirei on the outskirts of the Sundargarh city. The AMFU usually provides the daily updates of the maximum and minimum temperatures and rainfall and also forecasts

⁸ Source: Deputy Director, Horticulture, Sundargarh

⁹ District Gazetteer, Sundargarh, 1971

the same for the coming days. It provides advisory service to the farmers relating to agricultural activities to be taken up in the context of prevailing weather condition.

Table 40: Agro-Climatic Zones of Odisha

Zone No	Agro-Climatic Zones	Districts	AMFU location
AZ1	East & South East Coastal Plain	Kendrapada, Jagatsingpur, Khurda, Puri , Nayagarh , part of Cuttack & Ganjam	Bhubaneswar
AZ2	North Eastern Coastal Plain	Balasore, Bhadrak, parts of Jajpur	Ranital,
AZ3	Western Central Table Land	Sonepur, Bargarh, Bolangir, Boudh, Parts of Jharsuguda & Sambalpur	Chiplima,
AZ4	Western Undulating Zone	Nuapada, Kalahandi	Bhawanipatna
AZ5	North Central Plateau	Mayurbhanj ,Major parts of Keonjhar ,	Keonjhar
AZ6	North Western Plateau	Sundergarh , part of Deogarh & Sambalpur , Jharsuguda	Kirei
AZ7	North Eastern Ghat	Rayagada, Gajapati, parts of Ganjam , Kandhamal ,small patches of Koraput	G.Udayagiri,
AZ8	Eastern Ghat Highland	Nawarangpur, Major parts of Koraput	Similiguda
AZ9	Mid Central Table Land	Angul,Dhenkanal , parts of Cuttack & Jajpur	Mahisapat
AZ10	South Eastern Ghat	Malkangiri , parts of Koraput	Kalimela/ Malkangiri

Three element of the climate, i.e. temperature, precipitation and humidity are deciding factor for development of soil and pattern of agricultural activities. Being situated in the north-western part of Odisha; the District experiences warm tropical sub-humid type of climate. The hot weather season begins in the month of March. The range of temperature between March and May is 41⁰C to 49⁰C. Pre-monsoon rains brought by distant cyclonic circulations over the Bay of Bengal and land based troughs over the ChhotNagpur plateau cause some precipitation, which help in reduction of the high temperatures. In the summer months, localised low pressure cells, in shape of strong winds of short duration with heavy downpour, known as *Kalabaisakhi* also bring respite from the dry heat of the summer. The monsoon arrives in the District in June, soon after its onset in the coast of Odisha. Normally, the District receives 1647.6 millimetre of rain per annum. About 86per cent of the annual rainfall are received in four months starting from June to September. But, owing to the global disturbances in the climatic patterns, the rainfall in the District has been erratic. July is the month receiving highest rainfall. The annual variation in relative humidity in the District is between 30 to 89 per cent. The relative humidity rises and remains high with the onset of monsoon and progressively declines. The summer months are the driest months.

Especially, the summer afternoon are marked with relative humidity as low as 25 to 30 per cent.

Rainfall: Droughts and drought like situations are often created due to the erratic nature of the monsoon. Similarly, occasional heavy downpours cause floods and flash floods in many parts of the District. The uncertain and fluctuating weather condition results in triggered soil erosion. Droughts are classified as severe (Less than 50 per cent), moderate (-25 per cent to -50 per cent), mild (-15 per cent to -25 per cent) and normal (above -15 per cent) on the basis of percentage of variation of the average rainfall received from the normal average rainfall expected in the District. In the absence of irrigation for the entire stretch of agricultural land during the principal crop seasons result in actual drought, when food production comes down. Within a span of 24 years, meteorologically, severe drought occurred only once, i.e. in the year 2008. Moderate drought occurred seven times, i.e. in the years 1992, 1995, 1996, 2000, 2002, 2004 and 2010. Mild drought condition occurred in four years, i.e. 1991, 1993, 1997 and 1998. In the rest twelve years, the hydro-meteorological condition was normal. The effects of drought bring in grave situation, especially when it comes consecutively. The difference in the normal and actual rainfall in the District is distinct in the following table.

Table 41: Difference in Normal and Actual Rainfall in Sundargarh District (1991-2014)

Year	Normal (Average)	Actual Rainfall (Average)	Deviation from Normal	Deviation in %
1991	1657.10	1321.95	-335.15	-20.23
1992	1657.10	938.38	-718.72	-43.37
1993	1657.10	1340.13	-316.97	-19.13
1994	1657.10	1944.81	287.71	17.36
1995	1657.10	1233.58	-423.52	-25.56
1996	1657.10	1072.57	-584.53	-35.27
1997	1657.10	1292.45	-364.65	-22.01
1998	1657.10	1275.76	-381.34	-23.01
1999	1657.10	1486.86	-170.24	-10.27
2000	1657.10	948.45	-708.65	-42.76
2001	1657.10	1411.16	-245.94	-14.84
2002	1657.10	971.13	-685.97	-41.40
2003	1657.10	1416.76	-240.34	-14.50
2004	1657.10	1148.00	-509.10	-30.72
2005	1422.40	1241.88	-180.52	-12.69
2006	1422.4	1213.0	-209.4	-14.72
2007	1422.4	1572.80	150.40	10.57
2008	1422.4	663.00	-759.40	-53.39
2009	1422.4	1747.70	325.30	22.87
2010	1422.4	895.60	-526.80	-37.04
2011	1422.4	1585.00	162.60	11.43
2012	1422.4	1429.50	7.10	0.50
2013	1422.4	1448.30	25.90	1.82
2014	1422.4	1334.00	-88.40	-6.21

Source: District Emergency Operation Centre, Sundargarh

The normal rainfall that the District should get in each month and the average no. of rainy days as per the standard estimated with effect from January 2005, by the Special Relief Commissioner, Odisha, is given below.

Table 42: District Normal Rainfall (in mm)

Sl. No.	Month	Normal	Average no. of Rainy Days
1	January	15.1	1.1
2	February	24.9	1.7
3	March	16.0	1.3
4	April	16.0	1.4
5	May	40.6	3.0
6	June	237.4	10.0
7	July	386.4	16.8
8	August	393.9	17.2
9	September	211.5	11.1
10	October	67.7	3.8
11	November	8.7	0.6
12	December	4.2	0.4
	Total	1422.4	68.4

Source: District Emergency Operation Centre, Sundargarh

Table 43: Drought Classification

Drought Class	Range	Rainfall	Range
Severe	Less than -50 % of normal	Excess	+20 % and above of the normal rainfall
Moderate	-25 % to -50 % of the normal	Normal	-19 % to +19 % of the normal rainfall
Mild	-15 % to -25 % of the normal	Deficient	-59 % to -20 % of the normal rainfall
Normal	> -15 % of the normal	Scanty	-99 % to -50 % of the normal rainfall
		No Rain	-100 % of the normal

An analysis of the achievement of Kharif 2014 programme in the District reveals that the rainfall in the monsoon season has shown wide fluctuation.

Table 44: Fluctuation in rainfall, Kharif 2014

Month	Normal Rainfall in mm	Actual Rainfall in mm	Deviation in %
April, 2014	16	1.2	-93
May, 2014	40.6	61.4	51
June, 2014	237.4	111	-53
July, 2014	386.4	442.6	15
August, 2014	393.9	416.6	6
September, 2014	211.5	200.3	-5
Total of Kharif season	1285.8	1233.1	-4

The fluctuation of the rain directly affects the agricultural calendar of showing paddy, i.e. broadcasting, nursery raising, transplantation and beushan.

Nature and Soil Types:

The soil of Sundargarh, on the whole, is not very fertile except in the river valleys. The northern part of the District, which is occupied generally by the tribal people, the soil is less fertile. Mixed red and black soil, red sandy soil, gravelly, and lateritic soils are found in this area. The mixed red and black soil contains a large quantity of calcium and magnesium carbonates, but is generally deficient in nitrogen and phosphorous. The red sandy soil, gravelly, and lateritic soils are generally deficient in potash, phosphoric acid and lime. Soils are in general open in texture and well drained. Plenty of iron concretions are present in the soil. Cultivable land in the District is classified in six broad categories on the basis of soil fertility and suitability for cultivation, i.e. *Aatt*, *Maal*, *Bahal* and *Berna*, *Goda* and *Bari*.

Aatt lands are generally unbounded uplands with low fertility. *Mal* is the embanked land and slopes which are terraced to catch the surface drainage coming down from uplands. The lower *mal* lands called *Pani Mal*. *Bahal* lands are low lands, which are generally plain and fertile and suitable for paddy cultivation. *Bahal* is a term used for flat land at the bottom of a depression or drainage line. The best *bahal* lands called *panibahal* are served by reservoirs and so are secure from crop failure. *Berna* lands are medium-or medium-low lands with average fertility. The term *berna* denotes lands towards the bottom of a depression, which receive the drainage from the slopes on either side and also from drainage line between them. *Berna lands* are classified into two classes viz., (i) *berna*, (ii) *pani berna*. The only degree of comparison between these two is that *pani berna* gets more water. Besides, the above four categories of land *Dangar* lands are located on hill slopes where occasional shifting cultivation is practised. *Bari* or *baribagait* lands are the land adjacent to the households where usually kitchen gardening or growing fruit crops are done in subsistence scale. *Goda* is generally the uplands of the area, entirely depending upon Goda rain water. These lands are used for crops which are less dependent on moisture. It is more suitable for *Rabi* cultivation.

Soils in the District are mostly acidic to neutral reaction with medium level of Nitrogen, Phosphorus and Potash. Major soil types of the District are Red soil (Alfisol), Laterite and Lateritic soil (ultisol and exisol) and Black soil (vertisol) with patches of forest (humults). The distribution of different soil types is given below.

Table 45: Soil Classification in Sundargarh District

Sl. No.	Block	Soil Type	Average Soil depth	PH	Fertility
1	Balisankara	Black, Red, Sandy, Sandy loams	1' 9"	87 % acidic soil	1.54
2	Bargaon	Black, Red, Sandy, Sandy loams	2' 3"	87 % acidic soil	1.55
3	Bisra	Black, Red, Sandy, Sandy loams	2' 9"	87 % acidic soil	1.53
4	Bonaigarh	Black, Red, Sandy, Sandy loams	2' 11"	87 % acidic soil	1.54
5	Gurundia	Black, Red, Sandy, Sandy loams	2' 8"	87 % acidic soil	1.55
6	Hemgiri	Black, Red, Sandy, Sandy loams	2' 6"	87 % acidic soil	1.53
7	Koida	Black, Red, Sandy, Sandy loams	2' 5"	87 % acidic soil	1.57
8	Kuanrunda	Red, Sandy and Sandy loams	2' 11"	87 % acidic soil	1.53
9	Kutra	Black, Red, Sandy, Sandy loams	2' 4"	87 % acidic soil	1.58
10	Lahunipada	Black, Red, Sandy, Sandy loams	2' 9"	87 % acidic soil	1.56
11	Lathikata	Black, Red, Sandy, Sandy loams	2' 7"	87 % acidic soil	1.51
12	Lephripada	Black, Red, Sandy, Sandy loams	2' 9"	87 % acidic soil	1.54
13	Nuagaon	Black, Red, Sandy, Sandy loams	2' 10"	87 % acidic soil	1.52
14	Rajgangpur	Black, Red, Sandy, Sandy loams	2' 6"	87 % acidic soil	1.52
15	Subdega	Black, Red, Sandy, Sandy loams	1' 10"	87 % acidic soil	1.57
16	Sundargarh	Black, Red, Sandy, Sandy loams	2' 2"	87 % acidic soil	1.56
17	Tangarpali	Black, Red, Sandy, Sandy loams	1' 11"	87 % acidic soil	1.51

Source: Deputy Director, Agriculture, Sundargarh/ Comprehensive District Five year Perspective Plan: 2012-17, Sundargarh District

Land Utilization Pattern in the District:

The best cultivated lands of Sundargarh are located along the valleys of the two main rivers, the Brahmani and IB and their tributaries viz., the Sankh, the Koel, the Safai, the Ichha etc. The cultivable area of the District is 6,72,000 hectares, out of which percentage of land under highland, medium land and low land are respectively 50 per cent, 27.7 per cent and 22.3 per cent. As in 2011, the net area sown in the District was 3,32,056 hectares, which constitute 49.4 per cent of the gross cultivable area. The land use pattern of the District out of the surveyed area of 715280 hectares and 715256 hectares in 2009-10 and 2010-11 respectively, is given in the following table. The detailed Block-wise and ULB-wise land use pattern is elaborated in **Appendix-XIV (Land Utilisation Pattern in Sundargarh District)**.

Table 46: Land Utilisation Pattern of Sundargarh District

Year →	2009-10		2010-11	
	Area in Ha	per cent of surveyed area	Area in Ha	per cent of surveyed area
Land use↓				
Forest	176151	24.63	152013	21.25
Land put to non-agriculture use	67568	9.45	72033	10.07
Barren and non-cultivable land	60788	8.50	63222	8.84
Permanent pastures and other grazing land	35324	4.94	34230	4.79
Land under Misc. tree crop & grooves, not included in net area sown	1484	0.21	2206	0.31
Cultivable waste	40313	5.64	45154	6.31
Old fallows	48007	6.71	54575	7.63
Current fallows	64937	9.08	61549	8.61
Net area sown	220708	30.86	230274	32.19

Source: District Statistical Handbook, 2011, Sundargarh

Table 47: The Land Use Pattern in Sundargarh District in 1971

Figures in hectares

Land Use Pattern in Sundargarh District	Year- 1971
Total cropped area	2,43,997
Area shown more than once	24,375
Fallow	86,600
Forests	5,82,700
Area not available for cultivation	55,800
Other uncultivated land including pastures	75,600

Source: District Gazetteer, Sundargarh 1971

Irrigation- Major, Medium, Minor Irrigation Projects; Traditional Modes of Irrigation

Very little facility for irrigation was available in 1971. As per the 2011 figures, the total irrigation potential in the Kharif season was 65990 hectares of land and in Rabi season 21778 hectares. Kharif and Rabi season irrigation potential constitute 38.11 per cent of the net area sown. The major chunks of the arable area are rainfed, thus prone to drought in failure of monsoon.

Table 48: Irrigation Potential Generated from Different Sources of Irrigation

Major/ Medium project		Minor irrigation project				Other sources		(Area in hectares)	
		Flow		Lift				Total	
Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
11713	805	16187	681	10944	6492	27146	13800	65990	21778

Source: District Statistical Handbook-2011, Sundargarh

Major and Medium Irrigation Projects: The District has no major irrigation project in its territory. Four significant irrigation projects, i.e. Saraphgarh Irrigation Project, Talsara Irrigation project, Pitamahal Irrigation project and Kansbahal Irrigation projects are function as on date. The detailed salient features of each of the irrigation project are elaborated in **Appendix-XVIII (Features of Medium Irrigation Projects of Sundargarh District)**. The following table gives a brief sketch of the irrigation in Sundargarh District.

Table 49: Culturable Command Area of Different Projects under Sundargarh Irrigation Division, Sundargarh

Sl. No.	Name of the Project	Name of Block	Ayacut Area (In Ha.)
1	Saraphgarh Irrigation Project	Lephipara	2238.00
		Balisankara	1568.69
2	Talsara Irrigation Project	Subdega	1467.31
		TOTAL	3036.00
		Rajgangpur	297.35
3	Pitamahal Irrigation Project	Lathikata	2332.65
		TOTAL	2630.00
		Rajgangpur	4123.54
4	Kansbahal Irrigation Project	Lathikata	94.46
		TOTAL	4218.00
		GRAND TOTAL	12122.00

Saraphgarh Irrigation Project: Saraphgarh Irrigation Project was started during the year 1977 and was completed during 1985. It is constructed across the river Ichha, a tributary of the river IB of Mahanadi Basin near revenue village Saraphgarh having a catchment area of 65.30 sq. km. The total length of the dam is 319 metres. The ayacut area comes under the village Saletikra, Telendihi, Bairagibahal, Chakardharpur, Didigajharan, Giringkela, Kadomal, Karadega and Suarjore of Lephipara Block 2238.00 Ha. The project is providing irrigation since 1985.

During Kharif 2011, the project provided irrigation to 2238 Ha and during Rabi 1340 Ha of land was irrigated. Five numbers of Water Users Association (WUA) have been formed in Saraphgarh Irrigation Project and re-election for office bearers of five Pani Panchayats has been completed on 07.05.2011.

Talsara Irrigation Project: Talsara irrigation project was started during 1977 and was completed during 1985. It is constructed across the river Bada-Bandajore nallah a tributary of the river Ib of Mahanadi Basin near revenue village Talsara having a catchment area of 91 sq. km. The total length of the Dam is 1095 metres. The Ayacut area comes under the village Subdega, Tumlia, Sankara, Jamuna, Mayabahal, Fateimunda, Simdega, Latdega, Rasipatra and Kainsara of Subdega Block 1467.31 Ha. and Balisankara Blocks 1568.69 Ha.. The Project is providing Irrigation since 1985. The project is providing irrigation to 3036 Ha during Kharif and 1820 Ha during Rabi. Seven numbers of Water Users Association (WUA) have been formed in Talsara Irrigation Project and re-election for offices bearers of seven numbers of Pani Panchayats have been completed on 04.05.2011.

Pitamahal Irrigation Project: This Project was started in 1969 and was completed during 1976 across Pitamahal nalla, a tributary of the river Sankh in the Brahmani Basin near Village Balanda having a Catchment area of 103.60 sq. km. The total length of the Dam is 660.20 metres. The Project is providing irrigation to tribal and economically backward areas in Lathikata Tahasil & Rajgangpur Tahasil of Sundargarh District. The entire area is irrigated by two distributaries i.e. Vedvyas distributary & Beldihi distributary on both side of the Pitamahal Nallah. The Ayacut area comes under the village Balanda, Kalunga, Goibhanga, Jhartarang, Brahmani Tarang, Killinga, Sannuagaon, Bhalupatra, Beldihi, Sagjore of Rajgangpur 297.35 Ha and Lathikata Block 2332.65 Ha. This project is providing irrigation since 1976.

The certified Ayacut of the project is 2654 Ha (i.e. Kharif) and area irrigated during Rabi is 1631 Ha. Five numbers of Water Users Association (WUA) have been formed and handed over to the respective Water Users Association. The re-election for office bearers of Executive Committee of five numbers of Pani Panchayats completed on 02.07.2011.

Kansbahal Irrigation Project: The Project was started during 1980 and was completed during 1996. It is constructed over Badjore Nallah in Badnuagaon revenue village having a catchment area of 179 sq. km. The total length of the dam is 1075 metres. The Ayacut area comes under the village Kadambahal, Panposh, Kansbahal, Sagjore, Kumarkela, Ghoghar, Badnuagaon, Jampali, Baipur, Jhagarpur, Ranibandh, Liploi, Lamloi, Kunmur, Garvana, Pada Jampali, Alanda, Tileimal, Keshramal and Dudukabahal in Rajgangpur Block 4123.54 Ha. and Lathikata Block 94.46 Ha.

The Project is providing irrigation during Kharif to 4218 Ha and during Rabi to 2430 Ha. Nine numbers of Water Users Associations have been formed. Re-election for office bearers of Executive Committee of nine numbers of Pani Panchayats have been completed on 02.08.2011.

A Proposal for renovation of Kansbahal Irrigation Project amounting to Rs.2047.97 Lakhs has been submitted to Government for inclusion under OIIAWMP (Odisha Integrated Irrigated Agriculture and Water Management Project) under ADB. Expert panel on Irrigation, management, Agriculture, Sociology and Economy have visited the project in November, 2007 and January, 2008 and they have submitted an affirmative report for renovation of Kansbahal Irrigation Project. For improvement of this project Rs.2047.97 lakh (approximately) will be required which will increase potential of the Project from 4218 Ha (existing) to 4730 Ha after completion and will stabilise the entire ayacut.

Rukura Irrigation Project is one Medium Irrigation Project in land acquisition stage at present. It is designed for integrated development of the Brahmani Basin in the drought prone tribal area of Bonai Sub-Division in Sundargarh District in the State of Odisha. The Project intercepts a catchment area of 171.00 sq.km.

The project consists of the following components:

- a. Homogeneous earth dam of 1185 metres Length
- b. Central spillway of 52 metres length and
- c. One head-regulator across Rukura nallah, a tributary of the river Brahmani.
- d. One main canal of length 10.872 km &
- e. Distribution network of length 107.45 km

The project on completion will provide annual irrigation to 7648 ha (CCA - 5750 ha) with 133 per cent irrigation intensity (95 per cent in Kharif and 38 per cent in Rabi) in 74 villages of Bonai and Gurundia Blocks of Sundargarh District.

Minor irrigation projects: The Minor Irrigation Organisation (erstwhile R.E.O) was created in 1962. On abolition of R.E.O, Minor Irrigation Department was formed on 15.6.1980. Since 1996 it is functioning as a separate wing under Water Resources Department. This department takes care of construction, maintenance and management of Irrigation projects of Culturable Command Area (CCA) ranging from 40 ha to 2000 ha utilising surface flow.

The Minor Irrigation Projects under the jurisdiction of M.I. Division, Sundargarh spread over 16 Blocks of Sundargarh District (except Nuagaon Block). The total designed irrigation potential under Kharif through Minor Irrigation (Flow) ending March 2015 in the District is 24001 ha.

Table 50: Status of Minor Irrigation Projects as on 18.3.2015

Sl. No.	Category of Project	No. of M.I.Ps/		Ayacut in Ha.	
		Check Dams	Designed	Designed	Certified
1	Completed & Operational	80	18795	18795	15976
2	Partly Derelict (PD)	5	577	577	151
3	Completely Derelict (CD)	5	414	414	0
4	On-going MIPs.(O.P)	13	3363	3363	0
5	Projects with technical sanction (T.S)	2	852	852	0
	Total		24001	24001	16127

Over last 25 years efforts have been made to construct maximum number of M.I. Projects to enhance the irrigation potential of the District. The notable achievement in completing some of the large MIPs is listed below.

Table 51: List of Minor Irrigation Projects of Sundargarh District

Sl.No	Name of MIP	Block	Ayacut in Ha
1	Bargamal MIP	Lephipada	405
2	Masinanalla MIP	Balisankara	483
3	Katanganalla MIP	Balisankara	405
4	Bisrapada MIP	Kuarmunda	566
5	Badjore MIP	Bonai	486
6	Singarmunda MIP	Hemgir	223
7	Chhatenjore MIP	Hemgir	323
8	Turungagarh MIP	Tangarpali	141

Besides this The M.I. Division also execute the “In-stream Storage Structures” called **Check Dams** having multi-disciplinary benefits like ground water recharge, domestic use and irrigation through lift. The scheme has started in the year 2010-11. By end of 31st. March 2015 the division has completed 402 numbers of check dams spread over 17 numbers of blocks of the District creating an additional irrigation potential of 2010 ha. through lift.

Sources: Minor Irrigation Projects in Odisha as on 18.03.15

Lift Irrigation:

The Odisha Agro Industries Corporation (OAIC) and the Odisha Lift Irrigation Corporation (OLIC) work in the field of creating irrigation potentiality over non-irrigated land, by means of establishment of community based Lift Irrigation Points through convergence of funds of different government sources and sponsored schemes like BKVY, WODC, ITDA and IAP. The community based schemes of OAIC and OLIC units in the District are taken under the umbrella term, Jalanidhi-II. The highlights of the achievement of the Jalanidhi-II in different Blocks are given below.

Table 52: Progress of Jalanidhi-II Scheme

Name of Block	OLIC				OAIC				Total	
	Total no. of projects	Total ayacut (Ha)	Total no. of functional projects	Ayacut of functional projects (Ha)	Total no. of projects	Total ayacut (Ha)	Total no. of projects	Total ayacut (Ha)	Total no. of functional projects	Total ayacut (Ha)
Balisankara	13	260	10	212	23	23	36	283	33	495
Bargaon	26	550	10	294	19	19	45	569	29	863
Bisra	79	1700	11	667	26	26	105	1726	37	2393
Bonaigarh	41	1419	13	971	9	9	50	1428	22	2399
Gurundia	31	640	19	448	4	4	35	644	23	1092
Hemgiri	23	642	9	418	16	16	39	658	25	1076
Koida	15	400	12	352	1	1	16	401	13	753
Kuanmunda	47	1360	7	620	18	18	65	1378	25	1998
Kutra	20	400	4	144	44	44	64	444	48	588
Lahunipada	60	1464	15	744	13	13	73	1477	28	2221
Lathikata	81	1840	17	838	18	18	99	1858	35	2696
Lephipada	32	760	9	392	23	23	55	783	32	1175
Nuagaon	75	1640	6	602	48	48	123	1688	54	2290
Rajgangpur	42	868	2	261	14	14	56	882	16	1143
Subdega	18	514	11	402	19	19	37	533	30	935
Sundargarh	42	1016	17	616	43	43	85	1059	60	1675
Tangarpali	26	572	9	300	33	33	59	605	42	905
District total	671	16045	181	8281	371	371	1042	16416	552	24697

Source: District Manager, OAIC and Executive Engineer, OLIC, Sundargarh

Both the OLIC and OAIC create negligible amount of irrigation potentiality for the Rabi season. The ayacut area of LI points of OAIC for Rabi season is 13045 hectares as in the year 2015. Over the years the concept of community based management of irrigation water has been developed in the name of *Pani Panchayat*. Both the surface flow and lift irrigation points at micro-scale are managed the community. As in 2010-11, there were 15318 numbers of *Pani Panchayats* formed in the District involving 80588 farmers. The aggregate of the ayacut area of all *Pani Panchayats* is 27524 hectares. Out of the ayacut area, crops were grown over 6347 hectares in Kharif season and over 14983 hectares in Rabi season. A detailed status of the *Pani Panchayats* in the District is given in **Appendix-XVI (Achievement of Pani Panchayat Programme in Sundargarh District)**.

Traditional Modes of Irrigation, Tanks, Wells and Nalas: There are many tanks and *Katas* in the villages throughout the District and these are filled up during the rains. These tanks and *Katas* are mostly utilised in dry seasons for bathing and drinking purposes and occasionally the water is used for irrigating vegetable gardens by ordinary lift (*Tenda*) system. At places, irrigation by small streams is taken resource to, by means of which the water is diverted and carried into the fields. Bore wells and dug wells are still very popular sources of irrigation at micro level. The *Bandha* and *Kata* are under the administrative control of Grama Panchayats. As in the year 2015, there are 1933 such water bodies maintained by Grama Panchayats.

Some of the water bodies are exclusively used for fishery purpose, whereas some are catering the need of irrigation in the water scarce time. A Block-wise detail of Bandha and Kata is given in **Appendix-XXXIX (Bandha and Kata in possession of Grama Panchayats)** in Chapter-IX.

Soil Erosion and Soil Conservation

The problem of soil erosion is acute in this District which includes the upper catchment areas of the Mahanadi and Brahmani. It is estimated that about 1.30 lakh hectares of land have been affected. The monsoon rain is erratic and there is frequent drought in the area. Measures to check erosion were started in 1954 with the establishment of a demonstration-*cum*-training centre at Jharbeda. Its main object was to train field workers and other personnel, and to carry out research on problems relating to soil and water conservation. In addition, the centre rendered technical assistance to the cultivators and executed soil conservation measures in the locality. The training Centre has been shifted to Bhubaneswar since August 1970. The activity of the department resulted in controlled soil erosion in 25,000 hectares of land, along with soil moisture conservation as a measure of drought proofing.

Soil conservation activities are done through the two Soil Conservation Officers of the District, i.e. Sundargarh and Panposh. The different Soil Conservation programmes in operation are the National Watershed Development Project for Rain-fed Areas (NWDPPRA), Rasthriya Krishi Vikash Yojana (RKVY), Integrated Wasteland Development Programme (IWDP), Integrated Water Management Programme (IWMP), and the River Valley Project Watershed Development Programme. Soil conservation measures are taken up by the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), in convergence with the other programmes. The soil and water conservation measures include contour bonding, tree planting, pasture development, gully control, percolation tank, farm pond, erection of water harvesting structures, diversion bunds etc. Soil conservation in the Hirakud catchment for the portions in Sundargarh District was initiated in 1957 around Bargaon in a selected sub-catchment of the river Ib. Subsequently the area of activity was extended to other sub-catchments where soil erosion was acute and required proper attention.

The post of Soil Conservation Officer, Sundargarh has been re-designated as Project Director, Watershed and Deputy Director, Soil Conservation since 2012. Watershed programme is implemented in a large scale since 1990 with a view to check soil erosion, conserve rain water for ecological balance and livelihood improvement under different schemes. Out of 1946 watersheds in the District, 517 have already been taken for development. Now 185 watersheds are in the process of development. At present it is targeted to treat 98405 hectares of land comprising of 323 villages.

As in the year 2008-09, Sisal plantation has been taken up only in 639.3 hectares in Sundargarh and Bargaon Soil conservation zone from the vast stretches of Government waste lands which are subjected to severe erosion and are unsuitable for cultivation. The total population of the plants is 1136180 during the period. Sisal plantation has been given low priority due to low demand for finished product of the hemp. Besides, soil conservation measures have been taken up in the catchment area of Mandira Reservoir. The survey conducted by the Soil Conservation Department has a comprehensive scheme costing Rs.26.00 lakh. So far as the achievements of the Soil Conservation Department are concerned, the department has taken the measures of afforestation over 1061.28 hectares of Government waste land and 40.52 hectares of private land. The area under hybrid cashew plantation over private land is 33.55 hectares. Miscellaneous tree plantation has been done over 752.8 hectares during the period. Hybrid cashew plantation on private land has become popular in the District. In 2008-09, there were 257 SC and ST beneficiaries across the District.

The achievement of some of the programmes and schemes during the 11th plan period, i.e. from 2008-09 to 2011-12, is as follows.

Table 53: Target and Achievement in Soil Conservation in Sundargarh District, 11th Plan Period, 2008-09 to 2011-12

Scheme	Block	No. of Watersheds	Geographical Area of all the Watersheds	Area in hectares	
				Area Targeted for Treatment	Area Treated
NWDPRA		17	14781.73	8486.00	2498.14
RKVY		20	15988.59	10000.00	736.8
RVP		3		5498.37	2757.38
IWDP (up to July 2009)	Bargaon	22	12834.87	12224.00	11555.19
	Sundargarh	10	5462.55	5000.00	1976.17
	Kuanmunda	12	7202.34	5000.00	4239.77
	Bonai	10	7931.50	5224.07	1780.00
	Lahunipada	10	5663.87	5000.00	1086.00

Along with soil conservation measures, the watersheds also target to involve the local stake holders in the project by means of creating livelihood support. During the plan period, there were 81 watersheds handled under IWDP and NWDPRA, covering 174 villages and involving 458 SHGs. There were 5007 members who had been able to create a total savings of Rs.50.72 lakh. Out of the 174 SHGs, 117 were linked to the banks through credit linkage. A scheme-wise detail is given below.

Table 54: Involvement of SHGs in Watersheds and Livelihood Programme

Sl. No.	Name of the Scheme-No. of Watershed	Village covered/ Total no. of SHGs/ Persons enrolled	Amount of savings/ Contribution to the Watershed Development fund (Rs. lakh)	No. of SHG linked with bank	Grading			Important income generating trade adopted	Micro credit received from bank	No. of user groups
					A	B	C			
1	IWDP-64	132/ 379/ 4167	48.26	102	43	33	26	Poultry, Goatery, Pisciculture, Mushroom,	36.063	1654
2	NWDPRA-17	42/ 79/ 840	2.45	15	4	6	5	Basket making, Vegetable cultivation,	9.34	92
3	RVP-4	-/ 24/-	- / 5.63	-	-	-	-	Piggery.	-	114
	Total-81	174/ 458/ 5007	50.72	117	47	39	31		45.403	1860

Construction of water harvesting structures is a measure for soil and water conservation. In 2004-05, 35 numbers of water harvesting structures were erected which created a total potential to benefit 560.4 hectares of land. In 2005-06, 29 WHS were constructed to benefit 556.3 hectare of area. The soil conservation department also encourages construction of farm ponds. 35 farms ponds were dug in the year in eight different Blocks in 2007-08 and 23 in 2008-09 utilising the fund available under MGNREGS.

The River Valley Project Scheme (RVP) aims at treating degraded catchment area of Multipurpose Inter-state Reservoirs with appropriate soil and water conservation measures to check silt inflow in to the reservoirs and to enhance the productivity of degraded land. The Scheme is in operation in four catchments in the State viz. Hirakud, Rengali-Mandira, Machhkund-Sileru and Upper Kolab.

Crops Grown In the District and Other Agricultural Produce:

Cereals:

Paddy is the most important crop of the District and occupies 85 per cent of the total cultivated area. There are three regular paddy crops, viz., *Godadhan* or high land paddy, autumn paddy and winter paddy. In 2011-12, summer paddy was cultivated over 2000 hectares of land.

High land paddy is sown at the commencement of the rains i.e., in June-July and harvested in towards the last part of September the autumn paddy is sown in June and harvested in October. The winter paddy is grown on low lands known as *Bahal* and is sown or transplanted in July-August and harvested in November and December. There are many promising varieties of local paddy, viz., Sonakhadika, Jhilli, Karpurbasha, Chimati, Agnisal, Barhasal, Saljhati, Khairkakuchi, Khijurjhopa, etc. Besides these local varieties, improved varieties of paddy such as *T.842, T.90, T.1242, T141, IR-1030, Swarna, Lalat, Jajati etc.,* have become popular among the cultivators. High yielding varieties were introduced in this District since 1967 Kharif season and have been widely accepted by the cultivators. Particularly, the short duration high yielding varieties viz, Taichung Native-1, Saubhagya, Naveen, Annapurna, Khandagiri, all ripping within 120 days have become popular in the District and have been successfully incorporated in the cropping patterns of various climatic zones. Total area covered under paddy crop during 1971-7 was 2,08,204 hectares, out of which 4,385 hectares were under high yielding paddy, 70,447 hectares under improved paddy, and the rest 1,33,372 hectares were under local paddy. The average yield of high yielding paddy and local paddy are 20 qtls and 7.5 qtls per hectares respectively. By 2011, the coverage of land under HYV has substantially increased replacing to a very great extent the traditional varieties of seed. The breaking up of 'technological indivisibility' factor in the cultivation of HYV

paddy seeds has had very adverse effect on the yield of HYV. However, some progressive farmers in Subdega Block have taken to raising 'certified' and 'truthfully labeled seeds' under the support of the Seed Corporation of Odisha. To the 'limited extent, another kind of rice crop known as "Dahidhan" is grown on forest lands by the hill tribes mostly in Bonai Sub-Division. For this no ploughing is required; the trees are cut down and burnt on the land and the ashes are mixed up with the surface soil. The seed is put as soon as the rain commences. But after about two years such lands become exhausted and new plots have to be prepared afresh. *After the restructuring of Agriculture Department(1980) with the World Bank sponsored 'T&V'(Training & Visit) system, the 'contact farmers' adopted by the Village Agriculture Workers (VAW), improved their crop cultivation practices both for cereal & millets and the cash crops mainly in Lephripada, Subdega, Badgaon, Nuagaon and Kuanrunda Block areas. By 2010-11, Surplus Agriculture Products (SAP) coming to markets has shown a rising trend in these areas.

The area under autumn paddy and production in 2010-11 were respectively, 93,344 ha and 4,52,869 quintals. The area under winter paddy and its total production in the same period were respectively 1,17,993 ha and 16,29,513 quintals. During the summer 2010, 10463 quintals of paddy was produced over 487 ha of land. The details of the area, yield rate and production of paddy in different Blocks and ULBs of the District in different seasons is given in **Appendix-XVII (Season-wise estimated yield area, yield rate and production of paddy in different Blocks and Urban areas of Sundargarh District).**

Besides, paddy the other cereals crops that are grown in the District are Wheat and Maize. Being a tribal dominated area Ragi is a traditional food item, hence is grown as a millet crop. The main pulses are Moong, Biri and Kulthi. The main oilseeds are Til, Groundnut and Mustard. Among other crops Potato and Sugarcane is grown in the District.

Wheat is the next important cereal crop of the District. It is sown in October after the cessation of monsoon. High yielding varieties viz, Safed Lerma, Lerma Rajo, S.308, Sonalika, Sarabati, Sonara, S.64, S.63, Kalyan-Sona etc., have been introduced in the District since 1967, and these varieties are gradually replacing the earlier introduced Pusa and red grain high yielding varieties. During the *Rabi* season of 1971-72, an area of 1557 hectares was put under the improved varieties introduced since in 1967. Only a small area of 378 hectares was sown with red grain high yielding variety of wheat. The average yield is 18 quintals per hectare. The wheat cultivation in the District has followed a pattern of 'market response' to the MSP (Minimum Support Price). In 2010-11, wheat was grown over 806 hectares of area as a summer crop. The season of cultivation starts after the

retreat of the monsoon. The total wheat production was 14127 quintals. In the same year Maize was grown over 1134 hectares of land with a total production of 17248 quintals of production in 2010-11. Maize is cultivated as an autumn as well as a summer crop.

Millets: Ragi is both an autumn crop as well as winter crop. It was grown over 221 hectares of land with a total production of 1084 quintals of production in 2010-11

Pulses (Lentil): Among the pulses, Moong (Greengram) is a crop in all seasons, i.e. autumn, winter and summer. Biri (Blackgram) is an autumn as well as winter crop. Kulthi (Horsegram) is cultivated only as a winter crop. In 2010-11 among the three dominant pulses, the area under production of Kulthi was the highest, i.e. 3224 hectares with 9994 quintals of harvest. Moong was grown over 196 hectares of land with a total production of 447 quintals and Biri was cultivated over 4524 hectares with production of 9242 quintals.

Oilseeds: Groundnut is the main oilseed grown in the District. It is grown as an autumn as well as a summer crop. Mustard is a winter crop. The area under cultivation of groundnut in the year 2010-11 was 1278 hectares and the total production was 11655 quintals. Mustard was grown over 765 hectares with production of 1782 quintals. Besides, oil is also extracted from *kusum* and *mahul* seeds obtained from the forests by the mechanized oil expellers not so much for home consumption but as MFP (Minor Forest Produce).

Other crops: Potato was grown in the winter over 498 hectares of land with production of 39955 quintals in 2010-11. During the same year sugarcane was grown over 11 hectares of land with 10234 quintals of production. The detailed estimated area, yield rate and production of different crops in the District in 2009-10 and 2010-11 is given in the following table.

Table 55: Estimated Area, Yield Rate and Production of different Major Crops in Sundargarh District (2009-10 and 2010-11)

Sl. No.	Crop		Unit	2009-10	2010-11
1	Wheat	Area	Hectare	1046	806
		Yield rate	Quintal/ hectare	16.57	17.53
		Production	Quintal	17332	14127
2	Maize	Area	Hectare	440	1134
		Yield rate	Quintal/ hectare	11.63	15.21
		Production	Quintal	5115	17248
3	Ragi	Area	Hectare	230	221
		Yield rate	Quintal/ hectare	5.64	4.9
		Production	Quintal	1297	1084
4	Moong	Area	Hectare	291	196
		Yield rate	Quintal/ hectare	2.6	2.28
		Production	Quintal	756	447

Sl. No.	Crop		Unit	2009-10	2010-11
5	Biri	Area	Hectare	2992	4524
		Yield rate	Quintal/ hectare	2.57	2.04
		Production	Quintal	7689	9242
6	Kulthi	Area	Hectare	3334	3224
		Yield rate	Quintal/ hectare	3.01	3.1
		Production	Quintal	10035	9994
7	Til	Area	Hectare	1949	3242
		Yield rate	Quintal/ hectare	2.46	2.21
		Production	Quintal	4789	7152
8	Groundnut	Area	Hectare	1027	1278
		Yield rate	Quintal/ hectare	9.46	9.12
		Production	Quintal	9717	11655
9	Mustard	Area	Hectare	947	765
		Yield rate	Quintal/ hectare	2.26	2.33
		Production	Quintal	2140	1782
10	Potato	Area	Hectare	443	498
		Yield rate	Quintal/ hectare	75.62	80.23
		Production	Quintal	33500	39955
11	Sugarcane	Area	Hectare	3	11
		Yield rate	Quintal/ hectare	566	930.4
		Production	Quintal	1698	10234

Source: District Statistical Handbook, 2011 Sundargarh

Commercial Crops: Sugarcane, cotton, jute and groundnut are the principal commercial crops of the District. Potato, chilies and tobacco are also cultivated on a limited scale. The area under this crop was 305 hectares and the annual yield was 1,754 tonnes of gur (1971-72). As a crop, sugarcane cultivation has lost importance in the District. In 2010-11, the area under sugarcane production was just 11 hectares, which was limited to Badgaon block (Panchra) and Lephripada Block (Greenkela). Production of Gur is no more done in the District.

Cotton, which was once being grown extensively in the District, is found no more in such large scale though short-staple variety is still grown in some dry areas. In recent years improved long-staple varieties have been introduced, but the area under cotton is reduced as the cultivators are not interested in its cultivation due to extensive use of mill-made yarn. The soil of the District is not suitable for jute cultivation, but during recent years its cultivation in some suitable areas has proved a moderate success. Potato and chilies are cultivated in large scale in Lephripada, Subdega, Bargaon, Bisra and Nuagaon Blocks. Large scale sandy loam areas on the banks of river Sankh and Ib are used besides the humus soil valley plots for cultivation of watermelon during summer months. Watermelon cultivation, mainly of sugar baby variety has become popular 2010-11.

Vegetables: Country vegetables such as pumpkin, brinjal, arum, yam, sweet potato, ridge gourd, little gourd, bitter gourd, snake gourd, plantain, Banion, cucumber, capsicum both bull nose and elephant trunk, colocasia etc., are grown during rainy season. Winter vegetables like cauli flower, cabbage, knol kol, spinach, carrot, French bean, tomato and potato have

also become very popular among the cultivators and are cultivated largely by the farmers* to feed the markets both weekly and daily in the District. However, the daily markets at Rourkela, Rajgangpur, Biramitrapur and Sundargarh are fed mostly by the vegetable growers of Andhra Pradesh, Chatisgarh and West Bengal, though, Agharia, Mali and Kulta farmers have specialized in potal (*parwal*) cultivation in Lephripada and Subdega Blocks. The tribal farmers of Nuagaon, Bisra, Kuanrmunda, Badgaon and Rajgangpur Blocks have taken to growing large scale cash crops in the rainy and winter seasons.

It is interesting to note that all categories of people have got used to eating wild edible mushrooms collected and sold by the tribes in the rainy season. In Rourkela such wild edible mushrooms are sold in the market complex of Birsa Chouk. In Rajgangpur, Sundargarh and Birmitrapur such wild edible mushrooms are sold every day in the season. The names of such wild edible mushrooms are different in different regions, but chirko, Bali chhatu, bhundu chhatu, patiari, badka chhatu are commonly used along with ruguda produce in the rainy season.

Fruits: The agro-climatic conditions in the District are quite suitable for cultivation of fruits and horticultural crops like banana, papaya, drumstick, spices and condiments like onion, garlic. Floriculture is gaining momentum in the District. Under the National Mission for Sustainable Agriculture, a new banana variety, Dwarf Cavendish, G-9 Robusta is grown throughout the year. The other fruit crops grown in the District are mango, litchi, k-lime, pomegranate and custard apple. Details of achievement in terms of area under cultivation in Rabi-2013 are as follows.

Table 56: Cultivation of Fruit Crops in Sundargarh District

Sl. No.	Crop	Area Under Cultivation (Ha)
1	Mango plantation	10
2	Litchi	25
3	K-lime	25
4	Pomegranate	10
5	Custard apple	19
6	Papaya	20
7	Banana (Tissue culture)	27
8	Cashew	90

Source: Deputy Director Agriculture, Sundargarh

Honey production is done by rearing of honey-bee. Besides, the honey-bees help in pollination and add yield rate of crops. In 2013, 150 units of honey-bee colony were established in the District. In the field of horticulture, mechanisation, the Horticulture Department has achieved in supplying 304 pump sets, 48 power tillers, 20 power-weeders, three power sprayers, eight brush cutters and one digger to the farmers in 2013. Mission on Integrated

Horticulture Development (MIDH) in 2013 achieved in irrigating 88.16 hectares of land through drip irrigation and 745 hectares of land by sprinkler irrigation.

Grafts and seedling of various fruit plants are sold to the farmers every year through the Agriculture and Horticulture Department. A progeny orchard and a fruit nursery have been established at Sundargarh and Kuliposh respectively to supply fruit grafts and seedlings. Recently, the NABARD has introduced a loan-subsidy scheme '**Badi**' planting one acre of mixed fruit and cashew trees. NABARD has been implementing Natural Resource Management projects (Watershed Development and Wadi Development Programmes) for the past 20 years.

Progress of Scientific Agriculture created incentive among the cultivators. Cultivation of high yielding and short duration varieties of crops is also an important factor for the progress of agriculture. Cultivators are gradually feeling inclined to adopt improved methods of cultivation by use of better seeds, manures and implements. Fruit gardens as a source of income were almost unknown a few years back, but are gaining popularity with the annual observation of Banamahostava. During the past few years, several orchards have been started at different places and cultivation of vegetables is widely undertaken. Farmers are now almost accustomed to chemical fertilisers for better yields of potatoes and other vegetables. Fallow lands are gradually being brought under cultivation.

Cropping Pattern and Crop Rotation:

Generally the farmers follow the age-old method of cultivation. The country plough is still the popular implement used in all kind of cultivation, but mechanised cultivation through tractors has been recently in use large measure by well-to-do as well as enterprising cultivators.

Water scarcity causes very small patch of cultivation of crops in summer. Paddy is the main crop of the land ploughing generally begins in summer to get the land ready for sowing. The seeds are sown broadcast, but large areas of *bahal* and *berna* lands are brought under transplantation because of proven higher yield. For such transplantation, nurseries are raised in July and transplantation is over by mid-August. For the paddy sown in the summer and early rains in *bahal*, *berna* and mal lands one inter-culture (*beusoning*) operation is essential for control of weeds and help tillering. Weeding in the fields where early varieties of paddy are grown, begins early in the monsoon and after the monsoon settles, padding operation in the fields sown with winter rice is undertaken with country ploughs having pointed plough shares. *Rabi* cultivation of pulses and oil seeds is done on *goda* lands towards the end of September but the yield is generally low. In the irrigated areas like Lahunipara, Koira, Sarafgarh,

Kansbahal, Pitamahal and Talsara high yielding varieties of paddy are taken up in *Rabi* season. The broadcasting method as adopted in 1971-72 is often being followed in the cultivation of high yielding paddy thereby limiting the tillering and the ultimate yield. Similarly, the line sowing of high yielding wheat adopted in till 1969-70, is generally in practice where wheat cultivation is done with irrigation facilities.

Most of the cultivators in this District raise a single crop (mainly paddy) in a year during *Kharif* season and keep the land fallow for the remaining period. Only a few well-to-do farmers raise more than one crop in a year. Demonstrations have been conducted in cultivator's fields under various schemes by the Agriculture Department during the past few years.

In 1970-71 inputs (investments of goods and services) worth Rs. 8,500 were supplied to cultivators and multiple cropping with the cropping pattern: Padma paddy-M.27 mustard-SB. 11 Groundnut was adopted in an area of 42 hectares. Similarly during 1971-72 inputs worth Rs. 7,100 were supplied under diversification of cropping pattern demonstration. Intensive Agricultural Area Programme and multiple cropping were adopted in an area of 16.4 hectares. Out of the total demonstration area, the cropping pattern of Padma paddy-M. 27 mustard-SB. 11 groundnut was followed in 10.8 hectares and the cropping pattern; Padma of IR. 8 paddy-high yielding variety wheat-Pusa Baisakhi *mung* was followed in the rest area of 5.6 hectares. Such demonstrations have a good impact on the cultivators and create initiative for intensive cultivation. As in 2010-11, all types of land having irrigation facilities have been brought under multiple cropping. After paddy, majority of *bahal* and *berna* lands are covered with pulses like masoor, kesari and chana that thrive in retentive moisture. The mal lands are used for wheat and vegetable cultivation where irrigation is available. The *goda* lands used for short duration paddy crop are having a mixed crop of arhar and bajra that last about a month longer in the field after harvest of *goda* paddy. The *goda* lands with no mixed crops are ploughed soon after harvest of paddy and pulses like biri, horsegram are sown while oil seed like sesamum and mustard are also sown in such *goda* lands.

Use of Agricultural Implements, Manures & Fertilizer; Agricultural Technology and Productivity

Use of modern agricultural tools and implements and farm mechanisation are the essential for improvement in agriculture. Traditional plough is still in use as it is suitable to cultivate small size land holdings. Due to intervention of the Government in different schemes, uses of modern tools and implements have become popular. As per the agricultural strategy statistics of the District, the sale statistics of the modern tools and implements in the District is as follows.

Table 57: Sale of Farm Implements in Sundargarh District, 2013-14 to 2015-16

Sl. No.	Name of the Implement	No. Sold During 2013-14	No. Sold in 2014-15	Target for 2015-16
1	Winnower 98	1134	961	1100
2	Pedal thresher (DG)	223	275	295
3	Heavy soil plough	165	165	190
4	IC plough	10	10	15
5	Marker	23	23	30
6	Cono weeder	451	451	600
7	LL Hand pump	0	0	5
8	Pedal pump	4	4	10
9	Trench hoe	0	0	10
10	Rake weeder	0	0	10
11	W F weeder	28	28	35
12	G N Decorticator	1	0	5
13	Drum seeder	32	32	40
14	Puddler	0	0	5

Farm machineries were sold in the District through the Agriculture Department as given in the following table. There was target for utilisation of subsidy amount of Rs. 62,64,000.00 during 2014-15 for the District. A sum of Rs. 52,44,685.00, i.e. 83.72 per cent of the target was achieved. The target for utilisation of subsidy for the year 2015-16 is Rs. 67,13,520.00.

Table 58: Sale of Farm Machineries in Sundargarh District

Sl. No.	Name of the Machine	No. Sold		Target for 2015-16	Subsidy Details
		2013-14	2014-15		
1	Tractor	271	197	300	50 % subsidy, limited to Rs. 90,000.00
2	Power Tiller	891	785	295	50 % subsidy, limited to Rs. 75,000.00
3	Self Propelled Reaper	69	23	35	50 % subsidy, limited to Rs. 80,000.00
4	Special Power operated Axe-flow Thresher	46	0	94	50 % subsidy, limited to Rs. 70,000.00
5	Transplanter	88	29	45	50 % subsidy, limited to Rs. 1,50,000.00
6	Hydraulic Trailer	0	0	10	50 % subsidy, limited to Rs. 25,000.00
7	Power Operator Thresher	328	176	5	50 % subsidy, limited to Rs. 24,000.00
8	Rotavator	232	220	350	50 % subsidy, limited to Rs. 80,000.00
9	Combine Harvester	7	1	2	50 % subsidy, limited to Rs. 6,00,000.00

Manures and Fertilisers are very important inputs of agriculture. At present fertilizer supply has been channelized through 10 numbers of whole sellers and 250 retailers to cater the needs of the farmers. The nutrient-wise fertilizer programme and achievement in two years, i.e. 2013-14 and 2014-15 is as follows.

Table 59: Target and Achievement in Consumption of Chemical Fertilisers in Sundargarh District

Nutrient	Consumption (MT)		Target for 2015-16 (MT)
	2013-14	2014-15	
Nitrogen	7302	6257	8553
Phosphorus	3594	3069	3963
Potash	924	1096	2283
TOTAL CONSUMPTION	11820	14176	14799
Consumption in Kg/ Ha	37.76	32.50	47.00

Material-wise consumption of different fertilisers in the District during 2013-14 and 2014-15 is as follows. Consumption pattern of Chemical Fertilizers in the District as in 2009-10 and 2010-11 is given in **Appendix-XX (Consumption of Chemical Fertilizers (Kharif and Rabi) in different Blocks of Sundargarh District)**.

Table 60: Category-wise Consumption of Chemical Fertilizers

Sl. No.	Fertiliser	Consumption	
		2013-14	2014-15
1	Urea	11517	11110
2	28:28:0	0	45
3	20:20:0	630	0
4	DAP	5470	5410
5	10:26:26	467	526
6	MOP	1337	1536
7	14:35:14	0	0
8	SSP	0	0
9	12:32:16	0	0
10	15:15:15	0	250
11	20:20:0:13	4153	1970
12	AS	80	30
	TOTAL	23654	20877

Organically produced food items are gaining popularity for its nutritional and purity value. Vermi-composts are produced systematically in one big unit and 375 HDPE vermibed. In 2012, under the Rastriya Krishi Vikash Yojana (RKVY), 66 vermi-compost units, three vermi-hatchery units and nine numbers of Block level training and extension centres were achieved.

Cow-dung still remains the principal manure. Oil-cake and silt of old tanks are also applied in the fields. With the efforts of the Agriculture Department the local cultivators are gradually using compost which is usually a mixture of cow-dung, ashes, leaves and house-hold refuses.

Crop Diseases, Control Mechanism and Crop Protection

Seed is a vital input in agriculture. There are four small seed farms located at Sundargarh, Bargaon, Rajgangpur and Kendudihi with a total area of 80.94 hectares; and a large farm located at Kuliposh of 334.28 hectares for production of nucleus seeds. There is a progeny orchard at Sundargarh with an area of 6.87 hectares for supply of seedlings and grafts to the cultivators. Besides, a fruit nursery on 4.85 hectares of land is attached to the Kuliposh farm and tow transit nurseries are located at Sundargarh and Panposh. Agriculture farms at Rajgangpur and Bargaon have been stopped operating due to some policy change. Large scale encroachments have come up in major part of the farms.

The National Food Security Mission targets to accelerate crop production through changing the methodology of cultivation, use of High Yielding Variety (HYV) sees, Plant and soil protection Management, Resource conservation techniques, incentivisation and capacity building. The NFSM targeted to distribute 12000 quintals of HYV rice seed in the District in 2014-15, with a budget of Rs. 120 lakh. The NFSM for pulses, targeted demonstration on improved technology, i.e. cluster demonstration, cropping system based demonstration.

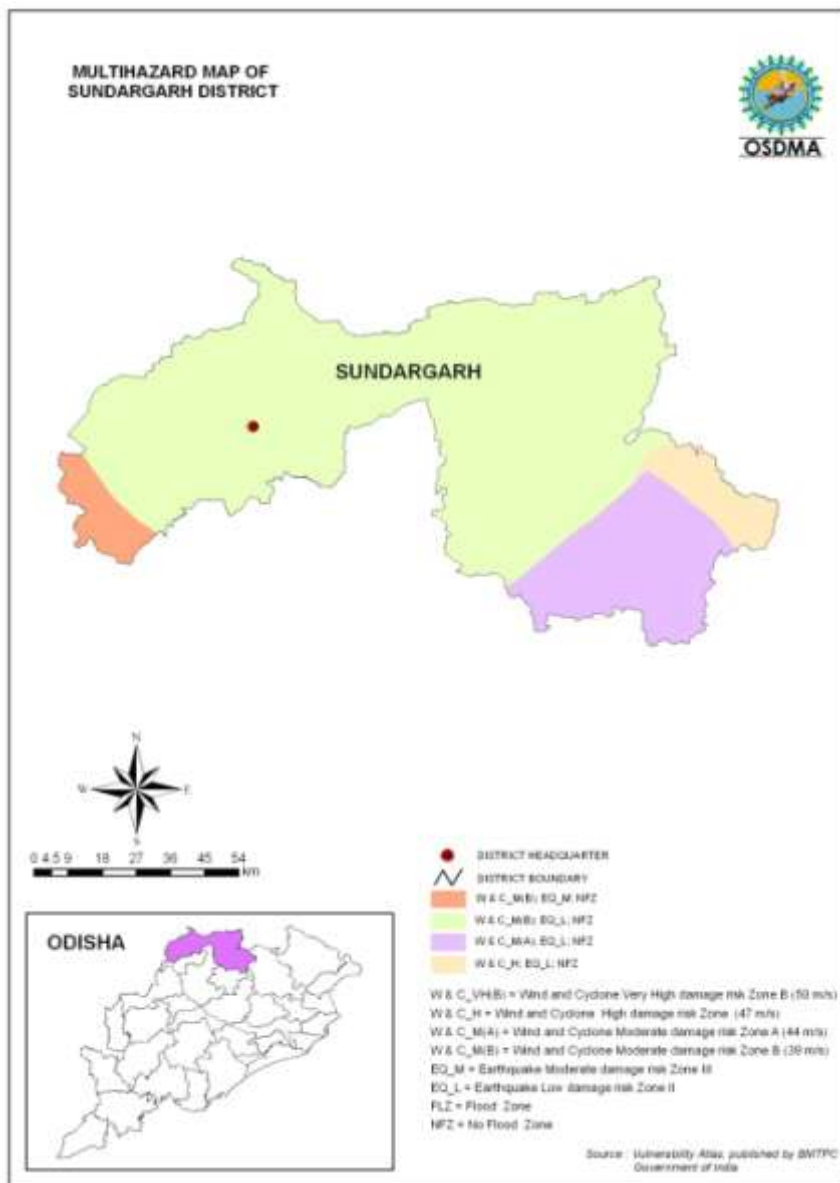
Crop Diseases: Almost every year paddy crop is attacked by stemborer, gallmidge, jassids and gundhy bugs. Sugarcane is affected by stemborer and top shoot borer. Mustard is affected by aphids. Groundnut falls prey to the attack of termites, whit- of pathogenic bacteria, fungi and virus cause a lot of damage to different crops.

Soil Testing has great importance for planning purpose. The achievement in soil testing in different blocks of the District is given below.

Table 61: Details of Soil Testing done in 2013-14 and 2014-15

Sl. No.	Agriculture District	Name of the Block	Total no. of Soil Testing Done	
			2013-14	2014-15
1	Lephripara	Hemgiri	344	346
2		Lephripara	284	637
3		Tangrapali	555	1343
		TOTAL	1183	2326
4	Sundargarh	Sundargarh	1385	676
5		Subdega	1020	606
6		Balishankara	1234	398
		TOTAL	3639	1680
7	Rajgangpur	Bargaon	577	629
8		Kutra	514	394
9		Rajgangpur	416	1362
		TOTAL	1507	2385
10	Panposh	Lathikata	429	659
11		Kuanmunda	399	611
12		Nuagaon	514	748
13		Bisra	514	595
		TOTAL	1856	2613
14	Bonei	Bonei	1714	3
15		Lahunipada	684	1770
16		Koida	428	0
17		Gurundia	394	1804
		TOTAL	3220	3577
		DISTRICT TOTAL	11405	12581

Source: Deputy Director, Agriculture, Sundargarh



Krishi Vigyan Kendra (KVK), Soil Testing and State Farms

The Krishi Vigyan Kendra, Sundargarh came into existence in March 2004 under Odisha University of Agriculture and Technology (OUAT), Bhubaneswar, with one post of Programme Coordinator, six posts of subject matter specialists, one Programme Assistant, one Farm Manager and one Computer Programmer as technical staff. As in the year the KVK is running with two subject matter specialists against six sanctioned posts. It has been established to bridge the gap between advanced agricultural technologies

and the existing practices in the field of agriculture and allied sector. The main objective of the KVK is to assess and refine the agriculture technologies with reference to their suitability to specific farming situation, demonstrate the potentiality of such front line technologies and equip the farming community with specific skill and knowledge to use those technologies thereby developing a technology dissemination model. The KVK works to enhance the agricultural and allied production by specific interventions through the principles of 'Learning by Doing' to improve the socio-economic condition of the people in the District. The mandates of this Kendra are:

1. To conduct On Farm Testing (OFT) to assess and refine the agriculture technologies.
2. To conduct Front Line Demonstration (FLD) on latest agricultural and allied technologies to demonstrate the potentiality of such technologies in the farmers field.
3. To conduct vocational trainings for practicing farmers, farm women and rural youth.
4. To organize in-service trainings for various field extension personnel of the line departments and NGOs to update their knowledge on the recent advances in the field of agriculture.
5. To work as knowledge resource centre at the District level in the field of agriculture and allied.

Identified Thrust Areas for the Krishi Vigyan Kendra (KVK): The identified thrust areas of the KVK are (1) promoting diversified cropping pattern in uplands (Oilseeds/ Pulses/ Maize), (2) varietal substitution in major field crops and vegetables, (3) promoting Integrated Weed and Nutrient management practices in major field crops, (4) promoting Integrated Pest and Disease Management strategy in major crops, (5) to emphasize on cultivation of lucrative non-traditional, off-season and exotic vegetables, (6) to promote farm mechanization and improve use of implements for drudgery reduction, (7) to promote alternate livelihood options for resource poor farm house holds and (8) to promote farming system approach.

Krishi Vigyan Kendra works in different farming situations concentrating its activities in adopted villages representing specific farming situation. As on date Krishi Vigyan Kendra, Sundargarh is having outreach to 142 villages spread over nine Blocks in the District through direct interventions and Kissan Mobile Advisory Service.

From 2012-13, the Krishi Vigyan Kendra has adopted villages to fulfill the identified thrust areas and objectives on experimentation basis. The details of the adopted villages are given below. Achievements of KVK during

2014-15 in various fields are enumerated in Appendix-XIX (Achievement of Krishi Vigyan Kendra, Sundargarh, 2014-15).

Table 62: List of Adopted Villages by Krishi Vigyan Kendra, Sundargarh

Village Name	Year of Adoption	Block Name	Distance from KVK	Population	Number of Farmers (having land in the village)
Salepali	2012-13	Sadar	30	1300	150
Khamarbahal	2012-13	Tangarpali	25	900	120
Amasaranga	2012-13	Sadar	20	1185	115
Tileimalti	2010-11	Sadar	22	778	156
Birjaberna	2013-14	Sadar	27	216	43
Mundapada, Salangabud	2013-14	Sadar	32	238	47
Khera pada	2013-14	Sadar	33	198	29
Samaradihi	2013-14	Sadar	4	718	98
Baghnipani	2013-14	Sadar	22	272	58

Source: Krishi Vigyan Kendra (KVK), Sundargarh

Agricultural Credit, Marketing, Processing and Storage and State Support

Agricultural credit comes through Agricultural Credit Societies, Marketing Co-operative Societies and crop insurance. In 2010-11 there were 44 numbers of Primary Agricultural Co-operative Societies (PACS), two CARDs, and 15 branches of Central Co-Operative Bank (CCB) in the District. Besides, there are three Regional Co-Operative Marketing Societies with a total of 1051 members in the District. There is no Co-operative Cold Storage in the District. The total sum of the insurance value of the crops was Rs. 2388.59 lakh against the premium collected for Rs. 54.8 lakh.

Table 63: Credit Activities of Agricultural Co-Operative Societies

Year	No. of Societies	Membership	Working Capital (Rs. In Lakh)	Loans Advanced (Rs. In Lakh)	Loans Overdue (Rs. in Lakh)	Loans Outstanding (Rs. in Lakh)
2009-10	44	260633	21358.64	10244.16	3642.59	12477.76
2010-11	44	293047	28883.82	16867.23	7713.94	17677.36

Source: District Statistical Handbook, 2011, Sundargarh District

Marketing Co-Operative Societies aim at providing marketing service to the agricultural products of the District. The numbers of members in the Marketing Co-operative Societies are fluctuating over years. The societies are running in loss due to different reasons. In 2010-11, the overall profit was 5.86 per cent.

Table 64: Marketing Activities of Marketing Co-operative Societies

Year	No. of Societies	Membership	Share Capital by Govt (Rs. In Lakh)	Working Capital (Rs. in Lakh)	Business turnover (Rs. In Lakh)	Profit (+)/ Loss (-) %
2005-06	3	1037	30.16	285.19	533.22	(+) 0.26
2006-07	3	1094	30.16	313.07	540.86	(-) 0.70
2007-08	2	1023	26.59	296.23	1295.15	NA
2008-09	3	1105	37.42	337.94	1432.53	NA
2009-10	3	1105	37.42	337.94	1432.53	(-) 59.29
2010-11	3	996	37.46	391.67	77.35	(+) 5.86

Animal Husbandry, Animal Diseases

The local breeds of cattle are generally 'non-descript'. They are stunted in growth and are not well cared for. Bullocks and buffaloes are employed in ploughing, the latter being especially useful in tilling hard and muddy soil. Though majority of cows are dry not subjected to milking, cows and she-buffaloes are prized for their milk by milkmen class and a few conscious families. Goats, sheep and pigs are reared for table purpose. Ponies are not seen anymore. Poultry keeping is a common practice with the Adivasi families and the local breeds require almost no care for their survival.

Livestock were enumerated to be 6,77,179 as reported in 2007. At the same time the strength of cross-breed and exotic cattle was 10634, following 52857 buffaloes, 354623 goats, 53122 sheep, 98895 pigs and an estimated 723495 number of poultry birds reported in the District. In 2020-11 total milk produced was 40470 metric tonne in Sundargarh District. The share of milk production from the domestic cows was 14910 metric tonnes (37 per cent). The share from Cross Breed Cows was 19520 metric tonnes (48 per cent); Buffaloes was 6040 metric tonnes (15 per cent). Milk from goat was not collected in the District.

Milk yield of the local cows is very meagre and they remain dry for most part of the year. Generally the cows are neglected and preference is given to bullocks because of their utility in agriculture. Till recently, no systematic attention was given by the local people for improved breeds. Good cows and she-buffaloes were only found with the milkmen class (gourahirs), a few rich farmers, business men and traditional milkmen (Gowalas), who had come from outside the State and with a few affluent people.

After large scale urbanisation in the Rourkela Steel Plant areas and its periphery, like Jhirpani, Jagda, Kantajhar, Sonaparbat, Jolda, Lathikata,

Raghunathpali, Hamirpur, Gerdhai in the east of the river Brahmani, and Vedvyas, Lungei, Gopodihi and Kalunga in the west of the river, has increased the demand for milk to a very substantial extent. Local cattle owners could meet scanty percentage of the demand. This phenomena of acute shortage of milk compelled the import of cattle (mainly Jersey) and buffaloes (Murrah and Surti) from Bihar and Uttar Pradesh in large numbers in 1960s and it became a common parlance to name the brand of milk as 'Gaya milk', 'Chhapra milk', 'Balua milk', etc. sold door to door by the milkmen from those origins. In 1985, the supply of milk from those sources was assessed at 50,000 litres a day. OMFED has already set up milk chilling and processing plant of 10,000 litres per day capacity at Rourkela.

Poultry

Poultry Keeping is almost a hereditary occupation with the tribal people who constitute the bulk of the population in the District. They keep poultry mainly for the purpose of home consumption, guest entertainment, offering sacrifices and gambling through cock-fights. The eggs are either consumed by them or are sold in the village markets. The modern idea of keeping poultry for profit was novel to these people, but during the first phase of Community Development programme, poultry units were kept in each Gram Panchayat for feeding of eggs to pregnant and lactating mothers.

One Egg Producing Layers Unit in the modern scientific technique with a layer capacity of 100000 birds has been set up by M/s Prasant Kundu and made operational from 2014 in the village Pamura of Badgaon CD Block. The total number of birds stocked is reported as 80,000, of which @80 of 60,000 birds lay eggs everyday producing 48,000 eggs for sale.

With introduction of meat yielding '**broilers**' from 1980s in the country, broilers chicks, that become over a kg of table birds in less than 30 days, caught up very rapidly all over the State and Sundargarh District needed broiler birds in huge scale. Thereafter, **table-cum-layer birds** in the species of 'Banraj', 'Kurelors', 'Rainbow Roosters' started coming in the market from private entrepreneurs. By 2010-11, both the broilers and eggs-cum-table birds have quite a sizeable market in the District.

In 1958 the Regional Poultry Farm at Sundargarh was started with pure white leghorn breed. The farm caters to the needs of various poultry development projects of the Districts of Sundargarh, Sambalpur and Keonjhar. Hatching eggs, laying pullets and breeding cocks are supplied to Departmental Poultry Units, Block poultry Units, All-India Poultry Development Centres and also for the Expanded Nutrition Programme. Besides, eggs and birds are also sold for table purpose. This farm is managed by the Fisheries and Animal Resources Development Department.

*As in 2000, the farm had reduced the production of layers and taken up breeding of broiler chicks from the brood stock raised in the farm. Thereafter, the farm also took up breeding of RRI table-cum-layer birds.

Intensive Egg and Poultry Production-cum-Marketing Centre: A project was started in 1956 to provide loan and technical assistance for establishing 200 poultry units on commercial scale near Rourkela. 52 units, each consisting of 100 layers were started at Rourkela, Biramitrapur, Hatibari, Kuarmunda and Kalosihiria. Within a few years 50 per cent of the units were closed down and the scheme was discontinued. At present the Government Poultry Farm at Kuarmunda supplies birds, chicks, eggs and premixed poultry feeds. There are about 600 private poultry farms having 7,000 birds located at jhirpani, Jalda, Balanda and Kalunga.

Poultry Feed Mixing Centre: A poultry feed mixing centre has been established at Sundargarh to supply balanced premixed feed to different poultry farms and private poultry keepers of the northern Districts of the State. The unit is managed under the administrative control of the Deputy Director, Poultry Development, Odisha.

Total Egg Production in the District in 2010-11 was 7,02,06,000. Desi eggs were 58,00,000, improved eggs were 6,38,00,000 and duck eggs were 6,06,000 during the period. Production from commercial farms was reported as nil in that period. The District produced 834.94 MT of meat from sheep, 1529.19 MT of meat from goat and 2673.33 MT of meat from pig. Out of the total meat, 16.72 per cent comes from sheep and 30.30 per cent from goats. 52.98 per cent, i.e. more than half of the total production comes from pig.

Veterinary Health Facilities

Animal husbandry activities are looked after by the Chief District Veterinary Officer (CDVO). In 2011, there were 30 hospitals and dispensaries, 113 Livestock Aid Centres, 132 Artificial Insemination Centres, 36 Veterinary Assistant Surgeon and Additional Veterinary Assistant Surgeon and 116 Livestock Inspectors in the District. During 2010-11 a total number of 334165 animals were treated. Inoculation of 19,06,555 animals and birds was done. 30,904 animals were castrated; artificial insemination was done with 33144 animals. 7575 male and 6429 female progenies were born out of the artificial insemination. Detailed list of veterinary health institutions is given in **Appendix-XXII (Veterinary Institutions and Personnel in different Blocks and ULBs)** and the details of animals treated at such institutions is given at **Appendix- XXIII (Treatment of Animals and Progeny born in Different Blocks and ULBs)**.

Animal Diseases:

The common contagious diseases of the cattle in the District are **rinderpest, haemorrhagic, septimicaemia, black-quarters, anthrax and foot and mouth disease (FMD)**. The incidence of rinderpest is not severe as it can be prevented by Goat Tissue Vaccine. Haemorrhagic septicaemia and black-quarter generally occur during rainy season. The number of young and milking country cattle is few. Mostly, all the cattle including young the old and invalid animals are left to their fate and are uncared for in the District rural following the age old practice of 'kheda' or 'urla' soon after the bahal land paddy is harvested. The principal **poultry disease is ranikhet and fowlpox**. The former is a virulent type of disease, which spreads rapidly and takes a heavy toll.

To check Rinderpest disease, the cattle are being vaccinated with Goat Tissue Vaccine. One-post has been established at Kuarmunda to vaccinate cattle from outside the State. The technical staffs of different hospitals, dispensaries and Stockman Centres also vaccinate animals and birds to immunise them against various contagious diseases.

Fodder: There are extensive areas of forests and waste lands in the District. Plenty of green grass is available for the cattle to graze during the rains. Every village has its own pasture (*gochar*). Cattle of all categories graze upon it throughout the year. Acute shortage of grass is felt after the rains for and they remain underfed during the summer months mostly depending on paddy straw. In recent years particular attention is being given to preserve the greens in form of silage and hay. Silo pits have been dug at various veterinary centres for demonstration. Moreover, cultivation of perennial grasses like elephanta grass, nippier grass, anjan, *kanchan* etc, has been taken up by the State Government. The Soil Conservation Department has introduced grass cultivation in village waste lands. A pasture centre has been established near Panposh in 1966-67 where grass, maize, jowar and cowpea are cultivated as fodder crops to meet the requirements of the Rourkela city.

Increased demand for milk in the Rourkela metropolis has motivated growing seasonal as well as perennial fodder grass in some Government forest, soil conservation and agriculture farms in the neighbourhood of Rourkela. Kuarmunda Dairy Farm grows fodder only for captive consumption. The farm near Kalunga on the way to Birkera grows Hybrid Nappier for propagation and sale. Other fodder farms are dependent on wild grass. Animal Resource Department has a programme to promote fodder cultivation at family, Gochar and farm levels. The Department units distribute seasonal fodder kits in rainy season besides supplying the stock of perennial fodder.

Table 65: Fodder Varieties

Year 2000 onwards	Names of Seasonal Fodder Seeds Distributed	Names of Perennial Grass Stock Supplied
2000	Mp cherry, Juar, Sweet sudan, Leguminou, Sudex cherry.	Co-3, Congo signal bunch, Paragrass, Ginee grass, Jumidicola, Hybrid Nappier, Stylo.

Dairy Farms & Dairy in the Private Sector:

In 1939, a small dairy farm was started at Sundargarh by the Durbar administration. There were 13 Sindhi cows, two bulls, six male and six female calves during 1940, with the idea that in course of three to four years the ex-State would have a model breeding farm and will be able to distribute bulls for improvement of the local variety. The farm was almost of a private nature and was meant for supply of milk to the palace. It was closed in 1948. A small dairy farm was also maintained for a few years at Kuarmunda by the ex-Zamindar. Nothing tangible was done to encourage dairy farming in this District till 1957 and in that year the State Government launched a scheme of subsidised dairy. Under that scheme a person from Kalunga started a small farm with six milch cows and a Red Sindhi bull. The milk produced was marketed at Rourkela but the unit continued to function for a short period.

A dairy farm has been established by the State Government at Kuarmunda at a distance of 19 km from Rourkela during 1966-67. It maintained pure breed of Hariyana cows and Murraha buffaloes. These Hariyana cows are being artificially inseminated with the Jersey breed at present. The cows and heifers are often sold on auction and young bulls for breeding purpose are supplied to the Utkal Gomangal Samiti to be distributed in rural areas. It was originally planned to keep 694 heads of cattle and to supply about 1,500 litres of milk daily to Rourkela City maintaining 300 milch animals throughout the year. At present only 200 litres of milk a day is produced. 200 hectares of lands have been provided for this farm, out of which 40 hectares have been reclaimed for growing different fodder crops. At present Kuarmunda Dairy Farm has reduced its operation drastically, concentrating in HF breed of cows, some Murra buffaloes and recently rearing goats of Sirohi varieties for propagation.

Another dairy farm is going to be established by the State Government at Sundargarh that has some Jersey cows for milk. Besides the Government farm at Kuarmunda, there are a number of private dairy farms in Rourkela and Rajgangpur run mostly by the people of the neighbouring States and a few local milkmen of the District. A *gosala* has been established at Rajgangpur. Its primary objective is to take care of old and invalid cattle.

Dairy Farms in Private Sector: From 1970, the dairy farming has taken a commercial venture in and around Rourkela Municipality. Private dairy farms have come up with subsidised loan from Commercial Banks linked with APICOL schemes. Others have ventured the projects without any loans. The list of important dairy farms of Sundargarh District as in 2015-16 is given below.

Table 66: Major Dairy Farms of Sundargarh District

Name	Location	Nos of Animals	Variety	Remarks
Rourkela				
Amrit Ganga	Rourkela	150 cows	jersey	
Mishra Khatal	Rourkela, Sector-19	50	jersey	
Purohit Farm	Jhirpani	30	jersey	
Rout DAIRY	Vedvyas	60	jersey	
Rajgangpur				
OCL	Rajgangpur OCL Colony	40	HF	
Kishori Maharaj,	Banthupada	30	Haryana & Jersey	
Meenu Dairy	Barkani	40	Jersey	
Orion Dairy	Duddi	15	Jersey	
Diya Dairy & Agro Processors Pvt Ltd (DDAPL)	Sangitangar, Badgaon	250	HF	Fully mechanized milking and processing.
Sundargarh				
Panda Dairy	Sundargarh	40	jersey	

Besides, the number of private small units having two to six milch animals are in sizeable numbers in the outskirts of Rourkela, Kuarmunda, Bisra, Bondomunda, Rajgangpur and Sundargarh towns which are called 'Khatal's' in the local parlance.

Fisheries and Growth

Traditional fishing crafts and gears (implements,) like bamboo traps, nets and angling rods are in common use. During recent years nylon nets and different types floats made of plastic and rubber have been introduced in the District. The Fisheries Department is supplying fry dragnet, fishing nets, gill nets, shooting nets and plankton nets.

Table 67: Area Available for Fisheries in Sundargarh District - 2015-16

RESOURCE	Area Available		Area Culturable	
	Nos	Area (in ha)	Nos	Area (in ha)
Tanks	6270	4372.82	5841	4083.51
MIP	83	628.82	50	294.66
Reservoirs	6	4306.00	6	4306.00
TOTAL	6359	9307.64	5897	8684.17

Source: District Fishery Officer-cum-CEO, FFDA, Sundargarh

Owing to interior location only fresh water fish cultivation and production is seen in the District. In 2010-11, 8894.1 MT of fresh water fish produced in the District. In all Blocks, fishery depends upon availability of tanks. In the recent years, due to growth of the Minor Irrigation Projects tanks are available for fishery activity. Reservoirs of the Medium Irrigation Projects are also utilised for the purpose. The District has a potential of 8648.17 hectare areas of water bodies for pisciculture. There are four numbers of departmental fish farms at Sundargarh Sadar, Bonai, Bisra and Tudalaga covering cultured water area of 10.22 acres of land. The farm at Sundargarh is managed by the OPDC, is mainly a breeding farm. There are two circular hatcheries in this farm, having production capacity of 25 lakh spawns at a time. The other three farms have been run by private entrepreneurs on lease basis. Oxygen packing with plastic bag has been introduced by the Fisheries Department for safe transportation of fry to distant places. Detailed account of fish production in different Blocks of the District is given in **Appendix-XXIV (Production of fish in different Blocks of Sundargarh District, 2010-11)**.

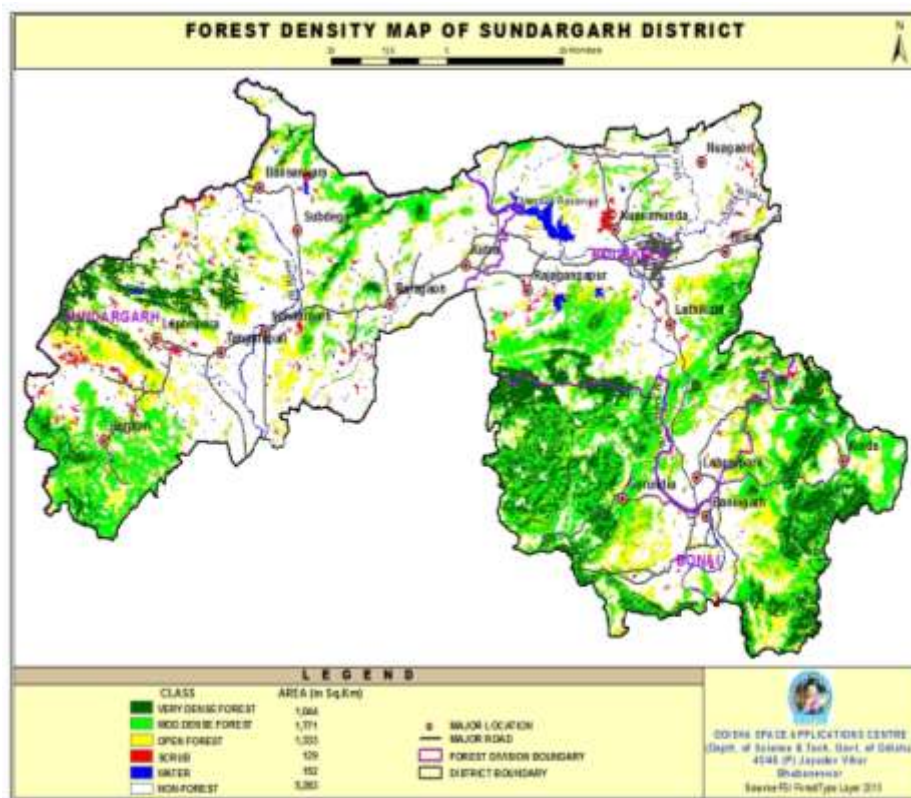
Table 68: Government Fish Farms in Sundargarh District

Sl No.	Name of Fish Farm	Total area in Ac.	Total Water Area in Ac.	N.T. area in Ac.	R.T. area in Ac.	S.T. area in Ac.	Spawn stock capacity (in lakhs)	Capacity to produce fry (in lakhs)
1	Sadar	11.93	5.27	2.08	0	3.19	85	25.50
2	Bonai	5.50	2.51	1.01	0	1.50	40	12.00
3	Bisra	4.44	0.75	0.59	0.16	0	30	9.00
4	Tudalaga	5.39	1.69	1.05	0.64	0	0	0
	Total	27.26	10.22	4.73	0.80	4.69	155	46.50

Reservoirs: Reservoir stocking of 'common crap' started in Mandira Reservoir from 1985 and the programme was implemented in other medium and minor water impoundments. Reservoir-wise no. detailed account of Pisciculture Farmers Co-Operative Society formed and area of each reservoir used is given at **Appendix- Pisciculture Cooperative-wise detailed information (2014-15)**. At present, fishery activity is realised through the SHGs. SHGs mainly operate in small scale in the tanks. Fishery tanks are excavated through convergence programme of the departmental fund and the central fund coming through MGNREGS.

Table 69: Pisciculture through SHGs in Sundargarh District

Sl. No.	Name of the Block	Total		
		No. of SHG	No. of Tank	Area in ha.
1	Lephripara	2	2	5
2	Hemgiri	1	1	0.40
3	Subdega	5	5	2.00
4	Bargaon	6	6	2.50
5	Kutra	1	1	0.40
6	Rajgangpur	2	2	0.80
7	Nuagaon	6	6	2.50
8	Bisra	41	41	16.40
9	Lathikata	4	4	1.60
10	Gurundia	10	10	4.60
11	Lahunipara	7	7	2.80
	Total	85	85	35.20



Forestry: Importance, Management, Rights and Concessions

The present District of Sundargarh was a very inaccessible tract having no proper communications before the advent of the Bengal Nagpur Railway (now South Eastern Railway). The tribal people living in the area subsisted for the most part on shifting cultivation which meant wanton destruction of forests. There was no regular department to deal with the forests, into which the local people had free access to destroy what they liked. The outstanding event in the history of forests of the District was the construction of the Railway in 1883 and this gave rise to great demand for forest products. About this time Durbar Government levied a forest cess on tenants of Gangpur ex-State for the supply of timber for their domestic requirements. The Railway Company required large quantity of timbers for which an Inspector was appointed to collect royalty from the company and to control the activities of the forest contractors who used to cut the trees irrespective of size and marking. Till about 1890 the forests of the Gangpur ex-State were regarded as property of the ruler but with timbers assuring an ever increasing importance as a source of revenue, the Zamindars put forward their rights in their respective areas and their claims were recognised by the Divisional Commissioner of Ranchi. Attempts were made to regularise the operation of contractors. On the initiative of the Commissioner, regular terms of contract ranging from 10 to 15 years were fixed but no provision was made for proper management of the forests. In 1908 efforts were made to organise a Forest Department by appointing two Forest Rangers and 13 Forest Guards. A Land Revenue Settlement was in progress at the time and the opportunity was taken to declare several forests continued for the next 10 years. In 1920 a set of forest rules were published. The next mile stone was the preparation of the working plan under the guidance of H. F. Moony, who revised the plan in 1948. With the inauguration of the Forest Department and introduction of forest rules, the subject of conservation developed on scientific lines.

In Bonai a few rules were framed for the management of the forests during 1892 when the contractors worked in the forests for supply of sleepers to the Bengal Nagpur Railway (now South Eastern Railway). These rules provided for the division of the forests into reserved and unreserved areas and restricted the rights of the tenants in the reserved forests. Proper management and controlled felling in both reserved and unreserved forests commenced in 1918. Prior to that there were long-term leases hampering conservation. It was only in 1931 that the first preliminary working plan of the Bonai forests for systemic working and regulation of exploitation in the reserves was prepared.

At present the forests are being managed and worked according to the prescription of well regulated working plan. During the period of war forests

were recklessly destroyed in spite of well-regulated plans in furtherance of war efforts and timbers of all size were removed for military purposes. The management of the forests of the Bonai and Gangpur was taken over by the State Government with the merger of the States on 1 January 1948.

Ex-Zamindari Forests: There were six estates within Sundargarh division and three in Bonai division where the estate holders enjoyed rights over the forests. After the abolition of the zamindaris all these forests were merged with their respective forest divisions excepting Hemgir and Sarapgarh which were being managed by the Revenue Department. Subsequently these two forest areas were included under the jurisdiction of Sundargarh Forest Division.

Impact of Forest in the Economy of the District: The people of the District depend upon the forest to a large extent. Their requirements consists of mainly of timber for houses building, agricultural implements bullock-carts; bamboo for fencing, roofing and basket making; grass for thatching and rope making; and fuel for the kitchen. Demand for grazing is also met from the forest.

The poor people search out from the forest edible roots, leaves, fruits and flowers for their living. The carpenters, basket makers and blacksmiths require timbers, bamboos and firewood in large quantities than the ordinary cultivators for their profession. Apart from the excellent revenue obtained from the sale of forest produce, the various works taken up in the forest involve utilisation of manual labour. In the season when labour is not utilised for agriculture, people get employment in various works of the forest like picking of *kendu* leaves, cutting of timber, rearing cocoons and *lac*. Other minor forest produce like myrabolan, *mohua* flowers and seeds, *dhatuki* flowers, resins, etc are collected by the local villagers and sold or bartered in the weekly markets in exchange of salt, rice and other necessities.

Forest Produce: The principal forest produce of the District were timber and *kendu* leaves. *Sal* timber is exported in the form of sleepers, poles, logs, pitprops etc. Logs of *bija*, *sisu*, and *gambhari* have also good markets outside the District. There are various kinds of forest produce like *kendu leaf*, *sabai* grass, *lac*, *tassar*, *myrabolan*, *mohua*, *kusuma*, seeds, resin and catechu. Of these, *Kendu leaf* brings the largest revenue. Bamboos are exported mostly from the Kunjar range of Bonai division. In Sundargarh division bamboos are not abundant except in a region to the extreme West, on the border of Hemgir ex-zamindari. Elsewhere there are a few stunted clumps which meet in the ordinary requirements of the people. Charcoal is exported in huge quantities although the industry is of comparatively recent origin.

Exports of forest produce are made mainly through roads and railways. Facilities of road communication have solved the difficulties to a great extent and the timbers are easily removed to the rail heads by motor trucks. Attempts made to float sleepers down the river Brahmani have failed due to rapids and rocks with which the river abounds in this District up to its entry into the Talcher Sub-Division of Dhenkanal District.

Rights and Concessions: The Union Government implemented the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. The rights and concessions enjoyed by the people of the District in different classes of forests vary widely from area to area. Nistar (forest cess) is a communication of payments to be made by the tenants for free use or use at concessional rates of timber and other forest produce from the Khesra or 'B' class Reserves. The royalty for taking bamboos by tenants vary from, 0.50 paise to 2.00 per hundred.

In 'A' class Reserved forests of Bonai division unreserved species at half of scheduled rate are supplied to the tenants if the same are not available in Khesra forests. Thatch grass and sabai grass are supplied to tenants at half the scheduled rate. In Khesra or unreserved forests reserved species reserved species are given at half of the royalty. Firewood, bamboos, minor forest produce and timber of unreserved species are allowed free, excepting the minor forest produce prohibited for collection. Grazing of the cattle is allowed free. There is no restriction collecting edible fruits, roots and flowers in both the reserved and Khesra forest.

In 'A' class Reserved forests of Sundargarh division, the tenants living close to the forest are allowed to collect dry firewood, edible fruits, roots and leaves without payment on condition that they render service in extinguishing fire and cutting boundary and fire lines. The tenants have to pay a fee of Rs. 1.00 and 0.75 per head of buffalo and bullock respectively. In 'B' class reserved forests; the cess payer gets plough timber and timber of unreserved species from annual coupes free for his personal use. In Khesra forest the cess-paying tenant is allowed to remove unreserved species, firewood and minor forest produce freely.

The Indian Forest Policy of 1988 (MoEF, 1988) and the subsequent government resolution on participatory forest management (MoEF, 1990) emphasize the need for people's participation in natural forest management. The policy document asserts that local communities should be motivated to identify themselves with the development and protection of the forests from which they derive benefits. Thus, the policy envisages a process of joint management of forests by the State governments (which have nominal responsibility) and the local people, which would share both the responsibility for managing the resource and the benefits that is harvest of

(Non-timber Forest Products) NTFP that accrue from this management. Under joint forest management (JFM), village communities are entrusted with the protection and management of nearby forests. The areas concerned are usually degraded or even deforested areas. The micro unit of 'Van Sanrakshan Samiti' in each village has to implement the plans and programmes of the JFM programme. The local Forester has to be an integral part of the Vana Sangrakshya Samiti (VSS). Taking into account the performance of the VSS, the concerned DFO confers the status of 'Forest Development Agency' (FDA) to the deserving VSS giving assistance for protection of the forest and gives grants for plantation and regeneration in the degraded forest areas. In Sundargarh District, the DFO wise report of VSS under the JFM is as under from the year 2000.

Table 70: Sub-Division-wise formation of Vana Sangrakshya Samiti (VSS) and Forest Development Agency (FDA)

Name of the Division (Territorial)	No of VSS Formed	No of FDAs Functioning
Sundargarh	332	59
Rourkela	365	52
BONAI	292	60
Total	989	171

Remarkable achievement of JFM is the regeneration of SURDA forest range in Lephripada Block in Sundargarh Forest Division. The VSS protected and regenerated the SURDA forest that had become almost bald, and was awarded **Indira Priyadarshini Van Sanrakshan Award 1989**.

Implementation of Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006: Progress of recognition of forest rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 in Sundargarh District is in its mid-way as on date. So far as individual rights are concerned, 40311 applications in total were received in 1669 Gram Sabhas held in the District so far. The Gram Sabhas have rejected 10187 claims, remanded 1223 cases to the Forest Rights Committee (FRC) at the village level and forwarded 28901 cases to the Sub-Divisional Level Committees (SDLC). The SDLCs in the three Sub-Divisions have approved 16888 cases and recommended to the District Level Committee (DLC). The DLC has so far recognised the right of 15258 individual cases, though the distribution of record of rights to the beneficiary families has not been fully covered. Only 9473 numbers of records of rights have been distributed and distribution of the rest is under process. The total area of Revenue Forest land for which patta has been distributed is 10156.76 Acres and the area of Reserve Forest is 7927.71 Acres. The only concentration of Paudi Bhuiyans in the Bonai Sub-Division has registered approval of 463 individual rights out

of 957 claims received at the FRC level. The statistics on the implementation of Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act is given in the following table.

Table 71: Progress of Implementation of Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (up to February 2016) in Sundargarh District

Name of Sub-Division	No. of Claims Received	No. of Claims finally Approved	Area Under Approval in Acres	No. of Beneficiary Families	No. of Cases relating to the Primitive Tribal Group (PTG)	Area relating to PTG
Sadar	15558	7953	11372.58	7953	-	-
Panposh	10381	2415	2852.98	2415	-	-
Bonai	14372	4890	5812.25	4890	463	423.36
TOTAL	40311	15258	20037.81	15258	463	423.36

Marketing of Forest Products: In the past practically the whole outturn of the forest was in the form of sleepers. With the exception of *sal* a few other economic species were being extracted in the log form. The principal market for the sleepers was the Railway. After use of concrete sleepers, there is no demand for wooden sleepers by the Railways. With the establishment of the Steel Plant at Rourkela, construction of Bandamunda-Dumarao Railway line, establishment of a mining township at Barsuan and execution of several other construction works demand for timber has increased considerably. Timbers are also exported to Calcutta, Jamshedpur, Asansol and various other places outside the District. The coal fields of Jharia and the copper mines at Musabani provide a good market for pit props.

Minor forest produce is generally leased either annually or for more than one year to contractors. Kendu leaves, though a minor forest produce, has attained considerable importance and the revenue derived from it has increased enormously during the last decade.

All the forest coupes in Sundargarh Forest Division are worked out by the Odisha Forest Corporation Limited it has established the saw mills in this division. Besides local supply large quantity of timber, fire wood and charcoal are exported. A Kendu leaf unit is being worked out by the Forest Corporation since 1971. In Bonai Division the Corporation is the main lease holder of timber coupes.

