



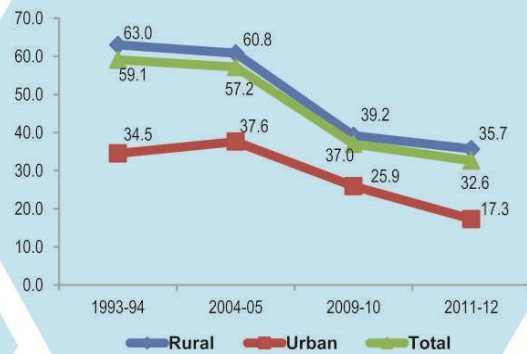
Government of Odisha

ODISHA ECONOMIC SURVEY 2017-18

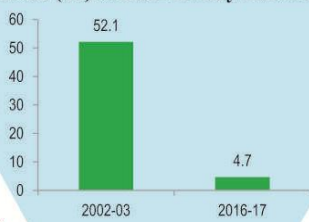
**Increase in Rice Production
(000'MT)**



Downswing in Poverty Ratio (%)



**Fast decelerating Dropout
Rate (%) in Elementary Education**



Planning and Convergence Department

Odisha Economic Survey 2017-18

**Planning and Convergence Department
Directorate of Economics and Statistics
Government of Odisha**

March 2018

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Government of Odisha

Bhubaneswar

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Bhubaneswar, 2018

Foreword

In recent years economic activities in Odisha have surged upwards in various sectors resulting in high growth rate of GDP as compared to national growth rate. This is particularly true in the industry and service sectors. The GDP growth rate of the State is projected to reach 7.14% in 2017-18 fiscal against the World Bank's projection of national growth rate of 6.7%.

The State's economy has rebounded strongly with the real growth rate touching double digit figures for the first time (10.39%) during 2016-17 against the national figure of 7.11%. Crop production has recorded an encouraging growth rate of above 27% in 2016-17. All these trends indicate a state of sustainable and inclusive growth in economy achieved during last two decades because of consistent initiative and more investment in irrigation, infrastructure, poverty alleviation, health care, education, development of human resources and industrial promotion.

Sustaining this higher rate of growth depends on realistic planning with definite growth trajectories in coming years. I hope Odisha Economic Survey 2017-18 will be instrumental in this direction and will serve as a reference material for formulating policy interventions and chalking out developmental strategies.

I compliment the efforts of Planning & Convergence Department in bringing out this integrated and comprehensive Economic Survey Report for the year 2017-18 and wish the publication all success.

(A. P. Padhi)

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Preface

Odisha Economic Survey, 2017-18 presents the emerging trend of State's economy. It takes stock of different sectors of State's economy and provides a comprehensive analysis of the development performances. The highlights of economic policies and development strategies that have turned Odisha to a vibrant State on move are also brought out in the document along with the developmental challenges.

During the years 2011-12 to 2016-17, the Economy of Odisha has grown steadily at an annual average rate of 7.02 percent. In 2016-17, Odisha has bounced back to double digit real growth rate of 10.39 percent; increase in real per capita income to Rs.63,674/-, recorded low level of price inflation of 1.3 percent, with above 27 percent growth in the crops sector accompanied by decline in unemployment rate. The State expects to have a real growth rate of 7.14 percent and real per capita income of Rs.67,522/- in 2017-18. Services sector and industry sector are the major drivers of the State's economy having the relative share of 43 & 33 percent in GSDP respectively during 2016-17.

Farmers' income has doubled in the last decade. Poverty ratio fell sharply and over 8 million poor people were pulled out above poverty line between 2004-05 & 2011-12. Infant Mortality Rate stands reduced from 96 per thousand live births in the year 2000 to 40 in 2015-16.

Establishment of four investment regions for industrial clusters at Kalinganagar, Paradip, Dhamra and Bhubaneswar, Make in Odisha conclave in 2016, Single Window Investor Facilitation Portal like GO SWIFT are expected to attract investment to spur industrialization in Odisha.

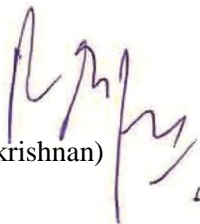
Odisha's Disaster Management along with zero casualty policy has received global recognition and has become the model for other States. More than 47,000 villages were electrified, Road density improved to 165 km per 100 sq. kms. The schemes like connecting unconnected villages, Mukhyamantri Sadak Yojana and Biju Gaon Gadi Yojana etc speak of the core rural infrastructure development strategy of the State.

Interventions like ANWESHA and AKANKSHYA have created new hopes for poor SC & ST youth to have quality education with financial support from the State Government. State's own schemes like BASUDHA for safe drinking water supply, AWAAS for low cost housing and the Scheme MAMATA for maternity and child benefit will contribute immensely towards improvement in human development status in the State.

The first chapter of the Report presents a glimpse of Odisha's economy. The second chapter provides a macro view of the State's Economy. The remaining chapters present physical & financial progress in different sectors of the State economy. The concluding part presents a view of the Public Finances and an outlook of the State's perspectives and policy interventions for the future.

The sincere efforts of the Officers of Planning & Convergence Department and Directorate of Economics & Statistics, Government of Odisha in preparing this Odisha Economic Survey 2017-18 are thankfully acknowledged. The contribution of Dr. Tapas Sen, Adviser, GRID, PwC India Pvt. Ltd. and his team of Officers to enrich overall quality of the Report is gratefully acknowledged.

I hope, the document will serve as a useful reference material for policy makers, planners, academicians, researchers and other stakeholders and will help in shaping the public policy for sustainable and inclusive growth of Odisha's economy in future.


(R. Balakrishnan)

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Acknowledgement

Odisha Economic Survey 2017-18 is an outcome of dedicated team work. Many Departments, institutes & agencies extended timely support for compilation of this document. The Planning & Convergence Department with the support of Directorate of Economics and Statistics prepares and tables the Report in the Odisha Legislative Assembly in time. Their contributions are gratefully acknowledged.

Shri R. Balakrishnan, IAS, Development Commissioner-cum-Additional Chief Secretary supported, guided and shared his intellectual inputs in preparation of the Report. We acknowledge his vision and contribution with sincere gratitude.

We are grateful to Prof. (Dr.) Tapas Sen, Adviser (GRID), Pricewaterhouse Coopers India (PwC) Pvt. Ltd., Gurgaon, Haryana and his team of officers for their technical support and contributions in improving the content and get up of the document for a better thematic presentation. Shri D. K. Jena, IAS, Additional Secretary, P&C Department; Sri D. Behera, Director, E&S; Dr. Dillip Ray, Joint Director, PR&DW Department; Shri D. Das Mohapatra, Joint Director, P&C Department; Shri S. P. Rath, Deputy Secretary, Finance Department and Dr. B. N. Mohanty, Deputy Director of the Directorate of E&S extended their expertise & intellect in editing of different chapters and made untiring efforts for compilation of the Report. Their support and contributions are thankfully appreciated.

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It is hoped that this document will benefit the planners, policymakers, administrators, academicians, students and general public. We welcome constructive suggestions for further improvement of this document.


(N. K. Nayak)

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Acronyms

ACA	Additional Central Assistance	BMI	Body Mass Index
ACP	Annual Credit Plan	BOT	Build Operate Transfer
ADB	Asian Development Bank	BPL	Below Poverty Line
ADRI	Animal Disease Research Institute	BRGF	Backward Region Grant Fund
AH	Animal Husbandry	BSE	Board of Secondary Education
ANC	Anti Natal Care	BSNL	Bharat Sanchar Nigam Limited
ANPM	Atma Nijukti Paramarsha Melas	BSVY	Biju Saharanchala Vidyutikarana Yojana
APEDA	Agricultural & Processed Food Products Export	CAF	Common Application Form
APICOL	Agriculture Promotion Investment Corporation Ltd	CAMPA	Compensatory Afforestation Fund Management & Planning Authority
APL	Above Poverty Line	CARD	Cooperative Agricultural and Rural Development Bank
APMC	Agricultural Produce Marketing Society	CBIS	Community Based Information System
APY	Atal Pension Yojana	CBO	Community Based Organisation
ART	Anti-Retro viral Therapy	CBR	Crude Birth Rate
ASCAD	Assistance to State for Control of Livestock Diseases	CBSE	Central Board Secord of Secondary Education
ASER	Annual Survey of Education Report	CCCN	Crime & Criminal Cracking Network & System
ASMO	Area Sown More than Once	C-D Ratio	Credit-Deposit Ratio
ASSA	Automation of Small Saving Activities	CDB	Coconut Development Board
ALFA	Automation of Local Fund Audit	CDM	Clean Development Mechanism
ATIC	Agricultural Technology Information Centre	CDR	Crude Death Rate
AWC	Anganwadi Centre	CDS	Current Daily Status
ASI	Annual Survey of Industries	CEA.	Central Electrical Authority
BALCO	Bharat Aluminium Company	CES	Centre for Environment Studies
BBNL	Broad Band Nigam Limited	CESCO	Central Electricity Corporation Ltd
BCP	Boundary Change Proceeding	CESU	Central Electricity Supply Unit
BGGY	Biju Gan Gadi Yojana	CFC	Consumption of Fixed Capital
BKKY	Biju Krushaka Kalyana Yojana	CGP	Captive Generating Plants
BMC	Bhubaneswar Municipal Corporation	COC	Community Owned Company
BMC	Bio-diversity Management Committee	CHSE	Council of Higher Secondary Education
		CIFA	Central Institute of Freshwater Aquaculture

CIF	Central Inspection Framework	DPR	Detailed Project Report
CIL	Central Investigation Laboratory	DTET	Directorate of Technical Education & Training
CMEGP	Chief Minister Employment Guarantee Programme	DW	Dug Well
CMR	Colossal Magneto Resistance	DWRS	Drinking Water Pumping Station
CPI	Consumer Price Index	DWCUA	Development of Women & Children in Urban Areas
CPP	Captive Power Plant	EARAS	Establishment of Agency For Reporting Agriculture Statistics
CPSU	Central Public Sector Undertaking	ECBC	Energy Conservation Building Code
CRF	Calamity Relief Fund	ECIL	Electronic Corporation of India Limited
CRN	Core Road Network	EDC	Eco Development Committee
CRRRI	Central Rice Research Institute	EFC	Expenditure Finance Committee
CSC	Common Services Centre	EIA	Environment Impact Assessment
CSO	Central Statistical Organization	ENVIS	Environment Information System
CSR	Corporate Social Responsibility	EPIP	Export Promotion Industrial Park
CV	Co-efficient of Variation	EPC	Export Promotion Council
CVRC	Central Variety Release Committee	ERPC	Eastern Region Power Committee
CWA	Constituency wise Allotment	ESSC	Electric Sector Skill Council
CWS	Current Weekly Status	ETM	Electric Ticketing Machine
DAT	Distress Alert Transmission	EWS	Economically Weaker Section
DCCB	District Cooperative Central Bank	FARTC	Fresh Water Aquaculture Research Training Centre
DDP	District Domestic Product	FBS	Frozen Semen Bank
DDUGKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana	FCAL	Ferro Chrome & Alloys Ltd
DEPM	Directorate of Export Promotion Marketing	FCI	Food Corporation of India
DFID	Department for International Development	FFDA	Fish Farmers Development Agency
DGFT	Director General Foreign Trade	FFS	Farmers Field School
DIC	District Industry Centre	FLC	Fish Landing Centre
DISE	District Information of School Education	FSAI	Frozen Siemen Artificial Insemination
DLCC	District Level Coordination Committee	FSCS	Farmers Service Cooperative Society
DoT	Department of Tourism	FSI	Forest Survey of India
DoWR	Department of Water Resources		
DPAP	Drought Prone Area Programme		

FSR	Forest Survey Report	IGA	Income Generating Activity
FSRE	Farming System Research Education	IGEA	Investment Grade Energy Audit
GDDP	Gross District Domestic Product	IGNOAP	Indira Gandhi National Old Age Pension
GDP	Gross Domestic Product	IID	Industrial Infrastructure Development
GEDCOL	Green Energy Development Corporation Ltd.	IIFT	Indian Institute of Foreign Trade
GFCF	Gross Fixed Capital Formation	IIIT	International Institute of Information Technology
GFR	General Fertility Rate	IIM	Indian Institute of Management
GGY	Gopabandhu Gramin Yojana	IIT	Indian Institute of Technology
GPF	General Provident Fund	IKIWL	IDCOL Kalinga Iron Works Ltd
GPO	General Post Office	ILDLP	Integrated Livestock Development Programme
GRIDCO	Grid Corporation of Odisha	IMA	Institute of Mathematic and Application
GSDP	Gross State Domestic Product	IMIS	Integrated Management Information System
GVA	Gross Value Added	IMR	Infant Mortality Rate
HCFC	High Carbon Ferro Chrome	IMS	Institute of Material Science
HDI	Human Development Index	INM	Integrated Nutrient Management
HMV	Heavy Motor Vehicle	IPDS	Integrated Power Development Scheme
HRD	Human Resource Development	IPICOL	Industrial Promotion & Investment Corporation Ltd
HSG	High Spending Group	IPM	Integrated Pest Management
HUDCO	Housing & Urban Development Corporation	IRDP	Integrated Rural Development Programme
HYV	High Yielding Variety	IT	Information Technology
IAP	Integrated Action Plan	ITB	International Tourism Bureau
IAY	Indira Awaas Yojana	ITDAs	Integrated Tribal Development Agency
ICDS	Integrated Child Development Scheme	ITI	Industrial Training Institute
ICSE	Indian Council of Secondary Education	ITPS	IB Thermal Power Station
ICT	Information & Communication Technology	IVLP	Institute of Village Linkage Programme
ICTC	Integrated Counselling & Testing Centre	IWDP	Integrated Watershed Development Programme
IDCO	Infrastructure Development Corporation	IWMP	Integrated Watershed Management Programme
IDCOL	Industrial Development Corporation of Odisha Ltd		
IDDP	Integrated Dairy Development Programme		
IEC	Information Education & Communication		

IWT	Inland Water Transport	MOTA	Ministry of Tribal Affairs
JFM	Joint Forest Management	MoU	Memorandum of Understanding
JNNURM	Jawaharlal Nehru Urban Renewal Mission	MPCE	Monthly Per Capita Consumer Expenditure
JSPL	Jindal Steel Plant Limited	MPCS	Milk Producer's Cooperative Society
KBK	Kalahandi Bolangir Koraput	MPEDA	Marine Product Export Development Agency
KCC	Kissan Credit Card	MR	Mandated Revenue
KKGC	Kalinga Kissan Gold Card	MRP	Mixed Recall Period
KL	Kendu Leaf	MSE	Micro & Small Enterprises
KSY	KishoriSaktiYojana	MSG	Middle Spending Group
KVIB	Khadi& Village Industry Board	MSME	Micro, Small & Medium Enterprises
KVIC	Khadi& Village Industry Commission	MSW	Municipal Solid Waste
KVK	Krishi Vigyan Kendra	MT	Metric Ton
KW	Kilo Watt	MTPA	Million Ton Per Annum
LAC	Live Stock Aid Centre	MTW	Medium Tube Well
LAMPS	Large Sized Adivasi Multi- Purpose Cooperative Society	MU	Million Unit
LCV	Light Commercial Vehicle	MVU	Mobile Veterinary Unit
LFPR	Labour Force Participantion Rate	MW	Mega Watt
LIC	Life Insurance Corporation	MWSA	Mean Water Spread Area
LIG	Lower Income Group	NABARD	National Bank for Agriculture & Rural Development
LNG	Liquefied Natural Gas	NACP	National Aids Control Programme
LSG	Low Spending Group	NADRS	National Animal Diseases Reporting System
MARKFED	Marketing Federation	NAFED	National Federation
MCL	Mahanadi Coal field LTD	NAIS	National Agriculture Insurance Scheme
MDF	Medium Dense Forest	NALCO	National Aluminium Company
MDG	Millennium Development Goal	NAM	National Agriculture Market
MDM	Mid-Day Meal	NBFC	Non-Banking Finance Companies
MFP	Minor Forest Product	NBMMP	National Bio Gas & Manure Management Programme
MHU	Mobile Health Units	NCLP	National Child Labour Project
MIC	Multipurpose Identity Card	NDC	National Data Centre
MIDH	Mission for Integrated Development of Horticulture	NDDP	Net District Domestic Product
MIS	Management Information System	NDP	Net Domestic Product
MMR	Maternal Mortality Rate		
MOEF	Ministry of Environment & Forest		
MORD	Ministry of Rural Development		

NDRF	National Disaster Response Force	NRSE	New & Renewable Source of Energy
NEAC	National Environment Awareness Campaign	NSA	Net Sown Area
NeGP	National eGovernance Plan	NSDP	Net State Domestic Product
NER	Net Enrolment Ratio	NSS	National Sample Survey
NESCO	Northern Electricity Corporation Ltd	NTCA	National Tiger Conservation Authority
NFHS	National Family Health Survey	NTFP	Non Timber Forest Product
NFSM	National Food Security Mission	NTPC	National Thermal Power Corporation
NGC	National Green Card	NULM	National Urban Livelihood Mission
NGO	Non-Government Organisation	NWDpra	National Watershed Development Programme for Rural Areas
NH	National Highway	NWFF	National Welfare for Fishermen
NHAI	National Highway Authority of India	OAIC	Odisha Agro Industries Corporation
NHFDC	National Handicapped Finance Development Corporation	OBA	Odisha Bigyan Academy
NHM	National Horticulture Mission	OBBD	Odisha Bio-diversity Board
NHPC	National Hydropower Corporation	OBDA	Odisha Bamboo Development Agency
NIC	National Informatic Centre	OCAC	Odisha Computer Application Centre
NICRE	Non Interest Committed Expenditure	OCT&SF	Odisha Cooperative Tasar& Silk Federation Ltd
NLM	National Livelihood Mission	OCZMA	Odisha Coastal Zone Management Authority
NMMP	National Mission on Medical Plant	ODRAF	Odisha Disaster Rapid Action Force
NMOOP	National Mission on Oilseed and Oil palm	OERC	Odisha Electricity Regulatory Commission
NMSA	National Mission for Sustainable Agriculture	OF	Open Forest
NMS	National Mineral Statistics	OFDC	Odisha Forest Development Corporation
NOAP	National Old Age Pension	OHPC	Odisha Hydro Power Corporation Ltd
NOFN	National Optical Fibre Network	OLIC	Odisha Lift Irrigation Corporation
NPA	Non-Performing Assets	OMC	Odisha Mining Corporation
NPA	Non Performance Asset	OMFED	Odisha State Cooperative Milk Producer's Federation Ltd
NPCBB	National Project for Cattle & Buffalo Breeding		
NREGA	National Rural Employment Guarantee Act		
NRHM	National Rural Health Mission		
NRLM	National Rural Livelihood Mission		

OPERP	Odisha Public Enterprises Reform Programme	OSWAN	Odisha State wide Area Network
OPGC	Odisha Power Generation Corporation	OSWAS	Odisha Secretariate Workflow Automation System
OPOLFED	Odisha State Poultry Producer's Cooperative Marketing Federation Ltd	OTIDA	Odisha Transport Infrastructure Development Authority
OPSC	Orissa Public Service Commission	OTRAC	Odisha Transport Regulatory & Advisory Council
OPSIP	Odisha Power Sector Improvement Project	OUAT	Odisha University of Agriculture & Technology
OPTCL	Odisha Power Transmission Corporation Ltd	OWDM	Odisha Watershed Development Mission
OREDA	Odisha Renewable Energy Development Agency	P.M.J.D.Y	Prime Minister Jan Dhan Yojana
ORHDC	Odisha Rural Housing Development Corporation	PACS	Primary Agricultural Cooperative Society
ORMAS	Odisha Rural Development & Marketing Society	PCCF	Principal Chief Conservator of Forest
OSAC	Odisha Space Application Centre	PCI	Per capita income
OSCARD	Odisha Cooperative Agriculture & Research Development	PDD	Project Design Document
OSCDC	Odisha State Cashew Development Corporation	PDS	Public Distribution System
OSCHC	Odisha State Cooperative Handicraft Corporation	PFCS	Primary Fisherman Cooperative Society
OSDC	Odisha State Data Centre	PGCIL	Power Generation Corporation of India Ltd
OSEMS	Odisha State Employment Mission Society	PGR	Poverty Gap Ratio
OSFC	Odisha State Finance Corporation	PGM	Platinum Group Metals
OSFDC	Odisha State Finance Development Corporation	PHC	Public Health Care
OSRP	Odisha State Road Project	PHDMA	Poverty & Human Development Monitoring Agency
OSRFS	Odisha State Renewable Fund Society	PIU	Project Implementation Units
OSSC	Odisha State Seed Corporation	PLF	Plant Load Factor
OSSOPCA	Odisha State Seeds and Organic Products Certification Agency	PLI	Postal Life Insurance
OSWAB	Odisha State Welfare Advisory Board	PMEGP	Prime Minister Employment Generation Programme
		PMGSY	Pradhan Mantri Gram Sadak Yojana
		PMJJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana
		PMKSY	Pradhan Mantri Krishi Sanchay Yojana
		PMMY	Pradhana Mantri Mudra Yojana
		PMRY	Prime Minister Rojgar Yojana

PMSBY	Pradhanmantri Suraksha Bima Yojana	RPRC	Regional Plant Resource Centre
PMU	Project Management Units	RRB	Regional Rural Banks
P-PAS	Paddy Procurement Automation System	RRTTS	Regional Research & Technology Transfer System
PPCS	Primary Poultry Co-operative Society	RTE	Right to Education
PPP	Public Private Partnership	RTI	Right to Information
PPA	Power Purchase Agreement	RTO	Regional Transport Officer
PSE	Public Sector Enterprises	RTTS	Research and Technology Transfer Sub-station
PSU	Public Sector Undertaking	RVEP	Remote Village Electrification Programme
PTG	Primitive Tribal Group	RVP	River Valley Project
PTS	Public Telephone Services	RWSS	Rural Water Supply & Sanitation
PVTG	Primitive vulnerable Tribal Group	S/W	Soft ware
PWCS	Primary Weavers Cooperative Society	SAMS	Student Academic Management System
R&D	Research & Development	SBM	Swachha Bharat Mission
RBI	Reserve Bank of India	SC	Scheduled Caste
RBSK	Rastriya Bal Swasthya Karyakrama	SCA	Special Central Assistance
REC	Rural Electrification Corporation	SCERT	State Council Education Research Training
REGP	Rural Employment Generation Programme	SCIF	State Crop Insurance Fund
RGVY	Rajiv Gandhi Gram Vidyutikaran Yojana	SCST	State Council on Science & Technology
RHA	Rehabilitation of Handicraft Artisans	SCSTRI	Scheduled Caste & Scheduled Tribe Research Institute
RIDF	Rural Infrastructure Development Fund	SCW	State Commission for Women
RIEC	Regional Imbalance Enquiry Commission	SCRIPS	State Capital Region Improvement of Power System
RKBY	Rastriya Krishi Bima Yojana	SDC	State Data Centre
RKSK	Rastriya Kishore Swasthya Karyakrama	SDRF	State Disaster Response Fund
RKVY	Rastriya Krishi Vikas Yojana	SEM	Self Employment Mission
RLIP	River Lift Irrigation Points	SEZ	Special Economic Zone
RLTAP	Revised Long Term Action Plan	SFAC	Small Farmers Agribusiness Corporation
RMC	Regional Cooperative Marketing Society	SGSY	Swarna Jayanti Gram Swarajgar Yojana
ROR	Record of Right	SHDP	State Highway Development Project
RPLI	Rural Postal Life Insurance	SHG	Self Help Group
		SHM	Soil Health & Management
		SHEP	Small Hydro Electronic Project