Natural Calamities, Disaster Management, Climate Change and Impact on Agriculture:

Due to the undulating hilly and sloping landscape, the area is often subject to floods and drought. The district is coming under moderate and low

risk zone to earthquake (Zone –II most of the part and Zone-III as partially). The district is also coming under moderate damage zone to wind and cyclone. The earthquake in Deogarh-Bonaigarh area in 1995 caused substantial damage. The major potential hazard areas is Rourkela and mining area of the district which is prone to chemical/ Industrial disaster.

Ravages by famines and scarcity due to frequent droughts and occasional floods have created havoc in the economic and social life the people. The rivers in this District flow down to plains and no flood usually occurs. Only when there is wide spread heavy rain in catchment areas they overflow. Drought and attacks of insect pest are the main causes of crop failure. There is very little second crop except paddy which is cultivated in *kharif* season. When paddy crop fails the cultivators becomes helpless. Moreover, most of the agriculturalists own very small holdings and they supplement their income as agricultural labourers on other's fields. When agriculture deteriorates they become unemployed. Worse is the case with landless labourers who have nothing to fall back upon. Much remains to be done by way of repair, renovations or constructions of minor irrigation works for storing up an increased volume of water and make it available for irrigation with the ultimate aim of insuring against drought caused by deficient and ill distributed rains and also to raise a second crop or to raise money crops.

Worst Calamities of the 20th Century:

Flood of 1943: The highest flood in living memory was seen in the river Brahmani in August 1943. The flood affected 66 villages, the worst affected being San-Kansara. Crops were badly damaged over an area of 240 hectares. On the other hand, about 400 hectares were benefitted by the deposit of silt. The Durbar Administration organised gratuitous relief to supply food to the victims of flood, and seedling for transplantation of the damaged fields. Considerable help was given in the shape of Taccavi loan and house building advances.

Flood of 1960: Unprecedented rain from 15th to 18th August caused a heavy flood in the river Brahmani. It caused considerable damaged to an area of 600 hectares. The affected people were given help in the shape of loan and subsidies. To provide employment various works were undertaken by the State Government.

Flood of 1971: Heavy rains during 1971 caused high floods in the rivers Ib and Sankh. The agricultural areas and several villages were flooded. The damage was more intensive in Panposh Sub-Division. To render help to the affected people of the Sub-Division test relief works were undertaken through Blocks and three Projects at an estimated cost of Rs. 38,000.

Drought Famine of 1908: Bonai Sub-Division was in the grip of severe famine in 1908 due to failure of crops caused by drought.

Drought of 1954 and 1955: In 1954 the total rain fall in the District was 34.75 inches. The average monthly fall during the period May to September was 6.75 inches. Nearly 827 square miles (2,142 sq. km) in the three Sub-Divisions of Sundargarh, Panposh and Bonai were affected involving a population of 2,68,223 having an average outturn of 6 to 8 annas (40 per cent to 50 per cent). In 1955, rain fall was freakish and not enough for either transplantation or interculture of paddy plants. As a result, paddy crop of Mal and Gora lands in Sundargarh Sub-Division and that of Panposh Sub-Division suffered to some extent. The yield of crop on above lands in Sundargarh Sub-Division was about 50 per cent and that in Panposh was 37 per cent. But the yield on other classes of land such as Bahal and Berna was better. The crop condition was not normal. In as much as the average crop condition on all classes of land was 50 per cent of the normal crop.

Due to the alarming situation prevailing for two constitutive years the economy of the District was upset. Relief was given to the people in various ways. Loans were advanced to encourage *Rabi* cultivation wherever possible. Mid-day meal centres were started for school going children and for persons old, infirm and in indigent conditions. Relief works were also started for providing employment in the distressed areas.

There was a failure of winter rains. This was followed by failure of pre-monsoon rains in the early months of 1972. The long dry spell in the first few months damaged the crops, particularly, early millets and other food crops grown by Adivasis and poorer sections of the community. As a result of continued dry spell water and irrigation sources were dried up. Prices of food grains began to rise in the western District. Sundargarh along with some other Districts developed scarcity conditions and required test relief, agricultural loans and other assistance. There was a virulent paste attack of paddy crop in some areas in 2006 kharif.

Relief Measures: Various types of relief measures were undertaken including gratuitous relief, provision for test relief works, and agricultural loans. During the period from 1 April 1972 to 15 June 1972 a sum of Rs. 7 lakhs were allotted for test relief and rupees ten thousand for gratuitous relief. Rs. 2,50,000 has been allotted for the District during 1972-73 under the Agriculturalists Loans Act. The CARE Feeding Program for children and expectant and nursing mother continued to meet the needs of various situations and 1,41,460 people have been benefited by this organisation till August, 1972.

Natural Calamities of the 21st Century: Owing to the coastal location, Odisha has experienced the nature's fury in the form of Cyclone, Drought and Flood. The calamity history of the State speaks that the year 1994, 1995, 2001 and 2003 were flood years affecting 17, 23, 24 and 27 Districts respectively. Drought occurred in the year 1996 (28 Districts), 1997 (16 Districts), 1998 (26 Districts), 2000 (29 Districts) and 2002 (29 Districts). The Super Cyclone that ravaged the coastal Districts of Odisha on 29 October 1999 was termed as Super Cyclone.

2003-04: Owing to the interior location, Sundargarh District did not experience the flood in 2003 which occurred in massive scale in the affected areas. Twelve cases of death due to lightning and 4 cases of death due to heat wave were reported in the District. Number of fire accidents was as high as 106, affecting 354 families with estimated loss of Rs. 20.51 lakh. The tune of assistance towards emergent relief received from the Government was Rs. 5.00 lakh in the District.

2004-05: Kharif season of 2005 was a drought year in the State. The moisture stress built up in the monsoon season caused crop loss and the Government declared 1615 villages under 40 Blocks and 10 wards of five ULBs of 10 Districts, Angul, Bargarh, Bolangir, Deogarh, Ganjam, Jharsuguda, Puri, Sambalpur, Sonepur and Sundargarh as drought affected. Deficiency in rain in Sundargarh District in the month of May, June, July and September were respectively -98.7 per cent, -52.1 per cent, -31.9 per cent and -44.2 per cent, and the average deviation were -28.1per cent as per Government vide notification no. 15481 dt. 11.04.05 Three Blocks of Sundargarh were declared to have sustained crop loss above 50 per cent. 24 Gram Panchayats were affected and 220 villages were affected in total. As mitigation measure, 38 Lift Irrigation Points were repaired with the cost of Rs. 5000.00 each. Only two cases of fire accidents resulting in no casualty was reported in that year.

2005-06: Monsoon in the next year was normal, resulting in normal crop in the District. There were only three deaths in the District due to fire accident.

2006-07: Sericulture in 11 Districts of Odisha, i.e. Angul, Dhenkanal, Gajapati, Jajpur, Kalahandi, Kandhamal, Keonjhar, Koraput, Mayurbhanj, Rayagada and Sundargarh was affected. Among the 1539 farmers and 1157.8 hectares of crop damaged, 175 farmers and 160.00 hectares of crop areas was from Sundargarh District. During this year, 14 cases of fire accidents were also reported in 12 villages claiming three lives with loss of property worth Rs. 35480.00. Number of deaths due to lightning was 13.

2007-08: Heavy rain from 26 to 29 June in 2007 caused damage of 61.75 km of PWD road and 29 culverts and 178.89 km of Panchayat Roads. There were also damages in the urban areas. Roads of 25 km length, drains of 19 km length and 20 culverts were damaged in Rourkela Municipality. Similarly, roads of 7.2 km, drains of 3.56 km and 16 culverts were damaged in Sundargarh Municipality. One Block, two Gram Panchayats, seven villages and two Gram Panchayats were affected in the heavy rain. 74 houses were fully damaged, 16 severely and 1006 houses were damaged marginally. 89 Minor Irrigation Projects and damage to the river embankments and canals were 10 each. Seven cases of fire accidents with zero casualty and 15 cases of death due to lightening and five deaths due to sun-stroke occurred in the year.

2008-09: This was a relatively calm year. Though there was drought in other parts the State declared vide R. & D. M. Department notification No. 29362 dated 23.7.2009 that there was no drought in Sundargarh District. There were only two cases of fire accident with no casualty, three cases of death due to lightening and four cases of death due to sun-stroke.

2009-10: This year was moisture deficient year. From the beginning of the year there was moisture deficit amounting to above 87 per cent by the end of April. As a result, Sundargarh came inside the map of the draught affected area of the State. The moisture deficit in the monsoon months was 21 per cent and in the retreating monsoon season it was 24.3 per cent. There was no flood but the heavy rain claimed three lives. There were 14 deaths due to lightening and four deaths due to heat wave.

2010-11: Like the previous year, this year was a moisture deficient year, throughout. In the first, second and third quarter of 2010, rainfall was deficient by 75.4 per cent, 36.0 per cent and 33.5 per cent respectively. The National Remote Sensing Centre, Hyderabad while monitoring drought situation found 10 Districts as drought affected and Sundargarh was one among them. 17 Blocks, four ULBs, 248 Gram Panchayats, 1435 villages and 24 wards were affected where crop loss was above 50 per cent. There were 14 cases of deaths due to lightening and one incident of hail storm which affected two villages in one Block.

2011-12: The rainfall was scanty in 2011-12, but there was no warranting situation. Rather, due to excessive rain in the month of August and September there was flood in the upper course of the Mahanadi and the Brahmani river systems, for which Sundargarh experienced flood situation. 564 kutchha houses were damaged out of which 158 were fully, 68 severely and 318 partially damaged. Twenty numbers of huts were damaged. Road of 89 km in length and three culverts were damaged in the flood. Rural roads to the extent of 11 km were damaged with 14 breaches and 11 culverts were

damaged. 47 km roads in urban areas were damaged. This year witnessed six cases of fire accident which affected nine families in the District. Further human casualty claimed by lightening and heat stroke were respectively 23 and three deaths.

2012-13: This year was again a rain deficient year. Deficit of rain was 75.4 per cent in the month of April. In the month of May, June and July, the deficit figures were respectively 91.5 per cent, 25.6 per cent and 21.4 per cent. August and September were the good months to receive above normal rainfall for which the crop survived. This year, 13 persons and 14 animals died in six different fire incidents, lightening claimed 17 lives and heat wave claimed 11 lives.

2013-14 and 2014-15 did not witness any major calamity. During 2014-15, however, there was unseasonal rain for which houses were damaged and House Building Assistance to the tune of Rs. 4,48,200 were distributed in the District.

2015-16 again registered moisture stress. The area to the extent of 71571 hectares of crop land in 17 Blocks covering 256 Gram Panchayats, 1448 villages, two ULBs and nine Wards were affected by the drought. The District got allotment of Rs. 21,57,48,700.00 for disbursement of agriculture input subsidy.

APPENDIX- XIV: Land Utilisation Pattern in Sundargarh District

Sl. No.	Block/ ULB	Forest	Land put to Non-Agriculture use	Barren and Non-Cultivable Land	Permanent Pastures and other Grazing Land	Land under Mic. Tree Crop & Grooves, not included in Net Area Sown	Cultivable Waste	Old Fallows	Current Fallows	Net Area Sown	Total Surveyed Area
1	Baliskara	8605	3683	1508	2552	40	6454	3774	1826	15697	44139
2	Bargaon	4662	2945	559	1671	586	2838	1781	3520	17112	35674
3	Bisra	1630	1873	457	1140	22	382	1914	1780	7970	17168
4	Bonaigarh	11438	2387	505	2054	123	1157	1013	1445	12662	32784
5	Gurundia	17463	2546	14590	1963	61	4991	2303	2501	10905	57323
6	Hemgiri	17451	3602	4151	3684	212	1510	5775	3982	14845	55212
7	Koida	21142	4938	6599	3189	46	3240	6462	4052	6520	56188
8	Kuanrunda	10158	5789	1944	2118	54	3951	3975	3398	19189	50576
9	Kutra	1776	3667	1137	1281	38	1140	1926	4039	16600	31604
10	Lahunipada	11405	3449	25054	2069	39	3105	4440	3677	15528	68766
11	Lathikata	9571	4320	1137	1295	25	370	1045	5647	9609	33019
12	Lephrpada	9014	3196	1623	2400	63	1244	2421	7671	12473	40105
13	Nuagaon	3263	4271	880	1483	62	1479	4788	6373	16754	39353
14	Rajgangpur	7250	4198	1623	1680	91	2188	4581	2746	14776	39133
15	Subdega	6699	3212	631	1692	9	4854	3023	1865	12199	34184
16	Sundargarh	6602	5451	373	2106	113	4367	1121	1580	14354	36067
17	Tangarpali	3252	2597	205	1572	594	1229	1052	4591	10499	25591
	ULB	632	9909	246	281	28	655	3091	856	2582	18280
	TOTAL	152013	72033	63222	34230	2206	45154	54485	61549	230274	715166

Source: District Statistical Handbook- 2011, Sundargarh

APPENDIX- XV: Source-wise Irrigation Potential in Different Blocks of Sundargarh District

(Figures in hectare)

Sl. No.	Year/ Block	Major/ Medium project		Minor irrigation project				Other sources		Total	
		Kharif	Rabi	Flow		Lift		Kharif	Rabi	Kharif	Rabi
				Kharif	Rabi	Kharif	Rabi				
1	Balisankara	1300	199	2761	52	488	242	2002	850	6551	1343
2	Bargaon			1085	25	1153	423	2020	913	4258	1361
3	Bisra			125	32	270	558	284	632	679	1222
4	Bonaigarh			1000	50	486	107	1759	805	3245	962
5	Gurundia			35	0	220	30	1894	703	2149	733
6	Hemgiri			809	75	871	462	1950	823	3630	1360
7	Koida			1015	70	38	30	1444	670	2497	770
8	Kuanrunda			100	28	653	590	1038	1037	1791	1655
9	Kutra		12	248	8	1558	506	1829	633	3635	1159
10	Lahunipada			3958	210	672	105	1849	815	6479	1130
11	Lathikata	1400	79	162	5	220	356	1174	594	2956	1034
12	Lephripada	2519	228	1499	104	308	137	1292	538	5618	1007
13	Nuagaon			7	0	224	1082	973	1206	1204	2288
14	Rajgangpur	4224	163	179	0	1105	435	1359	759	6867	1357
15	Subdega	2270	124	387	5	736	210	2020	900	5413	1239
16	Sundargarh			1108	15	906	1118	1989	879	4003	2012
17	Tangarpali			1709	2	1036	101	2270	1043	5015	1146
	TOTAL	11713	805	16187	681	10944	6492	27146	13800	65990	21778

APPENDIX- XVI: Achievement of Pani Panchayat Programme in Sundargarh District

Sl. No.	Block	No. of Pani Panchayats	No. of farmers covered	Aggregate area under Pani Panchayats	Crop coverage	
					Kharif	Rabi
1	Balisankara	821	6958	1521	298	634
2	Bargaon	906	3769	1452	362	894
3	Bisra	659	3897	1413	365	753
4	Bonaigarh	894	3029	1129	451	635
5	Gurundia	863	2156	957	232	365
6	Hemgiri	703	4265	1258	289	526
7	Koida	796	2098	998	231	451
8	Kuanmunda	958	3981	1625	264	782
9	Kutra	888	3359	1203	364	692
10	Lahunipada	805	7013	1528	394	752
11	Lathikata	1352	6235	2798	651	1253
12	Lephripada	735	7596	2387	853	1121
13	Nuagaon	2056	3759	3129	246	2681
14	Rajgangpur	651	7026	2016	368	1152
15	Subdega	786	5528	1328	423	677
16	Sundargarh	643	4967	1426	269	763
17	Tangarpali	802	4952	1356	287	852
	TOTAL	15318	80588	27524	6347	14983

Source: District Statistical Handbook-2011, Sundargarh

APPENDIX- XVII: Season-wise Estimated Area, Yield Rate and Production of Paddy in Different Blocks and Urban Areas of Sundargarh District

Sl. No.	Block	Autumn			Winter			Summer			Total		
		Area	Yield Rate	Production	Area	Yield Rate	Production	Area	Yield Rate	Production	Area	Yield Rate	Production
1	Balisankara	4803	7.64	36681	9221	16.75	154459	16	16.24	260	14040	13.63	191400
2	Bargaon	8482	3.95	33525	7338	21.74	159492				15820	12.2	193017
3	Bisra	3944	2.5	9878	2945	6.8	20018	2	53.12	106	6891	4.35	30002
4	Bonaigarh	4719	9.38	44285	7626	14.96	114108				12345	12.83	158393
5	Gurundia	3993	3.42	13676	6671	10.07	67205				10664	7.58	80881
6	Hemgiri	4590	5.97	27411	8544	23.02	196658	14	31.82	445	13148	17.08	224514
7	Koida	1668	9.99	16667	4681	20.79	97303	280	13.59	3806	6629	17.77	117776
8	Kuanrunda	9474	2.06	19490	7268	5.09	36996	1	4.56	5	16743	3.37	56491
9	Kutra	7895	4.53	35787	5704	8.87	50588	2	31.3	63	13601	6.36	86438
10	Lahunipada	5919	5.92	35038	9800	10.08	98782	3	10.96	33	15722	8.51	133853
11	Lathikata	4222	2.99	12632	4687	6.9	32323	9	38384	350	8918	5.08	45305
12	Lephipada	4545	4.81	21854	7309	14.54	106263	6	9.27	56	11860	10.81	128173
13	Nuagaon	7321	1.63	11938	7481	1.49	11119	49	36.2	1774	14851	1.67	24831
14	Rajgangpur	6446	4.88	31457	6688	9.49	63499	91	34.11	3104	13225	7.41	98060
15	Subdega	3553	5.41	19209	7599	18.82	142985				11152	14.54	162194
16	Sundargarh	7059	6.1	43032	6770	13.61	92173				13829	9.78	135205
17	Tangarpali	3878	9.54	37013	6296	27.49	173093	1	7.58	8	10175	20.65	210114
	ULB	833	3.96	3296	1365	9.12	12449	13	34.88	453	2211	7.33	16198
	TOTAL	93344	4.85	452869	117993	13.81	1629513	487	21.48	10463	211824	9.88	2092845

Source: District Statistical Handbook-2011, Sundargarh

APPENDIX- XVIII: Features of the Medium Irrigation Projects of Sundargarh District

	IRRIGATION PROJECTS	PITAMAHAL	TALASARA	SARAFGARH	KANSBAHAL
General	Sub-Division	Panposh	Sundargarh	Sundargarh	Sundargarh
	Village	Near village Balanda	Near village Talsara	Near village Saraphgarh	Near village Kadambahal
	River	Pitamahal Nallah	Bandajor Nallah	Ichha Nallah	Badjore Nallah
	Location	22 ⁰ -12' N / 84 ⁰ -42'-0" E	20'-20' 33" N/ 84'-7' 15.8" É	22 ⁰ -10'-45" N/ 83 ⁰ -45'-45" E	20 ⁰ -10'-45"N/ 84 ⁰ -39'0" E
	Topo sheet	73 B/12	73 B/SW	64N/SE & 0/NE	73 B/12
	Hydrology	Catchment Area	103.6 Sq. KM	91 Sq. KM	65.30 Sq. KM	179.00 Sq. KM
Maximum Monsoon Rainfall		2317.75 MM	1728.00 MM	1785.00 MM	2352.00 MM
Minimum Monsoon Rainfall		847.86 MM	868.00 MM	881.00 MM	541.00 MM
Maximum Flood Discharge		716.00 Cumecs	820.00 Cumecs	695 Cumecs	1745.00 Cumecs
Reservoir	Gross Storage	2362.00 Ham	1985 Ham	1375 Ham	4041.50 Ham
	Dead Storage at DSL	345.40 Ham	320 Ham	160 Ham	1169.50 Ham
	Live Storage	2016.60 Ham	1665 Ham	1215 Ham	2872.00 Ham
	Full Reservoir Level	243.84 M	296.30 M	307.50 M	228.00 M
	Maximum Water Level	246.88 M	296.30 M	307.50 M	228.00 M
	Top Level of Dam	248.41 M	299.30 M	310.5 M	231.00 M
	Submerged Area at FRL	355.00 Ha	351.00 Ha	233.00 Ha	506.00 Ha
	Dead Storage Level	234.10 M	288.30 M	297.00 M	220.50 M
Main dam	Type	Earth dam	Earth dam	Earth Dam	Earth dam
	Total length of the dam	660.20 M	1095.00 M	319.00 M	1075.00 M
	Maximum Height of the dam	23.43 M	21.00 M	25.00 M	28.00 M
Spillway	Type	Ogee non-gated	Ogee gated	Ogee gated	Ogee gated
	Length	45.72 M	91.25 M	62.50 M	70.00 M

	Crest Level of Spillway	246.88 M	292.30 M	303.5	222.00 M
	Spillway capacity	716.00 Cumecs	820.00 Cumecs	695 Cumecs	1745.00 Cumecs
	Spill way Gates	Non-Gated	6 nos. (10 m. x 4 m.)	5 nos. (10 m. x 4 m.)	5 nos. (12 m. x 6 m.)
Distribution system	Gross Command Area	3350.80 Ha	4337.00 Ha	3198 Ha	7212.00 Ha
	Cultivable Command Area/ certified ayacut	2630.46 Ha/ 2654 Ha	3036.00 Ha	2238 Ha	5050.00 Ha/ 4218 Ha
	Intensity of Irrigation during Khariff	100per cent		100per cent	84per cent
	Area irrigated during Khariff	2630.00 Ha	3036.00 Ha	2238.00 Ha	4218.00 Ha
	Design Area irrigated during Rabi	1630.88 Ha	1820.00 Ha	1340.00 Ha	2430.00 Ha
	Annual irrigation	4260.88 Ha		3578.00 Ha	6648.00 Ha
	Length of Canal				
	Left Canal System(8 minors & 1 sub-minor)	23.58 Km	33.947 Km	43.023 Km	75.413 Km
	Right Canal System(7 minors & 4 sub-minors)	29.32 Km	33.554 Km	No right Canal	16.857 Km
	Length of the Left Main Canal	9.968 Km	14.45 Km	9.053 Km	23.385 Km
	Length of the Right Main Canal	9.591 Km	15.950 Km	No right Canal	5.82 Km
Head regulator	Capacity Left HR	1.15 Cumecs	1.74 Cumecs	2.02 Cumecs	3.70 cumecs
	Capacity Right HR	1.64 Cumecs	1.55 Cumecs		1.10 Cumecs
Cost and completion	Total Cost of the Project	Rs.262.912 Lakhs	Rs.759.00 Lakhs	Rs.816.805 Lakhs	Rs.3344.20 Lakhs
	Year of Completion	1976	1985	1985	1996
	Cost Benefit Ratio :	1.86	2.3	1.75	1.44
Pani Panchayat	No. Of Pani Panchayats	5 Nos	7 Nos	5 Nos	9 Nos
	No. Of Beneficiaries	2226	3143	2661	6277
	Area handed over to Pani Panchayat	2654.00 Ha	3580.00 Ha	2747.00 Ha	4218 Ha
	No. Of villages covered	20 Villages	11 Villages	10 villages	21 Villages

Source: Executive Engineer, Irrigation, Sundargarh

APPENDIX- XIX : Achievement of Krishi Vigyan Kendra, Sundargarh, 2014-15

S.N.	Quantifiable Achievement	Number	Beneficiaries (nos.)
1	On Farm Testing		
	Proposed OFT	10	130
	On Going OFT	1	
	Technologies assessed (Completed OFT)	9	104
	Technologies refined		
	On farm trials conducted	9	104
2	Frontline demonstrations		
	Proposed Frontline demonstrations	10	334
	On Going Frontline demonstrations	1	240
	FLDs conducted on crops	8	89
	Area under crops (ha.)	25.4	89
	FLD on farm implement and tools	0	
	FLD on livestock/ AH enterprises (Dairy/ Sheep and Goat/Poultry/ Duckery/ Piggery etc.)	1	240
	FLD on Fisheries - Finger lings		
	FLD on other enterprises (Bee keeping, lac, mushroom, sericulture, value addition, vermi compost, etc.)	1	5
	FLD on Women in Agriculture - (Nutritional garden, Income generation, Value addition, Drudgery reduction, etc.)		
3	Training programmes	No. of Course	Duration (days) and no. of participants
	Farmers	25	25 (500)
	Farm women	6	6 (150)
	Rural youth	4	8 (75)
	Extension personnel/ In service	4	4 (70)
	Vocational trainings	3	6 (40)
	Sponsored Training	0	0
	Total		
		No. of programmes	Participants
4	Extension Programmes	618	14128 & Mass

S.N.	Quantifiable Achievement	Number	Beneficiaries (nos.)
5	Production of technology inputs etc	Qty	Beneficiaries (nos.)
	Seed (qt.)	31.25	570
	Planting material produced (nos.)	47016	7860
6	Livestock	Qty	Beneficiaries (nos.)
	Livestock strains (Nos)		
	Milk Yield - Cow, Buffelo etc. (in liter)		
	Fish (Kg.)		
	Fingerlings (nos.)		
	Poultry-Eggs (nos.)		
	Ducks (nos.)		
	Chicks etc. (nos.)	1619	240
7	Bio Products	Qty	Beneficiaries (nos.)
	Bio Agents -Earth worm (Kg.)		
	Trichoderma (kg.)		
	Bio Fertilizers- Vermi compost, Rhizobium, PSB , BGA , Mycorriza , Azotobacter , Azospirillum etc. (Kg.)	1000	178
	Bio Pesticide-Panchgavya, Neem Extract , Neem oil etc.(lit.)		
8	Any other significant achievement in the Zone	Nos.	Participants/ beneficiaries
	Award (Best KVK award and scientist and farmer's award)	1	3
	Publications (Res. Paper/ pop. Art./Bulletin,etc.)	2	
	KVK News letter	4	2000
	SAC Meetings conducted	2	50
	Soil sample tested	345	271
	Water sample tested		
	RWH System (Special training and field visit on RWH structure and MIS in KVKs)		
	KVK-KMA (Message and beneficiaries)	127	1398
	Convergence programmes	1	1000
	Sponsored programmes		
	KVK Progressive Farmers interaction	6	67
	No. of Technology Week Celebrations	1	720
	Attended HRD activities organized by ZPD	6	4
	Attended HRD activities organized by DES	7	4

S.N.	Quantifiable Achievement	Number	Beneficiaries (nos.)
	Attended HRD activities by KVK Staff(Refresher /Short course, Training programme etc.)	0	0
9	Current status of Revolving Funds (Amt. in Rs.)		228313
10	Outreach of KVK in the District	No. of blocks	No. of villages
		9	351
11	No. of important visitors to KVK (nos.)	ICAR	SAU
		2	12
12	Status of KVK Website	Working (Yes/No)	No. of Update
		Yes	6
13	Status of RTI (nos.)	Application received	Application disposed
		0	0
14	Citizen Charter (nos.)	Query received	Query dissolved
		0	0
15	E-connectivity	Working (Yes/No)	No. of programme viewed
		No	
16	Staff Position	Filled	Vacant
		8	8
17	Workshop/ Seminar/ Conference attended by staff of KVK (nos)		12
18	Publication received from ICAR /other organization (nos.)		8
19	Agri alerts (epidemic, high serious nature problem, Cyclone etc. reported first time to ZPD, SAU, Agri. Deptt. and ICAR)	Particulars	Organization

APPENDIX - XX: Consumption of Chemical Fertilizers (Kharif and Rabi) in Different Blocks of Sundargarh District

Sl. No	Year/ Block	Quantity in MT			Total	Per hectare Consumption of Fertilizer (Kg)
		Nitrogen	Phosphate	Potash		
	2009-10	8334	4873	1692	14899	33
	2010-11	6720	4828	1795	13343	33
2010-11						
1	Balisankara	396	284	106	786	32
2	Bargaon	351	252	94	697	32
3	Bisra	245	176	65	486	34
4	Bonaigarh	377	271	101	749	33
5	Gurundia	378	271	101	750	33
6	Hemgiri	411	296	110	817	32
7	Koida	327	235	87	649	33
8	Kuanmunda	466	335	124	925	33
9	Kutra	401	288	107	796	32
10	Lahunipada	435	313	116	864	33
11	Lathikata	487	350	130	967	33
12	Lephrpada	342	247	92	681	33
13	Nuagaon	592	425	158	1175	33
14	Rajgangpur	400	287	107	794	32
15	Subdega	353	253	94	700	32
16	Sundargarh	399	286	107	792	32
17	Tangarpali	360	259	96	715	32

Source: District Statistical Handbook 2011, Sundargarh

**APPENDIX- XXI: Details of Extension Interventions Undertaken by Krishi Vigyan Kendra (KVK) during Rabi, 2014-15
TITLE TECHNOLOGY & RESULT**

Assessment of medium paddy c.v Hiranmayee

Line transplanting of cv Hiranmayee with recommended dose of N:P:K @ 80:40:40 kg/ ha

Yield (q/ha)		Net Returns/ha		B:C Ratio	
FP	RP	FP	RP	FP	RP
40.2	46.8	21972	30948	1.67	1.94

Assessment of soil test based micronutrient (Zinc and Boron) application in paddy

Application of zinc (Zn So4) @25 kg / ha and Boron , Borax@ 15 kg / ha soil application along with N:P:K

Yield (q/ha)		Net Return/ unit		B:C Ratio	
FP	RP	FP	RP	FP	RP
38.2	44.3	19352	23846	1.59	1.65

Assessment of effect of post emergence herbicide Azimsulfuron & Bispyribac sodium in rice

Application of azimsulfuron @ 35g a.i/ha after 20-25 DAS

Application of Bispyribac Sodium @ 25 g a.i/ha after 20 – 25 DAS

Yield (q/ha)			Net Return/ unit			B:C Ratio		
FP	RP1	RP2	FP	RP1	RP2	FP	RP1	RP2
29.0	33.2	32.8	10840	20482	20838	1.38	1.83	1.87

Assessment of Crop intensification in Mustard (Observation plot only)

Spacing 45 x 46"5cm , Seed Rate @500g/Ha, transplanting of 8 – 10 days old seedling in 15cmX15cmX20cm size pit , Nutrient mgt. FYM @ 200 q/Ha, 65:50: 40 kg NPK / Ha, irrigations at 35, 55 and 75 DAT, interculture at 15,25 and 40 DAT

Yield (q/ha)		Net Returns/ha		B:C Ratio	
FP	RP	FP	RP	FP	RP
	14.25		9000		1.26

Assessment of transplanting method of cucurbit (Water melon)

Nursery raising in leaf trays, transplanting of 7 – 12 days old seedling in prepared pits.

Yield (q/ha)		Net Returns/ha		B:C Ratio	
FP	RP	FP	RP	FP	RP
192.6	216.3	108280	125350	3.36	3.63

TITLE

TECHNOLOGY & RESULT

Refinement of planting time of Garlic c.v. Yamuna safed 3&4

Planting of Garlic during 2nd fortnight of August, Planting of Garlic 1st fortnight of September, Planting of Garlic 2nd fortnight of September

Yield (q/ha)				Net Return/ unit				B:C Ratio			
FP	RP1	RP2	RP3	FP	RP1	RP2	RP3	FP	RP1	RP2	RP3
24.0	42.0	38.0	36.8	8600	61100	47800	43600	1.12	1.84	1.64	1.59

Assessment of Onion c.v Bhima super during kharif

Details of technology (T2)

Seed treatment with thiram and T. viridae, 35-40 days old seedling planted in broad bed and furrow method , Planting of onion cv Bhima super during Kharif.

Yield (q/ha)		Net Returns/ha		B:C Ratio	
FP	RP	FP	RP	FP	RP
	180.4		196200		3.64

Performance of application of pendimethalin for weed management in onion

Sequential application of pendimethalin @0.75 kg a.i /ha as pre emergence, followed by broadcasting pendimethalin @ 0.75 kg/ha (Sand mix) 30 DAT

Yield (q/ha)		Net Returns/ha		B:C Ratio	
FP	RP	FP	RP	FP	RP
145.8	153.6	69200	80350	2.10	1.97

Assessment of Potato varieties in irrigated medium land of plateau eco system

T₁ : Lal Patani, T₂ : Kufri Pukhraj., T₃ : Kufri Surya. T₄ : Kufri jyoti

Yield (q/ha)				Net Return/ unit				B:C Ratio			
FP	RP1	RP2	RP3	FP	RP1	RP2	RP3	FP	RP1	RP2	RP3
150.3	220.6	198.2	205.4	53600	86800	64400	71600	1.50	1.64	1.48	1.53

(Source: Krishi Vigyan Kendra, Sundargarh)

APPENDIX- XXII: Veterinary Institutions and Personnel in Different Blocks and ULBs

Sl No.	Year/ Block/ ULB	Hospitals & Dispensaries	Livestock Aid Centres	Artificial Insemination Centres	V.A.S & Additional V.A.S	Livestock Inspector
1	2	3	4	5	6	7
	2009-10	30	113	132	36	116
	2010-11	30	113	132	36	116
	2011-12					
	Block					
1	Balisankara	2	9	9	2	9
2	Bargaon	1	7	8	2	7
3	Bisra	1	6	7	2	6
4	Bonaigarh	2	5	7	2	5
5	Gurundia	3	9	5	3	9
6	Hemgir	2	6	8	2	6
7	Koida	1	6	7	1	6
8	Kuarmunda	1	6	7	2	6
9	Kutra	1	4	5	2	4
10	Lahunipara	2	5	6	1	5
11	Lathikata	2	7	9	3	7
12	Lephripara	2	7	9	2	7
13	Nuagaon	1	4	5	2	4
14	Rajgangpur	1	4	5	1	4
15	Subdega	1	9	10	0	9
16	Sundargarh	2	9	11	1	9
17	Tangarpali	1	5	6	2	5
	ULB					
1	Bimitrapur (M)	1	1	1	2	4
2	Rajgangpur (M)	1	0	1	2	0
3	Rourkela (M)	1	4	5	1	4
4	Sundargarh (M)	1	0	1	1	0

Source: CDVO, Sundargarh / District Statistical Handbook 2011, Sundargarh

APPENDIX- XXIII: Treatment of Animal and Progeny born in Different Blocks and ULBs

SI No.	Year/ Block/ ULB	Total Animals Treated	Innoculation done	Animal Castrated	Artificial Insemination made	Pregnancy Born	
						Males	Females
1	2	3	4	5	6	7	8
	2009-10	350444	1819750	31501	33377	7593	6169
	20010-11 2011-12	334165	1906555	30904	34144	7575	6429
	Block						
1	Balisankara	290006	90200	2415	1627	386	309
2	Bargaon	15447	86200	2478	1663	336	316
3	Bisra	9529	71350	1147	1190	300	286
4	Bonaigarh	15057	119300	1089	2607	636	394
5	Gurundia	13846	139300	1274	952	264	277
6	Hemgir	19099	86400	1453	1409	339	226
7	Koida	7281	91700	817	510	117	87
8	Kuarmunda	16058	98550	1561	978	241	206
9	Kutra	13713	63250	1102	1025	273	182
10	Lahunipara	25569	155850	2033	1883	524	421
11	Lathikata	21174	153950	1771	2195	407	413
12	Lephipara	16344	110200	1891	1992	304	241
13	Nuagaon	12224	155900	1064	1341	410	304
14	Rajgangpur	13074	88000	1585	847	169	126
15	Subdega	23128	61900	1822	1362	260	178
16	Sundargarh	29548	102955	3130	3083	683	607
17	Tangarpali	14836	63300	1712	1617	323	292
ULB							
1	Bimitrapur (M)	4674	7800	375	416	73	72
2	Rajgangpur (M)	6351	7000	315	564	157	121
3	Rourkela (M)	23253	105050	1969	5570	1216	1195
4	Sundargarh (M)	4954	48400	498	636	171	176

Source: CDVO, Sundargarh.

APPENDIX- XXIV: Production of Fish in Different Blocks of Sundargarh District-2010-11

Sl No.	Year/ Block	Production of Fish (in MT)			Total
		Fresh Water	Brakish Water	Marine	
1	2	3	4	5	6
	2009-10	7132.56	0.00	0.00	7132.56
	2010-11	8894.10	0.00	0.00	8894.10
	2011-12				
1	Balisankara	505.30	0.00	0.00	505.30
2	Bargaon	559.70	0.00	0.00	559.70
3	Bisra	274.00	0.00	0.00	274.00
4	Bonaigarh	576.00	0.00	0.00	576.00
5	Gurundia	285.00	0.00	0.00	285.00
6	Hemgir	909.00	0.00	0.00	909.00
7	Koida	206.00	0.00	0.00	206.00
8	Kuarmunda	347.05	0.00	0.00	347.05
9	Kutra	486.00	0.00	0.00	486.00
10	Lahunipara	338.00	0.00	0.00	338.00
11	Lathikata	412.25	0.00	0.00	412.25
12	Lephipara	1035.00	0.00	0.00	1035.00
13	Nuagaon	212.05	0.00	0.00	212.05
14	Rajgangpur	541.80	0.00	0.00	541.80
15	Subdega	415.95	0.00	0.00	415.95
16	Sundargarh	1089.00	0.00	0.00	1089.00
17	Tangarpali	702.00	0.00	0.00	702.00

Source: Directorate of Fisheries, Odisha, Cuttack / District Statistical Handbook 2011, Sundargarh

APPENDIX- XXV: Pisci-Culture Cooperative-wise Detailed Information (2014-15)

Sl No.	Name of the Block	Name of the reservoir	Area in Ha.	PFCS tagged	Member			Lease value in 2014-15	Royalty collected	Name of the PFCS	Fingerlings stocked in lakh	Fish harvested (Kg)
					M	F	Total					
1	Lephrpara	Sarafgarh Reservoir	140.00	Sarafgarh P.F.C.S	30	28	58	14000.00	14000.00	Sarafgarh PFCS	1.26	19350
2	Balisankara	Talsara Reservoir	190.50	Talsra P.F.C.S	33	22	55	19050.00	19050.00	Talsara PFCS	1.71	23450
3	Lathikata	Pitamahal Reservoir	225.00	Pitamahal P.F.C.S	87	28	115	22500.00	22500.00	Pitamahal PFCS	1.22	31250
4	Rajgangpur	Kansbahal Reservoir	380.50	Kansbahal P.F.C.S	61	20	81	38500.00	38500.00	Kansbahal PFCS	2.92	47200
5	Rajgangpur Kuarmunda	Mandira Reservoir	3328.00	Laing P.F.C.S	48	6	54	-	-	-	-	-
				Jhunmur P.F.C.S	90	11	101	-	-	-	-	-
6	Lephrpara	Badgamal Reservoir	42.00	Maa Samaleswari	46	17	63	-	-	Maa Samaleswari PFCS	-	-
		Total	4306.00		395	132	527	93600.00	93600.00		7.11	121250

Source: District Fishery Officer-cum- CEO, FFDA Sundargarh

Chapter-V

INDUSTRIES, MINES & MINERALS

History and Evolution of Industries in the District

Historically, the villages were self contained with their own black-smiths, potters, carpenters and weavers etc. Iron smelting, gold washing and making of vessels of soap-stone for domestic use were some of the important old time industries of the District. Gold washing has been discontinued due to economic reason and iron smelting is now confined to a few villages in Bonai Sub-Division and the other industries are still continuing in a cottage stage. Cobden Ramsay in his Gazetteer has given the following account of the gold washing in Bonai.

“Gold washing is done by the Jhora caste, men and women alike sharing in the work. The gold is obtained from the sands in the bed of the Brahmani River and its tributary streams. The earnings of a Jhora washer will average about 3 annas (20 Paisa) a day. Though the quantities of gold obtained in this way are small, probably most of the gold ornaments worn by people in Bonai are made of gold obtained locally from the Jhoras”.

Large quantities of wild tassar cocoons were being exported from Bonai at the beginning of the present century (20th). Artificial culture of the tassar worm did not flourish as the local people considered it an impure occupation. Tassar cocoons and lac stick were the most valuable of the forest products.

Prior to Independence, the industrial activities in Sundargarh were confined only to Biramitrapur, started operation in 1910, the site of the limestone quarry. The establishments of the cement factory at Rajgangpur in 1951 and the steel plant at Rourkela in 1955 were mainly responsible for rapid industrial development in the District. During the past decade large, medium and a number of small-scale and ancillary industries in and around Rourkela began to concentrate and created an industrial complex. All the large-scale industries of the District viz., (i) the Steel Plant at Rourkela, (ii) the Fertilizer Plant at Rourkela, (iii) Cement Factory at Rajgangpur, (iv) Messrs. Utkal Machinery Ltd. at Kansbahal and (v) the Limestone quarry at Bisra, are in the complex.

The first Electrical Power House (Diesel Engine) was installed in the District in the early forties. It was of 130 KW capacity and was meant to electrify the streets of Sundargarh town and supply electricity to a limited number of consumers.

In 1950, a thermal power station of 3,000 K.W was installed at Rajgangpur for the exclusive use of the newly installed cement factory. In 1955, the Rajgangpur town was electrified and power was supplied from the

above thermal power station. After the completion of the Hirakud Project the thermal power station was closed. Since 1957, Sundargarh is getting electricity from Hirakud Hydro-electricity Project situated in the District of Sambalpur and the Talcher Thermal Power Station in Dhenkanal District. The total power consumption in the District (including seven Police Station areas of Sambalpur District) during 1971-72 was 52,51,20,476 K.W.H. out of which 47,04,95,816 units were consumed by industrial establishments. While the consumption of electricity for an agricultural purpose is negligible and that for industrial purposes is very high which accounts for more than 90 per cent of the total power consumption. This is because of the location of a number of large-scale industries in the District.

Power Production and Sources – Hydro, Thermal, Solar & Bio.

Power is a critical input for economic development. It is the basic input to improve the standard of living, agricultural and industrial development. India's power sector has been traditionally experiencing massive and chronic problem. The performances of this sector in the technical, commercial and financial spheres have been extremely lack-lustre and Odisha and Sundargarh District is no exception. Reform measures in production, transmission and distribution have been taken to improve the sector. Sundargarh occupies a prominent position in the mineral map of the country. Mineral exploration and development of industrial infrastructure depends upon availability of energy resources.

The total installed capacity in the State as on September 2011 is 4756 MW which included 2331 MW of Hydel power and 2425 MW of Thermal energy. The per-capita annual consumption of electricity in 2009-10 was 874.24 KW in Odisha. Thermal power is not generated in large scale in Sundargarh District and supplied to the national power grids. As per the report of the Odisha Economic Survey, 2014-15, there are 30 industrial units in the State producing thermal energy at their Captive Power Plants and supplying to the GRIDCO. In Sundargarh District there are three such units, i.e. Rourkela Steel Plant, Shri Ganesh Metallic Ltd. Sundargarh (Near Kuanrunda, Rourkela) and Shree Mahavir Ferro Alloys Private Limited, Sundargarh (Kalunga, near Rourkela). They have installed capacity of respectively 220, 32 and 12 MW and their contribution to the Power Grid was respectively 0.005, 1.159 and 0.190 MW in 2013-14. Sundargarh comes in the area of WESCO, which is a distribution company.

The Basundhara Coal fields in the District are endowed with huge reserve of coal. There are many issues for which the production is being hampered and also lots of coal is wasted every year due to loss in transportation and at loss at stockyard. The Coal India Limited is planning for Super Critical Thermal Power Plant in the name of Mahanadi Basin Power Plant.

Table 72: Up-coming Power Projects in Sundargarh District

Unit	Company	Capacity (MW)	Status
Basundhara power project Unit 1	Mahanadi Coalfields Limited	800	Shelved
Basundhara power project Unit 2	Mahanadi Coalfields Limited	800	Shelved
Darlipali Super Thermal Power project Unit 1	NTPC	800	Permitted
Darlipali Super Thermal Power project Unit 2	NTPC	800	Permitted
Hemgir power project Unit 1	Coal India	800	Pre-permit development
Hemgir power project Unit 2	Coal India	800	Pre-permit development
Sundargarh Ultra Mega Power Project	Odisha Integrated Power Ltd (OIPL)	4000	Pre-permit development

Power transmission: The Odisha Power Transmission Corporation Limited (OPTCL) having its headquarter at Bhubaneswar, controls the power transmission in Sundargarh District. It was established in March 2004. The Company is wholly owned by the Government of Odisha. **OPTCL** became fully operational with effect from 9th June 2005 consequent upon issue of Odisha Electricity Reform (Transfer of Transmission and Related Activities) Scheme, 2005 under the provisions of Electricity Act, 2003 and the Odisha Reforms Act, 1995 by the State Government for transfer and vesting of transmission related activities of **GRIDCO** with **OPTCL**. The Company has been designated as the State Transmission Utility in terms of Section 39 of the Electricity Act, 2003. Presently the Company is carrying on intra-State transmission and wheeling of electricity under a license issued by the Odisha Electricity Regulatory Commission (OERC). The Company is also discharging the functions of State Load Despatch Centre. The reported transmission loss is ---per cent of load in the State. The Company owns Extra High Voltage Transmission System and operates about **12,171.194 ckt kms** of transmission lines at 400 KV, 220 KV, 132 KV levels and **115 numbers** of substations with transformation capacity of **14,0032 MVA** having **293 numbers** of transformers. The following are the substations coming under the EHT (O & M) Division, Rourkela.

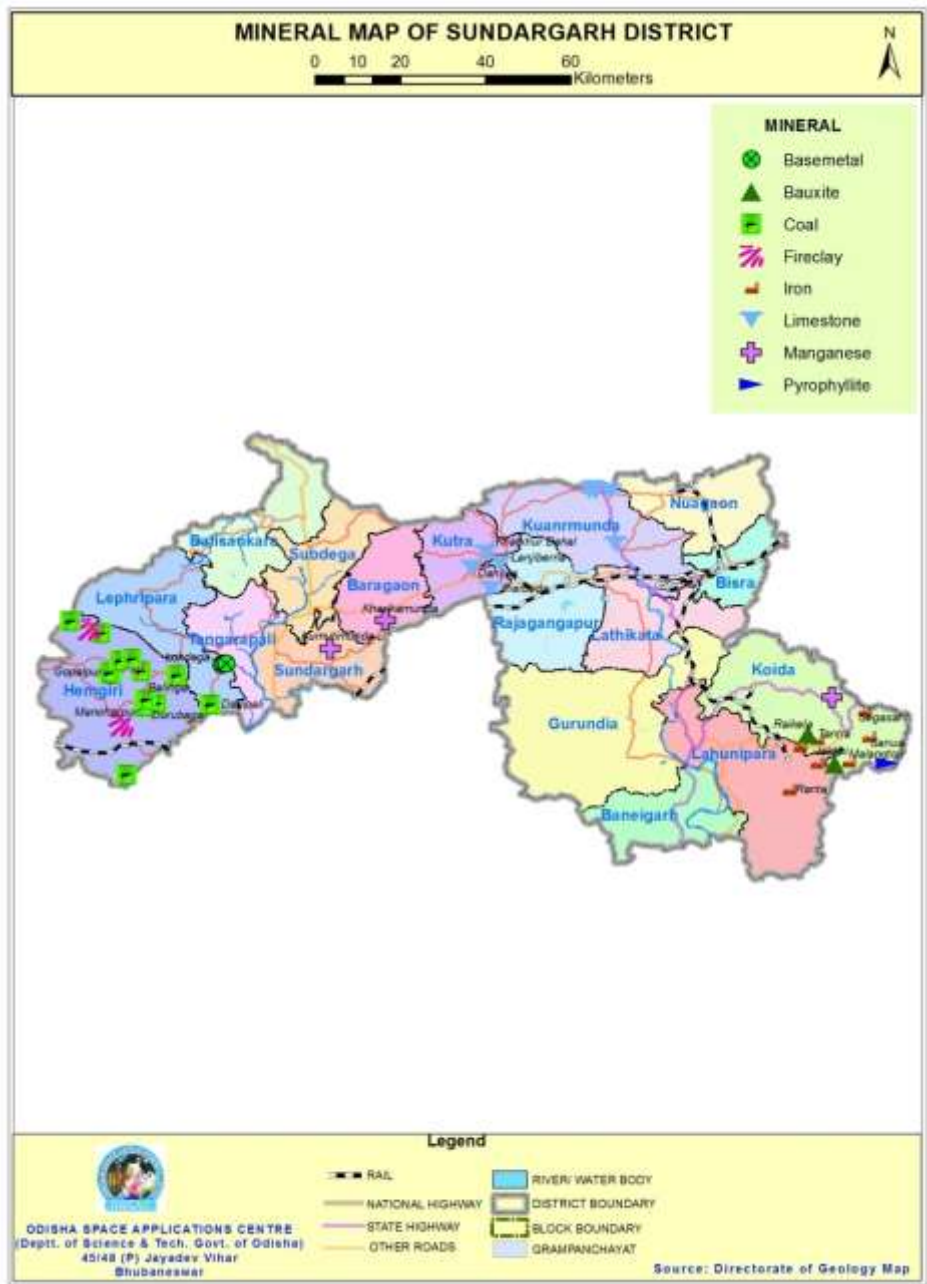
Box- 1: Grid Network and Sub-Stations in Sundargarh District

1. Location No. 78, up to 132 KV Rourkela- Nalada SC line
2. 220 KV Tarkera- Bisra PGCIL Circuit-I
3. 220 KV Barkot- Rengali Curcuit-II
4. 220/33 KV Grid Sub-Station, Barkote
5. 220 KV Rengali- Tarkera Circuit-II (Tarkera to Barkote)
6. 132/33 KV Grid Sub-Station, Rajgangpur
7. 132/33 KV Grid Sub-Station, Rourkela
8. 132 KV Rourkela- Tarkera Circuit-I
9. 132 KV Rourkela- Tarkera Circuit-II
10. 132 KV Tarkera- Budhipadar Circuit-I
11. 132/33 KV Grid Sub-Station, Chhend
12. 132KV Tarkera- RSP Circuit-I
13. 220 KV Tarkera- PGCIL Circuit-II
14. 132 KV Budhipadar- Sundargarh line
15. 132/33 KV Grid Sub-Station, Sundargarh
16. 132KV Tarkera-Budhipadar Circuit (Rajgangpur to Bamara)

Among the users of power, the South East Railways is a very important. There are traction substations of the OPTCL at Rajgangpur, Chandiposh, Rourkela, Bhalulata, and Nuagaon. The details of the demands of different industries for power from the Grid are as follows.

Table 73: Power Contract of Industries of Sundargarh District with the OPTCL

Sl. No.	Name of the Industry	Connected Grid	Voltage Level (KV)	Mode of Connectivity	Demand Contract with OPTCL
1	Shree Ganesh Metallic Ltd.	Chhend- Adhunik	132	LILO	7 MVA
2	OCL India Ltd	Rajgangpur	132	SC	43 MVA
3	Adhunik Metalics. Ltd.	Shree Ganesh Mettalic Station	132	SC	43.33 MVA
4	Rourkela Steel Plant	Tarkera	132	TC	100 MVA



Mines and Minerals, Extraction of Minerals, Mineral Processing

The important minerals occurring in the District are Iron-ore, Limestone, Manganese, Dolomite and fire-clay. Besides, a few other minerals like Mica, Bauxite, Quartz, Lead, Copper and Zinc etc. are also found. The detailed account of significant minerals available, the working mines of each mineral, area, worker strength and output is given in the following table.

Table 74: Mining Activities in Sundargarh

Mineral	No. of Working Mines	Area (in Hectare)	No. of Workers Employed	Out-put ('000 MT)	Value (Rs. '000)	Quantity Exported Abroad ('000 MT)
Iron ore	29	5899.18	7957	19462	64653496	3994
Manganese ore	17	2688.89	1053	258	3192234	0
Bauxite	0	0	0	0	0	0
Soap stone	0	0	0	0	0	0
Lime stone	16	3618.6	1936	2541	708939	0
Dolomite	18	4019.02	128	1419	446985	0
Quartz	0	0	0	0	0	0
Silica sand	2	129.43	0	0	0	0
Coal	2	1631	1405	12418	6531868	0
Pyroxenite	0	0	0	0	0	0
	84	17986.1	12479	36098	75533522	3994

Source: District Statistical Handbook, 2011- Sundargarh

Basing upon the production of different minerals, Iron Ore amounts to be very significant. The next significant exploitation has been done in mining of coal. All most all coal mines of the District are open cast mines. Other important minerals are limestone, dolomite, manganese, fireclay etc. Manganese in the District is exploited at Gadiajore, Dolomite at Hatibari belt in Panposh Sub-Division and Limestone at Biramitrapur and in the Lanjiberna belt extending over Rajgangpur, Kutra and Badgaon Tahsils. Such mining activities have its impact on employment generation in these sectors to the tune of 15,000 persons. Environment and ecological issues have also assumed alarming proportion in the mining areas due to laxity in strict compliance to the mining regulation by the miners.

Coal: A big stretch of Gondwana rocks in the former Hemgir-Zamindari of Gangpur State, known as Hemgir coal field, extends from Amatpani (22° 12' 83° 39') to south-east upto Ratakhand (21° 54': 83° 51'). It forms the connecting link between the Ib river coal fields in the east and the Raigarh coal fields in the west.

Outcrops of coal have been reported from Jhuria Nala near Ghogarpali (22°8': 83° 39'), at the confluence of the Jhuria Nala and the Baisundar Nala, along the Baisundar Nala and near Dulunga (21° 57'- 83° 48') in the Deodaria Nala. It is reported that systematic drilling was carried out under the guidance of Dr. King (1871) in three places at Ratansara (22° 4' : 83° 40'), Gopalpur and Bankibahal (22° 2' : 83°45') and three seams ranging in thickness from 1.2 metres to 6 metres (4 feet to 20 feet) were proved.

The Coal India Limited, one among the Navaratna Companies in the Public Sector is the only Government agency engaged in the production of coal. Basundhara and Siarmal are the two areas from where coal exploration is under progress. The later area is new. The Basundhara area started in the valley of River Basundhara which forms the part of the Ib valley, in the year 1996, with opening of Basundhara-West mines and Kulda OCP. It is blessed with more than 6000 million tones of coal in reserve. The operations are in the form of open cast. More projects are coming up at Garjanbahal, Basundhara-Extension, and Siarmal. The figures regarding coal production from the area during the last five years is as follows.

Table 75: Production of Coal by Coal India Limited from 2010-11 to 2015-16 (Lakh tons)

Year	Production	Despatch	Coal Stock
2010-11	125.00	110.00	64.00
2011-12	126.00	110.00	79.00
2012-13	120.00	123.00	76.00
2013-14	100.00	107.00	70.00
2014-15	85.00	111.00	44.00
2015-16 (Up to 1.9.2015)	34.82	51.72	30.84

Shortage of fleet to transport coal is a major hindering factor, which results in wastage of coal and dumping of over burden. A railway link in the name of Jharsuguda-Sardega railway link is under construction at present. This rail link will be of a length of 52.412 km with nine major bridges and 66 minor bridges and will be able to transport 34.23 million tons of coal per year.

Iron Ore: The Singhbhum-Keonjhar-Bonai (Sundargarh) Iron-ore belt, otherwise also known as Mallaya range, constitutes the most important store house of India's Iron-ore wealth. It has a striking length of nearly 48 km, out of which about 23 km fall in the Bonai area of Sundargarh.

The iron-ore deposits from a series of ridges with a NNE-SSW strike and occur in the rocks of iron-ore series in association with the banded hematite Jasper. The banded hematite Jasper consists of alternating bands of Jasper or chalcedony and hematite, containing varying proportion of iron oxide and silica. The maximum thickness of hematite Jasper formation is Stated by H. C. Jones ¹ to be about 914 metres in Bonai area. From the present study by the Directorate of Mines, thickness of BHJ is found to be between 150 metres to 300 metres.

The banded hematite Jasper is seen frequently to change into hard massive Iron-ore where followed laterally. It occasionally passes also into laminated ore with a shaly appearance or into lenses or pockets of powdery ore.

The important iron-ore deposit in the District with their proved reserves and grade are as follows:-

Table 76: Occurrence of Iron Ore Mines in Sundargarh District

SI no.	Location	Reserve (in Million Tonnes)	Grade % Fe.	Reserve proved by
1.	Baliapahar	25	64	Directorate of Mines, Odisha
2.	Mithurda Group (21° 50':85°20').	25	63	Ditto
3.	Badamgarh pahar (21°48':85°16').	21	64	Ditto
4.	Basada	25	63	Ditto
5.	Diringburu	4	64	Ditto
6.	Khandadhar group	200	62	Odisha Mining Corporation.
7.	Dandrapahar (21°51':85°09')	166	59	Hindustan Steel, Ltd. Rourkela
8.	Taldihi	227	61	Ditto
9.	Kulta	50	32	Ditto
10.	Other minor deposits	100	62	-----
	Total			800 m. tonnes (approx.)

Asbestos of Tremolite variety occurs as irregular veins in the ultra basic rocks near the village Renjar in the Bonai Sub-Division.

Barytes: About 0.8 km east of Khatangtola (22° 22': 85° 4') in the Panposh Sub-Division occurrences of barites have been recorded.

Bauxite: Occurrences of bauxite derived from lateritisation of shales, etc. of iron-ore series have been noticed in Mithiurda area. The bauxite occurs in small pockets and patches. The percentage of alumina in the pre was found to be above 45 per cent as determined from few samples. Few

occurrences have been recorded in and around the Koira valley associated with laterite capping rocks of the Iron-ore series.

Building Materials: Pockets of *Calc-tufa* containing lime occur in the valley of Asurkol Pahar about two km due west of Kuljhor. A similar deposit, but smaller one, is seen along the course of Kuljhor nala itself, about 1.6 km to the north of the site referred to above. Building materials like epidiorites and dolerites near Maholpada (21° 38': 85° 07') and Siria (21° 42': 85° 05') are quarried for use as road metal. Thin slabs of Slate up to 1.8 m. long and about 25 mm. in thickness have been used as fencing and paving slabs. These occurrences are recorded near Heptos, Talsara, Sarumohan, Khatkurbahal and Kuarmunda. Besides, quartzites are also quarried for use as road building materials and railway ballasts near Panposh.

Clays: Kaolin: a small, irregular deposit of kaolin associated with pegmatites occurs near Menjapara (22° 02' North and 84° 11' East), 9.65 km north of Dhruadihi railway station. It is suitable as 'filler' and also for ceramic purpose, if mixed with feldspar.

Barakar sandstones around Amatpani (22° 02': 83° 39') contain about 17.8 per cent of white clay as matrix, the rest of the bulk being made up of good quartz sand. Though reserves are indefinite, the deposit should be workable for both clay and sand. Near Kurdrigatu, there is a bed of kaolin associated with grey sandy shales adjoining carbon phyllites, extending for 274 metres with an average width of 45 metres. Similar material is also found near Lardga (22° 25': 84° 47') and Bariabera (22° 23': 84° 49').

Fireclay: The Barakar formations in the Hemgir local field contain several occurrences of different varieties of clays. Fireclay beds are encountered in a number of places in the entire strip of the Barakars in Baisundar valley. But good varieties of clay beds are recorded in and around Teneuligadi-Siarimal, Dulunga, Balinga-Bankibahal-Forkbahal, Kirpsara-Garjanbahal, Khuntijharia, Khujurdihi and Jharpalang-Girisuon.

China Clay: Kaolin originated from the altered feldspar of the metamorphosed pegmaties is found Kaintara (732), Bhaunra and Dhruadihi. They are locally used for white washing, but if exploited properly it can be suitable support a pottery industry in a small scale.

Felspar: Pegmite veins containing very coarse masses of potash feldspar (orthoclase & microcline) suitable for use as refractory are fairly abundant in the granite tracts around Darlipali (21° 58' : 85° 55'), Sargipali (22° 03' : 83° 55'), Ghantburu (22° 01' : 84° 05') and other areas.

Gold: The gravels of the Brahmani river and some of its tributaries are washed for their gold contained (placer gold) by the local Jhoras. The important occurrences are at 0.8 km south of Jaraikela bathing ghat (21° 45':

84° 51') opposite Birtola (21° 58': 84° 53'). Dhenkia (21° 57': 84° 52') Kulghari (2159' : 84° 51'), and Siarkundar (21° 55' : 84° 52'). The recovery is said to be poor and of no economic importance. According to Dr. M. S. Krishnan, gold washing was carried out in the Ib river and its tributaries like the Ichhanala during the last century. Colonel Hanghton has recorded occurrence of placer gold in the sediments contributed by the Koel, the Karo, the Sankh and the Brahmani rivers.

Kyanite and Silimanite: Kynite occurs in association with vein-quartz at many places, but all the occurrences are comparatively small and of no economic value. The occurrences south off village Sialjor (22°12': 84° 27'), west of Kuarmunda (22°23': 84°32'), Ghariajor, Kumbakera (22° 29': 84°44') and Alapaka deserve mention. Silimanite occurs in the quartz-schists, south of Kahchua (22°23: 84°31'). It is of no economic importance.

Lead and zinc ore: The earliest occurrence was reported by M. S. Krisnan, one mile (about 2 km) SE of Sargipali (22°05': 85°55') and immediate north of hill 1254', in which traces of galena were discovered in the dump near abandoned pits. Detailed investigation around Sargipali was surveyed by the Geological Survey of India and

Zinc was already exploited at Sargipali by the Hindustan Zinc Limited (HCL) from 1966 to 2001. The total production per year was 150,000 tons of ore in 1984 yielding 6500 tons cu and 4 tons of Ag. with over 2000,000 of ore reserves at 6.7 per cent pb and 9.33 per cent cu. Now, Sterlite Group has more than 65 per cent of shareholding in HCL and Government of India holds approximately 30 per cent the share as in April 2002. The plant was operating for zinc and lead metal mining and smelting. Sargipali mines became un-economical unit that led to separate 462 employees under Voluntary Retirement Scheme-II in July-August 2001.

Sulphide mineralisation has been noted in an area SE of Gringkela (22° 8': 83°47'), which displays visible specks of pyrite, galena and chalcoppyrite along with pyrhotite, bornite and arsenopyrite. Occurrences of base-metals have been recorded in the core of limestone at kiringsera (22°15' 30": 84° 25'). Prospecting operations by means of geochemical sampling in the area is under progress by the Directorate of Mines.

Limestone and Dolomite: Limestone and dolomite which are the most important economic mineral deposits in the Gangpur area occur in two series of outcrops, one along the northern limb and the other southern limb of the Gangpur anticlinorium. The deposits have been recorded by M/s. Krishnan while undertaking a systematic geological mapping of the State. Subsequently the deposits have been reassessed by the Geological Survey of India (G.S.I). with a view to substantial reserves of limestone and dolomite for the Hirakud Dam Project and proposed steel plants of Odisha. The

average width of the biggest horizons is between 610 metres to 760 metres of which are dolomite forms nearly 365 metres to 455 metres and limestone about 240 metres to 260 metres. The general strike of the bands varies from EW to ENE-WSW. The dip of the formations is generally steep. The limestone is fine to medium grained and is grey in colour. There is transition from pure crystalline limestone to calcareous phyllite. About one third of the limestone reserve in the area is of good quality and of a composition suitable for flux.

The limestone and dolomite occur in two distinct belts, one in the north, comprising the deposits at Raiboga ($22^{\circ} 23' : 84^{\circ} 37'$), Birmitrapur ($22^{\circ}24' : 84^{\circ} 44'$), Hatibari ($22^{\circ}24' : 84^{\circ}51'$), Gatitangar ($22^{\circ}24' : 84^{\circ}54'$) and along the Khatma Nala and the Deo river and the other in the south, which stretches over a distance of more than 96 km between Jaraikela in the east and Lefripara ($22^{\circ}7' : 83^{\circ}48'$) in the west. The important deposits in this belt are at Panposh ($22^{\circ} 14' : 84^{\circ}49'$), Lanjiberna ($22^{\circ}15' : 84^{\circ}30'$), Kirengsera ($22^{\circ} 15' 30'' : 84^{\circ} 25'$), Kukurbhuka ($22^{\circ} 12' : 84^{\circ}30'$), Kinjirma ($22^{\circ}0' : 84^{\circ}06'$). The important deposits are discussed below:-

Birmitrapur is the largest and forms the major source of flux grade limestone and furnace grade dolomite for the iron and steel plants in eastern India. The limestone occurs over a total distance of nearly 6.4 km width of 225 metres to 240 metres and forms a line of hills rising to an average elevation of 60 metres above plains. Dolomite occurs to the south of the limestone and occupies the plains, the width being 300 metres. The strike of the beds is nearly EW and the average dip is 60° due north. There is a minimum width of 45 metres to 60 metres of limestone with less than 5 per cent silica, 90 metres to 105 metres width 5 to 8 per cent silica. The percentage of iron oxide, alumina and magnesia in the limestone is 0.5, 1.5 and 2.4 respectively. Probable reserves of limestone containing less than 8 per cent insoluble within a depth of 60 m. i.e about 100 million tonnes of which 16 million tonnes would be below 4 per cent insoluble but the total indicated reserve of limestone of all grades will be nearly 274 m. tonnes. The reserves of dolomite are estimated at 256 million tonnes. This deposit is being worked by Bisra Stone and Lime Company Limited. (Bird & Co.)

Exposures of limestone in Hatinari-Purnapani-Gatitangar-Katma nala-Limbra belt occur over an area of 12.8 km by eight km between Kolram and the river Deo and further east. The reserves of limestone with insoluble below eight per cent will be about 20 million tonnes. The reserves of the individual areas are given below:

The limestone in Hatibari Block is being worked by TISCO. The reserve of dolomite of furnace grade in this area is estimated at 0.5 million tonnes and the same of flux grade limestone are about 1.5 million tonnes up to 30

metres depth. The eastern portion of the deposit extending for a length of nearly 1.5 km between the Hatibari quarry of the TISCO and Pahartoli forms the Purnapani Block. Dolomite quarry at village Bonrai granted to M/s G. C. Rout in 2009 by Government of India has high grade dolomite outcrop relatively at low depth. The limestone suitable for flux extends over a zone of 1.2 km in length with minimum width of 120 metres the probable reserves from this area are 7.3 million tonnes up to a depth of 30 metres.

In the Gatitangar area, limestone is exposed for a length of about 1.5 km with a width of about 0.4 km the general strike of the bands is nearly EW and the dip is about 75° to 85° . The reserves for flux grade limestone (below five per cent insoluble) are estimated at 3.4 million tonnes up to a depth of 30 metres. But the reserves of limestone containing average eight per cent insoluble would be about 505 million tonnes.

The Limra deposits lie to the east of the river Deo. The Hindustan Steel Limited has estimated a reserve of 4.5 million tonnes within 30 metres depth containing 12 per cent insoluble.

The limestone and dolomite deposits at Dublabera ($22^{\circ} 18': 84^{\circ} 34'$) are situated at about 12.8 km west of Kuarmunda railway station on the Rourkela-Birmittapur branch. The limestone occurs in three bands with a thickness of 90 cm to 120 cm (3' to 4') each and separated from one another by 60 cm to 90 cm (2' to 3') of impure limestone. The dip is low (25°) and are grey to white in colour and medium to coarse grained in texture. The situated to the north-east of Dublabera consist of mainly dolomite though at the top limestone is exposed all along the southern and western escarpments. The hillock South of Sarumohan is composed mainly of dolomite limestone. The limestone exposed in the region is not of good grade. The magnesia contained in the limestone varies from 2.3 per cent to 6.2 per cent. The Directorate of Mines has estimated a reserve of three million tonnes of limestone for the same deposits.

The limestone bands are exposed to the west, east and north of the village Lanjiberna ($22^{\circ} 15': 84^{\circ} 30'$). The beds strike approximately EW and dip at 60° - 70° on either side. The deposit is traceable for a distance of about 1.6 km with a maximum width of about 0.5 km the deposit is divisible into three zones, the southern, the central and the northern of which the central zone is dolomitic. In the southern zone the limestone is mainly medium grained and most of it is suitable for cement. The northern and the southern zones run parallel to each other and extend eastwards from the south Dhaurada. A reserve of about 16 million tonnes of limestone has been estimated in the two zones of the deposit more than half of which would be suitable for flux. The deposit is being worked by M/s Odisha Cement India Limited.

The Kirisenga (Ludhkutali) deposit is situated 16 km north of the Garposh railway station. The limestone exposures are traceable over a length of 720 metres with a maximum width of 300 metres. The beds strike east-west with a dip of 35° to 40° northwards. A reserve of two million tonnes of limestone averaging 10-11 per cent insoluble was estimated by the Geological Survey of India.

The deposite situated at Kukurbhuka ($22^{\circ}12'$: $84^{\circ}30'$) about eight km NW of the Sonakhan railway station is traceable from Gumardihi, on the east to Sialjor on the west, over a distance of about six kilometres with a width of about 600 metres. The beds strike in an east-west direction and dip at 60° to 70° due south. The northern part of the deposit is occupied by limestone, while dolomite occupies the southern part. The dolomite is light grey, fine grained, massive in nature and suitable for furnace lining. This area is under the lease hold of M/s. Bisra Stone & Lime Company and the Tata Iron & Steel Company. Since a greater part of the area is covered by alluvium the reserves have not been estimated.

There are three deposits at Katang ($22^{\circ} 14'$: $84^{\circ}29'$) about eleven km north-west of Sonakhan railway station and are under the lease hold of B. S. L. Company. The limestone deposit is situated about one km north of the village and the dolomites occur to its south-east and south-west. Limestone is traceable along the strike for a distance of about 720 metres beyond which on either side, it is covered with laterite. The width of the exposed limestone and dolomite is nearly 300 metres.

Since a greater part of the deposit is under water, the reserves of different grades of limestone have not been assessed.

The Khatkurbahal deposit ($22^{\circ}17'$: $84^{\circ}29'$) is situated at about 16 km north-west of the Sonakhan railway station. The deposit is traceable for a distance of nearly one km with a thickness of about 600 metres. The general strike of the beds is east-west and dipping 45° to 60° due north. The southern part of the deposit exposes limestone of good quality, whereas the northern part is all dolomitic. Tee reserve of limestone exposed in the southern part (40 metres width) is about 1.5 million tonnes.

The Purkapali deposit ($22^{\circ} 10'$: $84^{\circ} 23'$) is situated at about six kilometres north-west of the Garposh railway station. The deposit is traceable for 0.8 km along the strike and 2.8 km ($1\frac{3}{4}$ mile) across it. The greater width of lime stone at this place appears to be due to folding by which the beds have been repeated. The general strike of beds is approximately NE-SW, dipping between 25° to 50° to the SE. The limestone for greater part of the deposit flaggy contains plenty of tremolite crystals, which are predominantly seen on the exposed surface. Minute specks of pyrite are also seen. The deposit is traversed by large number of quartz

veins, thereby deteriorating the grade of the limestone. The deposit does not contain good limestone in any part. The area is held under lease by the Birsa Stone Lime Company,

The deposit at Kaduapara ($22^{\circ} 9' : 84^{\circ} 22'$) is situated south-west of the Purkapali deposit and is probably the south-western continuation of the same deposit. The main exposures of limestone are seen on the foot path, in the Nala just SE and in another nala about 0.8 km east of the Kaduapara village. The beds dip 30° to 40° to the SE. It is associated with phyllites and for greater part of the deposit the limestone is flaggy and in general the quality of limestone is not better than that of Purkapali and therefore is no commercial importance.

The Directorate of Mines has brought to light a six km long belt of limestone around Kutra extending from Litibera on the east up to Telighana on the west. The limestone occurs in detached patches. Detailed investigation has indicated that the limestone is high in silica content and probably can be used commercially only after beneficiation and blending with high grade ore.

The following additional deposits have been discovered and assessed by the Directorate of Mines.

Table 77: Additional Deposits of Lime Stone in Sundargarh District

	Name of Deposit	Location	Reserve in M.T.	Grade
1	Litibeda	$22^{\circ} 15' : 84^{\circ} 25'$	3.1	High silica limestone
2	Kutra South	$22^{\circ} 14' : 84^{\circ} 27' 50''$	14.3	Ditto
3	Telighana	$22^{\circ} 13' : 84^{\circ} 25'$	2.55	Ditto
4	Bimta	$22^{\circ} 23' 30'' : 84^{\circ} 49'$	0.76	Ditto
5	Luaram	$22^{\circ} 27' 30'' : 85^{\circ} 01' 30''$	0.80	Ditto
6	Khairtola	$22^{\circ} 20' : 85^{\circ} 0' 30''$	6.00	Dolomitic

Dolomite: The belt of dolomite occurring at the southern and south-eastern portion of Gangpur is fairly extensive and is exposed intermittently over a distance of 45 kilometres from bed of the Koel, six kilometres NNW of the Jaraikela railway station in the east, to near Amghat 10 kilometres north-east of the Rajgangpur railway station in the west. The width of the dolomite zone varies between 270 metres at the eastern part and 630 metres at the western end. The general strike of the dolomite is E W to ENE-WSW, with south or SSE dips varying from nearly vertical at places to arrange between 45° - 47° .

A few outcrops of dolomite are seen exposed at intervals along the bed of the Sapai river at the south western part of Gangpur, extending in a NE-SW direction over a distance of nearly 25 kilometres from the junction of the Ib river to as far as Birbira.

Good quality dolomite occurs in the middle portion (1) adjoining Tumnigudi near the Ghoriajor Road (2) between Bandubahal and Tillaimalti and (3) to the SW of Khinjirma.

The dolomite is medium grained, gray to white saccharoidal variety. From analysis, it was found that percentage of MgO varies from 18 to 20, CaO from 25 to 33 and silica within five per cent. There are also some impure bands but in an average the quality is fair and may be suitable for furnace lining.

Exposure of dolomitic marble at Lephripara ($22^{\circ} 7' : 83^{\circ} 48'$) extend outcropping intermittently along the Ichha Nala for a length of nearly three km from the Surugada village in the east as far as the road bridge NW of Lefripara. The width of the dolomite band exposed varies from 30 to 78 metres. The nearest railhead is at Belpahar.

Here the dolomite is white to light bluish in colour and finely saccharoidal. The surface is traversed by thin veins of quartz and stringers of limonite. The outcrops at the western extremity carry grains of calc-silicates like tremolite, diopside, etc. but the central part of the deposit is more or less pure dolomite. But on the whole the dolomite here is fairly low in silica content and magnesia is above 20 per cent and R_2O_3 is less than one per cent. This can be used for furnace lining. About 1.7 million tonnes of dolomite has been estimated for this deposit.

Quartzite and Vein quartz: Occurrences of quartz of practically pure variety have been reported from Barma ($22^{\circ} 03' : 84^{\circ} 17'$), Dandapara near Birmitrapur ($22^{\circ} 24' : 84^{\circ} 44'$), Kuchinda ($22^{\circ} 05' : 84^{\circ} 42'$), Targa ($22^{\circ} 27' : 84^{\circ} 39'$) and around Birbira. They may be useful as source of quartz for ceramic and other purposes. Some bands of Barakar sandstones of the Hemgir coal field occurring near Amatpani ($22^{\circ} 13' : 83^{\circ} 39'$), contain good grade quartz sand in a matrix of Kaolin. A part of the hill about one mile south-west of Jara ($22^{\circ} 01' : 84^{\circ} 39'$) contains pure quartzites.

Manganese ore: Extensive deposits of the manganese ore occur in the District in two regions namely Bonai and Gangpur. The manganese deposits of the well known Singhbhum, Keonjhar-Bonai belt occur in highly folded shales of the Iron ore series and in gently folded sandstone and shales of Kolhan series which overlie unconformably the rocks of the iron ore series. The rock associated with the deposits is intensely weathered and the area is largely covered by laterite, reddish ferruginous soil and chert. The deposit in the iron ore series are tabular bodies conformably enclosed by shales whose upper extension and outcrop are capped by laterite and chert.

Manganese deposits that are associated with the rocks of the Kohlan series and their weathering products occur as small lenses and layers conformably enclosed in shales as cross cutting stringers in shale and as

pockets in laterite. Low grade manganese ore also occur as small stringers and pockets in purple sandstone interbedded with shales.

The deposits associated with the rocks of iron ore series are the largest and are most important source of the ore in the belt. They range in length up to 305 metres and in thickness up to 6.10 metres and some of the deposits have been mined down dip distance of 12.2 metres. The deposits consist of manganese oxide that commonly are cavernous and exhibit various textures like botryoidal and mamillary. The ores consist of pyrolusite, psilomelane and braunite. The grade of ore even in individual deposits has wide variation. Only about 30 per cent of the ores of the area contain more than 40 per cent MnO₂. Some deposits yield small amounts of chemical and battery grade ore containing up to 97 per cent MnO. Iron oxides are the chief adulterants of these ores. Important manganese deposits in the Bonai area in the Koira valley are as follows.

Table 78: Manganese Deposits of Sundargarh District

1	Malda	8	Nadidihi
2	Koira	9	Harischandrapur
3	Kamaljong	10	Nuagaon
4	Patamunda	11	Mahulsakha
5	Bhutra	12	Sarkunda
6	Dengula	13	Orahuni
7	Ranisal	14	Kusumdihi

The manganese deposits in the Gangpur region are associated with the Gonditic rocks, mica schists and phyllites of the Gangpur series. The rocks are highly folded. The deposits occur in the core of an easterly plunging anticlinorium, in a belt of about 64 kilometres in length. These deposits are tubular conformable bodies having maximum length of 305 metres and thickness of 6.10 metres.

Most of the deposits are associated with typical gondites composed of quartz and spessartite with subordinate amount of primary braunite, rhodonite and other manganese silicates. Pyrolusite and Psilomelane type oxides and hollandite are the principal supergene minerals.

The Ghariajor (22° 03': 84° 08'), Manmunda (22° 05': 84° 49') to Gantbur (22° 06': 84° 12') group of deposits from the most promising block in this sector. These groups of deposits have been worked out since long. Occurrences of bedded manganese ore varying in thickness from 10 cm. to 15 cm. have been reported from Amasdegi (22° 01': 84° 03') to Gobira (22° 19': 84° 44') in the eastern part of Gangpur. The other deposits in this area are located at Pandrisila (22° 20': 84° 43'), Kuhupani (22° 14': 84° 27'), Panchra (22° 17': 84° 22'), Dandijamira (22° 14': 84° 20') etc. the ore

occurring at all these places except Pandrisila, Dandijamira, Kuhupani is of low grade.

The reserves of deposits in the Gangpur area are not known but are probably small. Many of the mines have been exhausted.

Probable reserves for the Bonai-Keonjhar belt are of the order of 20.3 million tonnes of all grades, of which 7 million tonnes of all grades (30 per cent and above including the oxide ores) may be available from Koira valley alone.

Red ochre: Powered red ochre occurs as thin band in association with coal in the Baisundar Nala, north of Gopalpur ($22^{\circ} 03'$: $83^{\circ} 42'$) overlain by fireclay. The band varies in thickness between 20 cm to 30 cm and extends over a length of about 29,100 metres. 29,100 tonnes of red ochre has been estimated in the area by the Directorate of Mines, Odisha. This ore can be used for manufacture of paints, etc.

Talc and Soap-Stone: Fine to medium grained, pure green and grey soap-stones occur near Jharbera ($21^{\circ} 49'$: $84^{\circ} 53'$) and Bhaludungri ($21^{\circ} 51'$: $84^{\circ} 50'$) in Bonai Sub-Division. The ultra basic rocks near Bonaikela ($21^{\circ} 56'$: $84^{\circ} 47'$) and Bargaon ($21^{\circ} 53'$: $84^{\circ} 48'$) contain minor pockets and lenses of soap-stone. The reserves of soapstone in the area are estimated to be fairly large. Pure white and soft variety soapstone has been recorded in a well in Biribera area at a depth of about 7 metres. Occurrences of talc schists have been marked near Katepur ($22^{\circ} 04'$: $84^{\circ} 43'$) and Jarmal ($22^{\circ} 03'$: $84^{\circ} 11'$) and steatite schists near Simba ($22^{\circ} 02'$: $58^{\circ} 09'$).

Numerous bands of talc and talcos rocks are also found associated with sheared chlorite-talc schist and ultra basic rocks in the following places.

1. West-South-West and South-West of Bhaludungri.
2. Several places between Sisurdih and Bundhebhui.
3. Near Junadih and
4. At the western foot of the 1223 hill near Khajuribahal

Mineral Based and Other Industries in the District:

Large chunk of the industries in Sundargarh District are mineral based. The Mineral based large-scale industries in Sundargarh District are listed as follows.

Table 79: Important Mineral Based Industries of Sundargarh District

Sl. No	Name & Address of the Unit	Products	Status
1	Rourkela Steel Plant (RSP)	Hot metal (4.5 MT), crude steel (4.2 MT) Salable steel (3.9 MT) (Post-expansion)	Working
2	M/s OCL (India) Limited, At/Po- Rajgangpur	Refractories & Cement	Working
3	M/s L & T Limited, At/Po- Kansbahal, previously known as Utkal Machinery Limited	Machinery works	Working
4	M/s Hari Machine Limited, At/PO- Rajgangpur	Machine spares parts & machinery works	Working
5	M/s Scan Steels Limited		
	(a) Ramabahal	Rolling mill	Working
	(b) Budakata	Sponge Iron	Working
	(c) Bai-bai	Ingot	Working
6	M/s Shiva Cement Limited, At/PO- Teleghana, Kutra Block	Cement	Working
7	M/s Mahanadi Coal Fields Limited, Basundhara	Coal Mines	Working
8	M/s Kausalya Ferro Metalic Private Limited, Podbahal, Sundargarh	Sponge Iron	Working
9	M/s. OCL Iron & Steel Limited, At- Jampali, Rajgangpur	Sponge Iron	Working
10	M/s Mahavir Hi-Tech Chemicals Private Limited, Ratanpur Tangarpali Block	Power plant	Pipe line
11	M/s Bhusan Power Plant Limited, Jharpalam, Hemgir Block	Power plant	Pipe line
12	M/s Prakash Industries Limited, Ledhimong, Sundargarh	Sponge Iron, stainless steel	Pipe line

A detailed list of the Large Scale Industries in the District is at **Appendix-XXVI (List of Industrial Units in Sundargarh, Rourkela and nearby Areas)**.

Rourkela Steel Plant (RSP), in Rourkela, Odisha is the first integrated steel plant in the public sector in India. It was set up with West German collaboration with an installed capacity of one million tonnes in the 1960s. It is operated by Steel Authority of India Limited (SAIL). Subsequently, its

capacity was enhanced to two million tonnes of hot metal, 1.9 million tonnes of crude steel and 1.67 million tonnes of saleable steel. After implementing a massive modernisation and expansion that is in the last leg of completion, Rourkela Steel Plant has enhanced its capacity to 4.5 million tonnes of Hot Metal and 4.2 Million Tonnes of Crude Steel.

German metallurgical firms Mannesmann, Krupp, Demag, Siemens and Voestalpine provided machinery and consultancy to the plant among others. Rourkela Steel Plant was the first steel plant in Asia to use the LD (Linz-Donawitz) process of steel-making. Rourkela Steel Plant has an associated fertilizer plant that produces nitrogenous fertilizers using ammonia feedstock (from its coke oven plant). On 3 February 1959, then President Rajendra Prasad inaugurated RSP's first blast furnace named 'Parvati' when the company was known as Hindustan Steel Limited (HSL). Subsequently, the RSP became a unit of the Steel Authority of India Limited (SAIL).

Modernisation and expansion of the Rourkela Steel plant became the need of the time. The Steel plant doubled its capacity and augmented it to the level of 4.5 MTPA of Hot Metal. The Crude Steel making capacity will simultaneously increase from the level of 1.9 MTPA to 4.2 MTPA and production of Saleable Steel to zoom from the level of 1.671 MTPA to 3.99 MTPA. The key areas of modernisation were Augmentation of Ore Bedding and Blending Facilities and Augmentation of Steel Melting Shop-II

For augmenting the ore bedding and blending activities the modernisation included installation of new Coke Oven Battery, new Coke Dry Cooling Plant, new Coal Handling Plant, new Coal Chemical Department, new Sinter Unit, new Blast Furnace, Turbo Blower Station, Boiler, STG, BPTG & Blowing Station, Torpedo Ladles & Repair Shop, Pig Casting Machine For augmenting Steel Melting, the 3rd BOF Converter (1 X 150 T), Slab Caster were installed. The plant also has adopted computerisation process. The Integrated Go-Live of the ERP system was carried out at RSP on 1 April 2012. The ERP system integrates all departments and functions across the organisation right from production and finance to dispatch.

Total Quality Management (TQM) that was adopted in RSP since January 1992 today forms the core of all our business strategies. Today the entire works zone as well as Personnel, Steel Township and Finance Department have been certified to ISO 9001: 2008 QMS. Silicon Steel Mill and Environmental Engineering Department were the first departments to be certified with ISO 14001 Environment Management System (EMS) in the year 2000. Subsequently, SP-II, HSM, PM, SWPP, ERWPP, SPP and Steel Township were certified to ISO 14001:2004 EMS. RSP's Steel Township is the first Township of SAIL to be certified for both ISO 9001 QMS and ISO

14001 EMS. Entire RSP has been certified to internationally acclaimed Occupational Health & Safety Assessment Series (OHSAS 18001: 2007).

In order to have synergy and synchronization in implementation of various management systems, concept of Integrated Management System (IMS) has been initiated in RSP. An IMS Policy covering Quality, Environment, Occupational Health & Safety and Social Accountability of RSP has been introduced. RSP is the first unit in SAIL to adopt IMS policy.

Table 80: Products of Rourkela Steel Plant and their Application in Other Industries

Products	Applications
HR Coils	LPG cylinders, automobile, railway wagon chasis and all types of high strength needs.
Plates	Pressure vessels, ship building and engineering structures
Chequered Plates	Flooring & staircases in the industrial installations, railway platforms, etc.
CR Sheets & Coils	Steel furniture, white goods like refrigerators, washing machines, automobile bodies, railway coach paneling, drums, barrels, deep drawing and extra deep drawing, etc.
Galvanised Sheets	Roofing, paneling, industrial sheeting, air conditioner ducting and structural
Electrolytic Tin Plates	Containers for packaging of various products including edible oils, vegetables and confectionary items.
Silicon Steel Sheets & Coils	Small generators, stators for high efficiency rotating equipment and relays, etc.
Spiral Weld Pipes	High pressure transportation of crude oil, natural gas and slurry transportation, water supply, sewage disposals, grain silos, civil engineering pilings, etc.
ERW Pipes	High pressure transportation of oil & water, sewage disposal, tube wells, etc.

Odisha Cement Limited is the flagship company of 'Dalmia Group' of companies, set up and operating from eastern India. The emergence of 'Dalmia' group on the industrial scene of India can be traced back to pre-independence era. Prominent among the early entrepreneurs who laid the industrial foundation of India was Dalmia family. Against the said background Sjt. Jaidayalji Dalmia, an industrialist of farsighted vision set up a cement plant at Rajgangpur during 1950-51 at the request of Government of Odisha to manufacture super grade cement for use in the construction of the prestigious Hirakud Dam. Odisha Cement Limited (OCL) was incorporated on 11.10.1949 and its cement plant went on steam during 1952. OCL commissioned its Refractory plant in 1954, which today has grown into one of the largest composite refractory plants in the country. It manufactures Silica, Basic Burnt Magnesia Carbon, Fireclay & High Alumina Bricks, Continuous Casting, Slide Gate Refractories, Castables and Precast blocks Basic, Silica high alumina Ramming Mases/Mortars. OCL's Refractory division is the first Indian refractory manufacturer to have secured the coveted ISO 9001 certification for all its refractory products. Globally OCL is amongst the few select producers of coke oven silica bricks. Over years OCL has collaborated with other world leaders in the respective fields and secured a place of pride for itself. The company changed its name from Odisha Cement Limited to OCL India Limited w.e.f. 15.01.1996 to reflect its multifarious activities. During the year 2002 OCL set up its Sponge Iron unit at Rajgangpur State of Odisha, with an installed capacity of 1, 20,000 MT P.A and later on developed Steel making facility by installing three sets of Induction Furnaces each of 250 MT/ day capacity and Steel Billet Casting Machine as a forward integration activity for the Sponge Iron plant & Pig Iron plant.

In 2007 the Hon'ble High Courts of Odisha and Guwahati have approved the Scheme of Arrangement involving demerger of Steel Undertaking of the Company with OCL Iron and Steel Limited and Real Estate Undertaking of the Company with Landmark Property Development Company Limited (formerly "Konark Minerals Limited) and merger with Dalmia Cement (Meghalaya) Limited. OCL's Cement Plant is one of the most modern dry process cement plants in India. 'Konark' brand cement manufactured by the OCL is the market leader in the State of Odisha and has emerged as a brand synonym of premium quality cement. Presently its installed capacity for the factories located at Rajgangpur Cement Works & Kapilas Cement Works is 5.35 Million Tonne per annum. The OCL's Refractory plant is situated at Rajgangpur with a total installed capacity of 106400 MT per annum to produce the various types of refractories. The production and sales statistics of the OCL, Rajgangpur is as follows.

Table 81: Production and Sale Statistics of the OCL, Rajgangpur

Particulars	Unit/ Year	2010-11	2011-12	2012-13	2013-14	2014-15
Clinker production	MnT	1.61	1.24	1.39	1.75	1.95
Cement production	MnT	3.41	3.08	2.54	3.29	4.21
Cement sales	MnT	3.34	3.10	3.46	3.39	4.27

L & T's Kansbahal Works in the Private Sector is located near Rourkela and is producing heavy engineering machineries. It is having a world-class Integrated Machine Building Centre with facilities for Casting, Fabrication, Machining and Assembly, complemented by excellent design, engineering, quality control and logistics support. Initially, it was set up in 1962 as an Indo-German Venture, it merged with L&T in 1982. The facility produces Crushing and Screening systems, Pulp & Paper machinery, Windmill components, Cast products, Mining equipment and various other specialised industrial products. The Kansbahal Works R&D wing is equipped to carry out process engineering, mechanical design / analysis, 3D modeling, Finite Element Analysis and basic and detailed engineering.

Indian Detonator Explosives Limited is a 100 per cent wholly owned subsidiary of the **Gulf Oil Corporation Limited**. It manufactures packaged and bulk explosive products. Packaged products include small diameter permitted category and small & large diameter general purpose explosives. It also manufactures non-explosive emulsion matrix, an intermediary for delivery of bulk explosives.

Odisha Industries Limited was incorporated on 23 December 1944, and is owned by the Orind Group producing other refractories. The company has its unit at Lathikata, producing refractories, salt glazed stoneware, magnesia carbon, glass and glass products. The Company ran into trouble due to labour problems and has been closed temporarily. The office of the company is based in Sundargarh, India.

Hari Machines Limited is a company belonging to the Dalmia group of companies and is catering to the needs of various core sector industries for the last four decades by manufacturing, exporting and supplying heavy industrial machinery and equipment.

Scan Steels Limited is the company of "Scan group" of industries and represents integrated Sponge Iron Plant located at Rajgangpur, Odisha. It was founded by Shri Sawarmal Gadodia in 1990. The products are iron billets and major part is converted into wire rods, both tor and plane.

Shiva Cement Limited (SCL) was incorporated in 1985 and first commercial production commenced in 1986. **SCL entered into alliance with ACC in 2007.**

Mahanadi Coalfields Limited (MCL) is one of the major coal producing company of India. It is one of the eight subsidiaries of Coal India Limited. Mahanadi Coalfields Limited was carved out of South Eastern Coalfields Limited in 1992 with its headquarters at Sambalpur. It has its coal mines spread across Odisha. It has total seven open cast mines and three underground mines under its fold. Garjanbahal and Kulda OCP are presently under exploration.

Table 82: Coal Production from MCL, Basundhara

Item	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Coal Prod. (M.T)	60.05	66.08	69.06	80.00	88.01	96.34	104.08	100.28	103.12	107.89	110.439	121.379
O.B. Removal (M.Cu.M)	50.56	49.81	51.43	55.47	54.56	51.85	66.07	88.70	85.67	90.36	96.028	89.221

Medium Scale Industries: The rich mineral base of the District supports many medium scale industries. The list of some of the industries is given below.

Table 83: List of Medium Scale Industries of Sundargarh District

Sl. No.	Name and Address of the Enterprise	Products
1	M/s Ashoka Multiyarn Mills Ltd., At/Po- Kirei, Sundargarh	Spinning mill
2	M/s T.R Chemicals Pvt Ltd., At-Barpali, Rajgangpur block	Sponge Iron
3	M/s Agrasen Sponge (P)Ltd At/PO-Mandiakudar	Sponge Iron
4	M/s Suraj Product Ltd., At-Barpali, Rajgangpur	Sponge Iron
5	M/s Prabhu Sponge (P) Ltd, Jhagarpur, Rajgangpur	Sponge Iron
6	M/s Sri Ganesh Acid Chem (Pvt) Ltd AtPo-Birbira, Sandargarh	Manganous Oxide
7	M/s Aryan Coal Beneficiation (P) Ltd At/Po- Kanika, Hemgir	Coal washery

M/s Ashoka Multiyarn Mills Limited belongs to the Keshar Group, who owns two spinning mills with a combined Spindle-age of 65,796 engaged in the field of both Cotton and Synthetics. They are installed in two different locations at Sundergarh, District Sundergarh, Odisha and at Midnapore, District Midnapore, West Bengal. It produces sewing thread, sweater yarn and synthetic yarn.

M/s. T. R. Chemicals Limited manufactures exports and imports industrial Adhesive Resins, Polyester Resins and Rubber Adhesive. Suraj Products Limited was established in the year 1991 as Champion Cement Industries Limited. Subsequently in the year 2000, it was renamed to Suraj

Products Limited. The unit started its operations with a mini Cement plant and subsequently in 2002, it diversified to Sponge Iron manufacturing and production of Cement stopped. Today the installed capacity is 36,000 TPA. Subsequently, it set up a Pig iron plant with an installed capacity of 24,000 TPA. Aryan Coal Beneficiation (ACB India) Limited, was incorporated in March 1997 as Aryan Coal Beneficiations Private Limited. It started its operations of washing coal from Korba Coalfields of South Eastern Coalfields Limited in Chhattisgarh in 1999.

Cottage, Small & Medium Industries, MSME:

As per the District Statistical Handbook, 2011, Sundargarh, there were 407 registered units of SCI in 2008-09. In 2009-10 the number rose to 436 and to 504 in 2010-11. Total capital investment ranged from Rs. 2564.14 lakh in 2008-09 to Rs. 4562.00 lakh in 2010-11. The total employment generated in the SCIs ranged from 1589 to 2138 during this period. Similarly in 2008-09, there were 16 registered units of cottage industries, which declined to 10 units in 2010-11. Total capital investment in cottage industries in 2010-11 was Rs. 0.50 lakh and employment generated was only 10. Handlooms industries have shown downward trend in their performance. In 2008-09, there were 128 units, which declined to 114 units in 2009-10 and 60 units in 2010-11. The magnitude casts a bleak picture of the Cottage and Handloom industries in the District. Different types of SSI, Cottage and Handloom industries thriving in the District are given below.

Table 84: Small Scale and Cottage Industries in Sundargarh District

TYPE OF INDUSTRY	NUMBER OF UNITS	INVESTMENT (Rs. In Lakh)	EMPLOYMENT
Agro based and Soda water	1703	3499.26	6486
Textile based	368	464.79	1908
Wood/wooden based furniture/Forest based	289	276.16	1876
Paper & Paper products	284	1016.89	1766
Leather based	46	55.97	238
Chemical/Chemical based	279	2344.62	2964
Rubber, Plastic & petro based	213	2819.41	1583
Mineral based(G &C)	642	7798.45	17705
Engineering &Metal based (Steel Fab.)	2241	25426.47	27304
Electrical machinery, Transport equipment & Electronics	168	437.26	1111
Repairing & servicing	4191	7333.7	13368
Others	747	1991.34	4920
Kachori Making	-	-	-

Source: DIC, Sundargarh/RIC, Rourkela

Industrial Trends: As per the report of MSME Development Institute, Cuttack, the District has 4182 registered units in 2010-11 and there are 11171 industrial units. Registered large and medium units number to 75. There are six industrial areas in the District. The detailed information on year-wise number of units registered since the independence is as follows.

Table 85: Year-wise Trend of Registration of Industrial Units.

YEAR	Number of units	Employment	Investment (Rs. Crore)
Up to 1984-85	1207	10815	1278.75
1985-86	124	1152	185.78
1986-87	135	1066	228.01
1987-88	114	979	214.75
1988-89	93	1071	122.36
1989-90	108	1376	417.76
1990-91	162	1959	988.18
1991-92	207	2204	884.20
1992-93	219	2359	674.62
1993-94	123	1483	469.88
1994-95	130	1558	293.94
1995-96	77	1043	318.62
1996-97	102	947	849.82
1997-98	92	773	280.73
1998-99	116	1021	1467.15
1999-2000	163	1186	835.45
2000-01	98	606	300.89
2001-2002	95	556	681.22
2002-03	97	810	996.63
2003-04	88	573	405.87
2004-05	84	615	321.91
2005-06	102	880	413.07
2006-07	80	1472	3087.11
2007-08	96	3774	11640.06
2008-09	67	924	2406.56
2009-10	99	1390	2624.25
2010-11	104	1424	2091.22
Total	4182	44016	34478.82

Industrial EStates: From the source of the District Industries Centre, there are six industrial areas/ sheds in the District.

Table 686: List of Industrial Estates of Sundargarh District

SINo	Name of the I.E/I.A	S h e d s			Total Area (Acres)	Available Land (Acres)
		Constructed	Allotted	Vacant		
1	2	3	4	5	6	7
1	Rourkela	66	66	0	24.47	35.43
2	Commercial estate	20	20	0	0.887	4.71
3	Kalunga	175	175	0	402.869	608.140
1	Mandiakudar Industrial area	-	-	-	36.210	45.430
2	Rajgangpur Industrial Estate	12	0	12	30.010	60.000
3	Kirei, Sundargarh Industrial Estate	10	10	0	6.133	9.590

Handicrafts - Brass, Bell Metals, Pottery, Stone Carving, Gold Smithy, Bamboo And Cane Works, Basketry, Iron Works, Silk Weaving, Filigri, Ornamental Fabric, Toy Making & Carpentry:

Traditionally Panas or Gandas and Hansis were forming the weaver section in the villages. Bamboo mat and wickerwork is done by the Turi, Dom and Khond castes. The Turis do by far the finest work. The Doms make the bamboo wicker trunks, called petras and bamboo and palm leaf mats and fans, while cheap and rough mats and baskets are made by the Khonds. Brass and bell-metal utensils for domestic use are being made by Kansari caste. They make also the brass ornaments, anklets, bracelet rings etc, worn by women of the poorer classes. Tangarpali is one of the important centres of brass and bell-metal business production in the District. At present the cheap aluminium and plastic products have almost replaced the use of bell-metal utensils by the common men. Use of stainless steel utensils is gradually becoming popular among the richer section of the society. Earthen wares continue to be used in large scale for water stores during summer by people in urban and rural areas and deepabali festival has still unreduced demand of earthen lamps. Potters (Kumbhars) are still in profitable business.

Another unique old time industry which is still continuing is the manufacture of vessels of soap-stone or Khadi for culinary and other domestic use. This industry is run by the men of the Bhumij or Bhandwal caste. Two varieties of stone are found in Bonai Sub-Division. One is an opaque variety of a greyish tinge and of a hyalescent or semi-crystalline character and is highly prized of the two. The stone vessels find good market in the neighbouring areas.

The local black-smiths (Kamar) were smelting iron-or picked up from the surface and producing excellent iron. All the domestic and agricultural implements used throughout the District were made from that iron. At present they depend upon factory made iron and steel for their living, but the village black smiths still make iron implements used for agriculture like plough shares, sickles for cutting, axes and some small instruments used in hunting. A black-smithy co-operative society has also been organized in the District having 14 members.

Sundargarh is very rich in both mineral and forest wealth. These resources can feed many industries in future. Besides, the Rourkela industrial Complex has built up the necessary infrastructure for the industries to grow. Recently discovered minerals like lead, zinc and copper in Sargipali area near Sundargarh have created vast scope for establishment of industries.

There were 27 Labour Unions in the District in 1971 and have been multiplied into many more. Generally the workers of registered factories and

mines have formed trade unions to safeguard their interest. Almost all the major factories and mines of the District have provided amenities to their employees. The welfare measures include recreation clubs, subsidised canteens, housing accommodation and facilities for schools, hospitals and sports. Besides, the Labour Department takes necessary steps for proper implementation of various labour laws in force in the District through their District level office located at Rourkela.

Labour Laws and Relations, Protection of Labour, Trade Unionism, Labour Welfare:

Labour law also known as employment law is the body of laws, administrative rulings, and precedents which address the legal rights of, and restrictions on, working people and their organizations. As such, it mediates many aspects of the relationship between trade unions, employers and employees. In other words, Labour law defines the rights and obligations as workers, union members and employers in the workplace. Generally, labour law covers: Industrial relations, certification of unions, labour-management relations, collective bargaining and unfair labour practices; Workplace health and safety; Employment standards, including general holidays, annual leave, working hours, unfair dismissals, minimum wage, layoff procedures and severance pay. There are two broad categories of labour law. First, collective labour law relates to the tripartite relationship between employee, employer and union. Second, individual labour law concerns employees' rights at work and through the contract for work. The labour movement has been instrumental in the enacting of laws protecting labour rights in the 19th and 20th centuries. Labour rights have been integral to the social and economic development since the industrial revolution.

Bonded labour was once in practice in the State owing to the historical factors. As in 1991, there were 2343 cases of bonded labour in the District identified in 17 Blocks. Out of the identified cases, 2282 numbers of bonded labourers were rehabilitated. The remaining 61 cases were dropped due to death and non-availability of the labourers. The District had got package of Rs.9486250.00 towards rehabilitation of the bonded labourers. The District Rural Development Agency (DRDA) was entrusted to identify, rehabilitate and pay compensation to the bonded labourers.

Due to concentration of many industries, there are many labour related issues in the District. The Government of Odisha appointed the Director of Industries as an ex-officio-Labour Commissioner in the State in 1950. With the Growth of Labour problems and enactment of various Labour Legislations, the Government in their Resolution dated 13th January, 1953 created the separate office of the Labour Commissioner-cum-Chief Inspector of Factories from 1 April 1953. Subsequently the office of the Chief Inspector

of Factories was separated from the office of the Labour Commissioner. The State Government in Labour and ESI Department continued to function as the "Appropriate Government" during the period under report in respect of all Industries other than those for which the Union Government is the "Appropriate Government". Now the State is divided into four Labour Commissioner Zones, i.e. Cuttack, Sambalpur, Rourkela and Jeypore. District Labour Officer is posted at Rourkela and there is an office of the Assistant District Labour Officer in Sundargarh.

The State Labour Directorate otherwise known as office of the Labour Commissioner, Odisha discharges several functions, which are

- (1) maintaining industrial peace and harmony including settlement of industrial dispute, implementation of settlements as well as awards passed by industrial tribunals and labour courts matters relating to strike, lockout, layoff, retrenchment, closure and prosecution under Industrial Disputes Act, 1947;
- (2) filing of claim cases and prosecutions under Minimum Wages Act and Payment of Wages Act,
- (3) registration and Licensing under Contract labour (R & A) Act, Inter-state Migrant Workers (RE & CS) Act, Odisha stops and Commercial Establishment Act, Motor Transport Workers Act and Beedi And Cigar Workers (CE) Act;
- (4) registration of Trade Unions under Trade Unions Act and verification of membership of Trade Unions for recognition through secret ballot as per the verification of membership and recognition of Trade Union Rules 1994;
- (5) ensuring payment of notified minimum wages to workers particularly engaged in the unorganized sector under Minimum Wages Act;
- (6) ensuring social security benefits to the workers both in organized and unorganized sectors under (i) Maternity Benefits Act. (ii) Payment Of gratuity Act (iii) Workmen's Compensation Act to both male and female workers;
- (7) providing protection to labour with special emphasis to eliminate and prevention of child labour system under child labour (Prohibition and Regulation) Act,
- (8) ensuring payment of equal remuneration to female workers both in organized and unorganized sector at par with workers doing same and similar work under Equal Remuneration Act,
- (9) preventing illegal and unauthorized drafting and exploitation of migrant labour through unscrupulous middle men to other States under Inter State Migrant Workmen (RE & CS) Act,
- (10) prohibition and regulation of Contract Labour system in different industries in the State under contract labour (Regulation and Abolition) Act;
- (11) regulation of employment of construction workers in the State under Building and Other Construction Workers (RE & CS) Act;
- (12) providing health insurance facility to BPL families under Rastriya Swasthya Bima Yojana and
- (13) the State Labour Directorate Compiles Consumer Price Index Number for Industrial Workers of Cuttack, Berhampur and Sambalpur centres. Different industries of the State are utilizing these industries for fixation / revision of wages of their employees.

There is one Industrial Tribunal set up at Rourkela which is looking into the cases of industrial disputes. Among the Trade Unions, (Centre for Indian Trade unions) CITU, INTUC, AITUC, HML, Rourkela Mazdoor Sabha, Steel Employees' Association, Rourkela (SEAR), Rourkela Workers Union (RWU), Gangpur Mazdur Mancha (GMM), Rourkela Ispat Karmachari Snagha (RIKS, which is affiliated to Bharatiya Mazdur Sangha), are active Trade Unions in the industrial city of Rourkela and in its periphery. Rourkela city has witnessed a number of labour unrest due to concentration of many industries.

Rourkela Chamber of Commerce

Rourkela Chamber of Commerce was established in 1962 under the president-ship of Late S. N. Agrawal and was inaugurated on 15 February 1962 by Sri Biju Patnaik the then Chief Minister of Odisha. When it was started there were 50 members. Now it has more than 800 members comprising of the large and medium industries and small scale industries as well. In 1971 the leading local Industrialist of Rourkela Sri K. R. Jhunjhunwala took over the reign of the Chamber. By then Rourkela Steel Plant had started production. Many large industrial Units had been set up and Trading Houses had also established themselves at Rourkela. Till that time Chamber of Commerce was looking after interest of Trade and Commerce only to give it a broader base and to give more accurate idea about its functions the name "Chamber of Commerce" was changed to "Rourkela Chamber of Commerce & Industry" and the same was registered under the Societies Registration Act.

During its initial years the Chamber was mostly concerned with creating necessary infrastructure for growth such as Railway System, Passenger amenities, Telephone System, Road Transport, Drinking Water facilities for inhabitants, Educational facilities, Accommodation for visiting public to Rourkela etc. Such activities continued till the end of sixties and the Chamber had its share of joy whenever success was achieved.

The Chamber started interacting with Rourkela Steel Plant in the beginning of seventies when it was felt that though the Steel Plant produced many items of iron & Steel, the local industries & Trade had to procure such materials from markets outside the State. Supplies of iron & Steel materials from Rourkela Steel Plant to local industries and Trade was nil till that time. We have pride in stating that our efforts yielded results, and with cooperation from Steel Plant Authorities, direct sale of material to local industries and trade started. We are glad to mention that at present more than 1.5 lakh tonnes of such materials are being directly supplied by Rourkela Steel Plant to local industries and Trade annually. Eighties marked a new change in the atmosphere, and with the State Government embarking upon a massive

plan for industrial Development in the State, the Chamber worked in close co-operation with State industries Department and its many ideas and suggestions were incorporated in the State industrial Policy, 1980. The Policy heralded a new era in industrial activities and an impressive growth was witnessed in the first half of present decade.

Second half of eighties began with a new thrust in atmosphere. On the one hand the industries established earlier in Rourkela area started losing momentum and profitability started declining, and on the other hand new opportunities were thrown open by the Union Government under Sri Rajiv Gandhi with the announcement of liberal schemes for modernization, diversification and expansion of existing industries and relaxation in the field of import of Technology and equity participation by multi-national companies in High-Tech areas. The Government was all set for creating a modern industrial Society. All over the country new hopes were raised, fresh investments were made and share markets reached dizzy-heights. Tuning itself with the new mood, the State Government, in close consultation with different Chambers of Commerce and industries and Associations, announced a bold industrial Policy with effect from 1 April 1986.

Rourkela Chamber had sent a business delegation consisting of 36 members to European countries coinciding with the Hannover World Fair in West Germany in 1980 under the leadership of Shri Ravin Jhunjhunwala. Main emphasis of this delegation was on Hannover Fair to explore opportunities of business in collaboration with the Trade & industry of European countries. This delegation visited different cities of European countries in general and industrial Towns of West Germany in particular.

This delegation held meetings with the Representatives of international Trade Centre. Geneva, Paris Chamber of Commerce, London Chamber of Commerce and U. K. Trade Agency, Copenhagen Chamber of Commerce, Stuttgart Chamber of Commerce, Federation of German industries (BDI), The Association of Consulting Engineering Firms (VUBI), Indo-German Chamber of Commerce (Dosseldeorf) Dosseldeorf Chamber of Commerce and Indian investment Centre. This delegation also visited Ruhort Work of M/s Thyssen A. G., which is the largest steel making Corporation in Europe. The Federation of German industries (B.D.I.) recognized its delegation as a National Delegation from India. It was also honoured by Hamburg Chamber of Commerce with National Tri-colour flying on the boat in which it was taken around the Hamburg Harbor. This Delegation was honoured by Mayor of Stuttgart and Chairman of Hannover Fair and was also received by the Indian Residents of West Germany under the Banner of ARIA (Association for Reintegration of Indians Abroad). This delegation successfully projected Odisha and its future potential as an industrially developed State, and Industrialists and businessmen in these countries developed interest in

Odisha. As a result our chamber had the opportunity to receive Counsel General of West Germany and U.S.A. many times. Delegation from ARIA from West Germany and several other delegations also visited Rourkela.

Another business delegation of Chamber consisting of 17 members visited the city of Hongkong, Singapore and other cities of Thailand in 1985, and met many industrialists there. Our Chamber is affiliated with Federation of Indian Chamber of Commerce & Industry (FICCI) and Shri Harishankar Singhania, the then President of FICCI has also addressed us.

Development of Information & Technology Sector and Industrialization:

The Department of Electronics & Information Technology is the nodal department for Government of Odisha in the matters of IT, ITES and Communication. The Department plays a vital role in formulating and implementing policy matters in Information Technology, ITES and Electronics; promotion of Odisha as an ultimate ICT destination for investment and Facilitating ICT industries; assisting other department for effective e-Governance and capacity building; Promotion of ICT based education in the State. Odisha Computer Application Centre (OCAC), the Designated Technical Directorate of Information Technology Department, Government of Odisha, has contributed significantly to the steady growth of IT in the State.

Under the Department of Electronics and Information Technology, National Informatics Centre (NIC) was established in 1976, and has since emerged as a "prime builder" of e-Government / e-Governance applications up to the grassroots level as well as a promoter of digital opportunities for sustainable development. NIC, through its ICT Network, "NICNET", has institutional linkages with all the Ministries /Departments of the Central Government, 35 State Governments/ Union Territories, and about 625 District administrations of India. The NIC of the District is managed by a Scientist in the designation of District Informatics Centre. Like the NIC, the State has developed State Wide Area Network to provide connectivity to the District Headquarter with the State Government offices in the District through horizontal and vertical network connectivity. The OSWAN centre of the District is functioning in the Collectorate building with a State of art conference hall and dedicated staff. The OSWAN has been implemented on Build-Own-Operate and Transfer (BOOT) basis spread over a period of five (5) years to provide Data connectivity, Voice and Video services to various offices starting from State Head Quarters to all District Head Quarters and Block Head Quarters. e-Governance has taken central focus in the age of spread of IT and its application.

Software Technology Park of India (STPI): Software Technology Parks of India (STPI)- a non-profit society setup in 1991, by the Ministry of

Communication & Information Technology (MCIT), Govt. of India to promote and facilitate Software Exports from India. STPI offers all statutory services and High Speed Data Connectivity to its member companies as 100per cent Export oriented Units. STPI, as of now has 36 centres spread across the country and helping about 7202 software exporting companies. Similar services are being provided to the Electronic Hardware exporting companies. STPI is playing a leading role in providing high speed Data Communication services through the State-of-the-art infrastructure facilities as per the need of the customer requirement. At Rourkela STPI has established its own international gateway for ensuring 100 per cent uninterrupted data connectivity. It has an earth station which is integrated with point-to-point microwave connectivity, copper and fibre facility to extend the services to the users. Ready to use Internet and IPLC services are provided uninterruptedly round the year; this is one of the most ambitious services of its kind.

Industrialization, Displacement and Rehabilitation:

Among the Districts of the State, Sundargarh has seen the dawn of modern heavy metallic industry with establishment of Rourkela Steel Plant. Since then the issues concerning acquisition of land for establishment of different industries and mining activities took place for which displacement of the original land owners from their villages was necessitated. Secondly, establishment of the Mandira Dam and all other irrigation projects raised demand for land for which issues concerning displacement and rehabilitation arose. As per the inspection report of the Member, Board of Revenue, Odisha in 2004, the Rourkela Steel Plant caused displacement to 2901 families, who were resettled in different rehabilitation colonies. Government set up 15 Rehabilitation Colonies and 10 Resettlement Camps besides two colonies at Jhirpani and Jolda adjacent to the Steel plant. The number of displaced families settled in these camps and colonies is in Table- 38. Similarly, the Mandira Dam caused displacement to 1193 families, out of whom only 639 families preferred to stay in the rehabilitation colonies and the balance 554 families settled in the villages of their choices. Till that time Ac. 18,879.36 decimils of land in total was acquired by different industries in the District.¹⁰

¹⁰ Page-35, Inspection note of Shri Livinus Kindo, IAS, Member, Board of Revenue, Orissa, on Sundargarh Collectorate, dated 21.12.2004

Table 87: Land Acquisition in Sundargarh District

Industry	Land acquired			Land used			Land surrendered		
	Private	Govt	Total	Private	Govt	Total	Private	Govt	Total
RSP	14824.18	4898.51	19722.69	11794.67	3919.54	15714.21	3029.51	978.97	4008.48
OCL	1130.10	54.33	1184.43	1079.38	54.33	1133.71	50.72	-	50.72
L&T	423.16	200.30	623.46	349.90	200.30	550.20	73.26	-	73.26
Odisha Industries, Lathikata	33.44	133.43	166.87	33.44	133.43	166.87	-	-	-
MCL	766.04	548.33	1314.37	766.04	548.33	1314.37	-	-	-

Out of the total area of Ac. 19722.69 acquired for Rourkela Steel Plant (RSP) by 2011, only Ac. 15156.07 acres have been utilised, that constitutes 76 per cent of the land acquired and the surplus 14.96 per cent are left fallow. The acquired lands for industrial purposes are being leased out for non-industrial purposes. No land in Dahiposh and Tumkela villages has been utilised.

In 2007, a Special Leave Petition bearing no. 6933 of 2007 came up before the Supreme Court of India filed by the Mahanadi Coal Fields Limited in reaction to the order of the Odisha High Court made on the occasion of disposing the grievances of one Mathias Oram and others. The SLP brought out a traumatic aspect relating to acquisition of land by the industrial houses and human issues. The result of the SLP led to constitution of Claims Commission to look into the cases of payments of compensation to the affected people after 23 years of initiation of the land acquisition and exploration of coal in Basundhara area of the District. To cite the issue as Stated in the judgment dated 19 July 2010, the main points go as follows.

Box- 2: Special Leave Petition (C) NO.6933 OF 2007, Mahanadi Coal Fields Ltd. & Anr. (Petitioners) Versus, Mathias Oram & Ors. (Respondents)- Order¹¹

18. The Central Government issued the preliminary notification under section 4(1) of the Coal Bearing Areas (Acquisition and Development) Act, 1957 Act on February 11, 1987, giving notice of its intention to prospect for coal in Revenue Village Gopalpur, District Sundergarh, Odisha. The notification also covered the lands of the respondents. This was followed by another notification under section 7(1) of the Act on July 27, 1987 giving notice of the Government's intention to acquire the notified lands. Finally, the declaration of acquisition under section-9 of the Act was made by the notification issued on July 10, 1989 as the result of which the notified lands, along with all rights therein, vested absolutely in the Central Government. On March 20, 1993, the Central Government issued the notification under section-11 of the Act vesting the acquired land and all rights therein in the petitioner company, retrospectively, with effect from November 17, 1991. It is undeniable that the lands of the writ petitioners

¹¹ Judgment of the Hon'ble Supreme Court in SLP No. 6933 of 2007, New Delhi, July 19, 2010

(respondents before this court) were covered by the notifications under sections 7, 9 and 11 of the Act. Nevertheless, the writ petitioners, and others whose lands were similarly acquired, were never paid any compensation for their lands. After a futile running from pillar to post for about fourteen years, the writ petitioners knocked the doors of the High court, claiming compensation for their lands. Before the High Court, the relevant facts as noted above were all admitted. But it seems that the claim of the writ petitioners was over shadowed by the dispute between the coal company and the Central Government. The coal company took the stand that the lands of the writ petitioners, and some other lands, were not required by it and it proposed de-notification of those lands (This, after more than twenty years of acquisition!). On behalf of the Central Government, however, it was Stated that the coal company's proposal for de-notification was rejected by order dated September 12, 2006. The High Court then referred to section 13(5) of the Act and pointed out that any person whose land is acquired under section 9 of the Act must be paid compensation after taking into consideration the factors enumerated under that sub-section of section 13. The High Court expressed its concern that the writ petitioners were not paid compensation for their lands taken away from them more than two decades ago and disposed of the writ petition with the direction to both the coal company and the Central Government, as noted above.

19. The Central Government, apparently, did not take much notice of the High Court order but the coal company brought the matter to this court. It seeks to challenge the High Court order on the plea that it has no liability to pay compensation for the lands acquired by the Central Government since they are of no use for the purpose of mining operations nor are they likely to be needed in the near future as per the mining plan approved by the Central Government. Apart from this, the petitioner has taken some rather strange pleas. It is pleaded that the acquisition proceedings were still incomplete because no steps were taken for determining the market value of the lands and no compensation was paid to the land holders. If this is not adding insult to injury we do not know what else is! It is also alleged the lands are not in possession of the coal company and they are still in the possession of the land holders, including the writ petitioners. This last allegation is strongly denied by the writ petitioners.

20. The SLP remains pending in this Court for the last three years. Now, twenty three years have passed and the writ petitioners remain unpaid of the compensation for their lands. In the meanwhile some of them (respondents 5 and 24) are reported to be dead. It was in these circumstances that on January 9, 2010 we requested Mr. Gopal Subramaniam, the Solicitor General for India, to assist the court on behalf of the Central Government. He immediately realised the gravity of the matter and the deep distress caused to the court by this case. He asked for some time to try to resolve the matter between the Central Government and the coal company at his own level and to ensure that the land holders whose lands were acquired are paid lawful compensation without any further delay. On the last date (May 13, 2010) he informed this Court that he had been able to make the Central Government and the coal company agree to a scheme through which the whole matter may be resolved and compensation may be paid not only to

the writ petitioners but to all the land holders whose lands were acquired. The scheme proposed by Mr. Subramaniam and agreed upon by the Central Government and the Coal Company is as follows:

"1. The land in Village Gopalpur, District Sundargarh, Odisha stands acquired by the Central Government and ownership is vested with MCL, which will determine and pay compensation to the erstwhile landowners.

"2. In respect of vast portions of the acquired land (excluding the area where mining activities are being undertaken), actual physical possession was never taken. The State of Odisha and its officers are directed to assist MCL in taking actual physical possession of the acquired land.

"3. Since the matter pertains to an acquisition of 1987 i.e. more than two decades ago, the extent of actual physical possession needs to be re-ascertained, it is necessary that the genuine landowners, amount of compensation payable, status of possession, use to which the land has been put in the last two decades, is discovered. The entire land needs to be surveyed again.

"4. In accordance with the advice of the learned Solicitor General, a Claims Commission needs to be set up with representatives of the Central Government as well as MCL. It is submitted that the Claims Commission will consist of 3 Members:-

(a) A former Judge of the High Court of Odisha (Chairman);

(b) An officer who has held a post/office equivalent to the rank of Secretary to the Government of India;

(c) An officer to be nominated by Chairman, Coal India Ltd. The Claims Commission will carry out the exercise referred to above and submit a report on the compensation payable and the persons to whom it should be paid, within a period six months. "5. The above-said report will be submitted to the Central Government, and upon formal approval by the Central Government, MCL will make payment within a further period of two months.

"6. Some portions of the land have been determined to be unsuitable for the Petitioner having regard to physical features (mining being impossible, area being heavily populated, etc.). The Claims Commission will examine whether possession of such portions has been taken over by the Petitioner. It would be open to the Claims Commission to recommend de-notification/release of the said land from acquisition. "7. In view of the special facts obtaining above, the Central Government may be permitted to de-notify the said land from the acquisition as a special case, since the land is not required and possession also was never taken.

"8. Even in the case of the de-notified land, suitable compensation, in appropriate cases, may have to be paid to the landowners. The Claims Commission may also give a report on this aspect of the matter.

"9. The learned Solicitor General has opined that such matters of uncertain

acquisition or pending compensation claims lead to unnecessary social tensions and the Petitioner must act in spirit of good governance. Upon examination of all the surrounding villages, in the light of the opinion of the learned Solicitor General, for the sake of uniformity as well as fairness, the above exercise would be carried out for the following villages as well:

i. Sardega ii. Jhupurunga iii. Ratansara iv. Tikilipara v. Siarmal vi. Tumulia vii. Karlikachhar viii. Kulda ix. Bankibahal x. Balinga xi. Garjanbahal xii. Bangurkela xiii. Kiripsira xiv. Lalma R.F.

"It must be noted that in the case of Sardega and Tikilipara Villages, part-payment has already been made. Further, in the case of Bankibahal and Balinga Villages, full payment has already been made but possession has not been fully taken. "10. The Petitioner and the Central Government shall assist in the establishment of the Commission including the provision of suitable infrastructure. The honorarium payable to the Commission may be determined by this Hon'ble Court. "11. This Order is being passed with the agreement of all parties and in the peculiar facts and circumstances of this case. The said order shall not operate as a precedent."

21. The scheme proposed by Mr. Subramaniam was shown to Mr. Janaranjan Das, counsel, appearing for the writ petitioners-respondents and he also gave his express consent to it. We, accordingly, approve the scheme but with certain clarifications and modifications as Stated below.

As a result of the intervention of the Apex Court, the payment of compensation to the inhabitants of the seven villages out of the 14 villages is going on at present, with an office of Additional District Magistrate, a civil servant of Additional Secretary Rank, being set up at Balinga, just amid the Kulda Open Cast Project, in dust and dirt. A Revenue Officer, who is a State Civil Service Officer, is placed in the office to aid the Additional District Magistrate, R & R.

The details of displacement and rehabilitation of Rourkela Steel Plant has already been narrated in Chapter-III, People and Demography. Besides, displacement, rehabilitation, there are several other inherent issues linked to industrialisation. Growing number of industries add more population of different categories; create more demand for services like education, health, housing, sanitation etc. And each has impact on the environment. Environmental pollution, degradation of land water, ambient air quality and soil are the major issues. The industries are generally taking up some activities under CSR to address some of the issues like education, plantation of trees, drinking water and irrigation to some extent.

Hotels and Hospitality Industry

Hotels and hospitality has got the status of industry. Since the District has many places of scenic beauty, historical importance, reputed educational institutions and industries, inflow of visitors and tourists is very high. Besides, the city of Rourkela is a prime business centre in the western part of the State. As per the statistics maintained by the Tourism Department, Government of Odisha, there are 14 High Spending Group

Hotels with 607 rooms and 1154 beds in the District. The cost of accommodation in such hotels is above Rs.1000 per day. There are 17 Middle Spending Hotels, with 516 rooms and 1004 beds. The cost of accommodation per day varies between Rs.501 to 999/- per day. The numbers of Low Spending Group of hotels is 49 with 911 rooms and 1575 beds. Thus there are 80 hotels with 2034 beds and 3733 beds as in 2014.

The Hotel Industry is developed in Rourkela City, owing to the industries and educational institutions present in the city. The Odisha Tourism Development Corporation (OTDC) operates one Pantha Nivas at Rourkela. At present it has 32 rooms with 68 beds.

Table 88: Private Hotels in Sundargarh District

Sl. No.	Name of the City	Hotels in HSG and MSG Group			Hotels in LSG Group			Total		
		Hotel	Room	Bed	Hotel	Room	Bed	Hotel	Room	Bed
1	Rourkela	50	1416	2590	13	371	717	63	1787	3307
2	Sundargarh	9	125	191	0	5	20	9	130	211
3	Rajgangpur	1	12	18	5	83	163	6	95	181
4	Bonai	0	0	0	2	22	12	2	22	34
	TOTAL	60	1553	2799	20	481	912	80	2034	3733

There are four registered tour operators in Sundargarh District at present. Those are M/s Trishakti Tour and Travels, Hospital Road, Sundargah, M/s. Subhadra Travels, Sector-2 Bus Stand, Rourkela, M/s. Aryan Travels & Service, Gajapati Market, Ambagaon, Rourkela and M/S. Maa Travels, Civil Township Rourkela.

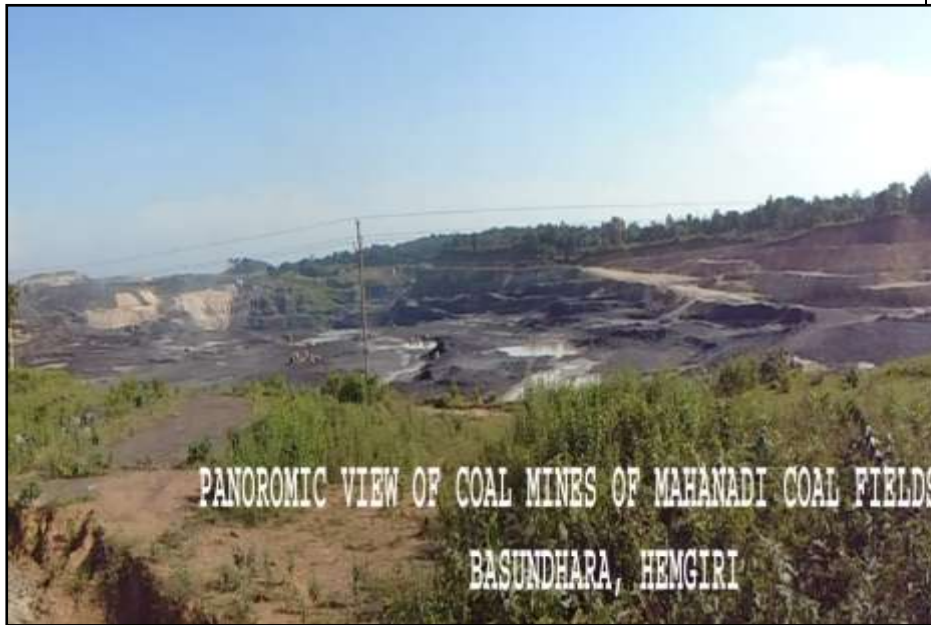
The Department of Tourism, Government of Odisha finds that the average occupancy rate of the rooms in the hotel in 2007 at Rourkela was 55 per cent only. In the subsequent years up to 2011, the percentages were respectively 63 per cent, 68 per cent, 68 per cent and 70 per cent. Four hotels in Rourkela find place in the list of Star Hotels in Odisha during the year 2011, i.e. Hotel May Fair Garden (3 star), Hotel Radhika Regency (3 star), Hotel Deepti (3 star) and Hotel Tridev International (2 star).



JSPL Iron Ore Mines, Tensa



Lime Stone transportation on conveyor belt to OCL Industries PVT. Ltd. Rajgangpur



PANOROMIC VIEW OF COAL MINES OF MAHANADI COAL FIELDS
BASUNDHARA, HENGIRI

Plate- 6 JSPL Iron Ore Mines, Tensa (Top- left), Lime Stone transportation on Conveyor Belt, OCL Industries Ltd. Rajgangpur (Top- right), Panoromic view of Basundhara Coal Mines

APPENDIX- XXVI

List of Industrial Units in Sundargarh, Rourkela & nearby Area

Large-Scale Units

1. M/s. Rourkela Steel Plant Ltd.,Rourkela
2. M/s. OCL India Ltd.,Rajgangpur,Sundargarh
3. M/s L&T Ltd.,Kansbahal
4. M/s. Hari Machines Ltd.,Rajgangpur

5. M/s.Scan Steel Ltd.,Ramabahal
6. M/s.Shiva Cement Ltd., Teleghana,Kutra Block
7. M/s.Kausalya Ferro Metallic Pvt. Ltd.,Podbahal
8. M/s.OCL Iron & Steel Ltd.,At-Jampalli,Rajgangpur,
9. M/s.Prabhu Sponge Pvt. Ltd.,At-Jhagarpur,Rajgangpur
10. M/s.MCL,Basundhara,Tikilipara
11. M/s.Hindustan Aqua Ltd.,Industrial EState,Kalunga
12. M/s.Ganesh Metalliks Ltd.,Kuarmunda
13. M/s.Times Steels &Power Ltd.,I.E.,Kalunga
14. M/s. Maa Vaishnobi Sponge Ltd.,Kalunga
15. M/s. Rungta Mines Ltd.,Koira
16. M/s. IFGL Refractories Ltd.,I.E.,Kalunga
17. M/s.Adhunik Metalliks Ltd.,Kuarmunda
18. M/s.Bhaskar Steel & Ferro Alloys Ltd.,Bonai
19. M/s.Gulf Oil Corporation Ltd.,Soneparbat,Rourkela
20. M/s.Saswat International Ltd.,Lathikata
21. M/s.Pawanjay Sponge Iron Ltd.,Kuarmunda
22. M/s.Jay Balaji Jyoti Steels Ltd.,Tainsar
23. M/s.ICI India Ltd.,I.E.,Kalunga
24. M/s.Jindal Steels and Power Ltd.,Koira

Medium Scale Units

1. M/s.BR Sponge &Power Ltd., Rajamunda
2. M/s.Vikram(P)Ltd., Rajamunda
3. M/s.Rexon Strips (P)Ltd.,Kumakela
4. M/s.Sri Mahavir Ferro Alloys Pvt. Ltd.,I.E., Kalunga
5. M/s. Reliable Sponge(P) Ltd., Bonaigarh
6. M/s. Seeta Integrated Steel &Energy Ltd.,I.E., Kalunga
7. M/s. Pooja Sponge(P) Ltd.,I.E., Kalunga
8. M/s. Jay Iron 7Steel Ltd.,At/PO-Balanda,Kalunga
9. M/s. Kalinga Sponge(P)Ltd.,I.E.,Kalunga
10. M/s. Asiatic Gases Ltd., Brahmanitarang,Vedvyas,Rourkela
11. M/s.aa Tarini &CO., Barsuan
12. M/s.Ashoka Multiyarn Mills Ltd., At/PO-Kirei, Sundargarh
13. M/s.TR Chemicals Pvt. Ltd.,At-Barpali,Po-Rajgangpur
14. M/s.Agrasen Sponge Pvt. Ltd.,At/Po-Mandiakudar
15. M/s. Suraj Products Ltd., At-Barpali,PO-Rajgangpur

APPENDIX- XXVII:
Rourkela, where Steel is Tempered

The art of smelting iron was known in ancient India. Reference to iron has been made in the Rig Veda (2000 B.C.) and it is said that India is the first producer of carbon steel. The most celebrated mass of ancient Indian iron is the Iron Pillar standing near Kutab Minar at Delhi which shows no sign of rust and provides complete testimony of the skill and art of the Indian iron-making 1,500 years ago. The iron pillar at Dhar, the ancient capital of Malwa, 33 miles west of Indore has a length of about 50 feet and its lower portion is square in section, 16.5" * 16.5" and the upper is octagonal and 10" to 11" across. The weight of this pillar is about 7 tonnes more than that of the Iron Pillar at Delhi. This pillar was probably made and erected about the year 321 A.D. Besides, there are numerous beams and smaller pieces at the Sun Temple at Konark in Odisha built in the earlier part of 13th century A.D. The beams were constructed by welding short blooms together. The blacksmiths of Odisha produced various types of weapons and also smooth barrelled guns known as Odia Nali or Odia Barrel Weapons and articles made of Indian Steel and wrought iron were available all over the century even after it came under British occupation.

In early days the smelting of iron took place in small charcoal fired furnaces, which consisted merely of pits on the ground. Air was blown by the only process in vogue at that time i.e., the foot-bellows. It was not possible to separate the iron from the slag by this method, and wrought iron was made by further working the furnace product. Each furnace was worked with two goat-skin bellows so that a continuous blast of air could be produced. The charcoal fuel was made from various hard woods such as Teak, Babul and Sal. Some of the smelters of this type can still be seen near Manoharpur, hardly 50 kilometres from Rourkela. Piles of metallic modules found at different places in north Odisha indicate the existence of a smelter not long ago.

The first smelter for smelting iron ore in India was started in 1830 by J. M. Heath, a civil servant of the East India Company at Porto Novo, Madras. In 1833, furnaces, forges and rolling mills were established at Porto Novo. After the liquidation of this company in 1874, the Napier Foundry Company was set up for manufacture of iron in 1875 which lasted only up to 1877. In West Bengal the indigenous industry was highly developed in the Birbhum District. The furnaces were comparatively large. In 1852, there were about 70 furnaces in different parts of west Bengal. The annual out-put of each furnace was about 34 tonnes of iron. About the year 1874, the Bengal Iron Company was formed and in 1878 the works consisted of two blast furnaces

yielding 40 tonnes of pig iron per day. Attempts for smelting the local iron ores were also made in Kumaon region of Uttar Pradesh.

The foundation of the iron and steel industry on a stable footing was only laid in 1907 when the Tata Iron & Steel Company was formed and it started building the factory at Sakchi, a village in the District of Singhbhum. Production of pig iron by TISCO started in 1911 and of steel in 1913. The Government of Mysore started the Mysore State Iron & Steel Works in 1923 at Benkipur (now called Bhadravati) and the first blast furnace of the company was blown in January 1923. In March 1930 a steel plant was set up and in April 1930 steel rolling mills were started. The Indian Iron & Steel Company was formed in March 1918. These plants were expanded under the first Five Year Plan (April 1956 to March 1961) three new integrated steel plants at Rourkela (Odisha), Bhilai (Madhya Pradesh) and Durgapur (West Bengal) under the Hindustan Steel Limited started production.

Iron occurs in nature in the form of iron oxide mixed with other oxides such as aluminium oxide and silicon oxide. The important iron bearing minerals are magnetite, hematite and limonite. In pure form of magnetite the iron content is 72.4 per cent and 27.6 per cent is oxygen. Generally, the iron content of magnetite ores varies from 65 per cent to 68 per cent due to presence of other oxides as impurities. In pure hematite the iron content can be 70 per cent maximum and the rest is oxygen. But, in commercial hematite ore, the iron varies from 60 per cent to 65 per cent due to the presence of impurities. This type of ore is present in large deposits in Odisha and practically all the iron ore deposits of India are of this type. Limonite is nothing but hematite with varied amount of moisture content, present as water of crystallization.

As mentioned above, iron is present in iron ores as iron oxides. To get iron from iron ore we need to get rid of oxygen. This can be done by any reducing agent like carbon and hydrogen which can combine with oxygen to form a gas. But, for commercial purposes carbon is found to be more suitable as it is available abundantly in nature in the form of coal. Coal can be burnt in absence of air to form coke which is a concentrated form of carbon. The other oxides (aluminium oxide and silicon oxide) which are present in iron ore are made to combine with lime (present in limestone) to form liquid slag which separates out from iron at higher temperature due to its lightness. Therefore, iron is reduced at a very high temperature in a blast furnace. The heat in the blast furnace is supplied by burning of carbon (available from coke) in presence of air which is blown into the furnace. Thus to manufacture one ton of pig iron following raw materials are needed:

Iron ore (Haematite)	1500-1600 Kg/ ton Pig
Limestone	300 Kg/ ton Pig Iron
Dolomite	100 Kg/ ton Pig Iron
Coke (for supply of reduction carbon and heating)	900 Kg/ ton Pig Iron
Air (to supply oxygen for coke burning)	3500-4000 Kg/ ton Pig

The Iron produced in a blast furnace has the following chemical composition:

Carbon	4.0 % to 4.1 %
Silicon	1.0 % to 1.3 %
Manganese	1.8 % to 2.0 %
Sulphur	0.04 % to 0.06 %
Phosphorous	0.2 % to 0.24 %

When this iron is cast into small moulds it is called pig iron.

This is a mixture of almost pure iron with slag and was produced in olden times when separation of slag and metal was not possible due to inability to attain high temperature. It was produced from iron ores in smaller hearths using charcoal as reducing and heat supplying source. The product of this type of smelting was spongy mass of pure iron intermixed with considerable amount of slag. Usable articles were produced by hammering the hot spongy mass to expel most of the slag. However, with the development of modern technique of producing higher temperature, wrought iron production from iron ore is replaced by production of pig iron by a blast furnace which is subsequently converted to steel.

Most of the iron produced in blast furnaces is converted to steel either by Open Hearth or by L. D. process. Bessemer process which was used for steel making in the past has now become more or less obsolete. In steel making the carbon, silicon and manganese present in molten iron is removed to the desired levels by oxygen. In Open Hearth process oxygen is supplied by air and L. D. process pure oxygen is blown through the molten metal. In both the processes carbon is removed by the formation of carbon dioxide, which is a gas and thus escapes out. The silicon and manganese are removed as their oxides which being lighter floats on the metal bath. After the removal of these elements, the molten metal consists of almost pure iron. This is very soft and its strength is less. But, the actual steel has to contain some amount of carbon, manganese, silicon, chromium etc. to have proper strength. This is done by calculated addition of carbon (when carbon falls below the desired level during blowing), ferro-silicon, ferro-manganese, ferro-chromium etc. Another use of ferro-manganese and ferro-silicon is to remove dissolved oxygen from the molten metal which otherwise have harmful effects. The additions are done mostly during the time when the molten

metal is poured into ladles. Thus, typical low carbon steel which had undergone all the above processes as will contain:

Carbon	0.15 % to 0.25 %
Silicon	1.0 % to 1.3 %
Manganese	0.02 % to 0.35 %
Sulphur	0.30 % to 0.80 %
Phosphorous	0.03 % to 0.05 %

The unique feature of the Rourkela Steel Plant is the adoption of L. D. process of steel making for the first time in India.

Although the L. D. process is the newest method of making steel, it is basically a delayed fulfilment of the dream of Henry Bessemer, who invented the familiar Bessemer Converter about a century ago. In devising the Converter, named after him, Bessemer blew air through molten iron and realised only half of his plan of making steel in large quantities at low cost and in a short time. He could not go the whole way and lower the nitrogen content of steel and improve its quality by replacing the air blast by oxygen. Bessemer failed because it was exceedingly difficult in his time to get a regular supply of oxygen in bulk points. As a consequence, the steel industry developed the basic open hearth method of making high quality steel.

Today, with the improved techniques of producing pure oxygen in large quantities Bessemer's original dream of an oxygen-blown steel making process has become a reality. As the Indian Steel industry is launched upon its greatest expansion programme in history, the development of the L. D. process could not have come at a more auspicious time.

The L.D. process is named after the two steel towns in Austria, Linz and Donaowitz where it was developed by the Austrian steel manufacturing company, the VOEST. In L. D. process 99.5 per cent pure oxygen is blown through the molten iron kept in the L. D. vessel by water-cooled lance.

The L. D. process is eminently suitable for the production of low-carbon steel which is used for cold and hot rolled sheets, strips and tinplates. The investment costs of an L. D Process Plant including the oxygen plant and the gas cleaning equipments are considerably lower and works out to 60 per cent to 70 per cent of those of an open hearth plant of the same capacity. The processing costs of L. D. steel are much lower too. Including capital costs, they are per ton about 30 to 50 per cent lower than those of the open hearth steel. The oxygen plant, in the process of making oxygen releases nitrogen which is used for manufacturing nitro- limestone fertilizer as a by-product. The operational methods of an L. D. plant are simple and the

maintenance of the converters is easy. The entire process of cooling the converter, removal of damaged brick linings, relining with fresh bricks and preheating the lining can be done in about three to four days. According to composition the steel can be broadly divided into two types (i) plain carbon steels, (ii) alloy steels. The plain carbon steels contain the usual five elements up to the following percentage:

Carbon	up to 1.82 %
Silicon	up to 0.5 %
Manganese	up to 0.8 %
Sulphur	up to 0.06 %
Phosphorous	up to 0.06 %

Alloy Steels contain beside the above elements other alloying elements like chromium, nickel, molybdenum and manganese are higher than the above mentioned level, and it is also taken as alloying elements. Steel containing alloying elements totalling up to five per cent, are called low alloy steel. When the alloying elements exceed 5per cent in total they are called high alloy steel. The typical example of a high alloy steel is 18/8 stainless steel used for household utensils. This contains 18 per cent chromium and eight per cent nickel in addition to its usual carbon, silicon and manganese content. Low alloy steels are used for making various types of tools and are therefore commonly known as tool steels.

A new era in the Indian Steel industry was heralded when construction work on India's first of the three public sector steel plants at Rourkela started in October 1956, in collaboration with the Federal Republic of Germany. This plant is being managed by the Hindustan Steel Limited, a Government of India undertaking. A capital of Rs. 330,533,426 has been invested in this undertaking.

Rourkela was chosen as the site for a steel plant owing to its naturally advantageous situation. Situated in the minerally rich State of Odisha, Rourkela has the advantage of being barely 80 kilometres away from rich iron-ore deposits. Manganese ore and limestone deposits are even closer. Water is obtained from the river Brahmani which is hardly two kilometres away from the plant. The requirements of raw materials are met mainly from its own captive mines. The completely mechanised iron-ore mines at Barsuan have a capacity to handle 800 tonnes of iron-ore per hour. A beneficiation plant has also been set up to improve the quality of the ore. Washed coal for Rourkela comes from Hindustan Steel's modern washeries situated at Dugda, Bhojudih, Patherrdih and also from Kargal Washery of the National Coal Development Corporation. Limestone is obtained from the

plants' quarries at Purunapani and Satna. Manganese is obtained from Birmitrapur and Baradwar.

A detailed project report for this plant prepared by Messrs Indian Gemeinschaft Krupp-Demag GmbH was finalised in November 1955 and was accepted by the Government of India in February, 1956. The work started soon after that and its various units went into production on different dates between 1958 and 1960. The first battery of Coke Ovens was commissioned on 1 December 1958; the first Blast Furnace on 3 February 1959; the first Open Hearth on 28 April 1959; the first L. D. Converter on 27 December 1959; the Blooming Mill Started production on 15 December 1959 and the Plate Mill on 12 September 1960.

The plant was originally designed to produce one million tonnes of steel ingots per year. To meet the growing demand of flat steel in the country the plant has been expanded to 1.8 million tonne ingot steel capacity per year. At the one million tonne stage the technical knowhow and most of the equipments had to be imported from W. Germany. A remarkable feature of the present expansion is that considerable amount of material of indigenous manufacture has been utilised in various units.

The plant consumes as much electricity as a fairly large city needs and the bulk of its power requirements is met from two sources, its own 100 M.W. thermal power station, and the Odisha State Electricity Board Grid consisting of the Hirakud system and the Talcher Thermal Power Station.

The plant produces a large variety of products meeting the demands of some of the most important industries like ship building, wagon building, automobile and barrel manufacturing, tube making, manufacturing of domestic appliances, canning, packing etc. Some of these industries have to depend entirely on Rourkela.

The main units of the plant are Coke Ovens and By-products plant, Blast Furnaces, Steel Making Shop, Rolling Mills, Sintering Plant and the latest introduction of Continuous Casting Technology (CCT).

The Coke Ovens at Rourkela comprises three batteries of 70 ovens each, and one battery of 80 ovens which has been added under the expansion scheme. In the Coke Ovens blended coal is heated to about 1,250* C out of contact with air for about 18 hours. The volatile matter is expelled and the coal is converted to a hard porous mass called coke. From the gas obtained during this process crude tar, crude benzol, and ammonia are recovered in the By-products plant. The remaining gas is supplied to the Fertilizer plant where hydrogen is removed by fractionation from making calcium ammonium nitrate.

The By-products plant, one of the largest in India, treats 1,05,000 cubic meters of gas per hour. Here crude tar is refined to produce extra hard pitch, heavy oil, creosote oil, wash oil, tar fuel, road tar, dolomite tar, neutral oil, hot pressed naphthalene, phenol, cresol and solvent naphtha. This is the only plant in India where extra hard pitch is produced. Valuable products like phenol, cresol and xyleneol are produced in the Carbolic Acid of the plant.

Mechanised mining produces large quantities of iron ore fines which previously used to go waste. To gainfully utilise these fines with other plant wastes like mill scale, coke breeze and limestone fine, and to economise on the Blast Furnace operations a Sintering Plant with a capacity to produce 4,000 tonnes of self-fluxing sinter per day has been set up. Use of sinter in Blast Furnace reduces coke rate and flux rate ensuring higher iron production with better and uniform quality of hot metal.

The plant has four Blast Furnaces. Three having a capacity of producing 1,000 tonnes of hot metal each existed in the 1 million tonne stage. Under the expansion scheme one blast furnace having a capacity of 1,500 tonnes of molten iron per day has been added. Iron ore in lump form, sinter, coke, limestone and dolomite are charged from the top in measured quantities. Preheated air is blown from the bottom through tuyeres. Coke provides the heat and energy for reaction and reduces the iron oxide in the ore to molten iron. Limestone and dolomite help in the removal of impurities by combining with them to form slag which is removed through the slag holes in the furnaces.

The molten iron is tapped every four hours into ladles and taken to the mixers at Steel Melting Shop. A part of iron is also cast into is also cast into pigs at the two pig casting machines.

The oxygen Generating Plant has been erected to supply 99.5 per cent pure oxygen to the L. D. converters. It is the largest oxygen plant in India and has a total capacity to produce 500 tonnes of oxygen per day. The pure nitrogen, obtained as a by-product from the oxygen plant is being utilised in the Fertiliser plant.

At this plant, bulk of steel is made by L. D. process. The first L.D. Plant went into production in 1959. From then onwards, the development of the L. D process has been a story of steady progress. Two more L. D. Converters of 60 tonnes capacity each have been added recently to the existing three of 50 tonnes capacity each. There are four Open Hearth furnaces of 80 tonnes capacity each. The capacity of production of ingot steel from L. D. Converters constitutes 86 per cent of the total steelmaking capacity of the plant.

The molten steel produced is tapped into ladles and then teemed into moulds and transferred to the stripper bay where ingots are stripped from these moulds and sent to soaking pits for reheating before rolling.

A serious accident took place in the Steel Plant when the roof of the Steel-Making shop collapsed in July 1971. A brief account of the accident is given below.

The gas coming out from the L. D. converters during the blowing is directed through the uptakes and the horizontal connecting duct to the associated gas conditioning tower. The object of this gas conditioning tower is primarily to cool the gas from a temperature of about 1200°C to about 250°C which is achieved spraying atomized water through several nozzles supplied with high pressure water and secondarily to arrest the coarser particles of dust and collect it at the bottom through a controlled gate valve. The gas further is directed through two horizontal type dry electrode precipitator units with connected power packs for cleaning a total gas volume of about 2,38,400 cubic meters at N.T.P per hour. An induced draft fan assists to draw out the entire gas creating suction and letting out through chimney at the end. The precipitators accommodate horizontal rows of discharge electrodes and collecting electrodes which form the main components of the entire system of dust extraction. The dust that is collected at the bottom is conveyed through individual chain conveyors to main system leading to a central storage whereby periodically it is cleared away. As the dust is rich in iron content, efforts are being made to utilise it usefully in iron and steel making. Each converter has its own gas conditioning tower but the induced draft fan and the precipitators remain common to all. The equipment is highly sophisticated with electronic controlling device and high voltage power supply. According to the present blowing practice in L. D. converters, the dust collection amounts to two per cent of L. D. production as against 1.2 per cent envisaged by supplier.

However, the dust escaping from the L. D. Converters contains fine particles of iron-oxide which unless arrested, deposit themselves on the roof of the Steel-making shop. This deposit is fairly heavy and as per the Technical Enquiry Committee which enquired into the roof collapse in July, 1971 was the primary cause for the disastrous roof collapse in that year. In fact, following the roof collapse, the column and roof of the steel melting shop have been strengthened during the rebuilding and also following the rebuilding. Apart from the overbearing weight of such a deposit, the atmospheric pollution caused by such dust is also a potential health hazard. In fact, in the foreign countries the atmospheric pollution that would be caused by the L. D. dust forms the major consideration for installation of the Dust Catcher Plants. The plant has been working very satisfactorily since February, 1972.

The Rolling Mills at Rourkela have two main sections viz., Hot Rolling Mills and Cold Rolling Mills. Hot Rolling Mills comprise of a Blooming and Slabbing Mill, hot Strip Mill, Plate Mill and Electrical Sheet Mill.

The blooming and Slabbing Mill may be called the mother product mill for all other units. It is the main unit through which all the steel ingots pass before being rolled into finished products. The blooming and slabbing mill is designed to produce slabs and blooms. Since the Rourkela Steel Plant produces flat products, this mill rolls slabs mainly. Though the mill had an inherent capacity to roll 1.8 million tonnes of steel ingots annually, to cope with increased production four batteries of Soaking Pits, one Ingot Bogie, a Hot Scarfing Machine and a Water Wheel have been provided under expansion scheme.

About 25 per cent of the slabs produced at the Slabbing Mill are rolled into plates ranging in thickness from 5 mm to 63 mm. The plates are used for making locomotives, wagons, bridge-girders, ships, boilers, trucks, cranes, penstock, railway coaches and many heavy equipments including electrical equipment.

The modern semi-continuous wide Hot Strip Mill, the first of its kind in India, converts slabs into strips ranging from 1.6 mm to 10 mm in thickness. Hot rolled strips are further processed in Cold Rolling mills, Pipe Plant, Electrical Sheet Mill at mill's own dividing lines. Strips are also sold as such. The plates and sheets produced at the mill's own Dividing lines are used for making wagons, coaches, ships, boilers, bridges, telephone posts etc. Chequered plates are used for flooring. Hot rolled strips are mainly used for making tubes and liquid -petroleum-gas cylinders.

Before cold reduction in this Mill, coils from Hot Strip Mill have to be pickled where scale formed during hot rolling is removed. This is done in two pickling lines, the new one having a capacity of 318,000 tonnes per year. Hot rolled pickled coils, 2 mm to 4 mm in thickness are cold reduced to 0.15 mm to 1.6 mm in thickness in three cold rolling units:

The newly installed 1420 mm 4-High 5-Stand Tandem Mill, The earlier existing 1700 mm 4-High Reversing Mill and 1200 mm 4- High reversing Mill.

The 1420 mm 4-High 5-Stand Tandem Mill is one of the most sophisticated units of the Rourkela Steel Plant. It has a delivery speed of 1,800 meters per minute. It rolls material for auto body sheets, galvanised sheets and tin plates. To ensure quality, provision of an X-Ray gauge to measure the thickness of the strip and data logging equipment to record the thickness along the entire length of the strip has been made. Capacity of this mill is 600,000 tonnes per year.

After cold reduction the steel becomes hard and needs relieving of stress before further processing. To restore the requisite workability it has to be annealed. Annealing is done either in stack annealing furnaces or in a continuous annealing line with built-in degreasing facilities. Both types of annealing furnaces have been installed at this plant. The average output of the continuous annealing line is 11 tonnes per hour. The nominal speed of the line is 120meter per minute. To avoid oxidation of the strip, inert atmosphere of 4 per cent to 6 per cent hydrogen and 94 per cent to 96 per cent nitrogen is maintained inside the furnace.

Cold Rolled strips must be tempered after annealing. This is done in Skin Pass Mills where necessary physical properties, surface finish and flatness are obtained. Cars, railway passenger coaches, panel boards of electrical and mechanical equipments, refrigerators, air conditioners, steel furniture and office equipment, oil drums and many more thing are made out of cold rolled sheets.

Production of galvanized sheets in continuous hot dip galvanizing lines by Armco-Sendzimir process has been introduced in the country for the first time at Rourkela Steel Plant. In this process, cleaning, annealing and coating of the strips are done in a continuous process in the same line. There are two lines of 80,000 tonnes per year capacity each. The cold rolled strip is uncoiled, trimmed and passed through open flame oxidizing furnace which also serves as a flame degreaser. The strip is annealed under a reducing atmosphere. The strip is cooled in the next zone of the reducing furnace to a temperature slightly higher than the galvanizing temperature. It is then passed through the molten zinc bath. As the molten zinc solidifies, the spangles come out on the galvanized strip surface. The hot galvanised strip is cooled by passing through a long cooling zone. It finally passes through finishing section for cutting to the required sizes. The galvanised sheets are also given a passivation treatment for increasing the resistance against corrosion. These sheets are supplied both in plain and corrugated condition. Corrugation is done in two tandem corrugating lines.

Galvanised sheets are widely used for roofing and panelling purposes. They are also used in refrigeration and air conditioning. Agriculture sector is a major user of galvanised sheets. These can also be used in the automobile industry.

The Tinning Plant has a capacity to produce 2,00,000 tonnes of tin plates annually-1,50,000 tonnes per year from the new electrolytic tinning line and 50,000 tonnes per year from the hot dip process.

At the Electrolytic Tinning Line, Acid Ferrostan process is employed. Long bars of tin constitute the anode and the cold rolled strip acts as

cathode. Solution of stannous sulphate in phenol sulphonic acid is used as the electrolyte.

Electrolytic tin plates produced at Rourkela have uniform coating which ensures perfect protection against corrosion. These are widely used in the manufacture of containers for packing of various products like processed and unprocessed food, cosmetics etc. They are also used in electronic and automobile industry.

The electrical steel sheets which must have low electrical losses, high magnetic permeability and high electrical resistance are used for making magnetic cores of generators and other electrical equipments.

Very low carbon steel with high silicon content and low sulphur is rolled in Hot Strip Mill to strips of 4 mm to 6 mm thickness. These are further pack-rolled with unidirectional grain deformation in the Electrical Sheet Mill. Heating is done in intermediate stages in walking beam furnaces. The sheets, after finishing to the required size, are skin passed to obtain dead-flat surface. They are then heat treated in Walzwerk-Naviges patented annealing furnaces or Roller Hearth furnace for grain orientation and for lower watt-loss.

The Pipe Plant at Rourkela is designed for production of large diameter Electric Resistance Welded (ERW) pipes suitable for gas and oil transmission, water well casings, irrigation, drainage, structural and mechanical uses and also for pilling, prospecting, mine shafting etc.

The Plant is among the few in the world entitled to use the quality stamp of the American Petroleum Institute. Besides supplying API pipes to several pipe lines in India, viz, Naharkatuya- Noonmati- Barauni pipe line; Gauhati- Siliguri pipe line; Haldia- Barauni- Kanpur pipe line; and Gujarat pipe line, this plant has the distinction of exporting pipe to several countries against stiff international competition.

Hot rolled steel strips are fed into the forming mill where they are progressively formed into a tabular shape. Continuous resistance welding machine welds the butting edges. The pipes are finished and thoroughly tested to maintain high standards of quality.

To keep a steel plant of the size of Rourkela operating smoothly a number of service departments and auxiliary units perform vital functions. The important among them are discussed below.

The plant's requirements of casting of various sizes are met by the Foundries. Bulks of these are supplied by the Grey Iron Foundry which has an annual capacity to make 64,000 tonnes of grey iron casting. Main requirements are in the form of ingot moulds and base plates required by the Steel Melting Shop and slag pots required by the Blast Furnace as well as by

the Steel Melting Shop. The steel foundry and the non-ferreous foundry have an annual capacity of 5,000 tonnes and 300 tonnes respectively.

A well-equipped Metallurgical Research and Control Laboratory has been set-up in the plant. Its function is to check the quality at every stage through highly qualified staff of Metallurgists, Physicists, and Chemists.

The dearth of skilled personnel to man industrial units posed serious problems in India. A modern technical Institute has been established at Rourkela to train its own technicians and engineers. It also trains personnel for other steel plants.

The modern Technical Institute at Rourkela has training facilities for 18 different trades and maintains different shops for these trades. The institute has so far trained over 6,300 trainees under its regular training schemes. The institute has facilities to train nearly 2,000 trainees every year. Training facilities at Rourkela have been appreciated even by the more industrially advanced countries. Trainees from Australia, Germany, Burma, Ceylon, Philippines, Spain and South Vietnam have been trained at this institute.

Besides organizing technical training courses the institute also conducts Employees Training Schemes and Management Development Schemes.

The Fertiliser Plant is a Public sector undertaking and has been constructed at a cost of Rs. 268.7 millions. It is the only fertiliser plant in the country based on the utilisation of surplus gas from a steel plant.

The Plant is designed to gainfully utilise the by-products like hydrogen from Coke Oven gas, nitrogen from the Oxygen Plant and limestone fines from Purunapani. Designed to fix 1,15,000 tonnes of nitrogen per year in the form of calcium ammonium nitrate (CAN), the Plant has a gas fractionation section, a naphtha steam reforming unit, an ammonia synthesis unit, a nitric acid plant and a nitro lime plant. A naphtha reformation unit has been set up recently to augment the supply of hydrogen.

In terms of CAN the plant has rated capacity to produce 5,60,000 tonnes of calcium ammonium nitrate per year. This product is conventionally marketed with 20.5 per cent nitrogen content. With technological improvements at Rourkela the product has been enriched to 25 per cent nitrogen content which is marketed under the trade name 'SONA'.

A further quantity of fertiliser is produced in the By-Products Plant. Ammonia recovered from the Coke Oven gas is absorbed in Sulphuric acid to obtain ammonium sulphate. This Plant produces about 20,000 tonnes of ammonia sulphate annually.



Plate -7 Wagon shunting by Elephants-1950s (OCL) (Left), Rolling of Plates in the Plate Mills, Rourkela Steel Plant (Top- right), Sargipali Lead Mines (1983)

Chapter-VI

BANKING, TRADE AND COMMERCE

Evolution of Banking, Trade and Commerce in the District

The first institutional Banking organisation in the District came in to existence in 1955, with the opening of the District Central Co-Operative Bank Ltd. at Sundargarh. Prior to it, the old pattern of credit system maintained by the village money-lenders, who were mostly Gountias and traders obtained unchallenged rank generations. The money lenders were primarily wealthy. They were the only agency engaged in providing agricultural finance but usually in high rate of interest. Rate of interest differed from place to place. In addition to this, the loanees were forced to offer free labour to the money lenders at the time of agricultural operations as also were forced to advance pledge their produce at a much suppressed price as a means of 'crypto-credit' that allowed 'profit-at-will' to the money lender.

Traditional money lending has no trace in the present day scenario. Incidence of poverty in rural areas as per survey of the NSS (2005) was 70.5 per cent in northern Odisha. In 2011-12, the figure is 39.97, i.e. the incidence of poverty has been reduced by 30.5 per cent over seven years. The population below poverty line in the survey conducted in 1992 and in 1997 reveal that the percentage of BPL household in 1992 was 74.27 per cent whereas in the survey conducted in 1997 it was 65.22 per cent. There had been a decrease of 9.05 per cent in the poverty within a span of five years.

Table 89: Block-wise Status of Rural BPL Households in Sundargarh: 1992 and 1997:

Sl. No.	Name of the Block	Rural BPL Survey 1992			Rural BPL Survey 1997			Difference in BPL from 1992-1997
		Total Households (Number)	Total BPL Households (Number)	Total BPL Households (Percent)	Total Households (Number)	Total BPL Households (Number)	Total BPL Households (Percent)	
1	Balisankara	14,160	10,391	43.38	17,739	11,275	63.56	-9.82
2	Bargaon	11,468	9,440	82.32	14,368	11,452	79.70	-2.62
3	Bisra	10,024	7,545	75.27	13,224	5,843	44.18	-31.09
4	Bonai	11,076	8,549	77.18	15,359	9,229	60.09	-17.09
5	Gurundia	10,111	8,564	84.70	13,760	12,202	88.68	3.98
6	Hemgir	14,527	11,740	80.82	17,702	8,649	48.86	-31.96
7	Koira	14,207	7,699	54.19	17,364	11,106	63.96	9.77
8	Kuarmunda	13,546	11,552	85.28	20,483	14,689	71.71	-13.57
9	Kutra	11,936	10,115	84.74	15,732	8,893	56.53	-28.21
10	Lahunipara	15,457	12,959	83.84	14,781	14,653	99.13	15.29
11	Lathikata	22,408	13,120	58.55	25,231	14,077	55.79	-2.76

Sl. No.	Name of the Block	Rural BPL Survey 1992			Rural BPL Survey 1997			Difference in BPL from 1992-1997
		Total Households (Number)	Total BPL Households (Number)	Total BPL Households (Percent)	Total Households (Number)	Total BPL Households (Number)	Total BPL Households (Percent)	
12	Lephripara	14,159	11,050	78.04	15,671	9,748	62.20	-15.84
13	Nuagaon	15,181	11,010	72.52	21,440	17,244	80.43	7.91
14	Rajgangpur	12,013	8,153	67.87	16,884	11,944	70.74	2.87
15	Subdega	11,429	7,695	67.33	13,742	6,696	48.73	-18.60
16	Sundargarh	12,560	9,264	73.76	15,837	8,675	54.78	-18.98
17	Tangarpali	11,434	8,776	76.75	15,824	9,594	60.63	-16.12
	Total	225,696	167,622	74.27	285,141	185,969	65.22	-9.05

Source: BPL Survey, 1992 and 1997, Government of Odisha.

At present, there is no record of money lenders providing credit either with or without license. In 1970, there were 62 registered money-lenders in the District, of which 23 were in Sundargarh Sub-Division, 25 in Panposh Sub-Division and 14 in Bonai Sub-Division. A survey¹² revealed that the most important purpose for which a debt was incurred by family was consumption which amounted to more than a half (58.34 per cent) of the total debt. This was closely followed by debts incurred for social ceremonies which accounted for 17.45 per cent. For repayment of old debts and to meet the expenses of litigation 3.92 per cent of the total debts were expended. These were responsible for 79.71 per cent of the total debts of the farmers which was distinctly burdensome. Of the total debt, 20.29 per cent was incurred for various productive purposes, of which 6.35 per cent accounted for expenditure on cultivation; 12.15 per cent for purchase of land and bullocks; and 1.79 per cent for building houses.

As regards the source on credit, the chief source was the money-lender. The data revealed that 97.16 per cent of the total amounts of debts were obtained from money lenders. Some of them were professional and some farmers were able to secure loans either from Government or from Co-operative Societies, but these were exceedingly small and constituted only 2.84 per cent.

However, the Government of Odisha has passed the Money-Lenders Act to protect the poor people from the clutches of the village Mahajans. The registered money-lenders are required to register themselves and obtain licence for carrying on money-lending business. They are also required to maintain regular account books. The committee appointed to hold an enquiry

¹² Economic Survey of Orissa, Vol. I

into the working of the Odisha Money Lenders Act. 1939 observed that there were certain gaps in the provisions of the Act, as a result of which people belonging to the Scheduled Tribe and the Scheduled Caste communities inhabiting in the Scheduled Areas were unable to derive any significant benefit out of it. So, in order to control and regulate the business of money-lenders, Regulation 1967 was promulgated under Paragraph 5 (2) of the Fifth Schedule of the Constitution of India. The Odisha (Scheduled Areas) Money-lenders Rules 1970, framed under the said Regulation was brought into force on 30 May 1970.

According to the Regulation, no person shall carry on business of money-lending at any place in the Scheduled Areas without obtaining a licence from the concerned Tahasildar, who is the Licencing Authority. The Additional District Magistrate is the Appellate Authority within his jurisdiction. All the Assistant District Welfare Officers posted to Sub-Divisional headquarters and all the Circle Inspectors of Police have been appointed as the Inspectors with their respective jurisdictions for the purpose of the Regulation. A money lender may charge simple interest of nine per cent per annum in case of secured loan and up to 12 per cent per annum in case of unsecured loan. He is to maintain Cash Book and Ledger and deliver Statements of accounts to the Licensing Authority. A money-lender is punishable with imprisonment or fine or both in case of default. The offences punishable under Regulation are non-cognizable.

Besides, Government has amended the Odisha Co-operative Societies Act so that people can avail loans easily. Paddy loan is advanced under "Crop Loan System" to the agriculturists at the time of their need. The Commercial Banks have come up to render necessary credit assistance to the agriculturists, traders, manufactures and others at low rate of interest.

Nationalized Banks Their Operations And Present Position:

Today, there is no dearth of nationalised as well as Private Banks in the District. The major nationalised banks are State Bank of India, Punjab National Bank, Syndicate Bank, United Bank of India, UCO Bank, Oriental Bank of Commerce, Indian Bank, Canara Bank, Bank of Baroda, Central Bank of India, Allahabad Bank and Andhra Bank. There are 190 branches of nationalised and undertaking Banks functioning in Sundargarh District catering to the banking need of the people.

Private Banks in the District

Among the private Banks, Banks are Axis Bank, ICICI Bank, HDFC Bank, IndusInd Bank, Kotak & Mahindra Bank and Yes Bank. At present there are 35 branches of these Banks tapping the deposits and advancing credit in the District. In recent years, due to rapid industrialisation, land acquisition for industries, mining activities and construction of roads and other infrastructure, bankers have taken interest in opening several branches to tap the deposits from the awardees of compensation from these projects.

Co-Operative Credit and Cooperative Banks:

The scenario of poverty and credit linkage has been different from that of the situation prevailed in 1970 and prior to that credit facilities are available to the people at easy means by District Credit Co-operative Banks, Agricultural Credit Co-operative Societies, Non-Agricultural Credit Co-operative Societies, Regional and Specialised Commodity Marketing Co-operative Societies and Commercial Banks. There are 21 branches of various Cooperative Banks in the District. The status of credit position of the first four categories of credit institution as in the year 2015 in the District is as follows. There are 246 branches of Commercial Banks, both nationalised and Private Sectors.

Table 90: Credit Institutions in Sundargarh District

Sl. No.	Credit Institution particulars	Unit	Figures
1	Commercial Bank branches	No.	246
2	Regional Rural Bank branches	No.	21
3	District Credit Co-Operative Bank branches	No.	15
4	LAMPs	No.	44
5	CARD bank	No.	3
6	Agricultural Credit Co-Operative Societies (2015)	No.	21
7	Non-Agricultural Credit Co-Operative Society (2015)	No.	136
8	Central Co-Operative Banks	No.	1

Table 91: Credit Co-Operative Societies in Sundargarh District

Co-operative Society		No. of Societies/ Branches	Membership (No.)	Loans Advanced (No)	Amount of loans Sanctioned (Rs. Lakh)
Agricultural Credit Co-operative Societies	PACS ¹³	44	352843	148107	42432.69
	CARD ¹⁴	3			
Housing Co-Operative Societies (HBCS)	CCB ¹⁵	1	10497	4675	51105.83
	Primary HBCS	2			
Non-Agricultural Credit Co-operative Societies	Sub-Divisional level HBCS	3			
	Urban Co-Operative bank	1			
Consumer-Co-Operative Societies	Whole-sale Consumer Store	2			
	Primary Consumer Co-Operative Store	9			
	Employee Consumer Co-Operative Store	72			
Marketing Co-Operative Societies	Regional Co-Operative Marketing Societies	3			

Source: District Statistical Hand Book, Sundargarh, 2015

¹³ PACS- Primary Agriculture Co-Operative Society

¹⁴ CARD- Co-Operative Agricultural and Rural Development Bank

¹⁵ CCB- Central Co-Operative Bank

There are three Regional and Specialised Commodity Marketing Co-operative Societies in the District out of which two are in Rourkela and one is in Sundargarh. As per statistics of 2015, the share capital of the Government in these societies amounted to Rs 30.16 lakh. Their working capital aggregated to Rs. 313.07 lakh and business turnover to Rs. 540.86 lakh. Greater description of the credit aspect in the agriculture sector is described in “Chapter-IV, Agriculture and Irrigation”.

Table 92: Credit Facilities extended by Commercial Banks in Sundargarh District

Sl. No.	Item	Unit	2008	2009	2010	2011	2012	2013	2014	2015
A. Public Sector Banks										
1.	Reporting Offices	No	109	113	118	126	128	138	152	169
2.	Deposits	Rs. in Lakhs.	280300	363600	435900	497400	517308	584226	888654	1006972
3.	Credit	Rs. in Lakhs.	251600	295500	343900	364200	294995	361929	415943	455856
4.	CD Ratio	Percent	89.76	81.27	78.89	73.22	57.02	61.95	46.80	45.27
B. Regional Rural Banks										
1.	Reporting Offices	No	19	21	21	21	21	21	21	21
2.	Deposits	Rs. in Lakhs.	9100	11600	12000	12500	12580	12579	14313	14386
3.	Credit	Rs. in Lakhs.	6400	7300	8100	9100	9650	7454	11274	11817
4.	C.D. Ratio	Percent	70.33	62.93	67.5	72.8	76.70	59.25	78.76	82.14
B. All Scheduled Commercial Banks										
1.	Reporting Offices	No	132	142	151	161	182	198	223	246
2.	Deposits	Rs. in Lakhs.	319300	415100	495300	572500	606159	673304	1067901	1195858
3.	Credit	Rs. in Lakhs.	276800	325900	377700	411600	378436	441314	551676	612808
4.	C.D. Ratio	Percent	89.69	78.51	76.25	71.89	62.43	65.54	51.65	51.24

Source: District Statistical Hand Book, Sundargarh,

Total agriculture credit provided by the District Central Co-operative Bank Limited to farmers during 2008 Khariff crop was of the order of Rs.40 crore and for 2009 Khariff season, the Bank targeted an increase in credit flow to agriculture sector by 97.92 per cent, but actual disbursement was only Rs. 8.47 crore to 6,533 farmers. In 2009-10, total targeted amount of agricultural credit (crop loan) for disbursement was Rs. 194.26 crore, but only Rs.109.79 crore (56.52 per cent of the targeted amount) was disbursed. In 2011-12, however, the crop loan disbursement was Rs.132.75 crore only. Further in 2011-12, total crop loan disbursed was Rs. 274.30 crore, an achievement of 110.06 per cent of the crop loan target.

Kisan Credit Card (KCC) scheme has been implemented in the District. Around 2.36 lakhs KCC have been issued till 31 March 2010. The sustainable credit flow to the Rastriya Krishi Bima Yojana (RKBY) during 2011-12 has been projected at Rs. 273.64 crore. Credit flow to Minor Irrigation Sector during 2011-12 has been projected at Rs. 25.29 crore.

The need for agricultural credit arises mainly due to crop failure due to improper rain, pest attack, lack of irrigation, lower yield, improper marketing, poor storage, lack of knowledge on modern tools and techniques, use of traditional seeds etc. In order to address the issues there have been many Government initiatives.

Table 93: Government Initiatives on Agricultural Promotion

Sl. No.	Initiative	Objective
1	Seed Village Programme	To make self sufficient in the availability of quality seeds- production of foundation seed and supply of certified seeds
2	Jalnidhi	Encourage farmers to establish private lift irrigation points (mainly bore wells and dug wells) with provision of 50per cent subsidy under terms and conditions.
3	Capacity building	Training and orientation of farmers at village level, field demonstrations, Farmer Field Schools, Exposure visits, Interaction with progressive farmers
4	NFSM Rice	Enhance production of rice through area expansion, restoration of soil fertility at individual farms, creation of gainful employment opportunities for farmers and agricultural labourers.
5	Rastriya Krishi Vikash Yojana (RKVY)	Infrastructure development and promotional activities
6	Integrated Scheme for Oilseeds, Pulses, Oil Palms and Maize (ISOPM)	Increase production and productivity of Oilseeds, Pulses, Oil Palm and maize
13	Soil Sample Testing	Ascertain key nutrients in the soil, apply balanced dose of fertilisers into the soil
14	Integrated Pest Management (IPM)	Popularise biological methods of pest management, reduce use of synthetic fertilisers, supply of egg parasites and pupal parasites to the farmers

Self-Help Groups and Micro Finance

As per the National Rural Livelihood Mission (NRLM), there are 12290 SHGs in the District. The details are mentioned below.

Table 94 : Block-wise Details of SHGs under NRLM Activities in Sundargarh District

Sl. No.	Block	New	No. of SHGs		Total	Category-wise membership				Total members
			Revised	Pre NRLM		SC	ST	OBC	Other	
1	Balisankara	22	1	853	876	784	6,895	1,608	192	9,479
2	Bargaon	115	296	358	769	717	5,549	2,018	117	8,401
3	Bisra	4	0	716	720	384	4,035	2,284	548	7,251
4	Bonaigarh	66	15	545	626	912	3,953	1,635	430	6,930
5	Gurundia	9	6	427	442	325	3,776	451	115	4,667
6	Hemgiri	15	0	653	668	926	3,710	2,335	128	7,099
7	Koida	5	1	538	544	544	3,835	958	238	5,575
8	Kuanmundara	92	1	909	1002	871	9,078	317	33	10,299
9	Kutra	29	138	600	767	633	7,182	778	164	8,757
10	Lahunipada	11	114	877	1002	779	6,929	2,642	213	10,563
11	Lathikata	55	28	480	563	525	4,469	557	843	6,394
12	Lephipada	10	3	649	662	945	4,232	1,892	100	7,169
13	Nuagaon	23	0	712	735	638	5,500	1,568	198	7,904
14	Rajgangpur	32	6	719	757	425	7,097	195	46	7,763
15	Subdega	2	143	616	761	664	5,995	1,323	95	8,077
16	Sundargarh	29	15	557	601	1,048	3,456	1,929	29	6,462
17	Tangrapali	120	21	654	795	1,502	4,280	1,999	508	8,289
	TOTAL	639	788	1086	1229	12,62	89,97	24,48	3,997	1,31,079
				3	0	2	1	9		

Micro Finance:

Micro-Finance also has started playing a big role to meet the small credit need of micro and mini business entrepreneurs. In the District, eight numbers of Micro-Finance Companies are operating with Reserve Bank of India licences. The list of Micro-Finance Companies and their achievement in generation of beneficiaries is mentioned in the following table.

Table 95: Micro-Finance Companies in Sundargarh District

Sl. No.	Name of the Organization	Number of Beneficiaries Since 2010
1	Annapurna Microfinance Pvt. Ltd.	11508
2	Janalakshmi Financial Services Ltd.	4790
3	L & T Finance Ltd.	15800
4	Sambandh Finserve Pvt. Ltd. ¹⁶	59906
5	SKS Microfinance Ltd.	38252
6	Spandana Sphoorty Financial Ltd.	13615
7	Suryoday Microfinance Ltd.	8000
8	Ujjivan Financial Services Ltd.	17605

Source: Director, Institutional Finance, Finance Department, Government of Odisha

¹⁶ Sambandh Finserve Private Limited has both the Head Office and Branch Offices in Sudargarh District. This organization is operating both as a business correspondent of Yes Bank and also having owed fund into the micro-finance sector. Rest all MFI organizations are having Branch Offices in Sudargarh District.

Life Insurance, General and Crop Insurance

Life Insurance Corporation provides insurance facilities in general. In the era of privatisation and globalisation many private insurance companies have emerged. General insurance is now a matter of negotiation.

Both in 2008-09 and 2010-11, the total sum assured of the crops was Rs. 2388.59 lakh against a total value of premium collected for Rs. 54.8 lakh. In both the years, no crop claim for the insurance was made. There are 202400 Kisan Credit Card holders and 190888 Kalinga Kishan Gold Card holders in the District.

PMJDY in the District

The PMJDY (Pradhan Mantri Jan Dhan Yojna) scheme was launched on 28 August 2014 in Sundargarh District by Hon'ble Minister, Steel & Mines & Labour Minister of Odisha, Shri Prafulla Mallick.

Table 96: Progress of PMJDY in Sundargarh District

Sl. No.	Bank name	GP	SSA	Ward	No. of Ac opened
1	Andhra Bank	0	0	1	1154
2	Bank of Baroda	2	2	4	9412
3	Bank of India	10	7	4	21568
4	Canara Bank	6	4	4	8006
5	Central Bank of India	12	10	2	8051
6	Corporation Bank	0	0	1	1460
7	IDBI Bank	0	0	1	1675
8	Indian Bank	1	1	2	1533
9	Indian Overseas Bank	2	2	2	6981
10	Oriental Bank of Commerce	0	0	3	7158
11	Punjab and Sind Bank	0	0	1	459
12	Punjab National Bank	3	1	4	14894
13	State Bank of India	147	139	19	199093
14	Syndicate Bank	0	0	2	3587
15	UCO Bank	6	5	10	16316
16	Union Bank	0	0	3	3754
17	United Bank of India	27	20	7	26005
18	Vijaya Bank	0	0	1	12670
19	Axis Bank Ltd.	1	1	5	3334
20	ICICI Bank	1	1	3	2572
21	Utkal Grameen Bank	44	33	4	44585
	TOTAL	262	226	83	394267

Trading System, Centres of Trade and Business, Regulated Markets, Cooperative Marketing

The routes passing through the Ib and Brahmani river valleys traditionally served as ancient trade routes. The people of this area were carrying on trade with erstwhile Madhya Pradesh, Bihar and other neighbouring areas. The main items of trade were peacock feathers, ivory, lac, myrobalan, etc.

During the beginning of the present century in the ex-State of Gangpur, the principal articles exported were cotton, sesamum, lac, honey, arrowroot, catechu, sabai-grass and wax; and the principal articles imported were salt, sugar, piece-goods, spices, and kerosene oil. During this period in the ex-State of Bonai, the main articles exported were Lac, myrobalans, sabai-grass, and other forest products. Large quantities of wild tusser silk cocoons were also exported from the ex-State of Bonai.

Towards 1930 the export of timber, hides, oil seeds, and jungle produce took place and the sizable quantities of piece goods, salt, kerosene, petrol and fancy articles brought in by Katchi and Marwari traders. Within the ex-States, trade was chiefly carried on by women of the labouring class at small weekly markets. The system of barter was in vogue and the commodities consisted of rice, millets, vegetables and tobacco. Beyond this, there was no special trade in the ex-State of Bonai. During this period, in the ex-State of Gangpur lime was exported by the Bisra Line Stone Company through Biramitrapur-Rourkela. Rourkela and Panposh drained rice and timber of Nagra ex-State. Lac and timber of Talsara, Rajgangpur and Raiboga Police Stations and of the southern portion of Ranchi District (which is in Bihar) were exported ; and salt, cloth, oil and other fancy goods were imported through Rajgangpur railway station. Timber and rice of Sundargarh, Bhasma, and Lephripara Police Stations were exported through Jharsuguda railways station which is in Sambalpur District. Bamboo, rice timber, and sleepers of Hemgir Police Station were exported through Hemgir-Road railway station.

A fair at Vedvyas in Panposh Sub-Division which is held every year on the Sivaratri festival attracts shopkeepers from distance places. The Cattle fairs at Sundargarh, Sargipali, and Rajgangpur were well-known. Rajgangpur, Biramitrapur and Bisra were trade centres from which cloth, kerosene and petrol were distributed to Bonai and many other places.

The steel township of Rourkela has now emerged as the nerve centre of trade and commerce in the District. Most of the wholesalers and retail traders are concentrated in the Rourkela city. In 1971, the number of licensed wholesalers and retail traders were 14 and 1233 respectively in the District. Rajgangpur, Sundargarh, Bonai and Birmitrapur are other important

trade centres which also served as marketing centres for the surrounding areas. Trade relations of Rourkela city are mostly with Jamshedpur, Ranchi, Calcutta, Raipur and Bombay. The District has trade links with the parts of the erstwhile Madhya Pradesh and Bihar being located in close proximity.

In the year 2006-07, there were 7396 number of registered dealers of consumer goods in the District. Rs. 17080.99 lakh was realised as OST as revenue for the State. Similarly, under CST, there are 4145 registered dealers with collection of Rs. 17608.34 lakh rupees. The number of dealers in the list to pay entertainment tax is just six in 2006-07 and Rs. 6.36 lakh has been collected.

Weekly markets are important channels of local trade. A list of weekly markets in the District is shown in Appendix-I

Table 97: Present day Trade Materials

Items of Export	Items of Import
Iron ore, coal, dolomite, limestone, manganese, engineering goods, fabrication works , machinery, steel products, fertilisers, cement and refractoriness and forest products like bamboo, timber, kendu leaves , mohua flower, siali fabric , lac etc.	Ferro-manganese, Ferro-silicon, coal, chemicals, medicines, engineering goods, food stuff, fertilisers, textile goods, petrol edible oils, stationary, etc.

Wholesale and Retail Trade

Table 98: Weighted Average Wholesale Prices of Essential Commodities in Odisha (Rs. Per quintal)

Commodities	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Paddy (common)	515	547	820	891	930	955	1045	1165
Wheat	954	1046	1087	1260	1351	1429	1449	1506
Ragi	567	1029	103	891	1143	965	1058	1185
Maize	479	960	779	950	941	886	997	1072
Mung	2798	2927	2857	3140	3861	4082	4028	4384
Biri	2542	3123	2626	3087	3694	3872	3845	4002
Gram	1945	2561	2868	2974	3062	3077	3008	3423
Kulthy	1090	1265	1498	1610	1938	2040	2071	2310
Til	2139	2229	2878	3575	3386	3324	3332	3445
Mustard Seeds	2688	2426	3028	3109	3153	3179	3324	3651
Groundnut	1751	1946	1904	2357	2519	2451	2628	2807
Potato	670	859	585	748	652	715	695	790
Jute	1410	N.A	N.R	1400	1525	2600	2771	2777
Gur	1600	1672	1866	2178	2668	3140	3241	3643
Dry Chillies	4595	5640	5832	6062	5789	5957	5992	7244

Table 99: Average Retail Price of Some Essential Commodities in Odisha

Commodities	2004	2005	2006	2007	2008	2009	2010	2011	2012
Rice (common)	8.47	8.93	9.11	10.73	11.34	14.58	15.18	17.02	18
Wheat	9.31	9.72	11.51	13.85	12.67	14.31	14.6	15.13	15.4
Mung Dal	24.08	29.14	39.35	38.78	36.17	67.97	76.1	68.67	69.68
Arhar Dal	28.42	27.46	27.95	36.05	36.72	68.43	72.72	67.36	69.32
Mustard Oil	55.53	50.6	50.7	60.15	62.5	62.24	72.35	77.97	92.69
Palm Oil	50.79	45.13	48.54	54.08	58.1	48.8	49.02	59.72	66.03
Vanaspati	51.1	43.27	48.48	53.95	56.18	45.3	58.79	67.35	75.92
Sugar (free sale)	17.23	20.03	21.01	16.33	16.39	32.46	35.22	33.35	35.92
Gur (local)	17.17	18.62	18	14.87	15.09	33.66	37.37	35.75	37.21
Salt	2.43	2.62	2.38	2.92	2.79	4.22	9.52	10.05	11.02
Potato	6.82	7.12	8.19	8.95	9.07	13.41	8.58	8.82	1328
Onion (ulli)	8.44	9.75	7.51	13.29	11.93	15.37	18.4	16.36	13.63
Atta	10.5	10.83	13.05	14.07	14.16	16.34	18.95	19.57	20.59
Maida	11.5	12.16	14.39	15.67	15.8	17.86	20.71	21.23	22.12
Suji	11.99	11.87	14.95	16.48	16.52	19.2	21.07	21.83	22.54

Weights and Measures- Then and Now

Prior to the enforcement of the metric system of weights and measures, **Katha** and **Tambi** were used in the ex-State of Gangpur. There are standardised by the ex-State authority and bore the seal of the ex-State. The **Tambi** was double of the **Katha**. **Paila** was used by the tenants of Nagra ex-Estate. By actual weighment, the weight of one standard **Katha** measure of paddy, rice and fine rice were respectively 60, 85 and 85 **Tolas**.

In the ex-State of Bonai, the following three types of measures were in use.

1. The Korua Paila, so called because all payments in kin or Kor were made in these measures.
2. The Bhuti Paila was the measure by which Bhutis or field labourers were paid.
3. The Seer Paila, a capacity of 80 tolas for measuring rice, was used at all markets.

In the absence of any of the measures the difficulty was got over by measuring with handfuls, one handful being a **pos**. Ten no. of **pos** were equal to over **Korua** Paila equivalent to 2 seers of rice and 1 ½ seers of paddy. Six Pos were one Bhuti Paila equivalent to 1 & 3/16 seers of rice and 14/16 seer of paddy. Five Pos were equal to one Seer **Paila** equivalent to one seer of rice and ¾ seer of paddy. Twenty Pailas made one Khandi, and 10 Khandis were equal to one Purug.

These measures varied not only in nomenclature but also in capacities from area to area, and the buyers were generally cheated. Besides, the traders were indifferent while transactions were done with other Districts. So, with a view to overcome these difficulties, the metric system of weights and measures has been introduced as an All India Standard from the 1st April 1960.

The metric system of weights and measures has been made compulsory in the District from 1st April 1962. Initially, difficulties were experienced by both the consumers and traders, but after regular practice and propaganda through distribution of conversion table, charts, and pamphlets, the system is now easily understood by the people.

The following table shows the old measures and their equivalent in metric units.

Table 100: Old Systems of Measurement

	Old Measures		Metric Equivalent
Tumbi	For measuring paddy.	120 tolas	1,400 grams
	For measuring rice	170 tolas	1,983 grams
Kantha	For measuring paddy.	60 tolas	670 grams
	For measuring rice.	95 tolas	991 grams
Karua Paila	Ditto	160 tolas	1863 grams
Bhuti Paila	Ditto	120 tolas	1,400 grams
Seer Paila	Ditto	80 tolas	0.933 grams
Khandi	Ditto	20 seers	18,662 grams

Forest Marketing Co-operative Societies: There are three Forest Marketing Co-operative societies located in Jamdihi, Bargaon and Bisra. The total number of villages in their areas of operation is 30. The working capital is Rs. 39,219 constituting Rs. 4,607 as paid up share capital. The value of sales, during 1971-72 was Rs. 28,010.