SIDBI	Small Industry Development Bank of India	TRYSEM	Training for Rural Youth for self-Employment
SJSRY	Swarna Jayanti Sahari Rojgar Yojana	TSC	Total Sanitation Campaign
SLBC	State Level Banker's Committee	TSP	Tribal Sub Plan
SLCC	State Level Coordination Committee	TSSC	Telecom Sector Skill Council
SNP	Supplementary Nutrition Programme	TTF	Travel & Tourism Fair
SOAP	State Old Age Pension	UEE	Universal Elementary Education
SOUTHCO	Southern Electricity Corporation Ltd	ULB	Urban Local Body
SPCB	State Pollution Control Board	UNDP	United Nation Development Programme
SPV	Special Purpose Vehicle	UPS	Usual Principal Status
SRS	Sample Registration System	UPSS	Usual Principal & Subsidiary Status
SSA	Sarva Sikshya Abhiyan	UR	Unemployment Rate
SSI	Small Scale Industries	URP	Uniform Recall Period
SSNP	Social Safety Net Programme	USEP	Urban Self Employment Programme
ST	Scheduled Tribe	UWEP	Urban Wage Employment Programme
STA	State Transport Authority	VAL	Vedanta Aluminium Ltd
STD	Sexually Transmitted Disease	VAT	Value Added Tax
STD	Subscriber's Trunk Dialing	VCTC	Voluntary Counselling & Testing Centre
STEP	Support to Training & Employment Programme	VDF	Very Dense Forest
STL	Soil Testing Laboratories	VRS	Voluntary Retirement Scheme
STPF	Special Tiger Protection Force	VSS	VanaSarankshanSamiti
STPI	Software Technology Park of India	WCD	Women & Child Department
STW	Shallow Tube Well	WDF	Watershed Development Fund
SVL	State Veterinary Laboratory	WESCO	Western Electricity Supply Corporation Ltd
SWCA	Single Window Clearancy Authority	WFP	World Food Programme +
SVRC	State Variety Release Committee	WHO	World Health Organisation
T&D	Transmission & Distribution	WLI	Wild Life Institute of India
TCS	Tata Consultancy Services	WODC	Western Odisha Development Council
TED	Turtle Extruder Devises	WORLP	Western Odisha Rural Livelihood Project
TFG	Tenant Farmers Group	WPR	Worker Population Ratio
TFR	Total Fertility Rate	WSHG	Women Self Help Groups
TISCO	Tata Iron & Steel Company	WTM	World Tourism Mart
TMT	Thousand Metric Ton	WTO	World Trade Organization
TOF	Trees Outside Forest	WTE	Waste to Energy
TPS	Thermal Power Station		

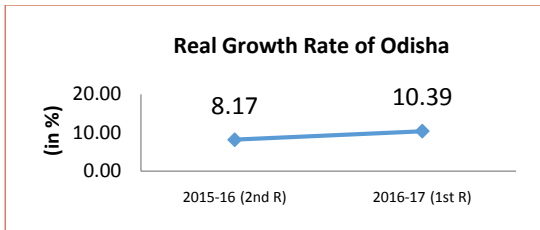
State Profile

SL.No.	Indicator	Year	Unit	Amount/value
1	Geographical Area		Sq. KM	155707
2	Districts		Number	30
3	Subdivisions		Number	58
4	Tehsils		Number	317
5	C.D. Blocks		Number	314
6	Urban Local Bodies		Number	111
7	Gram Panchayats		Number	6802
8	Villages (Inhabited)	2011Census	Number	47677
9	Total Population	2011Census	000'	41974
10	Urbanisation	2011Census	Percent	16.7
11	Sex Ratio	2011Census	Female per 000' Male	979
12	Literacy Rate	2011Census	percent	72.9
13	Density of Population	2011Census	Sq.K.M.	270
14	GSDP at current market price(2011-12 base)	2016-17 (1 st R)	Rs.in Crore	377202
15	GSDPat constant market price (2011-12 base)	2016-17 (1 st R)	Rs. in Crore	323218
16	Growth Rate at constant market price(2011-12 base)	2016-17 (1st R)	percent	10.39
17	Growth Rate at constant market price(2011-12 base) (anticipated)	2017-18 (A)	percent	7.14
18	Share of Agriculture sector to GSDP at current basic price	2017-18 (A)	percent	19.98
19	Share of Industry sector to GSDP at current basic price	2017-18 (A)	percent	34.77
20	Share of Service sector to GSDP at current basic price	2017-18 (A)	percent	45.25
21	Per Capita Income (Base2011-12)at constant market price(GSDP)	2017-18 (A)	Rupees	77193
22	Per Capita Income (Base2011-12)at constant market price(NSDP)	2017-18(A)	Rupees	67552
23	Un employment Rate(UPS)by labour Bureau	2015-16	percent	3.8
24	Poverty Ratio	2011-12	percent	32.59
25	Poverty Ratio(projected)	2017	percent	26.90
26	Production of Food grains	2016-17	000,M.T	10970
27	Irrigation potential created till	2016-17	000, hect.	5591
28	Per hectare consumption of fertilizer	2016-17	Kg/hect.	60.43
29	Per capita Milk consumption	2016-17	Gm/day	120
30	Per capita egg consumption per Annum	2016-17	Number	46
31	Per capita meat consumption per Annum	2016-17	Kg.	3.86

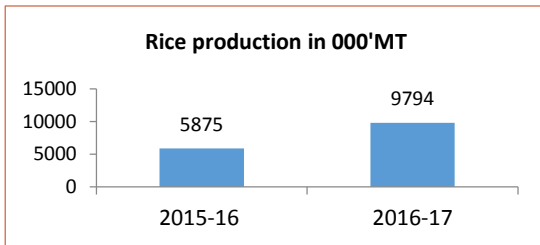
Sl.No.	Indicator	Year	Unit	Amount/value
32	Per capita fish consumption per Annum	2016-17	Kg.	13.49
33	Total No. of Micro, Small and Medium Enterprises(MSME)	2016-17	Number	57783
34	Employment Generated under MSME	2016-17	Lakh Number	1.75
35	Index of Industrial Production(IIP)	2016-17	Base 2011-12 = 100	218.738
36	Installed Capacity of Power	2016-17	Mega watt.	5509.37
37	Villages Electrified	2016-17	Percent	94.37
38	Total No. of Schools	2016-17	Number	69,287
39	Pupil Teacher Ratio(Elementary)	2016-17	Ratio	23.48
40	Pupil Teacher Ratio(Higher)	2016-17	Ratio	23.29
41	Share of Girl Students in Elementary Enrolment	2016-17	Percent	48.24
42	Share of S.C.Students in Elementary Enrolment	2016-17	Percent	18.82
43	Share of S.T.Students in Elementary Enrolment	2016-17	Percent	30.21
44	No. of Govt.Elementary Schools with Drinking Water Facility	2016-17	Number	52253
45	No. of Govt.Elementary Schools with Toilet Facility(Girl)	2016-17	Number	51928
46	No. of Govt.Elementary Schools with Toilet Facility(Boys)	2016-17	Number	50872
47	Dropout Rate at Elementary Schools	2016-17	percent	4.20
48	Credit Deposit Ratio	2016-17	percent	68.96
49	Number of Bank Branches	2016-17	Number	5031
50	No. of Accounts under Pradhan Mantri Jan DhanYojana	By March'2017	Lakh	126.55
51	Number of registered vehicles	2016-17	Lakh Number	62.15
52	Road density per 100 sq.km	2016-17	Km.	165
53	Biju Gaon Gadi Yojna	2016-17	Number	583
54	IMR	2015-16 (NFHS-4)	Per 000, live births	40
55	MMR	2013	Per 000, live births	2.22
56	Number of PHC	Up to Oct,2016	Number	1266
57	Number of CHC	Up to Oct,2016	Number	377
58	Number of Sub-Divisional Hospitals	Up to Oct,2016	Number	27
59	Number of District Hospitals	Up to Oct,2016	Number	32
60	Hospital Beds per thousand population	2015-16	Number	4.15
61	Institutional Delevry	2015-16	percent	85.4
62	Forest Cover		percent	37.34
63	Tele density (over all)	2016-17	Ratio	80.74

Odisha :A State on move

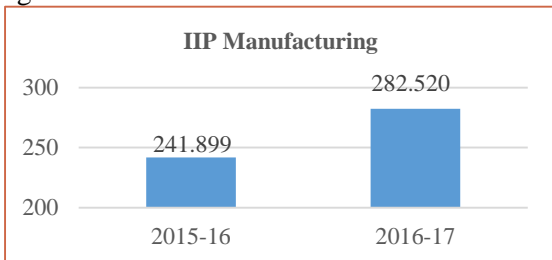
Striking Growth Rate : Odisha’s economy has shown a striking performance in 2016-17, the growth rate being 10.4%. Crops, mining, trade, transport and social sectors drive Odisha to a State on move.



Increased Agriculture Production : Crop sector was buoyant in 2016-17. The principal crop rice in terms of production (98 lakh MT), cropped area (39.63 lakh ha.) and yield rate (24.72qtl/ha) led to unprecedented growth rate of 27%. Impressive State government intervention on certified quality seed provision, improved agriculture implements, farmers extension etc showed the way to visible upswing in the crop sector.

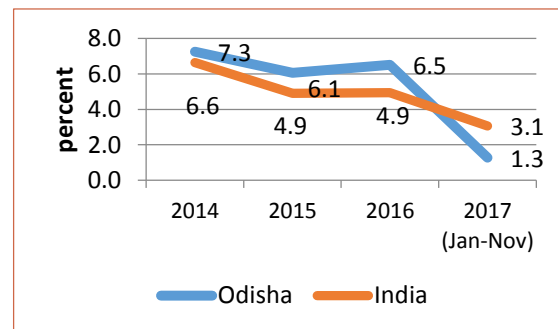


Progressive Industrial Development : The State’s manufacturing sector recovered notably. State specific IIP increased by 17%. Metallic industry production is the major driver of growth of this section.



Odisha is the leading State to establish 4 Investment Regions in the focus sectors, viz., National Investment & Manufacturing Zone (NIMZ) at Kalinganagar, Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) at Paradeep, Port Based Manufacturing Zone at Dhamra and Information Technology Investment Region at Bhubaneswar.

Lower ebb of inflation rate : Controlled price behaviour led Odisha to have lowest overall inflation rate of 1.3 in 2017 (upto November 2017) even below 1 % in rural area. Good governance by State government on push & pull factors of demand –supply of goods , food 7 beverages in specific, can be attributed to the lower ebb of inflation rate in the State.

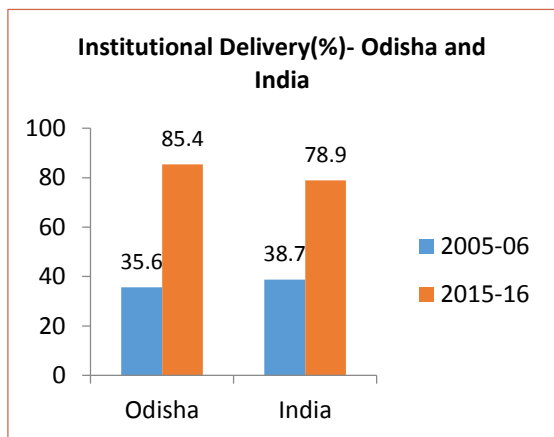
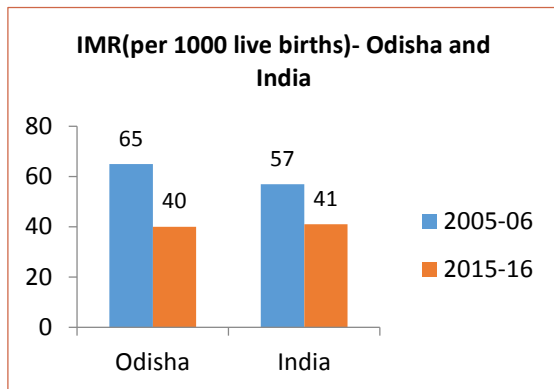


Assured Debt Sustainability : The Debt Stock/GSDP ratio of Odisha which was as high as 50.73% in 2002-03 has been brought down to 15.72% in 2016-17 against the bench mark target level of 25%.

Improved Health Care : Remarkable strides are observed in access, finance and delivery system of health sector in Odisha with IMR of 40, U5MR of 49, institutional delivery of 85%, 5 medical colleges, 892 transport referral services for 3.5 lakh infants, 44000 ASHAs for 47147 villages and implementation of new scheme Mukhyamantri Seva Mission 2017-18 etc.

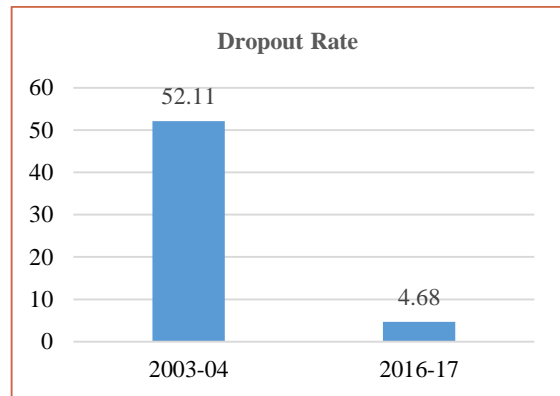
Significant decline in Infant Mortality Rate :

Health is a fundamental right and key indicator of social development. The state health care policy ensures delivery of quality health care services in all districts as well as promotes establishment of health care institutions for best in class infrastructure. There has been significant improvement in health status in the state.



As per NFHS-4(2015-16), the IMR is estimated at 40 deaths before the age of one year per 1000 live births, down considerably from 65 (2005-06). The percentage of births in health facility is more than doubled in the 10 years between 2005-06 to 2015-16 from 36% in 2005-06 to 85% in 2015-16

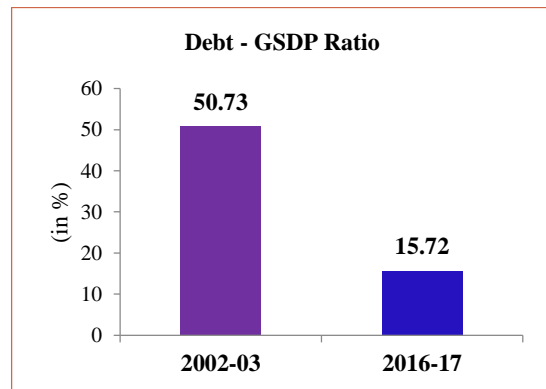
Decline in Dropout Rate in Elementary Education : Odisha approaches nearer to universal education to all. Number of elementary schools, enrolments and dropout rates improved visibly.



Rural Housing and livelihood Mission :

Rural poor was uplifted strikingly. During last 3 years, 11.52 lakh rural families received pucca houses, 33.75 lakh rural households and 3.03 lakh SHGs received support from Odisha Livelihoods Mission.

Rural Roads : 45200 Kms length of rural roads were built and provided all-weather connectivity to 15841 villages between 2000 & 2017. That put Odisha among the leading 5 States in India in constructing maximum length of rural roads.



Skill Development and Employment : It is targeted to skill 11 lakh youth during 2014-15 to 2018-19 under Chief Minister's Employment Generation Programme. Deen Dayal Upadhyaya Koushalya Yojana (DDU-GKY), bears huge sustainable employment potential. 52.7 thousands and 43.7 thousands rural youths were trained and placed with jobs under DDU-GKY scheme in last three years. ORMAS partners 81 Project Implementing

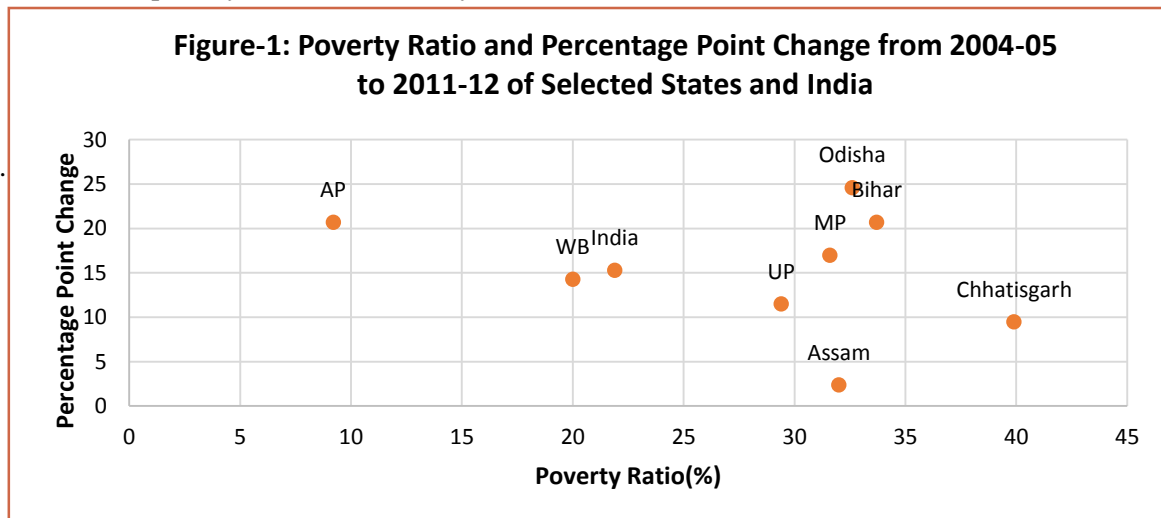
Agencies (PIA) to implement DDU-GKY components. The Yajona trained 71,179 youths and placed 53,819 skilled youths in industries inside and outside the State since inception. The Yojana targets to train 35,000 rural poor youths in 2018-19. Odisha received the Best Performing State Award from Ministry of Rural Development, Govt. of India for the resounding success of the DDU-GKY in 2016-17.

Growing Employment in IT Sector : Bhubaneswar emerged as national leader in smart city challenge amongst 98 cities. IT/ITES companies expanded to generate 17000 IT employments in 2017 growing by 15% YoY and expects to generate about 33 thousands IT employments by end of 2018.

Remarkable Poverty Reduction : Eradication of poverty in all its forms remains one of the greatest challenges facing humanity. Sustainable Development Goal(SDG)-1 ensures end poverty in all its forms by 2030.

The poverty report of Odisha highlights that poverty ratio has been dropped substantially between 2004-05 to 2011-12. The poverty analysis is based on household consumption and defines the poor as those whose expenditure falls below the poverty line, set at Rs. 407.78 for rural and Rs. 497.21 for urban areas in 2004-05; the corresponding figures were Rs. 695 for rural and Rs. 861 for urban areas in 2011-12.

Figure-1 analyzes poverty ratio and percentage change from 2004-05 to 2011-12 of selected states and all India. The State witnessed the highest reduction of poverty ratio of 24.6 points from 57.61 percent in 2004-05 to 32.59 percent in 2011-12 among Indian States like Andhra Pradesh (20.7 points), Assam(3.32 points), Bihar(20.66 points), Chhatisgarh(9.47 points), M.P (16.9 points) and U.P (11.47 points). The annual rate of reduction stands at 3.5 percentage points per year as against the all-India rate of 2.2 percentage points.



Disaster Management

Odisha received global recognition on disaster management by UN. Major strides in disaster management in Odisha include: 10 Units of ODRAF, 317 Fire Stations, 879 Multi-purpose cyclone shelters and Multi-purpose flood shelters. Community based disaster preparedness programme implemented in more than 23,000 villages with UNDP assistance.

National Cyclone Risk Mitigation Project covers 6 coastal districts with 316 Multipurpose Cyclone Shelters, 388.5 km all-weather roads to connect the shelters. Multilayer communication systems provided 60 satellite phones to all District Collectors, Early Warning Dissemination System (EWDS) set up under World Bank assistance in 22 blocks under 6 coastal districts.

Overview

1

Chapter



The economy of Odisha continues on a path of steady growth which is assisting in the development transformation of the State. Although the real GSDP growth rate remains impressive at 7.14 percent in 2017-18 with improved growth performance in industry, including manufacturing, energy and water supply, there are some concerns in agriculture sector performance after a buoyant growth in 2016-17. There is a strong rebound in the services sector with a double digit growth of 12.4 percent. Inflation rate, related to food & beverages, has fallen sharply to 1.3 percent per annum. Finance, infrastructure and social sectors have also improved on their performance. There are reasons to believe that the considerable decline in the incidence of poverty witnessed in the past decade is holding its ground and momentum in the wake of sustained efforts on the part of the State Government to address the distributional concerns in the society. Indeed Odisha's economy is poised to take off and consolidate its recent gains with good leadership, informed evidence-based policymaking and accountable implementation of public programmes. To that end, while reflecting on the recent gains, this overview chapter draws attention to a number of issues that need policy attention, including to build the required policymaking capacity to put the State, on a self-sustaining path of high growth, meaningful social and economic transformation and good governance in the medium term.

1.1 Overall Scenario

Odisha's economy continues on a path of steady improvement in its growth. In 2017-18, Odisha's GSDP is estimated to grow at 7.14 percent as against the national average of 6.5 percent for India. This follows a striking expansion of 10.39 percent in 2016-17. Over the past few years the State is exhibiting strong catch-up growth, which is helping in the transformation of the economy, from a lagging State to a State on the move. During the fiscal period 2011 to 2017, while the economy expanded by 53 percent, its real per capita income increased by 42 percent to an estimated level of ₹ 92,727 in 2017-18.

1.1.2 The improvement in the growth trajectory of the State over the last five years can be attributed to several development initiatives and prudent macro management of economy. A structural shift is visible, but it is largely on account of a shrinking share of industrial sector in the State. At present services account for 45 percent of the GSDP, industry 35 percent and agriculture sector about 20 percent. The fact that the share of industry in output is shrinking and agriculture continues to account for an imposing 62 percent of the total unorganized workforce in Odisha is a matter of concern that needs to be addressed in the medium term. Moreover, even as there is a considerable improvement in social attainments of people in Odisha, including in addressing abject poverty, there is significant scope for bridging developmental gaps that still remain, and improving the quality and coverage of publicly provided social services.