Milk Supply Co-operative Societies: There is one milk supply Co-operative society at Koira. It is functioning with a working capital of Rs. 20,220 and 28 memberships. During 1971-72, it earned a profit of Rs. 70,000. In August 1972, there were 411 fair price shops in the District serving a population of 9,30,800. Through these shops, 1,31,350 quintals of rice and 24,531 quintals of wheat were sold during November 1971 to August 1972.

Trade in Kendu Leaves: Kendu leaves provide raw materials for Bidi industries both inside and outside the State, and thus bring in large revenue to the State exchequer. Kendu leaf bushes grow spontaneously in the forests and on at land mainly in the District of Western Odisha and in the some pockets of other Districts. In order to regulate the trade the State Government declared Kendu leaves as essential commodities and promulgated Kendu leaves (Control and Distribution) order, 1949, which was replaced by another control order viz. The Orissa Kendu Leaves Control Order, 1960. Under both the control orders Government were leasing out Kendu leaves growing areas to the private persons on annual royalty basis. These systems were not found to be fool proof against smuggling of Kendu leaves and leakage of Government Revenue. Besides, it was considered

necessary to maintain the quality and to ensure fair price to the pluckers and growers of Kendu leaves. Keeping in view the above aspects, and in pursuance of the recommendations of "The Odisha Taxation Enquiry Committee" the State Government enacted and enforced the Odisha Kendu Leaves (Control of Trade) Act. 1961 and framed the Odisha Kendu leaves (Control of Trade) Rules 1962. Under the provision of the above Act and Rules the State Government took up monopoly trade in Kendu leaf from 1962. The monopoly system of trading and the income of the State from Kendu leaf were raised from one crore in 1962-63 to 2.83 crores in 1971-72.

With a view to increased revenue to the State exchequer by eliminating middlemen in this trade as well as to bring in some profit to the Odisha Forest Corporation Ltd. which is a State Government undertaking. The State government nationalised the trade in Kendu leaf since January 1973 and evolved a system of joint working in the trade. Accordingly to the joint scheme in the Forest Department is in charge of the production of Kendu leaves , and the storage collection and bagging of processed leaves ; and the Odisha Forest Corporation Ltd. is entrusted with the marking of the processed bags inside and outside the country as the selling against of the Government.

The system of operation of Kendu leaf trade is working within the general frame-work of the Odisha Kendu Leaves (Control of Trade) Act. 1951 and Rules made there under. In addition , a manual entitled " The Odisha Kendu Leaf Manual 1973 "has been framed which specifies the duties and responsibilities of various field staffs and contains the guide-lines for the functional part of the trade entrusted to the Forest Department. The accounting part of the trade, so far as the Departmental portion is concerned, is being governed by the accounting procedure formed under the Odisha Kendu Leaves (Control of Trade) Act 1961.

In pursuance of the provisions under section 4 of the Odisha Kendu Leaves (Control of Trade) Act 1961, the State Government ,is consideration with the Advisory Committee, have fixed the following purchase rates of Kendu leaves from the growers and pluckers for the year 1974.

1. 30 (thirty) green leaves per paise.
2. A minimum of Rs. 60 (Rupees sixty) per bag of one quintal of processed leaves subject to the condition that the growers supply the dry leaves and get the leaves processed at the places fixed by the Forest Department 30 (thirty) green leaves per paise.

Rate of Collection from Pluckers: To ensure and proper and timely payment of the price to the growers and wages to the puckers. Village Committee has been formed to supervise payment.

In order to ensure smooth working of the trade, particularly to ensure the estimated revenue to the State exchequer, an agreement is being executed between the Forest Department and the Odisha Forest Corporation Ltd. every year on the terms and conditions as decided by the Government. The salient features of the agreement executed for the year 1974-75 are given below:

The agreement was made on the 1st May 1974 between the Government of Odisha and the Odisha Forest Corporation Limited according to which the State Government have appointed the Odisha Forest Corporation Limited. As the Selling Agent under Section 10 of the Odisha Kendu Leaves (Control of Trade) Act, 1961 for the disposal of the Kendu leaves purchased by the Government.

The agreement shall remain in force from 1st April 1974 to 31st March 1975 and may be renewed as may be agreed upon by both the parties.

With effect from April 1974, Government in the Forest Department collect the Kendu leaves by purchase or otherwise through their officers and employees in the Forest Department and process the same. The Odisha Forest Corporation Limited markets these Kendu leaves on behalf of the Government as their Selling Agent. The Government ensures collection and production of processed Kendu leaves and gives delivery of the bags of processed leaves to the Corporation for the purpose of marketing.

The Odisha Forest Corporation Limited makes advance payment of its dues to the Government obtaining it from the State Bank of India as per the cash credit Facility granted to the Odisha Forest Corporation Limited by the said Bank. The Government have agreed to allow the Odisha Forest Corporation Limited to by-pothecate the Kendu leave raw and process at the disposal of the Government to the State Bank of India in order to enable the Odisha Forest Corporation Limited to obtain the loan from the State Bank of India.

The Odisha Forest Corporation Limited pay the Government Rs.230 per quintal of processed Kendu leaf or for 133 kg of loose leaves (phalli bags) delivered to them, and the aforesaid amount of Rs, 239 includes Rs. 130 per quintal for meeting the cost of collection and processing. The Corporation pays towards royalty Rs. 3.60 crores (State figure) to the Forest Department by selling 3.60 lakh quintals (State figure) of Kendu leaves supplied by the Government at the rate of Rs. 100 per quintal of processed leaves or 133 kg of loose leaves (Phali begs), after deducting its administrative charges limited to a maximum of Rs. 25 lakhs plus the Bank interest. For any excess production and sale, the same charge at the rate of Rs. 100 per quintal towards royalty is payable. The payment towards royalty is made in three equal instalments.

In case of average sale value of all the Kendu leaves supplied by the Government below Rs. 255 per quintal for seasons beyond the control of Odisha Forest Corporation Limited necessary deduction on account of royalty, as per the decision of Kendu Leaves Co-ordination Committee, is made. In case the average sale value exceeds Rs. 255 per quintal, the amount towards royalty payable by the Odisha Forest Corporation Limited is increased by such amount, as decided by the Kendu Leaves Co-ordination Committee.

Government is kept informed about the sale programme by the Odisha Forest Corporation Limited in the interest of securing Government revenue.

Over and above the aforesaid arrangements, Co-ordination Committees at the District level have been formed with the District Collector as Chairman to review the progress of operation periodically and to find out solutions of the bottlenecks, if any.

The State Level Co-ordination Committee meets periodically to review the progress of the trade as a whole, solves the difficulties if any, and inter alia determines the sale policy of the Kendu leaves produced.

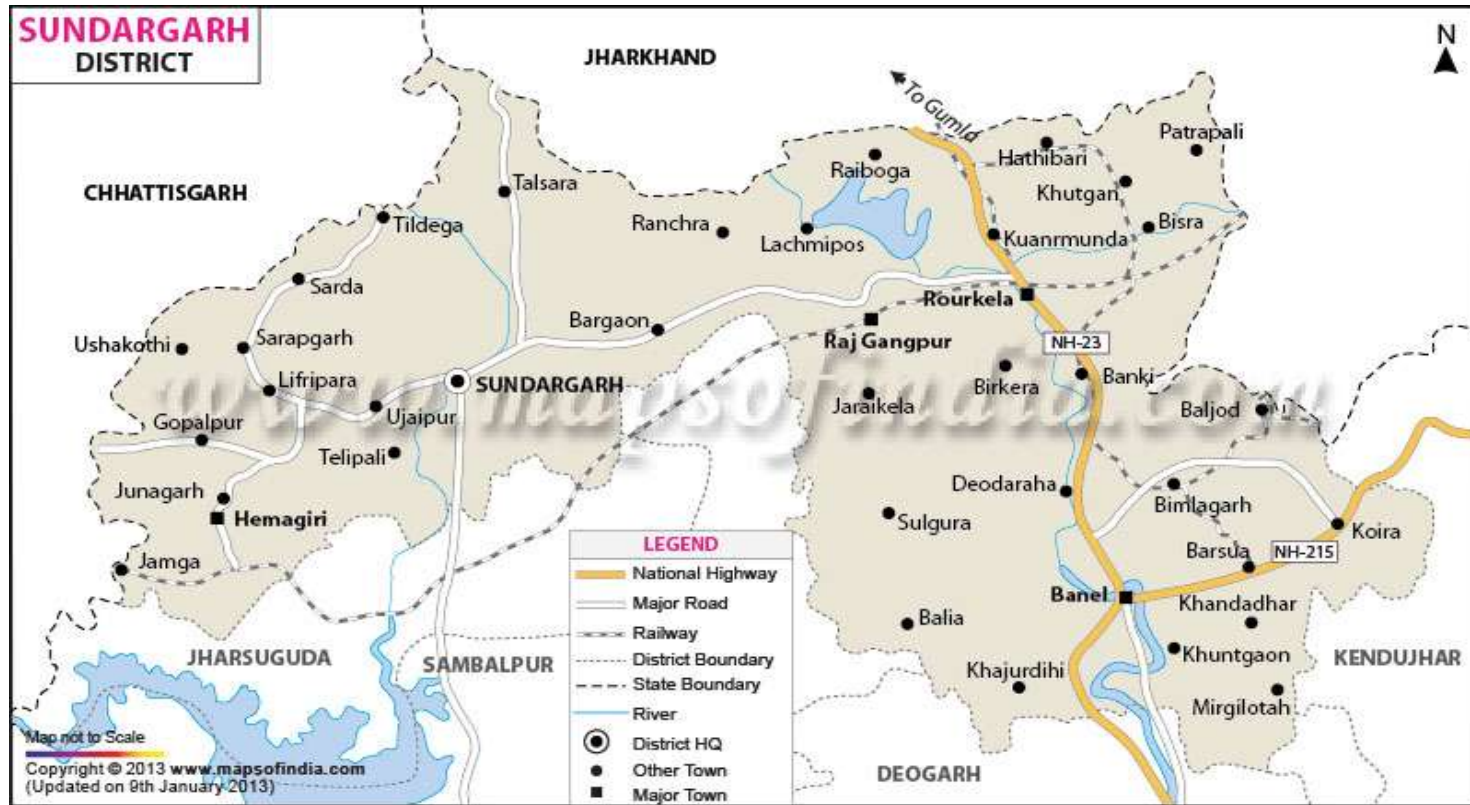
At present the Odisha Forest Corporation Limited is adopting the following methods of sale inside the country for the disposal of Kendu leaves delivered to them by the Forest Department.

1. Forward sale by tender.
2. Sale against ready stock by tender/ auction.
3. Sale through retail sale centres.
4. Sale through commission agents.

The Odisha Forest Corporation Limited is also exporting Kendu leaves to Sri Lanka and is endeavouring the search market in other countries.

As envisaged under section 11 of the Odisha Kendu Leaves (Control of Trade) Act. 1961, not less than 50 per cent of the net profit derived from the Kendu leaves trade continues to be distributed as grant- in- aid to the Gram Panchayats and Panchayat Samitis.

Map: 1- Transport map of Sundargarh District



Chapter-VII

TRANSPORT AND COMMUNICATION

Evolution of Transport & Communication in the District:

Communication facilities in the ex-States of Gangpur and Bonai improved perceptibly during the second quarter of this century. Cobden-Ramsay describes the road condition of the ex-Gangpur State in 1907-08 as follows:

“There is only one good road in the State, the road from the headquarters, Sundargarh, to the Jharsuguda railway station; half of the road lies within the State and half in the District of Sambalpur; the road is bridged throughout except at the large Sapai nullah, where a good ferry is maintained. A large and substantial bridge is, however, in course of erection. There is a fair surface track with small wooden bridges from Kumarkela and Raj Gangpur, an important village on the line of rail, to Sundargarh: a surface track continues north from Sundargarh to Loakara, on the Ib in the Jashpur State. In the Nagra Zamindari a good road, some 13 miles in length, is under construction from Panposh on the railway line to Banki, just across the boarder in the Bonai State: this road will be continued through the Bonaigarh. Elsewhere the only means of communication are tracks used by pack-bullocks and the solid wheeled country carts, known as sagars. Communications are defective, but gradually improving”. About communication in the es-State of Bonai in 1907-08, the same author remarks: “With the exception of the road to Banki, there are no regular roads in the State. At the best there are a few bullock-tracks and travelling is a most difficult and slow process. Formerly carts could scarcely proceed from the railway to Bonaigarh owing to the difficulties of the road through the Champajharan pass: the pass has, however, been recently opened out by blasting and through communication for carts is no longer a difficulty: a good road from the line of rail to the headquarters is now under construction”.

The traffic in the interior of these two ex-States was made almost entirely by pack-bullocks or by coolies and during rainy season it was usually at a stand still. In the rains small boats were carrying goods down the Ib to Sambalpur. Carts drawn by bullocks were used by people in general while horses and elephants were used by the rulers, Zamindars and other wealthy peoples.

In 1932, the Chief Editor motored from Sambalpur to Bihar. The only unbridged river crossing was at Vedavyasa where two country boats tied together took his car (Oakland Tourer) across the Brahmani. By the end of 1946, most of the existing roads of the District were constructed. That year the ex- State of Bonai maintained about 250 miles (400 km) of roads of

which 49 miles (78.4 km) were all weather while the ex-State of Gangpur had 351 miles (561.6 km) including 108 miles (172.8 km) of all weather roads.

After the expiry of twenty years ending 1966, the District had 980 km of roads maintained by the Public Works Department of which 398 km were metalled.

Old Time Trade Routes in the District:

The period when surface transport on road was not developed, the river course was the main trade route in the District, through which items of trade were transported to the present day Bihar and Jharkhand, Madhya Pradesh and Chhatisgarh.

Road Transport- National and State Highways, Major District Roads, Other District Roads, Revenue Roads, Gram Panchayat and Village Roads and Forest Roads.

The length of National Highways in Sundargarh is 168 Km in 2010-11. There is 2011 km of State Highway, 307 Km of Major District Road (MDR), 278 Km of Other District Road (ODR) in the District. Besides, the length of Forest Road is 687 Km, Grama Panchayat Road is 7682 km, Panchayat Samiti Road is 3066 Km, Village Road is 1251 Km as reported from various Government agencies.

Vehicles and Conveyances

By the end of 1970, about 13,000 bicycles, 1,400 cycle rickshaws and 30 bullock-carts were registered in different Municipalities and Notified Area Councils of the District. In this year there were 9 horse drawn carriages playing at Rourkela. By the end of 1971, 10,099 motor vehicles including 5,170 motor cycles and scooters, 1,836 trucks, 1,423 cars, 92 buses, 1,114 jeeps, 224 taxis and auto-rickshaws, 64 station wagons, 168 tractors and trailers and 8 petrol and water carriers were registered in the office of the Regional Transport Authority, Sundargarh.

By the end of 2010-11, there were 247863 two-wheelers on the road. Three-wheelers and auto rickshaws numbered to 4748, Jeep and Station Wagon to 1660, private cars to 19975, Taxis to 1452, buses (contract carriage and stage carriage) to and 3396, trucks and lorries to 26735, tractors and trailers to 4647 and other vehicles to 2321. Cycles were once upon a time very popular in the District, especially for Rourkela city. Due to cheaper availability of fuel run two wheelers and general economic upliftment of people, all most all households are capable of maintaining two-wheelers. However, bi-cycles are still popular among the lower income group people. Bullock carts are in rare use in rural areas.

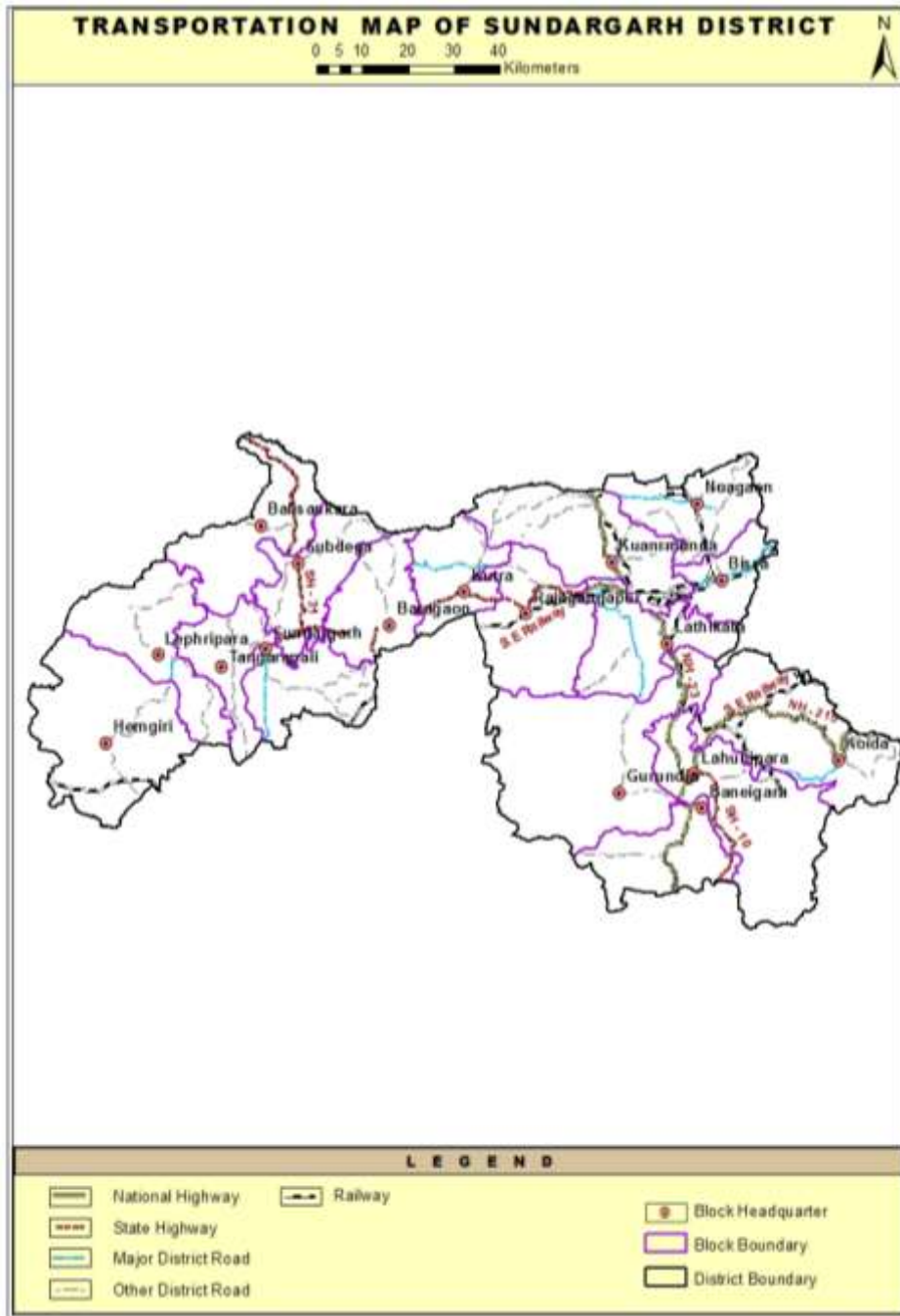
Regional Transport Authorities:

There are two Regional Transport Authorities in the District, i.e. one at Sundargarh and the other at Rourkela. The Regional Transport Authority of the District consists of three non-official and five official members under the Chairmanship of Collector. Regional Transport Officer is the Secretary of RTA. The main function of the RTA is to register the vehicles, allot inter District routes with timings, settle timing and ownership disputes, conduct vehicle checks and impound them after issue of VCR (Vehicle Check Report), and collect revenue in the form of road tax and registration fees.

Table 101: Registration of Vehicles and On-Road Vehicles in Sundargarh District

Sl. No.	Vehicles	Number of Registered during			Motor Vehicle in Road		
		2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
1	Motor Cycles, Scooters and Mopeds	13009	13538	17807	202621	230056	247863
2	Three Wheelers & Auto Rickshaws	451	365	611	3519	4137	4748
3	Jeeps and station wagons	207	77	3	738	1607	1610
4	Private Cars	1637	1549	2784	17231	17191	19975
5	Taxies	76	99	0	1074	1452	1452
6	Buses (Contract & Stage Carriages)	165	180	81	528	3313	3396
7	Trucks and Lorries	3754	1384	2172	23001	23935	26735
8	Tractors and Trailors	634	475	671	3560	3976	4647
9	Miscellaneous Vehicles	113	9	945	3373	2004	2321
	TOTAL	20046	17676	25074	255645	287671	312747

Source: State Transport Authority, Odisha, Cuttack



Public Transport:

Roads are the means for movement of majority of the people of the District, since railways are available in limited area. Roads play vital role in transporting passengers and goods, thus create opportunity for better market for the agricultural and forest based products of the District. The Department of Commerce & Transport (Transport) is the nodal department for implementation of the scheme. Initially, the scheme was for 10 to 26 seater vehicles excluding the driver, but later, by amendment and gazette notification, Government allowed vehicles upto 32 seater to be operated as Biju gaon Gadi. The vehicles are running on a minimum route length of 160 Km in their to and fro journey. They are aimed to connect the villages, and GPs to the Block Headquarters. At Block level, a Committee, chaired by the Sub-Collector and membered by the Block Development Officer and Junior MVI are facilitating the scheme.

Table 102: Abstract of Newspaper Publication on Government Policy on Rural Transport

'Biju Gaon Gadi Yojana' Launched

By Express News Service - BHUBANESWAR

'Biju Gaon Gadi Yojana' Launched

By Express News Service – BHUBANESWAR, Published: 23rd February 2014 10:25 AM, Last Updated: 23rd February 2014 10:25 AM

Chief Minister Naveen Patnaik on Saturday launched yet another populist programme, 'the Biju Gaon Gadi Yojana' to improve communication in the backward tribal Districts of the State.

The programme was launched in 118 backward blocks of 12 Districts - Koraput, Nabarangpur, Malkangiri, Rayagada, Kalahandi, Phulbani, Gajapati, Sundargarh, Sambalpur, Keonjhar, Mayurbhanj and Balasore.

The first bus was flagged off by the Chief Minister from Koraput bus stand through video conferencing from the Secretariat here. Buses will run on 1,180 routes of these Districts every morning and evening. Official sources said that the new programme will benefit 80 lakh people in the 12 Districts.

The Chief Minister hoped that the programme would bring a change in the social and economic condition of the people of the area.

He directed that besides Koraput District, the bus service should be immediately introduced in other 11 Districts.

Chief Secretary, JK Mohapatra and senior officials were present.

Plying of Government owned vehicles for local transport inside the District is not seen any more except a few buses of Odisha State Road Transport Corporation. Private buses are plying to all most all places of the District. The major destinations which receive passengers are Rourkela, Junagarh, Ushakothi, Vedavyasa, Mandiradam, in 1998 Khandadhar, Deodhar, Darjeeing, Goghar, Mirigkhaj, Tensa (Keonjhar), Pitamahar, Chhatrihill and Sundargarh town. Besides daily buses are available to inter-District destinations like Sambalpur, Koraput, Balasore, Cuttack, Bhubaneswar, Berhampur, Keonjhar, Deogarh and Jharsuguda on STA permit. In 2013, the State Government launched Biju Gaon Gadi Yojana in the State, with the objective to connect the remote areas with swift transport facility for movement of passenger as well as goods strengthening the order of the STA passed in 1998. Sleeper coaches with A/C facilities are also plying from the District to other District long routes.

Table 103: Distance of the Sub-Divisional Headquarters, Block Headquarters and important Hats from Sundargarh

Sl. No.	Name of the Sub-Divisional Hqrs./ Block Hqrs./ Main Hats Sub-Divisional Hqrs.	Distance on road from State Hqrs. (In Kms.)	Distance on road from District Hqrs. (In Kms.)	Whether public / Private or both Bus Services available
1	Sundargarh	405	0	Both Bus service
2	Panposh	505	110	-do-
3	Bonai	315	170	Private Bus
	Blocks			
1	Hemgir	467	62	Private Bus
2	Lephripara	432	27	-do-
3	Tangarpali	418	13	-do-
4	Sundargarh	405	0	-do-
5	Subdega	434	29	-do-
6	Balisankara	451	46	-do-
7	Baragaon	434	29	-do-
8	Kutra	457	53	-do-
9	Rajgangpur	474	69	-do-
10	Lathikata	524	119	-do-
11	Kuarmunda	526	121	-do-
12	Nuagaon	561	156	-do-
13	Bisra	530	125	-do-
14	Bonai	587	182	-do-
15	Lahunipara	576	171	-do-
16	Koida	420	232	-do-
17	Gurundia	413	232	-do-
	Important Hats			
1	Sargipali	423	18	Private Bus
2	Bileimunda	468	63	-do-
3	Subdega	434	29	-do-
4	Gamlai	378	178	-do-

Source: D.P.M.U., Sundargarh

Railways, Water Ways & Ferry System, Air Strips and Aerodromes:

Railway lines in Sundargarh District come within the South-Eastern Railways. There is no existence of narrow-gauge and meter gauge railway tracks in the District. However, there is one narrow-gauge line joining the OCL Ltd. to Lanjiberna. Occasionally a diesel engine is seen on the track, carrying limestone to the cement factory. The total length of the railway lines in the District is 285.16 km, out of which 153.88 km of line is single track and 131.28 km of line is double track.

Among the railway stations, Rourkela is most important. Trains in all most all directions of the country arrive and depart from the station. Other railway stations of the District are at Jareikela, Bhalulata, Bisra, Bandamunda, Rourkela, Panposh, Kalunga, Kansbahal, Rajgangpur, Sonakhan, Dharuadihi, Hemgir, and Daghora. The line was opened in 1890-91.

Mainly there are three branch lines in the District, one of which starts from Rourkela and other two from Bandamunda Railway Stations on the main line. The branch lines from Rourkela to Birmitrapur (28.9 km) and from Bandamunda to Barsuan (68.6 km) were constructed in 1927 and 1960 respectively mainly for carrying ores to the steel plant. From Bimalgarh Railway Station of the last named branch line, there is a rail link to Kiribura passing about 26.2 km within the District. The third line which starts from Bandamunda crosses the State border at about 24 km near Nuagaon Railway Station for Ranchi in Bihar State. The stations in the branch lines are Quarry siding, Kuarmunda, and Birmitrapur (Rourkela-Birmitrapur line), Dumerta, Lathikata, Champajharan, Chandiposh, Patasahi, Bimalgarh, Gagnaposh, and Barsuan (Bandamunda-Barsuan line), and Bangurkela, Bispur, and Nuagaon (Bandamunda-Ranchi line). There is a rail link between Nuagaon and Purunapani for a distance of about 10 km. These two branch lines were constructed in 1953-54. Except the branch lines from Nuagaon to Purunapani and from Bimalgarh to Kiriburu, other lines are opened to passenger traffic.

Bimalgarh Talcher Rail Link Survey: The Railway authorities conducted preliminary engineering and traffic survey for rail link between Bimalgarh and Talcher in 1969 and 1970 respectively. The survey report has been submitted to the Government of India. Still today, the railway line has not been completed.

Box- 3: Excerpt from Media on Bimalgarh-Talcher Link

Following is an excerpt from [a report in ibnlive.com](#).

The State government has started work on development of a railway corridor through Choudwar to Rourkela to allow ease of inward and outward transportation of goods from the industrial hubs and mining belts along the region.

Land acquisition for the project, the first of its kind initiative by a State government, has already been initiated by the Industrial Infrastructure Development Corporation (Idco). The project would go on ground after the land acquisition and is targeted to be completed by 2015, said Idco CMD Priyabrata Patnaik on Friday.

The corridor involves development of extensive rail and road connectivity, along with provisioning of water supply and other infrastructural facilities. The corridor would encompass two track railway lines and six-lane road passing through the industrial hubs and the coal mining belts. New industrial areas and downstream units would be developed along the corridor.

Common infrastructure facilities under the corridor would solve the problems of inward and outward transportation of goods and minerals. The stretch would pass through the heart of coal mining operations in the State, which harbours about 65 billion tonne of reserves. The coal reserve in the Talcher belt only is around 43 billion tonne.

The corridor would cover 17 large and mega-industries, along with 57 other units, through the stretch from Choudwar to Rourkela. Traffic projection on the route is given out as 8.7 million tonne.

The route would have 163 km of railway track length and 465 km on road. As many as 308 minor bridges and 77 major bridges would have to be constructed on it, said Patnaik.

Water Ways, Ferries and Bridges: The rivers Brahmani, Ib, Sankha, and Koel flow in the District. The river Brahmani is not navigable owing to rocks and rapids: small dug-outs work up and down, but it is unsafe for boats carrying merchandise. In the rains, small boats carry goods down the Ib River to Sambalpur. The other two rivers are not suitable for navigation. There are ferry-ghats in almost all the rivers of the District. Now these ferry-ghats are maintained mainly by different Grama Panchayats.

Besides, a ferry ghat on the river Brahmani at Tumkela is maintained by the Public Works Department. This is an important ghat as it connects the headquarters town of Bonai Sub-Division with other parts of the District. Another ferry-ghat at Sundargarh on the river Ib is also maintained by the Sundargarh Municipality. These two ghats are leased out every year.

Boats: As mentioned earlier, small dugouts are generally used for crossing the rivers. There are about seventy ferry boats in the District.

Air transport: There is an air port at Rourkela owned and maintained by the Hindustan Steel Ltd., which is licensed for private use. The other upcoming airport is at Jharsuguda, which is at about 26 Km away from the District headquarter of Sundargarh.

Circuit Houses, P.W.D Inspection Bungalows, Revenue Rest Sheds And Forest Rest Houses:

There are circuit Houses at Sundargarh and Panposh and Public Works Department Inspection Bungalows at Kaintara, Sundargarh , Bargaon, Rajgangpur, Jangra, Rourkela, Bisra, Koira, Birmitrapur, Kalunga, Lahunipara, Banki, Kuarmunda and Darjin. There are also rest sheds at Bonaigarh, and Vedavyasa maintained by public works department. The Forest Department is also maintaining rest houses at Kahachhan, Ujalpur, Kanika, Tamra, Jamdihi, and Dolaisara. Besides, the Revenue Department also maintains one inspection bungalow at Bargaon and 55 rest-sheds (as shown below) in different parts of the District. Biringatoli, Panchra, Katkurbahal, Sabdega, Tangargaon, Bargaon, Ekma, Rungaon, Hemgir, Kanika, Lefripara, Gumardihi, Sargipali, Darlipali, Mangaspur, Bandhabahal, Bandega, Kinjirkela, Kundukela, Birbira, Majhapada, Khuntgaon, Khuntadara, Balisankara, Konkaira, Sanpatrapali, and Ujalpur (all in Sundargarh Sub-Division), Bargaon, Gopna, Kamarposh, Balanga, Jamdihi, Badalijor, Sankhposh, Kuliposh, Bandhabhuin, Mahulpada, Jamdora, Sarsora, Tanda, Tumkela, Dharnidharpali, Gurundia, Jarda, and Lamsi (all in Bonai Sub-Division), Uditnagar, Andali, Raiboga, Kumjharia, Kachanu, Hatibari, Nuagaon, Sarada, Birkeria, Jareikela, Vedavyasa, and Lathikata (all in Panposh Sub-Division). All these bungalows are meant to accommodate government officials touring on duty and when vacant are also available for reservation by the public on payment. At present, these are in bad shape and not in use in most cases due to lack of maintenance. Besides, the Steel authorities also maintain guest houses at Rourkela called 'Rourkela House'.

Posts, Telegraphs and Telephones

Before merger, there were 3 post offices in the ex-State of Bonai but there was no telegraph office. Gangpur ex-State had 13 post offices, six of them being combined post and Telegraphs Offices. Both the ex-States were served by the Indian Postal Department. Before 1970, all post Offices of Sundargarh District were coming under Samblapur headquarter. Since the 2nd March, 1970 a separate Postal Division for Sundargarh District has been created with headquarters at Sundargarh. One Superintendent has been placed in charge of the Division. In 2010, there are 3 head post offices, 81 Sub-Post Offices, 318 Branch offices, totalling to 402 units across the

District. Speed Post service is available from 84 offices and Instant Money order service is available in 80 offices. Block-wise details of the post offices and services available in the post offices are given in the Following table.

Table 104: Post Offices in Sundargarh District

Sl. No.	Year/ Block/ ULB	No. of Post Offices			Total	No. of Post Offices having	
		Head Post Office	Sub Post Office	Branch Post Office		Speed Post Service	Instant Money Order Service (IMO)
	Block						
1	Balisankara	0	2	29	31	2	2
2	Bargaon	0	1	20	21	1	1
3	Bisra	0	5	15	20	5	5
4	Bonaigarh	0	2	21	23	2	2
5	Gurundia	0	1	19	20	1	1
6	Hemgir	0	4	20	24	4	4
7	Koira	0	2	11	13	2	2
8	Kuarmunda	0	1	19	20	1	1
9	Kutra	0	2	15	17	2	1
10	Lahunipara	0	4	18	22	2	4
11	Lathikata	0	4	18	22	6	4
12	Lephripara	0	3	25	28	3	3
13	Nuagaon	0	2	9	11	2	2
14	Rajgangpur	0	3	11	14	3	3
15	Subdega	0	1	22	23	1	1
16	Sundargarh	0	3	22	25	3	3
17	Tangarpali	0	1	24	25	1	1
	ULB						
1	Biritrapur (M)	0	2	0	2	2	2
2	Rajgangpur (M)	0	3	0	3	3	3
3	Rourkela (M)	2	28	0	30	30	27
4	Sundargarh (M)	1	7	0	8	8	8
	Total in 2010-11	3	81	318	402	84	80
	Position in 2009-10	3	79	306	388	81	78

With the onset of the hi-speed data communication through internet, the business volumes of the post offices have lost significance. The India Posts has ventured into the field of financial services and concentrated more on Postal Life Insurance, accepting deposits through Savings Bank Account, Recurring Deposit Account, Monthly Income Schemes, Public Provident Fund, Time Deposit, Senior Citizen Savings Scheme, National Savings Certificate, disbursing government payments through e-FMS etc. Most recently, the India Posts has launched Postal ATM counters also.

Telephone Exchange: There are seven Telephone Exchanges in the District, located at Sundargarh, Rourkela, Rajgangpur, Bisra, Bonaigarh, and Birmitrapur. A small auto-exchange at Sundargarh was established in February, 1965, with the capacity of 50 lines. In 1962-63, it was converted to a central battery non-multiple 100-lines exchange. At Rourkela, a small 25 line exchange was installed in the office of the Chief Engineer, Township of Rourkela, in 1956. The next year, another 50 line exchange (central battery) was set up to be expanded to 400 lines in the following year. In 1961, the capacity of the exchange was increased to 700 lines. But the exchange failed to cope with the increasing telephone traffic resulting from the expansion of the steel plant and the growth of several ancillary industries in and around Rourkela. So in 1962, the 1800-lines Automatic Telephone Exchange, the first of its kind in the District, was commissioned. This exchange has 1472 direct working connections and 199 extensions. Another 1000 line auto-exchange has been opened at Rourkela Township since May 1962. It has 864 direct working connections and 22 extensions.

At present, the exchange has 92 working connections with 12 extensions. Block-wise details of landline phones, PCOs, Mobile phone users and Broadband connections are given in the following table.

Table 105: Telephones in Sundargarh District

Sl. No.	Year / Block / ULB	No. of fixed Land Line	No. of PCOs	No. of Mobile Users	No. of Broad Band Connections
BLOCK					
1	Balisankara	26	14	397	15
2	Bargaon	42	22	1256	16
3	Bisra	292	18	1354	14
4	Bonaigarh	79	12	2864	17
5	Gurundia	9	0	1956	15
6	Hemgir	173	18	3056	18
7	Koira	145	19	4562	19
8	Kuanrmunda	154	21	3267	21
9	Kutra	61	18	1653	13
10	Lahunipara	75	18	2785	11
11	Lathikata	104	28	4106	159
12	Lephripara	79	17	1256	58

Sl. No.	Year / Block / ULB	No. of fixed Land Line	No. of PCOs	No. of Mobile Users	No. of Broad Band Connections
13	Nuagaon	39	13	1853	22
14	Rajgaganpur	512	156	3364	206
15	Subdega	146	8	1462	82
16	Sundargarh	15	37	3289	228
17	Tangarpali	31	10	1159	25
	ULB				
1	Biramitrapur (M)	172	264	11652	321
2	Rajgagpur (M)	950	46	5021	602
3	Rourkela (M)	11724	1056	25369	3954
4	Sundargarh (M)	1236	59	4851	256
	Total in 2010-11	14082	1024	296523	6433
	Position in 2009-10	12561	1025	285611	5269

Radio & Wireless Systems and Stations

The radio plays an irreplaceable part in the life of an average Indian. The radio is everywhere – in the audio systems of cars and buses, in your mobile phone, at the mall, a portable tuner at your local tea shop, to name a few. There are numerous radio networks in India – ones which cater to the different sections and ideologies of people, some focusing on entertainment and fun, while some focusing on social issues and news. Earlier, radio service for common people was available in Short wave and medium wavelength. Now FM radio service is available in Rourkela, which is popularly known as 104 FM.

APPENDIX- XXVIII: Important Roads of the District maintained by the Public Works Department

Name of the road	classification	Important places through which it passes	Black topped (in km)	W.B.M. (in km)	Gravel (in km)	Total length (in km)	All weather/Fair weather
Jharsuguda-Sundargarh-Rourkela-Rajamunda-Keonjhar border road (portion from Gangpur ex-State boundary to Keonjhar border)	State High Way No.10	Sundargarh, Bargaon, Rajgangpur, Kansbahal, Panposh, Banki, Chandiposh, Darjin, Rajamunda, Lahunipara.	207	13	..	220	All weather
Barkot-Darjin road (From Bonai ex0State boundary to Lahunipara)	State High Way No. 10 A	Mahuldihi, Khuntagaon	1	10	18	29	Ditto
Sundargarh-Lefripara road	M.D.R. No. 27	Bandhapali, Surgura, Lefripara	7	19	1	27	Ditto
Karamdihi-Talsara-Luakara road	M.D.R. No. 30	Dumberbahal, Sabdega, Talsara	..	37	..	37	Ditto
Sulgura-Balichuan road	M.D.R. No. 29		..	..	6	6	Ditto
Kirai-Bamra road	M.D.R. No. 31	Dharuadihi	..	..	36	36	Ditto
Kukurbhuka-Ranchi road	M.D.R. No. 28	Lanjiberna, Dalki, Salangabahal	..	..	31.44	31.44	Fair weather
Barkot-Bonai-Rangamatia-Kalunga road	M.D.R. No. 26	Jhartarang, Tainsar, Tamra, Bonaikela, Gurundia, Uparapara	1	7	86	94	Ditto
Hatibari-Birmitrapur, Raiboga-salangabahal road	M.D.R. No. 28	Hatibari, Birmitrapur, Indrapur, Raiboga, Salangabahal	1.6	17.40	18.02	36.48	Ditto
Rourkela-bisra-Jareikela road	M.D.R. No. 32	Rourkela, Bisra, Jareikela	17.6	6.04	5.20	28.30	All weather
Gopapali-Birmitrapur road	M.D.R. No. 32	Birmitrapur,	21	..	..	21	Ditto

		Kuarmunda						
Rajamunda-Bonaigarh road	O.D.R. No.	Rajamunda, Bonaigarh	4	2	2	8	Fair weather	
Balichuan-Baligaon-Benijharia-Hemgiri-Kanika-Belpahar road	C.V.R.	Hemgir, Kanika	..	..	..	46 (earthen)	Ditto
Duduka-Gopalpur-Taparia	C.V.R.	Gopalpur	..	..	..	29(earthen)	Ditto
Lefripara-Gurundiadihi-tildega-Bandhabahal road	C.V.R.	Gurundiadihi, Tildega, Bondabahal	..	..	..	50(earthen)	Ditto
Talsara-Bandega-Ludukidih road	C.V.R.	bandega	..	..	..	27(earthen)	Ditto
Tangargaon-Rouldega road	C.V.R.	Ditto	..	..	..	15(earthen)	Ditto
Lanjiberna-Khatkurbahal-Panchara-Ekma-Tangargaon-Sabdega road	C.V.R.	Khatkurbahal, Panchara, Ekma, Tangargaon.	..	..	..	59(earthen)	Ditto
Jamdihi-Soyamba-Balijor-Bihar border road	C.V.R.	Soyamba, Balojor	..	..	..	13(earthen)	Ditto
Kododihi-Budhbhuin-Khandadhar road	C.V.R.	Budhabhuin	..	..	..	17(earthen)	Ditto
Kusumi-Jarda-Ramachinda-Gurundia road	C.V.R.	Jarda, Ramachinda	..	..	..	30(earthen)	Ditto
Bisra-Birkera Manko-Lathikata road	C.V.R.	Bisra-Birkera-Manki-Lathikata road.	..	..	..	24(earthen)	Ditto
Nuagaon-Bisra road	C.V.R.	Nuagaon, Khuntageni-Bisra.	..	..	..	20.80(earthen)	Ditto
Kuarmunda, Kaimadi, Hatibari, Puranapani, Nuagaon	C.V.R.	Kuarmunda, Kaimadi, Hatibari, Puranapani, Nuagaon.	21	..	..	29.20(Earthen)	Ditto

APPENDIX- XXIX: List of Major Bridges of Sundargarh District

Sl. No.	Name of the Bridge	Number and Length of Spans	Type of Bridge
1.	Ib Bridge at 2/0 of Sundargarh-Lefripara road.	9 spans of 30'-0" and 11 spans of 50'-0" each.	R.C.C. Bridge
2.	Tamaga nullah	5 spans of 30'-0" each	Ditto
3.	Ichha bridge	9 spans of 50'-0" each	Ditto
4.	Safai bridge on Gariamal-Bamra road	2 spans of 60'-0" each and 2 spans of 42'-6" each.	Ditto
5.	Safai bridge on Gariamal-Bamra road	11 spans of 50'-0" each	Ditto
6.	Bilagarh bridge on S.H. 10	7 spans of 50'-0" each	Ditto
7.	Kalunga nullah bridge	4 spans of 45'-0" each	Ditto
8.	Badsemji bridge on S.H. 10	7 spans of 50'-0" each	Ditto
9.	Balijor bridge on Barkot-Bonai road	4 spans of 30'-0" each	Ditto
10.	Guradhi bridge on S.H. 10	1 span of 30'-0" each	Ditto
11.	Brahmani bridge on S.H. 10	7 central spans of 160'-0' and 2 end spans of 158'-0".	R.C.C. press tressed bridge
12.	Jamdihi bridge at 23/6 of Rajamunda-Koira road.	3 spans of 40'-0"	R.C.C. Bridge
13.	Bridge over Karapani nullah	3 spans of 50'-0" and 2 spans of 20'-0" each.	Ditto
14.	Kuradhi bridge on S.H. 10	8 spans of 50'-0" each	Ditto
15.	Lahunipara bridge	4 spans of 40'-0"	Ditto

Chapter-VIII

ECONOMIC TRENDS

In the ex-State of Bonai (present Bonai Sub-Division), during the beginning of the twentieth century almost in every village there were small settlements of Panas, who wave coarse cotton which somewhat finer than those woven by the Panas. These people wave the clothes for the village community. There were also the village plough –makers and potters who worked for two or three villages in the neighbourhood. The jungle tribes collected tusser, lac, myrobalans, sabai grass and other jungle products for the contractors and received payment in cash of kind. Bamboo mat and wicker work were done by the Turi, Dom, and Khond castes. Brass and bronze vessels, dishes and ornaments of all usual forms in rough description were made by Kansari caste, Iron something was done by men of the Kumar caste and they prepared fine domestic and agricultural implements. Gold washing was done by the Jhora Caste. Gold was obtained from the sands in the bed of the river Brahmani and its tributary streams. The earnings of a Jhora gold-washer averaged about twenty paise per day. A unique occupation was that of the manufacture of vessels of soap-stone or Khari for culinary and other domestic use. This occupation was followed by men of the Bhumij caste. Very neat vessels of all the usual domestic shapes and sizes were turned out of this stone. The number of persons engaged in these occupations is not available.

During the beginning of the twentieth century, in the ex-State of Gangpur (present Sundargarh and Panposh Sub-Division), the principal occupation of the people was agriculture. Out of the total population 84.5 per cent were agriculturists, 10.8 per cent followed industry, 1.1 per cent were engaged in trade, and only 0.4 per cent followed profession. There were no indigenous manufactures. The village weavers prepared the cloth required by the people and eked out a precarious livelihood owing to the competition of mill-spun goods. The lime quarries at Bisra; two large timber companies with their headquarters at Rourkela, and Kalunga; and the manganese quarries employed a considerable amount of labour. Gold washing was carried out in most of the rivers and streams by Jhora Gonds, who thus gained a sustainable livelihood.

After the merger of the ex-States, a regular Census enumeration was undertaken in 1951. The Census of 1951 shows that of the total population of 552,203 as many as 479,415 pursued agricultural occupation as their principal means of livelihood. Thus about 86.82 per cent of the total population depends on agriculture for their living, and the remaining 13.18 per cent on industries and services. Of those who lived on agriculture 415,218 persons (69.29 percent) belonged to the class of cultivators of land wholly or mainly owned by themselves and their dependants, 47,749

persons (8.65 per cent) were agricultural labourers, 15,051 persons (2.73 percent) were cultivators of land unwound and their dependants, and only 1,397 persons (0.25 per cent) were non-cultivating owners of land and their dependants. Only 25,305 persons (4.78 per cent) derived their principal means of livelihood from production other than cultivation and 37,398 persons (6.77 per cent) were dependent on other services and miscellaneous sources of income. Only 7,759 persons (1.42 per cent) obtained their income from commerce, while a small number of 2,326 persons (0.42 per cent) depend on transport.

District Domestic Product- Its Composition and Trends

Sundargarh District emerged from its agricultural base to a new identity, i.e. industrial District after 1970. As per the Census figures of 1951, 80.67 per cent of the population of the District was dependent upon agriculture. Against this figure, only 16.57 per cent of the population has been dependent upon agriculture in 2004-05.

As per the Census 2011, District Domestic Product is estimated on the basis of the income generated from different sectors of the economy, i.e. industry, agriculture, animal husbandry, dairy, fisheries, forestry etc. Sundargarh is predominantly a tribal District. It has varied topography, rich mineral resource base and moderate in agriculture prospects. Traditionally people are associated with agriculture and forestry. Despite industrial development in the mineral rich areas of the District, the primary occupation is still dominantly followed.

As detailed in Chapter-IV and V, the domestic products of the District flow from varied sources, i.e. agriculture, forestry, animal husbandry, fishery, mining, manufacturing of varied types of goods. The service sector also contributes to the economy of the District.

The domestic product index decides the standard of living that people would live at a place. The standard of living has wide meaning. Human beings are the end of all development activities. The prime aim of the development activities is to enhance human achievement, confer freedom, and enhance capability to make their own choices. Health, education, income and gender issues are the major indicators of the Human Development. So far as Human Development in the District is concerned Sundargarh District the Human Development Report-2004 of Odisha finds the District as one among the top five Districts of Odisha having a value of 0.68 against the State average of 0.57. Similarly, in the Gender Development Index, it also stands in the top five at second rank in the State. Similarly, the same report finds that the mean poverty ratio of the State in 2004 was 51.98 per cent. The poverty ratio of Sundargarh District was about 38 per cent then, being less than the State average.

Table 106: Top Five and Bottom Five Districts of Odisha in terms of HDI and GDI Values

HDI Value Odisha (0.57)		GDI Value Odisha (0.53)	
Top Five	Bottom Five	Top Five	Bottom Five
Khurda (0.736)	Malkangiri (0.370)	Jharsuguda (0.687)	Malkangiri (0.362)
Jharsuguda (0.722)	Kandhamal (0.389)	Sundargarh (0.659)	Kandhamal (0.372)
Cuttack (0.695)	Gajapati (0.431)	Deogarh (0.647)	Jajpur (0.386)
Sundargarh (0.683)	Koraput (0.431)	Angul (0.637)	Gajapati (0.401)
Angul (0.663)	Nabarangpur (0.436)	Cuttack (0.618)	Koraput (0.415)

According to the 1971 Census, the District had a total population of 1,030,758 as against, 748,617 of 1961 Census. The total number of workers in the District is 324,122 of which 293,053 are males and 31,069 are females. The number of workers constitutes 31.6 per cent of the total population. In the total working population cultivators, agricultural labourers, and other residual workers respectively accounted for 43.0 per cent, 16.6 per cent and 40.4 per cent in 1971.

As per 2011 Census, 41.47 per cent of the total population of the District have participated in works of different nature and have contributed to the GDDP of the District. Since the year 1971, the trend of work participation is in the rise along with the increase of the population. The population in the working category is very important for the economy. Their labour resources are utilised and goods and services are produced in various sectors of the economy. Table-2 contains detailed information on year-wise variation of work force in the District. The work force participation rates in different Blocks and ULBs of the District as per the Census 1991 and Census 2011 figures is given at **APPENDIX-XXX**.

Table 107: Population and Workers in Sundargarh District.

Year	Population			Total workers			Work participation rate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1971	530836	499922	1030758	293053	31069	324122	55.20	6.21	31.14
1981	692749	645122	1337871	380238	141445	521683	54.89	21.93	38.99
1991	812707	760910	1573617	431991	188681	620672	53.15	24.80	39.44
2001	935601	895072	1830673	480285	258518	738803	51.33	28.88	40.36
2011	1061147	1032290	2093437	584687	288540	873227	55.10	27.95	41.71

The District has a huge work force. The percentage of the work force of the Sundargarh District is higher than the State average. The work participation ratio in the rural area was 46.6 per cent in the year 2011 in Sundargarh District. The corresponding figure for the State was 43.2 per cent. The detailed comparison between the work participation-ratio of the District with that of the State is mentioned in Table.3.

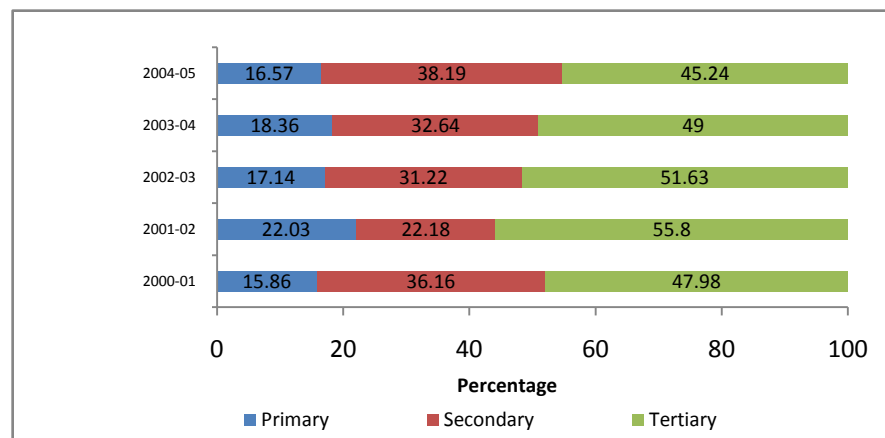
Table 108: Work Participation rate of Sundargarh District and the State of Odisha (Figures in per cent)

Year	2001			2011			Change		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Sundargarh	46.6	28.4	40.4	46.2	33.6	41.7	-0.4	5.2	1.3
Odisha	40.2	30.6	38.8	43.2	34.8	41.8	3	4.2	3

GDDP, its composition and trends and contribution of Sundargarh District to the GSDP of Odisha:

Magnitude of contribution of the different sectors of the economy to the GSDP in the District is quite evident from figure.1. There have always been structural changes in the contribution of the sectors. From 2000-01 to 2004-05, the magnitude of contribution of the primary sector, i.e. Agriculture, animal husbandry, fishery and forestry of the economy to the GDDP of the District has always been at lower side at the current price level. There is sizable presence of the share of tertiary, i.e. service sector. The contribution of the service sector is largely governed by the changes taking place in the primary and secondary sector.

Figure 3 : Sectoral Composition of Economy of Sundargarh



Sectoral Composition of the economy of Sundargarh District (at current price level)

Despite, rich mineral resource base and development of manufacturing units as discussed in Chapter-V, the share from the secondary sector is yet to be tapped at a higher rate. As in Fig.1, the share of the agriculture sector in the Gross District Domestic Product was 15.86 per cent at the present price level in 2000-2001. It has increased to 22.03 per cent in 2001-02. In 2002-03, the share of agriculture was 17.14 per cent, in 2003-04, it was 18.36 per cent and in 2004-05, it was at 16.57 per cent. There are several reasons for lower performance of primary sector to the economy of the District. One of the main reasons is the size of the operational land holdings. 57.13 per cent of the operational holdings of the District are of average size of 0.59 hectare. The balance holdings are in three categories, i.e. semi medium, medium and large holdings, i.e. above 10 hectare in size make 3.23 per cent of the total landholdings. Small size land holdings make use of machineries un-economical. Units of agricultural input become costlier. Second reason is that the District has 8,73,227 working population. Out of this huge population 4,37,600 are involved in agriculture. Out of the total work force in agriculture, 58per cent are agricultural labourers. They are either small or marginal or landless farmers. The third reason of lower contribution of agriculture is due to non-availability of adequate irrigation facility and climatic fluctuations.

Landholding:

Operational land holdings as per the Odisha Agriculture Statistics for the year 2010-11 in the District are mentioned below. Large holdings account for only 0.25 per cent of the total no. of holdings. 52.44 per cent of the holdings are of marginal size. 23.68per cent of the area is under marginal size holdings (small farmers) and 3.23 per cent of the total land holding belongs to large farmers. Now, the farming sector has been caught in the 'production limitation trap', particularly in crop production. The large farmers have come to adopt 'share cropping' with small farmers on produce-sharing basis of share-cropping and therefore, the maximum production possibility has witnessed a decline. The marginal farmers' holdings are no more 'economic' to sustain high cost of cultivation following upward revision of minimum wage, increased cost of fertilizers, pesticides and uncertainty in water and land management due to total dependence on rainfall.

**Table 109: Distribution of Operational Holdings in Sundargarh District:
2010-11**

Category	No. of Holdings	Percent of the Total Holdings	Area under the Holding Category (ha)	Percentage of Total Area	Average Holding Size (in ha)
Marginal (<1ha)	111447	52.44	66627	23.68	0.59
Small (1-2 ha)	65737	30.93	94096	33.45	1.43
Semi-medium (2-4 ha)	28392	13.36	76311	27.13	2.68
Medium (4-10 ha)	6425	3.02	35192	12.51	5.47
Large (>10 ha)	524	0.25	9085	3.23	17.33
Total	212525	100	281311	100	1.32

Secondary and Tertiary Sectors:

Owing to rich mineral resources and industrial infrastructure of the District, the secondary sector plays vitally controls the GDDP of the District. The share of the secondary sector was 36.16 per cent of the GDDP of the District in 2000-01 at the current price level. It was 22.18 per cent, 31.22 per cent, 32.64 per cent and 38.19 per cent of the GDDP of the District respectively in 20001-02, 2002-03, 2003-04 and 2004-05.

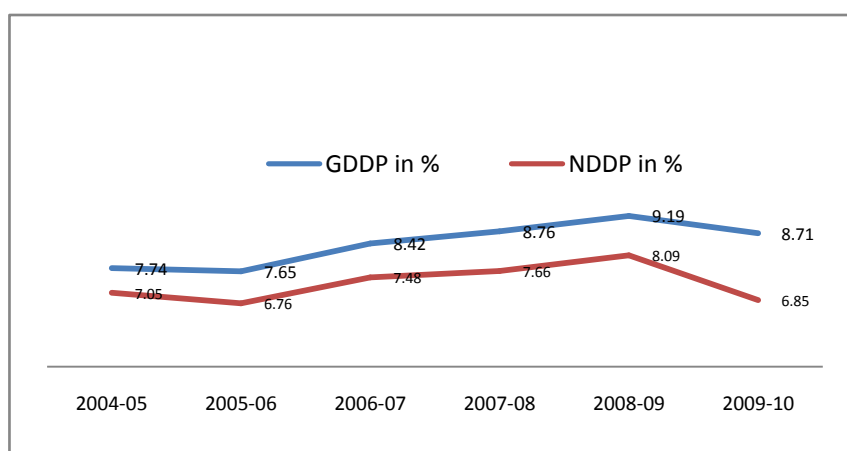
The share of the service sector in the GDDP of the District is always higher in all the years. This is resulted due to higher wage rate for the services. Industrialisation and urbanisation has caused growth of population. The growing population creates more employment opportunity. The Government organisations, large-scale manufacturing units provide higher wage rate. From the year 2000-01 to 2004-05, at the current price level, the contribution of tertiary sector to the economy of the District in terms of GDDP of the District was respectively 47.98 per cent, 55.8 per cent, 51.63 per cent, 49 per cent and 45.24 per cent. The detailed figures on sectoral composition of the Gross District Domestic Product of Sundargarh District are given at **Appendix-XXXI (Sectoral composition of the District Economy in Sundargarh District, 2000-01 to 2004-05)**.

In 2004-05, the Gross District Domestic Product (GDDP) of Sundargarh District was Rs. 601,481 lakh. In 2009-10 it was 1,420,007 lakh. The increase in the GDDP at the current price due to the contribution in the production form different sectors has been 136 per cent between 2004-05 and 2009-10. The Net District Domestic Product of the District in the year 2004-05 was estimated at Rs. 479,123 lakh against the GDDP of Rs. 601,481 lakh.

Table 110: Gross District Domestic Product (GDDP) of Sundargarh District and the State of Odisha from 2004-05 to 2010-11

Year	GDDP at price of 2009-10 of Sundargarh District (Rs)	GDDP at price of 2009-10 of Odisha (Rs)
2004-05	601481	7772943
2005-06	651194	8509649
2006-07	857603	10183947
2007-08	1132011	12927445
2008-09	1364780	14849071
2009-10	1420007	16294643
2010-11	1746635	19752990

Figure 4: Trend of Contribution of Sundargarh District to the State Economy, 2004-05 to 2009-10 at the Price Level of 2012-13



The share of Sundargarh District to the economy of the State in shape of Gross Domestic Product (GDP) is 8 per cent which is more than double of the average District share of 3.33 per cent. So far as Net Domestic Product (NDP) of the State is concerned, Sundargarh has contributed 7 per cent to the Net Domestic Product of the State at the price level of 2004-05.

GDDP growth rate of Sundargarh District, calculated at the price level of 2012-13 has been higher in comparison to that of the State growth rate in the year 2005-06 to 2008-09, whereas, it has been lower in 2009-10. Growth rate of NDDP of the District in comparison to that of the State, it was lower in 2005-06 and again in 2009-10. The growth rate of the NDDP of the District was negative in 2009-10.

Figure 5: Growth rate of GDDP of Sundargarh District and State Economy (in %) at price level of 2012-13

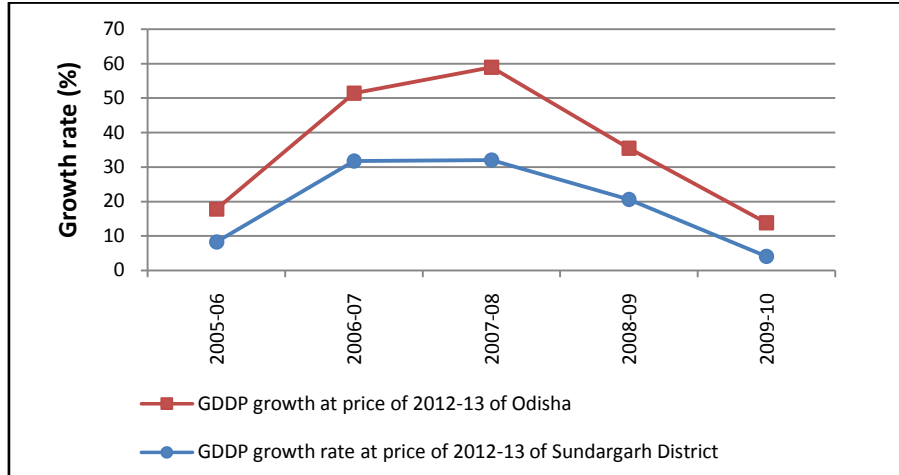
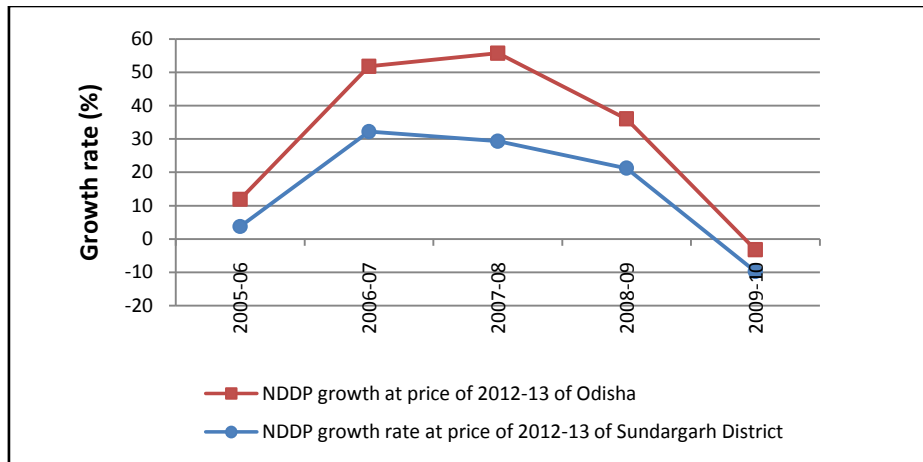


Figure 6: Growth rate of Net District Domestic Product (NDDP) of Sundargarh District and State Economy (in %) at price level of 2012-13



General Level of Prices: Wage Payment Systems and Wage Rate for Different Categories of Workers

General level of price in the District depends upon the prevailing price level of the State and the Central level. The essential inputs required for farming activities has considerably high. As per the figures of the Directorate of Economics and Statistics, Odisha, Bhubaneswar, a pair of Bullock costed about Rs. 12494.44 in 2010-11. Big size wooden plough was available at Rs. 198.84 in the year 2009-10. An Iron plough was available at Rs. 213.07, spade at Rs. 144.16, Sickle at Rs. 56.33, and axe at Rs. 151.6 to the

farmers during the same period. The cost of a quintal of local paddy seed was Rs. 742.73 in 2008-09 and Rs. 873.00 in 2010-11. The cost of HYV seed of paddy per quintal was Rs. 920.00 in 2010-11.

Labour cost for skilled labourers like carpenter, mason and tractor driver were at Rs. 144.00, 163.33 and 143.89 per day during 2010-11. The daily wage earned by male agricultural field labourer was Rs. 72.71 and female labourer was Rs. 61.84 during the year 2010-11. Wage of other agricultural labourer (male) was Rs. 90.52 whereas for female, it was Rs. 71.09. The actual wage rate of the workers in the primary sector of the economy in the District is still lower than the prescribed minimum wage rates.

Minimum Wage System:

Minimum Wage rates in different sectors of the economy are governed by the Government policy in the centre and the State from time to time. The latest wage rates in agriculture, domestic employment, shop establishment, construction and industry as in 2011 is reported as under;

Table 111: Wage Rates in Odisha

Employment Potential	Highly Skilled	Paid	Semi-Skilled	Paid	Un skilled	Paid
Agriculture	Male	72.71				
Agriculture	Female	71.09				
Carpenter		144.0				
Mason		163.33				
Tractor driver		143.89				

General economic condition of the workers, especially those who are entirely depending upon farming is not so good because of the wide gap between wages earned and the prices of essential commodities in the retail market. From the wholesale price level of the important food crops, i.e.. Paddy, ragi, moong, biri, kulthi, arhar it is generally seen that the all items except paddy has registered high increase between 2008-09 and 2010-11. The retail prices of the essential commodities are also in rise. Especially, pulses, i.e. moong and arhar has registered sharp rise in the retail price in 2010.11. The general trend of price is rising in respect of pulses and onion.

Standard of Living

Sundargarh District has higher HDI and GDI values. It has also higher contributions to the State Economy. The District stands in the northern NSS region where the estimate of poverty was 70.5 per cent in 2004-05. It came down to 41.70per cent in the year 2009-10. The estimate for the region is

39.97 per cent in 2010-11. As per the poverty estimates for the region in which the District is situated, the trend is declining. The Human Development Report-2004 finds the average poverty estimate for Sundargarh District around 38per cent, which is well below the State average.

Standard of living is a relative concept. Per-capita income is an important indicator of standard of living of people. The general trend of per capita income in the State is generally in rising trend. At the price level of 2004-05 the per-capita income in the State in the year 2006-07 was Rs. 21585.00. By the end of 11th Five year Plan, in the year, 2011-12, it was Rs. 25847.00. The per-capita income for Sundargarh District for the above periods were at Rs. 29788.00 and Rs. 29539.00, respectively Sundargarh is sixth among the ten Districts where the per-capita income is higher than the State average. Such Districts are Jharsuguda, Kandhamal, Angul, Khordha, Sambalpur, Sundargarh, Cuttack, Keonjhar, Koraput and Jagatsinghpur. A detailed analysis of the year wise per-capita income of Sundargarh District and the average of the State from, 2004-05 to 2010-11 is given below.

Table 112: Comparison between per-capita income (NNDP) of Sundargarh District and Odisha State

Year	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
District per capita NDDP	25029	24686	29788	32974	36128	30100	29539
State per-capita NDDP	17650	18194	20194	21640	22963	22846	23968

Employment and Un-Employment Situation in the District:

Another measure of the standard of living is employment. Higher growth trajectory is essential for expanding income and employment opportunities. Gainful employment is an important condition for food security, economic security and sustainable livelihood. The actual rate of expansion of labour force in the State usually depends on several factors that include growth of population, more population in working age, labour force participation rate, proportion of marginal workers to main workers, educational enrolment at higher levels and reduction in school dropout rates.

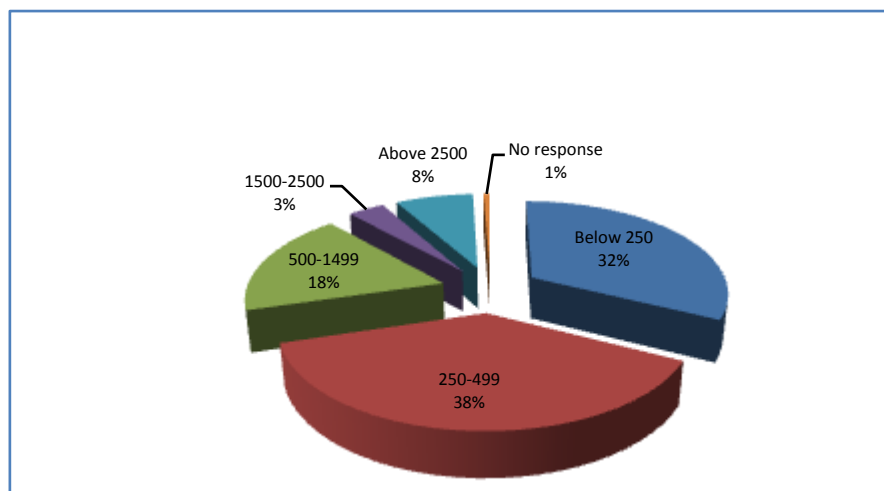
Out of the above enumerated elements of the work force, the percentage of population in the work force is steadily rising in the District, as detailed in Table No. 107. Secondly, the work participation rate of the District is at higher level of the State rate. Thirdly, the main workers in the District as per 2011 Census is 61per cent of the total workforce, whereas the marginal workers, who are enumerated in two categories on the length of employment per annum, i.e. those who work for 3 to 6 months and those who work for

less than 3 months, combined together form 49per cent of the workforce. On the fourth factor, i.e. educational enrolment, adequate year-wise information is not available. The information available for 3 years, i.e. 2006, 2009 and 2011 is elaborated in **APPENDIX- XXXIII**.

On analysis of the figures in Appendix-XXXIII, it is clear that the District has huge number of educated job seeker. In the year 2011, there were 61459 no. of names in the live registers of all the three employment exchanges, i.e. Sundargarh, Rourkela and Bonai. Among these job seekers 51per cent were matriculates. Most of them were in transition to higher qualification in the subsequent years. Similar is the case of intermediates and graduates, who make 28per cent of the job seekers. Most of the intermediate and graduate candidates are also in their academic transition. Engineering Diploma holders are 16.4per cent of the job seekers.

BPL estimates: BPL estimate is also an indicator of the standard of living of the people. On the basis of the estimate of BPL out of 2,25,696 households in 1992, 167622 households, constituting 74.27 per cent of the total, were surveyed in BPL category. In the survey year 1997, the no. of BPL families were 185696 against the total families of 285141, constituting 65.22 per cent of the total. Over five years between the two surveys, numbers of BPL families were reduced by 9.05 per cent. A block-wise detail of the households and BPL families is given at **Appendix-.XXXII**.

Figure 7: Income Distribution in Sundargarh District- 2002



Distribution of income: The BPL survey conducted in the year 2002 classified the households on the basis of monthly income. In the District 32.42per cent of the houses have less than 250 rupees monthly income. The

percentage of households in the monthly income range of Rs. 250-499, 500-1499, 1500-2500 and above 2500 are respectively 37.91, 17.98, 3.53 and 7.55 percent.

Distribution of Household assets: As per a random survey of 1558 households across all the Blocks on possession of durable assets by the households, 20.2 per cent of households have colour television and 5.8per cent have Black and White television. Refrigerators are available in 7.3per cent households, bi-cycles in 78.3per cent households, motor bikes in 13 per cent households, mobile phones in 47 per cent households, land phones in 0.7per cent households and tractors in 1.5 per cent households are possessed.

Housing types: In the preliminary field study conducted in 1558 random samples across the District in rural areas in different Blocks, 67.2 per cent of the houses are kutcha, 10.6 per cent are pucca and 22.2 per cent are mixed houses. The corresponding figure for the BPL households is 75.3 per cent, 4.9 per cent and 19.8 per cent respectively. For APL families, the corresponding figures are 41.6 per cent, 23.9 per cent and 34.5 per cent.

APPENDIX- XXX: Work Participation Rates in Block and ULBs in Sundargarh District (1991 and 2011 Census)

Sl. No.	Name of Block/ ULB	Work Participation Rate			Main Worker to Total Worker (per cent)		Marginal Worker to Total Worker (per cent)		Main Worker to Total Population (per cent)		Marginal Worker to Total (per cent) Population	
		1991	2001	2011	1991	2001	1991	2001	1991	2001	1991	2001
1	Balisankara	47.01	50.31		72.37	53.04	27.63	46.96	34.02	26.68	12.99	23.63
2	Bargaon	49.92	46.73		71.02	57.20	28.98	42.80	35.45	26.73	14.47	20.00
3	Bisra	39.94	35.72		78.34	66.27	21.66	33.73	31.28	23.67	8.65	12.05
4	Bonaigarh	46.05	48.69		73.81	51.39	26.19	48.61	33.99	25.02	12.06	23.67
5	Gurundia	48.59	50.79		78.12	44.66	21.88	55.34	37.95	22.68	10.63	28.11
6	Hemgiri	43.94	54.84		81.33	55.98	18.67	44.02	35.74	30.70	8.20	24.14
7	Koida	42.50	42.18		83.37	68.82	16.63	31.18	35.43	29.03	7.07	13.15
8	Kuarmunda	40.00	45.24		79.32	51.24	20.68	48.76	31.73	23.18	8.27	22.06
9	Kutra	40.57	43.55		77.27	59.63	22.73	40.37	31.35	25.97	9.22	17.58
10	Lahunipara	48.16	45.84		77.48	51.83	22.52	48.17	37.31	23.76	10.84	22.08
11	Lathikata	38.05	37.71		81.61	69.46	18.39	30.54	31.05	26.19	7.00	11.52
12	Lephipada	48.53	52.87		73.38	54.76	26.62	45.24	35.61	28.95	12.92	23.92
13	Nuagaon	46.13	41.96		73.80	51.27	26.20	38.73	34.04	25.71	12.09	16.25
14	Rajgangpur	41.41	32.71		77.09	66.51	22.91	33.49	31.92	21.75	9.49	10.95
15	Subdega	48.29	48.08		75.97	51.97	24.03	48.03	36.69	24.99	11.60	23.09
16	Sundargarh	46.34	57.63		73.46	58.30	26.54	41.70	34.04	33.59	12.30	24.03
17	Tangarpali	48.40	50.48		78.15	59.13	21.85	40.87	37.82	29.85	10.58	20.63
	Rural Total	44.88	45.38		76.61	57.77	23.39	42.23	34.38	26.21	10.50	19.16
	ULB											
1	Birmitrapur	28.72	29.55		99.26	81.96	0.74	18.04	28.50	24.22	0.21	5.33
2	Rajgangpur	30.51	27.13		96.15	89.55	3.85	10.45	29.33	24.29	1.18	2.84
3	Rourkela	31.01	28.58		99.29	93.26	0.71	6.74	30.79	26.65	0.22	1.93
4	Sundargarh	28.35	28.73		97.75	89.02	2.25	10.98	27.71	25.57	0.64	3.15
	Urban Total	30.28	28.53		98.59	92.05	1.41	7.95	29.85	26.26	0.43	2.27
	Sundargarh District	42.13	40.36		79.59	64.99	20.41	35.01	33.53	26.23	8.60	14.13

APPENDIX- XXXI: Sectoral Composition of the District Economy in Sundargarh District, 2000-01 to 2004-05

Sector	2000-01		2001-02		2002-03		2003-04		2004-05		
	GDDP Current Price	GDDP 1999-00 price	GDDP Current Price	GDDP 1999-00 price	GDDP Current Price	GDDP 1999-00 price	GDDP Current Price	GDDP 1999-00 price	GDDP Current Price	GDDP 1999-00 price	
Agriculture sector	Agriculture	12.14	12.59	17.73	18.59	13.86	12.94	14.74	14.57	13.78	13.04
	Forestry and logging	3.35	3.3	3.77	3.77	2.81	3.48	3.2	2.93	2.44	2.56
	Fishing	0.37	0.33	0.53	0.47	0.47	0.42	0.42	0.4	0.35	0.34
	Total of Agriculture sector	15.86	16.22	22.03	22.83	17.14	16.84	18.36	17.9	16.57	15.94
Industry sector	Mining and quarrying	5.82	5.85	6.33	6.21	5.43	5.53	6.36	6.51	7.09	6.68
	Registered MFG	26.83	26.68	11.82	11.89	23.02	23.4	22.79	23.04	27.67	27.88
	Un-registered MFG	1.43	1.49	1.48	1.57	1.28	1.34	1.17	1.21	0.98	1.02
	Manufacturing	28.26	28.17	13.3	13.46	24.3	24.74	23.96	24.25	28.65	28.9
	Electricity, Gas and water supply	2.08	1.85	2.55	2.1	1.49	1.22	2.32	1.87	2.45	1.96
	Total of Industry Sector	36.16	35.87	22.18	21.77	31.22	31.49	32.64	32.63	38.19	37.54
Service Sector	Construction	5.65	5.62	5.95	5.88	5.63	5.56	4.17	4.18	4.01	4.1
	Trade, hotel and restaurants	8.59	8.3	9.18	8.8	8.91	8.58	10.22	9.88	10.13	9.41
	Railways	5.18	5.46	6.44	6.67	6.05	6.28	5.61	5.95	5.17	5.5
	Transport by other means	3.65	3.62	4.54	4.61	4.2	4.28	4.33	4.47	4.44	4.66
	Storage	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.03
	Communication	1.49	1.68	1.66	1.88	1.48	1.97	1.6	2.29	1.53	2.39
	Banking and Insurance	3.18	3.2	4.32	4.13	4.33	4.13	3.94	3.64	3.32	3.45
	Real eState , ownership of dwelling, legal and business Services	6.42	6.24	8.14	7.4	7.46	6.62	6.91	6.05	6.03	5.48
	Public Administration	3.95	3.91	4.49	4.55	3.62	3.71	3.33	3.46	2.89	3.06
	Other services	9.84	9.85	11.04	11.44	9.92	10.51	8.86	9.52	7.7	8.44
	Total of service sector	47.98	47.91	55.8	55.4	51.63	51.67	49	49.47	45.24	46.52

APPENDIX- XXXII: Status of BPL Households in Sundargarh District: 1992 and 1997

Sl No.	Name of the Block	Rural BPL Survey 1992			Rural BPL Survey 1997			Difference in BPL from 1992-1997
		Total Household (Number)	Total BPL Household (Number)	Total BPL Household (Percentage)	Total Household (Number)	Total BPL Household (Number)	Total BPL Household (Percentage)	
1	Balisankara	14,160	10,391	73.38	17,739	11,275	63.56	-9.82
2	Bargaon	11,468	9,440	82.32	14,368	11,452	79.70	-2.62
3	Bisra	10,024	7,545	75.27	13,224	5,843	44.18	-31.09
4	Bonaigarh	11,076	8,549	77.18	15,359	9,229	60.09	-17.09
5	Gurundia	10,111	8,564	84.7	13,760	12,202	88.68	3.98
6	Hemgiri	14,527	11,740	80.82	17,702	8,649	48.86	-31.96
7	Koida	14,207	7,699	54.19	17,364	11,106	63.96	9.77
8	Kuarmunda	13,546	11,552	85.28	20,483	14,689	71.71	-13.57
9	Kutra	11,936	10,115	84.74	15,732	8,893	56.53	-28.21
10	Lahunipara	15,457	12,959	83.84	14,781	14,653	99.13	15.29
11	Lathikata	22,408	13,120	58.55	25,231	14,077	55.79	-2.76
12	Lephipada	14,159	11,050	78.04	15,671	9,748	62.20	-15.84
13	Nuagaon	15,181	11,010	72.52	21,440	17,244	80.43	7.91
14	Rajgangpur	12,013	8,153	67.87	16,884	11,944	70.74	2.87
15	Subdega	11,429	7,695	67.33	13,742	6,696	48.73	-18.6
16	Sundargarh	12,560	9,264	73.76	15,837	8,675	54.78	-18.98
17	Tangarpali	11,434	8,776	76.75	15,824	9,594	60.63	-16.12
	Total	225,696	167,622	74.27	285,141	185,969	65.22	-9.05

APPENDIX- XXXIII: Qualification-wise Registration and Placement in Sundargarh District

Year	Registration and placement details	Matric	Intermediate	Qualification								TOTAL	
				Graduate			Post graduate			Diploma holder			
				General	Technical	Other	General	Technical	Other	Engineering	Other		
2006	Registration	7223	1889	916	0	0	0	0	0	0	254	12	10294
	Placement	18	4	4	0	0	0	0	0	0	2	0	28
	Live register	34084	7588	4377	0	0	0	0	0	0	1600	25	47674
2009	Registration	4122	2262	1150	0	0	0	0	0	0	267	0	7801
	Placement	85	28	12	0	0	0	0	0	0	22	0	147
	Live register	40057	8069	4796	0	0	0	0	0	0	1223	0	44145
2011	Registration	7024	4381	1818	0	0	0	0	0	0	852	1172	15247
	Placement	28	11	5	0	0	0	0	0	0	8	30	82
	Live register	31477	10589	6672	0	0	0	0	0	0	2638	10082	61459

Chapter- IX

GENERAL REVENUE ADMINISTRATION

District Administration: General Overview

Sundargarh District was constituted on the 1st January, 1948, by merger of two ex–States of Gangpur and Bonai with Odisha. The District has 3 Sub-Divisions, namely, Sundargarh, Panposh and Bonai, 18 Tahasil, 17 Blocks and 4 Urban local bodies. Rourkela was declared as Municipal Corporation as per Notification No.22749 dt.14.11.14 with an existing Municipality area Ward No. 1 to 33 with Jagda, Gopapali, Brahmanitarang, Sana Brahmanitarang, Jhartarang and Unit-48 (Nabakrushna Nagar, Tala Balijodi, IDL Colony, Gopabandhunagar, Bhanja Colony, Bada Sona Parbat & Dharamdihi) of 53.29 sq. Kms comprising 26 Revenues Villages bounded by the river (Koel and the Sankah) in north, Lathikata Panchayat Samiti area in south, Bisra Panchayat Samiti area in East and Lathikata Panchayat Samiti area in west side.

Collector and District Magistrate is the administrative head of the District. His headquarter is at Sundargarh town. He is assisted by two Additional District Magistrates, i.e. Additional District Magistrate of Sundargarh and Additional District Magistrate of Rourkela. The District Office of the Collector is equipped with 2 posts of Deputy Collectors and six posts of Assistant Collectors. The District Collectorate runs with several staff in different sections like Establishment, General and Misc, Revenue, Touzi, Election, Land Records, Judicial and Certificate cases etc., Collector & District Magistrate, Additional District Magistrate (ADM), Sub-Divisional Magistrates cum Sub-Collectors and all Administrative officers are empowered to pass judicial and quasi-judicial orders constitute 'courts'. One senior officer functions as the Project Director, District Rural Development Agency (DRDA), assisted by Additional Project Director, Administration and several Assistant Project Directors. Tahasildars and Block Development Officers are headquartered at the Blocks and Tahasil respectively. The offices of the Block Development Officers run with the help of many extension officers, looking into welfare, social welfare, civil supplies, connectivity programmes, Drinking Water and sanitation, Livelihood programmes under the direct supervision of the Block Development Officer. Agriculture and other allied departments have been managing on their own without the direct supervision of the BDO at the Block level. The latest addition to the other Block level functionaries is the Education Department. The previous arrangement of management of Education section of the Blocks by the Sub-Inspector of Schools has been discontinued. Block Education Officers are in place in each Block to manage the multifarious activities of the Department. Blocks have been termed as mini-secretariat,

as the plans and programmes of different departments of the Government are implemented and monitored through it. Blocks are the nodal agency for implementation of wide variety of poverty alleviation schemes and programmes of the State and well as Union Government. Further, BDOs are the kingpins in administering development plans and programmes. Each Block has a Development Section, which keeps account of planning and implementation of Government programmes in the key sectors, i.e. Bijli, Sadak and Pani with the help of technical staff, i.e. Assistant Engineer, Accountants, Junior Engineers, Grama Panchayat Technical Assistants. Down below the Blocks are the Gram Panchayats, where an officer with the designation of Panchayat Executive Officer holds the executive office to assist the Sarpanch and other elected PRI members at the grass root level. With the advent of the poverty alleviation programme, many initiatives have come up since independence, the latest being the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), replacing the old scheme of National Food for Work (NFFW). In order to support the MGNREGS the BDO being responsible as the Programme Officer, is assisted by an Additional Programme Officer, MGNREGA Assistants, Computer Programmer and Additional Computer Programmer. The GPTAs act as the technical field personnel under the programme. The Panchayat Executive Officers are responsible for implementation of the MGNREGS at the Block level. They are assisted by the Gram Rojgar Sevaks (GRS) and several other volunteer type functionaries.

Tahasils are headed by the Tahasildars, assisted by Additional Tahasildars. They perform revenue administration and are responsible for collection of land revenue from different sources and forms and maintain law and order in the Tahasil area. Besides, Tahasils maintain land records and effect corrections arising out of land transfers and change of ownership due to various reasons. Tahasils are the protectors of the Government property and land from unauthorised encroachments. Tahasildars also function as Irrigation Officer under the Odisha Irrigation Act, 1959. They carry out the joint verification of the culturable command areas (CCA) of the irrigation projects with the staff of the Water Resource Department at the District Level every year to assess the area to be levied with water rate. Now-a-days, the Tahasil administration has been gradually becoming development oriented. Settlement of homestead land with the homestead-less people and agricultural lands with the landless are the prime objectives of the modern day Tahasil administration. The governments of Odisha vide Resolution No. DRC- 33/2003-57938/R dated 6.12.2003, has integrated the Settlement and Consolidation Administration with the Tahasil administration with the objective to rationalise the revenue administration at the Directorate, District, Sub-Divisional and Tahasil level. Since the Revenue and Disaster Management Department is the nodal department for disaster management,

Tahasildars play vital role in management of natural disasters at the Tahasil level. Tahasils have two distinct varieties of staff, i.e. ministerial staff and field staff. The offices are run by the ministerial staff, headed by a head Clerk. Revenue Supervisor, Revenue Inspector (RI), Assistant Revenue Inspector (ARI), Amin, Chainman and Process Server are the field level posts.

Table 113: Administrative Divisions of Sundargarh District

Sub-Divisions	Block (No. of GP)	Tahasil (No. of Revenue Circles)	Municipality	Municipal corporation
Sundargarh	Balisankara (16), Bargaon (13), Hemgiri (19), Kutra (16), Lephripada (17), Rajgangpur (12), Subdega (14), Sundargarh (16), Tangarapali (13)	Balisankara (6), Bargaon, (3) Hemgiri (6), Kutra (7), Lephripada (9), Rajgangpur (7), Subdega (4), Sundargarh (7), Tangarapali (6)	Sundargarh (19 wards)	
Panposh	Bisra (15), Kuanmunda (20), Nuagaon (20) Lathikata (16)	Biramitrapur (7), Bisra (7), Kuanrmunda (2), Lathikata (7), Rourkela (3)	Biramitrapur (11 wards) Rajgangpur (20 wards)	Rourkela (Erstwhile Civil Township- 41 wards) and Ispat Township- (23 wards)
Bonai	Bonaigarh (13), Gurundia (13), Koida (12), Lahunipada (17)	Bonei (6), Gurundia (6), Koida (2) Lahunipada (7)		

Sub-Divisional Administration:

Sundargarh District is divided into three Sub-Divisions, i.e. Sundargarh, Panposh and Bonai Sub-Division. Each Sub-Division is headed by a Sub-Collector-cum-Sub-Divisional Magistrate. In Panposh Sub-Division of Sundargarh District, the office of the Additional District Magistrate, Rourkela is instituted. The Additional District Magistrate at Rourkela is mainly concerned with the developmental aspects of the Rourkela city.

Other Government Offices of All Departments at the District Level

Police, Health, Education, Industry, Agriculture, Horticulture, Animal Resources, Fisheries, Forest, Public Works Department, Rural engineering, Irrigation, Soil Conservation, Harijan & Tribal Welfare, Culture and Tourism etc. constitute the District administration in totality. Collector & District Magistrate plays the 'Coordinating Role' in the smooth functioning of these offices.

Historical Background of Revenue Administration in the District:

The detailed political history starting from the pre-historic age has been detailed in Chapter-II, i.e. History. The present chapter will elaborate the history relating to the Revenue Administration of the District. The present Sundargarh District comprises the ex-State of Gangpur and Bonai. So far as the history of their revenue system is concerned, these ex-States have been treated separately. This narrative relates to the period ending 1948 when these ex-States lost their identity after their merger with Odisha.

Gangpur was once under the suzerainty of Sambalpur, which formed a part of the dominions of the Maratha Rajas of Nagpur. It was ceded in 1803 to the British Government by the Treaty of Deogaon by Raghuji Bhonsla, Raja of Nagpur, but was restored to the Maratha Raja in 1806. It reverted under the provisional engagement with Madhuji Bhonsla (Appa Sahib) in 1818 and was finally ceded to the British in 1826. In 1821, the feudal supremacy of Sambalpur over Gangpur was cancelled by the British Government and a fresh Sanad was granted to the Chief. In 1827, after the permanent cession, another Sanad was granted for a period of five years, but this was allowed to run till 1875 before it was renewed. The next Sanad was granted to the Chief in 1899 and the relations of the Chief with the British Government were regulated by this Sanad. The ex-State of Gangpur was transferred from Chota Nagpur to Odisha Division in 1905 and in the same year the transfer of the ex-State to Odisha and the appointment of a Political Agent to advise and assist the Chief. The Sanad was renewed again in 1936.

The previous History of the ex-State is interesting, for through it adjoins the Chota Nagpore plateau and much of its original population seem to have come from that area in comparatively recent years, the system of village and revenue management including the terms like Gaonitia, etc, bear strong resemblance to the Sambalpur and Central provinces system. In this connection, Sir W. Hunter in this statistical account of the Chota Nagpore State writes "Villages in Gangpur are held either on the feudal tenure or on farming leases. The feudal tenures date back to the early times, when the vassals of the Chief received grant of land, in consideration of rendering military service and commuted to a quit-rent in money, but the service conditions were rigidly enforced. When the Raja went on a journey, his military-fief-holders were obliged to accompany him with their naiks or lieutenants in charge of villagers and paiks or foot soldiery. A few of them are armed with matchlocks, but the majority has only axes and bows and arrows. As the purchasing power of money decreased, the malguzari or rent paid by the fief-holders and the heads of villages under them proved insufficient to meet the growing expenses of the Chief. Thus, demands for extra contributions arose. Neither fief-holder nor village head, nor foot

soldier, however, admit that there has been any enhancement of rent. This they claims to pay at the old rents and take a separate receipt for, as *malguzari*, while the extra contribution is paid as *pancha*, *mangan* or *cess*, and the two are never consolidated. The *paiks* or foot soldiers pay rent to *naiks* or village headmen at fixed rates, which average about half of those paid by tenants, who owe no service; the *paiks* of Gangpur belong to the Bhuiya tribes.

“All the other villages, whether belonging to the Chief’s demesne lands (*Khalsa*) or not, are by small farmers called *Gaontias* under a simple leasehold tenure for a term of from three to five years, which shows no signs of becoming hereditary, and is not usually held by any of the indigenous tribes. The *gaontia* pay a started annual rent, and is remunerated by the surplus collection from the tenants on account of new lands brought into cultivations and by certain *bhogra* or service lands held rent-free. The yearly rent is very seldom changed; but whenever the lease is renewed, the *gaontia* pay a bonus, which is supposed to represent the enhancement of value due to improvement or extension of cultivation within the currency of the lease. Under this system there has been little or no interference with the individual cultivator; they assist the *gaontia* in the cultivation of this *bhogra* (service) land. The land measure, however, is based, as in Chota Nagapur proper, not on a specific superficial area, but on the amount of seed sown. On the occurrence of births, Marriages, or deaths in the Raja’s family, the villagers are called on for extra contribution.”

By the beginning of the present century, employment of *paiks* as a State militia ceases. But though the *paiks* were no more officially recognised and the service conditions were no longer enforced, the distinction between rent (*malguzari*) and cesses (*panchas*) was still recognised in the villages formerly granted as feudal tenures.

“In the *Gaontia* villages besides the priest of the aboriginal deity, who ranks next to the villages headman, the only other recognised official is the *gorait* or *chowkidar* (village watchman). *Gaontias* are *ex-officio* police officers; and the *gorait*, besides being the village messenger, is also the assistant of the *Gaontia* in all matters connected with police or the detection of crime. Villages in the State are classified as *kut* and *akut* villages. The *kut* villages are those where a rough estimate by the eye has been made of the cultivated lands, and are practically entirely held by *Gaontias*; the *akut* villages are those in which no eye measurement has been made and the head of these villages is usually known as a *Ganjhus*; he is usually the original clearer of the soil or a direct descendant. The superiority of the position of a *Ganjhus* over a *Gaontia* is shown by the fact that the former pays nothing in cases of inheritance during the currency of his lease, whereas the latter has pay regular fees for mutation. The foundation of

administration rests very strongly in Gangpur on the village headman. In this State these headman have acquired by prosperity a very strong position and are fully capable of maintaining their rights against the Chief or feudal tenure-holder under whom they hold; this is especially marked in the Nagra Zamindari where many of the Ganjhus have actually asserted claims to the forest in their villages and tried for years to style themselves Sikmi (under) Zamindars. The custom in the neighbouring States of the Sambalpur District is that a Gaontia should not hold more than 20 percent of the total cultivated land as bhogra, village service lands; in Gangpur, however, the past, possess far more than this and are in consequence very wealthy and influential personages in the villages¹⁷.”

The earliest record available of the past Revenue Administration consists of a Jamabandi prepared in 1865. The Revenue is shown there as Rs.5,200/- plus a number of abwabs. This Jamabandi merely indicates the rents, cesses and abwabs, payable by each village and there are no details to show how these rent-totals were arrived at, or how the rent payable was distributed amongst the raiyats. It was only ascertained, villages were held by headmen with whom the settlement was made. In what manner these headmen recovered rents from the raiyats, what amount they had to pay, and whether they recovered rents, largely in excess of what they had to pay or not, there is nothing to show. The arrangement with the headmen appears to have been made after a rough estimate of the land in the village or by mutual agreement and the headmen in their turn distributed this amount or more than it among their raiyats, the State not coming into direct contact with the latter at all. In addition to these headmen of single villages, there were also some, who, evidently holding a stronger position, had groups of villages under them. In these cases, the settlement appears to have been made with the headman of the group, who in turn, leased his villages out to other headmen who apportioned the amount payable among the raiyats. It is obvious that this system of settlement was capable of abuse and there is very little doubt that advantage was taken of it by the headmen to enrich themselves at the cost of the raiyats. It is not quite clear, how these headmen came to get their positions, but there is little doubt that they were men of superior intellect and qualifications. They were dealing with raiyats who, in the main, were extremely ignorant and as a result there could have been little or no difficulty in collecting from the raiyats, sums far in excess of what they had to pay.

This State of affair appears to have continued up to 1874, when Kut settlement the Ruling Chief made a **Nazar-Kut** or survey by eye estimation. It was done purely on guess- work and in a limited number of villages Khalsa was excluded. A uniform rate was applied to all lands, the area being given

¹⁷ Feudatory States of Orissa, by L.E.B. Cobden-Ramsay.

in terms of seed capacity. part of the revenue was payable in kind. The areas not covered by *nazar-kut* were subjected to a percentage enhancement.

The system of assessment consisted of sending out an Amin to villages to prepare a Jamabandi showing the extent of each raiyats holding in khandikhunties. It was undoubtedly a great advance, but it left out of consideration of the classes of land and was unfortunately rendered very unreliable for want of supervision, with the result that the size of Khandikhunties depended entirely on the Amin's discretion. As a result of this settlement, a rent of Rs 2 per Khandikhunti was fixed in all *Kut* villages. All miscellaneous panchas or cesses, such as, Dashara, Rahat etc., which had hitherto been in force, were abolished, only karchowl and biripatti were being retained. The villages in which no *kut* was made apparently continued as before paying the rents and panchas, as they did in 1865. The financial result of this settlement was to raise the revenue to Rs, 15,000 in cash, plus 3780 mounds of rice and 360 mounds of Biri

As a next step, there was another settlement in 1900. The rent of each village was settle by agreement between the then ruling Chief and the Headmen. The Chief levied an all round increase of 25 percent on *kut* villages. This raised the cash rent per Khandikhunties in *kut* villages to Rs 3 and 2 annas (or Rs 3.12), the rent of non –*kut* villages beings made double the amount they were paying in 1865. As a result of this increase the land revenue became, Rs.29,327 inclusive of cesses and Karchowl, and Biri to the value of Rs.13,578. This brought the revenue to Rs. 47,700 including cesses and all abwabs.

The first regular survey and settlement of Gangpur commenced in 1907 and was completed in 1911 under the supervision of Mr. Connolly settlement 1907-11 was a ten years settlement and its term was to expire in 1920-21. The total revenue of Khalsa and Gaontiahi villages was brought Rs. 76, 904. The revenue of Hemgir Zamindari to Rs.3, 585, Sarappgarh Zamindari to Rs.1, 854 and Hatibari to Rs.5, 375 was achieved. A traverse survey was done by means of plane table and sighting instruments, but not with the theodolite. A cadastral survey was also done of the villages surveyed by traverse. The uplands were not assessed to rent. Only the wet lands and sugarcane fields were settled. The classification of land various kinds of rice land was made upon the levels the moisture retaining power of the soil as well as the accumulation of fertile matter. The Settlement Officer considered that little was to be gained by making a further classification was the dominant crop, this view seems to be quite sensible. The Settlement resulted in nearly 100 per cent enhancement of rent and record of rights was for the first time prepared and this document in the latter years, governed the administration of the State.

An important feature of the revenue system of Gangpur, as started earlier, was the existence of Zamindaris or the 'feudal-tenures'. The headman of the tribal villages in the Zamindari was known as Ganjhus and the groups of Ganjhus villages were placed under a head Ganjhu. In the tribal Zamindari areas, the Ganjhus were the descendant of the original clearers of the forests and tillers of the soil. Original, it is likely that wherever a village was founded by clearing the jungle the person who took the initiative in the matter became the headman of the village and it was with him that the Ruling Chief came to an agreement, regarding the revenue of the village. The system of leasing out villages to farmers was latter development and was introduced mostly when the tribal settlements of Gonds and others were intruded upon by a more sophisticated class of people who found the primitive headmen easy to put aside. Cobden Ramsay in his gazetteer records "the Gaontias". The Settlement officer found during the 1907-11 settlement that many villages in the Nagra and Hatibari Zamindaris were of comparatively recent origin that was 20 or 30 years past. In view of the backwardness of the Zamindaris, the system of farming out villages by ousting tribal headmen had apparently not taken place to any appreciable extent. The Ganjhus were thus different from the Gaontias. The succession to the post was by inheritance. The Ganjhus paid nothing in cases of inheritance during the period of a lease. It is also necessary to mention that at the 1907-11 settlement, it was found that a number of inhabitants of the Zamindari were recorded as having been born in Ranchi District as per the 1911 Census. At the 1901 Census, 19,000 Mundas were recorded in Gangpur State. These facts are mentioned here to show that development of the tribal areas where Mundas were in appreciable number was comparatively recent. **No rights as Khuntikatti rights or villages of Khunt Kattidars were found to exist at the time of first settlement and the settlement officer did not record any such rights.** An agitation for khuntkatti rights (mentioned in the Chhota-Nagpore Tenancy Act) was set up among the Mundas. Such rights could not be given to the Mundas as they were later entrants to the tract than the original clearers of the soil. If such rights were to be conceded the only reason for it would be that Mundas in another part of the country enjoyed such rights. It must be pointed out that they got these rights because they were Mundas. The head Ganjhus seem to correspond to the pargana or dandpat officials of other areas with a number of villages under them. The head Ganjhu usually held a village direct within the group and the land revenue of the group was paid through the head Ganjhu who probably engaged for the revenue of the entire group distributed the burden over Ganjhus below him.

At the 1907-11 Settlement, for the first time, the Rights of Gaontias and raiyats were recorded in the Record of Rights. It was recognised that a raiyats could not be ejected except by the order of the Court for non-

payment of rent. Rent could not be enhanced during settlement except on the ground of increase in area. Transfer by mortgage, sale etc. were not recognised and then Settlement Officer recorded that this was a statutory prohibition. Sub-lease with the consent of the headmen were permitted but could not remain after the end of the settlement. A portion of the holding could not be relinquished without the consent of the head headman. Uplands could be converted at pleasure into rice lands but new lands could not be broken without the consent of the Ruling Chief or Zamindar. The consent had to be obtained through the headman. New rice lands were rent free for the first three years. Raiyats could enjoy the fruits and leaves of all self-grown tree within their villages but the right to timber of all trees, whether planted or self- grown, was with the ruling Chief or the Zamindar and raiyats could cut no trees without his permission. Wood and fuel from reserved area could be taken only with licences issued by the forest Department. But fuel etc. could be taken for personal consumption from the unreserved forests. The propagation of lac and silk-worms was subject to such terms as were agreed upon between the raiyats and the Ruling Chief or the Zamindar.

The Gaontias and Ganjhus were enjoying different status. The Ganjus were superior to the Gaontias in many ways. The Gaontias were responsible for collection of the revenue and the cesses. **They had to pay salami to the Ruling Chief or the Zamindar equivalent to one year's rent of his village, once a year for 5 years from the date of issue of the patta. After the expiry of 5 years they had to pay salami for every fresh settlement.** He had no rights to partition the villages or the partition the homestead or farm lands or to lease out his village in favour of anybody. With the consent of the Ruling Chief or the Zamindar, he could let out waste lands.

In the case of Ganjhus, no salami during the period or a settlement was required and he was required to pay only a succession free equivalent to one year's rent on being appointed to headmanship. He had rights to appoint sub- Ganjhus with the permission of the Ruling Chief or the Zamindar. He could not be ejected on the expiry of each settlement like the Gaontias and was exempted from payment of rent in all bhogra land held by him; if the land was less than the equivalent of one-fourth of the village rental, he was entitled to a draw-back up to that limit. He could let out waste lands without consulting the Zamindaris or the Ruling Chief.

Nayabadi Settlement of 1923-24- The 1907-11 settlement was made for a period of 10 years but on expiry of the period, a revision was taken up as the economic condition of the raiyats was quite unsatisfactory. Besides this, the Ruling Chief in 1916 increased a panchas [special cess of 12 annas (75 paisa)] for every rupees of rent on the occasion of a Brita or thread investiture and another of two annas (12 paisa) per rupee of rent to defray a portion of expenditure of a wedding. A Nayabadi settlement or Settlement of

newly cultivated lands was therefore made 1923-24 and revision settlement was postponed.

Settlement of 1928-36- The operations of revision settlement commenced in October 1928 and was completed in 1936. In this settlement the soil unit system was applied. Villages were divided into 5 classes and the land which were originally placed in three classes (Bahal, Berna and Mal) were now classified in six namely, (1) Pani Bahal, (2) Bahal (3) Pani Berna, (4) Berna (5) Pani Mal, and (6) Mal. The only reason for this classification was that it was desired to divide the main class into a superior and inferior class. The superior class was distinguished by the prefix 'Pani'. In addition to this the Goda or upland which had not been assessed at the previous settlements, and various other lands, like homestead lands, Baris, Sugar-cane lands, land in the bed of rivers, were subjected to assessment. The classification of villages was also an innovation and probably was responsible for some of the troubles which arose after the settlement. The main feature of the settlement was that the whole State was surveyed and all lands assessed. The result of assessing lands which were formerly held free of assessment was a steep rise in the total assessment payable by the tribal classes particularly, as in the backward villages they held large areas of Goda lands which they cultivated irregularly. This effect and the assessment as a whole were accepted by the great majority of cultivators. On account of the agitation which broke out in the Munda territory, the assessment as well as the cesses had to be reduced by a considerable amount.

It is necessary to mention here certain points about the assessment of the Goda upland as there was a suggestion that these lands were not assessed in view of bethi and beggar which was being levied on the raiyats. In reporting the Nayabadi settlement, the Dewan wrote that there was a mistaken belief that goda lands were held free of rent for rendering bethi and beggar and were not suitable to the cultivation of paddy. He pointed out that throughout Chhota-Nagpore till recent years Goda lands were considered valueless and in fact were so. The ground was stony and was of little value expecting for a rapidly maturing cash crop. As even, a few days break in rains spelt total loss. Therefore, the rent of paddy lands was a few annas per an acre, it was impracticable and not worthwhile assessing rent on Goda, added to which is the fact that paddy lands were limited in extent and in great demand, whereas Goda lands were unlimited and in small demand. So raiyats were permitted to cultivate any extent of goda he wished free of rent.

The term of a settlement was proposed to be ten years. The main reason given for this by the Dewan was that the minor Ruling Chief would soon attain majority and it was not desirable to tie his hands down for a long period. The settlement officer who was asked to give an opinion did not

opine, as it appears, from the wording of his letter but rather agreed to the period of ten years proposed by the Dewan pointing out that the margin of profit to the agriculturists as reckoned by him was large. Not only was the calculation questionable but in giving the figure as if it must be correct to the last digit, the Settlement Officer showed that lack of understanding of the vicissitudes of agriculture and problems of the agriculturist which was fairly elsewhere. It is interesting to note that the same Dewan who proposed a period of ten years, he himself recognised as short, wrote only a few years before in reporting the Nayabadi settlement "As I have said the immense majority of our raiyots pinched by the most galling poverty, and just living from hand to mouth, have remained in a State of stupid debasement, broken by incessant misfortune, and generally abjectly submissive before their superiors".

The settlement records prepared in Gangpur was the khatian which contained in the villages except the *ekpadia*. The copy of the khatian originally prepared at the mutation branch. In addition to this copy of the Khatian a general register of mutation was maintained. From this register separate registers in the same form were prepared for each village. Additions to the village mutation register were entered in this copy of the khatian kept in the mutation office. Both the mutation registers showed the existing position of ownership of land. Before the last settlement the original khatian itself used to be corrected, but since the completion of the last settlement this new system of keeping a village mutation register had been introduced. The Gaontia's *ekpadia* was also corrected where a mutation was affected. In cases of a part of the plot was transferred, correction was made on the village map. The Gaontia's copy of *ekpadia* was also corrected at the time of settlement and entries in it were checked by the Tahasildas. Mortgages were not recorded. In the mutation register fees were prescribed by a standing order. Gaontias succession cases were treated as mutation cases and a succession fee was charged in respect of bhogra land. The existing patta of the Gaontias were corrected and new pattas were issued.

Cases of reclamation were not brought on to the mutation register. A separate register was maintained for this purpose. This was because the State did not get any income from the newly reclaimed land until the next settlement and the Gaontias appropriated the whole of the income from such new land. The *ekpadia* of the Gaontias only was corrected.

In the case of abandonment of holding, the Gaontias settled a raiyats on the land and this was usually approved by the court. In the case of re-allotment of abandoned holdings as well as on the allotment of a new land the Gaontias in many cases levied salami. Through the existing record of rights did not authorised this, there was no specific prohibition of Salami or a penalty for its recovery in the record-of rights.

As started in 1929-36 Settlement Report, there were ten tenures in Gangpur, i.e. (i) Zamindari (ii) Kharpos, (iii) Parganadar, (iv) Debottar (v) Brahmottar (vi) Noukaran (service tenures) (vii) Head Ganjhuari, (viii) Ganjhuari, (ix) Gaontiahi (x) Sikmi-Gaontiahi. There were four Zamindaris, i.e. (i) Nagra (524 sq. Miles or 1357. 16 sq.km), (ii) Hemgir (392 sq miles 1015. 28sq km), (iii) Sargipali (48sq.miles or 124,32sq km) and (iv) Saraphgarh (44Sq miles or 113.96 sq. km). The Zamindars stood half-way between the feudatory Chief and the ordinary proprietors of villages. The Zamindar was the proprietor of this estate which was impartible and non-transferable save to the nearest heir. The first son inherited the tenure, while the other sons got Kharposh.

Later, as found in Ramadhyni's report, village Kupsingha was declared to be a Zamindari, though somewhat indirectly, being mentioned in an order of the Commissioner relating to the forest rights of Deogaon village in the following terms: "I would add that there is no question as to plaintiff's right to hold Kupsingha village as Zamindari in permanency at a fixed rent of Rs.25-80. There is no forest there and the Raja has no claim to any forest right in that village"

No sanad had been issued by the State to the Zamindars and thus there was no clear definition of their rights. It would appear that the four Zamindaris first mentioned were of very long standing and the Zamindars at one time must have exercised, what were for all practical purposes, sovereign powers. Subsequently the rights were to some extent whittled down. The Zamindars had been unwilling to accept a sanad as this would mean definition of rights and a possible curtailment. The question of forest rights arose acutely in connection with the agreement entered into by the Ruling Chief with the Bengal Nagpur Railway in 1891. It was ruled that the Zamindars of Nagra and Hemgir had permanent rights in their Zamindaris and the Ruling Chief had no right to the forests or to levy a royalty on forest produce. In respect of forests as well as minerals which were the two important matters apart from land, disputes between the State and the Zamindars had rested in the decision that they were entitled to all rights over forests in their Zamindaris and had rights over minerals also in the proportion of 6 annas: 10 annas (37½per cent and 62½per cent). The latter amount went to State. A certain amount of control was exercised by the State over the management of Zamindari forests and through they had full rights, they were expected to manage the forest in accordance with the existing rules. The working plans and rules in respect of these forests were expected to be the same as the State Rules. The Zamindars had no control on allotment and exploitation, and were only entitled to six annas (37½) per rupees of the income. The takoli which they paid was a nominal amount and seemed to have been fixed many years ago. Decision in respect of taken

which of course the Zamindars contended to have been fixed in perpetuity, were held that the takoli should amount to five percent of the total income of the Zamindari till the expiry of Connolly Settlement after which it was expected to be enhanced to 10 percent, but no such enhancement took place. The Zamindari of Nagra formerly used to pay Rs.200 as Raja Bije to the Ruling Chief when the latter used to visit the Zamindari and Rs. 500 as takoli. The visit was frequently and it was settled that the takoli should be fixed at Rs.700. The Zamindari was given an undertaking in 1879 that the takoli would not be enhanced even later. The Zamindari held the estate at a fixed takoli for a considerable time. The previous history, however, shows that there was no definite undertaking that the takoli would not be revised. At the time of the succession, a Zamindari had to pay salami to the Ruling Chief equal to one year's takoli. This salami was private salami and did not enter into State accounts.

The allotment of waste land was said to be governed by a State rule that one third of the village area should be left as waste. In many villages in the Zamindaris as well as in the State there was not much waste land left. The allotment was subject to the Zamindars and Gaontias consent and consent money was said to be taken by both. In Nagra Zamindari, it was reported, royalty was charged only on the reserved species of trees. There was no specific authorisation for the Levy of salami nor was there any specific prohibition. In the Khalsa area no salami was said to be charged by the State. Cases of resettlement of abandoned land were dealt with by the State courts; the transfer free went to the Zamindars but not mutation fees.

The appointment of Gaontias in the Zamindaris was made with approval of the State. At the time of succession, a fee was levied and in the Zamindars this fee went to the Zamindaris. Succession fees were charged up to a maximum of Rs.5 and it is not unlikely that there was private salami as well. In the event of the death of a Gaontia in the absence of heir, or in the case of ejection of a Gaontia, the post as in the case of Khalsa villages was sold by auction and the proceeds being appropriate by the Zamindar.

Nistar cess in the Zamindaris was appropriated by the Zamindars. School and dispensary cesses in the Nagra Zamindari were collected and spent by the Zamindars. There was an old order, according to which the State had full control over education and dispensaries in the Zamindaris. The Nistar cess was levied at the rate of 16 pies (8½ paisa) per rupee of land revenue, though it was 2 annas (12 paisa) per rupee of revenue in Nagra Zamindari.

Kharposh Tenure: The takoli was paid by instalments which coincided with ordinary Gaontias instalments. There were Kharposh or maintenance grant such as, those held by the minor Chief for his pocket expenses or by

the Regent Rani Sahiba as *sindurtika* etc. The younger branches of the Chief's family got Kharposh and paid nothing in the first generation. The next successor paid 25 percent, the 3rd generation paid 50 per cent and the 4th generation paid 75 percent. These grants were for life and afterwards they became Khamar villages. There had been many changes in the khamar eState since the settlement made by Mr. Connolly. Two villages which were held by kharposhdars, and one Gaontias village, became Khamar. The tenure of kharposhdars of Hatibari was hereditary. He used to pay Rs.468.52 to the State as rent.

There were three parganadars viz, (i) Raiboga, (ii) Erga, and (iii) Daldali. The Parganadar of Raiboga got 15 villages under him, the pagandar of Erga got 29 villages and the pargandar of Daldali got 3 villages.

The Parganadar of Raiboga got 50 percent of the rental of his Khamar villages and 50 percent of the land revenue of his Gaontiahi villages. He enjoyed absolute forest rights like the Zamindars. The other two parganadars got certain fixed cash remuneration irrespective of village assets. All these parganadars enjoyed home farm (nijchas) lands rent-free. The villages under the Parganadar of Erga paid their rents direct to the treasury and the Parganadar used to get Rs. 821 as his fixed remuneration and enjoyed his nijchas lands free of rent. The Parganadar of Daldali used to realise rent direct from the Gaontias under him and paid to the ex-State the entire amount after deducting his remuneration of Rs.183.06. He enjoyed nijchas lands free of rent.

There were the usual Debottar and Brahmottar grants and Kharposh grants as well as the common service jagirs. The Brahmottar grants, of course, were given in perpetuity. There was a separate establishment for the management of Debottar grants which were not individual grants. There were 18 Debottar villages under the Durbar and the income from the villages was credited to a separate 'Personal Deposit Account'. There was no Gaontias in these villages and the bhogra lands were cultivated by share croppers every year. The raiyati tenure in these villages was the same as in other raiyati villages. Apart from these villages there were lands in 53 villages held by grantees subject to absolutely no control of any description; even if the grant was not made use of for the purpose for which it was meant, it is reported, nothing was being done. In Debottar villages no forest rights were recognised, but Salamis for reclamation, resettlement of abandoned land were realised. There were 5 Debottar villages in Nagra Zamindari, and 3 Debottar villages in Hemgir. The chowkidar of Debottar villages were appointed by the State.

Fourteen entire villages were held for rendering certain services to the ruler. The services comprised performing Puja, giving a sacred thread in

gold when the Chief was installed, for shaving the Chief, for worshipping the Chief's family deity, paying for the prosperity of the Chief, and supplying a bamboo from a particular bamboo clump when a Chief installed.

Brahmottar Tenure: There were 2 Brahmottar villages in the Khalsa area, 7 in Nagra Zamindari and 2 in Hatibari Kharposh. In Brahmottardars actually cultivated their fields and transfer of land expect to a person who was a member of the same family as the holder, was not permissible. If such a transfer was made ejection might take place. In these villages there were few sikmi raiyats (under-tenants). They were paying rent and cesses to the Brahmottardars from whom they had acquired the lands. They enjoyed, in other respect, rights similar to those of State raiyats but in lieu of Nistar cess, they got no return. The brahmottardars appropriated school cesses as well they paid neither rent nor cesses to the State. Sukhbasis (Labourers) paid rent to brahmottardars on their homestead lands. The brahmottardars enjoyed free rights in the village forest of their village. Waste land in a Brahmottar village could be reclaimed without permission. The village chowkidar was appointed by the brahmottardars. The brahmottardars claimed the right to minerals in the village.

Ganjhuaai Tenure: Village headmen in the Amunda area of Gangpur were called Ganjhus. Their place was next in importance to parganadars. The Ganjhus were divided into two classes namely, the Khuntkatti Ganjhus and thikka Ganjhus. The khuntkatti Ganjhus were the original clearer of villages while the thikka Ganjhus were not. The khuntkatti Ganjhus who somewhat corresponded to the Patels in the Maratha country were acting more like an intermediary between the tenants and the Zamindar than a lessee. He collected rents and paid them to the treasury and by way of remuneration was allowed to enjoy the whole bhogra, whatever might be its area, free of rent if the valuation of bhogra in possession of a Ganjhus was less than one-fourth of the total village rental. The head Ganjhus get 45 percent of his collection and handed over 55 percent to the Zamindar and enjoyed the bhogra land of his khamar village free. The bhogra land of Ganjhus was not held in raiyati rights and if a Ganjhus was evicted, the bhogra lands passed too to the next holder of 5th post. The Ganjhus were allowed to make private arrangements and create co-sharers in their bhogra lands through this were not recognised by the State. The bhogra land was declared to be non-transferable and impartible, and the right of a Ganjhus could not be non sold or otherwise transferred. They were of course responsible for the payment of the revenue of their villages The Ganjhus had the special privilege of protected status, that is they could not be evicted on the expiry of settlement and, in addition, if they had held more than 25 percent of the cultivated land as bhogra and they were allowed to held it rent-free and the remuneration was correspondingly greater. Ganjhus under

the record-of-rights had been given the rights to appoint sikmi-Gaontias (sub-lessees). The Ganjhus could make this appointment of their own accord but had to approach the State. The head Ganjhu had no duties to perform like the ordinary Ganjhu and usually he only he only acted as a channel for the land revenue of the Ganjhu of any village to pass through. It is said that he was expected to help the police and revenue officers in the discharge of their duties as Ganjhus were expected to do. Formerly Ganjhus got only salami from his nominee who was appointed by the State. Ganjhus had the power to allot waste land with the approval of the State which was usually accorded, and to appropriate the revenue of the newly cultivated lands till the next settlement.

Mr. Connolly writes in his Settlement report (1907-11) about the Ganjhus in the following terms.

“They may broadly be divided into two groups: the Ganjhus who have groups of villages and who have sub-Ganjhus under them, and the Ganjhus of individual villages. This latter class again consists of khuntkatti Ganjhus and thica Ganjhus. There are eight Ganjhus of the first class, Viz, (1) Ahirabandha, (2) Ketepur, (3) Bisra, (4) Jaraikela, (5) Teterkela, (6) Balani, (7) Simorta and (8) Bagdega. Their origin is obscure. But it seems fairly certain that they were relatives of the old Bhuiyan Chiefs or the Zamindar (they are all Bhuiyans) and their grants were probably in the nature of feudal tenures given at a time when the country was unsettled and when their services were requisitioned to protect the territories of the Chief from invasion. Each of these men has under him a number of Ganjhus, who collect rents from the raiyots and after deducting a certain portion hand the remainder over to him. Taking into consideration their peculiar circumstances and the fact that they have a recognised status undoubtedly superior to the other Ganjhus, It was decided that they should be allowed to retain 45 percent of the revenue they receive and would have to hand the remainder over to the Zamindar”.

Gaontiahi Tenure: The village headman in the Khalsa area of Gangpur was known as Gaontia. He took a village already reclaimed or brought under certain State of development by original tenants, as a cultivator or as a means of livelihood. At first, he was a temporary leaseholder. He was required to renew his lease at every 5th Year before 1900 A.D. He used to enjoy one-fourth of the rental of the whole village including bhogra. But at each renewal of his lease, he used to pay a lump sum to the Chief. This was known as nazarana. Their payments were competitive. The Agharias and Telis of Sambalpur District were bidders. The Chief betook himself to excessive enhancement of the nezarana and instead of renewing leases on a fair payment, ousted tribal lessees freely in favour of rich bidders from 1895, onward. Those tribal Gaontias who were thus ousted

raised the standard of rebellion under the leadership of Madri Kalo in 1898, but the rising was tactfully put down the help of the British Government.

In the neighbouring Sambalpur District there was no Ganjhu Gaontia was treated there as a village headman. He collected revenue from the tenants. The proprietary rights conferred on him was limited to his home-farm-land (nijchas) and as a remuneration for his services he was allowed to hold revenue -free bhogra up to a revenue value equivalent to 1/4th of raiyati rental of the village. But in Gangpur ex-State (like Bonai) the Gaontias used to get as his remuneration one –fourth of the raiyati rental as well as 1/4th of the assessment of bhogra land of his village. But the Gaontia of Gangpur could not partition his village nor transfer it like the Gaontia of Sambalpur. It was doubtful, if he could bring waste land under his own cultivation or lease it out to others on receipt of premium. It was also doubtful whether he could accept surrender of raiyati land and sanction transfer of such land among tenant taking the consent money to himself. During the progress of 1929-36 settlement, about 10,000 unauthorised sales were detected. Most of them paid consent money to the Gaontias which they had no rights to accept. The ex-State authority levied penalty on them at the following rates and recognised the transfer.

Table 114: Rent in First Class Villages

Bahal	Rs.12-8-0	(Rs.12.50)
Berna	Rs 8-0-0	
Mal	Rs.4-12-0	(Rs.4.75)
Agora	Rs.1-0-0	
Barchha	Rs.12-8-0	(Rs. 12.50)
Bari	Rs.8-0-0	

In second class villages, the rates were half of those of the 1st class villages. For the purpose of realising transfer fees, the villages were divided into two classes only. At the rates started above, the total demand of the unauthorised transfer fee or penalty amounted to Rs.32,981-4-9 (Rs.,32,981.30 paisa).

Sikmi Gaontias: (Sub-lessees) were found under the Ganjhus and kharposhdars only. They got remuneration according to the contract between the interested parties which was approved by the State authority. This arrangement did not affect the right of the third party. The sikmi Gaontias of Suamal, Kheriakani, Anlajori, and Laikera under the Kharposhdars were allowed remunerations like the ordinary Gaontias according to the existing practice.

There were no absolute occupancy raiyats (tenants) with the meaning of the Central provinces Tenancy Act in Gangpur ex- State. All the tenants were occupancy tenants and their status had been recorded in the Khatian

“Raiyati”. Occupancy rights could not accrue in bhogra and nijchas land of the Gaontia and the Zamindar. If a tenant was allowed to till bhogra or nijchas land, he was a tenant at will and not an ordinary tenant of the Central Provinces tenancy Act.

Mr. R.K Ramadhyan who enquired during 1941-42 into the land tenures and 4 revenue systems prevalent in the feudatory States writes on the raiyati tenure as follows:

“The rights of raiyots in land are at present in a somewhat confused position. The rights of occupancy, which meant that so long as rent was paid the raiyot was entitled to remain in possession, was recognised at settlement, but no right of transfer of any kind was conceded. At present, transfer with the permission of the State on payment of salami of 12½ percent of the consideration money is permitted on Nazul lands. (i.e. town land in residential area) the fee was Rs.1 per every Rs.10 up to Rs.50, and at reduced rates for larger amounts, that is the salami is a higher percentage of the consideration for agricultural lands than for town lands which are more valuable. In the case of agricultural lands, however, no stamp duty or registration fee is shown as charged and registration is not compulsory. No mutation fee is charged in either case. Mutation fee (minimum Rs.1, maximum Rs.5) is charged on gift or exchange but not salami. Succession fee for inheritance has been abolished recently. Leases and mortgages also seem to have been permitted. There are no definite rules but occasional orders have been issued by the Dewan regarding rights of transfer. Aborigines may transfer according to these orders, to only aborigines and no persons outside the State can acquire land without permission of the State. Land is not permitted to be sold either arrears of revenue or for private debts and only eviction can take place. This is an anomalous position considering that sale of land is permitted. The Ganjhus or Gaontias usually apply for eviction in the event of arrears. It appears that very few evictions have actually been effected. For the execution of civil court decrees, land is not sold but installments are granted and recovered by attachment of moveable property, standing crops, etc.

Other rights in land seem to extend to improvement by digging of a well but for the excavation of a tank permission is necessary. In trees on holdings there are no rights except that fruits and leaves may be appropriated. A small area of land was allowed free as home stead and the rest is included in the assessed lands of a raiyot. Bethi and beggar do not seem to be levied these days. There is no distinction between resident and non- resident raiyots.

The acquisition of land is not governed by any laws or rules. The only case I could see was not treated as a revenue case. The compensation

levied and paid depends upon whether the lands are in a tenure village or in a Khalsa village. If it is in a tenure village 15 times the rents plus 15 percent extra is taken as the capitalised value payable to the tenure-holder, of this three-fourth goes to the tenure-holder and one fourth to the Gaontia or Ganjhus. The cultivators get 10 times the rent plus 15 percent. Analogous procedure is probably followed if a head Ganjhus involved but no case seems to have occurred. There is no rule for the disposal of the land formed by alluviation and the rent is not increased for the additional area till the next settlement. if there is diluision or deterioration of land, reduction may given if the case justifies it".

Tenants holding land of others are called Sikim raiyats or under tenants. They were few in number. Generally they were tenants at will. Up to 0.20 acre gharabari plot of tenants had not been assessed to rent. But a tenant holding over 0.20 acre had not been assessed at gharabari rate to the full. They were recorded as sikmi raiyats and given parchas at the 1907-11 settlement in view of th3eir long possession of the land. They continued as such at the 1929-36 settlement also. The rent paid by these sikim raiyats had been recorded art settlements and was the same as the assessment of ordinary raiyats

There was anot6her class of tenants who were described as village service tenant. They included all kind of village servants such as Chowkidar, Kalo, Nariha, Bhandari and others. There were mentions of Chowkidar jagir, Kalo Jagir, Nariha Jagir; etc. Their holdings were free from rent.

The Sukhbasis enjoyed gharabari up to 0.20 acre free of rent. If the area was over 0.20 acre, they were assessed to the full like any other tenants. They did not pay school and cesses. But they had to pay the Rojagiri cess which had not been noted below against each class of Rojagiri men.

Table 115: Rate of Rojgari Cess

Washerman	Re0-12-0	(Re.0.75)
Potter	Re.0-8-0	(Re.0.50)
Keut	Re.0-4-0	(Re.0.25)
Blacksmith (for melting iron)	Re1-4-0	(Re.1.25)
Goldsmith	Re.2-8-0	(Re.2.50)
Brazier	Re.1-4-0	(Re.1.25)
Confectioner	Re.1-4-0	(Re.1.25)
Thuria (mahajan)	Re.3-0-0	(Rs. 12.00)
Sukhbasi (daily labourer)	Re.1-0-0	(Re. 1.00)
Chamar	Re.0-2-0	(Re.0.12)

There were few Chandana tenants. These had been assessed at Rs.6-4-0 (Rs.6.25) per acre or 1 anna (Re. 0.06) per decimal. They got no concession of rent for gharabari land like other tenants up to 0.20 acre and below. In assessing rent upon them the Settlement Officer at the 1929-36 settlement followed the instructions contained in the survey and settlement Manual of the Board of Revenue Bihar and Odisha, which are quoted below:

“Fair and equitable rents cannot be settled under the Bengal Tenancy Act for homestead lands, house-site or shops, when the occupier is not recognised by the Tenancy Act (Section 4 of the Act). In such cases if the occupier holds directly under the Government the rent is liable to enhancement and it is decided that the rent settlement at a fair rent should be made and if it is accepted kabuliyats and leases should be exchanged. If it is not accepted and the lessee is liable to ejectment, the Collector should be moved to issue a notice on the tenant to vacate the premises or remove his house etc., as the case may be and if the notice is not obeyed, necessary action should be taken through the Civil Court, ordinarily. However, this work is left to the Collector. When an intermediate landlord occurs between Government and the lessee a fair and equitable rent may be assumed for the purpose of the calculation of assets, leaving it to the parties to come to terms regarding a new rent, if they have not already done so,”

Chandana lands are generally goda lands on which the house of shopkeepers had been built with an orchard attached to it.

Rent Settlement: The ex- State was divided into three groups for purpose of rent assessment, viz (I) Hatibari, (II) Nagra, and (III) Khalsa. Hemgir, Sargipali and Sarapgarh forming one group. These groups were again sub-divided in to five classes of villages. The villages of each class were fairly homogenous in respect of their geographical position, trade facilities, soil rainfall and condition of tenants. At the 1929-36 settlement, rents were assessed at a uniform rate throughout the ex-State except Nagra Zamindari and Hatibari Kharposh. The rates of each group are given below:

Table 116: Rents on Different Soil Types

Kind of soil	Rate in Khalsa, Hemgir, Sargipali Sarapgarh Rs.	Rate In Nagra Rs.	Rate in Hatibari Rs.
Bahal	1-4-0 or 1-25	1-2-0 or 1.12	0-15-8 or 0.97
Berna	1-0-0	0-14-0 or 0.87	0-11-8 or 0.72
Mal	0-12-0 or 0.75	0-9-0 or 0.56	0-7-8 or 0.47
Barchha	1-0-0	0-14-0 or 0.87	0-11-8

Hukumnama Tenures :- During the present settlement operation, as per the provisions of Odisha Survey and Settlement Act 1958, all land holdings in the revenue villages were settled and Pattas issued. But the lands covered under ‘Hukumnama’ were either recorded in Government

Khata in the revenue villages in the erstwhile Saraphgarh Zamindari area presently in Lefripada Tahasil, noting 'encroachment' in the name of the land holder or not recorded in the name of the land holders as the land was not included in the villages declared as such and land was situated in the forest area. Even today, the land holders in village Bijakhaman in Rajgangpur Tahasil are neither 'royats' nor 'tenents' in the Revenue Department records. They are in cultivating possession of their holdings by virtue of their Hukumnama documents issued in the Gangpur State in 1939.

The issues still unresolved are the following:

- (i) Whether the Hukumnas were issued before coming into force of Act 1 of 1948 in the Gangpur State i.e. 3.3.1955 or after?
- (ii) Whether the conditions laid down in the 'Reclamation Hukumnama' as regards reclamation of land and payment of dues have been fulfilled or not?
- (iii) What is the present classification of the plots in occupation of the 'encroachers'?
- (iv) Whether the fixed rent as per 'Reclamation Hukumnama' is being paid by the 'encroacher' and the the reference of the deposit of money for five years after the date of the reclamation of the land?
- (v) As one MIP namely Sarafgarh has already been commissioned to cover lands in both the villages, the present classification of such land in terms of 'standard acres'.
- (vi) Hukumnama holder wise genealogical details of the land holders in these two villages.
- (vii) Right, Title and Interest over Hukumnama lands in possession can be examined by i) moving the Board of Revenue, Odisha for revision u/s 25 (a) of the Odisha Survey and Settlement Act 1958, and/or
- (viii) Moving the High Court for declaration of the right and title over the possession of land, or/and
- (ix) Moving Govt. seeking special dispensation.¹⁸

In the rural areas of the District, most of the labourers are unskilled who depended on agriculture for their livelihood. They are either paid in cash or in kind. The skilled labourers like carpenters, blacksmiths, masons etc. are less in number. They earn more than unskilled labours.

¹⁸ Pages 29&30 of Inspection Note of Shri L. Kindo IAS, RDC (ND) of Lefripada Tahasil on 10.10.1990

Land Revenue System- Past and the Present:

The ex-State and Zamindars did not receive all the rent paid by raiyats, a proportion being retained by the Gaontias or other subordinate tenure-holders as their commission. There were a few villages dedicated to temples or deities (Debottar) gifted to Brahmins (Brahmottar), given for the maintenance of the members of the Raj-family (Kharoposh) and in service (Naukarn). The holders appropriated the entire rent. In Khamar villages held direct, the ex-State or the landlords received the entire rent paid by the raiyats.

Land Revenue was recovered in two instalments on the 15th December and the 15th February every year. The land revenue fixed at the 1929-36 settlement was as follows;

In Khalsa - Land Revenue demand previously- 1,10,257-15-7 or Rs. 1,10,257.97 paise.

Land Revenue demand at the 1929-3- 1, 49,861-8-3 or Rs. 1, 49,861.52paise

In Zamindaris (Excluding takoli paid by the Zamindars not revised) as follows.

Table 117: Annual Land Revenue in the Erstwhile Zamindaris

Name of Zamindari	Land Revenue Demands Previously	Land Revenue Demand at 1929-36 Settlement
Hemgir	Rs.11.371	Rs.18,786.34
Sargipali	Rs.4,691	Rs.6,962.16
Sarapgarh	Rs.1,855	Rs.2,583.47
Nagra	Rs.27,116	Rs.38,538.98
Hatibari (Kharposh)	Rs.5,889	Rs.8,956.12

The cause of increase was attributed to (i) assessment of Goda, Kudu and gharabari lands hitherto un-assessed, (ii) assessment of wet land since Nayabadi settlement and (iii) increase in rates of rent of old wet land which were between 12 to 16 per cent.

Regarding recovery of land revenue Mr. R. K Ramadhyani reports "No interest seems to be levied by the Ganjhus or Gaontias from the defaulters. Formerly interest used to be charged.

For recovery of arrears the State proceeded first against the Gaontia. His moveable properties were attached; I saw a case in which his house had been attached; the rayoti lands are not attached If recovery is not effected by a attachment of movables the Gaontias is ultimately evicted and the vacancy put to auction. Out of the auction proceeds, the arrears are first credited and the rest is credited as salami. Similar action was taken against head Ganjhus.

Zamindars can proceed against Gaontias by civil suit for realisation of arrears or apply to the Revenue court for eviction. Gaontias similarly can either proceed against raiyots in the civil court for recovery of the arrears or for eviction; the holding is not saleable. About 200 cases are started against the headman on an average. The number of cases started by headman against raiyots shows a sharp increase after the settlement in 1936-37. The collection is not the whole not quite satisfactory in spite of the Gaontia system and arrears in several years during the decade have been heavy.”

In addition to the rent, tenants had to pay school, dispensary and Nistar cesses. The Nistar cess was really a forest communication rent. The school and dispensary cesses were levied at 2 annas (12 paisa) per rupee of rent. Nistar cess in the Zamindaris was appropriated by the Zamindars. School and dispensary cesses in the Nagra Zamindari were collected and spent by the Zamindar. There was an old order also according to which the state had full control over the education and the dispensaries in the Zamindaris. The Nistar cess was levied at the same rate all over the ex-State namely, 16 pies (81.5 Paisa) per rupees of land revenue through it was 2 annas (12 paisa) per rupee in the Nagra Zamindari. School and dispensary cesses also were levied at a uniform rate of 2 annas (12 paise) per rupee of revenue. At 1929-36 settlement total demand of cesses was as follows.

Table 118: Demand of Cess, 1929-36 Settlement Operation

School Cess	40, 902-2-0
Dispensary Cess	24, 536-4-9
Nistar Cess	30, 170-6-3
TOTAL DEMAND	95,608-13-0 or Rs.95,108.81

After the introduction of the Orissa Cess Act 1962, all types of cesses (except Nistar cess) have been consolidated and levied yearly at the rate of 25 percentum of the annual value of the land. But the Nistar cess is being collected as usual. Bonai was ceded to the British Government in 1803 by the treaty of Deogaon by Raghuji Bhonsla, to whom it was restored by a special engagement in 1806. It reverted to the British Government under the provisional agreement concluded with Madhuji Bhonsla (Appa Sahib) in 1818, and was finally ceded the treaty of 1826. The State was ordinarily administered, subject to certain restrictions by the Raja who was required to pay a yearly tribute of Rs.500 and a nazarana on succession and to render military service in time of war. Till 1905, it was under the control of the commissioner of Chhota Nagpore and then it was included in the group of Odisha Feudatory States.

The earliest authenticated record pertaining to the condition of the State was a report to Government from Colonel Ouseley who visited in the 1840. He found the area in a very backward condition and over-run by marauding bands of the Thakurs from the neighbouring States of Barma and

Gangpur. After the cessation of these incursions there arose internal feuds between the Chiefs of Bonai and their fief-holders, the Sawant (the only Zamindari in the State) and the two Gond Jagirdars: Dandapat and Mahapater, while touring in the State in 1864, Colonel Dalton found 83 deserted villages and the remaining villages were hamlets. Three years later, he again came to the State to prevent plunder and bloodshed that were due to a quarrel between partisan of the Chief and the Gonds. Another lengthily feud between the Chief and the Sawant, which began in 1871 and was responsible for depopulation of most of the villages of the latter, was brought to a satisfactory end by Mr. Hewitt, in 1879. Both parties frequently took resort to harsh measures and in spite of arbitration and stringent orders of the Commissioner, they did not come to terms till 1889. Raja Dayanidhi Indra Deo, who ascended the Gadi in early seventies, was mainly responsible for the decline of the influence of the Sawant and the Gond Jagirdars; and it was owing to his enterprises that a large portion of cultivated areas was in the hands of immigrants from Ranchi and Singhbhum Districts. The Chief encouraged them to come into his State and occupy jungle areas on extremely easy terms. Rents were very low and even then the Chiefs were forced to make concession to keep their people attached to land and to prevent their emigration to Bamra and Gangpur

The State was for the most part hilly and densely wooded, and the population was scanty. Considerable portion of land were occupied by the tribes, among whom Bhuiyans, Gonds, Mundas and Hos were prominent. The Bhuiyans, Gonds, Mundas and Hos were prominent. The Bhuiyans for the most part did not practice settle cultivation and were addicted to shifting cultivation. There were neither extensive cultivation in the past nor even a large number of settled villages for a new site was and in consequence the individual is careless of his rights in the land. The advent of railway through Gangpur is however changing this State of affairs, and under the security of administration there has been a noticeable improvement and development of the larger villages, especially in the valley of the Brahmini”

The land revenue demand in 1907-08 was Rs.9,534. The assessment was very light and the demand regularly and easily collected.

Survey and Settlement:

Settlement of 1880 - A summary settlement undertaken under the orders of the Commissioner, Mr. Hewitt, was supposed to have been completed in 1880. This settlement, partly being summary in nature, was extremely restricted and all lands were not surveyed. Mr Hewitt made an assessment of Rs.11,860 including the value of payments in kind. Measurements at this settlement seemed to have been done partly by eye-estimation and partly by means of a pole of 7 ½ inches in length. No reliable records appear to have been prepared. At this settlement, there was a note

(dated 6th January, 1880) by the Commissioner, Mr, Hewitt, about the uplands and garden lands: "It is admitted that by local custom no rent was paid for uplands or garden lands". This was not linked up with the custom of bethi-begari. It appears that this link was first established by following the Singhbhum practice, for he writes; "There still remained the question of bethibegari to be settled and this was postponed till the matter had been discussed between the Raja and Gaontias. They accordingly came to me again this afternoon in a body and asked me to determine what reduction in rents should be allowed for the retention of bethi-begari. As in Singhbhum it is customary to commute bethibegari at the rate of 8 percent. I consider that Rs. 8 in hundred should be allowed as a reduction in the land revenue from the full rates now charged and accordingly it was laid down that in consideration of a reduction of that amount the Gaontias and maintenance of the Raja's house and for all work required to be done in Bonai. That this conception was new is shown by the fact that at first the Gaontias continued to levy full rates from the raiyats. In 1883, however, the raiyats of six villages applied to Mr. Hewitt complaining that though a reduction was made in the Gaontias rent on account of bethi-begari, it had not been passed on to the raiyats, On this petition, orders were passed that a reduction in the raiyati should be made.

Settlement of 1910-13- The first regular survey and settlement was taken up in 1910 and completed in 1913, but the settlement excluded areas occupied by the Bhuiyans, these being not subjected to survey. Only the villages in the valleys of the Brahmini (i.e. the wet lands) were surveyed by traverse and cadastral survey but the traverse was a plane table and sight vane survey was similar to one adopted in most of Odisha States. Only 272 villages were cadastrally surveyed and the remaining 157 villages were summarily settled. The waste lands do not appear to have been properly surveyed even in the valley of the Brahmani.

In the hill country regular survey was attempted in a few villages which showed sufficient development and some of them were summarily settled. This settlement was for a period of 10 years. The Bhuiyan areas seem to have been assessed to a plough tax of Rs. 1 per plough in former years and this apparently was continued in the villages which were not subjected to regular survey and settlement but was abolished where settlement was done. At the time of 1910-13 settlement a number of payments in kind were commuted to cash rental. At this settlement there was an enhancement of 102 per cent of rent and the net rental of Rs. 24,000 in round figures was fixed. The term of this settlement expired in 1923, in 1923 but the period was extended by another 10 years. It extremely important to note here that at this Settlement there was no suggestion of any reduction in the rent on account of bethi-begari. The settlement Officer, Mr. W. G. Kelly, here assumed that the uplands and Homesteads were held free of rent in lieu of bethi-begari (which is dealt with separately).The reduction of rent ordered by Mr. Hewitt

does not appear to have been given effect at all for it was found that the raiyats were paying at Mr. Hewitt's original rates (Rs. 2 for Bahal Rs.1-8-0 or Rs.1.50 paise for Berna, Rs.1-0-0 for Mal) for their old lands. At the 1910-13 settlement, it was indeed found necessary to reduce the rate and apply new rates apparently on account of defective measurement and under-estimation of area at the previous settlement, but there was no suggestion that the rate was either low or was reduced on account of bethi- begari. In fact, the Settlement Officer points out that except in the valley of the Brahmini no enhancement could be expected after 10 years and in that valley he had suggested that fair enhancement could be made only after taking all factors into consideration.

As stated in the 1910-13 Settlement Report land tenures were few and the law governing them was simple. They were of three classes; (I) Tenures with limited proprietary rights; the Zamindari, Gond Jagirs and revenue free holdings, (II) Tenures appertaining to office, the Gaontiahi or tenure of village headman, and holdings of village and other servants, (III) Tenures with rights of occupancy ; the raiyati holdings.

The Sawant (or Saont), the recognised head of the Bhuiyans, was the only Zamindar. He had a small Zamindari in the south of the State on the east bank of the Brahmani consisting of 27 villages which he held on a hereditary feudal tenure. He paid a nominal tribute of Rs.40 to the Chief (as fixed at the Settlement). Over and above the tribute, he was liable with his Bhuiyans to render military aid when required. Half the proceeds from the sale of timber in his forests were also payable to the Chief. Excise was under State control. Owing to frequent disturbances the Zamindari was in a backward condition and assessment at the 1910-13 settlement had to be made at very low rates. From land revenue and fuel tax, the income of the Sawant was Rs.1500 per annum. The school cess levied in the Zamindari amounting to Rs.97 was to be paid to the State by the Sawant who used to collect it from his tenants. The Sawant appointed the headmen in his villages. The headmen could be removed only by the State. But the State usually did not proceed against them except at the instance of the Zamindar. The recognised village headmen could require an agent under him if he was not capable of discharging his duties himself and the State appointed the agent on the nomination of the Gaontia, but the Gaontia had no right to remove the agent on his own initiative. In the event of appointment of an agent, the bhogra land was divided equally between the Gaontia and the mukadam. Eight percent of the rent was taken as Salami on the appointment of a new Gaontia who was not the heir of the previous Gaontia. The salami seemed to go entirely to the Zamindar. The State levied a mutation fee amounting to Rs. 5 for issue of a Patta.

The royalty on trees on waste lands was divided equally between the Zamindar and the State and for the reclamation of the State was necessary. The Gaontia also seemed to allot land for reclamation independently of the Zamindaris consent as well as permission of the State, and used to get salami without the knowledge of the Zamindar. The Zamindar is said to recognise the reclamation and it is possible that recognition might be withheld until salami was paid. Newly reclaimed lands were assessed after three years and the assessment seemed to be made by the Gaontia by agreement with the tenant and probably in consultation with a few people of the village. The rights and liabilities of the cultivators in the zamindar seemed to be the same as in the Khalsa area.

The forests in the zamindari were subject to the ordinary rules regarding State forest, and the Zamindar had no reserved forests of his own. Bethi was taken for cultivation of Zamindari land (only food was given), free bethi was taken for Zamindari roads and for the State roads on payment of Rs. 2 per mile (1.60 km). It was obligatory for the Gaontia to give free rasad to officers –on- tour and luggage was to be carried free. Paddy for State elephants (Hati-dhan) was sold at concessional rate. The zamindar seemed to levy a Dashara tika of a goat given either free or for a nominal price. Besides the Sawant, there were two Gond Jagirdars (military-fief-Gond Jagirs holders), namely Dandapat and Mahapater, each holding thirteen villages. The people were Gonds and first entered the State with their followers; it is said, as wrestlers and sword-players and given the jagirs when installed as police force. In addition to rendering police service, half of the net land revenue of their villages was to be paid to the Chief. Owing to their refusal to supply the necessary police force, a tax had been abolished and the Jagirdars held the fief on the following terms.

- (I) To render military aid to the Chief when required and to accompany him on journeys when ordered to do so.
- (II) To pay half the net land revenue and the entire school cess imposed in the jagir.
- (III) To pay half of the proceeds from the sale of timber in their forests, taxes on artisans, and grazing dues.

The Jagirs were hereditary and in addition to retaining half of the land revenue of their areas, each Jagirdar held a certain amount of land rent-free in accordance with a compromise affected between them and the Chief by the Commissioner Mr. Grimley in 1889. These lands assessed at the rates of the rent sanction for the jagir were valued at Rs 97 in the case of Dandapat and Rs.70 in case of the Mahapater. No fuel tax was imposed in these areas and the raiyats paid at lower rates of rents than those fixed for the

neighbouring Khalsa villages (that is, the villages under direct control of the Chief) Jagirdars kept portions of forests in the Jagirs reserved.

In the Jagirs also the Jagirdars had the right to nominate the Gaontia who was appointed by the State. The State levied mutation fees and issued patta. The Jagirdar did not appear to levy any Salami the Jagirdar could report about a Gaontia to the State for removal. When a Gaontia defaulted, the Jagirdar usually issued a notice of demand on him and he could file a civil suit for area Rs. If a Gaontia made default for 3 years continuously, he was usually removed. The Jagirdar had no power to attach the property of any Gaontia or villager. All the jagir villages did not have Gaontias and in some village recovery was affected direct by the Jagirdar, but in those villages for which there was no separate Gaontia, no patta was issued in the name of the Jagirdar as Gaontia. The Jagirdar had the power to allot land for reclamation. Assessment of reclaimed land was made after three years according to the seed capacity. In the jagir villages of the Dandapat, there were no grazing fees. School cess was paid in fact to the State.

Revenue-Free Holdings: The revenue-free holdings included maintenance (Kharposh) grants, Brahmottar, Debottar and Anugrahi grants as well as various kinds of jagirs. There were some whole villages held as Debottar grant. There was a committee of officials and non-officials to look after the management of some of these grants. There was no Debottar Department. There were Brahmottar grants which also comprised some of the whole villages and individual holdings. The Brahmins were not liable to bethi and other States and were held subject to the condition of service. There were a number of Paik holdings, jagir's assessed to a concessional rent; and they were expected to attend at the palace for various kinds of menial services and guard duties as well as carriage of dak. Only one Paik had entirely rent free lands. A total areas of nearly 10,000 acres with a revenue of about Rs10,000 was held rent free apart from Zamindari and village service grants. No rules existed for governing these grants. The Chief personally held certain lands as Khamarchas. There were five villages without Gaontias (probably removed) which the Chief had made into 'Tikait fund' villages. The revenue of these villages had been struck off from the land revenue demands register and payment was made direct to the Chief. This seemed nothing more than appropriation of the revenue of the villages by the Chief without the sum being shown in the budget. At the 1913 settlement, a school and fuel cess had been imposed on all the lands included in these tenures.

Gaontiahi Tenure: The Gaontiahi tenure appertaining to the office of the village headman was next to that of the raiyats, the most important in the State. Gaontias were appointed by the raiyats, the most important in the State. Gaontias were appointed by the persons under whom they held the

tenure and were responsible to them for the punctual annual payment of rents and cesses in two installments. They were also morally responsible for the development of their villages and for the general welfare and conduct of the raiyats. They were allowed 12½ percent of the gross rental as collection charges. To ensure their taking an interest in the extension of cultivation they were permitted, during the period of settlement, to assess newly prepared rice lands after the third year of their existence with rents at half the village rates and to collect and retain such rents till a fresh settlement was made by the State.

With the office of Gaontia, management of bhogra or home lands of the village was rested. Bhogra lands were assessed to rent and if such rental was below the 12½ per cent. Gaontias were allowed to collect revenue with rebate. If the revenue so collected was in shortfall, the Gaontia had to pay the difference, but such payment did not give him any right of occupancy over bhogra lands.

The Gaontias were appointed for the period of settlement after which their appointment was open to revision and there were no hereditary rights of succession to the office. But in practice, a Gaontia who had during the period of a settlement observed the terms of the lease he held was reappointed for the ensuing period of settlement. The son of a Gaontia, if fit and agreeable to take over the village, was usually appointed to succeed his father and if a minor, he was eligible under suitable guardianship.

Co-sharers with headmen, unless appointed jointly with them, were not recognised by the State as having any right to the office. Private partitions of the bhogra lands among the members of a family were permitted, and in such cases the co-sharers could enforce in State court their rights to a share in home-farm lands. But in the event of the appointment of a new Gaontia the bhogra lands were made over to him free of all encumbrances.

During Dasahara they had to offer goats to the Ruler who used to return the carcasses retaining the head only. On **Paus Purnima** they had to supply a goat for eight annas (Rs.0.50). They were also required to sell fowls for a nominal price.

In Bonai State the distinction between Thani and Pahi did not seem to be known. Raiyats held directly from the proprietor of the village and not under the Gaontia though the Gaontia had the power to dispose of abandoned holdings and wastelands with certain restrictions. All raiyati holdings were of one class (namely, 'occupancy holdings') and no fixed period of possession was necessary to give them this status. In the case of abandoned holdings, permission from the Gaontia to enter upon and pay the first installment of rent; and in case of waste lands, sanction from the same sources to break up, give the raiyati rights of occupancy. He was only liable

to be ejected on non-payment of the settled rents or in the event of his alienating by sale, gift or mortgage, the whole or any portion of his holding, but an ejection could not be effected except by order of the State courts.

Mr. R. K Ramadhyani after conducting an enquiry into the system of revenue and land tenures in the feudatory States reported the position then prevalent in Bonai, according to which land was allotted to a cultivator free of any consent money (this was not certain though and had little value in most parts of the State) and after five years (three years Zamindari) he became liable to pay rent. It was not unlikely that the Gaontia himself allotted waste land in the village for new cultivation. In such cases, the Gaontia used to take salami and fix the rent. The rent was fixed were often quite arbitrary. The rent of the cultivator was not enhanced during the currency of the settlement.

The sale of holdings was permitted with the sanction of the State. Salami, as such, was not levied on that occasion, but four times the annual rent or 25 per cent of consideration money whichever was higher was levied as mutation fee and if the vendee was a resident outside the State, the fee was six times the rent. The Gaontia seemed to have a say in the matter. A person belonging to a scheduled caste had to sell only to a person of a scheduled caste except with the permission of the Ruler. The cultivator could lease his land and mortgage it, but there was no definite rule about this. The only document which cites the rights of a cultivator is the Settlement Report of 1913 which, however, says (as stated earlier) that a raiyot may be ejected "in the event of alienating his land by sale, gift or mortgage". Permission was necessary for a mortgage, but no case came up which presumably means that the rule was not observed.

Homestead lands as well as baris were not subject to any assessment, but in lieu of bethi assessment of these lands was made. The raiyats seemed to have a right to enjoy fruits of trees on waste lands. They had no rights over trees of reserved species even on their own holdings.

Under bethi, a system of free labour, the raiyot was bound to assist in cultivating the lands in actual possession of his proprietor and the bhogra lands of the Gaontia, to help in the construction and repairs of the village roads and the buildings of his landlord, and to carry the luggage of the Chief or officers on tour. In lieu of full wages for this, he used to occupy uplands and homestead land free of rent and was given his food or its value in cash. In a place like Bonai where professional labourers were scarce bethi was deemed essential and there was little apprehension that the proprietors and Gaontias would abuse their power, for the raiyot was much too necessary a person in the State to be bullied into doing more work than what was customary. In practice, only the lesser proprietors and Gaontias of more

advanced villages demanded agricultural labour and this was fixed at one plough and one sickle per raiyot to be supplied during the season, to each of these persons for the spell of half a day. Labour for transport, except along the main road to Panposh, was seldom demanded and as far as the State was concerned, it got little compensation for the revenue loss from extensive areas under upland crops.

Bethi continued till the State was merged with Odisha. As Mr. Ramadhyani put it, "Bethi has actually been decreed recently to the Rajguru by the civil court. Cultivation of Zamindars' lands on bethi continues, but food is said to be given. All the bethi is not free and in the case of roads and forest small payments seem to be made."

Hatidhan (Paddy for State elephants) was being recovered at concessional rates. Straw and firewood were also supplied at concessional rates to the palace.

The Naikali and the Paikali holdings were assessed at lower rates of rent on condition that tenants would keep watch for a fixed number of nights over the residence of the Chief and his outlying granaries.

Village servants in Bonai comprised the Chowkidar or Jhankar, Kalo (priest), Nariha (waterman), Kumbhar (Potter) and the Kamar (blacksmith). All of them enjoyed small holdings free of rent for their obligatory services. For a Chowkidar, the average size of the holding was three acres and for others it varied from 1½ to 2 acres. These servants were under the general control of the headman, but sanction of the State was necessary for a new appointment. The Chowkidar throughout the State was appointed by the State but in the jagir and other villages the nominee of the Jagirdar or Zamindar was appointed. The Kalo and others did not seem to render any useful service except mineral service to officers and others on tour. In most villages the villagers by custom seemed to make a payment to the Chowkidar in kind in addition to his jagir.

There were no under-raiyats or sub-lessees who had been recognised as having permanent rights. For the period of settlement, the Gaontias the raiyats and the village servants were permitted by the 1913 settlement to sublet portions of their holdings, but the sub-lessees had no legal tenure and could only sue for a money decree in the event of their being unfairly treated.

In all, there were 123 persons holding area valued at Rs.630 as Noukran or service tenures on practically the same terms as the village servants. The average holding was small but the work of the various posts was merely nominal.

The 1910-13 settlement was made for a term of 10 years, but subsequently extended for another 10 years, that is, a revisional settlement

fell due in 1933. So a revisional settlement was started in 1930 in order to complete the same in 1933. But the work was suddenly stopped on account of general slump and trade depression causing a financial deadlock, when the operation had progressed as far as kistwar of 244 villages and Khanapuri of 268 villages. In 1934, it was decided to resume the operation and complete the work of the whole State in 1939. But before resuming the settlement operation, it was found expedient to run the Nayabadi settlement of the entire State as there was a substantial increase of Nayabadi lands during a period of 22 years, so that the State would be in a position to realise rent on all new wet lands so long appropriated by the Gaontias. Thus the Nayabadi settlement was taken up in December 1934 with the aim of creating a record of land rights without enhancing the existing rates of rents, giving to the State a share in the profit arising from the enormous amount of new cultivation that had been made within the last 22 years. The Nayabadi settlement, done by Mr. Nimay Charan Pattnaik brought an additional revenue of Rs.15,909/8/ (Rs.15,909.50) to the State. He Khanapuried the Nayabadi areas cadastrally surveyed in 1930 and assessed them with rent along with Nayabadi plots which were not checked up by Mr. Nimay Charan Pattnaik in 1935, was made. When the work was in progress in 1938-39, the tenants of 167 villages filled petitions to exempt them from bethi (free labour) in lieu of an enhanced rent. Accordingly there was a settlement again but no final publication was made and no reliable records were maintained. So in 1940-41, a regular settlement was made for bethi-commuted villages and by the end of 1941-42, final publication was made with regard to 129 villages. For the remaining 38 villages work had to be stopped at the attestation stage under orders of the Political Agent who advised to start a regular settlement of the entire State in March 1942. In January 1943, he passed orders to assess, and no permanent must be low, there must be no cesses, and no permanent rights given to Gaontias. This work was started under the supervision of the Dewan and was taken up in 319 villages where bethi commutation had been done. The operation took full one year and it cost Rs.10,000 to the State. The total assessment was Rs. 12,000. A total area of 32,533 acres of land was assessed.

Recovery of Land Revenue: The rents were payable under two equal installments in December and February. For recovery of Land revenue, the Gaontia was first preceded against, a notice of demand and warrant of attachment of movable properties issued, simultaneously. A single case might be used to be registered against all the defaulting Gaontias of a pargana. Immoveable property did not appear to be attached for recovery and if recovery was not affected the Gaontia was to be evicted. Interest at one anna (Rs.0.6) per rupee was recovered from the defaulting Gaontias for recovery. He was also permitted to file a list of defaulters in the Revenue Court on which the Revenue peons used to go out and effect recovery.

Interest at one (re.0.6) per rupee was also charged from raiyats who had defaulted for more than 21 days. Arrest and imprisonment did not appear to be resorted to for the purpose of recovery. The zamindar and the other tenure holders were allowed to file civil suit, for recovery of rent but the State was also granting certificate proceedings on application by them. Since the introduction of the Odisha Public Demand Recovery Act, 1962, all government dues including land revenue are being recovered now under the procedure laid down in the said Act.

Forest: There were only two classes of forests, viz., reserved forests and Khesra forests. Khesra or village forests included all waste lands. Reserved forests were demarcated and boundary lines were required to be kept cleared in the bethi areas by the villagers on payment of Rs. 3 per mile, while in non-bethi villages, wages were paid at 0-2-6 to 0-3-0 (Rs. 0.15 to Rs. 0.19) per day. R.K. Ramadhyni's report reveals that there were 8 reserved species of trees. The reservation applied to all areas including cultivated holdings and reserved species could not be cut without permission and payment of royalty.

The present Sundargarh District, comprising the ex-State of Gangpur and Bonai, was formed in 1948. Following this, certain administrative changes occurred in the District. Besides, formation of this new District ushered in important changes in the sphere of revenue administration.

Four of the Zamindaris viz., Sargipali, Kupsingha, Nagra and Sawant and three parganadars viz., Erga, Daldali and Raiboga of the District were abolished under different notifications issued by the Government of Odisha on the 27th November, 1952. The other two Zamindaris, viz., Hemgir and Saraphgarh were abolished on the 15th June 1957.

The Khamar, Kharposh, Brahmottar, Dan, Anugrahi and Debottar tenures were abolished under the Government of Odisha notification No. 57652/ dated 28.08.1965.

In different Government press Notes published in between 1952 and 1969, 42 rent -free jagirs granted for rendering services to the village communities were also abolished and it was ordered that jagir lands would be settled on fair and equitable rent in favour of the holder of such jagirs and others in actual possession.

The rent-free jagirs granted for rendering personal services to the ex-Zamindars were abolished and settled in favour of the Jagirdars on raiyati rights as per section 8 (3) of the Odisha Estate Abolition Act. The rent -free jagirs rendering personal services to the ex-Ruler or his family were abolished and settled on occupancy rights under section 7 (g) of the Odisha Merged State (Laws) Act 1950, and those which were not settled under the

above provision of the said Act were deemed to be rayoti from 1-10-1965 under section 4 (i) (g) of the Odisha Land Reforms Act, 1960

In the Press Note No 89, dated the 13th April, 1961, issued by the State Government in the Home (Public Relations) Department, Gaontia system of the District was abolished. But after the introduction of the Odisha Merged Territories (Village Office Abolition) Act, 1963, the other village offices along with Gaontias of Gangpur and Bonai ex-State were abolished. They are; Gaontia, Sikmi Gaontia, Head Ganjhus, Ganjhu, Sub-Ganjhu, Khuntkatti Ganjhu and Thikka Ganjhu of Gangpur State.

The Odisha Offices of Villages Police (Abolition) Act, 1964 came into force in the District with effect from 1-7-1965, as per the Home Department notification No12418 dated 5-5-1965. From this date all jagir lands enjoyed by Chowkidars, Jhankars and Kalo stood resumed and vested absolutely in the State Government. Only Kalo or Jhankars performing the duties of the village priest are allowed to hold 50 per cent of the jagir lands for so long as they continue to discharge the said duty. The jagir lands resumed are settled with rights of occupancy therein on who may be in actual possession of the holding or part thereof in favour of in Grama Sasan within whose limits the land is situated.

Present Settlement Operation: The present survey operation of Sundargarh has been taken up in plane table method, divided the District into three blocks, i.e., 'A', 'B' and 'C'. In Rourkela, theodolite survey was adopted in order to achieve greater accuracy because of the extreme congestion of the area. Block 'A' covers 589 villages of Bonai Sub-Division, Block 'B' -399 villages of Panposh Sub-Division excluding 52 units of Rourkela town, Block 'C' -727 villages of Sundargarh Sub-Division including 5 villages constituting Sundargarh town and 2 villages constituting Rajgangpur miles town. Block 'A' of Bonai Sub-Division extends to 825.96 sq miles (2135.64 sq.km) and survey and settlement operations were taken up in November, 1961, in pursuance of the Government notification No 43536-S-51/61-R, dated 27-9-1961 under sections 11,18 and 36 of the Odisha Survey and Settlement Act 1958. Block 'B' of Panposh Sub-Division extended to 524.65 sq miles 91,358,82 sq km) and order to take up survey and settlement operation under section 36 (i) of the Odisha Survey and settlement Act,1958 was published in the notification No S/379/62-52599-R,,dated 10-9-1963. The Block 'C' extends to 1,286.36 sq miles (3331.57 sq. km) and the survey and settlement operations for Rajgangpur, Talsara, Bargain, and Hemgir Police Stations in this area under the same section of the above Act were taken up pursuance of the Government notification No 75346-R, dated 19-11-1964. In Thanas of Lephripara, Bhasma, and Sundargarh, the survey and settlement operations were taken up in accordance with the Government notification No 72612-R dated 8.12.1965.

Attestation of the entire District is already completed excluding 11 villages of Bonai Sub-Division, 52 units of Rourkela town and 25 villages of Panposh Sub-Division and 187 villages of Sundargarh Sub-Division.

Final publication of the entire District was likely to be completed by 1976. In preparing the record-of-rights during the currency of the settlement operations, the provisions of the following laws and regulation passed and enacted from time to time since the merger of the States are taken into consideration. They are mainly;

The Odisha Merged State (Laws) Act, 1950; The Odisha Estate Abolition Act, 1951; The Odisha Private Lands of Rulers- Assessment of Rent Act, 1958; The Scheduled Areas transfer of Immovable property (by Scheduled Tribe) Regulation, 1956; The Bhoodan Yagna Act, 1953; The Odisha Land Reforms Act, 1960; The Odisha Offices of Village Police (Abolition) Act 1964; The Odisha Merged Territories (Village Offices Abolition) Act, 1963.

Classification of village is made under the Odisha Survey and Settlement Act 1958, by taking into consideration the following factors, viz, (i) situation of the village, (ii) communication and marketing facilities, (iii) depredation by wild animals and (iv) liability to vicissitudes of season. After the villages are grouped under different categories, the classification of land is made according to crop or crops grown on the land, nature of the soil, situation of land in village, and source of irrigation. Then assessment of fair and equitable rent is done under the same Act.

Zamindari and Gaontiahi system which was found previously as collecting agency was replaced by the Tahasil pattern of administration which was introduced in the District in pursuance of Revenue Department notification No 52751/r dated the 9th November, 1962 from October 1963. Consequent upon the introduction of the Tahasil system, four Tahasil, i.e. Panposh, Bonai, Rajgangpur and Sundargarh were carved out at first. Subsequently for a smoother revenue administration another Tahasil named Hemgir came into being with effect from the 1st December, 1965. Under the new system the responsibility of revenue collection devolved upon the Tahasildar to ensure better revenue administration, a Tahasil is divided into a number of Revenue Circles and for each Revenue Circle the staff consists of one Revenue Inspector's work.

Relation between Landlord and Tenant: There were 907 Gaontias and Ganjhus in the ex-State of Gangpur. The Bhuiyans and Agharias held about 34 per cent of the Gaontiahi and Ganjhuni villages. The Agharias Gaontias were few in the Zamindari areas. They were generally well off. The Bhuiyan and Munda Gaontias were poor. The Settlement Report (1929-36) stated that their relation with tenants was, on the whole, satisfactory. They

used to help the Gaontias willingly in cultivating their home-farm lands. It was really difficult to cultivate rice lands in large areas unless ample labour was forth-coming at critical seasons. The Gaontias and landlords largely depended on the free labour provided by tenants who were also not large in number. So the landlord would not ordinarily take recourse to any coercive measures for he was aware that this would lead to desertion which means absolute failure of agriculture.

This was also true in respect of Bonai ex-State. In this connection, the Bonai Settlement Report (1910-13) states; "This relationship between landlord and tenant is very satisfactory. This is obviously due to the scanty population, the low value at which lands were formerly appraised, and the very solid help rendered by the raiyot in the cultivation of proprietor's home-farm and bhogra lands".

Agrarian Agitation: There was a rebellion of tribal Gaontias of Gangpur under the leadership of Madri Kalo. It has been narrated earlier under Goantiahi 'Tenure'. A Munda rising shook Gangpur in the late thirties. They were said to have got inspiration from the freedom struggle that the Indian National congress launched all over the country. Adibasis of Raiboga declined to pay the land Revenue demand enhanced in the revision settlement which concluded in 1936. A no-rent campaign was started. This took such a serious form at Simko in 1939 there was a bloodshed. Thirty-two persons were killed. In 1942, a commission of enquiry was appointed with Mr. Woodhouse and in accordance to its recommendation the enhanced demands was reduced in respect of different classes of land.

Land Reforms Followed After the Merger of the States.

It was after the merger of the ex-States with Odisha, the Central Government issued an order called the Odisha States (Application of Laws) Order, 1948, applying a number of enactments to the ex- States on the subjects included in the central list. Besides, the Odisha Government also issued an order called the Administration of Odisha States Order, 1948, extending a number of State Acts for carrying out the Administration of these areas in respect of the remaining subjects. In this order substantial and far reaching tenancy reforms were enacted giving free rights of transfer, full rights over trees standing on the tenants holding, protection against increase of rent and against ejection of occupancy tenants and Sukhabasis, notwithstanding anything contained in the tenancy laws of the ex-States. Besides, some rights were conferred on Jagir holders and cultivators of Khamar lands. This modification of existing tenancy right by the Administration of Odisha States Order, 1948, which was repeated in the Merged States (Laws) Act, 1950, was an event of far reaching consequence.

The first phase of land reforms affording protection to tenants thus started from 1948 with the enforcement of the above orders. The Odisha Tenants Protection Act, 1948, also made provision for protection of tenants' rights.

Subsequently the Odisha Tenants Relief Act, 1948, was enacted repealing the Odisha Tenants Protection Act, 1948. According to the Odisha Tenants Relief Act 1955, no tenants in lawful cultivation were to be evicted from such land by the landlord.

The enactment of the Odisha EStates Abolition Act, 1951 introduced further land reforms by eliminating intermediary interests. The primary purpose of the Act was to abolish all intermediaries existing between the estates and the raiyats and after eliminating all the intermediary interests to bring the raiyats or the actual occupants of land in direct contact with the Government. The Act further provided for release of the service tenure holders from the obligation of rendering serviced and conferring occupancy status on them in respect of the land under their occupation.

After these initial steps, came the Odisha Land Reforms Act, 1960, the objectives of which are:

- (a) Conferment of rights of ownership on the tiller,
- (b) Security of tenure and fixing of reasonable rent so that the right of ownership became effective
- (c) Fixation of ceiling on holdings in order to avoid concentration of land in the hands of a few cultivators.

The Act was subsequently amended by the Odisha Land Reforms (Amendment) Acts, 1965 and 1974. Under the amended Acts, no person shall hold land as landholder of raiyot under personal cultivation in excess of the ceiling area equivalent to 10 standard acres. A standard acre means the unit of measurement of land equivalent to one acres of class I land or one and one half acres of class II land or three acres of class III land or four and one-half acres of class IV land. Thus according to law a person (which includes a company or association or other body of individuals, whether incorporated or not ; and any institution capable of lands, 15 acres of class II lands, 30 acres of class III lands and 45 acres of class IV lands. If the number of constituent members of the family exceeds 5, the Laws permits an additional area to be included in the ceiling at the rate of two standard acres for each additional member in excess of 5, subject to a maximum of 18 standard acres.

Seventy percentum of the surplus lands which vest in Government as a result of the enforcement of the ceiling provision are required to be settled with persons belonging to the scheduled Tribes or the scheduled Castes in proportion to their respective populations in the villages in which the lands

are situated and the remaining lands with other persons. If, however, sufficient numbers of persons belonging to the Scheduled Castes or Tribes are not available in the villages, or being available, they are not willing to accepting the settlement of land, so much of the land reserved for them may be settled with other persons. For the purpose of settlement, the order of priority is prescribed as follows:

- (a) Co-operative farming societies formed by landless agricultural labourers
- (b) Landless agricultural labourers of the village in which the land is situated or of any neighbouring village.
- (c) Ex-service men or members of the Armed Forces of the Union if they belong to the village in which the land is situated.
- (d) Raiyats who personally cultivate not more than one standard acre of contiguous land.
- (e) In the absence of persons belonging to any of the foregoing categories, any other person. Subletting is entirely prohibited except in cases of disabled persons including those serving in armed forces, minors, widow etc. Under section 6(3) of the Act, privileged raiyats may also sublet their lands. The above class of persons except serving in armed forces will be required to produce certificates from the village Panchayats for subletting their lands, where such Grama Panchayats have not been constituted the Revenue Officer has been authorised to such certificates.

For the implementation of the Land Reforms Acts, Chapter V of the Act provided for the administrative machinery according to which the land Commissioner has been set up. The first Land Commissioner was set up on the 13th September, 1966. The tenure of the commission expired after three years i.e. on the 12th September, 1969. The second Land Commission was constituted and continued up to the 10th February, 1973 when the Third Land Commission was formed with seven members of who three are officials and four non-officials. The official members are the Members, Board of Revenue, Odisha, Chairman; the Land Reforms Commissioner, Odisha, Member-Secretary; and the Commissioner-cum-Secretary to Government, Revenue and Excise Department, Odisha, member.

The functions of the Land Commission were to review the progress of land Reforms in the State from time to time, publish report at least once a year and advice Government in all matters relating to land reforms. Under section 55 of the Odisha Land Reforms Act, 1960, the District Executive Committee was formed with the Collector as Chairman and two nominated non-official members. The committee which normally held office for three

years, reviewed the progress of land reforms. The statute, however, did not make any provision for the constitution of any committee at Tahasil level. In view of the growing importance of the land reforms measures and their likely impact in the field, the Government in its Resolution No 60267-R, dated the 15th September 1973, authorised the Board of Revenue, Odisha, to frame Tahasil Advisory Committee in each Tahasil consisting of four members with Sub-Divisional Officer as Chairman, the Tahasildar as Member-Secretary and two non-official members. Accordingly committees were framed in all the Tahasil of the District. These committees held office normally for a period of three years and meet thrice in a year. The committee advised in the matter of distribution of ceiling surplus lands and the implementation of land reforms measures in the field. In addition, these committees also advised in the matter of distribution of Government waste lands and settlement of unobjectionable encroachments with the landless persons in accordance with the laws and rules in force in the State.

Abolition of Land Revenue: Along with the change in the concept of land and tenancy, the concept of land revenue too underwent modifications. When the system of payment of land revenue in cash was introduced, it was hailed by its authors as an improvement over the traditional system of payment in kind. In the year 1946, the Government of Odisha appointed the Land Revenue and Land Tenure Committee which recommended, among other things, Legislative and other measures for reforming the different systems of land revenue or rent, as the case may be, as far as possible uniform, equitable and elastic. The Sub-Committee appointed by the National Planning Committee under the Chairmanship of Late Jawaharlal Nehru recommended in 1948 as follows:

“During the transition period no tax, rent or land revenue demand should be made in respect of any piece of land, which is so small or the gross outturn of which is so slight that the whole of it, if left to the cultivator of his own use, would not suffice to give him a decent human existence according to a predetermined standard”.

The Government, however, decided to abolish the land revenue with effect from the 1st April, 1967. The historic decision of the Government to abolish land revenue which had been on the soil of the country from the time immemorial, symbolises a further step in alienation of the right on land in favour of the tenants. As a preliminary step in this direction executive instructions were issued to all concerned not to collect from the 1st April, 1967, pending finalisation of the scheme.

After careful consideration of the pros and cons of the land revenue abolition scheme, the government introduced a bill known as the Land Revenue (Abolition) Bill, 1970 in the State Legislature on the 3rd April, 1970

to abolish the land revenue and the same was enacted on the 26th October, 1970. The law of land revenue abolition provides that no raiyot or tenant shall be liable to pay land revenue in respect of any land held by him directly under the Government provided such land is used for the purpose of agriculture, horticulture or for the purpose of any small scale industry outside the limits of a municipality or Notified Area. If any sum was paid on behalf of any raiyot or a tenant towards the land revenue after the 1st April, 1967, such amount if it cannot be adjusted against arrears, shall be refunded to him on application made on that behalf.

Bhoodan Movement started in the District in 1954. Till the end of March 1971, against 1,462.85 acres, being the total amount of land donated in the form of individual gift to the Odisha Bhoodan Yagna Samiti, the acreage distributed among the landless people is 262.60 acres only. It is in respect of 262,60 acres, declaration with the distribution have been filed before the respective Revenue Officers under section 10 of the Odisha Bhoodan Yagna Samiti Act, 1953.

Also till this date 56 villages covering a total area of 14,009.11 acres have been donated by way of Gramdan to Odisha Bhoodan Yagna Samiti. Out of this, 4,149.98 acres have been distributed in 16 villages. In respect of 4,149,98 acres, declarations with the distribution list have been submitted to the respective Revenue Officers. As yet 63.36 acres in 4 villages have been confirmed by the revenue officers under section 10 of the said Act. Remaining lands measuring 3,562.26 acres have been rejected.

Modernization of Land Records

In the way of modernizing and bringing efficiency to the land revenue administration as well as to make it citizen-centric, technological intervention has been envisaged under the centrally sponsored Digital India Land Records Modernization Programme. Major focus of the Programme is on citizen services. Various components of the programme are underway in the District which in brief has been outlined below.

Under this programme, all textual data of records of rights are being updated and computerized. Data conversion of all textual records has been completed in respect of all Tahasils of the District and has been hoisted in the Bhulekh website. Computerized RoRs are being issued to the citizens. Re-entry of RoR data is being done on continuous basis for further updation. Cadastral map-sheets of all the villages of the District have been digitized and mosaiced. All those maps have been integrated with the textual RoR data of bhulekh website for public view and official use. Steps have been taken to make the mutation process transaction based in which notices of all transactions registered in the registration offices are sent by the registering

officers to the concerned tahasil offices for initiation of mutation proceedings. There have been sharp decline in the application based mutation cases during the last 2-3 years. Further all Tahasildars have been instructed suitably to dispose all un-contested mutation cases within a maximum period of three months. People have been greatly benefitted due to quicker updation of land records.

In line of computerizing the Tahasil offices of the District, Tahasil level computer cells have been made functional in all Tahasils of the District. Information technology is being use for maintaining village wise property records and for providing services to citizens in a better way.

All the Tahasil offices have been provided with broadband internet connectivity. In addition, Virtual Private Network over Broad Band (VPN_oBB) has been provided in the Tahasil offices for secure data transmission. The VPN_oBB connectivity is being used to transmit the updated RoR data from the concerned tahasils to the NIC Head-quarters through File Transfer Protocol (FTP) for reflection of the same in the bhulekh website. Steps have been also taken to provide connectivity through Odisha State Wide Area Network (OSWAN) to all Sub-Collectorates, Tahasils and Registration Offices of the District. The District Head Quarters are already connected with OSWAN.

In order to replace the existing system of physical storing and maintenance of land records which has a lot of shortcomings and inconvenience, Modern Record Rooms in Tahasil offices are being created under DILRMP. In these Modern Record Rooms, valuable revenue case records shall be stored electronically through document management system software after their scanning. Maintenance of land records in the dematerialized format shall go a long way in long-term storage of the valuable revenue case records as well as in providing better citizen centric services. As of now, Modern Record Rooms have been made functional in all Tahasils of the District.

Under DILRMP, all the Registration Offices of the District have been computerized with adequate hardware, software. All the Registration Offices are connected to the Central Server at the State level through dedicated software on Virtual Private Network (VPN) mode. Bio-metric authentication system has already been put in place in all the Registration offices. Data Entry of Valuation details, legacy encumbrance data and scanning of old documents in respect of all records from 1995 to date has been accomplished. Citizens are being provided immediate services such as Encumbrance Certificates (E.C.) and Certified Copies (C.C.) at the Registration offices.

Hi-Tech survey operation using Aerial Photography followed by Ground Truthing by Electronic Total Station (ETS) and Differential Global Positioning System (DGPS) has been started in the District under DILRMP. All areas except those declared as urban areas and as forest areas are being covered under the programme. Necessary Ground Control Points have already been installed in the District. These Ground Control Points have been established taking the reference of existing Survey Pillars of Survey of India for the sake of accuracy and uniformity. One private agency namely M/s IIC Technologies Ltd. has been engaged by the State Government to undertake Hi-Tech Survey operation in the District. Digital map preparation depicting the ground reality in most accurate manner under Hi-Tech survey is expected to bring paradigm shift in the land record management and shall bring efficiency in the public delivery system.

Chapter- X

LAW AND ORDER, AND JUSTICE

To appreciate the need to strengthen and proliferate the law and order machinery in Sundargarh District after the fifties, one ought to know the serious nature of communal riot that took place in 1964. The tribals of the District were easily led into the intensification of the violence against Muslims. The communal conflagration had the root in the grabbing of land and forests by outsiders, liquor vending by them in the remote tribal pockets by 'Kuchia' shops, snatching away headloads of marketable goods from ladies besides several other illegalities that the community was perpetrating in the tribal pockets. The origin of the riot was ignited in the then East Pakistan where minorities there were brutally persecuted and the bruised lot reached Sundargarh District by train. Riot broke out in the town and villages of the District as a consequence of the brutalities manifested and direct support of the tribes was forthcoming and in the process many lives were lost. Shri V. S. Mathur, IAS (Retd.) the then Commissioner, Community Development was appointed to enquire into the horrific incident and following the enquiry report the office of the Additional District Magistrate was created at Rourkela with another Police District at Rourkela, that has now increased in strength. Now Rourkela has a range DIG posted for three Police Districts.

Incident of Crime

During the first decade of this century, crimes both in the ex-States of Gangpur and Bonai mainly related to ordinary thefts and burglaries. Dacoity and robbery were taking place occasionally. In the wilds of Bamara (now in Sambalpur District) and Bonai, the Kols in gangs were committing dacoity from time to time. In 1907-08, the number of crimes reported to the police of Gangpur ex-State was 579. The nature of crimes committed in the ex-State of Gangpur during the thirty years after 1907-08 had nothing special to be mentioned. In 1937-38, the total number of criminal cases reported to the police in this ex-State was 498. In early 1939 there was an agitation by Lutheran Mundas of the ex-State against the increase of land revenue. The agitation reached its climax on the 25th April, 1939, when a party of police that went to the village site to arrest the leader was confronted by a crowd of 500 Mundas. The trouble was over when the mob was fired at by the troops. The firing took 32 lives. During the period 1938-39 to 1946-47, the annual crime figures varied in between 378 to 720. Most of the crimes reported were burglaries and thefts. Murders and culpable homicides were not very frequent. Dacoity, robbery, abductions and rape were rare or nil.

By 1907-08, the police administration of the ex-State of Gangpur was organised on the lines of the police then in British India and the rules and

procedures in Bengal Police Code were closely followed. The force was under the general control of the Dewan with the eldest son of the ruler as the Superintendent of Police. The advent of the railway and the opening up of the country rendered a properly trained force essential. There were then eleven Police Stations and outposts, and the force consisted of one Inspector, 10 Sub-Inspectors, 12 Head Constables and 120 Constables maintained at a cost of Rs. 18,000 per annum. There was in addition a Chowkidar (Village Watchman) in each village, who was remunerated by grant of land.

In 1907-08, the ex-State of Bonai had a regular police force consisting of one Sub-Inspector, five Head Constables and 29 Constables. Besides the reserved police force of 9 men and one Sub-Inspector, there were also 108 village chowkidars or goraitis. The number of cognizable cases reported to the police during 1914-15 in the ex-State of Bonai was 143. It varied in between 143 to 455 during the ten years ending 1924-25, the largest being in 1919-20. Increase in crime in this period was due to serious out-breaks of dacoity which could not be controlled by the ex-State police. Specially, from 1918 to 1920, there was a formidable recrudescence of dacoity in Bonai with which demoralised police force was quite unable to cope. An armed police force had to be drafted in from Ranchi, Angul and the neighbouring ex-States, and the most of their associates were arrested. In the following five years on an average 212 crimes were reported in the ex-State. Crime figures of the ex-State varied between 236 to 425 in between 1941-42 to 1945-46. Like the ex-State of Gangpur, here also most of the crimes committed were either burglaries or thefts. Except 9 cases of murder and culpable homicide in 1942-43, these types of heinous crimes reported in other years were within five. There were few cases of dacoity, robbery, kidnapping and cheating.

By 1938-39, the police force of this ex-State increased to 210 which included one Superintendent of Police, one Assistant Superintendent of Police, two Circle Inspectors, 12 Sub-Inspectors, 18 Head Constables, 162 Constables and 14 others. There was one police man to every 12 square miles of area of the ex-State and to every 1,731 of its population. There was a slight decrease in the sanctioned strength of the force in 1946-47, which were 195. The force consist of one Superintendent of Police, four Inspectors, 15 Sub-Inspectors, 17 Assistant Sub-Inspectors, 17 Writer Constables, three Havildars, nine Naiks and 129 Constables. Besides this, there was C.I.D. staffs consisting of one Sub-Inspector and one Constable. There was one police man for 12.8 square miles and 2,047.6 persons. The ex-State was divided into nine Police Stations and four outposts.

The sanctioned strength of the police force of Bonai ex-State in 1942-43 consisted of 19 officers including one Inspector at the head and 80

constables. Thirteen of them were armed. The proportion of the police force to the area and the population of the ex-State, according to the Census of 1941, were 1 to 13 square miles and 1,934.8 persons respectively. The strength was reduced by 17 Constables towards the close of the year to keep it in proportion with crimes in the ex-State. There were eight Police Stations viz., Sadar (Bonaigarh), Koira, Banki, Gurundia, Kamarposh Balang, Sarsara Balang, Mahulpada and Sulgura. Just before merger, the force of the ex-State consisted of 82 personnel which included one Inspector, six Sub-Inspectors, 11 Assistant Sub-Inspectors, one Havildar, 10 Writer Constables and 53 Constables. The proportion of the force to area and population according to the Census of 1941 was 1 to 15.9 square miles and 1,108 persons respectively.

During 1955 and 1956 there was a general failure of crops and so it cast a shadow on the general economic condition of the people as well as the crime position. The construction of the steel plant which started at Rourkela under Raghunathpali Police Station demanded a large flow of labourers, both skilled and unskilled, who came from all over India and along with them also came absconders and out-of-view criminals who remained in the guise of labourers and committed crime during night. So, there was upward trend in the crime in 1955-56 and 1956-57 in Raghunathpali and nearby Police Station areas. There was also increase in accident cases due to motor vehicles as there was sudden increase in the number of such vehicles required in connection with the construction of the steel plant.

Except 1960, there was a trend of year-wise increase in the figures relating to the number of cognizable cases reported to the police of the District from 1955 to 1960. In between 1961-65 on an average 35 cases of murder, nine cases of dacoity, 18 cases of robbery, 396 cases of burglary and 683 cases of theft were reported to the police.

Tribal Unrest and Communal Disturbances

Tribal Unrest: As has been narrated earlier in the history of Gangpur and Bonai States both these ex-States were inhabited predominantly by the tribal groups such as Mundas, Kols, Oraons and Bhuyans who had migrated from ChhotaNagpore region. These tribal groups had set up their own **republic-like-settlements** headed by their Group Leaders selected by way of common consent. They were fiercely possessive about their land and forest and proud of their aboriginal traditions. They were extremely hostile to the outsiders particularly the Aryans who attempted to carve out their independent territories in these wild tracts. These outside fortune seekers were offered stiff resistance whenever they tried to exploit the tribals by subjugating them. As per the historical evidence gathered from different sources, one Keshari Ruler namely Raja Deo Keshari under the suzerainty of

the Gajapati Maharaja of Kalinga was an oppressive ruler. When his exploitation exceeded all limits he was murdered with all his family members by the Bhuyan tribes lead by their leader Mattan Pradhan. After the Kesharies, the Paramar Shekhar family (Rajputs from Ujain) established their Kingdom covering the Gangpur State by taking advantage of the internal strife among the various tribal groups. Though they were quite tactful in managing their territory and were enjoying protection of the Chouhan Kings of Patna and subsequently Sambalpur States by becoming their Vassals, they had to contend with the simmering discontentment of the tribal groups from time to time in matters of collection of land revenue and forest royalty etc. Similarly, during the Kol insurrection (1820-21) of Singhbhum the peace of Bonai State was affected. The Lakra Kols in the north-east quarter of Bonai had rebelled against exorbitant rent imposed on them by Raja Indra Deo of Bonai State. Again during the year 1883 hostilities started between the Ruler and the Gond Jagirdar of Bonai over rent and cesses when the Raja had committed serious irregularities by giving out forests to outside timber merchants. Though these risings were suppressed by Group Force, the arbitrary orders of the Raja were revised by the Commissioner ChhotaNagpore and the original rights were restored to the tribal groups.

The simmering discontentment of the tribals particularly in the Gangpur State had flared up from time to time when the Rulers had attempted to deprive the tribal Gountias of their original rights and concessions enjoyed over generations. When Raja Raghunath Shekhar Deo of Gangpur became greedy (1887-88) and started displacing aboriginal Gountias by Agharias and other high caste people from Sambalpur an agitation started under the leadership of Madre Kalo a tribal leader which ended in the Raja giving up his attempt. The situation had become so serious that the Deputy Commissioner of Singhbhum was deputed with armed body of British police to assist the Chief in restoring order and arresting the insurgent leaders (as extracted from the report of Sir Edward Gait, Chief Secretary to the Government of Bengal).

Another serious agrarian movement took place in 1938 when the Christian Munda tenants of north Gangpur in Nagra-Hatibari started a no rent campaign in protest against the arbitrary enhancement of rent (pech coss) by the Jamindars. These Munda tenants were incited by Nirmal Munda a Christian leader not to pay the higher and exorbitant rent imposed on them. In the month of February 1939, a largely signed petition was submitted to the regent Rani of Gangpur for abolition of Bethi and beggaries apart from reducing the enhanced rent. Police Force was brought in from outside to control the situation. This rising gradually gathered strength and ended in the infamous Sinko firing on 25th April, 1939 near Raiboga in the Nagra-Hatibari Jamindari when attempt was made to arrest Nirmal Munda who was leader

of this movement. This unfortunate incident in which a large number of tribals were killed left the tribals extremely bitter and restive against the Durbar Administration. On this occasion, strong representation was made by the Congress Leaders of India for enquiry and redressal measures. The Congress Leaders of Odisha also demanded taking over the Gangpur State by the British Administration. In short, the tribals inhabiting Gangpur and Bonai States had the propensity to rebel against economic and social exploitation caused to them particularly by taking away or whittling down their rights and concessions enjoyed by them over generations. These tribal agitations / risings as narrated above were due to agrarian reasons. However, those were eulogized by the Congress leaders as examples of bravery and valiant resistance by the tribals to the oppressive British Raj in order to inspire them to join the freedom movement. The tribals who were extremely agitated over Simko firing joined the freedom movement in a big way which got a fillip on this count in Sundargarh District.