1.2 Agriculture

1.2.1 The year 2016-17 saw an unprecedented growth of nearly 20 percent in agriculture after a severe contraction of over (-) 13 percent in 2015-16. This was largely on account of vagaries of weather, as also the low base. Indeed that has been the story of the agriculture sector in the State. Although there has been a significant negative growth in every alternative year in the recent past, the annual average growth rate (CAGR) for the sector is 2.8 percent for the period 2011-17.

1.2.2 The principal crop rice, constituting more than 90 percent of total foodgrain production, recorded a bumper harvest of 97 lakh MT and productivity of 24 qtl/ha in 2016-17. Intensive cultivation and expansion in the coverage of irrigated land has led to an increase in the area under cultivation of rice and crop yield in the State. Rice crop areas have been increasingly diverted to HYV paddy as well as cash crops, improving the commercial viability of agriculture and making it remunerative for the farmers. With 1.17 lakh ha of additional potential created during 2016-17, the total irrigation potential of the State stands at 55.91 lakh ha (Kharif-37.83 ha and Rabi 18.08 ha). Nevertheless, only about one-third of net sown area is irrigated and principal crop yields are lower than the leading States in the country.

1.2.3 The State Government has launched number of short gestation projects like Mega Lift Irrigation Projects, Deep Bore well Construction Programme, and Check Dam Construction Programme, with a view to rapidly met the irrigation needs of the farmers. The target is to bring an additional 10 lakh hectare of cultivable land under irrigation cover by the end of 2019. There is a target to provide

irrigation facility to at least 35 percent of the cultivable land in each block. Out of a total of 314 blocks, irrigation coverage in 198 blocks is less than 35 percent of the cultivable area. The schemes such as AIBP, RIDF, JBIC, RSVY, NREGS, WODC, FFW are being implemented to achieve the desired objective either directly or by way of convergence with other programmes. As of March 2017, 93 blocks out of the targeted 198 blocks have been covered under this initiative.

1.2.4 Although Odisha has experienced one-half of the expected transition in the agriculture sector, namely the rapid decline in the share of the agriculture and allied sectors' (crops, livestock, forestry and logging, and fisheries) output in the GSDP, the other half of the transition has not made much headway. Thus, the share of agriculture in GSDP has declined to 20 percent from an overbearing 60 percent in the 1960s, but the share of population dependent on the sector continues to be significant at around 50 percent. There is a need for continued policy priority for agriculture, especially in its allied sectors, in view of the high employment potential, favorable agro-climatic conditions, abundant water resources spread over 11 river basins, extensive coastline and the expanding irrigation potential. This would also help improve factor productivity and living standards of the population dependent on the sector. The State Government has been taking strategic policy initiatives and making budgetary provisions for agriculture sector to address inherent constraints associated with over-dependence on rain-fed farming, inadequate irrigation coverage, low level of capital formation, over-dependence on paddy cultivation, slow pace of modernization, small land holdings, continued prevalence of

old tenancy practices in some areas and above all frequent occurrence and impact of natural calamities on the performance of the sector. Many of these measures need to be reassessed and perhaps further intensified to attain the desired results.

1.3 Industry

1.3.1 Industry sector has a unique importance for Odisha's economy. The share of the sector in GSDP at 35 percent is significant and the manufacturing GVA in the organized industrial sector is 88 percent, which is much more than the corresponding national average. During 2016-17, the mining sector growth at 10 percent was robust while manufacturing and construction sectors grew at 5 and 6 percent, respectively. During 2017-18, the mining, manufacturing and construction sectors are estimated to grow moderately at 4.6 percent, while electricity, water supply & other utility services sub-sector is expected to clock a growth rate of 9.6 percent. Over the past five years, the average growth (CAGR) for the industry sector as a whole has been 5.72 percent per annum. A disconcerting issue relates to the declining share of the industry in the GSDP. It has declined from 43.6 percent in 2011-12 to an estimated 34.8 percent in 2017-18, even as the mineral-rich State has a huge potential for industrialization.

1.3.2. Industrialization process in Odisha led to setting up of 252 large and medium industries in 22 districts with a total investment of ₹92,788 crore and employment of 1.18 lakh persons as of March 2017. Availability of mineral resources, particularly iron ore, bauxite and coal; availability of water and power and above all investor friendly policy of the State Government, has made Odisha a favoured

destination for investors. Odisha is the leading State in the country in aluminum, both in terms of production and reserve capacity. Two of the larger aluminum companies in Odisha produce more than 50 percent of total aluminum production in India. MSME units grew impressively in 2016-17 mostly in Sundargarh, Khurda, Cuttack, Sambalpur and Ganjam districts. The State Government envisions a massive expansion of MSMEs in Odisha in the near future, while addressing the problem of industrial sickness in the State. Odisha has established 4 Investment Regions in the focus sectors, viz., National Investment & Manufacturing Zone (NIMZ) at Kalinganagar, Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) at Paradeep, Port Based Manufacturing Zone at Dhamra and Information Technology Investment Region at Bhubaneswar. This will transform Odisha into the industrial gateway to eastern India.

1.3.3. Mining sector is important for Odisha's economy. Over the past few years, it has contributed on an average 9.5 percent to GSDP. Odisha leads in the national mineral production of chromite (100 percent) iron ore (52.3 percent), bauxite (49.7 percent), manganese (26.7 percent) and coal (21.6 percent). There are thirteen States including Odisha, accounting for 95 percent of the total value of mineral production in the country, out of which Odisha's share was 22.8 percent in 2016-17 as compared to 20.9 percent during 2015-16. A major concern in the mining sector is to balance the implications of two concerns. On one hand there is a need to adopt more capital intensive and labour saving technologies to improve global competitiveness; on the other hand, there is need to harness the huge employment potential in the sector.

1.4 Services

1.4.1 In line with the all-India trends, the services sector comprises a growing component of Odisha's economy. It accounted for about 43 percent of GSDP in 2016-17 and is estimated to be over 45 percent in 2017-18. The sub-sectors Trade & hotels (10 percent), Transport & communication (7.5 percent), Real Estate (7.8 percent), and Other Services like education & health (8.4 percent) are the main drivers of the services sector in the State. The average (CAGR) growth of the services sector for the period 2011-17 stands at just over 9 percent per annum. The sector exhibited an accelerated growth rate of 10.7 percent in 2016-17 and is estimated to grow at 12.4 percent in 2017-18. Trade, transport and other services sub-sectors grew robustly by more than 12 percent, 14 percent and 13 percent respectively in 2016-17. Financial services, although with a lower share of 4 percent of GSDP, performed notably with a growth rate of 9.7 percent in 2016-17 and is likely to grow at 10.7 percent in 2017-18. Odisha has made noteworthy progress in financial inclusion. By 2016-17, about 81 percent of all bank branches were located in rural and semi-urban areas. During 2016-17, number of bank branches, deposits and advances grew by 2.9 percent, 16 percent and 7 percent respectively. The advances to priority sector and agriculture sector increased by 14.7 and 6.4 percent, respectively. The share of priority sector advance to total advances by banks remained high at 65 percent against the benchmark of 40 percent. Credit-deposit ratio was maintained at 69 percent during 2016-17 as against the benchmark of 60 percent. Co-operative banks have been mainly focusing on rural areas and the agriculture sector.

1.4.2 Launching of Centrally Sponsored e-platform for setting up national agriculture market by Odisha State Agriculture Marketing Board is expected to provide remunerative prices to the agriculture producers and accessibility to a wider market across the nation particularly for agricultural produce like Maize, Cotton, Onion, Coconut and Turmeric.

1.4.3 Odisha is endowed with promising tourism potential in terms of tourism resources, income generation and employment generation. The State Government has been promoting tourism in the State through improved institutional mechanisms, marketing support and expanded hotel industry, under the guidance of State Tourism Policy 2013. Hotel industry registered a growth of 12.3 percent in 2016-17. The domestic tourist flow from within and outside the State increased by 8.97 and 8.95 percent respectively during 2016 over the previous year. Air transport connectivity of the State expanded to cover additional national and international destinations. This will help improve the foreign tourist flows into the State. Tourism in the State also has a large potential for expansion once the destinations in less-frequented parts of the State (the western and southern parts) are developed adequately in terms of connectivity, tourism infrastructure and promotion.

1.5 Infrastructure

1.5.1 Infrastructure development that precedes and succeeds economic development has direct bearing on economic growth of the State and quality of life of people. The impressive performance indicators of infrastructure sectors like energy, roads, transport, communications, and IT reiterate the State Government's resolve for investor

friendly policy support and improvement in human wellbeing. Special programmes are being implemented for economically backward regions with focus on Bijli, Sadak and Pani with a view to improve quality of life of the people.

1.5.2 Odisha, the State at the forefront of power sector reforms in the country, had a total installed capacity (Odisha share) of 5509 MW in 2016-17. It reduced marginally and temporarily over 2015-16 because of renovation and modernization of Hirakud and Chipilima hydro power stations. About 94.37 percent of villages in Odisha are now electrified. Ongoing programmes like Rajiv Gandhi Grameen Vidyutikaran Yojana, Biju Gram Jyoti and Biju Saharanchal Vidyutikaran Yojana will lead to 100 percent village electrification in near future. About 35.5 percent and 38.5 percent of total power consumption of the State is accounted for by industrial and domestic users, respectively. The State has embarked upon an ambitious CAPEX programme to substantially improve its grid infrastructure and to bring down T&D losses.

1.5.3 The road density of Odisha has improved to 165 km per 100 sq. km of area in 2016-17. Public interventions through Pradhan Mantri Gram Sadak Yojana and Bharat Nirman Yojana are expected to further improve the coverage of all-weather surface roads and the road density in the State. In the course of 2016-17 and 2017-18, construction of number of bridges and cross drainage works has been undertaken to ensure all weather connectivity to remote habitations. Railway density in the State is still low with 16 km per thousand square km of area, which is less than the national average of 20 km. New railway projects have been launched through SPVs and

direct State funding. The projects to be taken up include Daspalla-Bolangir segment of Khurda-Bolangir line, Jaypore-Malkangiri and Jaypore-Nawrangpur rail links. On the whole, railways in Odisha grew by 19 percent in 2016-17 and are estimated to grow by 16 percent in 2017-18. State Government has identified 13 locations ideal for setting up ports in Odisha. Besides the only major port at Paradeep, Gopalpur and Dhamra ports have been operationalized through the State Government initiative.

1.5.4 Telecommunications improved notably in Odisha. The overall tele-density in the State by the end of March 2017 was 80.74 percent against the all India average of 92.98 percent. The urban and rural tele-density of Odisha were 183.86 percent and 58 percent respectively, as compared to 171.80 percent and 57 percent at the national level in India. Information Technology has transformed the State public administration into E-governance based public services delivery agency. Two software technology parks are in operation at Bhubaneswar and Rourkela.

1.6 Employment

1.6.1 Creation of adequate livelihood opportunities and addition to decent employment, commensurate with the aspirations of a growing labour force are essential ingredients for inclusive development. Odisha has made notable improvements in WPR (46.09 percent) and LFPR (53.2 percent) by reaching closer to national average of 47.8 percent and 53.2 percent, respectively in 2015-16. The unemployment rate (UR) in Odisha at 3.8 percent in 2015-16 was almost at par with 3.7 percent in the country. Ironically, the richer States like Goa, Kerala and Punjab with high

per capita income, have higher UR at 9, 10.6 percent and 5.8 percent, respectively. Urban Odisha recorded a higher UR of 4.4 percent than rural Odisha (3.7 percent) in 2015-16.

1.6.2 Although the share of State's agriculture in GSDP has declined to less than 20 percent, it continues to absorb more than 62 percent of total workforce in the unorganized sector. This leads to disguised employment in the form of lower income and productivity of labour in the unorganized sector in rural Odisha. Similarly, rising share of marginal workers in the total workforce from 33 percent in 2001 to 39 percent in 2011 is another area of concern. The State Government has sought to address this problem with strategic interventions in skill development, livelihoods and income generating activities to enable rural as well as urban youth to find suitable and decent employment in non-farm sectors within or outside the State. The role of Odisha Skill Development Authority has been notable in meeting the skilling needs of the displaced and the disadvantaged groups. The Government has been promoting agro-based and food processing industries to provide ample alternative employment opportunities to the surplus labour in the agriculture sector.

1.6.3 Expansion of employment opportunities in the organised sector is elemental in the context of ensuring quality, security and good governance in the labour market. In Odisha, share of organised sector employment in public and private sector is grossly skewed in the ratio of 85:15. Further, there has been a decline in employment in the organised sector from 7.95 lakh in 2013 to 5.03 lakh in 2015. Between 2004 and 2015, the CAGR of employment in public sector fell by 2.1 percent but there was an increase of 1.4

percent in private sector in the State. Although the latter represents a positive trend, there is much scope for greater accomplishment by way of improving the pace of generating additional productive employment opportunities, the quality of employment and skill sets of the workers and those who are seeking to enter the workforce.

1.7 Poverty and Human Development

1.7.1 Poverty reduction and human development are the ultimate goals of a development process as also basic rights of the citizens by implication. As per the poverty estimates based on revised Tendulkar methodology (Planning Commission, New Delhi and now NITI Aayog), Odisha had the distinction of achieving the largest poverty reduction of 24.6 percentage points from 57.2 percent to 32.6 percent between 2004-05 and 2011-12. Poverty declined among SCs and STs by 26.51 and 20.88 percentage points. Northern, southern and coastal regions recorded poverty reduction with 30.53, 25.40 and 19.95 percentage points respectively. The magnitude of deprivation showed significant reduction from 17.7 to 7.01 for rural areas. With the availability of Socio Economic and Caste Census (SECC 2011) poverty in Odisha has been in a sense redefined, re-measured and re-identified following the principles adopted for the SECC 2011. While the findings of SECC 2011 evaluate the predefined criteria of automatic exclusion, inclusion and deprivation, the poverty profile of Odisha has been prepared on the basis of the combined criteria of deprivation and compulsory inclusion.

1.7.2 There are significant regional disparities in Odisha. To address the disparities the State Government has been implementing a

number of development programmes with Central and State funding and has launched a number of specific initiatives. Out of these, important ones are Revised Long Term Action Plan (RLTAP), Biju KBK Plan, Biju Kandhamal O Gajpati Yojana, Gopabandhu Gramin Yojana (GGY), Programmes funded by Backward Regions Grant Fund (BRGF), Western Odisha Development Council (WODC) and Special Development Council. With the support of Government of India, the State implemented Integrated Action Plan (IAP) in 18 tribal and backward districts of Odisha. These development initiatives have contributed to improving the development momentum in the backward regions of the State.

1.8 Social Sectors

1.8.1 Social sector is in transition in Odisha. Provision of higher Annual Plan outlays, an improvement in the sectoral share of allocations and sectoral growth rates of the sub-sectors along with mobilization and engagement of civil society stakeholders reflects the importance being accorded to social sector development in the State.

1.8.2 Education not only improves quality of life but also instills confidence among the youth to improve their livelihood opportunities, incomes and quality of life. With 72.9 percent literacy rate, Odisha is at par with national average. By 2016-17, Odisha's gross enrollment at primary and upper primary level were 92.47 percent and 104.52 percent respectively. The dropout rates fell sharply to 4.20 percent at the primary level. Teacher-Pupil ratio has improved to 1:24 and 1.23 for primary and upper primary levels. Dropout rate for secondary level has also come down to 5.21 percent.

1.8.3 The school infrastructure has improved significantly. About 1688 schools, including Girls Schools, Residential Schools, Sevashrams, Training Institutes and Educational Complex for Primitive Tribal Groups (PTG) are functioning in the State. There are 3067 hostels completed for SC & ST students. The State run new scheme ANWESHA provides quality education to SC & ST in 142 best private schools in 17 districts. Construction of 250 hostels under ANWESHA has been initiated. The State Government constructed 2 urban hostel complexes at Bhubaneswar with a capacity for 500 students and steps have been initiated to establish another 6 new urban hostel complexes at Berhampur, Sambalpur and Rourkela, one each for boys and girls in these locations. A good number of vocational and technical institutions are helping to equip the youth with employable technical and soft skills. National level institutes like IIT Bhubaneswar, National Institute of Science Education and Research, the Central University at Koraput and the National Law University at Cuttack, and an IIM at Sambalpur have been set up in the State. Odisha Knowledge Corporation has been established to expand e-education among the youth.

1.8.4 Improvement in health care services requires addressing issues in accessibility, service delivery, financing and creation of infrastructure facilities. The State Government has been focusing on these issues and consolidating the encouraging trends in the delivery of health care services over the past one and half decade. Between 2000 and 2016, Odisha's IMR fell sharply from 96 to 40. Immunization coverage increased from 43.7 percent to 78.6 percent. Institutional delivery

increased from 22.6 percent to 85.4 percent. Health insured households increased from a meagre 1.6 percent to 47.7 percent. By 2016, the crude birth rate had improved to 19.2 per thousand population. Total Fertility Rate (TFR) in Odisha stood at 2.1 percent. Life expectancy at birth for male and female is estimated to improve to 66.3 years and to 69.6 years, respectively in the period 2016-20. However, there is a need to further reduce vital health parameters like Crude Death Rate (8.4), Infant Mortality Rate (40), Maternity Mortality Rate of 222 per lakh population for the State, which continue to remain high as compared to national averages.

1.8.5 Some major interventions by State Government yielded significant results. IMR Mission 2001 and Nabajyoti scheme 2004 were launched with State's own resources. Special strategy in 2015-16 was contemplated to achieve IMR of under 30 by 2020. Facility Based Newborn Care Units have saved 1.36 lakh newborns so far. About 85 First Referral Units (FRUs) operate at high volume health facilities. Nearly 44000 ASHAs were trained on home based newborn care. About 45407 Gaon Kalyan Samiti (GKS) are functional at revenue village level to facilitate community based action for addressing health and its social determinants. About 50 Nutrition Rehabilitation Centres treated 17,776 malnourished children in the last 7 years. Free referral '102' & '108' ambulances benefited 17.6 lakh patients. Immunization programme was strengthened with inclusion of four new vaccines to combat Hepatitis-B, Polio, Diarrhoea and Japanese encephalitis fever. "104 health help line" is introduced under Mother and Child Track System / RCH Portal.

1.8.6 The State Government is keen to reduce out of pocket expenditure on accessing health care access. Nearly 570 types of drugs are being supplied that benefited 46 crore patients under NIRAMAYA. There are 9.77 lakh families under RSBY; 2.77 lakh families under BKKY and 28,134 patients under OSTF who benefited from the health insurance and assurance programme. Nearly 55.10 lakh mothers have benefited so far under JSY and 9 lakh pregnant woman and 1 lakh sick children benefited annually under JSSY. New initiatives by State Government to prevent non-communicable diseases in the State include NCD complex in 5 districts HQ hospitals; ICU in 10 districts; Cancer chemotherapy in 13 districts; 8 Trauma care centres and Integrated Geriatric OPD in 10 districts. The government has also strengthened infrastructure with 7408 major civil projects for peripheral institutions. About ₹ 825 crore have been sanctioned under the Mukhya Mantri Swasthya Seva Mission for 2017-18. Nearly 18.84 lakh persons benefited every year in Swasthya Sanjog scheme. The State has proposed incentive to private hospitals in difficult areas through the Affordable Healthcare Project (in PPP mode) and the Health Investment Promotion Policy (HIPP). Odisha has 5 government medical colleges where the number of MBBS and PG seats have been increased.

1.8.7 Over 75 percent households have access to safe drinking water (taps, handpumps and tube-wells) as per the 2011 census. The Total Sanitation Campaign (TSC) has been implemented to provide toilets in rural areas and encourage people to improve their sanitation conditions. Physical achievements under this programme have been encouraging.

By September 2017, 1,460,757 IHLS have been constructed under Swachha Bharat Mission.

1.8.8 Malnutrition and malnourishment are visible concerns for Odisha. The State Government continues to fight malnutrition through its initiatives under Integrated Child Development Scheme (ICDS), Midday Meal Scheme, Rehabilitation of Cured Leprosy Patients, Emergency Feeding Programme and provision of heavily subsidized rice at the rate of ₹1 per kg for the BPL population.

1.8.9 Social security among economically weaker sections remains a priority concern of the State Government. Programmes/ schemes under implementation, both with Central and State funding, to provide social security to the poor, old and destitute, include Indira Gandhi National Old Age Pension, Madhu Babu Pension Yojana, National Family Benefit scheme, National Social Assistance Programme, Indira Gandhi National Widow Pension Scheme, Indira Gandhi National Disability Pension Scheme, Old Age Homes and Day Care Centers. For the welfare of persons with disabilities, State Government is implementing schemes like skill development, promotion of special schools, self-employment and rehabilitation of persons cured of leprosy/ Hansen's disease, provision of differential rate of interest in loans for self-employment, reservation in poverty alleviation schemes, working women's hostel for PwDs, provision of special aids and appliances, mission kshyamata, Bhima Bhoi Bhinnakshyama Samarthya Aviyan etc.

1.9 Public Finance

1.9.1 Finances of Odisha are on a sound base. The prudential policy of maintaining revenue account surpluses to finance the capital outlays has been consistently followed thereby reducing the need for incurring fresh debt as also providing the fiscal space to enhance capital expenditure for development of the State. Guided by the rolling targets of the Medium Term Fiscal Plan, an obligation under the Fiscal Responsibility and Budget Management Act of the State, key fiscal parameters were kept within permissible range, meeting conditionalities of the 13th and 14th Finance Commission of India.

The FRBM (Amendment) Act, 2011 has made it mandatory for the State to generate revenue surplus, keep the fiscal deficit within 3% of GSDP, achieve Debt/GSDP ratio (25%) at Finance Commission recommendation level. Further, Fourteenth Finance Commission in Fiscal Consolidation Roadmap have set fiscal deficit targets for States. It allows additional 0.25% of fiscal deficit, if the debt-GSDP ratio is less than or equal to 25% in the preceding year and another 0.25% if the interest payments are less than or equal to 10% of the revenue receipts in the preceding year provided there is no revenue deficit in the year in which borrowing limits are to be fixed and the immediately preceding year.

The State Government have amended the FRBM Act, 2005 on the basis of the recommendation of the 14th Finance Commission so that the enhanced Fiscal Deficit limit can be availed to finance higher capital outlay.

The State finances have come a long way from the stage of unsustainable fiscal deficit and debt levels to much below the prescribed threshold deficit and debt levels of 3% of GSDP and 25% of GSDP respectively. For the financial year 2016-17, the fiscal deficit stood at 2.56% of GSDP and year end debt stock was 16.47% of GSDP. The State has also taken several public financial management reform measures for more effective and efficient management of public finances.

1.9.2. Odisha is among few States that present a separate Agriculture Budget. The budget is prepared separately since 2013-14 for the Departments dealing with irrigation, agriculture, co-operation, fisheries and animal resources development. Agriculture Cabinet has been formed to fast track focused policy decisions for development of Agriculture and Allied Sectors. The outlay for the Agriculture Budget has been increased at an average rate of about 20% from 2013-14 onwards. It is aimed at addressing the twin challenges of rural poverty and regional disparity.

Developmental expenditure covering the social and economic sectors is now about 75% of total expenditure excluding debt repayment for 2016-17. Similarly, capital outlay has been increased by more than three times between 2012-13 to 2016-17.

The overall fiscal situation of the State is stable. It is capable of managing fiscal risks and continue with the prudent fiscal management policy keeping intact the thrust on socio-economic development for inclusive growth

1.10 The Way Forward

1.10.1 A stable political dispensation over an extended period of time, attempts to build a comprehensive approach to social and economic development of the State, along with initiatives on good governance has seen Odisha making steady progress on a range of development indicators in the past few years. However, there is a long way to go before it joins the club of front ranked States in the country. It is in that context that there is an urgent need to strengthen the institutional capacity to undertake evidence-based policymaking and create systems for real time monitoring and assessment of development and governance apparatus in the State to effectively transform good intentions to improved human wellbeing. Importantly, there is a need to review and introduce correctives in the policy response to rapidly overcome the chronic socioeconomic development gaps in the State.

1.10.2 The move towards decentralization (from centre to States) accompanied by greater flexibility in financial planning and the pressures and inevitability of adopting competitive development policies among contiguous States makes it necessary for the State governments to reform and strengthen their policymaking process. This inter alia requires a greater reliance on evidence based policymaking (need for databases, data compilation and improved statistical, monitoring and forecasting capacity), a transparent, accountable and efficient budgetary process, improved capacity for resource mobilization and resource forecasting over multiple years, public expenditure management and convergence of public interventions at district and sub-district levels.

1.10.3 Towards that end, the State Planning and Finance Department may have to take the lead in evolving a system that could support a multi-year budgeting framework to support a medium term policy perspective, especially if the practice of Five-year Plans is discontinued in line with the thinking favoured by the Central Government. There is a need, in that case, to strengthen repositories, archives and databases especially in these Departments with a view to build institutional memory and capacity for empirical policy analysis. Importantly, capacity for modelling and forecasting State-level macroeconomic indicators including GSDP, inflation, revenue and expenditure, State-debt indicators, investments and employment has to be rapidly put into place. This also calls for capacity augmentation of the State statistical agency for sub-State level databases, district statistical profiles, environmental accounting and social sector data.

1.10.4 Finally, reforms of State and sub-State level institutions and governance practices is a critical area of concern for Odisha, possibly for most State governments in India. Although it encompasses a wide range of issues and institutions, the government needs to focus on selected activities in three broad areas: improving accountability and efficiency in public service delivery, State level regulatory capacity for economic and social activities, and strengthening grassroots democracy including by engaging proactively with the civil society in the task of development transformation of the State.



Odisha remains a better performer of economy among all major States in current decade. Its real growth rate averaged an impressive 7.02% as against 6.80 % at national level in last six years. 2016-17 was the year of macro buoyancy for Odisha with double digit real growth rate of 10.4%. During 2017-18 the state has registered a growth rate of 7.14% at 2011-12 prices, which surpassing all India growth rate of 6.5%.

Services sector as a leading contributor to GSDP, has contributed 38.54 percent in 2011-12 which increases tremendously to 45.25 percent in 2017-18 and surpasses Agriculture and Industry sector over years. The consumer price inflation in the state exhibited a fluctuating trend and was the lowest level of 1.3% in 2017 (up to Nov, 2017) as against all India level of 3.1 percent. The CPI (all commodities) of the state increased to 146.8 in 2017 compared to 139 in 2016 and 129.6 in 2015. The labour force participation rate (LFPR) is estimated at 53.2 percent in the state in 2015-16, while the corresponding figure for All India was 52.4 percent. The worker Population Ratio (WPR) for Odisha during 2015-16 was estimated at 51.2 percent, while the same was 50.5 percent at all India level. The unemployment rate was estimated at 3.8 percent in the state during 2015-16 which is almost at par with all India rate of 3.7 percent. The Compound Annual Growth Rate (CAGR) in employment in organized sector from 2004 to 2015 has also declined by 2.1 percent, but in case of Private sector it is up by 1.4 percent. The MPCE, that symbolizes the extent of level of living, distinctly increased from Rs. 472 in 2004-05 to Rs. 1045 in 2011-12 in Odisha, This directly influenced the faster fall in poverty ratio, deprivation level of Odisha to a visible extent.

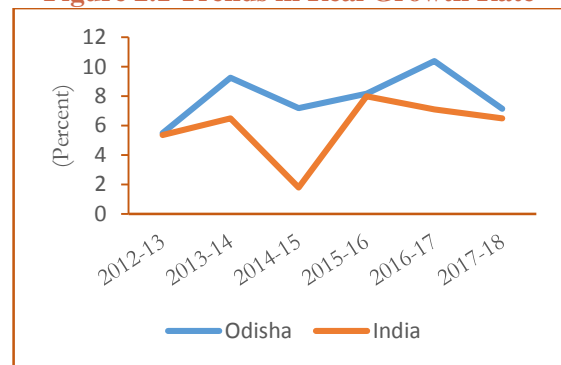
2.1 Economic Growth: Gaining Momentum

2.1.1 The central theme of economic growth refers to an increase in productive capacity of an economy which delivers on better standard of living. It has been rightly pointed out by Dani Rodrik, Harvard University that “Historically nothing has worked better than economic growth in enabling societies to improve the life chances of their members, including those at the very bottom”. Prof Amartya Sen has described economic growth as a crucial means for expanding the substantive freedoms that people value. These freedoms are strongly associated with improvements in general living standards, such as greater opportunities for people to become healthier, eat better and live longer¹. It is measured in terms of Gross State Domestic Product (GSDP), which is an estimate of total value of goods and services produced in the State.

2.1.2 The economy of Odisha posted its fastest growth in three years from 2015-16 to 2017-18 after moving downward in 2014-15. As per the Advance Estimates (AE) released by the DES, the economic growth in terms of real GSDP registered a growth level of 7.14 percent in 2017-18 at 2011-12 base (market price). The growth was higher than the 6.5 percent recorded at the national level (Figure 2.1). The growth rate in 2012-13 was 5.5 percent, and then increased to 9.26 percent in 2013-14. Because of a significant fall in the value of minerals like iron ore and manganese in the mining sector and in the value of manufacturing products like basic iron steel and petroleum

goods contributing a large share of GVA in manufacturing sector, the growth rate in 2014-15 slowed down to 1.80 percent. However, it jumped to 8.17 percent in 2015-16 and registered an impressive growth of 10.39 percent in 2016-17, thus averaging around 7.02 percent growth per year from 2012-13 to 2017-18 as against the all-India average of 6.80 percent.

Figure 2.1 Trends in Real Growth Rate



Source: DES, Odisha and CSO, New Delh

2.2. Growth of Odisha's GSDP since 1950s

2.2.1. The economy of Odisha recorded an annual average growth rate of 4.2 percent during the period 1951-2011 against the all-India average of 4.9 percent at 2004-05 base price. This implies a gap of 0.7 percentage points for the State from national average. From 2003 onwards, the growth rate of the State accelerated and entered into a higher trajectory of above 8 percent as against the national average of 7.5 percent thus becoming one of the fast-growing economies of the country.

2.2.2. The economic growth of the State in terms of GSDP at market prices was averaging

¹ Sen, A (1999), Development as Freedom, Oxford University Press

6.66 percent from 2012-13 to 2016-17 as against the all-India average of 6.84 percent. During the said period, the average annual growth rates in some other States like Andhra Pradesh, Assam, Telengana, Bihar, Gujarat, Punjab, Karnataka and Uttar Pradesh were on an average 6.89, 3.12, 6.73, 9.13, 8.95, 5.52, 6.84 and 4.92 percent respectively.

2.3. Growth in Per capita GSDP

2.3.1 The per capita income at base year price of the State in terms of GSDP is estimated to be Rs 77, 193 in 2017-18, which experienced a 6.06 percent rise from Rs 72,780 in 2016-17. India's per capita income at base year price rose by 5.1 percent with ₹ 98,673 in 2017-18 compared to ₹ 93,840 in the preceding year of 2016-17. At current prices, the per capita income of the State during 2017-18 is likely to touch the level of ₹92,727, while it will be ₹126,349 at the national level.

During 2011-12, the per capita income of Odisha in base year prices stood at ₹54,109 and increased to ₹ 57,059 in 2012-13, ₹61,715 in 2013-14, ₹ 62,192 in 2014-15, and ₹ 66,600 in 2015-16. But the Per Capita Income of India in constant prices (same base year) was ₹ 88,706 in 2015-16. The per capita income of India appeared to be 1.27 times higher than Odisha.

2.3.2 As regards per capita income of the major States for 2016-17 at constant prices (2011-12) based on GSDP estimate of 2016-17, the bottom three States were Bihar (₹ 26,693), Uttar Pradesh (₹ 39,028) and M.P. (₹51,852), while the top three were Sikkim (₹205,112), Haryana (₹143,211) and Puducherry (₹135,110)². This indicates striking income disparity between rich and poor States. The PCI

of Sikkim, the richest State, is 7.68 times that of Bihar, the poorest State, while it is 5.25 times that of UP, and 3.95 times that of M.P. The sharp income disparity across States is also evident as the coefficient of variation (CV) of PCI for 16 States reached the peak level of 46.68 percent in 2016-17.

2.4. Growth in Size and Sectors of the Economy: Overall Macro Perspectives

2.4.1 In terms of the size of the economy, GSDP at 2011-12 prices stood at ₹230.99 thousand crore in 2011-12 and increased to ₹323.22 thousand crore in 2016-17. It is further expected to rise upto ₹ 346.29 thousand crore in 2017-18, showing a growth rate of 7.14 percent compared to 2016-17.

2.4.2 Nominal GSDP at current prices for the base year 2011-12 is estimated as ₹230.99 thousand crore. In the subsequent years till 2016-17, the estimated figures are: ₹261.70 thousand crore, ₹ 296.48 thousand crore, ₹ 314.27 thousand crore, ₹ 330.87 crore, and ₹377.20 thousand crore, exhibiting growth of 13.30 percent, 13.29 percent, 6.00 percent, 5.28 percent, and 14.00 percent during the years 2012-13 to 2016-17 respectively.

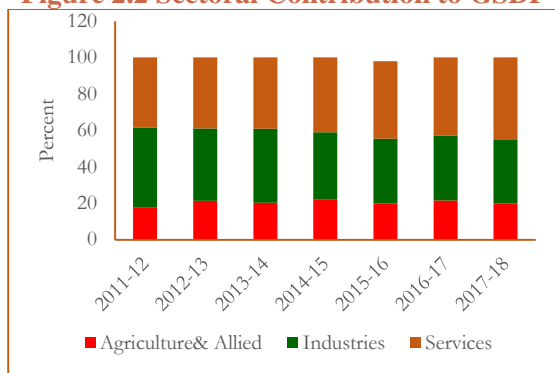
2.4.3 The process of structural transformation of economies can be studied by viewing the sectoral shares of economic activities grouped into three broad sectors, namely Agriculture & allied, Industries and Services. The shares of these broad sectors at current prices are given in Figure 2.2. Both industries and services sectors, accounting for more than four-fifths of GSDP, continued to be the largest contributors to economic growth. However, the share of

² DES data as available (for 16 States) during 2016-17

industries sector was 43.59 percent in 2011-12 and it declined to 34.77 percent in 2017-18.

2.4.4 Services sector witnessed a continuous expansion with a share in total gross value added rising from 38.54 percent in 2011-12 to 45.25 percent in 2017-18. Agriculture and allied sector, being still monsoon-dependent to some extent, showed a fluctuating trend. Its share increased from 17.9 percent in 2011-12 to 22.2 percent in 2014-15 and again declined to 20 percent in 2015-16 owing to deficient monsoon. It once again dropped to 20.0 percent in 2017-18 after rising to 21.6 percent in 2016-17. Compared to the all-India level in 2017-18, agriculture and allied sectors' share in Odisha is higher by 3.6 percentage points. The share of the industries sector is 6.3 percentage points higher than that for India as a whole. Share of services sector in Odisha is 9.9 percentage points less than the all-India figure.

Figure 2.2 Sectoral Contribution to GSDP



Source: DES, Odisha

2.4.5 While analyzing the past trends in sectoral shifts away from agriculture to industries and services, it is observed that the average contribution of agriculture and allied sector to the Odisha GSDP has been declining from 62 percent in 1950's to 48 percent in 1980's and 22 percent in 2000-10 (2004-05

base). The share has further fallen to an average of 20.4 percent during 2011-17 (2011-12 base).

2.4.6 On the contrary, average share of the industries sector for the State has been increasing from 26 percent in the 1980's to 34 percent in 2000-10, although it showed fluctuations from 1950's to 1970's. The services sector also registered an increasing share from 27 percent in 1980's to 44 percent in 2000-10 (2004-05) base. Using the new base year, the share of industries and services sectors stood at 39.20 percent and 40.88 percent respectively on an average during 2011-16 (Table 2.1). The details of sectoral developments are outlined below.

Agriculture and Allied Sector:

2.4.7 Agriculture and allied sector covers the economic activities of: (a) Crop production, (b) Livestock, (c) Forestry and logging, and (d) Fishing. As noted above, the annual growth rates of this sector fluctuated significantly during 2011-12 to 2017-18. During 2016-17, the growth rate increased significantly to 19.65 percent on a low base due to higher production of crops. But it declined to negative growth of 4.70 percent in 2017-18 following lower crop production as per second advance estimate of crop statistics. During 2011-17, the Compound Annual Growth Rate (CAGR) was 2.8 percent only. Although contribution of agriculture and allied sector is moving downward from 62 percent in the 1950's to 19.98 percent in 2017, this sector still continues to be the main employment provider to small and marginal workers. Growth of this sector is important not only for ensuring food security and reduction of poverty in rural areas, but also to sustain growth of the rest of the economy.

2.4.8 The driver of growth of agriculture and allied sector can be identified as crop production with 13 percent share on an average in the total Gross State Value Added (GSVA). The shares of livestock, forestry and fishery sectors were estimated to be 3.00 percent, 2.36 percent and 2.08 percent respectively in 2017-18 (Table 2.1). The production of crops, which faces risks and uncertainties of natural calamities like deficient rainfall, pests attack, non-availability of credit, price fluctuations, failure of farming method etc. plays the dominant role in the growth of agriculture sector. As the cropping pattern of the State is cereal-centric, it requires more irrigation, more use of fertilizers, manures etc. More than 50 percent of the gross cropped area is covered under cereal crops. Almost one third of the net area sown is irrigated, while two thirds remain un-irrigated. Therefore, cultivation of other crops like pulses etc which require less water need be encouraged widely in unirrigated areas to increase the level of production.

2.4.9 Although crop production in the State has increased, average yield of paddy and pulses remain below that of the leading States. In the recent years, the State has made impressive strides in average yield of paddy and pulses which were above 3000 kg/ha and 500 kg/ha respectively during 2012-16, compared to average yield of paddy of 2338 kg/ha and of pulses of 350 kg/ha during 2001-11.

2.4.10 For raising agricultural productivity, use of quality inputs, exploitation of modern technology and shift into high value commodities such as fruits, vegetables, flowers, fisheries, animal husbandry and poultry need be propagated. To make farming remunerative for farmers, market intervention of the government through minimum support prices (MSP) with wide coverage of commodities need be ensured so that farmers can get fair prices for their produce at market places without any exploitation from private traders.

Table 2.1 Sectoral Share (in per cent) at current prices in 2011-12 base

Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (Advance)
Agriculture and Allied	17.87	21.44	20.24	22.21	20.04	21.57	19.98
Crops	11.60	15.05	13.56	15.03	12.34	13.96	12.54
Livestock	2.45	2.56	2.60	2.72	2.81	2.92	3.00
Forestry and Logging	2.60	2.49	2.80	2.93	3.06	2.68	2.36
Fishing	1.22	1.34	1.28	1.53	1.83	2.01	2.08
Industries	43.59	39.70	40.64	36.69	37.45	35.71	34.77
Mining and Quarrying	12.03	10.70	10.23	9.16	9.47	8.26	7.72
Manufacturing	18.69	16.91	18.43	16.00	16.10	16.46	16.23
Electricity, Gas, Water Supply	3.52	3.76	3.72	3.42	4.07	3.60	3.64
Construction	9.35	8.32	8.25	8.11	7.80	7.39	7.18
Services	38.54	38.86	39.13	41.10	42.52	42.72	45.25

Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (Advance)
Trade, Hotels and Restaurants	9.24	9.78	9.88	10.26	10.08	10.14	10.37
Transport, Communication, etc	6.12	6.26	6.32	6.94	7.39	7.54	8.01
Financial Services	3.62	3.65	3.43	3.61	3.89	3.95	4.12
Real Estate, Ownership of Dwelling & Professional	7.75	7.63	7.65	7.87	8.12	7.76	7.81
Public Administration and Defence	3.92	3.94	4.96	5.14	5.19	4.98	6.20
Other Services	7.89	7.60	6.89	7.29	7.85	8.35	8.74
TOTAL GSVVA at Basic Prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : DES, Odisha

Industries Sector

2.4.11 Industrial sector occupies an important position in State economy and has a major role to play in realizing rapid economic development. This sector covers the sub-sectors of: (a) Manufacturing, (b) Mining and quarrying, (c) Electricity, gas, water supply & utility services, and (d) Construction. Value added from these sub-sectors account for more than one third of GSDP. Manufacturing sector contributes 17 percent on an average to total GSVVA, thus qualifying as a major driver of growth. The other sub-sectors like mining & quarrying and construction also contribute 9.7 percent and 8.1 percent on an average respectively. The electricity, gas, water supply & utility services sub-sector has a lower share averaging at 3.7 percent.

2.4.12 The manufacturing sector constitutes both organized and un-organized industries with a share of about 88 percent and 12 percent respectively. The organized manufacturing sector mainly consists of sub-sectors like manufacturing of basic iron and steel metal, precious and non-ferrous metal, coke and petroleum products. The GVA of these sectors

account for 79 percent of total GVA in the organized sector.

2.4.13 As per Annual Survey of Industries (ASI), which is the source of data on organized manufacturing sector, there were 2,803 registered factories in the State during 2014-15, which provided gainful employment to 2.63 lakh persons. Major employment providing industries are under basic metals categories (NIC code 24), which contribute more than half of the total output.

2.4.14 The un-organized sector, which contributes 12 percent of GVA under manufacturing sector, provides employment to 12.66 lakh persons through 6.15 lakh enterprises as per NSS 67th round survey (2010-11).

2.4.15 The share of mining and quarrying sector varies from 12 percent in 2011-12 to 7.72 percent in 2017-18. The erosion of the share is mainly attributable to fall in the prices of minerals. Iron ore and coal, with highest shares of about 42 percent and 32 percent respectively in the total GVA in mining and quarrying, have mainly contributed to the growth of the mining sector.

Table-2.2 Real growth of GSDP (percent) by Sectors from 2013-14 to 2017-18

Sector	2013-14	2014-15	2015-16	2016-17	2017-18
Agriculture, forestry & fishing	-4.16	7.84	-13.52	19.65	-4.70
CAGR % (2011-17)	--	--	--	--	2.81
Industries	16.23	-7.02	16.47	6.35	5.23
CAGR% (2011-17)	--	--	--	--	5.72
Services	7.79	7.75	8.11	10.74	12.42
CAGR% (2011-17)	--	--	--	--	9.02
GSVA at basic price	8.90	1.30	7.49	10.14	6.64
GSDP	9.26	1.80	8.17	10.39	7.14
CAGR% (2011-17)	--	--	--	--	6.98
CAGR% (All India), 2011-17	--	--	--	--	6.82

Source: DES, Odisha

2.4.16 The share of electricity, gas, water supply & other utility services increased marginally from 3.52 percent in 2011-12 to 3.72 percent in 2013-14 and 4.07 percent in 2015-16. During 2017-18, it again declined marginally to 3.64 percent. The contribution of construction sector varies from 9.35 percent in 2011-12 to 7.18 percent in 2017-18. Overall industries sector witnessed Compound Annual Growth Rate (CAGR) of 5.72 percent (Table 2.2).

2.4.17 All round industrial development in the State to generate employment and economic development has been a priority area of the State Government, because of which new Industrial Policy Resolution, 2015 and SEZ Policy, 2015 have been formulated. The Startup Policy has been prepared to develop startup hubs in Odisha and will act as a catalyst in economic growth of the State. Apart from the above, the State Government has also taken up various reform measures for simplification of procedures to attract higher industrial investment.

Services Sector:

2.4.18 The services sector includes the economic activities like trade, hotels and restaurants, Transport, Storage, Communication and services related to broadcasting, Financial Services, Real estates, Ownership of dwellings and Professional services, Public Administration and Defense, and Other services.

Average contribution of this sector to GSDP was 41.16 percent during 2011-17. In 2011-12, the share was 38.54 percent and it rose to 45.25 percent in 2017-18. Within this sector, Trade, Hotels and Restaurants, Other Services, Transport, Storage & Communication, and Real Estate, Ownership of Dwellings and Professional Services contributed substantially with shares at 10.37 percent, 8.74 percent, 8.01 percent and 7.81 percent respectively in 2016-17.

2.4.19 The annual growth of the services sector accelerated from 7.41 percent in 2012-13 to 10.74 percent in 2016-17 and it further increased to 12.42 percent in 2017-18. During 2011-17, the average annual growth rate

(Compound Annual Growth Rate) was 9.02 percent (Table 2.2). With a share of around 45 percent in GSDP and growth rate of about 9.04 percent, services sector turned out to be the growth engine for Odisha economy.

2.4.20 The sub-sector Public Administration which includes public expenditure is also one of the key indicators in services sectors with an average share of 4.90 percent. On the other hand, financial sector which includes banking and insurance services, has a share of 3.75 percent to the total GVA. The GVA of Trade and Hospitality sector, with major contribution from private un-organized sector (96 percent), continued to grow at an average rate of 9.9 percent.

2.4.21 The different segments of Transport and Communication sector exhibited mixed signals of growth. But average share of “Transport by other means” remained on top with 55 percent, while it was 28 percent for Communication, and 17 percent for Railways. GVA of Other services includes health, education, social work, arts and entertainment and personal services. Among them, GVA of education accounted for 55 percent and grew at 7.79 percent in 2017-18.

2.4.22 GVA of Real estate, Ownership of dwellings and Professional services, which includes (i) real estate services, (ii) occupied residential houses, (iii) computer and related activities, (iv) accounting, book-keeping and related activities, (v) research and development, (vi) consultancy, architectural, engineering & other technical activities, and (vii) legal services, seems to be strengthening

with highest contribution from ownership of dwelling sub-sector (65 percent) and the sub-sector exhibited a growth rate of 6.07 percent during 2011-17.