Communal Disturbances (in Post-Independence Period): Even after independence and merger of the ex-State of Bonai and Gangpur with the State of Odisha on 15th December 1947, the grievances of the tribals of Sundargarh District were not fully mitigated. The smouldering discontentment of the tribals because of their deprivation arising out of illegal grabbing of land and forest by the greedy outsiders, organised liquor vending by the Sundhies at the cost of their traditional brewing with the State patronage, harassment received from the usurious money lenders and the humiliation meted out to their women folk by a particular community took a very violent turn in the year 1964. During that period the minority communities consisting of Hindus, Christians, etc were inhumanly persecuted in East-Bengal of the undivided Pakistan. There was mass exodus of refugees to West Bengal. To cope with this serious situation, the refugees were shifted to different States for their rehabilitation. One such group was sent to Odisha through train transport via Rourkela for their ultimate rehabilitation in Dandakaranya area. The local inhabitants, particularly the Christian tribals became very agitated seeing the heart-rending plight of their refugees brethren. Another group of refugees who had already come to India immediately after partition from Punjab were resettled in appreciable number in and around Rourkela. They were smarting under the trauma of partition days; and hence, with vested interest, took advantage of the situation to incite the local public against the Muslim community which were perceived to be exploiters by the tribals and local people because of their comparative prosperity in trade, agriculture, money-lending, liquor vending etc. This resulted in eruption of serious communal violence and the local Mohemadans had to bear the brunt. This unfortunate incident assumed alarming proportions at places at Rourkela and the surrounding areas like Kumarmunda, Jagada, and Bisra etc where there was concentration of Muslim population. The disturbances were brought under control with lot of efforts by large scale deployment of military

police. Immediately after this incident Sri V. S. Mathews IAS (Retd), former Community Development Commissioner was appointed to enquire into the factors and circumstance leading to this violent occurrence and give his recommendations for preventing recurrence of such situations in future.

Apart from giving a detailed analysis of the factors leading to the outbreak of this communal violence Sri Mathews made many useful recommendations in his Enquiry Report. One of his recommendations was to create a post of Additional District Magistrate permanently at Rourkela to exercise control and supervision over the general administration in Panposh and Bonai Sub-Divisions with adequate powers relating to land administration, law and order, Civil supplies and maintenance of harmonious relationship among different ethnic, religious and linguistic communities. This post created in the year 1964-65 is continuing till date with full fledged office. This administrative arrangement has proved very effective in serving the desired purpose.

Left Wing Extremism (LWE):

Left Wing Extremism usually culminates in areas of functional inadequacies in the field level administration, support for local demands and feeling of neglect among certain groups of people. Areas prone to left wing extremism are usually lived in by people of under privileged groups which are mostly located in remote and inaccessible areas.

Left Wing Extremists make systematic efforts to prevent execution and implementation development programmes and more particularly by way of obstruction or destruction of infrastructure like railways, roads, power and telecom through violence and terror and to show the governance structures at field levels as being ineffective as the mode ventilating their perceived dissatisfaction and grievances.

A number of Left Wing Extremist groups have been operating in different parts of India so also in Odisha for the last few decades. Left Wing Extremists spread their operation within resource poor groups of people as well as in hilly and forest based tribal dominated areas of the States / Districts. Such activity is gradually increasing over the past few years. Extremism is a complex phenomenon and affects the day to day normal life of people. In a simpler manner, it can be defined as activities (beliefs, attitudes, feelings, actions, strategies) of a character far removed from the ordinary. Extremism is an ideology or political act far outside the perceived political center of a society; or otherwise claimed to violate common moral standards.

CPI (Maoist) philosophy of armed struggle to overthrow Indian State is not acceptable in our parliamentary democracy and will have to be curbed at any cost. Government have given a call to the CPI (Maoist) to abjure violence and come for talks. This has not been accepted by them; so far

several Left Wing Extremist groups have been operating in certain parts of the country. In a significant development in 2004, the Peoples War Group (PWG) then operating in Andhra Pradesh and the Maoist Communist Centre (MCC) then operating in Bihar and adjoining areas merged to form the CPI (Maoist). The CPI (Maoist) continue to remain as the most dominant among the various Left Wing Extremist groups, accounting for more than 90per cent of total Left Wing Extremist incidents and 95per cent of resultant killings.

As it reveals, mostly the States like Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Maharastra, Madhya Pradesh, Odisha, Uttar Pradesh, and West Bengal are the victims of Left Wing Extremism in India.

Causes of LWE:

Odisha is one of the poorest States in India, with 47.15 per cent of its people living below the poverty line, as against a national average of 26.10 per cent. People in backward regions lack economic opportunities. The incidence of poverty is higher in the southern and western regions of the State. Furthermore, the percentage of rural families living below the poverty line is substantially higher in the State (66.37 per cent, as per estimate made by the Panchayati Raj Department, Government of Odisha in 1997) as compared to the rest of the country (34 per cent). They are deprived in socio-economic opportunities. People in socio-economically depressed regions often carry a deep sense of frustration and discrimination against their better off neighbours. The Poor and innocent people are often easily manipulated by anti-social elements and powerful vested interests. These pockets of poverty breed serious socio-economic problems. There is corroborating evidence that the problems of terrorism, LWE, increased incidence of crime, law and order and social strife in many pockets are attributed to social and economic depression of such regions.

LWE activity in Odisha has particularly affected the Koraput, Rayagada, Malkangiri, Gajapati and Ganjam Districts on the Andhra border and Mayurbhanj, Sundargarh, Sambalpur, Deogarh and Keonjhar Districts on the Jharkhand border. Further, the Left Wing Extremists are reportedly targeting the Nawarangpur, Jajpur, Kalahandi, Balangir, Phulbani, Boudh, Dhenkanal and Jharsuguda Districts to expand their operational area. The inaccessible hilly, terrain, dense forests, lack of development, grievances of the tribals poor and the absence of administration have been conducive to the spread of Left Wing Extremism. Some of the causes of Left Wing Extremism are: Unemployment and social insecurity among poor and disadvantaged communities, lack of access to forest resources, poor infrastructural facility, improper execution of Government schemes, poor health hazard measures, lack of communication facilities, over exploitation by landlord or *Sahukar* or *Gantia*, ineffective implementation of the Public Distribution System (PDS), poor provision of drinking water facilities and other basic needs, lack of generation of adequate employment and livelihood opportunities, romantic

illusions about Naxalites arising out of incomplete understanding of their modus operandi, particularly among the educated unemployed youths, Inappropriate media coverage and inadequate awareness on the prevailing socio-economic situation of specific pockets and the political view points.

LWE Pockets in Sundargarh District:

Despite several initiatives, the situation has not changed much due to poor willingness and ownership of the people of the policy at the implementation level. Similar to many other areas, the LWE movement has survived and sustained in the Sundargarh District by way of revolving around the lives marginalised people in the District. The intrusion of the extremists in the District has spread in different interior regions and there is substantial impact on the local development process and the people. With a view to combating left wing extremism, Government have identified as many as 418 villages of 88 Gram Panchayats in 14 out of 17 Blocks (except Hemagiri, Sundargarh and Tangarpali) in the District as per the Statement given below.

Table-119: Block Wise Panchayats and Villages affected by Left Wing Extremism (LWE)

SI No.	Name of block	Panchayats	No of Villages
1	Balisankara	Sagabahal, Tildega, Lulukidihi, Talasara, Tileikani, Kinjirkela, Birkaldihi, Bandega, & Balisankara.	33
2	Bargaon	Rungaon, & Ekama	4
3	Bisra	Manko, Bisra, Daraikela, Jareikela, Kapatmunda, Santoshpur, Bhalulata, & Tulsikani	36
4	Bonaigarh	Kasada, Pithachora, Bhalupani, Sarasarabalong & Gobindapur.	29
5	Gurundia	Kucheita, Chandiposh, Pankadihi, Tamara, Temperkela & Kundheidiha	45
6	Koida	Gopna, Bimalgarh, K Balang, Relhatu, Soyamba, Jamudihi, Chordhara, Kalta, Koida, Dengula, Patamunda, & Malda	76
7	Kuanarmunda	Jalangabira, Salangabahal, Andali, Majhapara, Raibaga, & Pratapur.	14
8	Kutra	Panchara, Kiringisira, Tarkera, Nuagaon, & Amgobha.	13
9	Lahunipada	Talabahali, Sankhaposh, Sashyakela, Mahulpada, Phuljhar, & Bhutuda.	29
10	Lathikata	Lathikata, Mundajore, Ramjodi, & Birda.	16
11	Lephripada	Masabira, Alapaka, Rajbahal, Vumabahal, Gundiadihi, & Hurmei.	55
12	Nuagaon	Urmei, Kokerama, Chitapedi, Karadega, Kerketanash, Lukumbeda, & Badjojoda.	20
13	Rajgangpur	Budham, Malidihi, Buchukuupada, Jareikela, Panposh, Laing, & Kunutia.	33
14	Subdega	Deogaon, Kurumkela, Kiralaga, & Tangargaon.	15
	TOTAL	88	418

Organization of the Police Force after Merger:

After the formation of the District in January 1948, a Superintendent of Police was posted at the District headquarter. He was assisted by a force consisting of one Sergeant-Major, four Inspectors, one Sergeant, 33 Sub-Inspectors, 33 Assistant Sub-Inspectors, 15 Havildars and 331 Constables. The force included three Inspectors, 22 Sub-Inspectors, 31 Assistant Sub-Inspectors, four Havildars and 219 Constables of the ex-States service.

Till the 31st May, 1962, the entire District was under the control of Superintendent of Police, stationed at Sundargarh. On the 1st June, 1962, for the purpose of police administration the District was divided into Sundargarh and Rourkela police Districts, each under the control of a Superintendent of Police. Both the police establishments are placed under the Deputy Inspector-General, Western Circle, Rourkela.

(a) **Sundargarh Police District:** Configuration of Sundargarh Police District is as Follows.

Table 120: Configuration of Sundargarh Police District

Sub Division	Police Station	Out Post	Town out post
Sadar	Sadar		Sadar
	Town	Traffic (R)	
	Talasara	Bandegaon	
	Kinjirikela		
	Lephripara	Sargipali	
	Hemgiri		
	Bhasma	Balinga (R)	
	Dharuadihi		
Rajgangpur	Rajgangpur		Rajgangpur-1 & 2
	Kutra	Kansabahal Lanjibarana	
Panposh	Bargaon		
	Biramitrapur		Biramitrapur
Biramitrapur	Hatibari	Kplash (R) Kuanramunda (R)	
	Raibaga	Nuagaon	
	Spl. PS, Sundargarh		
4	15	9	4

(b) **Rourkela Police District:** Rourkela Police District has one Sub-Division, i.e. Bonai Sub-Division. It has 24 Police Stations, nine Police Out-Posts and eight Town Out Posts. The details are as follows.

Table 121: Configuration of Rourkela Police District

Sub Division	Police Station	Out Post	Town outpost
Bonai	Mahila PS		
	Tangrapalli	I.D.L. Chemical Plant, Main Gate	Tarapur Power Plant
	Sector – 15		T.O.P. – 2 Township
	Chend		
	Sector – 3		T.O.P. – 3
	Sector – 7		T.O.P. – 1
	Sector – 19		T.O.P. – 4
	Jhirapani		
	Lathikata		
	Plantsite		Puruna Rourkela
	UditNagar		
	Raghunatpalli	Jalada – 7 (R), Jalada – 8 (R)	
	Bandhamunda		
	Brahmataranga (F.C.I.)	Kalunga	
	Bisra	Jaraikela	
	Bonai		
	Mahulapada		
	K.Balanga		
	Chandiposh		
	Gurundia		
	Tikayatpalli		
	Koida	Kalta	
	Lahunipada	Tensa	
	Spl. PS Rourkela		
1	24	9	8

Railway Police & Fire Services & Other Forces:

Railway Police: Besides the two Police Districts, there is a Railway Police District at Rourkela, which is under the jurisdiction of a Superintendent of Police. Its jurisdiction covers the Railways in Rayagada, Balangir and Koraput District. Detail is as follows.

Armed Police and ODRAF: There are 8 Armed Police Battalions in the State. Rourkela is headquartering the 4th Bn OSAP. The Odisha Disaster Rapid Action Force (ODRAF) was created vide Home Department Resolution no-939/CD dated 7th June 2001 in order to overcome the Natural Calamities. Rourkela is the headquarters of the ODRAF unit of 4th Bn. OSAP. The force moves to the areas affected by disasters or impending disaster on the information of the Special Relief Commissioner, Odisha, Bhubaneswar.

Fire Service: There are five Fire Stations in the District, i.e. at Bonai, Panposh, Kutra, Rourkela and Sundargarh.

Home Guard: The Home Guards Organization in Odisha came into being in 1961. Since then Home Guard volunteers have been rendering valuable service to the society in cooperation with the Police for maintenance of internal security, law & order, prevention of crime, apprehension of criminals, traffic regulation, VIP security, night patrolling and watch and ward duties etc.. They also render voluntary service during natural calamities like floods and cyclones etc., Government of Odisha in Home (C.D.) Department's Resolution No. 1876/CD, dtd. 9.11. 2001 have also declared Home Guards as auxiliary of the Fire Service u/s 6 of Odisha Fire Service Act-1993. Indian citizen within the age group of 20-60 years, are appointed as Home Guards with the intention of allowing them to practice their programme and act as Home Guards volunteers during their off hours. The Home Guards are also employed in guarding public and private sector undertakings, Banks and important units under Govt. of India. Such deployment also augments the State Revenue by way of capitation charges @ Rs.20/- per head per day. On completion of 3 years as Home Guards, his suitability and efficiency is reviewed by a Board and unsuitable Home Guards are discharged from the Organization. Recently, Govt. in Home (CD) Dept.'s letter No. 776/CD, dated 15. 4. 2005 have directed that no reenrolment of a Home may be done after 6 continuous years as new persons should be trained. All Home Guards Volunteers undergo the Basic Course, Refresher Course, Advanced and Leadership training Courses in a phased manner during his/her tenure in the organization. Selected Home Guards are also deputed to the National Civil Defence College, Nagpore, and Civil Defence Training School, Bangalore for specialized training courses every year. Government of Odisha has also reserved 10per cent

vacancies in the rank of Police Constable, Firemen, Excise Constable and Jail Warders for the recruitment of suitable Home Guards. As in the year 2007, there were 557 home guards (514 male and 43 female) in Rourkela urban and 50 male Home Guards in Rourkela rural police. Similarly, there were 212 Home Guards in Sundargarh Urban (183 male and 29 female) and 357 Home Guards (349 males and 8 females) Home Guards in Sundargarh Police in rural areas.

Table 122: Railway Police District- Rourkela

Sub Division	Police Station	Out Post	Town outpost
Jharsuguda	Jharsuguda	Bamara	
	Sambalpur		Tarapur Power Plant
	Rourkela	Bahalada, Rajgangpur	
	Bandamunda	Bimalagada	
Rayagada	Bolangir		
	Rayagada		
	Titlagarh	Kantabanjhi	
	Koraput	Koraput Mobile – 1, 2, 3 & 4	
2	8		10

Vigilance Administration:

Vigilance: The District with one Vigilance Sub-Inspector and one Constable was under the control of an Inspector posted at Sambalpur till December 1959, when it was separated and formed a separate zone with one Inspector, one Sub-Inspector, One Assistant Sub-Inspector and three Constables with headquarters at Sundargarh. Consequently on the expansion and reorganisation of Vigilance, this District has been divided on the 1st November, 1961 into two squads placed one each at Sundargarh and Rourkela. The squad at Sundargarh has a staff consisting of one Inspector and three Constables whereas the Rourkela squad is manned by one Inspector, one Sub-inspector and four Constables. At present, the District is coming under the Vigilance Division of Superintendent of Police (Vigilance) Sambalpur.

Wireless stations have been established at Sundargarh, Rajgangpur, Biramitrapur, Tensa, Bonaigarh and Rourkela.

Village Police: Until 30th June, 1965 each village in the District was looked after by a Chowkidar and a Jhankar who was also the village priest. They were remunerated with some jagir lands or pay sanctioned by the Government. But from 1st July of that year it was decided to replace them by the appointment of Beat Constables.

According to the law which abolished the village police, the Jhankar should have half of his jagir land left with him for worshipping the village deity. This means that the entire jagir land of his has to be surveyed and valued. Then alone it can be decided which half would be left for the village deity. This work was started several years ago but it has not yet been completed. Beat system did not work well. So the system was abolished on 1st March, 1967. Now Grama Rakhis have been appointed in their place to look after the villages.

The crime scenario in the new century is different. As the population has increased and the socio-economic conditions have been changed, crimes have also been registered at higher rate. Sexual crimes, illicit activities relating to sex-trade have become major issues for the Police Administration. Similarly, economic offences and cyber crimes are on rise.

Table 123: Trend of Crimes in Sundargarh District from 2010-2014

Year	Murder	Dacoity	Rubbery	Burgulary	Theft	Cheating	Rioting	Rape
2010	54	12	52	51	140	8	38	24
2011	63	6	46	44	172	11	35	25
2012	48	15	48	62	174	10	50	40
2013	59	10	21	71	199	37	38	53
2014	51	11	33	90	158	46	24	49

Jail and Jail Administration, Prisoner's Welfare:

Prisons: In 1907-08, the ex-State of Gangpur had one well-built Jail at Sundargarh and one Sub-Jail at Raghunathpali (Panposh). The Sundargarh Jail had accommodation for 114 prisoners. At Raghunathpali Sub-Jail, prisoners sentenced by the Magistrate to a period not exceeding three months were confined. In the year mentioned above, there was also a Jail at the headquarters of Bonai ex-State. The jail was affording accommodation to 31 prisoners. In 1943-44, Sundargarh Jail, Raghunathpali (Panposh) Sub-Jail and Bonaigarh Jail had daily average population of 113, 7 and 49.45 respectively.

The convicts of Sundargarh and Bonaigarh jails were engaged in carpentry, weaving of cloth, newar making and oil-pressing, wheat grinding, tank digging, rope making, preparing articles from bamboo and gardening. There were hospitals for the above two Jails and the patient-prisoners of Raghunathpali Sub-Jail were also afforded medical treatment. Since 1st January, 1948, all the three Jails were taken over by the State Government.

After Government takeover, the Sundargarh Jail, at first continued to function as a class III District jail and since 1959, due to increase of the prison population, the status has been raised to that of class II District jail. It

has 10 numbers of wards and 12 cells. It can accommodate 226 male and 10 female prisoners. From the date of merger up to the 8th May, 1954, the Jail at Bonaigarh functioned as a Special Sub-Jail. The status of this Special Sub-Jail was reduced to that of a Sub-Jail on the 9th May, 1954. But since 25th February 1958, the jail with an accommodation facility for 62 male and five female prisoners has again been given the status of a Special Sub-Jail.

In 1959, another Special Sub-Jail started functioning at Rourkela. Due to the increase in prison population, the status of this Special Sub-Jail was raised to that of a Special Jail on the 1st March, 1965 with 18 wards and accommodation facilities for 295 male and 16 female prisoners. The Sub-Jail at Raghunathpali was closed on the 19th April, 1962.

Rourkela Special jail has been placed under the charge of the Revenue Officer of Panposh Sub-Division. He is assisted by one Jailor, one Assistant Jailor and a number of other subordinates. Subsequently the Sub-Jail at Bonai and Rajgangpur have come up in the District.

Medical, Educational and Recreational Facilities: There is one two-bedded hospital attached to the District Jail, Sundargarh, under the charge of the Chief District Medical Officer who acts also as the part-time Medical officer in addition to his part-time superintending. There is one Assistant Surgeon and one Pharmacist who assist him in the treatment of ailing prisoners. Necessary equipments, medicines and special diets for the ailing prisoners are provided from the jail budget. There is a hospital ward in the Rourkela Special Jail, one whole time Assistant Surgeon and a Pharmacist are available for providing medical facilities to the prisoners.

After-Care Shelter: Since February 1961, one District After-care Shelter at Sundargarh has been opened to facilitate social and vocational rehabilitation of the ex-convicts. The shelter provides food, clothes and lodging to 25 inmates admitted after being released from the jails. The inmates are allowed to stay for a period of three months. Since February 1961 till the end of 1970, 158 ex-convicts were admitted and 149 were discharged.

Probation Officer: A Probation officer has been posted at the headquarters of the District. He mainly supervises the probationers and other persons placed under his supervision, and where necessary, endeavours to find them suitable employment. He also enquires in accordance with any direction of a court, into the circumstances or home surroundings of any person accused of an offence with a view to assist the court in determining the most suitable method of dealing with him.

Judiciary System & Criminal Court:

Judgeship: During the Durbar administration, the ex-States of Gangpur and Bonai had different systems of judiciary. Before the forties of this century, the judiciary of the ex-State of Gangpur constituted of a Chief Judge, one Session Judge and five to seven Magistrates with first second or third class powers. A Bench was formed for the purpose of high Court work in the ex-State with the sanction of the Political Agent conveyed in his letter No. F.J-1-1/38(W), dated the 5th April, 1938. The Bench consisted of the Regent Rani Sahiba and her Dewan. All the subordinate courts of the ex-State were made responsible in respect of all judicial matters to the Bench. Besides the Bench, in early forties, the judiciary consisted of one District and Session Judge, two Sub-Divisional Magistrates of 1st class powers and some other magistrates with 1st or 2nd class powers. The Bench continued to exercise its powers in all criminal matters till the 3rd July, 1945, when a common High Court for Odisha and the Chhattisgarh ex-State was formed.

Before 1943-44, about seven to eight courts of the ex-State were exercising civil powers. The District Judge was first appellate and there was provision for second appeal to the Bench. There were Sub-Judges and Massifs to hear original suits in their respective territories. But at the end of September 1943, the system of territorial jurisdiction of civil courts was abolished and the number of courts with civil powers was reduced. This was done to maintain a higher standard in administration of civil justice.

Up to the date of merger, this ex-State had only two courts exercising civil powers. These were the court of the Sub-Judge at the headquarters, and the Court of the Sub-Divisional-Officer-cum-Munsif in Nagra. The Munsif of Nagra was empowered to try civil suits up to the value of Rs. 200.

During 1940-45, the criminal department of the ex-State of Bonai was under the charge of the Assistant Dewan who was also the District Magistrate. The Dewan of the ex-State was empowered to hear all appeals against 1st class Magistrates, and take up cases triable by the Court of Session. The Political Agent, Odisha ex-States, was exercising powers of a High Court in all criminal matters. Besides, there were a number of Sub-ordinate Magistrates with 1st, 2nd and 3rd class powers to deal with all criminal cases.

The entire fabric of the administration of civil justice in the ex-State consisted of (a) Court of Sub-Divisional Officers vested with powers to try civil suits up to a value of Rs. 250, (b) Court of Assistant Dewan vested with powers to try civil suits up to a value of Rs. 1,000 and (c) Court of the Sub-ordinate Judge with unlimited pecuniary jurisdiction and small cause court powers up to Rs. 50. The Dewan as the Civil Judge was exercising appellate jurisdiction on civil and rent suit. He was also exercising special jurisdiction

in guardianship, Succession, certificate and in the State cases. The Court of Political Agent, Odisha ex-State, was exercising the final appellate jurisdiction on all civil appeals arising from the ex-State.

The power of a District and Session Judge which were hitherto being exercised by the Dewan of the ex-State were, with the appointment of a Common States Civil and Sessions judge for the ex-States of Keonjhar, Saraikela, Kharsuan, Bonai and Pal-Lahara vested in the latter with effect from the 15th June, 1945. The Political Agent, Odisha ex-States, continued to exercise the powers of a High Court in all civil and criminal matters till the 3rd July, 1945 when with the constitution of a common High Court for Odisha and Chhattisgarh ex-States, the latter functioned as the High Court of Bonai ex-State.

After independence, Sundargarh was coming under Sambalpur Judgeship. The Sundargarh Judgeship was separated from Sambalpur Judgeship since 01.04.1978 and the court of District Judge was started functioning from such date. Besides above courts other subordinate courts are situated at Rourkela, Bonai and Rajgangpur.

Criminal Courts: Since 1948, the District and Session Judge, Sambalpur-Sundargarh with his headquarters at Sambalpur is functioning as the District and Sessions Judge for the District. He has powers to dispose session's cases, criminal appeals and criminal revisions for the District.

The Court of Additional District and Sessions Judge was created at Sundargarh on the 24th November, 1969, and since then it is continuing. The Additional District and Sessions Judge has got concurrent jurisdiction with the Session Judge to try session's cases on transfer and to hear criminal appeals and revision cases and criminal miscellaneous cases arising in the District.

A Special Judge in the status of a District Judge has been posted since October 1971 at Sambalpur to hear mainly corruption cases referred by the Vigilance Department in the Districts of Sundargarh, Sambalpur, Keonjhar, Dhenkanal, Balangir, Kalahandi and Koraput.

From the date of merger the court of the Sub-Judge, Sundargarh, was functioning till the 9th December, 1948, when due to insufficient work it was abolished. Again this court was created on the 3rd April, 1963, and is continuing. From the 10th September, 1971 another Sub-Judge's Court has been opened at Rourkela. The Sub-Judges have been vested with powers of an Assistant Session Judge.

Before the separation of the Judiciary from the Executive, the District Magistrate was in charge of the criminal cases of the District. All the Sub-

Divisional Officers and a number of other sub-ordinate Magistrates were vested with 1st, 2nd or 3rd class powers to deal with criminal cases.

Up to October 1961, there was not any remarkable change in the judiciary system of the District. There were 20 Magistrates in each of the years of 1958 and 1959. In 1960 and 1961, the numbers of Magistrates were 18 and 22 respectively. 664 cases were pending before the Magistrate at the beginning of 1959 and 2,808 cases were brought to trial during this year against 3,268 cases of the previous year. In 1960 and 1961, the cases brought for trial before the Magistrates were 3,528 and 4,939 respectively, and they disposed of 2,875 cases in 1960 and 3,631 cases in 1961. The details of the pending cases as on 15.9.2015 in different courts in Sundargarh District are as follows.

Table 124: Pendency of Different Civil and Criminal Cases in the District and Sub-Ordinate Courts (as on 15.9.2015)

Civil Cases		Criminal Cases	
Cases	No.	Cases	No.
Civil suit	3362	Sessions	1070
Civil appeal	277	Criminal appeal	132
Miscellaneous appeal	108	Criminal revision	56
Civil revision	11	Miscellaneous	118
MACT	1136	Special Act	82
MJC/ Spl.	1126	PCSO	232
Exn./ Others	1455	Juvenile	346
Total	7475	General file	35542
		Trial file	17588
		Total	55166

Source: <http://ecourts.gov.in/sundargarh>

Separation of the Judiciary from Executives: The judiciary in the District was separated from the Executive from the 25th October, 1961. At the beginning there was one Sub-Divisional Magistrate posted in each of the three Sub-Divisions of the District. Besides, one 1st Class Magistrate for Sundargarh, and one 1st Class and one 2nd class Magistrate for Panposh Sub-Division were also appointed.

There were six Magistrates working in the District during 1962. They included three Sub-Divisional Magistrate, two 1st class Magistrates and one 2nd class magistrate. There is no change in the number of Magistrates since then. During 1970, besides the Sub-Divisional Magistrates (Judiciary) posted in each of the Sub-Divisions, there were two Magistrates at Panposh and one at Sundargarh with first or second class powers. At present the Munsifs

of Panposh and Bonaigarh are the ex-Officio Sub-Divisional Magistrates (Judiciary) in their respective Sub-Divisions. For administrative and other purposes, the judiciary of the District has been placed under the supervision of the Additional District Magistrate (Judiciary), Sambalpur-Sundargarh with headquarters at Sambalpur who in turn is made subordinate to the District and Sessions Judge, Sambalpur-Sundargarh. The head of the judiciary in the State is the High Court.

As Stated earlier, a Subordinate Judge's Court was functioning in Sundargarh District after the merger. But as there was no sufficient civil work, it was abolished with effect from the 9th December, 1948. This court was again established in April 1963. A Munsif's Court was also established in 1948 and he was vested with powers to try cases up to a limit of Rs. 4,000. Another Munsif's court, established at Bonaigarh after the merger was abolished within a short period due to want of sufficient civil work and the Sub-Divisional Officer, Bonai was allowed to function as ex-Officio Munsif for the area to try un-contested civil suits. But for contested civil suits, the Sub-Division of Bonai was tagged to the court of Deogarh Munsif.

Presently, Sundargarh District has a District & Sessions Judge at Sundargarh along with Chief Judicial Magistrate. The Sub-Divisional Judicial Magistrate (SDJM) heads the hierarchy of Judiciary in the Sub-Division which has the judicial courts of civil and criminal at Sundargarh and Rajgangpur in Sadar Sub-Division and. In Panposh Sub-Division, Rourkela has a relatively large Judicial establishment with an Additional District-cum-Sessions Judge and the hierarchy of Judicial magistrates in civil and criminal lines. A judicial courts complex has been built in the compact location at Rourkela. In Bonai Sub-Division the SDJM is the top judicial court and heads the hierarchy of Judicial courts comprising civil and criminal.

Civil Courts, Bar Associations & Juvenile Delinquency:

Bar Association: There were lawyers in the ex-State of Gangpur since 1910. A regular Bar Association was formed at Sundargarh in 1948. A Bar Association was formed with three members i.e., one pleader and two Muktars practising in Panposh Sub-Divisional courts in the last quarter of 1952. The Bar Association at Bonai was established in the year 1949.

Legal Aid, Lok Adalat and Legal Literacy: A Court of Judge, Permanent & continuous Lok Adalat is functioning at Sundargarh the secretary of District Legal Services Authority is functioning as Judge of Permanent and Continuous Lok Adalat. The District Legal Services Authority, Sundargarh also holds Lok Adalat in different interior parts of the District of Sundargarh and also at the head quarters of Sundargarh at District Court, where a number of Criminal, Revenue and Civil Cases including the pre-litigation Bank Cases are being disposed of on

compromise. It also organizes legal literacy camps to create awareness about different provisions of Law for the people of Sundargarh. The aims and objectives of the District Legal Services Authority is ensure justice to the poor, downtrodden socially and educationally backward persons by providing legal services. Persons belonging to SC, ST, women and children, mentally retarded and handicapped, industrial worker, bonded labour, under-trial prisoners and any person who is not coming under these categories but earns less than Rs. 1.00 lakh per annum is entitled to get free legal aid.

Cyber Crimes:

Cyber Crimes: Cyber crimes are the latest in the legal alumni after fast expansion of IT and Computer networking in the country. Social Networking is enabling people to have access to the secret profiles that can be used for defamation, extortion and even character assassination of the good people in animosity. The present legal fora fall short in technical skill to tackle such IT and CYBER equipped mischiefs that often constitute 'crimes' of greivous nature. Therefore, Cyber courts have also come up.

Chapter-XI

EDUCATION AND CULTURE

Historical Background of Education in the District

The mythology relating to birth of Vyasadev and writing of the epic, the Mahabharata at the confluence of the Sankh and the the Koel River is a popular legend. Vedvyas has its connection with literary activities. Historically, Odisha has been the centre of education and research in the Country. The ruins of a major ancient university, Puspagiri, a Buddhist Vihar, were recently discovered in Odisha. Scholars from faraway lands, such as Greece, Persia and China used to study philosophy, astronomy, mathematics and science at this university. This university is the contemporary of Takshashila and Nalanda Universities. All the three universities were mentioned by the Chinese traveller Huien Tsang (Xuanzang), who visited India in the 7th century. The ruins of this university have not been fully excavated yet. Odisha's education prospered under the Hindu and the Buddhist rule. However, it went into a period of decline under the Sun dynasty, after 1568. The Muslims and the Marathas, who occupied Odisha before the British, did little to spread education. Before the creation of modern Odisha, the mainstay of the education system were the Sanskrit Pathasalas, and the Maktabs, which existed in Cuttack, Balasore, Puri, Angul and Sambalpur, local Chatasalis to cater to grass root level education, as well as advanced centers of oriental learning.

Though much is not in records about the traditional educational system in the District, King Mayur, the King of Bonai was a patroniser of learning. During his reign in nineteenth century A.D., Bonaigarh flourished with learning activities. In advent of the British era, the traditional education system was affected adversely in Odisha. During that time Patasalas were running in important villages only. The schools were imparting education on reading, writing and arithmetic. Odia and Sanskrit were the medium of instruction.

The traditional educational system suffered disastrously with the beginning of the colonial era in Odisha on 1803. It led to collapse of the traditional educational system in the beginning phase. Under the East India Company, Christian Missionaries who took up printing the old and New Testaments in Odia, also contributed to some growth in education. The first primary school was created in 1822 by Missionaries. However, Odisha was the last territory to come under the British Rule.

Introduction and Growth of Western Education:

Odisha came under the British reing in 1803, when indigenou education system was prevalent. During the period of the famous officiating British Commissioner, T. E. Ravenshaw in July 1865, some innovative methods for the development of education in Odisha were adopted from elementary level to University. The Wood's Despatch in 1854 ushered a new era in the evolution of British educational policy. The area of Sundargarh District was coming under the Eastern States Agency under the Bengal Presidency. The Paragraphs in the following box of the despatch gives a comprehensive outlook of the Britishers towards the contemporary society in Odisha, education and belief system and the British vision on the same. The vastness of the existing literature and eminencies in Indian Literature was duly admitted by the Britishers in the despatch. It was also admitted that some of the Indian had already aroused much high in the European literature. Since, their numbers were limited; India required the diffusion of the modern education to wider area.

Box- 4: Educational Despatch of 1854 (Abstract)

3. Among many subjects of importance, none can have a stronger claim to our attention than that of education. It is one of our most sacred duties to be the means, as far as in us lies, of conferring upon the natives of India those vast moral and material blessings which flow from the general diffusion of useful knowledge, and which India may, under Providence, derive from her connexion with England. For although British influence has already in many remarkable instances, been applied with great energy and success to uproot demoralising practices and even crimes of a deeper dye, which for ages had prevailed among the natives of India, the good results of those efforts must, in order to be permanent, possess the further sanction of a general sympathy in the native mind which the advance of education alone can secure.

4. Nor, while the character of England is deeply concerned in the success of our efforts for the promotion of education, are her material interests altogether unaffected by the advance of European knowledge in India; this knowledge will teach the natives of India the marvelous results of the employment of labor and capital, rouse them to emulate us in the development of the vast resources of their country[,] guide them in their efforts and gradually, but certainly, confer upon them all the advantages which accompany the healthy increase of wealth and commerce; and, at the same time, secure to us a larger and more certain supply of many articles necessary for our manufactures and extensively consumed by all classes of our population, as well as an almost inexhaustible demand for the produce of British labor.

Generally the schools were classified into vernacular and Anglo-vernacular schools respectively. Further they were classified in respect of their management as (i) Government managed, (ii) Government aided etc. 3 He instituted honour for teachers and rewards for successful students. Special duties were assigned to the inspecting body. In 1866 the "Na Anka Durbhiksha" swept away the lives of 30 lakh people. The condition of education in Odisha was severely affected. During that time, the Cuttack College, later the Ravenshaw College at Cuttack came up. It ignited the minds of the odia people with modern European thoughts. The educational enlightenment was somehow limited to the eastern part of Odisha. Education in the rest of Odisha was still to improve. The results of the improvements diffused to the rest parts of the State gradually.

Education in Ex-State of Gangpur: During the reign of Maharaja Raghunath Sekhar Deo, western education was introduced in the Gangpur State in the early part of the 20th century. In 1907, there were three Upper Primary Schools and 66 Lower Primary Schools in the Gangpur State. No. of students were 1547 and the total expenditure on education amounted to Rs. 1434.00. One English Middle School was established at Sundargarh towards the end of the 1st decade of the 20th Century. The institution was without qualified teacher till 1912-13. Shri Bairagi Mishra, an Intermediate in Arts joined in the school in 1914. In the same year the Middle English School at Sundargarh presented candidates for Middle English School Examination. In 1916, the number of schools in the ex-State increased to 52 and number of pupil increased to 3456 with 449 girls. The expenditure on education was Rs. 20167. In the next year, the status of the Middle English School was upgraded to High School with opening up of Class-VIII. The first batch of students appeared Matriculation Examination in the year 1924. Education exerted a lot of pressure on the financial condition of the ex-State for which the top two classes were stopped in the High School.

In 1925-26, there were 196 educational institutions, 5 Middle Vernacular, 22 UP (one UP school for girls), 168 Lower Primary schools. There was one institution for *Guru* Training also. The student strength increased to 7606 including 1080 girls and expenditure was Rs. 36728.00. The top two classes were opened again. Candidates appeared Matriculation Examination regularly from 1932 onwards. Towards the end of the thirties, the number of schools managed by the ex-State stood 133 which included one High English School, 2 ME schools, 4 Middle Vernacular Schools, 30 UP schools (including one for girls) and 74 Lower Primary schools (including one for girls), one Elementary Training School and a Sanskrit *ToI*. The total number of students in the roll by 31 March 1940 was 7310, including 6270 boys and 1040 girls. Besides, the Missionaries had opened up 200 schools and 27 aided *Pathasalas*. The ex-State spent Rs. 57000.00 in 1939-40 on education.

Before merger, in addition to the Mission Schools and the aided Pathasalas, there were 137 ex-State Managed Schools which included one High School, 2 Elementary Training Schools, one Industrial School at Bargaon (which was abolished later in 1965), 14 ME school (2 schools for girls), 32 UP Schools (2 schools for girls), 85 Lower Primary Schools (5 schools for girls), one Sanskrit *Tol* and 2 Urdu *Muktabs*. The number of teaching staff including five officers for inspection and twelve Mistress stood at 331. As on 31st March 1947, the numbers of students on the roll in schools were 8469 including 1331 girls. The then expenditure was Rs. 172185.00.

Education in the ex-State of Bonai: Condition of education in the ex-State of Bonai was not so good during the aforementioned time. First UP School started in the ex-State of Bonai in 1902, in the Durbar Hall of Bonaigarh. In 1907-08, there were 13 Lower Primary Schools, one UP School and the total strength of students was 492. The first ME school started functioning at Bonai in 1919. Shri Bharat Chandra Naik in his autobiography, '*Mo Purba Smruti Katha*'¹⁹ has given a pitiable account of education in the mid-twenties. According to him only one ME School of the State was functioning in a small house with insufficient number of students. There were only three UP Schools, i.e. at Bonaigarh, Banki and Bangada. Condition of Lower Primary Schools was very poor. About 300 students were attending the schools. People were poor, ignorant and not interested in education. The large part of the Bhuiyan inhabited region of the State had no schools. Shri Naik as the Dewan of Bonai (1924-27) took some remarkable steps for spread of education. A new spacious building was constructed for the Middle English School. Some Lower Primary Schools were upgraded to Upper Primary standard and more number of new Lower Primary Schools were opened. Parents were persuaded to send their children to schools. The State distributed reading and writing materials and scholarship to encourage education. Despite, progress was slow. At the time of merger, there was one High English School, one Middle English School, 5 mixed UP Schools, 48 Lower Primary schools, one Urdu *Muktasb* and 8 Grant-in-Aid *Pathasalas*. 3459 pupils in total were on roll with 2977 boys and 482 girls. Merger of the two ex-States took place in 1947-48. At that time there were 2 High English Schools, 17 Middle English Schools and 181 Primary Schools in the District.

During the Princely rules, the State of literacy was too poor. After the merger and formation of the District, the condition of education and literacy remained poor. As per 1951 Census, out of the total population of 5,52,203, only 56,686 (10.26per cent) were literates. The literates included 48,712 males and 7,974 females. In this Census, the District was ranked at eighth

¹⁹ '*Mo Purba Smruti Katha*' p.145-147

position in the State in literacy. The average literacy percentage in the State was 15.8.²⁰ The progress in the literacy is positive throughout from 1961 to till date. The sharp rise in the literacy in the District was due to industrialisation. The rate of literacy in different blocks of Sundargarh District is given at Appendix-XXXIV and XXXV for rural and urban parts of the District. Sundargarh District has remained higher above the State average literacy as recorded in the Census 2001 and 2011.

Table 125: Progress of Literacy in Sundargarh

Census Year	Total Population	Percentage of Literacy
1951	552203	10.26
1961	758617	19.71
1971	1030758	26.49
1981	1337871	36.16
1991	1573617	52.97
2001	1830673	65.22
2011	2093437	73.34

The first Office of the D.I. Schools was opened up in 1952 at Sundargarh. Until 1970, there was no second such office in the District, till setting up of the office of the D. I. of schools at Rourkela. The D. I. of Schools office at Bonai was established in the year 1977. The School & Mass Education Department was created in the State Government as a separate Department in January 1993, to look into the issues pertaining to Elementary Education, Secondary Education, Teachers Training, Sanskrit Education, Computer Education, Special Education and Mass Education in the State. The provision of funds for the development of these sectors is being made keeping in view the availability of State resources for education sector and assistance from the Central Government under various schemes.

Gender Difference in Education and Measures to Redress:

Spread of women education: During the premerger period there was no focus of the State on spread of women education. Both the poor and well to do families were callous towards education in general and girls' education in particular. In the ex-State of Bonai, 121 girls were reading in primary schools in 1915-16. The number rose to 480 in the year 1945-46. One Lower Primary School for girls was opened up at Bonaigarh in 1927-28. It remained as the only girls' school in the area till merger, though many schools became co-educational schools. After the independence, the spread of women's education took momentum in the District. In the mid-fifties, the first High School for girls was established in Sundargarh by Roman Catholic Mission. By 1961-62, apart from provision of co-education in 18 High Schools, 78

²⁰ Census of India-1951-Vol.XI, Part-I-Report-p.400

Middle English Schools (including Ashrama Schools) 957 Primary Schools (including 87 Shevashrams and four Junior Basic Schools), there were two High Schools, six Middle English Schools (including one Kanyashram), seven Primary Schools and 12 Adult Literacy centres in the District meant exclusively for girls. In 1961-62, there were 18286 girls in schools in the District. So far as spread of women education in the present scenario is concerned, after launching of Sarba Sikshya Abhiyan (SSA), the National Programme for Education of Girls at Elementary Level (NPEGEL), is a focused intervention of Government of India, to reach the "Hardest to Reach" girls, especially those not in school. Launched in July 2003, it is an important component of SSA, which provides additional support for enhancing girl's education over and above the investments for girl's education through normal SSA interventions. The initiative targets to reduce gender gap, ensure greater participation of women and girls in the field of education, improve the quality of education with focus on empowering girls. Besides, the initiative has resulted in establishment of Model Cluster Girl Friendly Schools, providing life skill training and vocational education to girls with objective to boost self esteem and self confidence among them. The programme also includes Gender Sensitisation Training Programme for teachers, comprehensive and continuous evaluation system, recognition to potential and dedicated teachers, community mobilisation activities in support of girls education, course material to address the needs of out of school and adolescent school girls, development of study material in local language and research study on various gender issues and impacts.

Present scenario of child care, protection and primary education:

Immediately after independence, the educational policy of the Government of Odisha radically changed. Educational facilities expanded very rapidly, with a remarkable rise in the enrolment of students. The Das Committee Report laid special emphasis on elementary education and intended to cover three major aspects in this context: (a) universal access and enrolment, (b) universal retention of children up to 14 years of age, and (c) substantial improvement in the quality of education to enable all children to achieve essential levels of learning.²¹ Keeping in view the need for Universalisation of Elementary Education, there has been expansion at Primary and Upper Primary School stage of education, in the Government sector, especially in rural areas as well as backward areas. Odisha Primary Education Programme Authority (OPEPA) came in to existence as a registered society on 30th January 1996. The School & Mass Education (S&ME) Department in the Government of Odisha has the responsibility to achieve the goals of Universal Elementary Education (UEE). The School & Mass Education Department operates through two agencies namely, Directorate of

²¹ Orissa Human Development Report, p.24

Elementary Education (DEE) and Odisha Primary Education Programme Authority (OPEPA) to realize the goals of Universal Elementary Education (UEE). While DEE manages the entire manpower of teachers, inspectors & administrators, OPEPA implements the flagship program of Sarba Sikhya Abhiyan (SSA) in the entire State.

Child Population: As per the statistics maintained in the School and Mass Education Department, in OPEPA, the total no. of children in the District as in the year 2013-14 was 295461 in the age group of 6 to 14 years. The percentage of ratio of the girls to the boys was 96.08 per cent. The Scheduled Castes and the Scheduled Tribes constitute 9.77 per cent and 60.72 per cent of the child population in this age category.

Table126: Child Population in Sundargarh District for the year 2015-16²²

Category	6-11 years			11-14 Years			6-14 years		
	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
All	102860	98337	201237	47823	46401	94224	150683	144778	295461
SC	10697	10151	20848	4022	4020	8042	14719	14171	28890
ST	62102	60443	122545	29807	27188	56995	91909	87631	179540
Muslim	1918	1847	3765	800	799	1599	2718	2646	5364

At present there are 1818 Primary Schools and 918 numbers of High Schools in the District. The break-up of the schools is given as follows.

Table 127: Ownership of Schools in Sundargarh

Sl. No.	Ownership of the School	No. of Schools	
		Primary	Upper Primary
1	Education Department	1543	771
2	SSD Department	59	30
3	Local body	0	0
4	Aided	144	43
5	Private unaided	38	45
6	Other	17	2
7	Central Government	0	1
8	Unrecognized	26	26
	TOTAL	1818	918

Enrolment of students in the District in Primary and Upper Primary level is low among the Scheduled Castes and Scheduled Tribe population. Transition rate of boys from Primary to UP level is 78.95 per cent and for girls it is 79.07 per cent which is far below the State average of 87.11 per cent for boys and 87 per cent for girls. The total retention rate of students in Primary level was 75.70 per cent with 75.42 per cent among boys and 76 per cent among girls. In the Elementary level, the total retention rate was 73.87 per cent with 71.54 per cent for boys and 76.33 per cent for girls. The average retention rate for both primary and elementary level of education in the State is higher than the District of Sundargarh.

²² School Education at a Glance, SME Department, Page. 84-87

Table 128: Enrolment Ratio in Sundargarh District²³

Level of schooling	Gross Enrolment Ratio			Net Enrolment Ratio		
	All	SC	ST	All	SC	ST
Primary	101.33	97.21	101.40	98.00	94.50	98.57
Upper Primary	104.73	120.69	100.12	87.64	94.27	82.42

Dropout rates of the District in primary level and secondary level are far above the State averages for Scheduled Caste and Scheduled Tribe categories. The rate is higher in the primary level than in the secondary level.

Table 129: Dropout rates in Sundargarh District and Odisha

		Primary Schooling								
		All			SC			ST		
		Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
Sundargarh		0	0	0	6.63	7.31	6.97	5.74	6.04	5.89
Odisha		2.08	2.05	1.97	2.41	2.83	2.39	2.68	2.27	2.71
		Secondary Schooling								
		All			SC			ST		
		Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
Sundargarh		2.03	1.39	1.71	7.07	7.58	7.33	4.17	4.77	4.47
Odisha		2.71	2.08	2.40	2.84	2.24	2.58	3.48	3.89	3.63

Pupil-Teacher Ratio is another important indicator of the health of education. The ratio is 23.63 per cent at elementary level, 23.20 per cent at primary level and 24.58 per cent at UP School level.²⁴ These figures are also below the State average. The status of enrolment in different blocks and ULBs of the District is mentioned in Table -147. As a result of evolution of the educational policy at the Central Government level and State Government level, the paradigms in education has shifted to inclusion of value based education, i.e. personal values, such as self-esteem, self-actualisation, work ethic; community values, such as equity and cooperation; and universal values, such as human rights, tolerance, non-violence, and peace. **Early Childhood Care and Education Centre (ECCE)** has emerged as a school readiness Package for preschool children in the age group of 3-5 years. The main objective of ECCE centre is to reduce the sibling care problem and promote pre-school education with focusing all round development of pre-school children.

Integrated Child Development Services (ICDS) in India is the world's largest integrated early childhood programme and Odisha has around 71,000 sanctioned centres which provide the services throughout the State. ICDS was launched in 1975 with the following objectives to improve the

²³ School Education at a Glance, SME Department Page 94-95

²⁴ School Education at a Glance, SME Department, page-92

nutritional and health status of children in the age-group 0-6 years, lay the foundation for proper psychological, physical and social development of the child; reduce the incidence of mortality, morbidity a malnutrition; achieve effective coordination of policy and implementation amongst the various departments to promote child development and enhance the capability of the mother/care giver to look after the normal health and nutritional needs of the child through proper nutrition and health education.

Table130: Pre Schooling

Services	Target Group	Service provided by
Supplementary Nutrition	Children below 6 years and pregnant/ lactating Women	AWW
Immunization	Children below 6 years and pregnant women (PW)	ANM/ MO
Health Check-up	Children below 6 years and pregnant/ lactating Women	ANM/ MO/ AWW
Referral Services	Children below 6 years and pregnant/ lactating Women	AWW/ ANM/ MO
Pre-School Education	Children 3-6 years	AWW
Nutrition & Health Education	Adolescent girls & women (15-45 years)	AWW/ ANM/ ASHA

Child Welfare: Protection of Child Rights Act came into force in 2005 in Odisha. The Odisha State Commission for Protection of Child Rights is working since then to safeguard the rights, privileges, complaints & take suo-moto action conduct inquiries & Investigation relating to Violations of Child Rights, review of Safeguards for Protection of Child Rights, research, Studies and Data Analysis, looking into Matters relating to Children in need of Special Care & Protection, inspection of Juvenile Custodial Homes/Child Care Institutions and promoting participation of children in Child Rights Literacy & Awareness activities. The Odisha Child Protection Society (OCPS) has been constituted in 2009 under the Women and Child Welfare Department of the Government. District Unit of Child protection is working in each District. The Odisha State Council for Child Welfare is also functioning as a child welfare unit. As per the provisions of the Juvenile Justice (Care and Protection of Children) Act 2000 (amended in 2006), Child Welfare Committees of the districts are constituted with a Chairperson and the members to rehabilitate children in destitution.

Education of Child Labour

There are special Child Labour Schools in all the blocks and ULBs for providing education to identified child labourers in the District. These schools are operated under National Child Labour Programme (NCLP).

About 1950 students have been enrolled in 39 NCLP schools with average number of students being 50 in each. This initiative has created opportunities for poor children who were engaged earlier as child labour and had not availed any opportunity to receive education for various reasons. The table below gives the status of child labour schools by blocks and ULBs in the District in 2010-11.

Table 131: Block-wise and ULB-wise Status of Child Labour Schools in Sundargarh Schools.

Sl No.	Name of block / ULB	No of Schools	Student Strength
Rural			
1	Balisankara	1	50
2	Bargaon	2	100
3	Bisra	3	150
4	Bonaigarh	2	100
5	Gurundia	1	50
6	Hemgiri	1	50
7	Koida	2	100
8	Kuanarmunda	1	50
9	Kutra	1	50
10	Lahunipada	-	-
11	Lathikata	1	50
12	Lephipada	2	100
13	Nuagaon	2	100
14	Rajgangpur	3	150
15	Subdega	1	50
16	Sundargarh	1	50
17	Tangarpalli	1	50
	Total (Rural)	25	1250
Urban			
1	Biramitrapur	1	50
2	Rajgangpur	1	50
3	Rourkela	11	550
4	Sundargarh	1	50
	Total (Urban)	14	700
	TOTAL (DISTRICT)	39	1950

Source: Project Director, NCLP, Sundargarh

Secondary Education: There are 23 old Government High Schools, 89 new Government High Schools, 52 Up-graded Schools, 38 Aided High Schools, 71 Block Grant Schools and 21 schools of the Urban Local Bodies those are taken over by the Government in Sundargarh District at present. Among the Block grant schools, two are Girls High Schools.²⁵ Year-wise enrolment of children in the secondary level as in the year 2015-16 is as follows.

²⁵ School Education at a Glance, SME Department, Page. 34.

Table 132: Enrolment of Students in the Secondary Schools in Sundargarh District

Year	All Community			SC			ST		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2000-01	43558	36044	79602	4028	3454	7482	13340	15119	33459
2001-02	42228	35702	77930	4014	3580	7594	17826	15179	33005
2002-03	42036	35435	77471	3982	3545	7527	18245	15567	33812
2003-04	43075	36896	79971	4299	3779	8078	18740	16255	34995
2004-05	42788	36959	79747	4274	3692	7966	18861	16583	35444
2005-06	42825	37017	79842	4198	3728	7926	18912	16774	35686
2006-07	42606	37112	79718	4237	3743	7980	18887	16825	35712
2007-08	35997	37164	73161	4025	4039	8064	19357	20549	39906
2008-09	37463	40205	77668	4124	4376	8500	20520	23081	43601
2009-10	38088	41444	79532	4042	4386	8428	20820	24077	44897
2010-11	40198	44309	84507	4367	4720	9087	22797	26687	49484
2011-12	39317	44359	83676	4495	4870	9365	22589	26993	49582
2012-13	39232	44314	83546	4329	4644	8973	22902	27164	50066
2013-14	39563	44666	84229	4392	4728	9120	22985	27282	50267
2014-15	39864	44735	84599	4410	4703	9113	23024	27325	50349

Source: District Education Office, Sundargarh

Teacher Training and Education: Only one Training College for imparting training to the trained graduates was opened up in Rourkela around 1989, under private initiative. The Institution was closed down and there is no institution to impart training in Bachelor programme in Education. On the other hand, there are three CT Training Schools, i.e. DIET, Sundargarh, Government ST School, Kundukela and BIET Kuanrunda, each having 100 intake strength.

The missionaries have played significant role in spread of education in interior tribal pockets. The District has good number of English Medium Schools opened in different parts. The list is at APPENDIX-XXXIX.

Trends in Growth of General and Technical Institutions Including Engineering and Medical Colleges

In mid 1955 there was no college in the District. A private college was opened up on 16th July 1955 at Sundargarh, which was taken over by the Government on 1 July 1962. Now this institution, affiliated to Sambalpur University is the pioneer educational institution of the District.

The Rourkela Science College was established as a private institution on 16th August 1961. Its management passed over to the Government on 1st July 1963. This college was once upon a time the centre of attraction of many ambitious students seeking admissions to the IITs and the prominent Engineering Colleges.

Rourkela Evening College was established on 14th July 1966 by the efforts of the employees of the Hindustan Steel Limited.

Sushilavati Khosla Dayananda Anglovedic College for Women at Rourkela was named after the Sushilavati Khosla, wife of Dr. Ajodhyanath Khosla, the then his Excellency, Governor of Odisha. The College was started in the year 1967.

Dalmia College was established in the year 1970 at Jharbera around a sylvan background and verdure of forest and hills. The College was inaugurated by Late R. N. Singhdeo, the then Chief Minister of Odisha on 19th August 1970. The College owes its origin to the efforts and initiative of Sri S. Sundar Rajan, I.A.S., the then Collector of Sundargarh. Different Panchayats like Kutra, Rajgangpur have given financial assistance to start the college. The College building is situated approximately 10 km away from Rajgangpur town on the No.10 State Highway. It provides teaching facilities up to degree stage in Arts, Science and Commerce. At its inception the college had 64 students only in two streams - Arts and Commerce. The Science stream was opened during the academic session 1980-81. The present strength has gone up to 1700. Facilities for honours teaching have been provided in English, Odia, Political Science, History, Economics, Philosophy, Commerce, Physics, Chemistry, Botany, Mathematics and Zoology. Being located in an area predominantly inhabited by tribal and backward classes, the college provides a unique opportunity to them for higher education. The present massive and majestic building donated by Messrs. Dalmia, Odisha Cement Limited, Rajgangpur was inaugurated on 30th August 1981.

A college was opened at Bonaigarh on 15th September 1971. The list of +2 Junior College and +3 Degree Colleges of Sundargarh are listed at Annexure-XL and XLI.

Professional and Technical Colleges: National Institute of Technology Rourkela formerly, Regional Engineering College Rourkela (REC Rourkela), is a publicly funded institute of higher learning for engineering and technology located in the steel city of Rourkela. It is one of the 31 National Institutes of Technology in India and has been recognized as an Institute of National Importance by the National Institutes of Technology Act, 2007. NIT Rourkela was established as Regional Engineering College (REC) Rourkela on 15 August 1961 under the then Chief Minister of Odisha, Biju Patnaik and its foundation stone was laid by the then Prime Minister of India, Jawaharlal Nehru. It was granted autonomy and functional independence by the Ministry of Human Resource Development in 2002 thus becoming one of the National Institutes of Technology. The Institution provides technical education in several branches at Graduate, Post Graduate and Doctoral Courses.

The IIPM School of Management (IIPM) is an educational institution which was started in 2007 by the Indian Institute of Production Management, a government of Odisha institution based in Kansbahal, near Rourkela. As of currently, the IIPM SoM campus operates within the IIPM campuses. This institution is the first in the State to provide M Tech Course in Production Management.

Purushottam Institute of Engineering and Technology (PIET) is a private co-aid undergraduate engineering college located in Mandiakudar of town Kansbahal. The institute was established in 1999. In the beginning, the institute temporarily functioned in the Biju Patnaik Hockey Stadium, Sector 06 of city Rourkela, with a small number of students and teachers. In 2001 the institute moved to new campus located at Mandiakudar, 30 km away from the city Rourkela. Presently at Mandiakudar the campus of the institute is functioning with two separate buildings of degree and Diploma College of Purushottam School of Engineering and Technology. The institute offers 4 years of undergraduate B.Tech degree with affiliation from Biju Patnaik University of Technology (BPUT). In 2007 the institute started courses for MCA and MBA.

Padmanava College of Engineering was set up in 1999 by the Padmanava Educational Trust on the auspicious Birthday of Pandit Jawahar Lal Nehuru. The trust is a non-profit making organization with the sole aim of development of education in Odisha. The College is situated in the heart of the Steel City, Rourkela, and Sector 4.

Sundargarh Engineering College, Sundargarh (KIREI) started in 2007 is one of the premier Technical Institutions in the Western Odisha managed by the Institute of Technical Training a society registered under SR Act for the development of Technical Education. It offers 4 years B.Tech courses in different Engineering branches with the approval of **All India Council for Technical Education (AICTE) New Delhi**, recognized by Government of Odisha and affiliated to **Biju Patnaik University of Technology (BPUT) Rourkela**.

The number of institutions providing Diploma Courses in Engineering is listed as follows.

Table133: List of Diploma Schools in Engineering

SI. No.	Name of the institution
1	S.K.D.A.V. Government Polytechnic, Rourkela
2	Utkalmani Gopabandhu Institute of Engineering, Rourkela
3	City Institute of Technical Education Kuanrmunda, Rourkela, Odisha
4	Purusottam School of Engineering and Technology (Polytechnic) Mandiakudar, Rourkela
5	Rourkela Institute of Technology Kalunga, Rourkela, Odisha
6	Sundergarh Engineering School Kirei, Sundergarh, Odisha/Odisha, India

Industrial Training Centres: Owing to presence of wide range of mineral resources, industrialisation in Panposh and Bonai Sub-Division, the facilities for industrial training is available abundantly in the District. The number of institutions is listed as follows.

Table 134: List of Industrial Training Institutes of Sundargarh

SL NO	NAME	SEAT
1	Banwarilal Mamo ITI (B.M. ITC)	257
2	Bonaigarh ITC	42
3	Brahmani Industrial Training Centre	462
4	Budhuvir ITC	504
5	Chhend Private Industrial Training Institute	703
6	Chinmaya Technical Academy	462
7	Dalmia Private Industrial Training Institute	478
8	Don Bosco Vocational Training Institute	315
9	Dr Ambedkar Memorial Industrial Training Centre For Women	796
10	Gangpur ITC	84
11	Global Industrial Training Centre At/Po Rourkela	168
12	Gouri ITC	336
13	Govt Industrial Training Institute, Rourkela	1531
14	Hrudananda Dani Industrial Trining Center	231
15	IB ITC, Sundargarh	294
16	Imarat Umar Technical Training Centre	273
17	Indira Memorial ITI	462
18	Industrial Training Centre	608
19	Industrial Training Centre Bargaon	740
20	Institute of Technical Training ITC	378
21	Ispat Private Industrial Training Institute	808
22	ITC Raghunathpali	84
23	ITC-Institute of Career Studies	262
24	Jalda ITC	504
25	Kalinga Industrial Training Centre	210
26	Khandadhar ITC	84
27	Koel Private Industrial Training Institute	294
28	Modern Industrial Training Centre	346
29	Naugaon ITC	84
30	Nirman Institute of Technology ITC	136
31	Pragati ITC	126
32	Rajganpur Industrial Training Centre At Podo By Pass Road	84
33	Rourkela Institute of Technical Education ITC	252
34	Rourkela Institute of Technology ITC	168
35	Shivam Industrial Training Centre At Jamna Dhupa Kuaranmunda	294
36	Shivani Institute of Technology	353
37	St. Marys Vocational Training Centre	47
38	Utkal Institute of Technology	126

University Education:

Sundargarh district has one technical university in the name of Biju Pattanaik University of Technology (BPUT). Technical Degree Colleges are affiliated to it. It was created by an Act of the Odisha State Legislature in November 2002. This is the State technical university of Odisha. Almost all the engineering, pharmacy and architecture and most of the colleges offering B.Tech, M.Tech, MBA, MCA, B.Pharm, M. Pharma and B. Arch degree programmes are either constituents or affiliated colleges of BPUT. As of 2015, the university hosts 58,000 students through its 110 constituent and affiliated colleges. The university is functioning in its new campus located at *Kalinga Vihar*, Rourkela situated about 7 km from Rourkela railway station. Biju Patnaik University of Technology had, only five colleges, i.e. Indira Gandhi Institute of Technology, Sarang (established founded in 1982), Veer Surendra Sai Engineering College, Burla (founded in 1956), College of Engineering and Technology, Bhubaneswar (founded in 1981), Odisha School of Mining Engineering (renamed as Government College of Engineering), Keonjhar (founded in 1956) & Central Institute of Plastic Engineering and Technology, Bhubaneswar (founded in 1968), under the State government of Odisha and a few other private engineering and management institutes were under Sambalpur University. Latter in 2009 three new government colleges were namely added. Parala Maharaja Engineering College, Berhampur, International Institute of Information Technology, Bhubaneswar and Government College of Engineering, Kalahandi. At present the VSS Engineering College has got the status of University and has been separated from BPUT.

The University has more than 110 colleges, both constituent and affiliated, with around 58,000 students. The disciplines include engineering and architecture, business management and hotel management, computer studies and pharmacy. Several of these offer both undergraduate and post graduate studies.

All other colleges, offering courses in general education at Graduate level, are affiliated to Sambalpur University.

Medical Education: There is only one Medical College in the name of Hi-Tech Medical College and Hospital at Rourkela. This college is run by the Bigyan Bharati Trust from the year 2012 and is under Sambalpur University. Facilities for studies in Paramedicals and laboratory technology were dealt in the Medical and Public Health Chapter. The city of Rourkela hosts Utkalamani Gopabandhu Homoeopathy Medical College and Hospital which was a private college in the beginning, but was taken over by the Government at later stage.

Oriental Education System:

There is one Sanskrit Toll, i.e. Gurukul Vedavyasa Sanskrit Toll, Vedavyasa in the District. Another Sanskrit Toll in the name of Ramji Sanskrit Toll at Sundargarh is no more functional. Besides, Gurukul Sanskrit College at Rourkela imparts oriental education in Sanskrit at +2 level at Rourkela.

Music and Dance Schools:

Sangeet Kala Parishad was opened in the industrial town of Rajgangpur with the aim of developing active interest in fine art, music (vocal and instrumental) and dramatic performances. The Bhanja Kala Kendra at Rourkela was the first to be affiliated to the Odisha Sangeet Natak Academy. Similarly, the Life and Rhythm, Rourkela, opened in 1960.

'Pratidhwani', one of the leadings theatre groups of Rourkela, came into being in 1979 by a group of people with an urge for self-expression in the medium of the proscenial theatre. This group first made a name for itself with the production of "Banchharamara Bagicha", an Odia version of Manoj Mitra's "Sajano Bagan" at Civic Centre in 1980. This was followed by a string of well-applauded plays over the next few years which enhanced its image and secured its early reputation. While presentation of neatly-packaged, socially relevant plays has remained its prime pursuit, the group has had occasion to foray into philanthropic enterprises like blood donation camps, adult literacy campaigns etc. About halfway down its theatrical journey, 'Pratidhwani' realized that staging fine plays and earning audience-accolades alone were not enough to save the proscenial flood lights from dimming out from the wider Odia stage. What was needed was fostering in the young generation an interest in theatre, an appreciation of its techniques and nuances and an awareness of its problems and prospects. To this end, it organized a 14-day "Theatre Workshop for the Youth" in 2000 and followed it up with another in 2003, this time under the aegis of Sangeet Natak Akademi, New Delhi, attended by eminent theatre experts of national repute. Since 2000, it has been organising an annual "Theatre Workshop for the Children and the Young" in the X'mas holidays, culminating in a couple of skits put up by the participating freshers. In between, 'Pratidhwani' has found time to conduct several theatre-based seminars, get-togethers and opinion-surveys and participate in local co-operative efforts for the promotion of theatre. Since 2000, it has been publishing an annual souvenir, often based on specific themes. It is also the only theatre group of Odisha to have begun a clip-book of media reports and records accessible to it of theatre-related events throughout Odisha, as a ready reference for theatre-lovers and researchers alike. While contributing its mite to the broad theatre movement of Odisha through these activities, 'Pratidhwani' has remained a prolific

producer of successful plays. Apart from the works of front-ranking Odia playwrights, its repertoire includes those of renowned non-Odia playwrights as well since it sets great store by the catalytic potential of theatre to further the cultural integration of India. Given the resources, 'Pratidhwani' has a vision of putting up all-time, international classics on stage, organising inter-State exchanges of the theatre-troupes, inviting widely-acclaimed directors/playwrights to come and interact with the local lights, setting up a store-house of stage-props and implements, conducting high-profile, think-aloud seminars on theatre issues etc. in an endeavor to restore a measure of pride and popularity to Odia plays and to take drama in general to a newer height.

Eminent Poets and Writers of the District

Binod Nayak was born on 2nd September 1919 in Telipali village of Sundargarh District. In the modern Odia literature, he is remembered as a talented poet of the age of romanticism in Odia literature. He has given a new rhythm and dimension to modern Odia literature. He was adorned with Kendra Sahitya Akademi Award for his poetry '*Sarisrupa*'. His poetry includes *Haimantri* (1933), *Chandra o' tara* (1951), *Ilabrutta* (1960), *Nandadebi* (1962), *Satatarara Dwipa* (1964), *Sarisrupa* (1969), *Pohaladwipara Upakatha*, *Nila Chandrara Upatyaka*. He was the Vice President of Odisha Sahitya Academy from 1.1.1988 to 11.7.1994.

Among the other notable names in literature of the District Shri Giri Dandasena appear as a luminary for being the Vice President of Odisha Sahitya Academy from 18.5.2011 to 8.2.2015. He is a notable columnist in the daily news papers. Among his works, *Kama* and *Rasta Kade Jiban*, *Kalasutra* are notable.

APPENDIX- XXXIV: Literacy in Rural Areas in Sundargarh District, 2011 Census

Sr.No.	Name of CD Block	Number of literates and illiterates						Literacy Rate (%)			Gap in Male-Female Literacy Rate (%)
		Number of Literates			Number of Illiterates			Persons	Males	Females	
		Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	
1	2	3	4	5	6	7	8	9	10	11	12
1	Hemgir	55691	31218	24473	28868	11452	17416	74.55	83.01	65.97	17.04
2	Lephripara	47765	26764	21001	31043	12690	18353	68.39	76.69	60.09	16.6
3	Tangrapali	40997	22835	18162	23377	9336	14041	71.57	79.88	63.28	16.6
4	Balisankara	50498	27778	22720	35192	14309	20883	67.54	76.17	59.32	16.85
5	Subdega	38995	21667	17328	25259	10284	14975	69.03	77.45	60.77	16.68
6	Sundargarh	46995	26247	20748	23916	9276	14640	74.05	82.66	65.43	17.23
7	Baragaon	43603	24216	19387	27639	11383	16256	69.31	77.36	61.33	16.03
8	Kutra	48411	26974	21437	32059	13406	18653	68.76	76.61	60.91	15.7
9	Kuanrunda	54338	30502	23836	43532	18346	25186	64.36	72.64	56.16	16.48
10	Nuagaon	56882	32507	24375	49274	20223	29051	61.92	71.22	52.73	18.49
11	Bisra	40528	22842	17686	28101	11466	16635	67.67	76.56	58.84	17.72
12	Lathikata	46997	26994	20003	35327	14330	20997	66.11	75.76	56.4	19.36
13	Rajagangapur	53153	29861	23292	41989	17508	24481	65.17	73.83	56.66	17.17
14	Gurundia	35875	20545	15330	31113	12642	18471	63.39	73.74	53.36	20.38
15	Baneigarh	39190	21865	17325	23621	9166	14455	71.95	81.6	62.61	18.99
16	Lahunipara	49074	28407	20667	50452	21103	29349	58.97	68.91	49.21	19.7
17	Koida	33155	20271	12884	42431	17655	24776	54.47	66.34	42.5	23.84
	Total	782147	441493	340654	573193	234575	338618	66.63	75.63	57.73	17.9

APPENDIX- XXXV: Number of Literates and Illiterates, Literacy Rate by Sex in towns, 2011

Sr. No.	Name of town	Number of Literates and Illiterates						Literacy Rate (%)			Gap in Male-Female Literacy Rate (%)
		Number of Literates			Number of Illiterates			Persons	Males	Females	
		Persons	Males	Females	Persons	Males	Females				
1	2	3	4	5	6	7	8	9	10	11	12
1	801815-Sundargarh (M)	35751	18725	17026	9285	4029	5256	88.88	92.48	85.22	7.26
2	801816-Rajagangapur (M)	37934	20484	17450	13428	5775	7653	84.32	89.38	79.07	10.31
3	801817-O.C.L. (ITS)	2084	1143	941	313	168	145	96.48	97.44	95.34	2.1
4	384265-Panposh (CT)	6948	3848	3100	2975	1184	1791	78.95	86.03	71.64	14.39
5	801818-Biramitrapur (M)	22863	12576	10287	10579	4278	6301	78.12	85.73	70.48	15.25
6	384373-Kuanrunda (CT)	6273	3460	2813	2770	1152	1618	79.59	86.13	72.78	13.35
7	384612-Jalda (CT)	10599	5924	4675	5190	2009	3181	75.92	84.73	67.09	17.64
8	384613-Hatibandha (CT)	6529	3659	2870	2409	966	1443	81.71	88.49	74.45	14.04
9	384647-Lathikata (CT)	5771	3227	2544	1634	686	948	86.65	92.02	80.69	11.33
10	384803-Koida (CT)	4181	2611	1570	2582	1109	1473	73.51	81.93	62.77	19.16
11	384964-Tensa (CT)	3131	1791	1340	1338	587	751	81.94	87.58	75.45	12.13
12	385209-Banaigarh (CT)	5531	2998	2533	1549	698	851	87.32	90.55	83.79	6.76
13	801819-Raurkela (M + oG)	246402	136794	109608	73638	32301	41337	86.59	90.98	81.67	9.31
14	801820-Raurkela (ITS + oG)	166178	91414	74764	50232	21483	28749	85.62	90.38	80.43	9.95
	District (Urban): Sundargarh(374)	560175	308654	251521	177922	76425	101497	85.34	90.21	80.04	10.17

APPENDIX- XXXVI: Educational infrastructure in Sundargarh District, 2011 Census

Sr.No.	Name of CD Block	Total Number of Inhabited Villages in the C. D. Block	Total Population of C.D. Block	Pre-primary	Villages having educational institutions					Technical institutions		
					Primary	Middle	Secondary	Senior Secondary School (SS)	Degree College of Arts Sceince & Commerce	Polytechnic	Vocational Training School /ITI	No Educational Facility
1	2	3	4	5	6	7	8	9	10	14	15	19
1	Hemgir	143	84559	2	137	67	22	5	2	0	1	6
2	Lephipara	108	78808	1	93	49	20	3	3	0	0	15
3	Tangarapali	80	64374	2	71	42	18	4	3	0	0	9
4	Balisankara	100	85690	0	88	61	30	2	2	0	0	12
5	Subdega	63	64254	2	60	35	17	2	1	0	0	3
6	Sundargarh	85	70911	1	83	46	18	5	2	0	2	2
7	Baragaon	69	71242	1	69	30	11	4	1	0	1	0
8	Kutra	54	80470	0	54	38	20	2	2	0	0	0
9	Kuanrmunda	105	97870	0	104	54	23	4	0	0	0	1
10	Nuagaon	119	106156	0	119	60	24	8	1	0	1	0
11	Bisra	69	68629	3	68	41	20	3	2	0	2	1
12	Lathikata	81	82324	1	80	44	24	0	0	0	1	1
13	Rajagangapur	72	95142	0	70	49	19	4	1	0	0	2
14	Gurundia	140	66988	0	130	59	30	3	1	2	20	7
15	Baneigarh	104	62811	0	99	63	23	4	3	0	5	5
16	Lahunipara	214	99526	0	196	78	41	7	5	0	1	18
17	Koida	107	75586	1	104	44	17	0	0	0	0	3
	Total	1713	1355340	14	1625	860	377	60	29	2	34	85

APPENDIX- XXXVII: Educational, Recreational and Cultural Facilities in Urban areas

Sr. No	Name of Town	Number of Educational Facilities*											
		Primary school	Middle school	Secondary school	Senior Secondary school	Arts/ Science/ Commerce colleges (of degree level and above)	Medical colleges	Engineering colleges	Management Institute/ colleges	Polytechnics	Recognised Shorthand, Typewriting and vocational training institutions	Non-formal Education Center (Sarva Shiksha Abhiyan Center)	Special School for Disabled
1	Sundargarh (M)	36	24	10	3	2	BRL (95)	KIREI (8)	RKL (104)	1	5	(0)	BNP (7)
2	Rajagangapur (M)	17	18	9	5	2	BRL (190)	MANDI AKUDAR (20)	RKL (35)	RKL (35)	5	(0)	(0)
3	O.C.L. (ITS)	2	1	1	2	(0)	BRL (0)	RKL (3)	RKL (37)	RKL (37)	(0)	RJP (0)	RJP (0)
4	Panposh (CT)	8	4	2	RKL (33)	(0)	(0)	(0)	(0)	1	2	3	(0)
5	Biramitrapur (M)	33	12	7	2	(0)	BRL (205)	RKL (35)	RKL (40)	RKL (40)	3	BNK (5)	RKL (40)
6	Kuanrmunda (CT)	7	4	4	KEDVYAS (7)	RKL (18)	(0)	RKL (18)	(0)	RKL (18)	(0)	(0)	(0)
7	Jalda (CT)	9	5	2	1	2	RKL (16)	RKL (16)	RKL (16)	RKL (16)	RKL (10)	5	RKL (15)
8	Hatibandha (CT)	4	3	3	DEOGAON(4)	RKL (14)	BRL (240)	RKL (14)	RKL (14)	RKL (14)	RKL (14)	(0)	RKL (14)
9	Lathikata (CT)	5	2	2	JALDA(7)	RKL (15)	RKL (20)	RKL (20)	RKL (20)	RKL (20)	RKL (20)	6	(0)
10	Koida (CT)	3	1	1	1	(0)	BRL (200)	RKL (112)	RKL (112)	RKL (112)	(0)	(0)	(0)
11	Tensa (CT)	4	3	1	KOIRA(14)	(0)	BRL (0)	RKL (98)	RKL (98)	RKL (98)	(0)	(0)	(0)
12	Banaigarh (CT)	7	2	1	1	(0)	BRL (200)	RKL (70)	DO(70)	DO(70)	RKL (70)	1	RKL (70)
13	Raurkela (M + oG)	207	60	60	24	7	1	3	3	2	4	3	(0)
14	Raurkela (ITS + oG)	78	54	40	15	5	1	3	15	(0)	3	70	(0)

Sr. No.	Name of Town	No. of orphanage Home	Number of Social, Recreational and Cultural facilities						
			Working women's hostles	No. of old Age Home	Stadium	Cinema Theatre	Auditorium/Community halls	Public libraries	Reading rooms
1	Sundargarh (M)	(0)	(0)	(0)	2	1	2	2	2
2	Rajagangapur (M)	LML (4)	BBH (20)	RKL (35)	2	3	5	2	2
3	O.C.L. (ITS)	(0)	RKL (37)	(0)	1	(0)	1	2	(0)
4	Panposh (CT)	(0)	(0)	(0)	1	RJP (15)	RJP (15)	RJP (15)	(0)
5	Biramitrapur (M)	3	RKL (30)	RKL (35)	1	RKL (40)	2	2	2
6	Kuanmunda (CT)	(0)	(0)	(0)	(0)	RKL (18)	1	(0)	(0)
7	Jalda (CT)	RKL (12)	RKL (10)	(0)	1	RKL (10)	RKL (12)	RKL (10)	RKL (8)
8	Hatibandha (CT)	RKL (14)	1	(0)	RKL (14)	RKL (14)	RKL (14)	RKL (14)	RKL (14)
9	Lathikata (CT)	RKL (15)	RKL (15)	(0)	1	RKL (15)	RKL (15)	RKL (15)	RKL (15)
10	Koida (CT)	(0)	(0)	(0)	BRB (35)	BRB (35)	BRB (35)	BRB (35)	BRB (35)
11	Tensa (CT)	(0)	(0)	(0)	BRB (49)	BRB (49)	BRB (49)	BRB (49)	(0)
12	Banaigarh (CT)	RKL (70)	RKL (70)	RKL (70)	RKL (70)	RKL (70)	RKL (70)	RKL (70)	RKL (70)
13	Raurkela (M + oG)	4	40	1	6	6	17	16	15
14	Raurkela (ITS + oG)	3	UDITNAGAR(10)	RKL (2)	2	2	44	5	15

Rourkela: Rourkela, BRL- Burla, RJP- Rajgangpur, BRB- Barbil, BNP- BNP, LML- Lamloi, BNK- Banki, BBH- Bihabandh

APPENDIX- XXXVIII: District level Report on Enrolment in all Classes from Class-I to VIII in all Blocks and ULBs of Sundargarh

SL NO	BLOCK/ ULB	Govt. institutions		Aided institutions		Unaided institutions		Other institutions		Central GOI institutions		Un-recognized institutions		Total institutions	
		No.	Enrolment	No.	Enrolment	No.	Enrolment	No.	Enrolment	No.	Enrolment	No.	Enrolment	No.	Enrolment
1	Balisankara	177	901	18	148	6	10	0	0	0	0	0	0	201	1059
2	Bargaon	137	2448	17	647	3	0	2	0	0	0	1	17	160	3112
3	Biramitrapur MPL	20	0	3	0	5	0	1	0	0	0	0	0	29	0
4	Bisra	110	5704	13	509	13	292	0	0	0	0	6	139	142	6644
5	Bonai	122	7563	4	142	7	102	1	0	0	0	2	0	136	7807
6	Gurundia	176	34	16	0	6	0	0	0	0	0	0	0	198	34
7	Hemgiri	180	6931	5	19	3	0	0	0	0	0	2	29	190	6979
8	Koira	163	188	5	0	9	0	2	0	0	0	3	0	182	188
9	Kuarmunda	138	2549	32	916	8	15	0	0	0	0	1	0	179	3480
10	Kutra	109	2928	24	895	4	50	0	0	1	29	3	19	141	3921
11	Lahunipara	186	7467	10	0	7	0	0	0	0	0	0	0	203	7467
12	Lathikata	155	7175	17	117	14	0	0	0	0	0	8	0	194	7292
13	Lephipara	148	7944	16	613	3	318	3	0	1	0	2	0	173	8875
14	Nuagaon	142	396	21	0	16	0	0	0	0	0	3	0	182	396
15	Rajgangpur	121	1860	31	132	4	0	2	0	0	0	2	0	160	1992
16	Rajgangpur MPL	25	2252	6	300	6	74	1	0	0	0	7	277	45	2903
17	Rourkela MPL	127	2447	8	239	46	16	0	0	3	0	17	53	201	2755
18	Subdega	112	3616	16	870	4	166	2	0	0	0	2	183	136	4835
19	Sundargarh	131	5009	8	156	4	33	0	0	0	0	0	0	143	5198
20	Sundargarh MPL	29	0	5	0	5	0	0	0	1	0	6	0	46	0
21	Tangarpali	122	13	4	0	6	1	3	0	0	0	1	0	136	14
	Total	2630	67425	279	5703	179	1077	17	0	6	29	66	717	3177	74951

Source: <http://www.opepa.in/CTSReports/ClasswiseenrolmentReport.aspx>

APPENDIX- XXXIX: List of English Medium Schools in Sundargarh District

Sl. No.	Name and Address of the Institution
1	Barilapita High School, Catholic, Po- Purunapani
2	Caramel English Medium School, Hamirpur
3	Chhend Public High School, Rourkela
4	Chinmay Vidyalay, Chhend Colony, Rourkela
5	City English School, Gandhi Road, Rourkela
6	Dalmian Vidyamandir, Rajgangpur
7	DAV Eng. Med. School, Kakansbahal
8	DAV Public School Kansbahal
9	DAV Public School, Basanti Colony, Rourkela
10	DAV Public School, Mcl Basundhara
11	DAV Public School, Tensa
12	De Souza's School, Sector-2, Rourkela
13	Deepika English Medium Secondary School, Sector-5, Rourkela
14	Deepika Ispat Sikshya Sadan, Rourkela
15	Delhi Public School, Rourkela
16	Don-Basco High School, Kuanmunda
17	Dr. A.N. Khosla Dav Public School. Sector-7, Rourkela
18	Good Sepherd School, Sundargarh
19	Guru Nanak Public School, Rourkela
20	Guru Tegh Bahadur Primary School, Sector-18, Rourkela
21	Hamirpur Boys High School, Rourkela
22	Hind Zinc Vidyalaya, Sundargarh
23	Hindi Vikas Val Vidyalaya, Rourkela
24	Indo-English School, Rourkela
25	Ispat English Medium School, Fertilizer Township
26	Ispat English Medium School, Rourkela
27	Jawahar Navodaya Vidyalay, Zinc Nagar, Lephripada, Sundargarh
28	Jhunmur High School, Catholic, Jhunmur, Biramitrapur
29	K.D. Public School, Birsa
30	Kantapali High School, Catholic, Kantapali
31	Kendriya Vidyalaya, SE Railway Colony, Bandomunda
32	Kendriya Vidyalaya, Sector-6, Rourkela
33	Kendriya Vidyalaya, Sundargarh
34	Keshramal Boys High School, Catholic, Rajgangpur
35	Kusumdegi Boys High School, Catholic, Bargaon
36	Loreto English School, Panposh
37	Lutheran High School, Rajgangpur
38	M.G.M. English School, Jagda
39	Mar Gregorios Memorial English Medium School, Jhirpani, Rourkela
40	Montfort School Complex, Kansbahal
41	New Odisha High School, Catholic, Subdega
42	Nirmala English School, Rajgangpur
43	Nirmala Girls High School, Koinsera
44	Nirmala Girls High School, Rajgangpur
45	Pragati Public School, Rourkela
46	Radha Swami English Medium School, Rourkela
47	Saraswati Vidya Mandir, Rajgangpur
48	Saraswati Vidya Mandir, Rourkela
49	Se Railway Mixed Higher Secondary School
50	SKDAV Girls High School, Rourkela

Sl. No.	Name and Address of the Institution
51	SPG Mission Primary School, Ghagari
52	Sri Aurobinda School, Rourkela
53	St. Gregory's High School, Kalunga
54	St. John Mary's VIANNY English Medium School, Kutra
55	St. Joseph Convent School, Hamirpur, Rourkela
56	St. Joseph's English Medium School, Hamirpur
57	St. Joseph's Girls High School, Catholic, Hamirpur
58	St. Mary's Convent School, Biramitrapur
59	St. Mary's Girls High School, Rajgangpur
60	St. Mary's Girls High School, Sundargarh
61	St. Mary's School, Jagada
62	St. Pauls English Medium School, Hamirpur
63	St. Pauls School, Rourkela
64	St. Thomas English School, Basanti Colony Rourkela
65	St. Thomas High School, Telendihi,
66	St. Thomas School, Rourkela
67	St. Xavier High School, Kantapali, Gurundia
68	St. Arnold High School, Lathikata
69	Sundargarh Public School
70	Tangrian High School, Kacharu
71	Vidya Jyoti Girls High School, Catholic, Kahupani

APPENDIX- XL: List of Junior Colleges in Sundargarh District

Sl. No.	Block Name	Name of College	Location
1	Balisankara	Kinjirkela (Junior) College, Kinjirkela	Kinjirkela
2	Balisankara	Panchayat Samiti (Junior) College, Balisankara	Balisankara
3	Bargaon	Panchayat (Junior) College, Bargaon-Kachhar	Bargaon-Kachhar
4	Bargaon	Panchayat Samiti (Junior) College, Bargaon	Bargaon
5	Biramitrapur (MPL)	Shrama Sakti (Junior) College, Biramitrapur	Biramitrapur
6	Bisra	College of Arts, Science & Technology (Junior), Bondamunda	Bondamunda
7	Bisra	Neelashaila (Junior) Mahavidyalaya, Jagada	Jagada
8	Bisra	S.E. Railway (Junior) Mixed Higher Secondary School, Bondamunda	Bondamunda
9	Bisra	Subodh Ray (Junior) Mahavidyalaya, Bisra	Bisra
10	Bonai	Balanipat (Junior) Mahavidyalaya, Jhirdapali	Jhirdapali
11	Bonai	Banshidhar (Junior) College, Kenaveta	Kenaveta
12	Bonai	Bonaigarh (Junior) College, Bonaigarh	Bonaigarh
13	Bonai	Jadupati (Junior) College, Sihidia	Sihidia
14	Gurundia	Panchayat Samiti (Junior) College, Gurundia	Gurundia
15	Hemgiri	Manikeswari (Junior) College, Garh-Tumulia	Garh-Tumulia
16	Hemgiri	Panchayat Samiti (Junior) College, Hemgir	Hemgir
17	Hemgiri	Vesaja Patel (Junior) College, Duduka	Duduka
18	Koira	Koida (Junior) College, Koida	Koida
19	Kuarmunda	Nirmalmunda (Junior) College, Bhalulata	Bhalulata
20	Kutra	Dalmia (Junior) College, Jharbeda	Jharbeda
21	Kutra	Government (Junior) Science College, Kutra	Sundergarh
22	Lahunipara	Baba Baneswar (Junior) Mahavidyalaya, Bilaipara	Bilaipara
23	Lahunipara	Eklavya Model (Junior) Residential School, Lahunipada	Lahunipada
24	Lahunipara	Lahunipara (Junior) College, Lahunipara	Lahunipara
25	Lathikata	Vedvyas (Junior) Mahavidyalaya, Vedvyas	Vedvyas
26	Lephripara	Damodar Naik (Junior) Mahavidyalaya, Darlipali	Darlipali
27	Lephripara	Lephripara (Junior) College, Lephripara	Lephripara
28	Lephripara	S.R.D.M.N. Panchayat (Junior) College, Sargipali	Sargipali
29	Nuagaon	Panchayat Samiti (Junior) College, Nuagaon	Nuagaon
30	Rajgangpur	Eklavya Model (Junior) Residential School, Laing	Laing
31	Rajgangpur	Kansbahal (Junior) College, Laing	Laing
32	Rajgangpur	Om Maa Saraswati Institute of Science & Technology, Rajgangpur	Rajgangpur
33	Rourkela (MPL)	Asian College of Science & Technology, Rourkela	Rourkela
34	Rourkela (MPL)	Chaitanya College of Education, Panposh Road	Panposh Road
35	Rourkela (MPL)	Gandhi (Junior) Mahavidyalaya, Deogaon	Deogaon
36	Rourkela (MPL)	Government (Junior) College, Rourkela	Rourkela
37	Rourkela (MPL)	Hrushikesh Ray (Junior) Mahavidyalaya, Chhend	Chhend

Sl. No.	Block Name	Name of College	Location
38	Rourkela (MPL)	Ispat (Junior) College, Rourkela	Rourkela
39	Rourkela (MPL)	Ispat (Junior) Vidya Mandir, Rourkela	Sector-19
40	Rourkela (MPL)	Kalyani Ray (Junior) Mahavidyalaya, Hamirpur	Hamirpur
41	Rourkela (MPL)	Municipal (Junior) College, Rourkela	Rourkela
42	Rourkela (MPL)	N.A.C. (Junior) College, Rourkela	Rourkela
43	Rourkela (MPL)	Naidu Science College, Rourkela	Rourkela
44	Rourkela (MPL)	Rourkela (Junior) College, Rourkela	Rourkela
45	Rourkela (MPL)	Utkal Gourav Madhusudan (Junior) Mahavidyalaya, Rourkela	Rourkela
46	Subdega	New Odisha (Junior) Higher Secondary School, Gaibira	Gaibira
47	Subdega	Subdega Anchalika Sahayog (Junior) College, Subdega	Subdega
48	Sundargarh	Eklavya Model (Junior) Residential School, Bhawanipur	Bhawanipur
49	Sundargarh	Illa Memorial Panchayat Samiti (Junior) College, Kinjirma	Kinjirma
50	Sundargarh	Panchayat Samiti Science & Arts (Junior) College, Bhedabahal	Bhedabahal
51	Sundargarh	Sabitri Gopal (Junior) Panchayat College, Birbira	Birbira
52	Sundargarh	Vesaja Rambhabati (Junior) College, Kundukela	Kudukela
53	Sundargarh	Vikash Science College, Bhedabahal	Bhedabahal
54	Sundargarh (MPL)	Government (Junior) College, Sundargarh	Sundargarh
55	Tangarpali	Jasoda Bishnu N.M.P. (Junior) College, Jogimal	Jogimal
56	Tangarpali	Maharshi Dayanand (Junior) Mahavidyalaya, Garh-Mahulpali	Garh-Mahulpali
57	Tangarpali	Ujalpur (Junior) College, Ujalpur	Ujalpur

APPENDIX- XLI: List of +3 Degree Colleges in Sundargarh

Sl. No.	Block/ULB Name	College Name	TOTAL SEATS	Arts	Phy. Sc	Bio. Sc	Comm
1	Rourkela (MPL)	Sushilabati Government Women's (Degree) College, Rourkela	544	320	128	96	-
2	Rourkela (MPL)	Government (Autonomous) College, Rourkela	538	160	144	32	74
3	Rourkela (MPL)	Ispat (Autonomous) College, Rourkela	480	128	120	40	192
4	Sundargarh (MPL)	Government (Degree) College, Sundergarh	448	224	96	32	96
5	Rourkela (MPL)	Municipal (Degree) College, Uditnagar	448	128	96	32	192
6	Kutra	Dalmia (Degree) College, Jharbeda	384	128	80	48	128
7	Rourkela (MPL)	Gandhi (Degree) Mahavidyalaya, Deogaon	384	128	96	32	128
8	Rourkela (MPL)	Rourkela (Degree) College, Rourkela	384	256	-	-	128
9	Lathikata	Vedvyas (Degree) Mahavidyalaya, Vedvyas	384	128	96	32	128
10	Hemgiri	Maa Manikeswari (Degree) College, Garh-Tumulia	320	128	64	64	64
11	Bisra	Neelashaila (Degree) Mahavidyalaya, Jagada	320	128	64	32	96
12	Bisra	College of Arts, Science & Technology (Degree), Bondamunda	256	128	64	-	64
13	Bonai	Bonaigarh (Degree) College, Bonaigarh	224	128	80	16	-
14	Tangarpali	Ma15harshi Dayanand (Degree) Mahavidyalaya & Higher Education, Garh-Mahulpali	224	128	48	48	-
15	Sundargarh	Panchayat Samiti (Degree) College, Bhedabahal	192	96	64	32	-
16	Biramitrapur (MPL)	Shrama Sakti (Degree) College, Biramitrapur	192	128	-	-	64
17	Hemgiri	Vesaja Patel (Degree) College, Duduka	192	128	32	32	-
18	Sundargarh (MPL)	Government Women's (Degree) College, Sundergarh	160	160	-	-	-
19	Bonai	Jadupati (Degree) College, Sihidia	160	96	32	32	-
20	Sundargarh	Illa Memorial Panchayat Samiti (Degree) College, Kinjirma	128	128	-	-	-
21	Tangarpali	Jasoda Bishnu (Degree) College, Sardhapali	128	64	32	32	-
22	Rourkela (MPL)	Kalyani Ray (Degree) Mahavidyalaya, Hamirpur	128	64	48	16	-
23	Lahunipara	Lahunipara (Degree) College, Lahunipara	128	128	-	-	-
24	Bargaon	Panchayat Samiti (Degree) College, Bargaon	128	128	-	-	-
24	Lathikata	Priyadarshini Mahila (Degree) Mahavidyalaya, Jalda	128	128	-	-	-
26	Rajgangpur (MPL)	Sarbati Devi Women's (Degree) College, Rajgangpur	128	128	-	-	-
27	Koira	Koida (Degree) College, Koida	96	64	-	-	32
28	Subdega	Anchalik Sahayog (Degree) College, Subdega	64	64	-	-	-
29	Rourkela (MPL)	Hrushikesh Ray (Degree) Mahavidyalaya, Chhend	64	64	-	-	-
30	Balisankara	Kinjirkela (Degree) College, Kinjirkela	64	64	-	-	-
31	Lephripara	Lephripara (Degree) College, Lephripara	64	64	-	-	-
32	Bisra	Subodh Ray (Degree) Mahavidyalaya, Bisra	64	64	-	-	-

**APPENDIX- XLII: List of Literary and Cultural Organisations /
Magazines of Sundargarh**

Sl. No.	Name of the Institution / Organisation	Name of the Proprietor
1	Cultural Academy	President- Akshya Kumar, Secretary- Pravat Mallick
2	Bhanja Kala Kendra	
3	Paschima Odisha Sanskrutik Parishad	
4	Sunaphula Sahitya Sansad	President- Sunil, Secretary- Bijay Kumar Sahu
5	Baisakhi Sahitya Sansad	President- Benudhar Dash
6	Pragati Utkala Sangha	
7	Swosti Sahitya Sansad	President- Rajib Pani
8	Sundargarh Jilla Lekhak Sammukhya	
9	Sundargarh Nari Kalyan Kendra	
10	Dhamara Sangha	President- Mahendra Mohanty, Secretary- Dhruba Charan Nayak
11	Nilasaila	
12	Jagnyaseni	President- S Panda Secretary- Ninarani Jena
13	Adarsh Pathagar	
14	Ispat Sahitya Sansad	President- Bidyadhar Barik Secretary- Trilochan Mathan
15	Srujani Sahitya Sansad	Secretary- Rabindra Dehuria
16	Odia Bhasa Bikash Manch	Secretary- Arttatrana Mahapatra
17	Utkala Silpa Parichalak Samaj	
18	Ganjam Gajapati Bikash Parishad, Rourkela	
19	Bedabyasa Sahity Sanskruti Parishad	
20	Dikhyadipan	
21	Anwasha	
22	Koel Club	
23	Kalinga Sena	
24	Pratidhwani	
25	Sankalpa	
26	Nayika	
27	Tribhangi Kala Parishad, Basanti Colony	
28	Music Circle, Basanti Colony	
29	Nabajeevan, Mohantypada, Sundargarh	
30	Sur, Sundargarh	
31	Bimbadhar Institute of Performing Art and Visual Art	
32	Mayuree Sundargarh	
33	Kalayatan Charukala & Karukala Mahavidyalaya, Sundargarh	
34	Ispat Kalakendra Rourkela	
35	Basanti Pathagara, Basanti Colony, Rourkela	

APPENDIX- XLIII: List of Literary Magazines and Periodicals Published from Sundargarh

Sl. No	Name (language) and Description	Address and Other Details
1	Tiki Tiki Sunaphula (Odia), Tri-monthly Childrens Literature	Editor- Sunil Kumar Mohanty, Publisher- Sunaphula Sahitya Sansad
2	Nabapatra (Odia) Bi-monthly progressive literature	Editor- Akshya Kumar Samal, Publisher- Cultural Academy
3	Stabak (Odia) Annual	Editor- Trilochan Mathan Publisher- Ispat Sahitya Sansad
4	Pancham Stambha (Odia) Tri-monthly	Editor- Kelucharan Badajena
5	Adarsha (Odia) Half-yearly	Publisher- Adarsha Pathagara
6	Jagnyaseni (Annual)	Editor- Ninarani Jena Publisher- Jagnyaseni
7	Dhamara (Odia) Annual	
8	Basantika (Odia)	Lekhika Sammukhya, Rourkela
9	Srujani (Odia) Annual	Editor- Rabindra Dehuria
10	Telingi Baja (Odia) Children's literature	Editor- Prafulla Barik
11	Unmesh (Odia)	Editor- Urbasi Sash Pati
12	Sajaphula (Odia)	Editor- Sunil Kumar Mohanty
13	Time Pass (Odia) Monthly	Editor- Bibidha Biswa, Sundargarh



NIT Rourkela



IIPM Kansbahal



Hi-Tech Medical College, Rourkela

Plate: 4- National Institute of Technology, Rourkela (Top), National Institute of Production Management, Kansbahal (Centre), Hitech Medical College & Hospital, Rourkela

Chapter-XII

LOCAL SELF-GOVERNMENT

Evolution of Local Self Government at the District Level

As far the early history of local self-Government in the District is concerned, towards the first part of the Durbar administration, the ex-State of Gangpur had Sanitation Committees for the towns of Sundargarh, Rajgangpur, Raghunathpali, Bisra, Hatibari and Hemgir. The Committees which were representative in composition mainly looked after sanitation of the towns. After merger, these committees were allowed to function for some time and then were abolished. During this period Panchayats were also formed at Sundargarh and Raghunathpali of the ex-State.