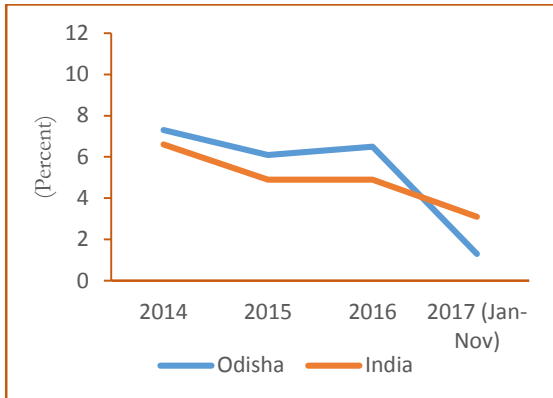
2.4.23 According to NSS 67th round survey (2010-11), 10.73 lakh enterprises under Trade sector and 7.55 lakh under Other Services activities were engaged in the State providing gainful employment to 16.79 lakh and 19.86 lakh persons respectively.

2.4.24 The growth rate of the services sector was averaging at 9.04 percent during 2012-17 and had an average share of 41.16 percent of value added. The sector is the least volatile sector. Addressing the issues like human skill development and physical infrastructure can further accelerate the growth of the service sector.

2.5. Prices and Inflation

2.5.1 Over the past few years, consumer price inflation in the State exhibited a fluctuating trend and was at the lowest level of 1.3 percent in 2017 (upto November, 2017) as against all-India level of 3.1 percent. The average annual inflation rate based on CPI with 2012 as the base year for the State, peaked in 2014 at 7.3 percent, but declined to 6.1 percent in 2015. It again increased to 6.5 percent in 2016 as against the all-India rate of 4.9 percent. Similarly inflation in rural Odisha increased to 7.6 percent in 2016 from 6.9 percent in 2015. But in 2017, it slipped to 0.9 percent, being the lowest over three years. The urban Odisha witnessed inflation of 6.7 percent in 2014 that later declined to 3.7 percent in 2016 (Figure 2.3). But it fell again to a lower level of 2.5 percent in 2017.

Figure 2.3: Trends in inflation: Odisha and India



Source: C.S.O, New Delhi

2.5.2 As prices for goods and services that we consume increase persistently, it is seen as inflation. The general idea is that households are thought to be worse-off when inflation rate is too high, and it becomes a concern for the government. The changes in prices affect the real purchasing power of consumers and their welfare. Thus inflation becomes the primary focus of policy makers. Inflation is measured using consumer price index (CPI). The percentage change in this index over a period of time gives the extent of inflation over that specific period, i.e. the increase in prices of a representative basket of goods consumed.-

2.5.3 A comprehensive measure used for estimation of price changes in a basket of goods and services representative of consumption expenditure in an economy is called consumer price index (CPI). It is calculated by Central Statistical Organisation (CSO), New Delhi based on several price quotes on a fixed basket of goods and services that represents the consumption basket of the households. Price data of selected rural and urban markets in the State are collected by CSO, New Delhi represents Consumer Price Index (CPI).

2.5.4 The urban, rural and combined CPI of Odisha and other States including all-India have been published since 2013 with base year 2012. CPI group constitutes five broad commodity groups, which include food and beverages, fuel and light, clothing and footwear, housing, and miscellaneous.

2.5.5 The average CPI of the State for 2013 is 110.4 as against 110.0 at all India level. It increased steadily to 125.6 in 2015, which represents an increase by 15.2 points. During the same period, all India CPI stood at 123.1. In 2017 (up to Nov 2017), CPI of the State fell marginally to 135.5 from 133.8 in 2016. The all India CPI remained at 129.2 in 2016 and touched 133.2 in 2017, which shows an increase of 4.0 percentage points.

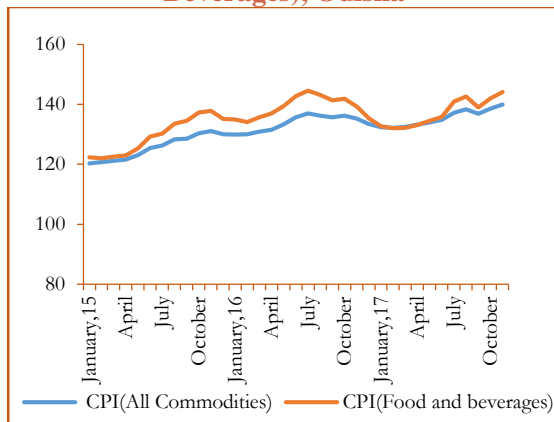
Table-2.3: Average CPI of Odisha

Year	CPI (All Commodities)	CPI (Food and beverages)	CPI (Fuel and light)	CPI (Clothing and footwear)
2015	125.6	129.4	125.7	129.6
2016	133.8	139.2	128.4	139.0
2017 (upto Nov,17)	135.5	137.2	132.4	146.8

Source- Derived by DES

2.5.6 CPI for food and beverages is 129.4 in 2015; it increased to 139.1 in 2016 with the rate of inflation accelerating to 7.5 percent. This is higher than the overall inflation for all commodities in the State. But it declined to 137.2 in 2017, which is still higher than CPI (all commodities) at 135.5

Figure 2.4: Trends in CPI (All Commodities) and CPI (Food & Beverages), Odisha

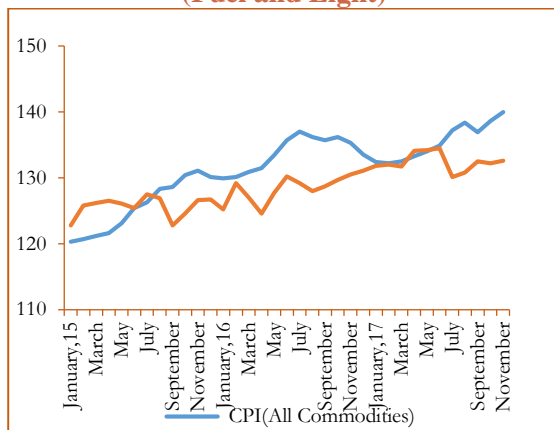


Source: C.S.O, New Delhi

2.5.7 Figure 2.4 indicates trends in CPI (all commodities) and CPI (food & beverages) of Odisha from January, 2015 to November, 2017. The CPI (food & beverages) inflation is consistently higher than inflation of CPI (all commodities). Thus, food items made a significant contribution to inflation.

2.5.8 CPI (fuel & light) was 125.7 in 2015 and it climbed to 128.4 in 2016, and to 132.4 in 2017 with the rate of inflation between 2-3 percent. In comparison to CPI (all commodities), CPI (fuel & light) is still lower and may not make a significant contribution to inflation.

Figure 2.5: CPI(All Commodities) and CPI (Fuel and Light)



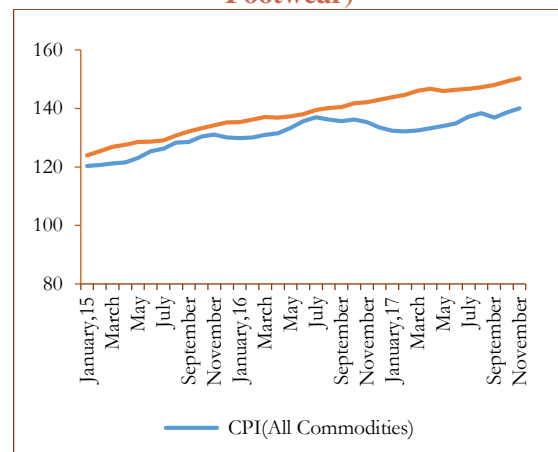
Source: C.S.O, New Delhi

2.5.9 Figure 2.5 depicts the trend in CPI (all commodities) and CPI (fuel and light) from 2015 to 2017. It is observed that CPI (fuel and light) was above CPI (all commodities) in early 2015, but maintained a declining trend thereafter till January 2017. From February 2017 to June 2017, both CPI (all commodities) and CPI (fuel and light) moved together. CPI (fuel and light) declined from July 2017 onwards, while CPI (all commodities) moved up.

2.5.10 Figure 2.6 above presents the trends in CPI (clothing and foot wear) and CPI (all commodities) from January 2015 to November 2017. CPI (clothing and foot wear) inflation is consistently higher between these periods.

CPI (clothing and foot wear) rose consistently with the values of 129.6 in 2015, 139.0 in 2016 and 146.8 in 2017. It is much higher in comparison to CPI (all commodities) with values of 125.6 in 2015, 133.8 in 2016 and 135.5 in 2017. In fact CPI (clothing and footwear) opened a gap of 11.3 points with CPI (all commodities) in 2017, which is much larger than previous years

Figure 2.6: Trends in CPI (All commodities) and CPI (Clothing and Footwear)



Source: C.S.O, New Delhi

2.5.11 Inflation affects purchasing power of the population, although the impact is not evenly distributed in the economy. Inflationary situation may be associated with fall in output and thereby affecting growth performance of the economy. The empirical evidence also implies that there is a long-run relationship between growth rates and inflation rates and the interesting finding is that the relationship between inflation and growth rates is negative .

2.5.12 Inflation management is crucial for an economic policymaker. The prices of commodities will, over time, rise and fall, responding to the pulls and pushes of demand and supply. The price movements signal to consumers that they should buy more/less, while it alerts producers to produce more of what is in short supply. Impact of inflation is greater for the common man, as rise in prices of commodities are not matched by equivalent increase in labour wage.

2.6 Employment Scenario

2.6.1 Employment and unemployment are the subjects of considerable debate. There is a need to ensure adequate growth in employment to provide productive employment for the increasing labour force. Expanding productive employment is central to sustained poverty reduction. The State Government is keen to create an enabling atmosphere for growth and development in agriculture, industry and services sectors with an aim to maximize value addition, employment generation and revenue augmentation. The Industrial Policy Resolution 2015 and SEZ Policy 2015 are formulated to create a conducive environment through an enabling policy and regulatory framework to drive sustainable industrial growth in the State.

With a view to synergizing skill initiatives in the State, Odisha Skill Development Authority (OSDA) is playing the critical role of coordinating skill development among different departments as well as ensuring skilling needs of the disadvantaged and marginalized groups. The State Agriculture Policy 2013 has been formulated involving agriculture and allied sectors to generate adequate employment thereby ensuring increase in productivity.

2.6.2. The employment situation and trends in employment and unemployment are being measured by: (a) household survey, (b) enterprise survey, and (c) data from government schemes. The NSSO (Government of India) conducts household surveys on employment/ unemployment at regular intervals. But it conducted the last survey in 2011-12 and since then no survey has been conducted. Labour Bureau, Chandigarh organizes employment survey on the population aged 15 years and above on annual basis since 2011-12 following concepts and methodology of NSSO. The last survey was conducted with reference period 2015-16. The Population Census data brings out results on main, marginal and non-workers using different concepts at the interval of ten years. The enterprise survey is conducted through Economic Census and Annual Survey of Industries (ASI). The Economic Census covers various establishments and its employment and is not conducted at regular intervals. The ASI is being conducted on annual basis, but it covers establishments and its employment registered under Factories Act, 1948. Besides the above,

various Government schemes like MGNREGA, PMGSY, ICDS etc. provide information on employment.

2.6.3. The Census 2011 shows that the State has a total workforce of 175.41 lakh, which is 41.8 percent of the total population as against 38.4 percent at the all-India level. The proportion of male and female workers works out 67.9 percent and 32.1 percent respectively. Of the total workers, the main workers constitute 61 percent, while the rest 39 percent belong to marginal workers. The total workers have registered a growth of 22.9 percent over 2001, which is higher than population growth rate of 14 percent during the decade.

Table 2.4: Workers in Odisha

(Number in lakh)

Item	2001	2011
Total population	368.04	419.74
Total Workers	142.76	175.41
Main Workers	95.89	107.07
Marginal Workers	46.87	68.34

Source: Census of India

2.6.4. The household survey on employment and unemployment covers parameters like Labour Force Participation Rate (LFPR), Worker Population Ratio (WPR), and Unemployment Rate (UR). Each of these parameters uses four different measures as is explained below. Usual Principal Status (UPS) reflects the employment status of an individual over a reference period of one year. A person is classified as belonging to labour force, if he/she had been either working or looking for work during longer part of the 365 days preceding the survey. Usual Principal and

Subsidiary Status (UPSS) concept is used to widen UPS. All those who were either unemployed or out of labour force, but had worked for at least 30 days over the reference year are treated as workers with subsidiary status. This approach is important to understand the contribution made by seasonal workers in the production of goods and services. Current Weekly Status (CWS) is used to classify a person to be in labour force, if she/he has either worked or is seeking and/ or available for work for at least one hour during the reference period of one week preceding the date of survey. Current Daily Status (CDS) rates are used for studying intensity of work. These are computed on the basis of the information on employment and unemployment recorded for the 14 half days of the reference week. The employment status during the seven days are recorded in terms of half or full intensities. An hour or more but less than four hours is taken as half intensity and four hours or more is taken as full intensity.

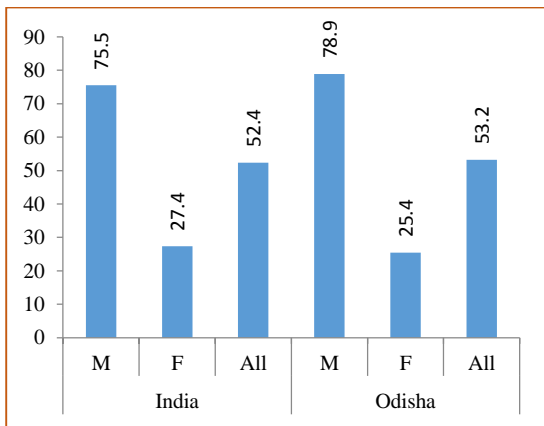
2.6.5. An analysis of data of Labour Bureau based on UPSS for the period from 2011-12 to 2015-16 shows changes in labour force and employment in the State.

2.6.6. Labour force indicates the supply of labour in the country and is an important input for production of goods and services in the country. The Labour Force Participation Rate (LFPR) indicates the proportion of a country's working-age population (15 years and above) engaged actively in the labour market, either by working or looking/ searching for work.

2.6.7. LFPR³ based on UPSS approach was estimated at 53.2 percent in Odisha while the corresponding figure at the all-India level was 52.4 percent during 2015-16. The gender-wise estimates show that 78.9 percent of males and 25.4 percent of females were either working or looking for work (Figure 2.7). Female participation was quite low compared to male counterparts in the State. Labour force participation at the all-India level for females was also at a lower level of 27.4 percent as against 75.5 percent for males. The LFPR in rural sector was 54.7 percent, whereas it was 44.7 percent in urban areas. The major reason for lower LFPR in urban area was the female participation rate, which was 14.2 percent only, while it was 27.4 percent in rural area.

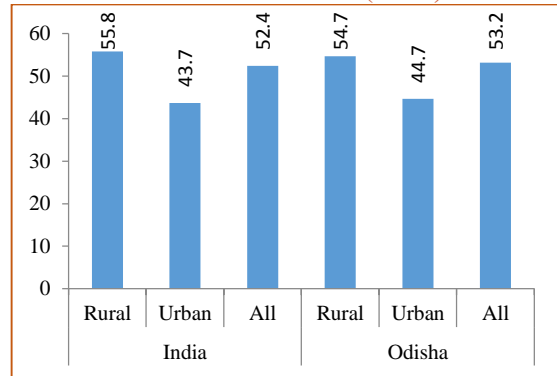
Figure 2.7: LFPR at Odisha and India for 2015-16

(in Percentages)



Source: Labour Bureau, Chandigarh

Figure 2.8 LFPR by sector at Odisha and India for 2015-16 (in %)



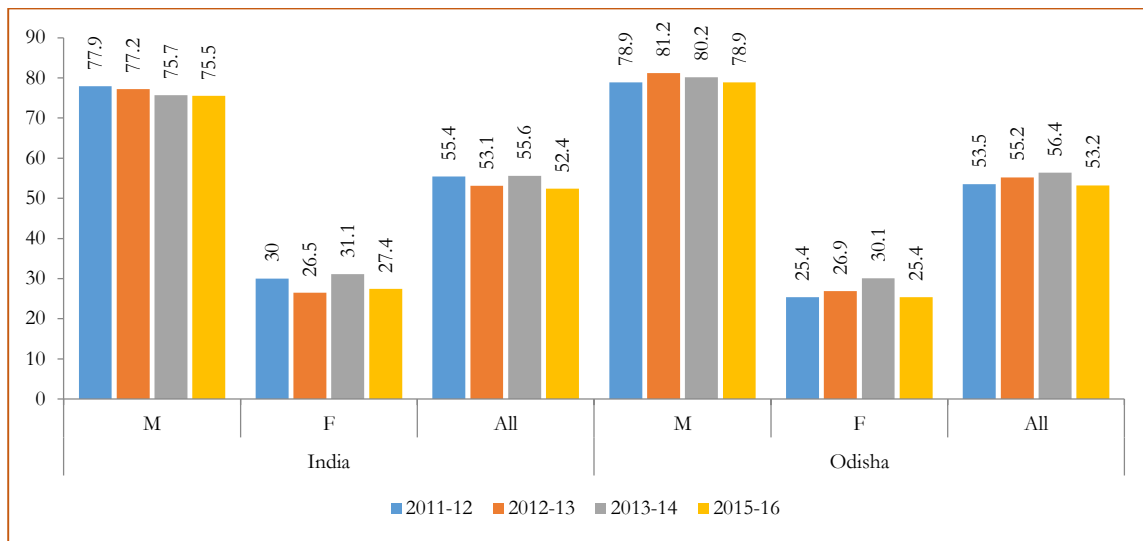
Source: Labour Bureau, Chandigarh

2.6.8. Figure 2.9 presents the trends in LFPR status from 2011-12 to 2015-16. It is observed that LFPR of the State was 53.5 percent in 2011-12 and it marginally decreased to 53.2 percent in 2015-16. While decomposing LFPR by gender, it is seen that female participation remained the same at 25.4 percent in 2011-12 and 2015-16 after showing an increasing trend of 26.9 percent in 2012-13 and 30.1 percent in 2013-14.

Female LFPR showed a fluctuating trend at the all-India level during this period. It declined to 26.9 percent in 2012-13 from 30 percent in 2011-12. But it again increased to 31.1 percent in 2013-14, but it fell to 27.4 percent in 2015-16

³ Report on employment- unemployment survey by Labour Bureau, Chandigarh

Figure 2.9 : LFPR by Sex of Odisha and India (2011-12 to 2015-16)(%)



Source: Labour Bureau, Chandigarh

2.6.9. The Worker Population Ratio (WPR) signifies the proportion of workers/ employed persons in the total population for a specific age group. It was estimated at 51.2 percent for Odisha during 2015-16 based on UPSS, which means 51.2 percent of persons aged 15 years and above were employed in the State (Table 2.5). The corresponding all-India figure was 50.5 percent. As regards rural-urban breakup, WPR was higher in rural Odisha (52.7 percent) than in urban Odisha (42.7 percent). Similar pattern was observed for all-India level with higher WPR in rural India with 53.9 percent against 41.8 percent in urban area.

Table 2.5: WPR(%) in Odisha and India, 2015-16

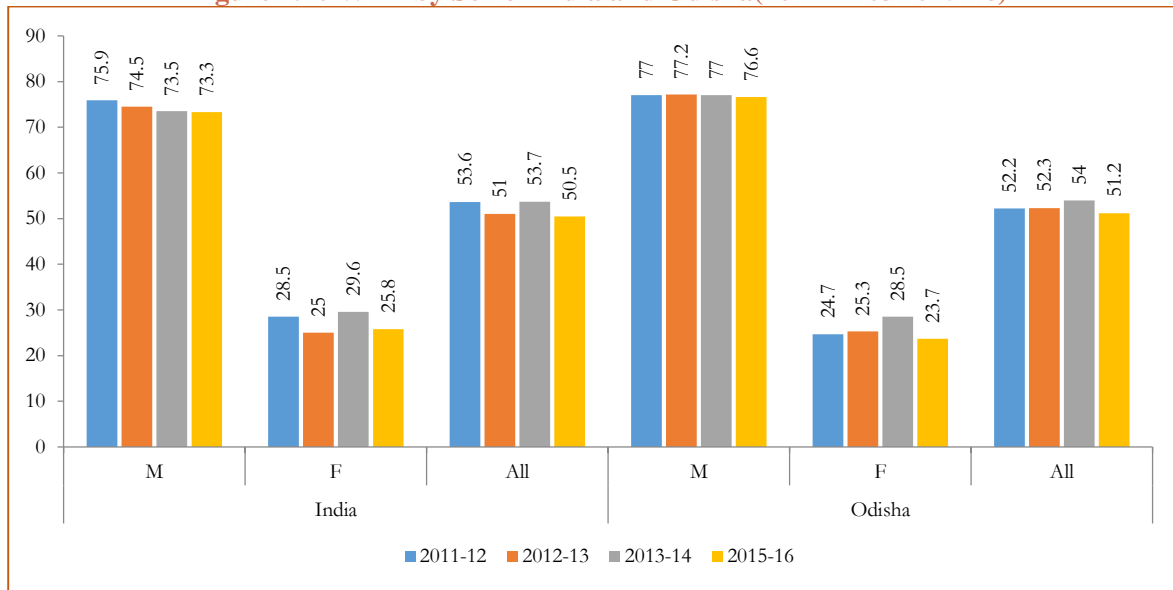
Level	Sector	WPR (%)		
		Male	Female	Person
Odisha	Rural	77.5	25.6	52.7
	Urban	70.3	12.9	42.7
	All	76.6	23.7	51.2
India	Rural	75.7	30.2	53.9

Level	Sector	2011-12	2012-13	2015-16
	Urban	67.1	14.8	41.8
	All	73.3	25.8	50.5

Source: Labour Bureau, Chandigarh

2.6.10. Figure 2.10 depicts the status of WPR according to sex from 2011-12 to 2015-16 for Odisha and India. WPR status in Odisha registered an increase from 52.2 percent in 2011-12 to 54.0 percent in 2013-14, but decreased to 51.2 percent in 2015-16. Taking the male category, the pattern of WPR remained the same for different years, while in the female category, WPR increased by 4 percentage points during 2011-12 to 2013-14, but again dropped to 23.7 percent in 2015-16. For India, the position remained at the same level of about 53 percent during the period from 2011-12 to 2013-14, but slipped to 50.5 percent in 2015-16

Figure 2.10 WPR by Sex of India and Odisha(2011-12 to 2015-16)



Source: Labour Bureau, Chandigarh

2.6.11 Unemployment rate reflects the portion of the labour force which was available for work during the given reference period but did not get work. The unemployment rate derived from Usual Principal Status is sometimes called “chronic unemployment” as the persons coming under this category remained unemployed for major part of the period for which they were available.