In the ex-State of Bonai, the Panchayats were constituted in 1943-44 under the Bonai State Village Panchayat Order 1943. There was 103 Panchayat Unions in 443 villages of the ex-State. These Panchayats were entrusted with single administrative powers of an elementary nature so as to lay the foundation of a real local self-government. These Panchayats were looking to the improvement of irrigation facilities supervision primary education, preventing black marketing and disposing of petty civil and criminal cases in their respective villages. At the Headquarters of the ex-State, there was a welfare committee.

Municipal Corporation, Municipalities and NAC:

At present the District has three municipalities constituted at Sundargarh (19 wards), Rajgangpur (20 wards) and Biramitrapur (11 wards), and one **Municipal Corporation at Rourkela (40 wards)**. The population, as per 2011 Census the population and area of the three Municipalities and the erstwhile Rourkela Municipality is mentioned below.

Table135: Area and Population of Urban Local Bodies in Sundargarh District

Name of the ULB	Geographical Area (Sq. Km)	Population	
		1971	2011
Biramitrapur Municipality	21.84	28063	33442
Rajgangpur Municipality	26.16	21876	51362
Rourkela Municipality*	53.30	172502	483038
Sundargarh Municipality	23.83	17244	45036

The chief sources of income of the Municipalities are taxes on holdings and latrines, taxes and carriages and cars, and fees realised in issuing licences for offensive and dangerous trades. The other sources of income are from ponds, ferry ghats, markets, slaughter houses, lease of municipal

land and fisheries. The major areas of expenditure for the municipalities are public lighting, water supply; drainage and sanitation; hospitals, dispensaries, and vaccination; public institutions; construction of roads and bridges; construction of buildings; use of vehicles; and payment of loans.

Sundargarh Municipality was formed on 1st November 1959. A Notified Area Council was formed in Rajgangpur in October 1957 with 10 nominated Councillors. It was converted into a Municipality in 1969. At first Biramitrapur was also a NAC formed in 1960. Later it got the status of a Municipality on 30th December 1969. The Rourkela Notified Area Council was constituted on the 1st August 1955, with both Civil and Steel Towns. On the 17th June, 1963, a separate Notified Area Council was formed for the Steel Township. The Rourkela Maha Nagar Nigam has been notified vide Gazette Notification No- 21437 Dt- 24.12.2014 comprising 40 Councils.

The Urban Local Bodies are constituted with peoples' representative elected through direct election in every five years conducted by the State Election Commission under the Odisha Municipal Act. The Chairman and the Vice-Chairman of the Municipalities are elected by the Councillors from among themselves. The Chairman and the Executive Officer carry out various functions as per the provisions contained in different chapters of the Odisha Municipal Act and Rules.

The notification for conduct of election indicating division of wards and reservation of seats u/s 7 of the Act in Rourela Municipality has been issued vide Government of Odisha, Housing & Urban Development Department Notification No.- Ele-138/2014/9223/HUD. Dt- 25.03.2015. (APPENDIX-XXX)

Government of Odisha, Housing & Urban Development have assigned Reservation for office of Mayor of Rourkela Municipal Corporation for Scheduled Tribe Woman vide Notification No- 6836-Elec-13/2015 dt 28.02.2015.

Town Planning and Development:

Town planning: To develop the old existing towns in the District, Master Plans for Rourkela, Sundargarh, Rajgangpur and Biramitrapur have been prepared by the Town Planning Organisation, Odisha. The Odisha Town Planning and Improvement Trust Act, 1956, have been enforced all over the areas of the four towns mentioned above to plan the control and the use of land keeping in view the building plan, road, sewerage, public facilities and sanitation.

The Odisha Town Planning and Improvement Trust Act, 1956 was extended over NAC (Civil Township) Area, Rourkela with effect from 1.1.1961. During 1964 the Special Planning Authority, Rourkela was

constituted where the Zone Officer-cum-Assistant Town Planner functioned as Special Planning Authority which continued till 25.1.1976. The Rourkela Regional Improvement Trust was constituted on 26.1.1976 with its jurisdiction over Master Plan Areas of Rourkela Civil Township, Rajgangpur, Biramitrapur and Sundargarh. The Rourkela Development Authority was constituted with effect from 2.10.1995 with its jurisdiction over Development Areas of Rourkela Civil Township, Rourkela Industrial Complex, Rajgangpur, Biramitrapur and Sundargarh. The Rourkela Development Authority has been constituted vide Notification No.30938/HUD.,dt.15.9.95 effective from 2.10.1995. Now the following members constitute the Authority. The post of Chairman is filled up by the Government at pleasure. The constitution of the Authority at present is as follows.

Table 136- Constitution of Rourkela Development Authority

1.	Collector, Sundargarh	Vice-Chairman
2.	Executive Engineer, P.H. Division, Rourkela	Engineer Member (Part time)
3.	Assistant Town Planner	Planning Member
4.	Secretary, RDA	Finance & Accounts Member
5.	Deputy Architect, Odisha	Architect Member (Part time)
6.	Commissioner-cum-Secretary, HUD, Odisha	Ex-officio Member
7.	Chairman, Rourkela Municipality	-do-
8.	Chairman, Sundargarh Municipality	-do-
9.	Chairman, Rajgangpur Municipality	-do-
10.	Chairman, Biramitrapur Municipality	-do-

The RDA has so far completed 11 housing projects and 30 housing projects in Rourkela since its inception.

Urbanisation and Emerging Issues:

In Sundargarh District, urbanisation has picked up greater speed than any Northern Odisha districts due to heavy inflow of migrant population in the industrial centres of Rourkela and Rajgangpur, mining belt of Biramitrapur and Coal belt of Vasundhara besides the small time Mining concentration unit at Zinc Nagar in Sargipali. The surge of urbanisation was based on urban planning, no doubt, but workers, small vendors, ragpickers and menial service providers besides non-formal sector did not get accommodated in the planned outfit, compelled to find their habitat as close to the work place as possible. The elected representatives as also the election aspirants counted on the votes of such people who certainly vote for them on hope of earning a better living. Thus, slums developed in all the four urban local body limits almost with impunity. Most of the slums were within the boundaries of the urban local bodies, but a large part found their habitations outside the limits. Including them within urban local bodies is breeding resentment for town planning. The case of Rourkela Maha Nagar Nigam is a classic case in point.

Table 137: Slum Population in Sundargarh District

Name of the ULB	No of Households in the Slum	No of Persons Inhabing the Household	No of Slums	Remarks
Sundargarh Municipality	5099	24073	31	Roads,watersupply,electricity under plan to provide
Rajgangpur Municipality	2933	10600	18	Farflung wads and councils not provided any facility
Birmitrapur Municipalty	3014	13191	22	Roads, water suuply not provided in major areas
Rourkela Municipality	89208	356832	576	Peripheral wards/councils not provided facilities and there is resentment for town planning.
TOTAL	100254	404696	647	

Source- Statement-VII, Civic and Other Amenities in Slums, 2009 (Census of India)

Weak Structure of Town Planning- Odisha Municipl Act 1954 provides for urban area planning through Town Planning Organisations set up either for single bodies or for conglomerates. Rourkela Development Authority was set up for planning, control, and regulation as also allotment of plots in the initial stages of development of 7&8 areas of Rourkela. RDA was headed by the Revenue Divisional Commissioner, Odisha, Sambalpur, and had authority to approve Master Plan for Sundargarh, Birmitrapur, Rajgangpur and Rourkela of Sundargarh District. The RDA was divested of the authority to approve town planning of all urban local bodies except Rourkela vide Government of Odisha U.D.Department Order No.Reforms-UR-10/2010/7678/HUD.dt 30th March 2010 read with HUD Dept ORDER No HUD-TP-Policy-0001-2015-1781/HUD dt 19.1.15. By this order the town planning of the urban local bodies has been delegatd u/s111of the Odisha Urban Development Authority Act 1982 to approve the plans covering building plan of habitation, roads, sewerage, sanitation, water supply and removal of encroachments over public places.The implementation of the town planning has taken the line of political gain, rather than improve the urban local bodies.

Implementation of State Urban Development Agency (SUDA): Ministry of Urban Development, Government of India set out guidelines for improving the benefit delivery system of the policy and programmes in the local bodies and following the said guidelines, Government of Odisha vide Resolution No-47588/HUD Dt.20.12.1990 constituted State Urban Development Agencies (SUDA) with one Additional District Magistrate as the Project Officer.

Objectives of the SUDA addressed, inter alia, to

- i. Restructring and strengthening benefit delivery system in the urban local bodies integrating the process of planning,implementation and evaluation,
- ii. Acting as co-ordinating agency to monitor,supervise and evaluate performance,
- iii. Emphasise ‘bottom up” instead of ‘top down’ approach and involve people in all spheres of activities,
- iv. Empower the people in capacity building through skill development programmes.

Work Components of State Urban Development Agency (SUDA) involved all activities in the nature of improving civic amenities as also implement beneficiaries oriented schemes and programmes.The shift in emphasis took place after coming into power of the NDA in 2014 as Swatchh Bharat Mission (SBM) set a time frame for implementation of the Mission as 9th June 2014 to 2nd October 2019 by the SUDA units in the urban local bodies.The SBM comprised Individual Household toilets,Community toilets,Public toilets,Solid Waste Management, IEC & Public Awareness programme and Capacity building, Skill development and livelihood improvement programmes.

Funding Pattern to SUDA units for execution of SBM was chalked out at Rs 62,009 crores for the earmarked period, share of Government of India being Rs 14,623 crores, State share being 25per cent i.e.Rs 4,874 crores and the balance to be raised in the form of taxes, non-tax receipts, fees etc.In the SBM, the Govnment of India would bear Rs 4000/- per unit cost, the balance to be shared by the State Government and the beneficiary.

Zilla Parishad and Its Operation:

Zilla Parishad is the 1st among the 3 tire panchayati Raj system in the State. With the Zilla Parishad Act, 1959, as amended in 1960 and 1961, coming in to force the Zilla Parishad for Sundargarh was constituted from the 6th February 1961. This organisation was an advisory body at the District level to advise the Government on all developmental matters relating to the District. It was entrusted with the task of approving the programme and the budget of the Panchayat Samitis in the District and distributing amongst them funds received from the government for expenditure on various developmental works. The institution which was also supervision the activities of the Samitis at Block level served at the apex of the three tier system of democratic decentralisation.

The Zilla Parishad consisted of both official and non-official members. In this institution, all the District level officers connected with the developmental works of the District were included as official members. The

non-official members consisted of the Chairman of each Panchayat Samiti. The MLAs and the MP Sundargarh are entitled to participate in the meetings of the Zilla Parishad. At present, there are 35 Zilla Parishad constituencies spreading across the District in 17 Panchayat Samities.

Panchayat Samities and Grama Panchayats:

Panchayat Samities: The District has 17 Panchayat Samities. Panchayat Samities are the 2nd tier of the 3-tier Panchayati Raj institutions, constituted in accordance with the provisions of Odisha Panchayat Samiti Act, 1959. The Blocks are headquarters of the Panchayat Samities. The Samiti is chaired by a Chairman and a Vice Chairman, who are elected members. Along with the Chairman and Vice Chairman, there are elected Panchayat Samiti Members from Grama Panchayats. The Chairman, Vice Chairman, Samiti Members and the Block Development Officer and other government officials are the official members of the Panchayat Samities. Sarpanchas of the Grama Panchayats are non-official members of the Panchayat Samities. Block-wise list of Grama Panchayats is mentioned at APPENDIX- XLV.

Sundargarh has been declared as Scheduled area in 1996. Accordingly, the heads of the all PRI institutions has been reserved for Scheduled Tribe persons, with not less than 50 per cent of the total seats in the election reserved for ST candidates.

Grama Panchayats: Grama Panchayats are the grass root PRI institutions. The system of Grama Panchayat was introduced in 1950-51 as per the codal provisions of the Odisha Grama Panchayat Act, 1948. Elections to the Grama Panchayats are held once in every five years for the post of Sarpanch and Ward Member for each ward of the Grama Panchayat. Sarpanch is assisted by a Naib Sarpanch. Unlike Sarpanch, the Naib Sarpanch is elected indirectly, i.e. elected from among the ward members. Each Panchayat is officiated by Panchayat Executive Officer, who was earlier known in the designation as Village Level Worker (VLW). After the implementation of the MGNREGS Act and scheme, the post of Grama Rojgar Sevak was created to assist the Panchayat Executive Officer in the MGNREGS programme. Progress and achievement under the MGNREGS scheme, which is the prime and flagship employment generation scheme is detailed at **APPENDIX- XLVII**. The last 3-tier Panchayati Raj elections were held in the year 2011-12. The Grama Panchayats act as the main agency of implementation of the development work at the grass root level. Panchayats look into village sanitation, water supply, maintenance of roads, ferry ghats and cattle pounds, providing street light. The length of roads maintained by different Panchayats and Panchayat Samities is mentioned at **APPENDIX- XLVIII**.

Grama Panchayats get government grants for the development works. Besides, they also create their own resources and generate income out of them. Grama Panchayats raise income from the **Bandha** and **Katas**, ferry ghats, orchards and weekly **hats**. The grants released to the Gram Panchayats and Panchayat Samitis and expenditure made thereof are indicated in the table below.

Table 138: Year-wise details of Income and Expenditure of Grama Panchayats

Year	Income			Expenditure (Rs.)
	Grants from Government (Rs.)	Own Source (Rs.)	Total Income (Rs.)	
2012-13	3,44,85,103.00	1,22,25,036.00	4,67,10,139.00	4,67,10,139.00
2013-14	3,75,72,541.00	2,10,86,255.00	5,86,58,796.00	5,86,58,796.00
2014-15	3,10,58,584.00	2,31,94,880.00	5,42,53,464.00	5,42,53,464.00

The list of ferry ghats, orchards and weekly hats and income generated from those for the Panchayats are given respectively in **APPENDIX- L to LII**.

Palli Sabha and its Modus Operandi: Palli Sabha is an important aspect of the local self government at the grass root level. It is convened normally in the month of February every year. Otherwise, the Sarapanch may hold an extraordinary meeting either on his own motion or on a requisition submitted in written form by not less than one-fifth of the members of Palli Sabha. The Block Development Officer may require the Sarapanch to call for a special meeting of the Palli Sabha whenever circumstances may so require. The Executive Officer after receiving approval of the Sarapanch under clause (a) or (b) or requisition under clause (c) shall issue notice of the meetings as provided in the rules. The date and time for holding of such meeting shall be fixed with clear Notice of at least fifteen days' in advance by way of affixing of a notice at once at one or more conspicuous places.

The meetings of the Palli Sabha is held at a public place within the Palli Sabha area as may be determined by its representatives in the Grama Panchayat or by the Grama Panchayat or by the person requisitioning the meeting under wide publicity of date time and venue. A President is chosen by the Grama Panchayat for the Palli Sabha.

If the Sarapanch of the Grama Panchayat fail to convene the meeting on the date mentioned in the requisition, the members who signed the requisition have power to call the meeting on the date and at the time and place mentioned in the requisition and the person representing the Palli Sabha area in the Grama Panchayat appointed by the Grama Panchayat. Women should for at least 1/10th of the total members. Questions in the Palli Sabha re decided by means of votes among the members, if consensus is not there. The Executive Officer records the proceedings in Odia in a register, which is open for public inspection.

Gram Sabha and Its Modus Operandi:

Grama Sabhas are normally held in the month of February and June of every year. The Special Grama Sabha shall also be held on 26th January, 1st May, 15th August and 2nd October of a calendar year. Besides the above, the Sarpanch or the Collector or any other person empowered by the Government in that behalf may call for a special meeting of the Grama Sabha whenever it deems necessary. The Executive Officer after receiving approval of the Sarpanch or after receiving requisition shall issue notice of the meetings. The date and time of the meeting including the special meeting under sub-rule (3) shall be fixed by the Sarpanch.

The notice shall set forth clearly and fully the business to be transacted at the meeting, but the Sarpanch may bring forward any motion or proposition which is not in the notice. The date and time for holding of such meeting shall be fixed with clear Notice of at least fifteen days' in advance with following conditions:

- (a) Copy of the notice shall be served on every Ward Member
- (b) The Executive Officer shall circulate the notice in a Notice Book which shall be signed by each of the Ward Members;
- (c) In case of absence of any Ward Member, the notice shall be served through the process of affixture in the presence of two witnesses.

Wide publication of the date, time and place of the meeting alongwith subject for discussion by beat of drum or through announcement by speech equipment in every village, and by fixing a notice at conspicuous places including weekly market places, High Schools, Primary Schools, Post Offices, Hospitals and Anganwadi Centres, within the Grama Sabha area is a pre-requisite. Accidental failure of service of notice on any member shall not invalidate the proceedings of any meeting. If at a meeting of the Grama Sabha, the quorum is not present, the Sarpanch or the President of the meeting shall adjourn the meeting until such other day as he thinks fit, of which not less than 3 days notice shall be given. The quorum included at least 1/3rd of the members as women. Sarpanch, or in his absence, the Naib Sarpanch presides the meeting. In absence of consensus voting method is used to decide the issues in the Sabha and the minutes are recorded by the EO in the minute book in Odia, which is open for inspection.

Implementation of Panchayat (Extension to Scheduled Area) Act:

The provision of Panchayat (Extension to the Scheduled Areas) Act, 1996 came into force on the 24th December, 1996. Odisha Gram Panchayat Act, 1964, Odisha Panchayat Samiti Act, 1959 and Odisha Zilla Parishad Act, 1991 have adopted the provisions of the PESA Act. It covers 7 Districts

i.e. Mayurbhanj, Sundargarh, Koraput, Malkangiri, Rayagada, Nowrangpur and Kandhamal in full and Keonjhar, Gajapati, Kalahandi, Balasore, Sambalpur and Ganjam in part spread over 1966 Gram Panchayats in 118 Blocks in full and 3 Blocks in part. Mandatory provision in the Central Act prescribes tribal communities to control over natural resources, granting licenses for minor minerals and their exploitation and acquisition of land by government for development projects which proposed to be enforced through Gram Sabhas. Currently the Panchayat Rules of Odisha Government confirms the reservation of seats for STs in scheduled area on the proportion of their population. All the posts of Chairpersons of the PRIs at all levels are reserved for STs.

The PESA 1996 authorises the Gram Sabha u/s 4(m) for-

- i. Prohibition of consumption of intoxicants
- ii. Ownership of minor forest produce
- iii. Prevention of land alienation of Scheduled Tribes to Non Scheduled Tribes
- iv. Management of markets in the PESA area
- v. Control of money lending in the schedule area
- vi. Control over social service institutions and their functioning in the area of operation of local self government
- vii. Control over local plans and resources at the Grama Panchayat / Grama Sabha level institutions.

The Odisha Scheduled Areas Transfer of Immovable Property (by Scheduled Tribes) Regulation of 1956 has been amended by Regulation of 2002 (Regulation I of 2002), which has come into effect from 4.9.2002. The Odisha Scheduled Areas Money-Lenders Regulations, 1967 is in operation since 15th November 1968 with a view to regulating and monitoring money lending activities in the scheduled areas of the State.

With the latest steps taken for implementation of PESA 1996, all the elected representatives in the three tyre Panchayat Raj Institutions (PRI) have been notified for Scheduled Tribes in the District. Thus, all Ward Members and Sarpanches in the Gam Panchayats, all Samiti Members and Chairman of Panchayat Samities, all Zila Parishad Members and the Chairperson of the Zilla Parishad are Scheduled Tribes in the District. Similarly, out of the 7 Assembly Constituencies, 5 are ST, one SC and one is reserved for General candidate.

Election to Local Bodies:

Election to the local bodies is conducted under the direct superintendence, control and guidance of the State Election Commission. There are 4 ULBs in Sundargarh District.

Dispute Settlement Mechanism in the Local Self Government

Under the three-tier system of Panchayat Raj Institutions, the lowest Panchayat Institution, the Gram Panchayat is formed through the election conducted by the State Election Commission as do the Panchayat Samities and the Zilla Parishad under the provisions of Gram Panchayat Act, Panchayat Samity Act and Zilla Parishad Act. Disputes are not settled by the hierarchy through any delegated legislation, but dispute settlement mechanism is operationalised through 'control' mechanism prescribed in Chapter XI of the Odisha Gram Panchayat ACT 1964.

- i. Samiti to act during disability of Gram Panchayat (Section 113).
- ii. Sub-Collector has power to rescind, modify and to confirm the resolutions of Gram Panchayats under certain circumstances. (Section 114)
- iii. Collector has power to take actions on the default of Gram Panchayat or its Sarpanch. (Section 119)
- iv. The public petitions and individual petitions should be considered for redressal under the provisions of section 5 of the Odisha Gram Panchayat ACT 1964 through Gram Sabhas, Gram Sashan and Palli Sabhas in their meetings.

APPENDIX- XLIV: Names of villages coming under the ward and status of reservation in Rourkela Mahanagar Nigam.

Sl. No.	Ward no	Names of villages	Status of reservation
1	1	Village Brahmanitarang (part),Village San Brahmanitarang (part)	ST
2	2	Village Gopapali, Village Brahmanitarang (part), Singhatola, Noditota.	ST
3	3	Village Brahmanitarang (part), SanBrahmanitarang (part), jhadtarang (Baikatola, Oramtola, Bhandatola, Patratola, Mundaritola, Tantitola, Indira AbasColony.	ST(W)
4	4	Pradhanpali, Bandhpos, Tapasyanagar, Tulsitola, Bankia (part), Tisco colony, Kisantola, Chhendbasti, Kausalyanagar and Father Colony	ST(W)
5	5	Panposhbasti, Tungritola, Jagannath colony	Unreserved
6	6	Banglatola, Manicolony, Ruptola, Dhableswar colony, Balughat, Palpalbasti, Grid Sub-station Quarter area	Unreserved
7	7	Deogan (Dehuribasti, Dhobibasti, Mundatoli, Telugupara)	Women
8	8	Nabakrushnanagar, TalaBalijori, IDL colony, Gopabandhunagar, Bhanjacolony, Bodosonaparbat, Dharamdihi	Unreserved
9	9	Panposh PHD colony, Govt college campus, Area 7&8 (part), Mantola basti	Unreserved
10	10	Area 7&8 (part), RGH Campus Area, Gadhtola, Gajpatipali, Rajivbasti	Unreserved
11	11	Gangadhar Pali, Kesari Nagar, Reserve Police Line, Koel Bank Area, Girja Toli and Khadia Bahal.	ST
12	12	Vyasanagar, Laxminagar, ITI Colony, Shanti Nagar, Ram Nagar, Netaji Nagar, Jail Colony, FCI Basti, Labour Tenement	Women
13	13	LIG- 1, LIG -II, MIG-1, KB, S3M1, S3H2, S3H1,GM, S3L1,S3L2, S2M, HD, C2L2, C2M Blocks.	Women
14	14	MIG-1, MIG-II,HIG-B,MSF, HSF, MICR, MIICR,LCR Blocks and Dhamara Basti,Bank Colony, Bagudi Basti,BPUT.	Women
15	15	C2L2, C2L1, C2M, LCR, ECR, MIG, LIG, EWS Plots and MIG, LIG, EWS Houses.	Women
16	16	Ambedkar Basti,Haripur Basti,DAV Basti, Jharana Basti, M Block part,AM, AL, EM Blocks and AM block backside Jhumpudi.	Women
17	17	L,CL,BL,BE,BM,CM,GM,BE,DE,EL and DL Blocks	Women
18	18	L,E,FE,FL, FM, Flat Quarters, DL,EL Blocks, Leprocy Colony and Hill Side Jhumpudi Basti.	Women
19	19	Mal Godam, Railway gate, Jhumpudi Basti, Mal Godam Jhumpudi, Khotal Basti,Jhumpudi Basti near Ice factory.	Unreserved
20	20	Mal Godam Jhumpudi, Kali Temple, Front Jhumpudi, Sardar Basti, Laprocy Colony, Kumbhar Basti, Madhusudhan palli (part)	Women
21	21	Madhusudhanpali (part) and Railway Colony (part)	Women
22	22	Railway Colony (part) Rimjhim Basti, Indira Nagar Basti and Gopobandhupali and Amarnath Basti	Unreserved
23	23	Gopobandhupali (Part)	Unreserved
24	24	Gopobandhupali (part), Timber Colony	Unreserved
25	25	ChachiBasti, New Bus Stand Backside Area, Bisra Road Area, Gurudwar Road Area, Traffic Gate and GT Lane Area	Unreserved
26	26	Gandhi Road, Choudhury Petrol Pump Area, Netaji Marg,Old Station Area, Bhati Road Area, Daily Market Area, Master Atta Lane and Telugu para.	Unreserved
27	27	Mal Godam Road Area, Sardar Basti, Gafur Colony, Kumbharpada, Manu Pattnaik Gali, BirajaPalli	Unreserved
28	28	Khadiapada, Police Colony, LIC Colony, Udit Nagar Revenue Colony, Tina Colony, Oram para, Shanti Colony and Hirakud Colony	Women
29	29	Okila pada, Indo -English School Area, Panda Colony, Birsadaha Road	Unreserved

		Area, Pradhan Colony, Power House Road Area, Nirmal Market Area.	
30	30	Daily market Area southside of Main road, Janata Niwas Lane, Dinanath Lane, Plant site Road Area. Police Station Area, Plant Site Jhumpadi Basti, Rout para, Nalla Road (part) and RDA building (part)	Unreserved
31	31	Plant Site Road Area, Rice patti, Urdu School Lane area, Nalla road (part), RDA building (part), Singh building area, Ananda Bhawan Lane Area.	Unreserved
32	32	Nalla road (part), Hassanpur area, Ananda Bhawan Lane area, Hotel Delux Lane Area, DAV School Lane Area, Gujurati Lane and Ganjam Basti	Unreserved
33	33	Bank Colony, Nayabazar Market Area, Saw Mill Area, Giridharipada, Utam Basti, Law College Area, Central Excise Colony Area, Bhawanipur Basti, Leprocy Colony Basti, OSAP Colony.	SCW
34	34	Koelnagar Part, Block A.D.E. Ittabhatta Basti, Shaktinagar Part.	Women
35	35	Koelnagar Block B and C, Shanti nagar (part)	Women
36	36	Village Jagada (part)	ST (W)
37	37	Shaktinagar (part), Jagada village (part), NIT Champus, East Kantajhar Basti and South Kantajhar Basti	Women
38	38	Bondamunda (part), Diesel Colony area, Sector- E, Bagda Basti (part)	Women
39	39	Bondamunda Area (part), Bagda Basti (part), Nepali Basti (part), Chudi Basti, Sarodapadi, Gupchup Basti, C-Sector Basti, Kunti Basti, Tanty Basti, R-Cabin Basti	SC
40	40	Bondamunda Basti (part), Gundichapali, Sector-A, B, C, D, Harijon Basti	SC (W)

APPENDIX- XLV - List of Gram Panchayats and nos. of villages in Sundargarh District

<i>Block_Name</i>		<i>Panchayat name</i>	<i>No. of villages</i>	<i>Block_Name</i>		<i>Panchayat name</i>	<i>No. of villages</i>
BALISANKARA	1	BALISANKARA	4	BARGAON	1	BARANGA	8
BALISANKARA	2	BANDEGA	4	BARGAON	2	KACHHAR	3
BALISANKARA	3	BANDHABAHAL	5	BARGAON	3	BHOIPALI	4
BALISANKARA	4	BHANDAR KARUA	3	BARGAON	4	DANDAJAMIRA	3
		BAHAL					
BALISANKARA	5	BIRKALDIHI	8	BARGAON	5	EKMA	7
BALISANKARA	6	DEOBHUBANPUR	1	BARGAON	6	FULBARI	10
BALISANKARA	7	KINJIRKELA	4	BARGAON	7	ITMA	5
BALISANKARA	8	KUSUMMURA	2	BARGAON	8	JARANGALOI	6
BALISANKARA	9	LULUKIDIHI	1	BARGAON	9	PAMRA	2
BALISANKARA	10	RAMPUR	11	BARGAON	10	RUNGAON	8
BALISANKARA	11	SAGBAHAL	14	BARGAON	11	SAHAJ BAHAL	5
BALISANKARA	12	SAUNAMARA	4	BARGAON	12	TIKILI PARA	2
BALISANKARA	13	TALSARA	7	BARGAON	13	TUDALAGA	6
BALISANKARA	14	TILAIKANI	5			Total	69
BALISANKARA	15	TILDEGA	4	BONAIGARH	1	BADGOGUA	5
BALISANKARA	16	TUMLIA	4	BONAIGARH	2	BANEIKELA	6
		Total	81	BONAIGARH	3	BHALUPANI	9
BISRA	1	BADABAMBUA	6	BONAIGARH	4	BONAIGARH	3
BISRA	2	BANDAMUNDA	3	BONAIGARH	5	GOBINDPUR	13
BISRA	3	BHALULATA	3	BONAIGARH	6	JAKEIKELA	10
BISRA	4	BISRA	4	BONAIGARH	7	JHIRDAPALI	10
BISRA	5	DAREIKELA	4	BONAIGARH	8	KASADA	16
BISRA	6	JAGADA ²⁶	1	BONAIGARH	9	KENAVETA	7
BISRA	7	JAMSERI	6	BONAIGARH	10	KENDRIKELA	14
BISRA	8	JAREIKELA	9	BONAIGARH	11	PITHACHOR	9
BISRA	9	JHIRPANI	1	BONAIGARH	12	RUGUDA	10
BISRA	10	KAPATMUNDA	6	BONAIGARH	13	S.BALANG	5
BISRA	11	MANKO	9			TOTAL	117
BISRA	12	SANTOSH PUR	3				
BISRA	13	THETEIPOSH	4	HEMGIR	1	ANKEL BIRA	12
BISRA	14	TULASIKANI	5	HEMGIR	2	BALINGA	6
BISRA	15	UDUSU	7	HEMGIR	3	DUDUKA	5
		TOTAL	71	HEMGIR	4	DURUBAGA	7
GURUNDIA	1	BANAIKELA	13	HEMGIR	5	GAD TUMULIA	5
GURUNDIA	2	BANKI	6	HEMGIR	6	GARJAN JORE	6
GURUNDIA	3	BHALUDUNGURI	24	HEMGIR	7	GOPAL PUR	6
GURUNDIA	4	CHANDIPOSE	11	HEMGIR	8	HEMGIR	9
GURUNDIA	5	GURUNDIA	12	HEMGIR	9	JHARPALAM	7
GURUNDIA	6	JARDA	10	HEMGIR	10	JULUM BAHAL	14
GURUNDIA	7	KUCHEITA	6	HEMGIR	11	KANAK TURA	7
GURUNDIA	8	KUNDHEIDIHA	8	HEMGIR	12	KANIKA	10
GURUNDIA	9	NARENDRA	20	HEMGIR	13	KENDUDIHI	5
GURUNDIA	10	PANKADIHI	6	HEMGIR	14	KUCHEDEGA	9
GURUNDIA	11	SOLE	15	HEMGIR	15	LAIKERA	7
GURUNDIA	12	TAMDA	7	HEMGIR	16	MUNDHARKHET	4
GURUNDIA	13	TAMPARKELA	7	HEMGIR	17	SANGHUMUNDA	8
		Total	145	HEMGIR	18	SUMURA	6
KOIDA	1	BIMALAGARH	5	HEMGIR	19	TAPARIA	6
KOIDA	2	CHORDHARA	8			Total	139
KOIDA	3	DENGULA	13	KUARMUNDA	1	ANDALI	3
KOIDA	4	GOPNA	10	KUARMUNDA	2	ANDHARI	4
KOIDA	5	JAMUDIHI	11	KUARMUNDA	3	DALKI	4
KOIDA	6	K.BALANG	10	KUARMUNDA	4	DUMERJORE	6
KOIDA	7	KALTA	3	KUARMUNDA	5	JALANGBIRA	1
KOIDA	8	KOIRA	10	KUARMUNDA	6	JAYDEGA	5
KOIDA	9	MALDA	15	KUARMUNDA	7	JHARBEDA	5
KOIDA	10	PATAMUNDA	15	KUARMUNDA	8	JHUNMUR	6
KOIDA	11	RELHATU	5	KUARMUNDA	9	KACHARU	6
KOIDA	12	SOYAMBA	7	KUARMUNDA	10	KADOBHAL	4
		Total	112	KUARMUNDA	11	KALOSHIRIA	4

²⁶ Merged with Rourkela Municipality (Large urban area) vide Letter no. 21437/PR dated 24.12.2014 of Panchayati Raj Department Government of Odisha. Total no. of GPs in Sundargarh District is 260 instead of 262

<i>Block_Name</i>		<i>Panchayat name</i>	<i>No. of villages</i>	<i>Block_Name</i>		<i>Panchayat name</i>	<i>No. of villages</i>
KUTRA	1	AMBHAGOVA	5	KUARMUNDA	12	KHUKHUNDU BAHAL	6
KUTRA	2	BIRINGA TOLI	3	KUARMUNDA	13	KUARMUNDA	3
KUTRA	3	GANGAJAL	3	KUARMUNDA	14	KUMJHARIA	13
KUTRA	4	GYANAPALI	4	KUARMUNDA	15	MAJHAPADA	5
KUTRA	5	JHARBEDA	3	KUARMUNDA	16	PADAM PUR	7
KUTRA	6	KANDEIMUNDA	3	KUARMUNDA	17	PRATAPPUR	6
KUTRA	7	KATANG	3	KUARMUNDA	18	PUTRIKHAMAN	7
KUTRA	8	KHATKUR BAHAL	4	KUARMUNDA	19	RAIBAGA	5
KUTRA	9	KIRINGSIRA	5	KUARMUNDA	20	SALANGA BAHAL	4
KUTRA	10	KUTRA	2			Total	104
KUTRA	11	NUAGAON	4	LAHUNIPARA	1	BADA PURUNAPANI	13
KUTRA	12	PANCHARA	3	LAHUNIPARA	2	BHUTUDA	12
KUTRA	13	PURKAPALI	4	LAHUNIPARA	3	DALEISARA	8
KUTRA	14	RAJABASA	4	LAHUNIPARA	4	DARJING	21
KUTRA	15	TARKERA	4	LAHUNIPARA	5	FULJHAR	11
KUTRA	16	TUNMURA	2	LAHUNIPARA	6	HALADIKUDAR	10
		Total	56	LAHUNIPARA	7	KALEIPOSH	14
LATHIKATA	1	BADDALKI	8	LAHUNIPARA	8	KHUNTGAON	11
LATHIKATA	2	BALANDA	4	LAHUNIPARA	9	KUDHEIKALA	14
LATHIKATA	3	BIRIDA	7	LAHUNIPARA	10	KULIPOSH	5
LATHIKATA	4	BIRKERA	5	LAHUNIPARA	11	KURDA	22
LATHIKATA	5	CHIKATMATI	7	LAHUNIPARA	12	LAHUNIPARA	11
LATHIKATA	6	GARJAN	4	LAHUNIPARA	13	MAHULPADA	10
LATHIKATA	7	HATIBANDHA	3	LAHUNIPARA	14	RAJAMUNDA	19
LATHIKATA	8	JADAKUDAR	5	LAHUNIPARA	15	SANKHAPOSH	19
LATHIKATA	9	JALDA	1	LAHUNIPARA	16	SASHYKALA	7
LATHIKATA	10	JHARTARANG ²⁷	4	LAHUNIPARA	17	TAL BAHALI	16
LATHIKATA	11	KALUNGA	6			Total	223
LATHIKATA	12	LATHIKATA	8	LEPHRIPARA	1	ALAPAKA	2
LATHIKATA	13	MUNDAJORE	5	LEPHRIPARA	2	BADBANGA	8
LATHIKATA	14	RAMJODI	10	LEPHRIPARA	3	CHHATEN PALI	5
LATHIKATA	15	SUIDIHI	10	LEPHRIPARA	4	DARLIPALI	2
LATHIKATA	16	TAINSAR	4	LEPHRIPARA	5	DUMABAHAL	9
		Total	91	LEPHRIPARA	6	GIRING KELA	11
NUAGAON	1	ANKURPALI	11	LEPHRIPARA	7	GUNDIA DIHI	4
NUAGAON	2	BADAJOJODA	6	LEPHRIPARA	8	HURMEI	5
NUAGAON	3	BAGDEGA	5	LEPHRIPARA	9	J RAIBAGA	3
NUAGAON	4	BARILEPTA	6	LEPHRIPARA	10	JHURIMAL	5
NUAGAON	5	CHITAPEDI	11	LEPHRIPARA	11	KULABIRA	2
NUAGAON	6	HATIBARI	5	LEPHRIPARA	12	LEPHRIPARA	5
NUAGAON	7	JAHARI TOLI	3	LEPHRIPARA	13	MASABIRA	6
NUAGAON	8	KANDARKELA	4	LEPHRIPARA	14	RAIDIHI	3
NUAGAON	9	KARDEGA	5	LEPHRIPARA	15	RAJ BAHAL	16
NUAGAON	10	KARKATNASA	6	LEPHRIPARA	16	SARAFGARH	13
NUAGAON	11	KHUNTAGAON	5	LEPHRIPARA	17	SARGIPALI	4
NUAGAON	12	KOKERAMA	7			Total	103
NUAGAON	13	LIMIDA	7	RAJGANGPUR	1	ALANDA	11
NUAGAON	14	LUKUM BEDA	10	RAJGANGPUR	2	BUCHUKPARA	6
NUAGAON	15	MENMENA	6	RAJGANGPUR	3	BUDHAM	7
NUAGAON	16	NUAGAON	5	RAJGANGPUR	4	CHUNGIMATI	3
NUAGAON	17	PURUNAPANI	2	RAJGANGPUR	5	JAREIKELA	8
NUAGAON	18	SORDA	3	RAJGANGPUR	6	KESRAMAL	7
NUAGAON	19	TETERKELA	7	RAJGANGPUR	7	KUKUDA	3
NUAGAON	20	URMEI	6	RAJGANGPUR	8	KUNMURU	4
		Total	120	RAJGANGPUR	9	KUTUNIA	9
SUBDEGA	1	DAMKUDA	3	RAJGANGPUR	10	LAING	5
SUBDEGA	2	DEOGAON	2	RAJGANGPUR	11	MALIDIHI	4
SUBDEGA	3	HAMIRPUR	12	RAJGANGPUR	12	PANPOSH	7
SUBDEGA	4	JAISAR	3			Total	74
SUBDEGA	5	JAMUNA	3	SUNDARGARH	1	BARAGAD	7
SUBDEGA	6	KARAM DIHI	5	SUNDARGARH	2	BHASHMA	5
SUBDEGA	7	KIRALAGA	2	SUNDARGARH	3	BHEDABAHAL	2

²⁷ Merged with Rourkela Municipality (Large urban area) vide Letter no. 21437/PR dated 24.12.2014 of Panchayati Raj Department Government of Odisha. Total no. of GPs in Sundargarh District is 260 instead of 262

<i>Block_Name</i>		<i>Panchayat name</i>	<i>No. of villages</i>	<i>Block_Name</i>		<i>Panchayat name</i>	<i>No. of villages</i>
SUBDEGA	8	KUKRIDIH	3	SUNDARGARH	4	BIRBIRA	4
SUBDEGA	9	KULBA	2	SUNDARGARH	5	DEULI	3
SUBDEGA	10	KURUM KEL	6	SUNDARGARH	6	KARLA	5
SUBDEGA	11	RAJPUR	7	SUNDARGARH	7	KINJIRMA	6
SUBDEGA	12	SUBALAYA	4	SUNDARGARH	8	KIRAI	4
SUBDEGA	13	SUBDEGA	2	SUNDARGARH	9	KULTA	9
SUBDEGA	14	TANGARAGAON	5	SUNDARGARH	10	KUNDUKELA	5
		Total	59	SUNDARGARH	11	LAHANDABUD	7
TANGARPALI	1	GAMHARIDIHI	5	SUNDARGARH	12	LANKAHUDA	6
TANGARPALI	2	JOGIMAL	5	SUNDARGARH	13	LEDHIMANG	6
TANGARPALI	3	KIRIPSIRA	5	SUNDARGARH	14	MAJHAPADA	4
TANGARPALI	4	MAHULPALI	6	SUNDARGARH	15	MASNIKANI	5
TANGARPALI	5	MANGASPUR	5	SUNDARGARH	16	SALEPALI	5
TANGARPALI	6	MEGHDEGA	7			Total	83
TANGARPALI	7	NIALIPALI	6				
TANGARPALI	8	RATANPUR	6				
TANGARPALI	9	REMENDA	4				
TANGARPALI	10	SANPATRAPALI	6				
TANGARPALI	11	TANGARPALI	4				
TANGARPALI	12	TASLADIHI	6				
TANGARPALI	13	UJALPUR	8				
		Total	73				
		Grand total	1720				

APPENDIX- XLVI: Tahasil-wise Revenue Circles and Revenue villages in Sundargarh District

Sl. No	Tahasil	No of RI Circle	No of Revenue Village
1	Balisankara	6	86
2	Bargaon	3	69
3	Biramitrapur	7	176
4	Bisra	7	71
5	Bonai	6	118
6	Gurundia	6	145
7	Hemgir	6	139
8	Koida	2	112
9	Panposh, Kuanrmunda	2	57
10	Kutras	7	55
11	Lahunipara	7	221
12	Lathikata	7	92
13	Lephipara	9	102
14	Rajgangpur	7	80
15	Rourkela	3	48
16	Sadar, Sundargarh	7	91
17	Subdega	4	59
18	Tangarpali	6	71
Total		102	1792

APPENDIX- XLVII: Employment generated under MGNREGS in different Blocks of Sundargarh District, 2014-15

S.No	Block	No. of households issued with job card 2014-15				No. of man-days created 2014-15					No. of households completed 100 days work in 2014-15	No. of IAY/ land reforms beneficiaries worked	No. of disabled beneficiaries provided with work
		SCs	STs	Others	Total	SCs	STs	Others	Total	Women			
1	BALISANKARA	3165	13846	5362	22373	55731	262471	80703	398905	142244	1190	12	2
2	BARGAON	1942	12109	4822	18873	25512	202154	39833	267499	86666	737	3339	20
3	BISRA	1012	8391	5462	14865	10709	120400	97856	228965	100021	590	32	21
4	BONAIGARH	2248	9129	4640	16017	14555	97022	28948	140525	43589	319	255	9
5	GURUNDIA	994	13857	2365	17216	9140	207987	36516	253643	99475	500	216	19
6	HEMGIR	3144	11461	7932	22537	38805	200547	111359	350711	97213	871	11	7
7	KOIDA	783	11853	3504	16140	2000	49012	10607	61619	23661	86	0	0
8	KUARMUNDA	2901	21397	5044	29342	31351	218855	46395	296601	113639	372	5	8
9	KUTRA	2606	15238	3136	20980	11074	107913	12001	130988	51664	133	4	2
10	LAHUNIPARA	2571	15591	6357	24519	28206	217734	66812	312752	104911	542	0	18
11	LATHIKATA	1690	18025	6309	26024	9373	147012	38228	194613	71337	476	29	8
12	LEPHRIPARA	3280	13862	6748	23890	24500	135139	35673	195312	56148	293	181	2
13	NUAGAON	3286	18247	7194	28727	42465	250914	84127	377506	144813	540	8	3
14	RAJGANGPUR	1618	17941	1381	20940	15640	212904	14913	243457	101889	643	4	3
15	SUBDEGA	2015	12538	3392	17945	28952	192599	38880	260431	89285	589	6	16
16	SUNDARGARH	2875	9867	5343	18085	41078	177333	57433	275844	80172	764	10	9
17	TANGARPALI	3528	11928	5753	21209	28680	125869	36778	191327	56766	316	8	34
	Total	39658	235280	84744	359682	417771	2925865	837062	4180698	1463493	8961	4120	181

APPENDIX- XLVIII: Block-wise length of GP & PS roads, 2015

Sl. No.	Block name	GP Road length (Km)	PS Road length (Km)
1	Lephripada	558.69	138.34
2	Bisra	490.64	11.60
3	Nuagaon	802.00	308.00
4	Lathikata	555.00	166.00
5	Kuanmunda	756.00	534.00
6	Koira	747.96	190.26
7	Gurundia	465.70	113.00
8	Lahunipada	663.55	90.75
9	Bonaigarh	193.94	21.50
10	Rajgangpur	697.00	68.50
11	Kutra	308.00	124.00
12	Bargaon	375.00	142.00
13	Sundargarh	277.00	72.00
14	Tangarpali	305.00	144.00
15	Hemgiri	385.00	95.00
16	Balisankara	276.00	207.00
17	Subdega	293.00	111.00
	TOTAL	8149.48	2536.95

APPENDIX- XLIX: Bandha and Kata under the possession of Grama Panchayats

Sl. No.	Name of the Blocks	No. of Bandha/ Kata
1	Lephripara	152
2	Bisra	86
3	Nuagaon	73
4	Lathikata	92
5	Kuarmunda	96
6	Koira	36
7	Gurundia	87
8	Lahunipara	220
9	Bonaigarh	189
10	Rajgangpur	73
11	Kutra	97
12	Bargaon	125
13	Sadar, Sundargarh	98
14	Tangarpali	71
15	Hemgir	137
16	Balisankara	137
17	Subdega	164
	Total	1933

**APPENDIX- L: Income of Grama Panchayats from Ferry Ghats
(2014-15)**

Sl. No.	Block	Name of the G.P.	Name of the ferry ghat	Income (Rs.)
1	Lathikata	Hatibandha	Kansar	14,700.00
		Garjan	Birual	4,600.00
		Tainsar	Tainser	35,334.00
2	Gurundia	Chandiposh	Chandrapur	350.00
		Tamda	Pitasan	0.00
		Bhaludunguri	Satkuta	0.00
3	Subdega	Kukuridihi	Kukuridihi	3,000.00
		Kukuridihi	Gangpurgarh	1,500.00
		Jaisar	Jaisar	2,500.00
4	Balisankara	Kusumura	Kusumura	2,400.00
5	Kuarmunda	Kacharu	Pasara	1,28,600.00
		Jharbeda	Biju Bandh Riun	5,000.00
6	Bisra	jhirpani	Jhirpani Mit Kundri	65,000.00
		Jamsera	Jamsera	1,40,000.00
		Badbambua	Masrikudar	0.00
7	Sadar, Sng	Bhasma	Badbambua	0.00
		Kundukela	Bhasma	0.00
		Lankahuda	Kundukela	0.00
8	Bonaigarh	Ruguda	Khamarbahal	0.00
		Badgogua	Jangla	1,00,000.00
		Kenaveta	Deoposh	5,000.00
		Kasada	Phalsagod	5,000.00
			Tendrabalapur	500.00
		Total	5,13,484.00	

APPENDIX- LI: Income of Grama Panchayats from Orchards (2014-15)

Sl No	Block	GP	Orchard	Income (Rs.)
1	Koira	Koira	Orchard Near Karo Nala, Koira	200.00
2	Tangarpali	Ujjalpur	Orchard at Tumapali	300.00
		Sanpatrapali	Sanpatrapali Orchard	2,000.00
3	Hemgir	Hemgir	Mango Orchard	3,000.00
		Durubaga	Durubaga Orchard	0.00
		Tumlia	Mango Orchard	25,000.00
4	Kutra	Birngatoli	Budakata Orchard	2,000.00
		Kandheimunda	Telighana Orchard	200.00
5	Bisra	Manko	Manko Orchard	500.00
6	Sadar, Sundargarh	Bhedabahal	GP Orchard Bhedabahal	200.00
		Kinjirma	GP Orchard Kinjirma	4,000.00
		Kulta	GP Orchard Kulta	300.00
		Kundukela	GP Orchard Badbahal	1,600.00
		Majhapara	GP Orchard Majhapara	1,600.00
7	Bargaon	Sahajbahal	Sahajbahal Orchard	1,550.00
8	Bonaigarh	Ruguda	Ruguda GP Orchard	200.00
9	Subdega	Damkuda	Damkuda Orchard	10,000.00
10	Lahunipada	Sasyakela	Sasyakela Orchard	0.00
			TOTAL	52,650.00

APPENDIX- LII: List of village weekly markets in Sundargarh district

Sl No	Name of the Block	Sl No	Name of the G.P. G.P. Name	Number of hats in the district	Sl. No.	Name of the weekly market	Annual Income (Rs.) (2014-15)
1	Tangarpali	1	Mangaspur	1	1	Mangaspur	66,100
		2	Ujjalpur	2	2	Goat market at Jhariapali	39,432
		3	Meghdega	3	3	Manjenmait,	18,300
		4	Sanpatrapali	4	4	at Aleikera	700
2	Gurundia	1	Kundeidiha	5	1	(1) Kansar hat.	3,100
				6	2	(2) Kundeidiha	75,300
		2	Bonaikela	7	3	Bonaikela	25,310
		3	Sole	8	4	Sole market	47,450
		4	Pankdihi	9	5	(1) Joda market	2,725
				10	6	(2) Pankdihi	2,500
		5	Chandiposh	11	7	Chandiposh	41,200
		6	Tamda	12	8	Tamda	21,700
		7	Gurundia	13	9	Gurundia	1,00,000
		8	Bhaludunguri	14	10	Satkuta market	15,650
		9	Narendra	15	11	Kurdapali market	14,330
		10	Jarda	16	12	Jarda market	13,600
		11	Banki	17	13	Banki	24,500
3	Lathikata	1	Kalunga	18	1	Kalunga market	1,38,000
		2	Mundajore	19	2	Mundajore, Dalkuda	2,050
		3	Ramjodi	20	3	Ramjodi market	15,500
		4	Jadakudar	21	4	Jadakudar market	69,000
		5	Birda	22	5	Birda, Karuabahal market	24,600
		6	Bad dalki	23	6	Bad dalki market	65,000
		7	Garjan	24	7	Garjan market	21,000
		8	Birkera	25	8	Birkera market	35,000
		9		26	9	(1) Jalda(C) market	50,200
			Jalda	27	10	(2) Jalda(B) market	1,650
				28	11	(3) Jalda(A) market	12,000
		10	Suidihi	29	12	Suidihi market	10,000
		11	Lathikata	30	13	(1) Lathikata Sunday market	50,100
				31	14	(2) Lathikata	5,000

Sl No	Name of the Block	Name of the G.P. Sl No G.P. Name	Number of hats in the district	Sl. No.	Name of the weekly market	Annual Income (Rs.) (2014-15)		
4	Nuagaon	12 Tainser	32	15	Tainser market	50,000		
		1 Nuagaon	33	1	(1) Nuagaon Monday market	1,65,000		
			34	2	(2) Nuagaon Thursday market	1,21,500		
		2 Jaharitoli	35	3	Jaharitoli Wednesday, Sunday market	82,010		
		3 Kokerama	36	4	Tuesday Market	52,500		
		4 Hatibari	37	5	Hatibari Market	1,86,000		
		5 Khuntgaon	38	6	Wednesday and Saturday Market	83,300		
		6 Ankurpali	39	7	Ankurpali	25,200		
		7 Sorda	40	8	Sorda Bazar	1,500		
		8 Chitapedi	41	9	Katepur	29,300		
		5	Subdega	1 Tangargaon	42	1	Tangargaon	6,800
				2 Kukuridihi	43	2	Kukuridihi	2,650
3 Karamdihi	44			3	Karamdihi	19,000		
4 Kurumkel	45			4	Khutupani	6,000		
5 Kiralaga	46			5	Kiralaga	10,100		
6 Subdega	47			6	Subdega	80,000		
7 Kulba	48			7	Kulba	10,800		
6	Lephripara	1 Gundiadihi	49	1	Gundiadihi	18,081		
		2 Dumabahal	50	2	Dumabahal	14,600		
		3 Sargipali	51	3	Sargipali	2,25,000		
		4 Lephripara	52	4	Lephripara	36,000		
		5 Darlipali	53	5	Darlipali	45,500		
7	Hemgir	1 Balinga	54	1	Balinga	55,000		
		2 Garjanjore	55	2	Garjanjore	18,600		
		3 Hemgir	56	3	Hemgir	96,000		
		4 Tumlia	57	4	Tumlia	35,600		
		5 Kendudihi	58	5	Kendudihi	16,250		
		6 Laikera	59	6	Laikera	10,000		
		7 Kanaktura	60	7	Kanaktura	13,000		
		8 Sanghumuda	61	8	Sanghumuda	21,000		
		9 Tapria	62	9	Tapria	14,580		
		10 Gopalpur	63	10	Gopalpur	18,072		
		11 Kanika	64	11	Kanika	17,100		
		12 Balinga	65	12	Balinga	16,600		

Sl No	Name of the Block	Sl No	Name of the G.P. G.P. Name	Number of hats in the district	Sl. No.	Name of the weekly market	Annual Income (Rs.) (2014-15)
8	Kutra	1	Amgova	66	1	Jouramunda	18,050
		2	Biringatoli	67	2	(1) Biringatoli (Monday)	35,000
				68	3	(2) Biringatoli (Monday)	40,000
		3	Katang	69	4	Lanjiberna	69,500
		4	Kiringsira	70	5	Kiringsira	20,800
		5	Khatkurbahal	71	6	Khatkurbahal	22,500
		6	Kutra	72	7	Kutra	51,000
		7	Nuagaon	73	8	(1) Nuagaon	650
				74	9	(2) Badmal	2,600
		8	Panchora	75	10	Panchora	40,350
				76	11	Tarkera	5,500
9	Lahunipara	1	Darjing	77	1	Salepali	15,200
		2	Khuntgaon	78	2	Khuntgaon	5,51,700
		3	Kuliposh	79	3	Budhabar Hat	15,250
		4	Sashyakela	80	4	(1) Sukrabar Hat	40,230
				81	5	(2) Rabibar Hat	1,00,500
		5	Bhutuda	82	6	Khandadhar	22,380
		6	Kaleiposh	83	7	Sukrabar	45,000
		7	Kurda	84	8	Kurda	48,200
		8	Daleisara	85	9	Rengali	47,740
		9	Lahunipara	86	10	(1) Rabibar	4,52,000
				87	11	(2) Budhabar	4,50,000
10	Rajamunda	88	12	Gomlei Bazar	15,10,000		
11	Fuljhar	89	13	Mangalbar Hat	21,710		
10	Balisankara	1	Balisankara	90	1	Balisankara	31,111
		2	Bandhabahal	91	2	Bandhabahal	17,500
		3	Tildega	92	3	Brahmanmara	26,000
		4	Teleikani	93	4	Sikajore Gurubar Bazar	1,72,000
		5	Kinjirkela	94	5	Kinjirkela	45,500
		6	Rampur	95	6	Rampur	30,000
		7	Talsara	96	7	(1) Talsara	21,000
				97	8	(2) Rouldega	12,500
		8	Sagbahal	98	9	Sagbahal	31,000
		9	Bandega	99	10	Bandega Goat Market	1,98,000
10	Lulkidihi	100	11	Lulkidihi	12,500		
11	Kuarmunda	1	Kacharu	101	1	Kacharu	54,500
		2	Andali	102	2	Andali	26,250

Sl No	Name of the Block	Name of the G.P. Sl No G.P. Name	Number of hats in the district	Sl. No.	Name of the weekly market	Annual Income (Rs.) (2014-15)
		3 Raiboga	103	3	Raiboga	30,900
		4 Kuarmunda	104	4	Kuarmunda	3,76,200
		5 Kalosihiria	105	5	Kalosihiria	5,120
		6 Kadobahal	106	6	Kadobahal	48,150
		7 Salangabahal	107	7	Salangabahal	1,46,150
		8 Putrikhaman	108	8	Putrikhaman	4,350
		9 Dumerjore	109	9	Dumerjore	3,500
		10 Jhunmur	110	10	Jhunmur	2,400
12	Bisra	1 Bisra	111	1	Sunday	97,400
			112	2	(1) Jhirpani Monday	2,26,115
		2 Jhirpani	113	3	(2) Jhirpani Thursday	1,51,600
		3 Jamsera	114	4	Jobaghat	15,850
		4 Badbambua	115	5	Badbiringajhar	30,300
		5 Jareikela	116	6	Kopsinga	1,15,000
		6 Bhalulata	117	7	Bhalulata	1,01,000
13	Rajgangpur	1 Laing	118	1	Bilaigarh	1,06,500
		2 Keshramal	119	2	Rambahal	15,200
		3 Alanda	120	3	Alanda	17,500
		4 Kukuda	121	4	Kukuda	8,500
		5 Kutunia	122	5	Kutunia	28,000
14	Sadar, SNG	1 Baragad	123	1	(1) Baragad	20,000
			124	2	(2) Gadiajore	14,100
		2 Bhedabahal	125	3	Bhedabahal	14,500
		3 Birbira	126	4	Birbira	37,000
		4 Kinjirma	127	5	Kinjirma	20,500
		5 Kirei	128	6	Kirei	22,000
		6 Ledhimang	129	7	Dharuadihi	14,100
		7 Majhapada	130	8	Majhapada	32,800
		8 Masnikani	131	9	Masnikani	30,000
		9 Salepali	132	10	Salepali	23,500
15	Bargaon	1 Jarangloi	133	1	Jarangloi	27,500
		2 Itma	134	2	Itma	30,500
		3 Bhoipali	135	3	Raidihi	3,000
		4 Bargaon	136	4	Bargaon	17,500
		5 Barangakachhar	137	5	Barangakachhar	14,000
		6 Tudalaga	138	6	Baibai	5,000
			139	7	(1) Ekma Hatly	25,000
		7 Ekma	140	8	(2) Ekma	92,000
		8 Rungaon	141	9	Siamal	19,000

Sl No	Name of the Block	Name of the G.P. Sl No G.P. Name	Number of hats in the district	Sl. No.	Name of the weekly market	Annual Income (Rs.) (2014-15)
		9 Sahajbahal	142	10	(1) Sahajbahal	36,000
			143	11	(2) Sankraposh	2,300
16	Bonaigarh	1 Ruguda	144	1	Jangala	500
		2 Bonaigarh	145	2	Bonaigarh (2 Days)	2,20,000
		3 Gobindpur	146	3	Sendpur	90,000
		4 Jhirdapali	147	4	Jhirdapali	1,10,000
		5 Kasada	148	5	Indra Bazar	45,000
		6 S Balang	149	6	Sarsara	1,35,000
		7 Bhalupani	150	7	Bhalupani	20,000
17	Koira		151	1	(1) Monday , Bimlagarh	80,000
		1 Bimlagarh	152	2	(2) Thursday , Bimlagarh	1,15,600
		2 Kalta	153	3	Kalta	21,500
		3 Koira	154	4	(1) Saturday	4,17,000
			155	5	(2) Rengalbeda	9,000
		4 Gopna	156	6	Saturday	12,500
		5 Jamudihi	157	7	(1) Sanroxi	30,200
			158	8	(2) Jamudihi	80,100
		6 Chordhara	159	9	Chordhara	26,000
		7 Malda	160	10		42,000
		8 Patmunda	161	11		20,900
		Total	161	161	TOTAL INCOME	1,04,22,696

Map: 2- Distribution of Major Government Health Units



Chapter-XIII

MEDICAL AND PUBLIC HEALTH SERVICES

Public Health and Medical Facilities in Early Times:

The aboriginal tribes who formed a considerable portion of the population had, naturally, little knowledge regarding maintenance of health, diagnosis of diseases and combating the disease on the modern scientific basis. Whatever knowledge they possessed had been inextricably linked up with their handed down traditional natural herbs and animal parts, as also religious faith and belief. The cause of illness or disease or for that matter any natural calamity and unnatural death were attributed in large part to the wrath of God, the village deities, the dead ancestors, black magic or sorcery, diagnosis through external manifestation of the disease, examination of pulse rates, touch of stomach part, liver and head portions was more or less accurate. Various religious methods sanctioned for propitiating the offended deities like animal sacrifices, etc., were adopted to eradicate the malady, obvious causes of disease like snake bite, dog bite, fracture of bones, epilepsy, diabetis, running stool and small or big injuries had natural medicine cure that has been acknowledged today as 'ayurvedic' line of treatment. In most of such occasions the village priest who was specially drafted from the aboriginal races played the most important role in appeasing the powers of evil and sylvan deities, but in many villages in Gangpur and Bonai expert village vaidyas knew and practiced the cure of dog bite, snake bite, epilepsy, impotency, bonefracture, nosebleeding, migrane, malaria, tuberculosis and also methods of birth control. In the ex-States of Gangpur and Bonai, the aborigines as well as the Hindus of the highest castes practiced propitiation of spirits, but the expert village vaidyas had no limitation of castes and creed. The names of 'Letha Vaid' from Karmabahal near Kutra and 'Stephan Master' of Dahijira can be verified from young and all. Major part of weak in mind sick folks and those with enemical dispositions were largely under the influence of these superstitions. Colonel Dalton in his *Ethnology of Bengal* and Cobden-Ramsay in his *Feudatory States of Odisha* have given elaborate and interesting account regarding the belief in witchcraft prevalent in the District. The Unani method of healing was unknown. It may be largely attributed to the scanty Muslim population and the lack of due patronage from the ruling chiefs.

Ayurvedic Practices:

The Ayurvedic system of medicine was popular. Shri Braja Sundar Purohit was a famous **Vaidya** of the District. A charitable Ayurvedic Dispensary was said to have been run by him. Apart from the private practitioners, there were perhaps no public Ayurvedic institutions to cater to the popular needs in either of the ex-States of Bonai and Gangpur in early

days. The Ayurvedic dispensary which was established in 1943-44 at Sarsara Balang by the ex-Ruler of Bonai seems to be the first of its kind. Towards the early part of the present century a great change came over in the attitude of the people to the use of Allopathic medicine and submission to the surgical operations. With a view to popularising the western medical system, one hospital and a dispensary with indoor and outdoor facilities were started at Sundargarh and Bonaigarh by the ex-rulers of Gangpur and Bonai respectively. Subsequently two more dispensaries, one at Korias and the other at Panposh in the Nagra Zamindari were also opened. The Sundargarh hospital was in charge of a medical officer in the rank of an Assistant Surgeon. But all the other dispensaries were in charge of qualified Civil Hospital Assistances. These institutions were well provided with medicines and surgical equipments. The dispensaries in the ex-State of Gangpur and the equipment they were provided with were excellent. To popularise vaccination special efforts were made. There were paid vaccinators and vaccination was free of charge. The Sanitary Department used to conduct and supervise the vaccination work.

The District is well drained and the climate is fairly extreme. The humidity throughout the year remains low. The people appear healthy and epidemics are rare among them. Malaria which was endemic and was creating havoc in the past has almost been controlled if not completely eradicated. Fever and spleen disorder appear to be the chief complaints. The people who are moderately immune show no sign of suffering to any serious extent from malaria fever. The climate on the whole may be termed as healthy.

Birth and Death Registration:

Births and Deaths Registrations were not being done in the pre-merger period. The ex-Rulers of Gangpur and Bonai had been collecting the information through the police department since the year 1924-25, the village Chowkidar being the primary reporting agency. The Bengal Birth and Deaths Registration Act, 1873, was enforced in the rural areas of the District in the year 1952, four years after its formation. Under the provisions of the Chowkidari Amendment Act, 1892 and the Odisha Police Manual, the primary responsibility for collection of vital statistics statutorily was vested with the village Chowkidar. He collected information relating to his area in a prescribed form called *hato chitha* and on the parade days produced it at the Police Station for entry in the daily register of births and deaths maintained there. But in urban areas the health staffs under the Municipality and the Notified Area Council (NAC) was in charge of the collection. The Thana Officer and the Executive Officer of the Municipality compiled and reported their monthly figures to the District Health Officer who transmitted them to the Director of Health Services, Odisha.

The Odisha Grama Panchayat Act, 1948, which provided registration of births and deaths as one of the obligatory function of the Grama Panchayats proved inoperative due to certain inherent defects in it. For instance, no penalty against the defaulting reporters was provided in the Act and the services of the village. Chowkidar who continued to be responsible for the collection of vital statistics were placed under the control of the police and the Grama Panchayat authorities. Consequent on the abolition of the Chowkidari system in 1965 (Odisha Merged Territories and Abolition of Village Officers' Act), a new system of collection and registration of vital statistic was evolved with the enforcement of the Odisha Grama Panchayat Act, 1964. But this system did not yield satisfactory results. The Grama Rakhi Ordinance 1967 was then promulgated according to which the responsibility again fell on the Thana Officer and the Grama Rakhi served as the primary reporting agency. But hardly did the system operate in full swing. The Odisha Registration of Births and deaths Rules, 1970 made under the Registration of Births and Deaths Act, 1969 (Act No. 18 of 1969) succeeded it on 1st July, 1970. It is mandatory under the Law (as per the Registration of Births and Deaths Act, 1969) to register every birth within 21 days of its occurrence. The government accordingly has provided a very structured system for registration of birth with the Registrar General at the Centre and Chief Registrars in the States, running through District registrars to the village and town registrars at the periphery. In urban areas Registrar (Birth and Death) -cum- Health Officer for Municipal Corporations, Executive Officers of Municipalities and Medical Officers in charge UGPHC (Upgraded Primary Health Centre) / CHC (Community Health Centre) / PHC (Primary Health Centre) in rural areas are responsible to issue birth certificate.

Common Diseases and Disease Vulnerability of the District:

As Stated earlier, Sundargarh District was vulnerable to malaria before some years. Though not completely eradicated, malaria has been controlled in the District. Besides, malaria, cases of leprosy, tuberculosis, blindness, HIV infections are the common disease scenario in the District.

Table 139: Disease Status of Sundargarh District- 2011

Disease	Malaria	Leprosy	Tuberculosis	Blindness	HIV/ AIDS
Detected	12369	385	1442	6485	26
Treated	12347	385	942	6511	-
per cent of patients treated	99.82	-	-	-	-
Deaths	22	-	-	-	21
per cent of patients died	0.002	-	-	-	80.77

Source: District Statistical handbook, 2011

During the year 2011, there were 100 cases of death reported in the State due to malaria. Out of the total no. of deaths, highest no. of cases, i.e. 22 cases detected in Sundargarh District. Kalahandi and Rayagada District

follow Sundargarh District in this aspect. Similarly, in case of the reported figures of Leprosy, Sundargarh District stands 4th in the State after Bhadrak, Bolangir and Ganjam in the number of cases of detection of Leprosy cases.

The status of some of the common diseases reported in the hospitals of Sundargarh District is given below.

Table 140: Diseases Statistics in Odisha and Sundargarh- 2014

State/ District	Cholera	Small pox	Fever	Dysentery and diarrhoea	Respiratory diseases	Wounds and accidents	Other causes	Total
Odisha	34,440	62,978	1,312,573	1,34,096	72,409	33,547	633,498	2,283,541
Sundargarh	472	1,084	54,106	5,188	3,256	1,661	16,168	81,89

The intervention of the State and the Central Government in the field of Health care in the State is detailed in **Appendix-XLIII**.

Health Facilities and Health Care System- Allopathic, Homeopathic, Ayurvedic and Other Modes of Public and Private Health Care:

Health-care infrastructure in the District is fairly adequate due to presence of many industries, especially, the Rourkela Steel Plant and OCL India Ltd. There are 15 Government Hospitals, 43 Community Health Centres, 44 Primary Health Centres, 357 Sub-Centres and 52 Nursing Homes and Private Hospitals in the District as in the year 2010-11. Out of the private hospitals 38 are located in Rourkela city. A private Medical College and Hospital has been established by Vigyan Bharati Charitable Trust at Rourkela in the brand name of Hi-tech Medical College and Hospital. The city of Rourkela houses a Government Medical College and Hospital, namely Utkalamani Gopabandhu Homeopathic Medical College and Hospital.

There is one nursing school in the name of Nursing Training Institute at Rourkela. It is under the Steel Authority of India Ltd. managed by the Indira Gandhi Hospital, Rourkela. Catholic Mission School of Nursing provides nursing education in private sector at Sundargarh with 20 approved seats. Another private GNM school in the name of Sundargarh GNM School is running at Sundargarh with 35 sanctioned seats.

There is one Pharmacy College in the name of Kanak Manjari Institute of Pharmaceutical Sciences running at Chhend Colony in Rourkela in its campus. This institution provides diplomas and degrees and is affiliated to the AICTE New Delhi and Biju Patnaik University of Technology, Rourkela.

As in the year 2010-11, there were 98 Allopathic doctors, 203 staff nurse, 2263 no. of ASHA workers, 1033 no. of hospital beds, 20 no. of drug stores in the District. The total no. of patients treated in the government institutions were 10,86,100. In order to strengthen the health care infrastructure, the Government has introduced the AYUSH (Ayurvedic, Yoga and Naturopathy, Unani, Siddha and Homeopathy). Department of Indian Medicine and Homeopathy was created in March 1995 in the Union Government. It was renamed as AYUSH in November 2003. Ministry of AYUSH was formed on 9 November 2014 for providing more health care to the public. There is one AYUSH Homeopathic hospital, 23 dispensaries, 15 no. of doctors, 15 no. of Homeopathic Assistants in the District. 235621 no. of patients were treated in the AYUSH homeopathic system in 2010-11. Similarly in the field of Ayurvedic and Unani, there are 33 dispensaries, 10 doctors, 8 Assistants in the District. During 2010-11 165284 no. of patients were treated in the District in the Ayurvedic and Unani system.

Vaccination Programme:

The key areas of the vaccination programme are TT to pregnant mothers, administration of BCG, DPT, Polio, Hepatitis-B, Measles, DT and TT to children at 10 years age and 16 years age and Vitamin-A. The programme of vaccination and immunisation is done through the Government hospitals and dispensaries. The details of the targets and achievements in the District in various immunisation programme is given below.

Table 141: Status of Immunisation in Sundargarh District, 2010-11 – 2014-15

Vaccine	Year	2010-11	2011-12	2012-13	2013-14	2014-15
T.T (Preg. Mother)	Target	41938	41076	40216	42117	42704
	Achievement	37045	36439	32708	33789	32135
	Percentage	88.3	89	81.3	80.2	75.25
B.C.G	Target	38120	37294	37622	38288	38822
	Achievement	40391	41262	33292	29296	33812
	Percentage	106.0	111	88.5	76.5	87.09
D.P.T	Target	38120	37294	37622	38288	38822
	Achievement	37623	36417	35990	33475	34263
	Percentage	98.7	98	95.7	87.4	88.26
Polio	Target	38120	37294	37622	38288	38822
	Achievement	36973	30818	34025	33408	34237
	Percentage	97.0	83	90.4	87.3	88.19
Hep.B	Target	38120	37294	37622	38288	38822
	Achievement	38733	35938	36016	33624	34343

	Percentage	101.6	96	95.7	87.8	88.46
Measles	Target	38120	37294	37622	38288	38822
	Achievement	36631	35497	36992	32757	33731
	Percentage	96.1	95	98.3	85.6	86.89
D.T	Target	40584	40584	40584	43861	35908
	Achievement	26022	28495	33288	31717	31899
	Percentage	64.1	70	82.0	72.3	88.84
T.T(10Yrs)	Target	42001	42001	42001	48133	39032
	Achievement	38034	36489	38042	35418	34957
	Percentage	90.6	87	90.6	73.6	89.56
T.T(16 Yrs)	Target	40637	40637	40637	45632	38356
	Achievement	38323	37929	40184	36257	35307
	Percentage	93.4	93	98.9	79.5	92.05
Vitamin-A (1 st dose)	Target	38120	37294	37622	38288	38822
	Achievement	36320	34716	36725	32743	33707
	Percentage	95.3	93	97.6	85.5	86.82

Maternity and Child Mortality and Health Care:

Maternity and child mortality rate (CMR) is governed by several factors, like age of the women at marriage, educational status of women, employment status of women, disability among women, no. of births given by the women, age at the time of giving birth to the child and gap between the births, etc. As per the Annual Health Survey conducted by the Registrar General of India, percentage of marriages of females below 18 years of age of is 2.7. In urban areas the percentage is 3 whereas in the rural areas it is 2.7. As in the year of survey, 20.4 per cent of the married women were married below the age of 18 years. The percentage is again high (23.9 per cent) in urban area and lower (19.1 per cent) in rural areas. All these figures are in lower side when compared to the State figures. Schooling status among women in the age group of 6 to 17 was 88per cent for the District, with 85.4 per cent in rural areas and 93.5 per cent in urban areas. School dropouts of among the female during the survey was 11.4per cent in the District, 14per cent in rural areas and 6.2per cent in urban areas. So far as employment of women in the age group of 5 to 14 years is concerned, the survey found 5per cent of the female in the age group are the earning members of the family. In rural areas their percentage is 5.4 and in urban areas it is 4.2. The work participation rate in the age group of 15 and above for women are 32.9 per cent in the District. The rate of disability per 1, 00,000 women population in the District was found 2137 against the corresponding figure of 1883 of the State of Odisha.

Table 142: Some Disease Indicators among Women in Sundargarh District

Type of chronic illness among females (persons per 1,00,000 persons)	Diabetes	Tuberculosis	Asthma	Arthritis	All kinds
Rural	246	218	154	186	4055
Urban	1446	63	507	211	7263
Total	640	168	270	194	5108

Cases of Asthma, arthritis and diabetes are more in the urban areas than the rural areas. The survey report revealed that the Crude Birth Rate (CBR) in the District as a whole was 17.9. In rural areas the CBR is 19.1 and in urban areas it was 15.6. The rate of fertility in the District was 2.0 against the corresponding figure of 2.3 for the State of Odisha. The survey found that 38.2 per cent of women have given birth to 2 or more children in the age group of 20 to 24. 27.3 per cent of the women in the District have given birth to 3 or more than 3 children. So far as the rate of abortion is concerned, 5.3 per cent of women in the age group of 15 to 49 years have gone through abortion, the rate being alarming in urban areas, i.e. 7.5 per cent. Out of the cases of abortions, only 18.9 per cent women had got the ultra-sound done. Whereas institutional abortion in the District was only 36.5 per cent and the balance no. of abortions took place in other places.

Family Welfare Programme in the District:

Family Welfare Programmes in the District have followed all national guidelines and National Rural Health Mission (NRHM) has had very effective activities in training, motivating and coordinating modalities in the matters of ongoing health programmes in family planning, family welfare and disease control both sporadic and epidemic type in the District.

Family Planning: Family Planning started in the District in 1962-63. Family planning stood as a major issue for checking the unrestricted growth of population in the country. The family planning activities are looked after by Additional District Medical Officer (FW). The District has a counselling unit for this purpose. Different family planning measures followed are sterilisation, use of Intra-Uterine Device, contraception, oral pills and Medical Termination of Pregnancy (MTP). It also called induced abortion. It is the medical way of getting rid of unwanted pregnancy. The major activities under the family planning are counselling the population in reproductive age group, IUCD insertion, and distribution of oral contraception pills, condoms and Emergency Contraceptive Pills. As per the micro-plan of the Fixed Day Static Service Delivery Family Planning), 2013-14, there were 69 medical institutions in the District catering to family planning services with 52 doctors, 31 staff nurse, 25 LHVs and 114 ANMs. The targets and achievements of different methods of family planning in the District from 2010-11 to 2014-15 is as follows.

Table 143: Progress of Family Planning Measures in Sundargarh District, 2010-11 to 2014-15.

Method	Parameters	2010-11	2011-12	2012-13	2013-14	2014-15
Sterilisation	Target	8009	8018	8456	8556	8984
	Achievement	6095	6829	6722	6666	5526
	Percentage	76.1	85	79.5	77.9	61.5
IUD	Target	8945	9679	9513	10909	11480
	Achievement	8037	7691	8052	6991	8774
	Percentage	89.8	79	84.6	64.1	76.4
Contraception	Target	17929	19399	17969	18181	18539
	Achievement	7963	7212	2693	2073	2816
	Percentage	44.4	37	15.0	11.4	15.2
Oral pill	Target	10564	11431	10570	10695	10905
	Achievement	6337	7760	5564	4978	6424
	Percentage	60.0	68	52.6	46.5	58.9
MTP	Target					
	Achievement Percentage	1448	1205	950	1110	771

Maternity Mortality Rate (MMR): From the analysis of the information from 2000-01 to existing 2014-15, it is commonly seen that the rate of maternal mortality has maintained more or less the same level. Institutional delivery is not very popular in the District. The tribal people still prefer to deliver the child at home with the help of the traditional help from the experts of the community. However, the percentage of institutional deliveries is on the rise, starting from a level of 34.93 per cent in 2000-01 to 90.99 per cent in 2014-15.

Table 144: Maternal Mortality Rate (MMR) and Infront Mortality Rate (IMR) in Sundargarh District from 2000-01 to 2014-15

Year	MMR Rate (Women died/ One lakh Women)	IMR No. (Infants died/ One lakh Infant)	Total Delivery	Institutional Delivery	% of Institutional Delivery	Total Live Birth	Neo-natal Death (No.)	IMR/ 1000 Births
2000-01	178	1623	34091	11907	34.93	33166	1045	48.94
2001-02	182	1395	36657	12972	35.39	35751	935	39.02
2002-03	225	1405	33691	11703	34.74	32850	823	42.77
2003-04	236	1264	33839	12647	37.37	33055	843	38.24
2004-05	227	1124	32872	13016	39.60	31697	734	35.46
2005-06	197	1095	34633	14656	42.32	32479	705	33.71
2006-07	193	1119	34975	15942	45.58	34193	707	32.73
2007-08	175	1048	39845	26922	67.57	38902	508	26.94
2008-09	161	1070	37414	28101	75.11	36550	533	29.27
2009-10	249	1010	32511	25351	77.98	31689	609	31.87
2010-11	239	938	32167	27026	84.02	31326	620	29.94
2011-12	206	997	34646	30094	86.86	33954	743	29.36
2012-13	198	872	31001	26977	87.02	30331	626	28.75
2013-14	178	886	31605	28352	89.71	30889	615	28.68
2014-15	199	759	30233	27508	90.99	29642	545	25.61

Source: CDMO, Sundargarh

Infant Mortality Rate (IMR): The factors governing the infant mortality rate are the same as the MMR. Due to increased acceptance to institutional deliveries in the District the IMR has come down significantly from the base year of 2000-01 to 2014-15. Neo-natal death, which is defined as death of the infant within the 28 days of the birth is a major indicator of IMR. Due to increase in the number of health centres and private health centres, the neo natal rat has declined during the period as in the above table.

The Janani Suraksha Yojana (JSY) is one of the most important programmes under the overall umbrella of NRHM aimed at reducing Maternal Mortality Ratio and Neo-natal Mortality Rate by promoting institutional deliveries. Under the Scheme, cash incentives are provided to mothers and they are facilitated by Accredited Social Health Activists (ASHAs) to deliver their babies in a health facility. There are also provisions for cost reimbursement for transport and incentives to ASHAs for encouraging mothers to opt for institutional delivery. The scheme is fully sponsored by the Central Government and is implemented in all States and Union Territories, with special focus on low-performing States. There is also a provision for roping in the private sector by giving accreditation to willing private hospitals/nursing homes for providing delivery services.

Ante-Natal Care (ANC): Ante-natal care constitutes one of the key elements towards initiatives to promote safe motherhood. The key indicators are number of ante-natal check-ups received, months of pregnancy at the time of first ANC, main source of ANC, type of tests performed during ANC, number of Tetanus Toxoid (TT) injections received and number of days of consumption of Iron & Folic Acid (IFA) tablets/syrup by the expectant mothers. The full ante-natal check-up comprises at least three visits for ANC, at least one TT injection received and IFA consumption for 100 days or more.

Delivery Care: Under Delivery Care, the details about place of delivery, source of transport provided/ availed for reaching the institution, length of stay in the institution after delivery, type of delivery (normal / caesarean / assisted) and the personnel conducting delivery in case of domiciliary are the key indicators. Safe delivery comprises institutional deliveries and home deliveries conducted by doctor/ nurse / ANM / LHV and it does not include those attended by trained Dhai. However, trained Dhai is included under skilled health personnel.

Extent of stay in institutions after delivery is very crucial and has a direct bearing on the new born care as also on the health of the mother.

Post-natal Care: Getting a Post partum / Post-natal check-up soon after the birth of baby or within 48 hours is crucial for the health of both the mother and the child. Accordingly, three indicators, viz., percentage of mothers who received Post-natal check-up within 48 hours of delivery, percentage of mothers who received Post-natal check-up within one week of delivery and percentage of mothers who did not receive any Post-natal check-up are the key factors to influence IMR.

Different indicators and facts associated with each of ante-natal care, post natal care, delivery care, Janani Surakshya Yojana and childhood diseases as per the report published by the Census of India, 2012-13 is reproduced at Appendix-LVI. The general trend of the health status of mothers and children when compared to the State of Odisha is at comfortable position.

Public Hospitals and Dispensaries:

Prior to 1948 the Chief Medical Officer of Bonai and Gangpur were in charge of the few hospitals and dispensaries that existed in their respective States. They were also superintendents of vaccination. After the creation of the District, the organisational pattern had to conform to the set-up then prevailing in the regular Districts. The Civil Surgeon was kept in charge of the medical administration while the public health and sanitation were under the District Health Officer. At present the Civil Surgeon, re-designated as Chief District Medical Officer, is vested with additional powers and jurisdictions. Subordinate to him are three Assistant District Medical Officers separately in charge of Medical, Public Health and Family Planning branches.

At the time of merger, Gangpur and seven hospitals located at Sundargarh, Bargaon, Raghunathpali, Kuanrunda, Bisra, Hemgir and Gangpur and a dispensary at Hatibari. The Roman Catholic Mission maintained three small hospitals and the B.S.L.Co. had one hospital and a small dispensary in their mining area at Biramitrapur. In Bonai ex-State there were one hospital at Bonaigarh, two dispensaries at Koira and Banki and an Ayurvedic dispensary at Sarsara baling which was opened in 1943-44. The bed strength of Bonaigarh hospital was 24.

After 1948, steps were taken for establishing new institutions to cater to the growing needs of the people. In the District, the number of hospitals at present is 15. Of these, 8 are meant for the general public and the remaining ones for the departmental people. The hospitals at Balisankra and Surda are managed by the Tribal & Rural Welfare Department and the rest by the Health Department. The last named hospital has no provision for indoor patients. The total number of beds in all the hospitals is 276 and the staff consists of 33 doctors, 27 nurses and pharmacists apart from other staff.

Today, the District has 2 no. of District Hospitals, i.e. the District Headquarter hospital at Sundargarh, 20 no. of Community Health Centres, 56 no. of Primary Health Centres (New, with Single Doctors), 390 Sub-Centres, 2383 no. of ASHA and 3706 no. of Anganwadi Workers. There are 14 Mobile Health Units. The total no. of beds in the Government hospitals is 635. There are 74 medical institutions in the private sectors in the District with total no. of 1053 beds in them.

Headquarters Hospital, Sundargarh: Headquarters Hospital, Sundargarh, was opened at Sundargarh was established in the year 1895 as a dispensary. It was then called the Gangpur Raj Dispensary. Later in 1913, it was named as Victoria Memorial Hospital as per the wish of the Raja of Gangpur State. This hospital was shifted to its new building in 1942 which was then under the control of the Ministry Department. It came under the civil control and management in 1945-46 and was called Bhabani Shankar Shekhar Memorial Hospital, after the name of the late Raja of Gangpur. The hospital now runs in its own building in the heart of the city of Sundargarh.

Rourkela Government Hospital (RGH): Rourkela Government Hospital (RGH) a District level hospital with 180 bed having consultancy facilities in OG, surgery, Anesthesia, Pediatric, Eye, ENT, Ophthalmology, Dental, Leprosy, Pathology etc. This Hospital has also a Blood Bank.

National Malaria Research Centre (Field Station): A field station of the National malaria Research Centre was established in Rourkela in 1988 to conduct research on malaria.

Ispat General Hospital (IGH): The IGH is a modern and well equipped hospital with number of specialty health care facilities by experienced and specialised Doctors on various fields. It is well equipped with more than 700 beds with best health care facilities including Intensive Care Unit, Burn Center, Dialysis Center, and Blood Transfusion Center etc. This hospital is functioning under the management of SAIL, Rourkela Steel Plant. Employees of the Rourkela Steel Plant are provided free services with medical card issued to the families. The hospital is open to provide paid services to all others. The head of this Hospital is Director, Medical and Health Services with a number of Joint and Assistant Directors, Senior Doctors to look after the health care as well as smooth management of this Hospital.

Drinking Water Supply and Sanitation:

Sanitation: In the ex-State of Bonai, a small conservancy department under the charge of the Chief Medical Officer looked to the sanitation of Bonai town; and rural areas were left to the care of the care of the *Gaontias* and the village Panchayats. The system in the ex-State of Gangpur was different: there were sanitation committees in six important towns, viz.,

Sundargarh, Rajgangpur, Raghunathpali, Bisra, Hatibari and chief functions were providing of street lights and maintenance of cleanliness of the towns. The sanitation of the villages was not probably given due importance.

Consumption of safe drinking water, proper sanitation and adoption of correct hygiene practices has a significant impact on the health of people. Diarrheal diseases are of faecal origin and the faecal matter enters into the body through oral route. Among the States of India, the condition of sanitation in Odisha is poor. Improper disposal of human excreta, improper environmental sanitation and lack of personal and food hygiene are major contributions to diseases.

The rural sanitation programme in India was introduced in the year 1954 as a part of the First Five Year Plan of the Government of India. Accelerated Rural Water Supply Programme (ARWSP) was implemented in 1972-73. The 1981 Census revealed rural sanitation coverage was only 1 per cent. The International Decade for Drinking water and Sanitation during 1981-90, began giving emphasis on rural sanitation. Government of India introduced the Central Rural Sanitation Programme (CRSP) in 1986 under National Drinking Water Mission (NDWM) primarily with the objective of improving the quality of life of the rural people and also to provide privacy and dignity to women. In 1991, NDWM was renamed as Rajiv Gandhi National Drinking Water Mission. In 1999, Department of Drinking Water Supply was created in the Union Government. With an intention to both reverse and strengthen the shortcomings of the CRSP programme, the Government of India launched the Total Sanitation Campaign (TSC) programme in 1999. TSC was 'demand driven' and emphasized more on Information, Education and Communication (IEC), Human Resource Development (HRD), Capacity Development activities to increase awareness among the rural people and generation of demand for sanitary facilities. This enhanced people's capacity to choose appropriate options through alternate delivery mechanisms as per their economic condition. Financial incentives were provided to Below Poverty Line (BPL) households for construction and usage of individual household latrines (IHHL) in recognition of their achievements.

Bharat Nirman programme launched in 2005-06 also aimed at strengthening the infrastructure relating to water along with 5 other sectors. Bharat Nirman targeted to achieve by 2008-09, supplementation with new schemes for the habitations served by outlived schemes, rejuvenation of the outlived schemes which were functioning below their rated capacity, providing the regional schemes from alternative safe sources by extending new pipelines, providing rainwater-harvesting structures, reviving the traditional sources, utilizing low cost technology for mitigation of quality affected habitations and providing water supply from alternate sources for coverage of habitations with no safe source.

In 2000, in the Millennium Summit, involving all UN Member States, brought together many of the targets adopted at previous conferences and identified key development priorities for the 21st Century. It led to the adoption of the Millennium Declaration and the Millennium Development Goals, a series of time-bound and measurable development goals and targets. It also led to the establishment of a comprehensive Millennium Project aimed at promoting and assessing the implementation of these goals and targets. The targets relating to water were to reduce by half the proportion of people without access to safe drinking water by 2015. Disparities and inequalities in access to water and sanitation have been caused due to widespread poverty. Poor people face a triple impediment to access to safe water - lack of availability to safe water, risk of contamination and high costs. Women and girls have specifically disadvantaged health status due to their traditional role in water collection.

The State Government has launched "Odisha State Water & Sanitation Mission" (OSWSM) established in R.D. Department resolution No.9990 dt.5.7.2002 and registered itself under Society Registration Act 1860 on 14.8.2002 for providing overall policy guidance for community led and participatory WATSAN projects.

The "Nirmal Bharat Abhiyan" (NBA) the successor programme of the TSC, was launched from 1.4.2012. The objective was to accelerate the sanitation coverage in the rural areas so as to comprehensively cover the rural community through renewed strategies and saturation approach. Nirmal Bharat Abhiyan (NBA) envisaged covering the entire community for saturated outcomes with a view to create Nirmal Gram Panchayats. Under NBA, the Incentives for IHHLs were enhanced and further focussed support was obtained from MNREGA. However there were implementation difficulties in convergence of NBA with MNREGA as funding from different sources created delays. To generate awareness on sanitation, the Nirmal Gram Purasakar (NGP) were awarded to recognise the achievements and efforts made at the GP level in ensuring full sanitation coverage and achieving other indicators of open defecation free GPs. The required eligibility criteria are 100per cent coverage of IHHL in the village, 100per cent school sanitation in all schools, i.e. primary and secondary schools, separate toilets for boys and girls, toilet coverage in Anganwadi centres, village to be free from open defecation, dry latrine and scavenging and operational toilets. While the award gained popularity in bringing about a desire in the community for attaining Nirmal Status, there have been issues of sustainability in some awardee GPs. 18 Grama Panchayats were awarded Nirmal Grama Award in the year 2007 in Odisha. Out of the 18 GPs, Deuli GP in Sundargarh Block, Hatibari GP in Nuagaon Block and Tasaladihi in Tangarpali Block belonged to Sundargarh District. In the year

2008, Jhirpani GP of Bisra Block also bagged Nirmal Gram Puraskar. No individual organisation, Block or Zilla Parishad of Sundargarh has ever got the award of Nirmal Gram.