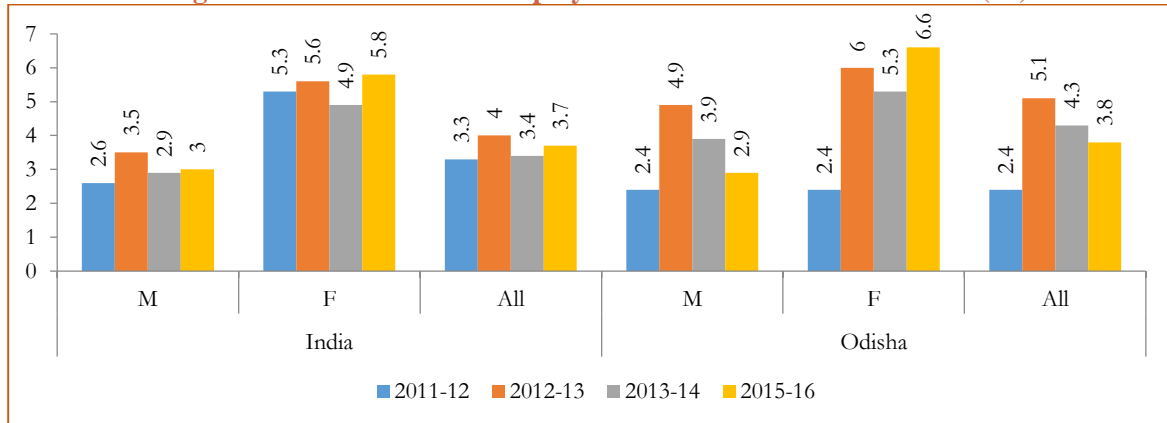
2.6.12 Unemployment rate was estimated at 3.8 percent in the State during 2015-16 compared to the all-India rate of 3.7 percent. The unemployment rate in the case of female category of urban India touched double digit 10.9 percent as against 9.4 percent in urban Odisha. Female unemployment rate is higher both in rural and urban areas in comparison to male counterparts in Odisha (Table 2.6).

Table 2.6 Unemployment Rate (percent) in Odisha and India for 2015-16

Level	Sector	Unemployment Rate (%)		
		Male	Female	All
Odisha	Rural	2.8	6.4	3.7
	Urban	3.7	9.4	4.4
	All	2.9	6.6	3.8
India	Rural	2.9	4.7	3.4
	Urban	3	10.9	4.4
	All	3	5.8	3.7

Source: Labour Bureau, Chandigarh

2.6.13 The trends in unemployment rate since 2011-12 is presented in figure 2.11. It has been declining from 5.9 percent in 2012-13 to 3.8 percent in 2015-16 in Odisha. The decline was more pronounced in male category than female. During 2011-12, unemployment rate in the State was as low as 2.4 percent as against all India rate of 3.3 percent. But it increased to 5.1 percent in the State in 2012-13, which is 1.1 percentage point higher than all India rate of 4 percent.

Figure-2.11: Trends in Unemployment Rate in Odisha and India (%)

Source: Labour Bureau, Chandigarh

As regards the male category, unemployment rate was 2.4 percent in 2011-12, but it increased to 2.9 percent in 2015-16. The corresponding all India figure was 3 percent in 2015-16. For the female category, the unemployment rate climbed to 6.6 percent in 2015-16 from 2.4 percent in 2011-12. At the all-India level, it increased marginally to 5.8 percent in 2015-16 from 5.3 percent in 2011-12.

2.6.14. The employment situation and trends in employment and unemployment based on National Sample Survey (NSS) for 2004-05 and 2011-12 are presented in Table 2.8. As per NSS 2004-05, rural LFPR for male was estimated at 60.4 percent as against 60.6 percent in 2011-12. While the urban LFPR for male was lower at 55.3 percent in 2004-05, but it increased to 60.3 percent in 2011-12. With regard to rural female, it was 35.1 percent in 2004-05, but it declined to 25.1 in 2011-12. Similar pattern of decline was observed for urban female. The WPR for males increased both in rural and urban area in 2011-12, whereas it increased only for females only in urban areas in 2011-12. But WPR for females in rural areas decreased to 24.6 percent in 2011-12 from 32.2 percent in 2004-05.

Table 2.7 Labour force indicators of Odisha based on NSSO (UPSS)

Year	Indicator	Rural		Urban	
		Male	Female	Male	Female
2004-05	LFPR	60.4	35.1	55.3	22.2
2011-12	LFPR	60.6	25.1	60.3	15.8
2004-05	WPR	58.6	32.2	50.4	14.8
2011-12	WPR	59.2	24.6	57.9	15.5
2004-05	UR	3.1	8.3	9.0	26.6
2011-12	UR	2.3	2.0	3.9	2.0

Source: NSSO, New Delhi

The unemployment rate was 3.1 percent for rural males in 2004-05, but it declined to 2.3 percent in 2011-12. Even for rural females, unemployment rate also declined in 2011-12. The decline in female unemployment rate was the highest (2.0 percent in 2011-12 from 26.6 percent in 2004-05).

2.6.15. The report of Sixth Economic Census, 2013 gives a comprehensive picture of employment in the State. There were 20.89 lakh establishments in the State engaged in different activities other than crop production, plantation, public administration, defense and compulsory social security services during 2013 by employing 43.18 lakh people. More importantly, the Compound Annual Growth Rate (CAGR) in total employment since 2005 is 1.93 percent. According to the previous

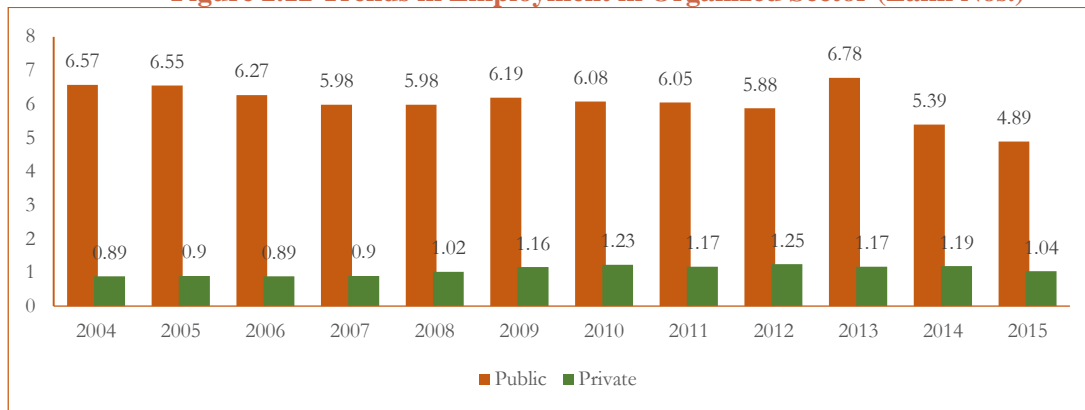
census, the growth rate in employment between 1998 and 2005 was 1.81 percent. Thus, there is a distinct improvement in employment during the periods 1998-05 and 2005-13.

Employment in Organized Sector

2.6.16. The unorganized sector of the economy is the largest sector in terms of employment of workforce. However, the organized sector plays a crucial role in boosting employment generation. It provides quality employment with social security. Fig 2.11 presents employment scenario in the State from 2004 to 2015 in the organized sector (details at

Annexure 2.10). It is observed that employment has been significantly high in the public sector with 85 percent share as compared to 15 percent in private sector. But the number of employment for the organized sector shows a decline trend from 7.95 lakh in 2013 to 6.58 lakh in 2014 and 5.93 lakh in 2015. This may be due to reduction of employment both in public and private sector. The compound annual growth rate (CAGR) in employment in organized sector from 2004 to 2015 has also declined by 2.1 percent. In the case of the private sector, the growth during that period has increased by 1.4 percent

Figure 2.12 Trends in Employment in Organized Sector (Lakh Nos.)



Source: Directorate of Employment, Odisha

MGNREGA as Policy Intervention

2.6.17 Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) enacted in 2005 to give effect to the legal guarantee of work by providing at least 100 days of guaranteed employment to every rural household whose adult members volunteer to undertake unskilled manual work subject to the conditions of this Act. As per status of 2016-17, the State has a total of 64.51 lakh households registered since inception, out of which 99.1% (63.96 lakh) households have been issued job cards. But the cumulative number of households demanding employment was 21.53 lakh, which is 33.66 percent of job card holder

households. The cumulative number of households provided employment was 17.82 lakh which is 82.76 percent of total households demanding employment. That means 17 percent of households sought but did not get work upto 2016-17. The cumulative number of households who got 100 days of employment was 21,219 in the State. To increase the employment opportunity in the State the Government must seek i) creation of productive employment, ii) improvement in the quality of employment in different sectors and iii) improvement of skill of the workers through training in a professional manner.

2.7 Level of Living, Growth and Inequality

2.7.1. The average level of living of people of the State has shown overall improvement and experienced higher growth. Between 2004-05 and 2011-12, Odisha has achieved annual compound growth rate of 11.5 percent in monthly per capita consumption expenditure (MPCE) in rural areas as against the all-India rate of 12.1 percent. But in urban areas, the relevant growth rate is healthier at 12.8 percent, which is higher than the all-India growth rate of 12.2 percent during the same period.

2.7.2. MPCE derived from Consumption Expenditure Survey (CES) of NSSO,

Government of India is an important indicator to measure level of living of households with inter-sectoral (rural-urban) difference. The last two rounds of CES depict the average per capita expenditure based on mixed recall period (MRP) of urban areas in 2004-05 at ₹ 790, which is larger than the average rural per capita expenditure of ₹422. The average urban per capita expenditure in 2011-12 is ₹ 1830, which is higher than that in 2004-05 by 131.7 percent. The average rural per capita expenditure, in contrast, is higher by 114.5 percent at ₹ 905 in 2011-12. The State's overall per capita consumption expenditure in 2004-05 is ₹ 472, which rose by 121 percent to Rs 1045 in 2011-12 (Table 2.8).

Table 2.8: Average Per capita Consumption Expenditure, Growth and Gini Coefficient (%), Odisha and India

Region	Average MPCE (in ₹)			Gini		
	2004-05	2011-12	CAGR%	2004-05	2011-12	Change (% points)
Rural	422	905	11.5	26.59	23.93	-2.66
Urban	790	1830	12.8	34.01	35.25	1.24
Total	472	1045	12.0	30.62	29.87	-0.75
All India						
Rural	579	1287	12.1	30.5	29.0	-1.5
Urban	1105	2477	12.2	37.5	38.0	+0.5

Source: DES calculations

2.7.3. The summary measure does not provide enough information about the change in the overall distribution. It does not tell us how the spread or inequality within the distribution changes over time, which can be captured by an inequality measure. The Gini Coefficient captures inequality in distribution and is reported on a scale from 0 to 100 in this chapter. Although rural mean per capita expenditure increased, the rural inequality has actually decreased. On the contrary, urban inequality has increased. The rural Gini Coefficient has fallen to 23.93 from 26.59,

while urban Gini Coefficient over these years increased from 34.01 to 35.25. The overall Gini Coefficient decreased by 0.75 from 30.62 in 2004-05 to 29.87 in 2011-12.

2.7.4. The level of consumption for the various population groups in the State and its growth over the years is presented through quantile per capita expenditure (PCE) and certain quantile ratios of per capita expenditure, which also measures the status of the poorest quantile population compared to rest of the population as well as inequality in consumption expenditure (Table 2.9 and 2.10).

Table 2.9: Quantile per Capita Expenditure (in ₹) Odisha

Region	10th	20th	50th	80th	90th
	A	B	C	D	E
2004-05					
Rural	186.62	239.90	345.19	492.03	602.22
Urban	257.76	355.84	562.33	1010.25	1278.04
Total	190.58	246.59	362.32	540.51	692.71
2011-12					
Rural	436.88	551.62	760.64	1047.88	1244.30
Urban	630.55	825.83	1284.94	2198.79	2892.44
Total	446.93	569.07	802.80	1156.02	1462.53

Source: DES calculation

Table 2.10: Quantile Ratios of Per Capita Expenditure, Odisha

Region		90/10	80/20	90/50	50/10
		G	H	I	J
Rural		69.01	51.24	42.68	45.94
Urban	2004-05	79.83	64.78	56.00	54.16
Total		72.49	54.38	47.70	47.40
Rural		64.89	47.36	38.87	42.56
Urban	2011-12	78.20	62.44	55.58	50.93
Total		69.44	50.77	45.11	44.33

Source: DES calculation

Column A denotes quantile PCE at 10th percentile, Col-B is quantile PCE of 20th percentile and so on. Col-F onwards presents quantile PCE ratios based quantile PCE at different percentiles. Column F, for example, reports 90/10 ratio, computed as (quantile PCE at the 90th percentile – quantile PCE at the 10th percentile)/ quantile PCE at the 90th percentile. The larger the 90/10 ratio, the larger is the gap between these two percentiles.

2.7.5 In 2004-05, the quantile PCE at the 10th percentile of Odisha is Rs 191 implying that bottom 10 percent of the State population lives with mean per capita consumption expenditure less than Rs 191. Similarly, 20 percent of the population lives with per capita

expenditure of Rs 247. In contrast, top 10 percent of the population lives with per capita expenditure more than Rs 693, which is 3.6 times of bottom decile class in 2004-05. This gap is then decreased to 3.2 times by 2011-12, which implies that inequality has decreased over the period of 7 years. In other words, consumption expenditure of the poorest individuals has increased relative to the richest. When growth is inclusive, it raises the consumption of the poorest individuals in society thereby enabling them to meet their basic needs (Kakwani and Pernia, 2000). Most importantly, it is also observed that the average per capita expenditure of bottom 10 percent grows by 12.9 percent between 2004-05 and 2011-12, whereas top 10 percent of the population experienced an increase in their consumption by 11.2 percent, which is lower in comparison to bottom 10 percent. These changes in bottom 10 percent population are contributed to by both rural and urban population groups. The corresponding 90/10 quantile ratio using these two quantile PCEs is 72.49, which means that the gap between the two percentiles is 72.49 percent. Likewise, the quantile PCE at the 80th percentile of the State is Rs 541, which is about twice the quantile PCE at the 20th percentile. The corresponding ratio 80/20 measure is 54.38. Inequality between the quantile PCE at the 90th percentile per capita expenditure and the quantile PCE at the 10th percentile is larger in the urban areas (78.20) than in the rural areas (64.89) in 2011-12.

2.7.6. When disaggregating the State result by social groups like ST, SC and others, mean per capita expenditure, inequality and expenditure by decile classes between two periods 2004-05 and 2011-12 is analyzed.

Among the social groups, the mean per capita expenditure of ST population experiences higher growth in rural areas, while SC group has higher growth in urban areas than other social groups.

In rural Odisha, the mean per capita expenditure of ST group grew by 12.14 percent

in 2011-12, while it increased by 11.2 percent for SC and 11.5 percent for 'others' groups. In urban Odisha, SC group registers higher growth with 14.1 percent followed by 'others' with 13.09 percent and ST with 12.4 percent (Table 2.11 and Table 2.12).

Table 2.11: Mean Per Capita Expenditure, Growth and Inequality by Social Groups (Rural)

Social Group	Mean Per capita Expenditure			Gini Coefficient		
	2004-05	2011-12	Growth	2004-05	2011-12	Change
ST	308	687	12.14	22.1	19.8	-2.3
SC	382	806	11.26	22.7	20.2	-2.5
Others	486	1041	11.50	25.7	23.3	-2.4

Source: DES calculation

Table 2.12: Mean Per capita Expenditure, Growth and Inequality by Social Groups (Urban)

Social Group	Mean Per capita Expenditure			Gini Coefficient		
	2004-05	2011-12	Growth	2004-05	2011-12	Change
ST	608	1379	12.41	33.0	36.7	3.7
SC	532	1339	14.10	29.9	29.8	-0.10
Others	856	2025	13.09	32.9	34.5	1.6

Source: DES calculation

Along with increase in mean per capita expenditure among social groups, the level of inequality was also reduced in rural areas. But in urban areas, it increased for ST and 'others' groups. The Gini Coefficient decreased by 2.3 for ST, 2.5 for SC and 2.4 for 'others', which implies that inequality in expenditure among various social groups in rural areas decreased. In urban Odisha, inequality for ST and 'others' increased by 3.7 and 0.016 respectively.

2.7.7. The level of consumption expenditure measured for various population groups (decile class) is presented in Table 2.13 and 2.14. The first decile class consists of poorest 10 percent of the population, while the 9th decile class consists of the richest 10 percent of the population.

Table 2.13: Quantile PCE and Quantile ratio of per capita expenditure (Rural)

Social Group	10 th	20 th	80 th	90 th	90/10	80/20
2004-05						
ST	158.87	197.86	346.73	412.02	159.35	75.24
SC	187.07	237.66	448.04	525.88	181.11	88.52
OC	222.43	286.31	568.82	696.52	213.14	98.67
2011-12						
ST	366.75	461.36	778.67	920.19	150.90	68.78
SC	441.19	523.59	925.49	1071.61	142.89	76.76
OC	521.73	645.50	1202.07	1431.02	174.28	86.22

Source: DES calculation

Table 2.14: Quantile PCE and Quantile ratio of per capita expenditure by Social Groups (Urban)

Social Group	10 th	20 th	80 th	90 th	90/10	80/20
2004-05						
ST	247.16	280.30	770.30	1004.60	306.46	174.81
SC	222.67	278.47	583.41	769.88	245.76	109.51
OC	284.38	388.14	1116.02	1331.49	368.21	187.53
2011-12						
ST	543.79	659.47	1466.37	2277.14	318.75	122.36
SC	589.58	777.45	1515.90	2001.39	239.46	94.98
OC	681.09	914.61	2499.62	3213.21	371.77	173.30

Source: DES calculation

The poor 10 percent ST population (first decile) managed with per capita expenditure of ₹ 159 in 2004-05 that increased to ₹ 367 in 2011-12. Per capita expenditure of the rich 10 percent of ST (9th decile) population increased to ₹ 920 in 2011-12 from ₹ 412 in 2004-05, which was 2.5 times that of the poorest 10 percent population.

Similarly the per capita expenditure of rich 10 percent SC (9th decile) in 2011-12 was 2.4 times the per capita expenditure of the poorest 10 percent SC population in 2011-12. The bottom 10 percent of 'other' population lived with per capita expenditure of ₹ 522 as compared to ₹ 1431, which is the per capita expenditure at the 9th decile class. The corresponding 90/10 measure in 'others' category shrunk to 173 percent in 2011-12 from 187 percent in 2004-05.

The bottom 20 percent of ST population (2nd decile class) had per capita expenditure of ₹ 197 in 2004-05, rising to ₹ 461 in 2011-12, the latter 2.3 times the former. Further, it is also evident

from the table that the ratio 90/10 and 80/20 for ST, SC and other groups has contracted. In urban areas, the poor 10 percent ST population had a per capita expenditure of ₹ 543 in 2011-12, which was twice that in 2004-05. At the same time, the rich 10 percent SC (9th decile) had a lower decile expenditure of ₹ 2001 than ST with ₹ 2277. But the SC group had larger expenditure in the first decile group. In the case of 'other' category population, the expenditure at the 9th decile class was ₹ 3213, which was 2.4 times that for 2004-05.

As regards per capita expenditure gap (90/10), it increased for ST and 'other' category, but it contracted for SC population.

Regional Level Analysis

2.7.8. To understand the regional differences, the results on level of living are presented by regions, i.e., central, southern and northern regions as per NSS with rural-urban break up. (Table 2.15).

Table 2.15: Mean Per capita Expenditure, Growth And Gini Coefficient by region of Odisha

Region	Mean			Gini Coefficient		
	Central	Southern	Northern	Central	Southern	Northern
2004-05						
Rural	482	322	396	30.81	31.75	31.95
Urban	802	751	784	38.35	37.31	33.08
Total	529	356	455	33.40	35.01	34.82
2011-12						
Rural	983	831	886	21.25	24.77	25.03
Urban	2022	1266	1963	34.33	29.67	35.19
Total	1169	880	1053	28.96	26.49	31.97
Growth						
Rural	10.717	14.504	12.192	-9.56	-6.98	-6.92
Urban	14.123	7.745	14.010	-4.02	-7.64	2.12
Total	11.994	13.801	12.735	-4.43	-8.52	-2.85

Source: DES calculation

The mean per capita expenditure for Southern region reflects the highest increase with annual growth of 13.08 percent. It increased from ₹356 in 2004-05 to ₹ 880 in 2011-12. Rural area of this region contributes more with 14.05 percent growth followed by Northern region with 12.75 percent and Central region with 11.99 percent.

The highest increase in mean per capita expenditure in urban area is registered by Northern region with 14.04 percent, while it is the least in Southern region with 7.71 percent.

There was reduction in inequality in all the three regions. The largest change was in the Southern region (8.5 percentage points) compared to Central region (4.4 points) and Northern region (2.9 points). However, both rural and urban inequality of Southern region fell by 7.0 and 7.6 percentage points, while in Central and Northern region, the fall in rural inequality is more pronounced in comparison to urban area.

The population's bottom segment is compared with rest of the population in three regions

through four percentiles (10th, 20th, 80th and 90th) and quantile ratios (90/10 and 80/20) across rural and urban areas. The larger the 90/10 or 80/20 ratios, the larger is the gap between deciles (Table 2.16 and 2.17).

In 2004-05, per capita expenditure in the lowest 10th decile class is ₹ 234.99 for Central region (rural), which implies that the poorest 10 percent of population lives with per capita expenditure less than ₹ 234.99. It increased to ₹ 519.80 in 2011-12. In contrast, richest 10 percent of population of Central region lived with per capita expenditure of more than ₹ 677, the decile per capita expenditure of 90th percentile in 2004-05. In 2011-12, it increases to ₹1321, which is 1.95 times the decile PCE in 2004-05.

The PCE at 10th decile class (bottom 10 percent population group) of Southern and Northern rural regions also increased to ₹ 402 and ₹ 416 respectively in 2011-12 from ₹155 and ₹190 respectively in 2004-05.

Table 2.16: Quantile PCEs and Quantile Ratios of Per Capita Consumption Expenditure (Rural)

Region	10 th	20 th	80 th	90 th	90-10	80-20
2004-05						
central	234.99	296.63	565.36	677.41	188.27	90.59
southern	155.58	190.84	375.12	443.47	185.04	96.56
northern	190.77	234.14	433.24	540.07	183.10	85.04
2011-12						
central	519.87	636.07	1119.62	1321.46	154.19	76.02
southern	402.02	506.54	970.70	1147.77	185.50	91.63
northern	416.10	532.65	1031.29	1242.93	198.71	93.61

Source: DES calculation

Table 2.17: Quantile PCEs and Quantile Ratios of Per Capita Consumption Expenditure (Urban)

Region	10 th	20 th	80 th	90 th	90-10	80-20
2004-05						
central	273.63	365.22	1077.83	1316.96	381.29	195.12
southern	210.83	276.76	947.46	1257.63	496.50	242.34
northern	263.24	359.90	965.75	1226.81	366.05	168.34
2011-12						
central	762.93	983.76	2542.54	3282.97	330.31	158.45
southern	565.81	682.81	1476.60	1888.09	233.70	116.25
northern	649.21	835.19	2379.29	2989.32	360.45	184.88

Source: DES calculation

In the case of urban areas, the average PCE for the bottom 20 percent of people of Central region was ₹365 and it increased to ₹983 in 2011-12. The average PCE for top 20 percent of population in the above region was ₹ 1077 in 2004-05, increasing to ₹ 2542 in 2011-12.