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachha Bharat Mission on 2nd October, 2014. The Mission Coordinator shall be Secretary, Ministry of Drinking Water and Sanitation (MDWS) with two Sub-Missions, the Swachha Bharat Mission (Gramin) and the Swachha Bharat Mission (Urban), which aims to achieve Swachha Bharat by 2019, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi, which in rural areas shall mean improving the levels of cleanliness in rural areas through Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitised. The Mission shall strive for this by removing the bottlenecks that were hindering the progress, including partial funding for Individual Household Latrines from MNREGS, and focusing on critical issues affecting outcomes.

Water Sources: Sundargarh District has a vast population. The status of water sources and water supply schemes is mentioned in the following table. As in the year 2014-15, the District had 2953 schools and 2500 Anganwadi centres. Out of those 1799 schools, i.e. 60.92per cent of schools and 860 Anganwadis, i.e. 34.4per cent have facility of drinking water facility. Under the National Drinking Water Programme, the District has so far 115 completed pipe-water schemes, 3315 no. of hand pumps and 67 other sources.

Habitation Coverage: In Sundargarh District 30090 sources of water supply have been surveyed, the information of which is available in the national portal of the Ministry of Drinking Water and Sanitation. As on date there are 2773 delivery points of water from 16637 no. of sources, being under utilisation. 2472 no. of habitations in the District are so far covered under different pipe water supply schemes.

Table 145: Details of Sources of Water in Sundargarh

Sl. No.	Block	Water Supply Scheme Sources	Delivery Points	Public & Private Sources	No. of Habitations with Pipe Water Supply Schemes		
					With New Schemes	With Completed Schemes	Total
1	Balisankara	1753	110	900	6	95	96
2	Bargaon	2053	215	1108	4	194	198
3	Bisra	1872	221	991	50	143	183
4	Boneigarh	1422	215	1241	52	154	202
5	Gurundia	1769	172	1427	44	123	167
6	Hemgir	1316	80	737	4	62	64
7	Koida	1411	146	1008	62	72	131
8	Kuarmunda	2335	257	1211	85	140	223
9	Kutra	1643	116	745	3	102	105
10	Lahunipara	2301	204	1329	36	152	186
11	Lathikata	2350	243	1079	9	189	197
12	Lephripara	1647	81	848	4	63	65
13	Nuagaon	2330	175	863	80	93	171
14	Rajgangpur	1729	114	737	0	105	105
15	Sadar, Sundargarh	1514	133	825	2	121	123
16	Subdega	1404	129	894	1	126	127
17	Tangarpali	1241	162	694	0	129	129
	Total	30090	2773	16637	442	2063	2472

Water Quality: There are four laboratories in the District to check the water quality, one in the District Headquarter and the other three are in the Sub-Division level. In the year 2013-14, 19131 sources were tested in the District. Chemical contamination was seen in 7032 cases and bacteriological contamination in only one case, i.e. Telendihi village under Ratanpur Grama Panchayat of Tangarpali Block, where presence of e-Coli (40.00 MPN/100 ml) was detected. In the year 2014-15, 12619 no. of sources were surveyed, in which 3849 cases of iron contamination detected. In four cases only, more than one chemical contamination was seen. All such four sources are in Balisankara Block. In no case bacteriological contamination was detected.

So far as testing of the water sources in use is concerned, in the year 2014-15, 4430 samples of water from the sources in use were tested. Except, cases of Iron and Fluoride contamination, the tested water sources

have not exhibited contamination of salinity, nitrates and arsenic. Iron contamination was seen above the permissible level in 75 sources in use and fluoride in one source.

Urban Sanitation: The Ministry of Urban Development, Government of India formulated National Urban Sanitation Policy (NUSP) in December 2008. The vision of National Urban Sanitation Policy is “all Indian cities and towns become totally sanitized, healthy and liveable and ensure and sustain good public health and environmental outcomes for all their citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor and woman”. As a result, a City Sanitation Plan (CSP) was prepared for Rourkela for the first time.

National Urban Health Mission: Population in urban areas is in rapid increase. As a result the number of poors in the urban areas, who usually live in slums or slum like condition, is also increasing. Despite the proximity of the urban poor to urban health facilities their access to them is severely restricted. This is on account of their being “crowded out” because of the inadequacy of the urban public health delivery system. Ineffective outreach and weak referral system also limits the access of urban poor to health care services. Social exclusion and lack of information and assistance at the secondary and tertiary hospitals makes them unfamiliar to the modern environment of hospitals, thus restricting their access. The lack of economic resources inhibits/ restricts their access to the available private facilities. Further, the lack of standards and norms for the urban health delivery system when contrasted with the rural network makes the urban poor more vulnerable and worse off than their rural counterpart. NUHM did not cover the urban health centres. As a result, the Union Government formed the National Urban Health Mission (NUHM). Every Municipal Corporation, Municipality, Notified Area Committee, and Town Panchayat became a unit of planning with its own approved broad norms for setting up of health facilities. In 2013-14, the project implementation plan of NUHM was prepared in Odisha. 18 cities across Odisha were identified to be covered, out of which Rourkela city is one among them. The population of Rourkela city was 536450. There were 162 slums with total slum population of 223386.

Terminal Diseases and Their Treatment

Rourkela city has considerable amount of health facilities. But for the purpose of treatment of terminal diseases, the people of the District depend upon Cuttack, Bhubaneswar and cities outside Odisha. The Ispat General Hospital at Rourkela has a Trauma Care Unit. Another Trauma Care Unit is about to be functional with the funds of the Government from District Innovation Fund and contribution from the Rogi Kalyan Samiti of Rourkela

Government Hospital. There is no known advanced centre for treatment of terminal diseases like heart diseases, cancer in the District. Government assistance for treatment is available from the Chief Minister's Relief Fund (CMRF). Odisha State Treatment Fund (OSTF) has been formed as a registered society under Registration of Societies Act, 1860. It aims at providing treatment to poor patients who suffer from life threatening diseases and accidents. Under the scheme, the cost of treatment is borne through the empanelled hospitals. List of empanelled hospitals under the OSTF is as follows.

Table 146: List of Empanelled Hospitals for Treatment of Life Threatening and Terminal Diseases under Odisha State Treatment Fund (OSTF)

Sl. No.	Hospital	Location
1	Kalinga Hospitals	Bhubaneswar
2	Aditya Care Hospitals	Bhubaneswar
3	L.V. Prasad Eye Institute	Bhubaneswar
4	Ashwini Hospital	Cuttack
5	Ayush Hospital	Bhubaneswar
6	Apollo Hospital	Bhubaneswar
7	Kanungo Institute of Diabetic Specialities	Bhubaneswar
8	Kalinga Institute of Medical Sciences	Bhubaneswar
9	Hi-Tech Medical College & Hospital	Bhubaneswar
10	IMS &SUM Hospital	Bhubaneswar
11	M/s Shanti Memorial Hospital	Cuttack
12	Chitta Ranjan Seva Sadan	Niali, Cuttack
13	Christian Hospital	Bisamkatak, Rayagada
14	Christian Hospital	Nawarangapur
15	Seven Hills Hospital	Vishakhapatnam
16	CARE Hospital	Vishakhapatnam
17	Apollo Hospital	Vishakhapatnam
18	Escort Heart Institute	Raipur, Chhattisgarh
19	Narayan Hrudayalaya (MMI)	Raipur, Chhattisgarh
20	Ramakrishna Hospital	Raipur, Chhattisgarh

APPENDIX- LIII: Programmes of the Central and State Government on Eradication of Diseases and Health

Revised National Tuberculosis Control Programme (RNTCP): The Revised National Tuberculosis Control Programme (RNTCP) with Directly Observed Treatment Short course Strategy (DOTS) was implemented in the State with DANIDA support from 1996 to 2005. Global Funds for Aids, Tuberculosis and Malaria (GRATM) support through Govt. of India is available from 2006 to 2010 to implement the said programme in the State. The objective of this programme is to achieve 70per cent case detection, 90per cent sputum conversion and 85per cent cure rate by the end of 2005. At present 102 sub-Districts T.B units and 536 Microscopy Centres are engaged in providing diagnosis and treatment services under the revised strategy.

National Filarial Control Programme (NFCP): The National Filaria Control Programme (NFCP), a Centrally Sponsored Plan scheme on a sharing pattern of 50:50 between the Centre and the State, is being implemented through a Filariasis Bureau comprising a research unit at Puri, 15 Filaria Control Units and 15 Filaria clinics in urban areas. The filaria clinics are conducting night blood survey in a confined area of 50,000 populations and undertake treatment to microfilaria carrier as well as to the diseased. Cases of filarial are not common in Sundargarh.

National Programme For Control Of Blindness (NPCB): National Programme for Control of Blindness (NPCB), a World Bank assisted project, was introduced in the State since 1976, with an aim to reduce the prevalence of blindness from 1.4per cent to 0.3per cent. For this purpose, strengthening of Central Mobile Units, District Mobile Units, up gradation of Medical Colleges, training of Ophthalmic Surgeons and District Blindness Control Society (DBCS) all over the State have been taken up. The available infrastructure includes 176 Dark Rooms, 28 nos. of 20-bedded eye wards, 25 nos. of 10-bedded eye wards and one 91-bedded Referral Eye Hospital at S.C.B. Medical College Hospital, Cuttack.

National Iodine Deficiency Disorder Control Programme (NIDDCP): Iodine is an essential Micronutrient with daily requirement of 100-150 micrograms, and it plays an important role in normal human growth and development. It has been widely recognized that deficiency of iodine not only contributes to Goitre but also is an important risk factor for preventable mental retardation. It also affects reproductive functions and impaired child learning ability. It has been assessed that about 2 billion people are at risk of Iodine Deficiency Disorder (IDD) in the World including 600 million people in the South-East Asia region. In India as many as 73 million people are

suffering from IDD. As per a survey conducted by the DGHS, New Delhi in the year 33.5 per cent of the households in Sundargarh District were using iodised salt. During 2002, a special survey was conducted by Govt. of India and UNICEF in the District of Puri, Cuttack and Sundargarh where in it was found that about 35per cent of the people are using iodised salt.

National Leprosy Elimination Programme (NLEP): The National Leprosy Elimination Programme (NLEP) is under implementation in the State since 1982-83. The programme is being supported by WHO, World Bank and international donor agencies like Lepra India, HOINA and the German Leprosy Relief Association. The objective of the programme is to eliminate leprosy by detecting all the cases and bring them with “Multi Drug Therapy (MDT)”. “Elimination of Leprosy” means to bring down the prevalence rate of leprosy to one or below, per 10,000 population. Due to successful implementation of the programme in the State, the prevalence rate of leprosy which was 121.4 per 10,000 population in the year 1982-83 has come down to only 0.89 per 10,000 population by September, 2006.

National Vector Borne Disease Control Programme (NVBDCP): Odisha has a high incidence of malaria with 20per cent of the total affected persons and about 40per cent of the death recorded in the country. The National Anti-Malaria Programme (NAMP) renamed as National Vector Borne Disease Control Programme (NVBDCP) is being implemented in the State since 1953. During 2005, 48.49 lakh blood slides were examined of which about 3.97 lakh were found positive while the percentage of positive falciparum was recorded as 86.4per cent. The deaths due to malaria are declining since 2002. The Enhanced Malaria Control Project (EMCP), assisted by World Bank, is in operation in hyper endemic areas since 1997-98 covering 240 blocks spread over 26 Districts.

Odisha Health System Development Project (OHSDP): The Odisha Health System Development Project (OHSDP), a World Bank assisted project, is being implemented in the State since Sept.,1998 at an estimated cost of Rs.415.60 crore (Rs.348.80 crore loan from world Bank and Rs.66.80 crore State Government share). Out of this Rs.110.00 crore have been diverted by Govt. of India and World Bank to Polio Eradication Programme leaving a balance of Rs.307.98 crore. Out of this an amount of Rs.279.19 crore has been spent till the end of December’2005. The project which was to close in March, 2004, has been extended by two more years i.e. till 31.3.2006. Due to non completion of 8 civil works, World Bank has been requested to extend the project for another 6 months i.e. up to June 2006. The project aims at:

- *Improving efficiency in the allocation and use of health resources through policy and institutional development, and*

- *Rejuvenating the existing health care system through improvements in the quality, effectiveness and coverage of health services.*

Pancha Byadhi Chikitsa: Pancha Byadhi Chikitsa is being implemented in the State since 2001, which guarantees free treatment including free medicine for five common communicable diseases viz. malaria, leprosy, diarrhea, acute respiratory infections and scabies. These five diseases constitute approximately 70 per cent of the patient load in the primary health institutions and affect a large number of poor people. T.B. has been included in the list recently. Diagnostic and treatment service for tuberculosis is available free of cost for all. Under the scheme clinical protocols have been drawn up and distributed to all doctors and institutions along with the required medicines free of cost. Government is contemplating to extend the scope of the Panchabyadhi scheme to other common diseases.

National Aids Control Programme (NACP): National AIDS control programme, Phase-I has been undertaken in the State during 1992-1999 and Phase-II programme is in operation since April, 1999 with the support of NACO and DFID. The aim of the Phase-II programme is to reduce the spread of HIV infection in the State and to strengthen the State's capacity to respond to the HIV/AIDS on long-term basis. The allocation of funds by NACO for the Phase-II programme is Rs.13.71 crore and by DFID is Rs.10.91 crore from 1999-00 to 2004-05 out of which Rs.12.09 crore and Rs.7.49 crore have been utilized till 2004-05. During 2005-06, NACO has approved a budget allocation of Rs.9.57 crore under DFID and Rs.5.84 crore under World Bank funded scheme.

- (i) **Information Education & Communication (IEC) Activities:** IEC campaign is being carried out through outdoor, print, audio and audio-visual activities. The World AIDS Day, Voluntary Blood Donation Day is observed throughout the State. Audio jingles through AIR and T.V. spots through Doordarsan & ETV are fixed for wide publicity. Audio visual shows in rural / slum areas are undertaken throughout Odisha.
- (ii) **School AIDS Programme:** Out of 7580 Secondary and Senior Secondary School of the State, OSACS has undertaken 2390 nos. of schools in ten Districts under the School AIDS Education Programme. The main objectives of the School AIDS Education Programme are to enhance the level of information and knowledge of sexual health and to develop skills, positive attitude and responsible sexual behavior among the students by imparting school

level extra-curricular activities. The school AIDS Education Programme has been launched in the District of Ganjam due to its high prevalence in the area through Nehru Yuva Kendra Sangathana, Odisha. 450 high schools and 90 colleges of +2 level covering 27,000 students have been taken into the fold. This year OSACS plans to implement this programme in 4 more Districts viz Bhadrak, Dhenkanal, Jagatsinghpur and Nayagarh.

- (iii) **Voluntary Confidential Counselling & Testing Centres (VCCTC):** In addition to the existing 20 VCCTC another 30 VCCTCs have been established in the State by the end of 2005-06.
- (iv) **Prevention from Parent to Child Transmission (PPTCT):** Prevention from Parent to Child Transmission (PPTCT) programme is being operated in 30 PPTCT centres in the State including in 3 medical colleges.
- (v) **Sexually Transmitted Diseases (STD) Clinics:** There are altogether 34 STD Clinics operational in the State. Objective of the STD Clinic is to facilitate treatment of STD cases in all the 30 District Hqrs. Hospitals (DHH), 3 Medical Colleges, Capital hospital, Bhubaneswar, RGH, Rourkela and ESI Hospital, Bhubaneswar.

Infant Mortality Reduction Mission: The Infant Mortality Rate (IMR) is a key indicator of the general health status of a population. As per SRS report the IMR in Odisha was 97 per thousand live births during 1999. In order to reduce the IMR from 97 to 60 per thousand live births by 2006, Infant Mortality Reduction Mission was launched in the State on 15th August, 2001. The key activities include;

- (i) *Immunization in outreach inaccessible areas.*
- (ii) *Chemoprophylaxis against malaria during pregnancy.*
- (iii) *Institutional delivery to the pregnant women free of cost.*
- (iv) *Free treatment service for slum dwellers*
- (v) *Reimbursement of transport cost for institutional delivery.*

Navjyoti Programme: The State launched a new scheme "NAVAJYOTI" under IMR Mission on 1st April'2005 to reduce neonatal Mortality and Morbidity in the State. This programme is operating in 14 Districts where the IMR is above the State average (as 60per cent death occurs in the neonatal period). Training of Traditional Birth Attendants has been taken up in these Districts on intensified scale.

National Rural Health Mission (NRHM): NRHM was launched in the State on 17 June 2005. The objectives of the Mission are to provide effective health care to rural people, especially among the disadvantaged groups including women and children by improving access, enabling community ownership and demand for services, strengthening public health system for effective service delivery, enhancing equity and accountability and promoting decentralization. The goal of the Mission is to reduce IMR & MMR, Universal Access to Public Health services, Women Health, Child Health, Sanitation and Hygiene, Immunization and Nutrition, Prevention and Control of communicable and non-communicable diseases. Access to integrated and comprehensive primary health care, population stabilization, gender and demographic balance and promotion of healthy life style has also been brought about.

Reproductive And Child Health (RCH) Programme: The Reproductive and Child Health (RCH), a cent per cent Centrally assisted programme is being implemented in the State. The Phase-I of this programme was carried out for a period of 5 years from 1997-98 to 2002-03. The total cost of the programme was Rs.119.75 crore including Rs.15.00 crore for Kalahandi sub-project. Like RCH-I programme, RCH-II programme is also a 100per cent centrally assisted programme with the objective of improving the reproductive health of men and women and the health of children. The RCH-II programme has been introduced to ensure safe motherhood and child survival to create confidence among the population to accept family planning methods. The total cost of the RCH-II programme for the year 2005-06 has been approved for Rs.57.43 crore.

Integrated Population And Development (IPD) Project: Integrated Population and Development (IPD) Project is being implemented in the 4 Districts of the State, namely Rayagada, Malkangiri, Nawarangpur and Koraput with assistance from United Nation's Fund for Population Activities (UNFPA). This project has all the components of the RCH programme and it aims at reducing maternal mortality and infant mortality as well as achieving population control and stabilization of population through education. The project includes components such as provision of new infrastructure (building for Sub-Centres), maintenance of old building, up-grading the skill of health personnel including doctors, female health workers, sub-technician etc. through training, provision of facilities in girls hostels and interest-free moped advance to ANMs.

APPENDIX- LIV: Year-wise Data of Family Welfare and MCH Activities of Sundargarh District

	2010-11			2011-12			2012-13			2013-14			2014-15		
	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%
I-Family Welfare															
Sterilisation	8009	6095	76.1	8018	6829	85	8456	6722	79.5	8556	6666	77.9	8984	5526	61.5
IUD	8945	8037	89.8	9679	7691	79	9513	8052	84.6	10909	6991	64.1	11480	8774	76.4
C.C Users	17929	7963	44.4	19399	7212	37	17969	2693	15.0	18181	2073	11.4	18539	2816	15.2
O.P Users	10564	6337	60.0	11431	7760	68	10570	5564	52.6	10695	4978	46.5	10905	6424	58.9
M.T.P.		1448			1205			950			1110			771	
II-Immunisation															
T.T (Preg. Mother)	41938	37045	88.3	41076	36439	89	40216	32708	81.3	42117	33789	80.2	42704	32135	75.25
B.C.G	38120	40391	106.0	37294	41262	111	37622	33292	88.5	38288	29296	76.5	38822	33812	87.09
D.P.T	38120	37623	98.7	37294	36417	98	37622	35990	95.7	38288	33475	87.4	38822	34263	88.26
Polio	38120	36973	97.0	37294	30818	83	37622	34025	90.4	38288	33408	87.3	38822	34237	88.19
Hep.B	38120	38733	101.6	37294	35938	96	37622	36016	95.7	38288	33624	87.8	38822	34343	88.46
Measles	38120	36631	96.1	37294	35497	95	37622	36992	98.3	38288	32757	85.6	38822	33731	86.89
D.T	40584	26022	64.1	40584	28495	70	40584	33288	82.0	43861	31717	72.3	35908	31899	88.84
T.T(10Yrs)	42001	38034	90.6	42001	36489	87	42001	38042	90.6	48133	35418	73.6	39032	34957	89.56
T.T(16 Yrs)	40637	38323	94.3	40637	37929	93	40637	40184	98.9	45632	36257	79.5	38356	35307	92.05
Vitamin-A(1st dose)	38120	36320	95.3	37294	34716	93	37622	36725	97.6	38288	32743	85.5	38822	33707	86.82

APPENDIX- LV: List of Private Hospitals in Sundargarh District

Sl. No.	Name of the Clinical Establishment	Name of the Proprietor	Name of the I/C Doctor	C.E Regd. No.	Bed Strength	Period of Validity	
						From	To
1	Mini Hospital, M/9, Basanti Colony, Rourkela	Dr. Gopabandhu Bal	Dr. Gopabandhu Bal	001/96		30-08-1995	31-07-1997
2	Sudha Nursing Home, Plot No-M/28, Basanti Colony, Rourkela	Dr. Dhreera Dash	Dr. Dhreera Dash,md-Paed	014/98	17	23-05-2015	22-05-2017
3	Ambika Birsamunda Nursing Home, At/Po- Civil Township, Rourkela	Dr. Rabinarayan Mohapatra	Dr. Rabinarayan Mohapatra MD O&G	1564/13	20	23-05-2013	22-05-2015
4	Khosala Nursing Home, H-15, Civil Township, Rourkela	Dr. Anup Khosla	Dr. Anup Khosla, MBBS	046/99		01-10-1994	30-09-1996
5	Prasanti Centre for Psychological Observation Welfare & Research, N-3, Civil Town Ship, Rourkela	Mrs. Gayatri Mishra	Dr. Dhobesh Ch. Mishra	059/99		05-09-1996	04-09-1998
6	Nayak Diagnostic Centre, Shop No-21, Main Road, Rourkela	Dr. Prativa Naik	Dr. Prativa Naik	062/00		01-10-1994	30-09-1996
7	Shanti Memorial Hospital, Plot No-1406, Udit Nagar, Rourkela	Dr. Manu Pattanaik	Dr. Manu Pattanaik, MD	064/00	50	23-05-2013	22-05-2015
8	Godhuli Clinic & Research Centre, Udit Nagar, Rourkela	Dr. Gostha Chandra Patri	Dr. Gostha Chandra Patri, MD	131/01	12	01-01-1997	31-12-2002
9	Simpi Rungta Hospital, P-13, Civil Township, Rourkela	Sushila devi Rungta	Dr. Priti Gupta, MD	166/02		01-04-2000	31-03-2002
10	Akshya Maternity & General Nursing Home, At-Fertiliser Township, Rourkela	Dr. Akshya Ku. Samal	Dr. Akshya Ku. Samal, MBBS	175/02	8	23-05-2006	22-05-2007
11	Omm Appolo Hospital, At:-UU-10,Civil Township,Rourkela-769004	Pratima Singh	Dr. Ajit Kumar Singh,MD-OG	218/03	15	13-08-2013	12-08-2015
12	City Hospital & Diagnostic Centre, D-8, Civil Township, Rourkela	K.P.Singh	Dr. Kastu Sahu, MD	220/03	30	07-09-2008	06-09-2012
13	R.K. Clinic & Laboratory, Udit Nagar, Rourkela	Dr.R.K. Sahoo	Dr.R.K. Sahoo, MD	299/04		16-02-2004	15-02-2006
14	Community Welfare Society Hospital,	J. Allapet	Dr. Debasish	328/04	120	23-05-2013	22-05-2015

Sl. No.	Name of the Clinical Establishment	Name of the Proprietor	Name of the I/C Doctor	C.E Regd. No.	Bed Strength	Period of Validity	
						From	To
15	Jagda, Rourkela Rajasthan Seva Sadan, EM Block, Basantinagar, Rourkela.	Shyamal Begaria	Pattanaik, MS Dr. Brijish Mukharjee, MBBS	339/04	40	29-05-2004	28-05-2006
16	Riya Dental Clinic, At- Station Road, Rourkela	Dr. Suman Mishra	Dr. Suman Mishra, BDS	443/05		26-07-2008	25-07-2009
17	Suraj Hospital & Research Centre, Vedabyas Chowk, Rourkela	Dharman Shaw	Dr. Bharat Chandra Pradhan, MD- Paed	465/05	14	05-12-2012	04-12-2014
18	Super Speciality Hospital, N-18, Civil Township, Rourkela	Dr. Ajit Gopal Samal	Dr. Ajit Gopal Samal, MS	651/07	24	30-03-2013	29-03-2015
19	Akhandamani Diagnostics Centre, STI Chowk , Rourkela	Kiranbala Dalai	Dr. Bishnu Charan Mishra, MD(Patho)	687/07		28-06-2008	27-06-2009
20	Kalinga Trauma Hospital, Rourkela	Dr. Uttam Ch. Jena	Dr. Uttam Ch. Jena, MS	490/14	25	10-08-2014	09-08-2016
21	Purniman Nursing Home, Main Road, Jhirpani, Rourkela	Dr. Madhusudan Sahoo & Others	Dr. Madhusudan Sahoo, MD-OG	730/07	20	21-08-2014	20-08-2016
22	Rourkela Life Line Pvt. Ltd., Civil Township, Rourkela	Dr. Sajjan Ku Agarwalla	Dr. S.K.Agarwalla	858/07	61	26-11-2011	25-11-2013
23	Ambika Diagnostic, STI Chowk, Rourkela	Sanjaya Ku.Jena	Dr. Bijaya Ku. Pradhan, MD	874/07		10-12-2008	09-12-2010
24	Tarini Poly Clinic J.B.Market STI Chowk, Rourkela	Banalaxmi Satapathy	Dr. Ketan Kumar Dutta, M.B.B.S.	875/07		07-12-2007	06-12-2008
25	National Poly Clinic, Shop No.-M/10, N.A.C. Market Sector-2, Rorkella-6	Saroj Kumar Samal	Dr. Akshaya Ku. Samantaray, MD (Patho)	894/07		22-12-2008	21-12-2010
26	Roy ultrasound Centre & Infertility Clinic, Janata Bipin Market, STI Square, Rourkela	Dr. Rajat Kumar Roy	Dr. Rajat Kumar Roy	898/07		27-12-2008	26-12-2010
27	Om-X-Ray, Infront of RGH, R.D.A. Market Complex, Rourkella-4	Mr. Swarup Ranjan Mohanty	Dr. Prabat Sen	902/08		29-12-2010	28-12-2012
28	Gayatri Dental Care Centre, E-96, Koel Nagar, Rourkella	Dr. Bandini Bhoi, B.D.S.	Dr. Bandini Bhoi, B.D.S.	906/08		03-01-2008	02-01-2009
29	Logos Oral & Dental Clinic, Kacheri Road, Rourkella-12	Dr. Rita Glori Tappo, B.D.S.	Dr. Rita Glori Tappo, B.D.S.	907/08		03-01-2008	02-01-2009
30	Sidhartha Dental Care, Kacheri Road, Rourkella-12	Dr. S. Majhi, B.D.S.	Dr. S. Majhi, B.D.S.	908/08		03-01-2008	02-01-2009
31	M.J.Dental Clinic-6, Udayan Shopping Arcarle, Uditnagar, Rourkella	Dr. Jyoti Swain, B.D.S.	Dr. Jyoti Swain, B.D.S.	909/08		03-01-2008	02-01-2009

Sl. No.	Name of the Clinical Establishment	Name of the Proprietor	Name of the I/C Doctor	C.E Regd. No.	Bed Strength	Period of Validity	
						From	To
32	Lasen Dental Clinic, STI, Rourkella	Dr. Subodha Kumar Meher, B.D.S.	Dr. Subodha Kumar Meher, B.D.S.	910/08		3-01-2008	02-01-2009
33	Smiline oral & Dental Care, 684, New Ispat Market, Rourkella-5	Dr. Chandan Maity, B.D.S.	Dr. Chandan Maity, B.D.S.	911/08		03-01-2008	02-01-2009
34	City Dental Clinic Panposh Road, Rourkella	Dr. Ranjan Kumar Patel, B.D.S.	Dr. Ranjan Kumar Patel, B.D.S.	12/08		03-01-2008	02-01-2009
35	Pathology Clinic, J.B.S. Complex uditnagar, Rourkella	Dr. Sangita Mohapatra	Dr. Sangita Mohapatra, MD (Patho)	917/08		05-01-2008	04-01-2009
36	Rasmi Poly Clinic Shop No.-9, STI Square, Rourkella	Dr. Birendra Kumar Nayak	Dr. Uttam Charan Sahoo, MD (Radio)	919/08		05-01-2008	04-01-2009
37	OMM Diagnostics, Shope No.-681, Ispat Market, Rourkella	Dr. Bijaya Laxmi Pattnaik	Dr. Bijaya Laxmi Pattnaik	920/08		05-01-2008	04-01-2009
38	Meher Eye Hospital, Uditnagar, Rourkella	Dr. Ramachandra Meher, MD	Dr. Ramachandra Meher, MD	924/08		11-01-2008	10-01-2009
39	Prasad Clinic & Diagnostic Centre, Shope No.-691, Ispat Market, Rourkella	Anu Ranjan	Dr. S. Chakravarty, MD	925/08		11-01-2009	10-01-2011
40	Prashanti Diagnostics, At.-Ambagana, Rourkella	Jyostna Panigrahi	Dr. Bijaya Laxmi Pattnaik, MD (Patho)	930/08		15-01-2008	14-01-2009
41	Medico Diagnostics, Udayan Market, Uditnagar, Rourkella	Dr. Satyanarayan Kar	Dr. Bijaya Laxmi Pattnaik, MD (Patho)	946/08		18-01-2009	17-01-2011
42	Verma Eye Hospital, STI Chowk, Rourkella	Dr. P.K.Verma, MS	Dr. P.K.Verma, MS	947/08		18-10-2009	17-01-2011
43	Life Line Diagnostics, S.T.I. Chowk, Rourkella	Mrs. Renu Anand	Dr. Bijay Ku. Sahoo	994/08		28-02-2008	27-02-2009
44	Dental Clinic, Uditnagar, Rourkella	Dr. Sujata Rath, MDS	Dr. Sujata Rath, MDS	995/08		28-02-2008	27-02-2009
45	Life Diagnostic Center, Rourkella	Mrs. Renu Anand	Dr. Sanghita Mohapatra, MD	996/08		28-02-2008	27-02-2009
46	Diagnostic Point, Mahatab Road, Rourkella	Dr. Namita Pattanaik	Dr. Namita Pattanaik, MD	1004/08		28-02-2008	27-02-2009
47	Fracture and Orthopedic Clinic, At.-Shop No.-34, Market Complex, Rkl.	Dr. Kastu Sahu	Dr. Kastu Sahu	1027/08		19-03-2009	18-03-2011
48	Pasayat Clinic, B/20, NAC Market Sector-2, Rourkella	Dr. Milan Pasayat	Dr. Milan Pasayat	1028/08		19-03-2008	18-03-2009
49	The Care (H.M.Collection Centre, Laxmi Market, Sector-19, Rourkella.	Jayanta Kumar Das	Dr. B.C.Mohapatra	1081/08		0-04-2008	29-04-2009
50	Rourkela Vedvyas Lions Eye Hospital, Civil Township, Rourkella.	Sunil Kumar Goutam	Dr. Alok Pati, M.S(Optha)	1106/08	9	25-07-2013	24-07-2015

Sl. No.	Name of the Clinical Establishment	Name of the Proprietor	Name of the I/C Doctor	C.E Regd. No.	Bed Strength	Period of Validity	
						From	To
51	Abhya Clinic Mari Road, Rourkella	Sanabjeet Kour	Dr. G. Kar	1113/08		16-08-2008	15-08-2009
52	Vesaj Patel Hospital, Plot No.H-4, Civil Township, Rourkela-4	Dr.Bijay Kumar Sahu(MD)	Dr. Yugeswar Patel,MS	1117/08	75	01-09-2013	31-08-2015
53	Vikash Pratistan, Deogan, Boneigarh	Dr. Ranjit Rath	Dr. Ranjit Rath, MBBS	297/04		11-02-2004	11-02-2006
54	Bharati Sevashram, Sangha Hospital, At/Po- Subdega, Kuramkela	Swami Ambika Nanda	Dr. Durga Ch. Naik	333/04	50	17-05-2004	16-05-2006
55	Karunamayee Nursing Home, At/Po- Biramitrapur, Sundargarh.	Swapna Kumar Basak	Dr. Uttam Ch. Jena, MS	358/04	10	27-08-2006	26-08-2008
56	B.M. Memorial Hospital, Rangadhipa	Dr. Sarat Ch. Mishra	Dr. Sarat Ch. Mishra, MBBS	441/05		21-07-2005	20-07-2007
57	Gupta Diagnostics, Sundargarh	Ranjit Kumar Gupta	Dr. Silwanti Jago, MD Patho	976/08	0	14-02-2008	13-02-2009
58	Mother Sai Patho Lab., Shope o.-26, Municipality Market Complex	Sri Anil Prasad Panda	Dr. Kalidas Padhi, MD-Patho	1011/08	0	03-03-2011	02-03-2013
59	Subhasini Patho Lab., B.T.Road, Sudergarh	Mr. Debabrata Nayak	Dr. Chakradhar Pradhan, MD-Bio	1014/08	0	07-03-2015	06-03-2017
60	Tushara Diagnostic (Patho. Lab.), At.- Hospital Road	Amar Ranjan Barik	Dr. Kalidas Padhi, MD Patho	1046/08	0	03-04-2012	02-04-2014
61	Sri Sai Patho. Lab., Hospital Road	Sunil Kumar Dutta	Dr. Kalidas Padhi, MD Patho	1091/08	0	02-06-2013	01-06-2015
62	Santi Clinical Lab, Hospital Road, Sundargarh.	Jayashree Gochiayat	Dr.Silawanti Jojo, MD, Path.	1129/08	0	25-10-2008	24-10-2009
63	Sri Krishna Path.Lab, Tushar Market Complex.	Prasanna Ku Das	Dr.Silawanti Jojo, MD, Path.	1144/08	0	15-12-2008	14-12-2010
64	St.Jpseph's Dispensary ,Harsmara Guandiadihi	Sister Kabita	Dr.Valerian Tigga MBBS	1247/09	6	05-12-2009	04-12-2011
65	Shree Jagganatha Maternity Care Center House no.C/655 Koelnagar, Rourkela	Dr.Harish Das	Dr.Harish Das	1248/09	4	09-12-2013	08-12-2015
66	Pulse Diagnostic Centre, Shop No-B.S.- 22/23, Gajapati Market Complex, Rourkella.	Smt. Bijayalaxmi Nayak	Dr. Gitanjali Satpathy	1262/10	0	29-03-2010	28-03-2012
67	Deisha Hospital, Misson Road, Plot No- 663	Mrs. Hara Mohini Sarangi	Dr. Ajit Gopal Samal(MS)	1290/10	9	13-12-2010	12-12-2012

Sl. No.	Name of the Clinical Establishment	Name of the Proprietor	Name of the I/C Doctor	C.E Regd. No.	Bed Strength	Period of Validity	
						From	To
68	Hi-Tech Medical College & Hospital, Health Park near RGH Campus,Ruorkela	Dr. Tirupati Panigrahi, Chairman& CEO	Dr. Chitta Ranjan Kar (MS)	1292/11	300	14-01-2013	13-01-2015
69	M/S Catholic Mission Hospital,At:-San Nuagaon,P.O:- Chikatmati,Via:- Kalinga	Fr. Joe Mamnam parambil S.V.D	Dr. Valerian Tigga,MBBS	1329/11	50	19-05-2011	18-05-2013
70	Aastha Mother & Child Care Hospital, At:-Hotel Nidhi Complem,Power House Road, Rourkela	Dr. Partha Sarathy Lall	Dr. Partha Sarathy Lall(MD- Paediatrics)	1348/11	40	15-10-2013	14-10-2015
71	Bisoi Patho Clinic,Hospital Road,Sundergarh	Dayanidhi Bisoi	Dr. Janet Khalkho,md-patho	1363/11	0	17-11-2013	16-11-2015
72	Ray Hospital & Test Tube Baby Centre,N/18,Civil Township, Rourkela,	Rajat Kumar Ray	Dr. Rajat Kumar Roy	1480/13	20	11-01-2013	10-01-2015
73	Ashadeep Hospital,Rajgangpur	Asha Kiran Kujur	Dr. Asha Kiran Kujur,MBBS	1476/13	20	09-01-2015	08-01-2017
74	Avinash Hospital, Infront of Indera Plaza	Dr. N.C Patel	Dr. Nimain Charan Patel,MD	1502/13	25	20-03-2013	19-03-2015
75	Sriya X-Ray ,B/6-7, Jagannath Complex,Udit Nagar,Rourkel-12	Ashok Kumar Mahapatra	Dr. Probal Sen,MBBS	1569/13	0	01-10-2013	30-09-2015
76	CURE Hospital, 0000/9, Civil Township,Rourkela	Dr. Kastu Sahu & Dr. Dillip Ku Sahu	Dr. Kastu Sahu,MS-Ortho	1593/13	20	08-11-2013	07-11-2015
77	Bez-X-Ray Clinic, Hospital Road, Sundergarh	Narayan Chandra Patel	Dr. Ambika Prasad Parida,MBBS	1607/13	0	30-11-2013	29-11-2015
78	Shanti Seva Sadan, Main Road, Rajgangpur, Sundergarh	Jayadeb Dash	Dr. Jayadeb Dash,MBBS	1619/13	16	09-12-2013	08-12-2015
79	Health care Hospital, Medical Road ,L.L-5, Civil township, Rourkela	Kastu Sahu	Dr. Kastu Sahu,MS-Ortho	1754/14	20	30-10-2014	29-10-2016
80	AAROGYA Nursing Home, Infront of C.D.M.O Office, Sundergarh	Chinmaya Nayakl	Dr. Bijay Kumar Lamay	1762/14	9	19-11-2014	18-11-2016
81	Subhas Bose Hospital, Subhash Chowk, Rajgangpur, Dist- Sundargarh	Dr. Dalvindra Singh Bhangu	Dr. Dalvindra Singh Bhangu, M.B.B.S	1779/15	10	09.01.2015	08.01.2017
82	Ashadeep Hospital, Mission Hata, Rajgangpur	Dr. Asha Kiran Kujur	Dr. Asha Kiran Kujur	1476/13	20	-	-

**APPENDIX- LVI: Abstract of the Report of Annual Health Survey Conducted by the Registrar General of India, 2012-13,
Health Indicators of Child and Maternal Health Care in Sundargarh and Odisha**

Issue	Indicator		Total	Rural	Urban
			(Figures in %)		
Ante-natal Care	Married pregnant women (15 to 49 years) registered for ANC	Odisha	79.8	79.7	80.6
		Sundargarh	83.5	85.2	79.6
	Mothers who received any Antenatal check-up	Odisha	98.0	97.9	98.1
		Sundargarh	98.4	98.2	99.1
	Mothers who had Ante-natal check-up in first Trimester	Odisha	71.4	70.1	79.5
		Sundargarh	71.7	68.1	80.8
	Mothers who received 3 or more Antenatal care	Odisha	81.9	91.0	87.6
		Sundargarh	84.1	81.7	89.9
	Mothers who received at least one Tetanus Toxoid (TT) injection	Odisha	97.6	97.6	97.8
		Sundargarh	98.2	97.9	98.8
	Mothers who consumed IFA for 100 days or more	Odisha	31.2	30.3	36.9
		Sundargarh	33.6	33.6	33.6
	Mothers who had full Antenatal check-up	Odisha	27.8	26.8	34.5
		Sundargarh	31.6	31.6	31.8
Mothers who got ANC from Govt source	Odisha	55.9	57.0	49.3	
	Sundargarh	80.5	90.1	57.0	
Mothers who underwent ultrasound	Odisha	46.8	43.7	66.6	
	Sundargarh	42.7	33.4	65.7	
Delivery care	Institutional delivery	Odisha	80.8	79.8	86.9
		Sundargarh	80.9	77.9	88.2

Issue	Indicator		Total	Rural	Urban
			(Figures in %)		
Delivery at Government institution		Odisha	70.8	72.5	60.1
		Sundargarh	68.6	72.8	58.2
Delivery at private institution		Odisha	9.6	7.0	25.9
		Sundargarh	12.1	5.0	29.7
Delivery at home		Odisha	18.7	19.6	12.6
		Sundargarh	18.9	21.9	11.3
Delivery at home conducted by skilled health personnel		Odisha	24.5	23.8	31.9
		Sundargarh	29.7	28.6	34.9
Safe delivery		Odisha	83.7	82.5	89.1
		Sundargarh	84.5	82.3	90.1
Caesarean out of total delivery taken place in Government institution		Odisha	8.7	8.1	13.9
		Sundargarh	7.6	6.2	11.7
Caesarean out of total delivery taken place in private institution		Odisha	47.0	47.1	46.8
		Sundargarh	39.0	31.9	42.0
Post Natal care	Less than 24 hour stay in the institution after delivery	Odisha	52.4	54.6	39.4
		Sundargarh	32.1	33.5	28.8
	Mothers who received post natal check up within 48 hours of delivery	Odisha	82.5	82.1	87.7
		Sundargarh	84.4	81.5	91.6
	Mothers who received post natal check-up within one week of delivery	Odisha	86.5	85.8	90.7
		Sundargarh	89.4	87.2	95.0
	Mothers who did not receive any post natal check-up	Odisha	12.1	12.8	8.0
		Sundargarh	9.4	11.7	3.7
	New born who were checked-up within 24 hours of birth	Odisha	81.7	81.0	86.5

Issue		Indicator		Total	Rural	Urban
				(Figures in %)		
Janani Yojana	Surakshya	Mothers who availed financial assistance for delivery under JSY	Sundargarh	81.4	78.3	89.1
			Odisha	70.3	72.7	55.1
			Sundargarh	66.7	73.0	51.5
		Mothers who availed financial assistance for institutional delivery under JSY	Odisha	85.2	88.9	63.2
			Sundargarh	79.4	89.4	57.4
		Mothers who availed financial assistance for Government Institutional delivery under JSY	Odisha	95.1	96.0	88.2
			Sundargarh	92.3	94.7	84.7
Immunisation, Vitamin-A & Iron supplement and birth weight		Children aged 12-23 months having immunisation card	Odisha	95.4	95.3	96.2
			Sundargarh	94.6	93.7	96.9
		Children aged 12-23 months who have received BCG	Odisha	98.2	98.2	98.5
			Sundargarh	98.4	98.1	99.0
		Children aged 12-23 months who have received 3 doses of Polio vaccine	Odisha	82.0	82.0	81.9
			Sundargarh	89.7	87.1	96.2
		Children aged 12-23 months who have received 3 doses of DPT vaccine	Odisha	82.6	82.9	82.5
			Sundargarh	91.1	89.3	95.5
		Children aged 12-23 months who have received 3 doses of Measles vaccine	Odisha	89.2	89.2	89.0
			Sundargarh	92.6	92.0	94.3
		Children aged 12-23 months fully immunised	Odisha	68.8	68.9	68.2
			Sundargarh	82.9	80.1	90.0
		Children who did not receive any vaccination	Odisha	0.8	0.8	1.0
		Sundargarh	0.9	0.9	0.7	
	Children aged 6-35 months who received at least one Vitamin-A dose during last six month	Odisha	68.6	68.8	67.3	
		Sundargarh	71.3	73.6	65.8	

Issue	Indicator		Total	Rural	Urban
			(Figures in %)		
Childhood diseases	Children aged 6-35 months who received IFA tablet/ syrup during last three months	Odisha	25.3	25.7	23.1
		Sundargarh	38.6	41.9	30.6
	Children whose birth weight was taken	Odisha	86.5	86.0	89.4
		Sundargarh	87.3	85.6	91.6
	Children whose birth weight was less than 2.5 Kg	Odisha	21.6	22.0	19.2
		Sundargarh	19.9	20.4	18.8
	Children suffering from Diarrhoea	Odisha	14.0	14.1	13.2
		Sundargarh	15.1	15.8	13.1
	Children suffering from Acute Respiratory Infection	Odisha	25.4	25.1	27.3
		Sundargarh	15.0	14.0	17.9
	Children suffering from fever	Odisha	30.6	30.9	28.6
		Sundargarh	21.2	21.2	21.4



The former President of India, Dr. APJ Abdul Kalam on the eve of inauguration of OCL Eye Centre at Rajgangpur



A panoramic view of L V Pradas Eye Institute (OCL Eye Centre) at Rajgangpur

Plate: 5- The former President of India, Dr. APJ Abdul Kalam on the eve of inauguration of OCL Eye Centre at Rajgangpur (Top), Khandadhar waterfall (Bottom) A panoramic view of L V Pradas Eye Institute (OCL Eye Centre) at Rajgangpur

Chapter- XIV

PLACES OF INTEREST, TOURISM, GAMES AND SPORTS



Places of Interest

Sundargarh District has distinct identity both in the history and mythology. The 1st chapter of the Gazetteer gives a vivid account of the mythology behind drafting of the great epic, the Mahabharata. The hills, valleys, tranquil forests, turbulent waters of rivers and rivulets across the District provide natural feast to the eyes of the nature lovers. Nevertheless, the urban landscape in the District also has been decorated with many man-made tourist infrastructures. The Government of Odisha, Department of Tourism and Culture (Tourism) has identified 15 places of Sundargarh as tourist's destinations.

Table 147: List of Tourists' Places Identified by the Government

Sl. No.	Name of the Place(CD Block)	Importance
1	Chhatri Hills (Badgaon)	Scenic Spot
2	Darjeeng (Lahunipada)	Scenic spot
3	Deodaraha (Balisankara)	Scenic spot
4	Goghar (Balisankara)	Religious centre & picnic spot
5	Ghogad Dham (Rajgangpur)	Religious center
6	Chandiposh (Rajgangpur)	Origin of river & scenic beauty
7	Junagarh (Hemgir)	Fort
8	Khandadhar (Lahunipada)	Waterfall & picnic spot
9	Mandira (Rajnggpur)	Water Reservoir &picnic sites
10	Mirigalota (Lahunipada)	Waterfall&scenic beauty
11	Rourkela	Steel Plant& eco-parks
12	Sundargarh	District headquarter
13	Ushakothi (Lefripada)	Scenic spot
14	Vedavyasa	Religious centre
15	Amco-Simco (Kuarmunda)	Historical place and scenic spot

- 1. Chhatri Hills** are located at a distance of 60 km from Sundargarh near Bargaon, which is a Block as well as Tahasil headquarter. The unique features of the hill are that it is a monolithic stone totally barren of trees, bushes and pebbles. Some caves and some ancient palaeographic marks are also found on the hill.
- 2. Darjeeng and Deodarha:** Situated 51 km from Rourkela, on National Highway No. 23, near the the river Brahmani, Darjeeng is a beautiful picnic spot. Deodarha a gorge is a two km walk from the National Highway.

3. **Ghogar** is situated at a distance of 27 km from Rourkela. One has to take a turn from Karamdih towards Subdega and proceed beyond. The site has a gorge on the river Ib, extending over five km and it is popular as a picnic spot. A naturally formed Siva Linga of black granite worshipped by the local people is an additional attraction. After rainy season when the water level of Ib comes down, the river passes through a narrow stone bed extending over five kilometers. The beautiful gorge with its sylvan background is a popular picnic spot. Sivaratri is celebrated at this site as an important festival.
4. **Ghogad Dham** is a religious centre of Saivite importance. Situated five kms from Rajgangpur in the downstream of the river Badjor below the Kansbahal dam, the site become filled with devotees carrying holy water in the Hindu month of Sravan. There is a linga of Lord Siva which is worshipped round the year and the site has been improved with construction of sheds and halls for the devotees and marriage blessings also take place in the temple there.
5. **Chandiposh** is an important scenic beauty that has the origin of the river Badjor nallah over which Kansbahal Dam stands. It is in Rajgangpur block situated at a distance of 20 kms in the extreme south amidst thick forest of Matia Reserve. One can negotiate the spot via Kahuchuan and travel on to Chandiposh crossing the village Chuliam. The perennial spring of Demul nallah will attract with its murmuring call. In the early hours of evening the lucky watchers can see wild animals coming to drink flowing water from the thickets.
6. **Junagarh (180 km):** A fort of historical and archaeological importance with some ancient caves having marks of tantra worship. It is four km from Hemagiri and 15 km from Kanika.
7. **Khandadhar:** The waterfall is situated on a perennial rivulet, called Korapani Nala, within a few kilometers of its origin. The fall lies in $21^{\circ} 45'$ and $85^{\circ} 7' E.$ in the village Nandapani under Bonaigarh Police Station. Amidst thick jungles, Khandadhar is a glittering waterfall created by a perennial rivulet called Korapani Nala within a few kilometres of its origin. 244 meters in height it is said to be the highest waterfall in Odisha. 19 km from Bonaigarh, it is approachable to its foothills by motor vehicles. Now, Khandadhar can be approached from Lahunipada via State Highway-10A.
8. **Mandira:** Situated in $22^{\circ} 18' N.$ and $84^{\circ} 38' E.,$ Mandira is known for the Dam across the river Sankh constructed for the supply of water to Rourkela and other industrial units in the vicinity. It is called Mandira Dam Project and is about 32 km (20 miles) from Rourkela, connected

by road. The Dam has been built at a point where the river enters a gorge flanked by hills and presents a picturesque sight. The construction started in 1957 and was completed in 1959. The length of the Dam is 445.008 meters (1460 feet) and its depth is 19.8120 meters (65 feet). Two Guest Houses have been built there for tourists and guests. The reservation authority is the Manager, Water Supply Plant, Hindustan Steel Limited, Rourkela. A circular road connects the Guest Houses located at a considerable height with the main entrance where an officer issues permits for visitors to enter the Dam area. As a visitor stands on the terrace of the Guest House or moves about in the lovely garden nearby, he sees around a continuous chain of hills at a distance varying from 15 km to 30 km. The cement factory at Rajgangpur is clearly visible on the left-hand horizon, as one stands facing the lake. The whole environment is highly refreshing. It is a nice place for holidaying. Taxi cabs ply from Rourkela to the Dam area. Boating facilities in the lake may be available with prior arrangement with the Dam authorities.

9. **Miriglotah:** It is a beautiful waterfall 111 km away from Rourkela which is very close to the Pradhanpat water fall in Deogarh District.
10. **Rourkela:** Rourkela is famous for the Steel Plant. The Rourkela Steel Plant has found place in the list of Tourists Attractions in Odisha. Besides, the Steel Plant, the Steel Township offers great deal of greenery to the eyes of the travelers. The Indira Gandhi Park, sprawling over 42 acres of land, managed and maintained by the Rourkela Steel Plant was once upon a time a park of its kind in the entire State and it was the pride of Rourkela. It had a Watch Tower and a Doll's Museum to attract huge crowd in the afternoons. The condition of the park has deteriorated in the recent days in want of proper maintenance, despite coming up of a aviary, mini zoo, aquarium and musical fountain. The over growths inside the park has become rendezvous of free lancing romantic pairs. The park is being developed ecologically to attract more sensible visitors in the wake of growing ecological concerns. In the meantime many other parks have come up in and around Rourkela city. Among those, the Green Park, Jubilee Park, Deer Park and Hanuman Vatika are important.
11. **Vedavyasa:** Situated in 22^o14' N. and 84^o 48' E, at the confluence of the rivers Sankh and Koel, Vedavyasa is one of the beauty spots of the District. Vedvyas is the name of a small hill on which there are three temples, two dedicated to Siva and one to Rama. In the temple of Rama, there are the images of Jagannath, Balabhdra and Subhadra, besides the usual trio: Rama, Lakshman and Sita. The

rivers Sankh and Koel meet here and the united stream flows south under the name of Brahmani. The place is about five km from Panposh and about 13 km from Rourkela, communicable by road. The place with its natural charm and relative calmness is an ideal picnic spot. The place stands as an attraction for tourists, pilgrims, poets and sight-seers.

Vedavyasa is a holy place and a dip in the holy water at the confluence of the two rivers is believed to wash away sins. The premier festival of the place is Sivaratri (held in February-March) which is popularly called Vedavyasa Mela. A week-long concourse takes place on that occasion at the foot of the hill. During the fair, about 50,000 persons from far and near visit the place, the largest gathering is, of course, on Sivaratri day itself. As elsewhere, devotees of lord Siva keep themselves awake throughout the night. Sitting near the temple with earthen lamps they mediate till dawn when the priest of the temple signals the end of the night by raising a light (Maha Deepa) on the spire of the temple.

Devotes also flock to the two Siva temples of Chandrasekhar and Balunkeswar atop the hill on Mondays. Tradition associates the river Brahmani with the scene of the amour of sage Parasara with the fisherman's daughter Matsyagandha, the offspring of which was the reputed Vedavyasa whose name the place bears. The ruins of a cave are pointed out by local people as the place where Vedavyasa lived and composed the great epic 'Mahabharat'. The tradition has inspired many poets of Odisha to write beautiful poems about the sanctity and beauty of the place of which mention may be made of the poem 'Vedavyasa' by poet Gangadhar Meher which gives a charming account of the natural beauty and the legends associated with the place. The Vedic Ashram, established under the aegis of the Arya Samaj since 1957, is maintaining here one Ayurvedic Dispensary, and a school on the lines of Gurukula Ashram. There is an Inspection Bungalow at Vedavyasa.

12. **Birmitrapur:** Birmitrapur is an industrial town situated in $22^{\circ} 23'$ N. and $84^{\circ} 44'$ E. It is in the north of Panposh Sub-Division. A branch railway line connects this place with Rourkela. By road it is 40 kms (25 miles) from Rourkela. The town has grown because of the extensive occurrence of limestone deposits around the place which is the largest in Asia. The open-cut limestone quarry here is said to be the largest in India. The town is named after Birmitra Pratap Sekhar Deo, a former ruler of Gangpur. The old name of the place was Raipura.

The Bisra Stone and Lime Company Limited., which owns a limestone and dolomite quarry at Birmitrapur provides educational, medical and recreational facilities to its employees and workers. The employees are provided with quarters on easy terms. The company has their headquarters office here. The town is a market place for nearby population. Except for the colony of the Stone and Lime Company the town has grown in a clumsy manner and is bifurcated by the railway line. The civic affairs are managed by a Notified Area Council. The town contains four churches, a mosque and the temples of Jagannath, Gupteswar Siva, Ranisati and Samaleswari. There is a Police Station, a hospital, a veterinary dispensary, a H.E. School, a cinema house and an Inspection Bungalow.

13. **Bisra:** Bisra, a village and railway station on the Howrah-Bombay section of the South-Eastern Railway, is situated in $22^{\circ} 15'$ and $84^{\circ} 59'$ E. It is 18 kms from Rourkela by road. Formerly it was an important business and industrial centre. The first mention of the occurrence of limestone and dolomite in the ex-Gangpur State (Present Sundargarh and Panposh Sub-Divisions) was made by the eminent geologist V. Ball in 1877. Large-scale quarrying for limestone and dolomite commenced from about 1910 near Bisra railway station. The Bisra Stone and Lime Company Limited with their headquarters at Bisra, had constructed large lime kilns here and the lime manufactured by them became well known in Calcutta (Kolkata) market as Bisra Lime. About 1922, the company closed their operations here and shifted their activities to Raipura (subsequently known as Birmitrapur) where limestone and dolomite were found in enormous quantities. The busiest part of the village called Bisra town has grown at a distance from old Bisra village. Headquarters of a Police Station and a Community Development Block, the place has a hospital, a High English school, an Inspection Bungalow and some small industrial units.

Near Bisra (at Khuramanjan Nala), Abhoya Singh, who had joined hands with Surendra Sai against the British was murdered in 1856 by the Zamindar of Nagra with the help of the Bhuiyan headman while he was at prayer. Abhoya Singh was the younger brother of Maharaja Arjun Singh of Porahat.

14. **Bonaigarh:** Situated in $21^{\circ} 49'$ N. and $84^{\circ} 57'$ E., Bonaigarh is the headquarters of Bonai Sub-Division and is on the river Brahmani, 72 km (45 miles) south of Rourkela. It was also the capital of Bonai ex-Sate. Bonai derives its name from its forests, i.e., 'Bono' or 'Bana' as they are called in Odia. The river surrounds it on the north and the

east. It is no more than a populous village. Bonaigarh is now easily communicable throughout the year after a high level bridge over the river Brahmani has been commissioned in 2004. A ferry is, however, maintained in the downstream for directly landing on the town.

The ex-Ruler's palace stands at the end of a wide road with rows of houses on either side. Important temples of the place are that of Radhakrushna, Baneswara, Kumari, Hanuman and Jagannath. Kumari (Durga) is the family deity of the ex-Ruler. Bonaigarh's memorable festival is the Chaita Parva in which, despite its tribal origin, all castes, high and low, participate. The festival takes place in April. Chhau dance is a special feature on the occasion.

Bonaigarh contains a hospital, a Sub-Jail, Circuit House, A Police Station, usual Sub-Divisional courts and office buildings, Tahasil Office, a college, a Boys' H.E. School, a Girls' H.E. School, an Elementary Training School, Sub-Divisional Office of Rural Engineering Organization, Divisional Forest Office and Block Development Office.

15. **Gangpurgarh:** Gangpurgarh, a village in Sundargarh Police Station, is situated in $20^{\circ} 13'$ N. and $84^{\circ} 5'$ E. It is on the right bank of the river IB and is about 16 km (10 miles) to the north of Sundargarh. It was at one time the seat of the ruler of the ex-State of Gangpur. From Masabira, the seat of administration was removed to Gangpurgarh by Raja Gangadhar Sekhar Deo, where he founded a new capital on the bank of the river IB which was named after him as Gangadharpur, later on as Gangpurgarh. His kingdom was known as Gangpur after the headquarter town. Again, early in the 19th century Raja Indra Sekhar Deo shifted his headquarters from Gangpurgarh to Raibogagarh. Gangpurgarh contains some relics indicative of its former importance.
16. **Hatibari:** Hatibari, a village in Bisra Police Station, is situated in $22^{\circ} 24'$ N. and $84^{\circ} 51'$ E. it is near the northern border of Panposh Sub-Division. It is 19 km (12 miles) north east of Kuanrunda and 33 km (20 miles) from Rourkela, connected by road. It contains a police outpost, High English School and a Dispensary. Tata Iron & Steel Company has its limestone quarry and staff colony here. They have been quarrying limestone since 1946 and dispatching it to their steel plant at Jamshedpur. The Hindustan Steel Limited has its limestone quarry at Purnapani, 3.2 km east of Hatibari. Population was 1,070 in 1971.

17. **Hemgir:** Hemgir, a large village with a Police Station, is situated in 21° 56' N. and 83° 42' E. It is also spelt as Himgiri, Himgir and Hemagiri. An important village in the western part of the District, it was the seat of a Zamindar. Nine kilometers to its south-east there is a railway station on the Howrah-Bombay line named after it. The village has a few large tanks to its south and west. The ex-Zamindari of Hemgir has extensive deposits of coal. The village is the headquarters of a Block Development Office and contains a Rest House, Sub-Divisional Office of Rural Health Organization, Tahasil Office, a Dispensary, Police Station, Post Office, a Veterinary Hospital, a High English School and a Middle English School, a Micro-wave Wireless Station belonging to the Government of India.

Junagarh and Manikmunda, which are places of historical importance, lie at a distance of about three kms to the north of Hemgir. They contain some ancient monuments, which have been discussed in Chapter II.

18. **Jagatgarh:** Jagatgarh, a small village in Sundargarh Police Station, is situated in 22° 9' N. and 84° 5' E. It is on the left bank of the river Ib and is about eight kms to the north-east of Sundargarh. During the 19th century it was a Garh (fort) under the Gangpur ex-State. Remnants of the old fort are still to be seen here. Raja Jagadev Sekhar Deo shifted the capital from Nabarangpur, also called Laing (near Rajgangpur), to this place which was called after him as Jagatgarh. For sometime in the fourth and fifth decades of the 19th century it was the capital of Gangpur. From jagatgarh, the capital was shifted to Suadih by Raja Janardan Sekhar Deo probably towards the middle of the 19th century. The name Suadih was later changed to Sundargarh sometime during 1908-10; the village has a temple dedicated to Samalai, the popular goddess of western Odisha.
19. **Kalunga:** Kalunga, is situated in 22° 12' N. and 84° 44' E., is a small village and railway station in Raghunathpali Police Station. The village is about 16 kms (10 miles) to the west of Rourkela beside the road leading to Rajgangpur. In 1928, Kalunga was made the headquarters of Nagra Zamindari which became a full-fledged Sub-Division under Gangpur ex-State. In 1944, the Sub-Divisional headquarters shifted to Panposh from Kalunga. Bonaigarh is approached from here by a fair-weather road running on the west of the Brahmani. The village has a church and is a centre of the Roman Catholic Mission. The Mission, under the charge of a Bishop, runs a dispensary, a milk distribution and a few educational institutions. There is a Rest House. The 50

bedded hospital of the Mission has been relocated with modern amenities at San-Nuagaon on the SH-10 near village Mandiakudar.

Close to Kalunga there is an ECO-TOURISM site in Pitamahul Dam. It has a captivating catchment site one can enjoy from the embankment of the dam. Facilities have been built for picnic parties.

- 20. Kansbahal:** The Utkal Machinery Limited is located at Kansbahal, which has also a railway station. Situated in 22° 12' N. and 84° 40' E, in Rajgangpur Police Station, it is on the Sundargarh-Rourkela road and is 14 km east of Rajgangpur and about 24 kms west of Rourkela. The Utkal Machinery Limited is an Indo-German enterprise and it manufactures machine parts. It started production in October 1962 with an employment potential of 1,400 persons. The company provides residential quarters for its employees inside the colony.

Very close to Kansbahal stands Kansbahal Dam south of the town. The scenic beauty of the catchment is very enchanting and the picnickers enjoy the place. Late picnickers can be lucky to watch herds of pachyderm crossing the shallow waters in the upstream of the reservoir in the early hours of the evening.

- 21. Kuanrunda:** Kuanrunda, the headquarters of Nagra Zamindari situated in 22° 16' N. and 84° 46' E., is an important village in Birmitrapur Police Station. There is a railway station on Rourkela-Birmitrapur branch line and is 14 kms from Rourkela on Rourkela-Birmitrapur road. Situated close to Vedavyasa, the place stands on an elevated land with a moat-like shallow (partly cultivated and partly with standing water) encircling it. The village was the seat of a former Zamindar under the Gangpur ex-State. It is the headquarters of Block Development Office and contains one Dispensary, one H .E. School, an Elementary Training School, an Inspection Bungalow, Tahasil Office, Forest Range Office, a Veterinary Dispensary, a Dairy Farm, a Cold Storage Plant. There are a few temples including one dedicated to Radhakrushna.

- 22. Lathikata:** Lathikata is a village under Raghunathpali Police Station of Panposh Sub-Division and is about 14 kms from Rourkela on the Rourkela-Bonai road. There is a railway station; thus it is connected with Rourkela both by road and by rail. Here the Odisha Industries Limited has a Refractory Plant which was started in 1963. It manufactures fire-bricks and the monthly production is about 3,000 tones. It provides employment to about 700 persons. There is a small colony for the employees with a population of about 500. A Grama Panchayat, a Panchayat Samiti, a Veterinary Dispensary are located

here. There is a recreation club called Orinds Recreation Club and a Siva temple, both constructed by the Plant.

- 23. Lephripara:** Lefripara, a village and headquarters of a Police Station in Sundargarh Sub-Division is situated in $22^{\circ} 6' N.$ and $83^{\circ} 48' E.$, on the bank of a rivulet named Ichha, a tributary of the Ib. It is 27 kms (16 miles) west of Sundargarh and is connected by a fair-weather road. The village is also the headquarters of a Community Development Block. Lephripara area is reported to contain large deposits of dolomite. In a reserved forest about 20 kms from this place there is a rock shelter measuring 15.24 metres or 50 feet called Ushakothi which contains primitive paintings. For details see Chapter II.
- 24. Panposh:** Situated in $22^{\circ} 13' N.$ and $84^{\circ} 48' E.$, Panposh is locally called Uditnagar, named after Udit Pratap Sekhar Deo, the late ruler of Gangpur ex-State. It lies on the road between Sundargarh and Rourkela and is also easily reached by railways. Being the headquarters of Panposh Sub-Division the State Government offices, viz., Sub-Divisional Office, Police Office, Courts, Sub-Jail, Commercial Tax office, Employment Exchange, Regional Transport Office, Office of the District Inspector of Schools, etc are situated here. The town has grown in importance on account of the Rourkela Steel Plant being set up in its vicinity. The confluence of the two rivers, Sankh and Koel at nearby Vedavyasa is one of the beautiful spots in the District.
- 25. Rajgangpur:** Rajgangpur is an industrial town and trading in Sundargarh Sub-Division. Situated in $22^{\circ} 11' N.$ and $84^{\circ} 35' E.$, it is one the Howrah-Bombay Section of the South-Eastern railway and on the Sundargarh-Rourkela road. It is 64 km (40 miles) from Sundargarh and 43 km (28 miles) from Rourkela. Rajgangpur was first classified as a town in 1961 Census comprising of 26.16 sq. km area in the villages of Ranibandh, Liploi, Kumarkela, Bhatollo, Rajgangpur and Jarmal. Kumarkela is the old section of the town. The railway station of Kumarkela was named Rajgangpur and the town is known by that name. The town is full of narrow lanes except for the colony of the Odisha Cements Limited. The Odisha Cement Limited, Dalmia Enterprise, has a cement factory and a Refractory here. The civic affairs of the town are managed by a Municipality. It is the headquarters of a Tahasil, Courts of Civil and Criminal Magistrate, Community Development Block (Panchayat Samiti) and it contains a Police Station, an Inspection Bungalow, a H.E. school, a College, a good Hospital, a Cinema house and a Telephone Exchange Office. Rajgangpur is a centre of the Christian Missionaries. Here the German Evangelical Mission has been at work since 1899, and has its

settlement. This is said to be the oldest Mission functioning in the District.

The R. C. Church has developed much faster here from regular establishment of a Parish in 1961. The St. Mary's Church as it is called has a Girls' High School, a Vocational Training Centre (VTC), a Dispensary and the Nirmala English Medium School. There is a good church at Ranibandh, which is the headquarters of S.P.G., Christian Mission, now Church of North India (CNI).

- 26. Sarapgarh:** Sarapgarh, a village in Lephripara Police Station, situated in $20^{\circ} 10'$ N. and $83^{\circ} 44'$ E., is 35 km (22 miles) west of Sundargarh town. The place is sometimes identified by scholars with Sarabhapura, the headquarters of the ancient Sarabhapurias ruling family (6th century A.D.). The first of the Sarabhapurias was one Sarabharaja after whom the dynasty and the capital were named. The association of this place with Sarabhapurias family is yet to be corroborated by archaeological finds. Local people also call the village Sarapagarh (Sanskritised from Sarpagarg, i.e., the Snake-fort). According to Cobden-Ramsay, Sarapgarh "derives its name from a cave, said to be occupied by a snake family, which the rural population have for ages worshipped". Sarapgarh was a Bhuiyan feudatory (Zamindari) of Gangpur ex-State.
- 27. Sargipali:** Situated in Lephripara Block and Tahasil, Sargipali is 30 km from Sundargarh town and is an important rural centre with a prosperous agricultural hinterland. The nearest railway station Jharsuguda (in Sambalpur District) is 54 Km from the place. Its lead mines were one of the most important resources for the country. The Hindustan Zinc Ltd. Has mined the zinc from the area. There is no more exploration at present. The buildings and staff quarters of the HZL are now being given to the Navodaya Vidyalaya Samiti for running a Navodaya Vidyalay at the site.
- 28. Sundargarh:** Sundargarh is the headquarters town of the District, situated in $22^{\circ} 7'$ N. and $84^{\circ} 2'$ E., on the left bank of the river Ib. It is 35 Km (22 miles) north of Jharsuguda, which is the nearest rail-head on the Howrah-Bombay section of the South-Eastern Railway. The Sambalpur-Rourkela road also passes through Sundargarh. The town extends around a large tank with a hillock nearby but its busy part has a clumsy growth. Its expanding market is fairly busy. The ex-Ruler's palace is an imposing building on an extensive area with a surrounding well. Near the palace is the Durbar Hall built in 1917. The Collectorate and many other offices and courts are housed in a fine looking spacious red building called 'Katcheri'. This building, meant to

accommodate the departments of the State, was opened in 1914 by the Governor of Bihar and Odisha. The building when built was the largest of its kind in the Eastern State. Near about the 'Katcheri' are many other office buildings and official quarters. The town has a college and several schools. It contains a number of temples of which important are those dedicated to the deities Jagannath (below the Hillock), Jagannath (inside palace compound), Vishnu, Radhakrishna and Samalei. Affairs of all these temples are managed by the Commissioner of Religious Endowments. The town has a Circuit House, an Inspection Bungalow and a Dharmasala (established in 1933).

29. **Tensa Township, Tensa:** Tensa, situated in $21^{\circ} 51'$ N. and $85^{\circ} 9'$ E., is 96 km from Rourkela on the south-east side. It is a hill resort with a township constructed by the Hindustan Steel, Limited.

Tourism in the District:

Accommodation: As per the statistics maintained by the Tourism Department, Government of Odisha, there are 14 High Spending Group Hotels with 607 rooms and 1154 beds in the District. The cost of accommodation in such hotels is above Rs.1000 per unit per day. There are 17 Middle Spending Hotels, with 516 rooms and 1004 beds. The cost of accommodation per unit per day varies between Rs.501 to Rs.999/- per unit per day. The number of Low Spending Group of hotels is 49 with 911 rooms and 1575 beds. Thus there are 80 hotels with 2034 beds and 3733 number of beds as in the year 2014. The description of hotel industry in the District is given in Chapter-V, Industries.

Tourist flow to different place of interest in the District as recorded by the Government in Tourism and Culture Department from 2012 to 2014 is as follows.

Table 148: Tourist Inflow to Different Tourist Spots of Sundargarh District from 2012 to 2014

Sl. No.	Name of the centre	2012			2013			2014		
		Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
2	Junagarh	54,751		54,751	46,329		46,329	47,208		47,208
3	Vedavyasa	4,74,969		4,74,969	4,82,483		4,82,483	4,96,299		4,96,299
4	Ushakothi	23,308		23,308	24,436		24,436	27,181		27,181
5	Mandira Dam	13,303		13,303	1,36,291		1,36,291	1,42,207		1,42,207
6	Khandadhar	2,20,538		2,20,538	2,21,853		2,21,853	2,23,139		2,23,139
7	Deodarah	64,035		64,035	66,420		66,420	68,626		68,626
8	Goghar	2,08,821		2,08,821	2,12,721		2,12,721	2,15,803		2,15,803
9	Darjeeing	79,956		79,956	80,011		80,011	82,616		82,616
10	Mirigatola	44,580		44,580	46,211		46,211	47,010		47,010
11	Chhatri hill	22,382		22,382	23,056		23,056	24,207		24,207
12	Sundargarh	58,744		58,744	59,089		59,089	43,568		43,568
13	Amco-Simco	-	-	-	-	-	-	-	-	-
	TOTAL	18,47,285.00	540	18,47,825	20,65,049	757	20,65,806	21,26,227	1,386	21,27,613
	Per cent increase from the previous year						11.8			2.99

Amco- Simco was identified in December 2014

Games & Sports:

- A. **Hockey, the Great Game of Fraternity:** Looks like the best act of fraternity of early Christians in the District in the village and far away a locality was the game of hockey. The history of the game tells that hockey was basically an English game brought to India by the Colonialists. The strange thing about this game is that whereas it is played by one and all in the Punjab, the game is played predominantly by the Christians in ChotaNagpore and that way the rising of both Dhyan Chandji and Jaipal Singhji to the level of national and international champions in hockey is almost contemporary in time. While Jaipal Singh was the product of Christianity, the schooling of Dhyan Chand has to be located in history, but the fact remains that the game of hockey has developed in the ChotaNagpore plateau with the coming of the Christian Churches of different denominations in the second half of the nineteenth century. Hockey became popular among the tribal people due to social and economic factors and both exacerbated each other. The game was damn cheap in terms of accoutrement; the playground could be any plain field with not much of rocks and pebbles, the goal posts had to be erected with locally available poles cut fresh from local sal or kendu sapling and embedded on the spot and the boundary lines were marked with the ash gathered from the nearby house of a benefactor.
- B. **Early Hockey Sticks:** The hockey sticks were made from the tender trunk of available tree or mature bamboo stocks. This could be done in three ways; one, readymade natural hockey stick shape branch of the kendu tree that was carefully cut from the mother tree and made to shape by adage (baisla). The selected tender trunk should not be too old to have pith formed in it but not too tender to bend on pressure either. This was the rare and fortuitous find of some lucky enthusiasts. The second method was to cut a straight sapling of kendu tree either growing on the ground or branching off on a tree, strong enough not to bend, cut it to size to measure a full length hockey stick after bending the root end rather than the tail end by exposing it to the live ember not the whole trunk but only the proposed root end to be bent, tie the rope roughly to give shape of the hockey stick after it is bent with the help of a tree root protruding from the ground and allow it to stay like that as long as the shape of the stick is not formed as per the formation done with the tied rope.

After the sapling has taken the shape of a hockey stick even after untying the rope, it can still be exposed to weather both sunray in the day and dew drops in the night for some days and then make a hockey stick exact to the specification by an adage. The third method is to cut a solid bamboo shoot old enough to resist bending in such a way that the bent root of the bamboo shoot is located and cut to measurement to make a hockey stick. This stick was lighter than the kendu stick and lasted shorter as well. The fourth method was to buy a hockey stick from the market. In the villages 99per cent of the hockey sticks used in the game both matches and otherwise were hand made in the indigenuous method even during 1950s and early 60s.

- C. **The Hockey Balls:** Hockey balls in the villages were made from the bamboo roots or from tumour growth of the kurlu tree or papda tree which were strong in terms of grains and had bright whitish colour. In the early days even hard hand wovan torn clothes were rope tied like a ball and used as hokey ball. At a later period, slightly stronger hockey balls were made from the burnt charcoal dust that was made charcoal balls with liquid plastic hot viscos as a binder. This charcoal dust ball lasted longer. Then, rubber balls,cork balls and leather balls came to be used. Now, in modern hockey turf balls are being used.
- D. **Formation of Teams-** The formation of teams in the friendly games was through the blindfold division of sticks with or without shuffling from the heap of sticks formed so after the players deposit them at the center of the field. In this way all the players learnt to play in all the positions according to the requirement. The matches were played to win the live trophies as murga (cocks), khasi (fatted castrated goats) or banda (fatted castrated boars). In the later years cups were introduced in the same name as the live trophy. Each village had the proud possession of a hockey field donated by a generous villager to promote brotherhood and enhance his social standing.
- E. **Early Hockey Stars-** In the early and transition years of modern'championship' in hockey that has a selection process, the villagers themselves opted position wise 'proficient' players while playing in own team matches. Then, those 'proficient players' were 'borrowed' by other villages to play their mtches as 'borrowed players', some of them getting some rewards as also remuneration for the play. However, one definite reward for the

borrowed players was that they became 'most prized bridegroom'. Some of the 'State players' from Sundargarh District were, Hardugan Topno, Louis Toppo, Ignace Hasda, Maurice Kujur, N. Marky, Isaac Lakra, Nicholas Lakra, Emile Lakra, Markas Lugun (Captain), Anthony Minj, Finian Lakra and a few others. It is a historical fact that in the fifties and sixties, the Odisha State team comprised Sundargarh Christian hockey players.

The spirit of hockey in the Mission Schools was maintained in the next generation in the sixties by developing well levelled playgrounds in Gaibira, Jhunmur, and Kusumdegi etc. All hockey players in the Colleges of Sundargarh and G. M. College of Sambalpur were from Sundargarh District and they also represented Sambalpur University.

- F. Role and activities of Sports Authority of India (SAI):** All India Sports policy was geared to train the coaches in Patiala and depute them to schools and colleges for normal drill classes and organisation of games and sports in the educational institutions. After locating the venue of international games and sports in India, particularly in Delhi with ASIAD (1982) games, the policy perspective of the Government took an international out-look both in terms of intensive as well as extensive development of games and sports talents through area approach and talent concentration approach. Thus, after 1987, Delhi hosted the training of coaches through Sports Authority of India (SAI) which was established then. In Sundargarh District, hockey had a spectacular performance at the State level and it was felt necessary to foster the game by way of talent search and early coaching.
- i. **National Sports Talent Coaching (NSTC)** scheme was launched in two High Schools, St. Mary's Girls' High School and B.S. High School in the District in 1991 for talent search and talent promotion for the students in the age group of 8-12 years in which another High School, Nabodaya Vidyalaya, located at Sargipali Zinc Nagar was adopted for athletics. In the St. Mary's it was for hockey, athletics, basket ball and volleyball and athletics and in B.S. High School it was for hockey, athletics, Volleyball and football.
 - ii. **Sports Promotion Scheme** was started by SAI in the District from 2002. Sports hostels were built for residential coaching with

studies in the schools nearby, Special Area Games Centres (SAG) were also located which later on identified in 80 Blocks of the State and in Sundargarh District projects were identified for hockey,athletics and archery. The Talent Search Centres were then reorganised as amalgamated training centres for all activities.

- iii. **District Sports Coaching Centre** was established for each District and the Centre still continues at Sankara. Special Area Games (SAG) Centre of SAI is continuing as the amalgamated training centre in Sundargarh starting with Mr.Bansal as the hockey coach in St. Mary's.The Coach in-charge of the centre is assisted by experts in the fields of hockey,athletics and archery.
- iv. **In the pocess, several coaches in hockey were made available** in the District like, Herman Lakra, Sylvester Toppo, Tejkumar Xess, Milton Bilung, Linus Ddungdung, James Ddungdung, Peter Tirky, Florentia Ekka and Lucela Ekka. They were good players at junior level and were selected for the State team as well as Sambalpur University.

Infrastructure for Hockey and Athletics:

- i. **Special Area Games (SAG) Centre, Sundargarh** is the reorganized amalgated Sai District office for Sundargarh District located at Sankara outskirts of Sundargarh town.It is a fully developed sports infrastrucuture with a hockey austro-turf and one 100 beded sports hostel for Tribal as well as general trainees accommodating 50per cent boys and 50per cent girls selected through sports talent search.Hockey, athletics and archery are the subject matter of specialisation. Presently, 80per cent accommodation is filled up. The SAG in charge is an Assistant Director of SAI and is assisted by the coaches in athletics, hockey and archery.
- ii. **Panposh Coaching Centre** was established with assistance of Rs. 1.00 crore from SAI in the initial phase and later was taken over by the department of Sports & Youth Affairs of State Government. This coaching centre is only for specialisation in hockey and the hostel has 100 beds combindly for boys and girls. The playground has two austro-turfs.

- iii. **SAIL Hockey Academy, Rourkela** is a PSU managed institution inially funded Rs 1 crore by SAI and later taken over by Rourkela Steel Plant.The play ground has austro-turf with full infrastructure.
- iv. **Other Stadium Infrastructures:** Private sector Companies like L&T Kansbahal, OCL India Rajgangpur and BSL, Birmitrapur have playgrounds with some facilities for different games.
- v. **Mini-Stadiums** have been built through State fund and M.P. and M.L.A. LAD fund, WODC (Western Odisha Development Council) and BRGF (Backward Region Grant Fund) in many block headquarters and Grama Panchayat headquarters of the District like District Headquarter Stadium, Tangarpali, Lefripada, Hemgir, Balisankara, Subdega, Badgaon, Kutura, Kusumdegi, Birsa Chowk, Rourkela, Jalda, Lathikata, Bonai, Guundia, Lahunipada, Koida, Nuagaon and Kuarmunda.

Emiment Sports Personalities of Sundargarh District:

Sundargarh District is credited with luminous sports personalities in hockey, atheletics and sports having shined at International, National and State level.The exhaustive list is long as the trend of accomplishment strides on.

- i. **Hockey has many accomplished international players** who have brought laurels to the country.They are the products of the sports infrastructure made available in the District.

Table 149 : Eminent Hockey Players of Sundargarh

Name	Place of Birth	Event Participed	Present Position	Remarks
MEN				
Peter Tirky	Jarangloi	Kualalampur	SAIL employee	Sports i/c SAIL Hockey Academy
Dilip Tirky	Saonamara	Olympiad, Captain, Indian Hockey team	M.P. (Rajya Sabha)	Has been trained from B.S.High School Coaching Centre.
Lazrus Barla	Tilaikani	Olympiad	Air India Executive	Panposh
Ignace Tirky	Lulkidid	International Word Cup,Olympic	Army	Panposh
Prabodh Tirkey	Lulkidih	International World cup, Azlam Shah Shah Match, Captain Indian Junior Hockey	Indian Airlines	Panposh
William Xalxo	Jhorabahal	International World Cup,Olempian	Indian OIL	Panposh
Birendra Lakra	Gurundia	International World cup,Olempian.		Sail Academy
Bikash Toppo	Saonamara	International matches,World Cup	Railways	SAI, Sundargarh
Sunil Ekka		International matches		Sail,Rkl
Starlin Victor Minj	Kesramal	International tournament	Railways	Panposh
Amit Ruhidas	Saonamara	International tournament	Railways	
Ekka				
Dipson Tirky	Saonamara	International tournament		Panposh & Sail Academy.
WOMEN				
Jyoti Sunita kullu	Dandjamura	International women hockey, Indian Captain	Railway	Panposh
Subhadra Padhan	Saonamara	International women hockey,Indian Captain	Railways	Panposh
Bineeta Xess	Mangarkunda	International matches	Railways	Panpoah
Bineeta Toppo	Lulkidih	International matches	Railways	Panposh
Neleema Minj	Saonamara	International Matches	Railways	Panposh
Namita toppo	Jaurumal	International matches	Railways	Panposh
Jeet grace Ekka	Lulkidih	International matches	Railways	SAI, Sundargarh
Gloria Dungdung	Gorealmal	Internatinal matches	Railways	SAI &Panposh
Loten Dungdung	Goreamal	International match	Railways	SAI &Panposh
Anupa Barla	Kesramal, Kukda	International matches	Railways	Panposh
Punam Barla	Kesramal	International matches	Railways	Panposh
Mukta Barla	Lulkidih	International matches	Railways	Panposh
Ranjeeta Barla	Lulkidih	International matches	Railways	Panposh
AnnaMary Bada	Somlaimunda	International matches	Railways	Panosh
SuniteeKispotta	Jolda	International matches	Railways	Panposh
Bahamani Tirkey	Tileikani	Internatinal matches	Railways	Panposh
Nileema Kujur	Lulkidih	International matches	Railways	Panposh
Anna Rita	Lulkidih	International matches	Railways	Panposh
Kerketta				
Anjana Barla	Sikajor	International matches	Railways	Panposh

Table 150: Eminent Sports Persons of Sundargarh (Atheletics, both Men and Women)

Name	Place of Birth	Event Participed	Present Position	Remarks
Anirudha Biswal (w)	Rourkela, SAI, Cuttack	Hurdles race	Nalco	National games
Minati Mishra (w)	Rourkela, SAI. Cuttack	400x4 relay	FCI	Gold Medal
Pramila Prabha Minj (W)	Rajgangpur, SAG, Cuttack	Rawing(Asia)	Odisha police (SI)	First Medal for the State
Nitali Sekhar Deo (W)	Rajgangpur, SAG, Cuttack	Rawing	Police	Junior Medalist
Meena Madhuri Toppo (W)	Lulkidih, SAG, Cuttack	RAWING International	Police	
Sanjukta Dungdung	Tangargaon, SAG, Cuttack	Rawing International	Odisha Police	
Manjula Xess (W)	Telendih, SAG, Cuttack	Rawing International	Odisha Police	
Sahebani Oraon (W)	Kusumura, SAI, Cuttack	Atheletics	Railways	
Bibiana Kullu	Tangargaon	Sprinter(International)		No employment
Anil Minj	Ranipia	Long distance runner	Police	
Hemanta Patel	Mundagaon	Longjump & 100 mtrs	Sail	
Panchanon Gantayat	Badgaon	Hurdles (International)	SAIL	
Sandeep Albert Kujur	Saonamara, SAG, Cuttack	Rawing junior National	Odisha Police	

Source: SAI Office, Cuttack



Pitamahal: A place of serene beauty of the nature



Khandadhar Waterfall

Plate: 6- Pitamahal (Top), Khandadhar waterfall (Bottom)



AMCO- SIMCO



Mandira Dam

Plate: 7: Amco- Simco (Top), Mandira Dam (Bottom)



Synthetic Turf of Hockey Ground at Sundargarh



Sundargarh Hockey Team at the winning moment of NALCO Cup

Plate: 8: Synthetic Grass Turf of Hockey Ground at Sundargarh (Top),
Hockey team of Sundargarh at winning moment of NALCO cup



Jyoti Sunita Kullu, Hockey Player felicitated by the President of India



Hockey Player Padmashree Dr. Dilip Tirkey with S. A. P. J. Abdul Kalam, the President of India (Standing 4th from left in the rear line)



Ispat Stadium, Rourkela

Plate: 9- Jyoti Sunita Kullu, Hockey Player receiving award from the President of India (Top left), Hockey player Padmashree Dr. Dilip Tirkey with S. A. P. J. Abdul Kalam, the President of India (Top right) Ispat Stadium, Rourkela (Bottom)

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GLOSSARY

Abwab	Miscellaneous cesses levied by the ex-rulers and ex-zamindars
Akut	A village in which no eye-measurement has been made for the cultivable land
Amin	A sub-ordinate surveyor of the Tahasil office
Anugrahi grant	A grant of favour
Ashrama School	A type of secondary school meant for tribal areas
Ayurveda	Hindu Science of Medicine
Ayush	A programmes of th Union Government comprising Ayurvedic Yoga Naturopathy Unani Siddha & Homeopathy medicine systems with the general health system
Bahal land	A low laying land
Banamahostav	A celebration held every year during rains to encourage plantation of trees
Bari	Land lying with the back/ front of the house
Badi	A project of NABARD encouraging subsidised cost for plantation of fruit trees
Berna land	Land occurring towards bottom of depression
Bethi Begar	Forced labour
Bidi	An indogeneous smoke, tobacco rolled in Kendu leaf
Biri	Black gram
Biripatti	A kind of cess
Bhangua	Leaves of intoxicating Indian hashish (Cannabis indica)
Bogra land	The land cultivated by a landlord or Gountia by himself
Bhoodan	Literally menas a land gift. It referes to the Bhoodan Movement started by Acharya Binoba Bjhabe for collection of land for the landless
Brahmottar	Land given free of rent to a Brahmin
Chatasali	An old type of village school
Cahupadi	A song or poem ordinarily consisting of four couplets
Chhanda	Poem composed of a particular meter
Chowkidar	A watchman/ village police
Dasahara	A Hindu Festival observed of the 10 th day of waxing moon in the month of Aswina (September- October)
Dasahara tikka	Payment in cash or in kind to the ruler or zamindar on the occasion of Dasahara
Debottar	Land given free of rent for the service of the deity
Dewan	The chief Executive Officer next to the Ruler in an ex-feudatory state
Durbar	A royal Court of ex-ruling chief
Akapadia	An official record containing the tenants area of holding and amount of assessment
Gadi	Thorne
Ganja	Intoxicating Indian hemp (Cannabis sativa)
Ganjhu	The headman of a village

Gaontia	The revenue collector of village
Gharabari	Homestead land
Goda	High land
Gramadan	Gift of a village refers to the Gramdan movement started by Binoba Bhave, the Sarvodaya leader
Grama Panchayat	An elected body of local self Government at village level under Panchayatiraj Institutions
Grama Rakshi	Village police
Gulji	A kind of food grain, minor millet
Gur	Unrefined sugar, Jaggery
Halia	Labourer engaged for ploughing
Hata chitha	Literally means a hand written slip, a prescribed form for collection of vital statistics
Jagir	Land or village given on service tenure
Jagirdar	Holder of service tenure
Jama	Gross receipt of annual revenue
Jamabandi	Rent roll, the precursor of the present Khatiyani
Jhankar	A village functionary in western Odisha belonging to the non-Aryan Caste who was both a village watchman and the priest of the village deity
Kabuliyat	A counter lease or agreement to pay rent executed by the tenant in return for the lease granted to him by the landlord
Kanyashrama	A type of girls School meant for tribal areas
Kar Chaowl	A kind of cess
Kata	A reservoir for harvesting rain water coming down the hills, having only one embankment
Katha	A local measure for corn
Kabiraj/ Vaidya	A physician practising the Hindu System of Medicine, An Ayurvedic practitioner
Khalsa	Land or village in the immediate possession of a land lord or a ruler
Khamarchas	Land under personal cultivation of the ex-rulers/ zamindars
Khamargrama	Village directly held by the Ruler or the landlord
Khanapuri	Literally means of record writing stage in settlement operation to prepare draft Khatiyani
Kharif	A crop season on the onset of monsoon till its withdrawal
Khandi	A standard measurement for paddy containing twenty seers
Kharposh	Maintenance grant
Khatiyani	A register in which the rights of the tenants are recorded
Khewat	A paper prepared during a revenue settlement showing the interest and shares of Central and State Government
Kili	The totems of Mundas are drawn from large number of exogamous groups called ' <i>Kili</i> '
Khunt-katti	Land reclaimed by the original settlers of the village or their descendants in the male line. After the coming into force of the Orissa Land Reforms Act, Khuntkati tenure/ rights

	are abolished
Kistwala	A money lender who lends money and realises the principal along with interest in instalments
Kuda	A mound of earth
Kumbha	A small water jar/ earthen pitcher
Kut village	A village where rough estimate by the eye has been made for the cultivable land
Hukumnana	Unsettled bebandiobasti Khata created by the order of the Zamindar
Mahajan	A village money lender
Magan	A kind of cess, a forced contribution
Mal land	Up bounded land
Malguizari	Rent realised by the ex-Gountia/ Zamindar in order to pay to the State
Mandal	Tract of country/ collection or group of villages
Maufi	Land brought for a consideration from an ex-ruler/ zamindar free of assessment
Mela	Fair
Mithun	A couple, a male and female
Mukhia	Head man
Naib Sarpanch	Vice President of village Panchayat under PRI
Nayabadi settlement	Settlement of newly reclaimed lands
Nazar Kut	Survey by eye-estimation
Nazrana	A tribute paid to ex-ruler/ zamindar
Nijchas	Land under one's own cultivation
Nistar Cess	Forest cess
Nuakahia	The ceremony of eating new rice of the year
Nullah (Nala)	A rivulet/ water course
Odissi	A classical dance of Odisha
Padika	A land measuring rod of certain length
Pagree	Turban
Pahi	Holding held by a non-resident raiyat
Paika	A landed militia of Odisha
Paila	A measure for corn
Pancha	A kind of cess
Parcha	A slip of paper given to araiyat showing the particulars of holding during survey in the settlement operations
Paragandar	A holder of pargana (a fiscal division)
Pathasala	A village school
Patta	A lease given to a raiyat showing his land and his rents and the period for which it was fixed
Prajamandal	A political organisation of the ex-state people
Puchee	A kind of play amongst girls
Rabi	A crop season following the recessing monsoon
Rasa	A festival in the month of Kartika (October- November) in which lord Krishna is worshipped.
Raiyat	A tenant holding the land primarily for cultivation purpose
Rojgari cess	A cess on employment

Rourkela Chamber of Commerce	An organisation of entrepreneurs
Sahukar	A money lender
Salami	A present given to a land lord or ruler
Sanad	Firman, a grant, a written order signed and sealed by a king or government
Sanyasi	A man who has renounced the material world
Sarbarakar	A rent collecting officer who used to collect rent from the Government estate
Sarpanch	An elected president of the village Panchayat under Panchayatiraj Institutions
Satyagraha	Literally means love for truth, the doctrine of passive resistance preached by Mahatma Gandhi
Sevashrama	A type of primary school meant for tribal areas
Sikmi Raiyat	Sub-tenant
Sindurtikka	A grant for the cosmetic expenses of the queen
Straddha	Paying oblation to ancestors
Subah	A province in Mughal or Maratha period
Sukhbasi	Landless and homeless tenant
Taccavi loan	Loan given as relief measure for carrying out agricultural operation
Tacoli	A tribute
Tambi	A wooden or metal measure for grains and liquids
Tassar	A kind of silk obtained from the species of silk worm (<i>Antheoea Paphia</i>)
Tikait	The eldest prince, the heir apparent to the throne
Thani	A raiyat cultivating land of the same village of which he is a permanent resident

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