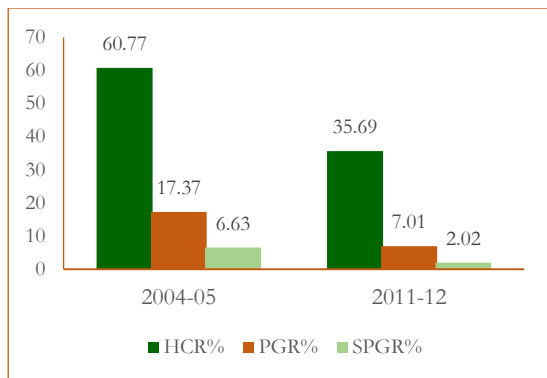
The mean per capita expenditure of the population in top 20 percent of the Central region is 3.3 times the mean expenditure in bottom 10 percent in 2011-12. In the case of Southern and Northern region, it was 2.6 times and 3.6 times respectively of the mean per capita expenditure of the population of bottom 20 percent.

Incidence of Poverty, 2004-05 to 2011-12

2.7.9. The State witnessed the highest reduction of poverty ratio from 57.61 percent in 2004-05 to 32.91 percent in 2011-12 among

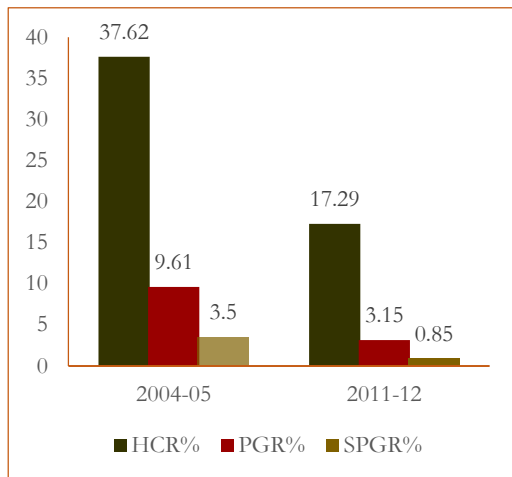
Indian States, meaning that living standards of the poor people of the State has improved. The annual rate of reduction stands at 3.5 percentage points per year as against the all-India rate of 2.2 percentage points. The poverty analysis is based on household consumption and defines the poor as those whose expenditure falls below the poverty line, set at ₹ 407.78 for rural and ₹497.21 for urban areas in 2004-05; the corresponding figures were ₹ 695 for rural and ₹ 861 for urban areas in 2011-12. Figure 2.13 and 2.14 analyze the poverty in Odisha by decomposing across rural and urban areas using three different poverty measures: headcount ratio (HCR in percentage), poverty gap ratio (PGR percentage), and squared gap ratio (SPGR percentage). These three poverty measures belong to the FGT (Foster-Greer-Thorbecke) family of poverty measures.

Figure 2.13: Headcount ratio, Poverty gap measure and Square Poverty measure (Rural), Odisha



Source: DES calculation

Figure 2.14: Headcount ratio, Poverty gap measure and Square Poverty measure (Urban), Odisha



Source: DES calculation

A region's headcount ratio is the proportion of the population that is poor compared to that region's total population. When poverty line benchmark was ₹ 407.78 in 2004-05, the rural HCR was 60.77 percent. This means that 60.77 percent of the population in the rural area belonged to households that could not afford the per capita consumption expenditure of Rs 407.78 per month. The rural HCR for 2011-12 was 35.69 percent. The change in HCR over these years is a decrease of 25.08 percentage points.

In contrast, the urban headcount ratio decreased by 20.33 percentage points from 37.62 percent in 2004-05 to 17.29 percent in 2011-12. Overall, Odisha's poverty headcount has decreased by 24.70 percentage points from 57.61 percent to 32.91 percent.

2.7.10. The poverty gap ratio lies between a minimum of 0 and a maximum of 100, where the minimum is when no one in a region is poor and the maximum is when everyone has zero consumption expenditure and the poverty line is positive. It measures the extent to which individuals fall below the poverty line. When the rural poverty line was fixed at ₹ 407.78, rural poverty gap ratio was 17.37 in 2004-05, which decreased by 10.36 to 7.01 in 2011-12. Likewise, urban poverty gap ratio decreased by 6.46 from 9.61 in 2004-05 to 3.15 in 2011-12.

The squared gap ratio also lies between a minimum of 0 and a maximum of 100, where the minimum is when no one in a region is poor and the maximum is when everyone has zero consumption expenditure and the poverty line is positive. This ratio is sensitive to inequality across the poor. For rural area, squared poverty gap measure decreased by 4.61 percentage points from 6.63 percent in 2004-05 to 2.02 percent in 2011-12. A similar pattern of change is observed for urban areas of the State. Proportion of poor people is decreasing in both rural and urban areas. However, rural areas performed better than urban areas in reducing poor people.

2.7.11 The distribution of poor across the rural and urban decomposition is presented in Table 2.18

Table 2.18: Distribution of Poor, Odisha

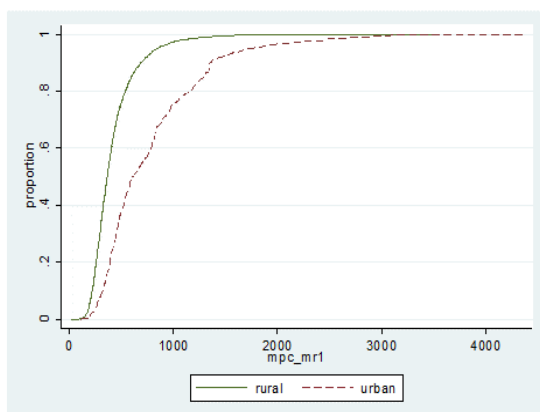
Region	Distribution of Poor (estimated), in lakh		
	2004-05	2011-12	% Annual Change
Rural	195.10	112.69	-6.03
Urban	19.08	9.71	-7.01
Total	214.18	122.40	-6.12

Source: DES, Odisha using Tendulkar methodology

In absolute terms, the number of poor declined from 214.18 lakh in 2004-05 to 122.40 lakh in 2011-12 with an annual average decline of 6.12 percent. In rural Odisha, the number of poor declined from 195.10 lakh in 2004-05 to 112.69 lakh in 2011-12. The rate of change is 6.03 percent, which is similar to the State average. But urban Odisha had higher rate of annual average decline of poor at 7.01 percent between 2004-05 and 2011-12.

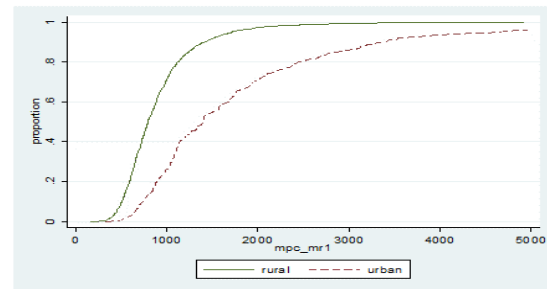
2.7.12. Figures 2.15 and 2.16 show the cumulative distribution (proportion) of persons over MPCE using rural-urban breakup. For the sake of clarity, MPCE less than ₹ 5000 have been considered.

Figure 2.15: Probability distribution function of Odisha over MPCE, 2004-05



Source: DES calculation

Figure 2.16: Probability distribution function of Odisha over MPCE, 2011-12



Source: DES calculation

the height of the poverty incidence curve at any per capita consumption expenditure denotes the proportion of people having less than that per capita expenditure. For a poverty line, a larger height denotes a larger headcount ratio or a larger share of the population having per capita expenditure below the poverty line.

During 2004-05, rural poverty dominated urban poverty. Earlier also, it was seen that rural poverty HCR was higher than urban poverty HCR. During 2011-12, incidence of poverty has decreased both in rural and urban areas, but the gap between rural and urban is more pronounced.

If we set the hypothetical poverty line, it will be the lower tail of the distribution having high incidence of poverty. This curve is convenient to check the relative dominance in the rural-urban context.

Level of living across Social groups

2.7.13. The overall decline in poverty among social groups from 2004-05 to 2011-12 is reflected in Table 2.19. Between SC and ST population, the latter is worse off with a higher HCR of 84.46 percent in rural Odisha than SC with HCR of 67.89 percent in 2004-05. However, urban STs registered lower HCR than urban SCs in 2004-05.

Table 2.19: Poverty ratio, Poverty Gap and Squared poverty measures among social groups

Social Group	2004-05			2011-12			% Change(Annual)		
	HCR	PGR	SPGR	HCR	PGR	SPGR	HCR	PGR	SPGR
	Rural								
ST	84.46	30.39	13.01	63.52	14.43	4.62	2.99	2.28	1.2
SC	67.89	19.01	7.22	41.39	8.24	2.29	3.79	1.54	0.7
OC	47.85	10.96	3.56	21.03	3.23	0.77	3.83	1.10	0.4
	Urban								
ST	53.51	16.74	6.43	39.69	8.24	2.38	1.97	1.21	0.6
SC	63.98	18.19	6.98	26.32	4.81	1.41	5.38	1.91	0.8
OC	31.12	7.27	2.55	12.57	2.21	0.55	2.65	0.72	0.3

Source: DES calculation

Table 2.20: HCR(%), Poverty Gap Ratio and Squared Poverty Gap ratio by regions

Region	Rural			Urban		
	HCR%	Pov gap	Sqr pov gap	HCR%	Pov gap	Sqr pov gap
	2004-05					
central	44.63	9.51	2.98	36.99	8.89	3.08
southern	80.70	30.31	13.67	46.39	15.11	6.45
northern	71.56	20.87	7.71	36.18	9.13	3.28
	2011-12					
central	21.64	3.394	0.77	6.87	1.43	0.42
southern	47.99	10.02	3.04	35.6	7.01	1.83
northern	39.97	8.291	2.48	19.12	2.84	0.75

Source: DES calculation

The HCR percentage of Central region of rural Odisha is 44.63 percent in 2004-05 and it decreased by 22.99 percentage point over the course of seven years i.e 2011-12. The HCR percentage of other regions also fell between 2004-05 and 2011-12. The highest fall in HCR percentage is recorded in Southern region with 32.7 percentage point, while it is 31.6 percentage point for Northern region.

For Southern region, the poverty gap ratio in 2004-05 and 2011-12 is 30.3 percent and 10.02 percent respectively. Thus, the poverty gap ratio decreased by 20.2 points over seven years. It also decreased by 12.6 percent in Northern region, while the reduction was 6 percent in Central region.

The squared poverty gap ratio for the three regions also decreased between the period 2004-05 and 2011-12. The Southern region witnessed the largest decrease by 10.6 percent in square poverty gap, while it was 5.2 percent for Northern and 2.2 percent for Central region.

The HCR percentage in urban areas was 36.9 percent in the Central region in 2004-05, while it came down to 6.8 percent in 2011-12. This is the highest fall among the three regions between two periods.

Table 2.21: Number of Poor, its Percentage and Distribution of Population , 2004-05 and 2011-12

Region	Estimated no of poor		No of poor (%)		Distribution of population (%)	
	rural	urban	rural 2004-05	urban	rural	urban
Central	6,649,873	936,709	34.09	49.08	46.41	49.91
Southern	4,831,065	236,768	24.76	12.41	18.65	10.06
Northern	8,028,595	735,011	41.15	38.51	34.95	40.03
Total	19,509,533	1,908,488	100	100	100	100
2011-12						
Central	2,563,351	177,492	22.75	18.27	37.51	45.94
Southern	4,899,864	459,596	43.48	47.31	32.33	22.95
Northern	3,806,273	334,279	33.78	34.41	30.16	31.10
Total	11,269,488	971,367	100	100	100	100

Source: DES calculation

The poor constituted 34.09 percent of the total population in the Central region (rural) in 2004-05; the ratio came down to 22.75 percent in 2011-12, a decrease of 11.34 percentage points. The corresponding urban scenario was 49.08 percent in 2004-05 and a decrease to 18.27 percent in 2011-12.

The Northern region also experienced fall in percentage of poor from 41.15 percent in 2004-05 to 33.78 percent in 2011-12 in rural areas. Similar pattern of fall is observed in urban area of Northern region. But the share of poor in the Southern region increased both in rural and urban areas.

Annexure 2.1 : Key aggregates of National Income at current prices

Sl. No.	Item	(Rs. In Crore)										Growth over previous year (in %)				
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (A)	2017-18 (A) (Ignored)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (A) (Ignored)		
1.	Gross Value Added at basic prices	8106656	9206315	10366266	11470415	12451938	13602175		13.6	12.6	10.7	8.6	9.2	-100.0		
2.	Taxes on Products	890060	1057977	1180144	1290634	1548769	1590413		18.9	11.6	9.3	20.0	2.7	-100.0		
3.	Less Subsidies on Products	260677	316656	310075	327300	325376		21.5	-2.1	5.6	-0.6	-100.0				
4.	Gross Domestic Product (GDP) (1+2-3)	8736039	9946636	11236635	12433749	13675331	15192588		13.9	13.0	10.7	10.0	11.1	-100.0		
5.	Primary income receivable from ROW (net)	-76824	-116763	-139884	-147430	-159779		52.0	19.8	5.4	8.4	-100.0				
6.	Gross National Income (GNI) (4+5)	8659215	9829873	11096751	12286319	13515551	15002477		13.5	12.9	10.7	10.0	11.0	-100.0		
7.	Consumption of Fixed Capital	917141	1059977	1195575	1325173	1432458	1621887		15.6	12.8	10.8	8.1	13.2	-100.0		
8.	Net Value Added at basic prices (1-7)	7189515	8145338	9170691	10145242	11019480	11980288		13.3	12.6	10.6	8.6	8.7	-100.0		
9.	Net Domestic Product (4-7)	7818898	8886659	10041060	11108576	12242873	13570701		13.7	13.0	10.6	10.2	10.8	-100.0		
10.	Net National Income (NNI) (6-7)	7742074	8769896	9901176	10961146	12083093	13380590		13.3	12.9	10.7	10.2	10.7	-100.0		
11.	Population (in million)	1220	1235	1251	1267	1283	1299		1.2	1.3	1.3	1.3	1.2	-100.0		
12.	Per Capita GDP (in Rupees)	71607	80540	89821	98135	106589	116956		12.5	11.5	9.3	8.6	9.7	-100.0		
13.	Per Capita GNI (in Rupees)	70977	79594	88703	96972	105343	115493		12.1	11.4	9.3	8.6	9.6	-100.0		
14.	Per Capita NNI (in Rupees)	63460	71011	79146	86513	94178	103007		11.9	11.5	9.3	8.9	9.4	-100.0		

Source : Press Note, NAD, CSO
ROW : Rest Of the World

Annexure 2.2 : Key aggregates of National Income at 2011-12 price

Sl. No.	Item	(Rs. In Crore)										Growth over previous year (in %)				
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (A)	2012-13	2013-14	2014-15	2015-16	2016-17 (A)	2013-14	2014-15	2015-16	2016-17 (A)
1.	Gross Value Added at basic prices	8106656	8548229	9079250	9709547	10469720	11153038	5.4	6.2	6.9	7.8	6.2	6.9	7.8	6.5	6.5
2.	Taxes on Products	890060	960949	1010149	1090388	1161389	1001760	8.0	5.1	7.9	6.5	5.1	7.9	6.5	-13.7	-13.7
3.	Less Subsidies on Products	260677	294053	271577	277049	273580		12.8	-7.6	2.0	-1.3	12.8	-7.6	2.0	-1.3	-1.3
4.	Gross Domestic Product (GDP) (1+2-3)	8736039	9215125	9817822	10522686	11357529	12154797	5.5	6.5	7.2	7.9	6.5	7.2	7.9	7.9	7.0
5.	Primary income receivable from ROW (net)	-76824	-108292	-122312	-124434	-134596		41.0	12.9	1.7	8.2	41.0	12.9	1.7	8.2	8.2
6.	Gross National Income (GNI) (4+5)	8659215	9106834	9695510	10398251	11222933	11993865	5.2	6.5	7.2	7.9	6.5	7.2	7.9	7.9	6.9
7.	Consumption of Fixed Capital	917141	1009217	1099002	1185640	1276646	1367459	10.0	8.9	7.9	7.7	10.0	8.9	7.9	7.7	7.1
8.	Net Value Added at basic prices (1-7)	7189515	7539012	7980248	8523706	9193074	9785579	4.9	5.9	6.8	7.9	4.9	5.9	6.8	7.9	6.4
9.	Net Domestic Product (4-7)	7818898	8205908	8718820	9337045	10080883	10787338	4.9	6.3	7.1	8.0	4.9	6.3	7.1	8.0	7.0
10.	Net National Income (NNI) (6-7)	7742074	8097616	8596508	9212611	9946287	10626406	4.6	6.2	7.2	8.0	4.6	6.2	7.2	8.0	6.8
11.	Population (in million)	1220	1235	1251	1267	1283	1299	1.2	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.2
12.	Per Capita GDP (in Rupees)	71607	74616	78180	83052	88523	93570	4.2	5.2	5.8	6.6	4.2	5.2	5.8	6.6	5.7
13.	Per Capita GNI (in Rupees)	70977	73740	77502	82070	87474	92332	3.9	5.1	5.9	6.6	3.9	5.1	5.9	6.6	5.6
14.	Per Capita NNI (in Rupees)	63460	65568	68717	72712	77524	81805	3.3	4.8	5.8	6.6	3.3	4.8	5.8	6.6	5.5

Source : Press Note, NAD, CSO
ROW : Rest Of the World

Annexure 2.3 : Gross State Value Added by economic activity at current basic prices

Sl. No.	Economic Activity	Rs. Lakh						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	3934537	5342867	5674967	6556959	6141929	7509102	7632274
1.1	Crops	2555039	3750538	3802014	4436266	3782381	4859910	4788904
1.2	Livestock	538911	637320	729849	803496	861012	1016539	1145267
1.3	Forestry and Logging	572223	619884	784937	864086	938201	932986	902006
1.4	Fishing and Aquaculture	268365	335124	358168	453110	560335	699667	796096
2.	Mining and Quarrying	2648738	2666989	2868392	2703161	2902932	2874922	2948353
	Primary	6583276	8009855	8543359	9260120	9044861	10384024	10580627
3.	Manufacturing	4116404	4212453	5168498	4724215	4936778	5728482	6201560
4.	Electricity, Gas, Water Supply & Other Utility Services	775701	937278	1044477	1008706	1247223	1251796	1390367
5.	Construction	2059629	2074164	2314669	2394151	2392253	2573235	2741801
	Secondary	6951734	7223895	8527644	8127072	8576254	9553513	10333728
6.	Trade, Repair, Hotels and Restaurants	2035854	2436044	2769620	3030218	3089348	3530035	3962908
6.1	Trade & Repair Services	1838866	2218946	2533465	2782577	2816034	3217529	3612211
6.2	Hotels & Restaurants	196989	217098	236155	247641	273314	312506	350697
7.	Transport, Storage, Communication & Services related to Broadcasting	1347538	1560857	1771254	2048455	2265659	2623783	3059500
7.1	Railways	179466	233719	266785	343229	392895	436554	522194
7.2	Transport by means other than Railways	819369	940402	1039368	1149260	1236285	1439341	1666336
7.2.1	Road transport	693450	802859	892415	972267	1060860	1243642	1436913
7.2.2	Water transport	41962	42597	42862	47988	38419	45081	50742
7.2.3	Air transport	3421	7232	5311	8947	16850	16923	24283
7.2.4	Services incidental to Transport	80536	87715	98780	120058	120156	133695	154398
7.3	Storage	13967	15384	18233	18781	19677	21741	25167
7.4	Communication & Services related to Broadcasting	334737	371354	446868	537185	616802	726148	845803
8.	Financial Services	796303	910354	962328	1065147	1192545	1374358	1572387
9.	Real estate, Ownership of Dwelling & Professional Services	1707147	1901721	2146627	2321999	2489622	2700029	2984887
10.	Public Administration and Defence	863077	980808	1390657	1517496	1591281	1733853	2367068
11.	Other Services	1738239	1892760	1932774	2151369	2404978	2905146	3338609
	Tertiary	8488159	9682545	10973261	12134685	13033433	14867205	17285358
12	TOTAL GSVA at Basic Prices	22023169	24916295	28044263	29521876	30654548	34804742	38199713
13	Gross State Domestic Product	23098708	26169960	29647538	31426707	33087377	37720178	41598168
14	Per capita GSDP (Rupees)	54708	61358	68813	72209	75262	84936	92727

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.4 : Gross State Value Added by economic activity (percentage share) at current basic prices

Sl. No.	Economic Activity	Percentage Share						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	17.87	21.44	20.24	22.21	20.04	21.57	19.98
1.1	Crops	11.60	15.05	13.56	15.03	12.34	13.96	12.54
1.2	Livestock	2.45	2.56	2.60	2.72	2.81	2.92	3.00
1.3	Forestry and Logging	2.60	2.49	2.80	2.93	3.06	2.68	2.36
1.4	Fishing and Aquaculture	1.22	1.34	1.28	1.53	1.83	2.01	2.08
2.	Mining and Quarrying	12.03	10.70	10.23	9.16	9.47	8.26	7.72
	Primary	29.89	32.15	30.46	31.37	29.51	29.84	27.70
3.	Manufacturing	18.69	16.91	18.43	16.00	16.10	16.46	16.23
4.	Electricity, Gas, Water Supply & Other Utility Services	3.52	3.76	3.72	3.42	4.07	3.60	3.64
5.	Construction	9.35	8.32	8.25	8.11	7.80	7.39	7.18
	Secondary	31.57	28.99	30.41	27.53	27.98	27.45	27.05
6.	Trade, Repair, Hotels and Restaurants	9.24	9.78	9.88	10.26	10.08	10.14	10.37
6.1	Trade & Repair Services	8.35	8.91	9.03	9.43	9.19	9.24	9.46
6.2	Hotels & Restaurants	0.89	0.87	0.84	0.84	0.89	0.90	0.92
7.	Transport, Storage, Communication & Services related to Broadcasting	6.12	6.26	6.32	6.94	7.39	7.54	8.01
7.1	Railways	0.81	0.94	0.95	1.16	1.28	1.25	1.37
7.2	Transport by means other than Railways	3.72	3.77	3.71	3.89	4.03	4.14	4.36
7.2.1	Road transport	3.15	3.22	3.18	3.29	3.46	3.57	3.76
7.2.2	Water transport	0.19	0.17	0.15	0.16	0.13	0.13	0.13
7.2.3	Air transport	0.02	0.03	0.02	0.03	0.05	0.05	0.06
7.2.4	Services Incidental to Transport	0.37	0.35	0.35	0.41	0.39	0.38	0.40
7.3	Storage	0.06	0.06	0.07	0.06	0.06	0.06	0.07
7.4	Communication & Services related to Broadcasting	1.52	1.49	1.59	1.82	2.01	2.09	2.21
8.	Financial Services	3.62	3.65	3.43	3.61	3.89	3.95	4.12
9.	Real estate, Ownership of Dwelling & Professional Services	7.75	7.63	7.65	7.87	8.12	7.76	7.81
10.	Public Administration and Defence	3.92	3.94	4.96	5.14	5.19	4.98	6.20
11.	Other Services	7.89	7.60	6.89	7.29	7.85	8.35	8.74
	Tertiary	38.54	38.86	39.13	41.10	42.52	42.72	45.25
12	TOTAL GSVA at Basic Prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.5: Gross State Value Added by economic activity at current basic prices

Sl. No.	Economic Activity	Growth over previous year					
		2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	35.79	6.22	15.54	-6.33	22.26	1.64
1.1	Crops	46.79	1.37	16.68	-14.74	28.49	-1.46
1.2	Livestock	18.26	14.52	10.09	7.16	18.06	12.66
1.3	Forestry and Logging	8.33	26.63	10.08	8.58	-0.56	-3.32
1.4	Fishing and Aquaculture	24.88	6.88	26.51	23.66	24.87	13.78
2.	Mining and Quarrying	0.69	7.55	-5.76	7.39	-0.96	2.55
	Primary	21.67	6.66	8.39	-2.32	14.81	1.89
3.	Manufacturing	2.33	22.70	-8.60	4.50	16.04	8.26
4.	Electricity, Gas, Water Supply & Other Utility Services	20.83	11.44	-3.42	23.65	0.37	11.07
5.	Construction	0.71	11.60	3.43	-0.08	7.57	6.55
	Secondary	3.92	18.05	-4.70	5.53	11.39	8.17
6.	Trade, Repair, Hotels and Restaurants	19.66	13.69	9.41	1.95	14.26	12.26
6.1	Trade & Repair Services	20.67	14.17	9.83	1.20	14.26	12.27
6.2	Hotels & Restaurants	10.21	8.78	4.86	10.37	14.34	12.22
7.	Transport, Storage, Communication & Services related to Broadcasting	15.83	13.48	15.65	10.60	15.81	16.61
7.1	Railways	30.23	14.15	28.65	14.47	11.11	19.62
7.2	Transport by means other than Railways	14.77	10.52	10.57	7.57	16.42	15.77
7.2.1	Road transport	15.78	11.15	8.95	9.11	17.23	15.54
7.2.2	Water transport	1.51	0.62	11.96	-19.94	17.34	12.56
7.2.3	Air transport	111.39	-26.56	68.48	88.32	0.43	43.49
7.2.4	Services Incidental to Transport	8.91	12.62	21.54	0.08	11.27	15.49
7.3	Storage	10.14	18.52	3.01	4.77	10.49	15.76
7.4	Communication & Services related to Broadcasting	10.94	20.34	20.21	14.82	17.73	16.48
8.	Financial Services	14.32	5.71	10.68	11.96	15.25	14.41
9.	Real estate, Ownership of Dwelling & Professional Services	11.40	12.88	8.17	7.22	8.45	10.55
10.	Public Administration and Defence	13.64	41.79	9.12	4.86	8.96	36.52
11.	Other Services	8.89	2.11	11.31	11.79	20.80	14.92
	Tertiary	14.07	13.33	10.58	7.41	14.07	16.27
12	TOTAL GSVA at Basic Prices	13.14	12.55	5.27	3.84	13.54	9.75
13	Gross State Domestic Product	13.30	13.29	6.00	5.28	14.00	10.28
14	Per capita GSDP	12.16	12.15	4.93	4.23	12.85	9.17

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.6: Gross State Value Added by economic activity at constant (2011-12) basic prices (May be ignored)

Sl. No.	Economic Activity	Rs. Lakh						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	3934537	4558109	4368529	4711024	4074096	4874833	4645942
1.1	Crops	2555039	3153542	2864360	3154054	2437967	3105454	2769488
1.2	Livestock	538911	550337	603389	581686	601371	629382	673040
1.3	Forestry and Logging	572223	552477	604105	638507	662414	686107	703385
1.4	Fishing and Aquaculture	268365	301753	296675	336777	372344	453890	500029
2.	Mining and Quarrying	2648738	2596740	3097752	2851914	3726511	4094861	4290527
	Primary	6583276	7154850	7466281	7562938	7800607	8969694	8936470
3.	Manufacturing	4116404	3985120	4830204	4374503	5057003	5317670	5596807
4.	Electricity, Gas, Water Supply & Other Utility Services	775701	924884	987637	919544	1127264	1130984	1239333
5.	Construction	2059629	2009633	2144855	2138590	2067520	2194847	2278079
	Secondary	6951734	6919638	7962695	7432637	8251788	8643501	9114219
6.	Trade, Repair, Hotels and Restaurants	2035854	2274231	2454254	2652360	2812243	3156894	3442527
6.1	Trade & Repair Services	1838866	2071553	2245248	2435870	2563577	2877633	3138224
6.2	Hotels & Restaurants	196989	202677	209006	216490	248666	279261	304303
7.	Transport, Storage, Communication & Services related to Broadcasting	1347538	1509441	1639444	1841384	2036310	2329612	2624145
7.1	Railways	179465	222896	247615	297269	325193	387256	448197
7.2	Transport by means other than Railways	819369	914347	966706	1045914	1135214	1278739	1428094
7.2.1	Road transport	693450	780615	830026	884837	974131	1102111	1231472
7.2.2	Water transport	41962	41416	39866	43673	35278	39950	43487
7.2.3	Air transport	3421	7031	4939	8143	15473	18198	20811
7.2.4	Services Incidental to Transport	80536	85284	91875	109262	110332	118480	132323
7.3	Storage	13967	14038	14302	13835	15515	19469	21906
7.4	Communication & Services related to Broadcasting	334737	358160	410822	484366	560387	644148	725949
8.	Financial Services	796303	898381	929172	1018384	1111143	1219159	1349572
9.	Real estate, Ownership of Dwelling & Professional Services	1707147	1770647	1889542	2002383	2200472	2335625	2502399
10.	Public Administration and Defence	863077	923056	1249332	1340689	1450045	1553064	2061577
11.	Other Services	1738239	1741648	1665455	1733687	1837078	2081957	2270454
	Tertiary	8488159	9117404	9827199	10588887	11447290	12676311	14250674
12	TOTAL GSVA at Basic Prices	22023169	23191892	25256175	25584461	27499685	30289506	32301363
13	Gross State Domestic Product	23098707	24336348	26589152	27066994	29279240	32321773	34629376
14	Per capita GSDP (In Rupees)	54708	57059	61715	62192	66600	72780	77193

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.7: Gross State Value Added by economic activity (percentage share) at current basic prices (May be ignored)

Sl. No.	Economic Activity	Percentage Share						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	17.87	19.65	17.30	18.41	14.82	16.09	14.38
1.1	Crops	11.60	13.60	11.34	12.33	8.87	10.25	8.57
1.2	Livestock	2.45	2.37	2.39	2.27	2.19	2.08	2.08
1.3	Forestry and Logging	2.60	2.38	2.39	2.50	2.41	2.27	2.18
1.4	Fishing and Aquaculture	1.22	1.30	1.17	1.32	1.35	1.50	1.55
2.	Mining and Quarrying	12.03	11.20	12.27	11.15	13.55	13.52	13.28
	Primary	29.89	30.85	29.56	29.56	28.37	29.61	27.67
3.	Manufacturing	18.69	17.18	19.12	17.10	18.39	17.56	17.33
4.	Electricity, Gas, Water Supply & Other Utility Services	3.52	3.99	3.91	3.59	4.10	3.73	3.84
5.	Construction	9.35	8.67	8.49	8.36	7.52	7.25	7.05
	Secondary	31.57	29.84	31.53	29.05	30.01	28.54	28.22
6.	Trade, Repair, Hotels and Restaurants	9.24	9.81	9.72	10.37	10.23	10.42	10.66
6.1	Trade & Repair Services	8.35	8.93	8.89	9.52	9.32	9.50	9.72
6.2	Hotels & Restaurants	0.89	0.87	0.83	0.85	0.90	0.92	0.94
7.	Transport, Storage, Communication & Services related to Broadcasting	6.12	6.51	6.49	7.20	7.40	7.69	8.12
7.1	Railways	0.81	0.96	0.98	1.16	1.18	1.28	1.39
7.2	Transport by means other than Railways	3.72	3.94	3.83	4.09	4.13	4.22	4.42
7.2.1	Road transport	3.15	3.37	3.29	3.46	3.54	3.64	3.81
7.2.2	Water transport	0.19	0.18	0.16	0.17	0.13	0.13	0.13
7.2.3	Air transport	0.02	0.03	0.02	0.03	0.06	0.06	0.06
7.2.4	Services Incidental to Transport	0.37	0.37	0.36	0.43	0.40	0.39	0.41
7.3	Storage	0.06	0.06	0.06	0.05	0.06	0.06	0.07
7.4	Communication & Services related to Broadcasting	1.52	1.54	1.63	1.89	2.04	2.13	2.25
8.	Financial Services	3.62	3.87	3.68	3.98	4.04	4.03	4.18
9.	Real estate, Ownership of Dwelling & Professional Services	7.75	7.63	7.48	7.83	8.00	7.71	7.75
10.	Public Administration and Defence	3.92	3.98	4.95	5.24	5.27	5.13	6.38
11.	Other Services	7.89	7.51	6.59	6.78	6.68	6.87	7.03
	Tertiary	38.54	39.31	38.91	41.39	41.63	41.85	44.12
12	TOTAL GSVA at Basic Prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.8 : Gross State Value Added by economic activity at current basic prices (May be ignored)

Sl. No.	Economic Activity	Growth over previous year					
		2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	35.79	6.22	15.54	-6.33	22.26	1.64
1.1	Crops	46.79	1.37	16.68	-14.74	28.49	-1.46
1.2	Livestock	18.26	14.52	10.09	7.16	18.06	12.66
1.3	Forestry and Logging	8.33	26.63	10.08	8.58	-0.56	-3.32
1.4	Fishing and Aquaculture	24.88	6.88	26.51	23.66	24.87	13.78
2.	Mining and Quarrying	0.69	7.55	-5.76	7.39	-0.96	2.55
	Primary	21.67	6.66	8.39	-2.32	14.81	1.89
3.	Manufacturing	2.33	22.70	-8.60	4.50	16.04	8.26
4.	Electricity, Gas, Water Supply & Other Utility Services	20.83	11.44	-3.42	23.65	0.37	11.07
5.	Construction	0.71	11.60	3.43	-0.08	7.57	6.55
	Secondary	3.92	18.05	-4.70	5.53	11.39	8.17
6.	Trade, Repair, Hotels and Restaurants	19.66	13.69	9.41	1.95	14.26	12.26
6.1	Trade & Repair Services	20.67	14.17	9.83	1.20	14.26	12.27
6.2	Hotels & Restaurants	10.21	8.78	4.86	10.37	14.34	12.22
7.	Transport, Storage, Communication & Services related to Broadcasting	15.83	13.48	15.65	10.60	15.81	16.61
7.1	Railways	30.23	14.15	28.65	14.47	11.11	19.62
7.2	Transport by means other than Railways	14.77	10.52	10.57	7.57	16.42	15.77
7.2.1	Road transport	15.78	11.15	8.95	9.11	17.23	15.54
7.2.2	Water transport	1.51	0.62	11.96	-19.94	17.34	12.56
7.2.3	Air transport	111.39	-26.56	68.48	88.32	0.43	43.49
7.2.4	Services Incidental to Transport	8.91	12.62	21.54	0.08	11.27	15.49
7.3	Storage	10.14	18.52	3.01	4.77	10.49	15.76
7.4	Communication & Services related to Broadcasting	10.94	20.34	20.21	14.82	17.73	16.48
8.	Financial Services	14.32	5.71	10.68	11.96	15.25	14.41
9.	Real estate, Ownership of Dwelling & Professional Services	11.40	12.88	8.17	7.22	8.45	10.55
10.	Public Administration and Defence	13.64	41.79	9.12	4.86	8.96	36.52
11.	Other Services	8.89	2.11	11.31	11.79	20.80	14.92
	Tertiary	14.07	13.33	10.58	7.41	14.07	16.27
12	TOTAL GSVA at Basic Prices	13.14	12.55	5.27	3.84	13.54	9.75
13	Gross State Domestic Product	13.30	13.29	6.00	5.28	14.00	10.28
14	Per capita GSDP	12.16	12.15	4.93	4.23	12.85	9.17

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.6 : Gross State Value Added by economic activity at constant (2011-12) basic prices

Sl .No.	Economic Activity	Rs. Lakh						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	3934537	4558109	4368529	4711024	4074096	4874833	4645942
1.1	Crops	2555039	3153542	2864360	3154054	2437967	3105454	2769488
1.2	Livestock	538911	550337	603389	581686	601371	629382	673040
1.3	Forestry and Logging	572223	552477	604105	638507	662414	686107	703385
1.4	Fishing and Aquaculture	268365	301753	296675	336777	372344	453890	500029
2.	Mining and Quarrying	2648738	2596740	3097752	2851914	3726511	4094861	4290527
	Primary	6583276	7154850	7466281	7562938	7800607	8969694	8936470
3.	Manufacturing	4116404	3985120	4830204	4374503	5057003	5317670	5596807
4.	Electricity, Gas, Water Supply & Other Utility Services	775701	924884	987637	919544	1127264	1130984	1239333
5.	Construction	2059629	2009633	2144855	2138590	2067520	2194847	2278079
	Secondary	6951734	6919638	7962695	7432637	8251788	8643501	9114219
6.	Trade, Repair, Hotels and Restaurants	2035854	2274231	2454254	2652360	2812243	3156894	3442527
6.1	Trade & Repair Services	1838866	2071553	2245248	2435870	2563577	2877633	3138224
6.2	Hotels & Restaurants	196989	202677	209006	216490	248666	279261	304303
7.	Transport, Storage, Communication & Services related to Broadcasting	1347538	1509441	1639444	1841384	2036310	2329612	2624145
7.1	Railways	179465	222896	247615	297269	325193	387256	448197
7.2	Transport by means other than Railways	819369	914347	966706	1045914	1135214	1278739	1428094
7.2.1	Road transport	693450	780615	830026	884837	974131	1102111	1231472
7.2.2	Water transport	41962	41416	39866	43673	35278	39950	43487
7.2.3	Air transport	3421	7031	4939	8143	15473	18198	20811
7.2.4	Services Incidental to Transport	80536	85284	91875	109262	110332	118480	132323
7.3	Storage	13967	14038	14302	13835	15515	19469	21906
7.4	Communication & Services related to Broadcasting	334737	358160	410822	484366	560387	644148	725949
8.	Financial Services	796303	898381	929172	1018384	1111143	1219159	1349572
9.	Real estate, Ownership of Dwelling & Professional Services	1707147	1770647	1889542	2002383	2200472	2335625	2502399
10.	Public Administration and Defence	863077	923056	1249332	1340689	1450045	1553064	2061577
11.	Other Services	1738239	1741648	1665455	1733687	1837078	2081957	2270454
	Tertiary	8488159	9117404	9827199	10588887	11447290	12676311	14250674
12	TOTAL GSVA at Basic Prices	22023169	23191892	25256175	25584461	27499685	30289506	32301363
13	Gross State Domestic Product	23098707	24336348	26589152	27066994	29279240	32321773	34629376
14	Per capita GSDP (In Rupees)	54708	57059	61715	62192	66600	72780	77193

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.7 Gross State Value Added by economic activity at constant (2011-12) basic prices

Sl. No.	Economic Activity	Percentage Share						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	17.87	19.65	17.30	18.41	14.82	16.09	14.38
1.1	Crops	11.60	13.60	11.34	12.33	8.87	10.25	8.57
1.2	Livestock	2.45	2.37	2.39	2.27	2.19	2.08	2.08
1.3	Forestry and Logging	2.60	2.38	2.39	2.50	2.41	2.27	2.18
1.4	Fishing and Aquaculture	1.22	1.30	1.17	1.32	1.35	1.50	1.55
2.	Mining and Quarrying	12.03	11.20	12.27	11.15	13.55	13.52	13.28
	Primary	29.89	30.85	29.56	29.56	28.37	29.61	27.67
3.	Manufacturing	18.69	17.18	19.12	17.10	18.39	17.56	17.33
4.	Electricity, Gas, Water Supply & Other Utility Services	3.52	3.99	3.91	3.59	4.10	3.73	3.84
5.	Construction	9.35	8.67	8.49	8.36	7.52	7.25	7.05
	Secondary	31.57	29.84	31.53	29.05	30.01	28.54	28.22
6.	Trade, Repair, Hotels and Restaurants	9.24	9.81	9.72	10.37	10.23	10.42	10.66
6.1	Trade & Repair Services	8.35	8.93	8.89	9.52	9.32	9.50	9.72
6.2	Hotels & Restaurants	0.89	0.87	0.83	0.85	0.90	0.92	0.94
7.	Transport, Storage, Communication & Services related to Broadcasting	6.12	6.51	6.49	7.20	7.40	7.69	8.12
7.1	Railways	0.81	0.96	0.98	1.16	1.18	1.28	1.39
7.2	Transport by means other than Railways	3.72	3.94	3.83	4.09	4.13	4.22	4.42
7.2.1	Road transport	3.15	3.37	3.29	3.46	3.54	3.64	3.81
7.2.2	Water transport	0.19	0.18	0.16	0.17	0.13	0.13	0.13
7.2.3	Air transport	0.02	0.03	0.02	0.03	0.06	0.06	0.06
7.2.4	Services Incidental to Transport	0.37	0.37	0.36	0.43	0.40	0.39	0.41
7.3	Storage	0.06	0.06	0.06	0.05	0.06	0.06	0.07
7.4	Communication & Services related to Broadcasting	1.52	1.54	1.63	1.89	2.04	2.13	2.25
8.	Financial Services	3.62	3.87	3.68	3.98	4.04	4.03	4.18
9.	Real estate, Ownership of Dwelling & Professional Services	7.75	7.63	7.48	7.83	8.00	7.71	7.75
10.	Public Administration and Defence	3.92	3.98	4.95	5.24	5.27	5.13	6.38
11.	Other Services	7.89	7.51	6.59	6.78	6.68	6.87	7.03
	Tertiary	38.54	39.31	38.91	41.39	41.63	41.85	44.12
12	TOTAL GSVA at Basic Prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.8 : Gross State Value Added by economic activity at constant (2011-12) basic prices

Sl. No.	Economic Activity	Growth over previous year					
		2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	15.85	-4.16	7.84	-13.52	19.65	-4.70
1.1	Crops	23.42	-9.17	10.11	-22.70	27.38	-10.82
1.2	Livestock	2.12	9.64	-3.60	3.38	4.66	6.94
1.3	Forestry and Logging	-3.45	9.34	5.69	3.74	3.58	2.52
1.4	Fishing and Aquaculture	12.44	-1.68	13.52	10.56	21.90	10.17
2.	Mining and Quarrying	-1.96	19.29	-7.94	30.67	9.88	4.78
	Primary	8.68	4.35	1.29	3.14	14.99	-0.37
3.	Manufacturing	-3.19	21.21	-9.43	15.60	5.15	5.25
4.	Electricity, Gas, Water Supply & Other Utility Services	19.23	6.78	-6.89	22.59	0.33	9.58
5.	Construction	-2.43	6.73	-0.29	-3.32	6.16	3.79
	Secondary	-0.46	15.07	-6.66	11.02	4.75	5.45
6.	Trade, Repair, Hotels and Restaurants	11.71	7.92	8.07	6.03	12.26	9.05
6.1	Trade & Repair Services	12.65	8.38	8.49	5.24	12.25	9.06
6.2	Hotels & Restaurants	2.89	3.12	3.58	14.86	12.30	8.97
7.	Transport, Storage, Communication & Services related to Broadcasting	12.01	8.61	12.32	10.59	14.40	12.64
7.1	Railways	24.20	11.09	20.05	9.39	19.08	15.74
7.2	Transport by means other than Railways	11.59	5.73	8.19	8.54	12.64	11.68
7.2.1	Road transport	12.57	6.33	6.60	10.09	13.14	11.74
7.2.2	Water transport	-1.30	-3.74	9.55	-19.22	13.24	8.85
7.2.3	Air transport	105.53	-29.75	64.86	90.02	17.61	14.36
7.2.4	Services Incidental to Transport	5.90	7.73	18.92	0.98	7.38	11.68
7.3	Storage	0.51	1.88	-3.27	12.14	25.48	12.52
7.4	Communication & Services related to Broadcasting	7.00	14.70	17.90	15.69	14.95	12.70
8.	Financial Services	12.82	3.43	9.60	9.11	9.72	10.70
9.	Real estate, Ownership of Dwelling & Professional Services	3.72	6.71	5.97	9.89	6.14	7.14
10.	Public Administration and Defence	6.95	35.35	7.31	8.16	7.10	32.74
11.	Other Services	0.20	-4.37	4.10	5.96	13.33	9.05
	Tertiary	7.41	7.79	7.75	8.11	10.74	12.42
12	TOTAL GSVA at Basic Prices	5.31	8.90	1.30	7.49	10.14	6.64
13	Gross State Domestic Product	5.36	9.26	1.80	8.17	10.39	7.14
14	Per capita GSDP	4.30	8.16	0.77	7.09	9.28	6.06

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.9 : Net State Value Added by economic activity at current basic prices

Sl. No.	Economic Activity	Rs. Lakh						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	3655362	5020904	5303737	6140445	5679338	6920613	7040420
1.1	Crops	2323278	3484350	3490503	4084682	3394109	4361026	4297309
1.2	Livestock	528869	625383	716080	789281	847369	1000432	1127121
1.3	Forestry and Logging	565936	612933	777013	855629	929289	924123	893437
1.4	Fishing and Aquaculture	237279	298238	320140	410853	508571	635032	722553
2.	Mining and Quarrying	2254986	2234557	2457251	2307232	2439275	2415738	2477442
	Primary	5910349	7255461	7760988	8447677	8118613	9336351	9517862
3.	Manufacturing	3273608	3459143	4067727	3475553	3687979	4279415	4632824
4.	Electricity, Gas, Water Supply & Other Utility Services	581075	703118	761680	650312	821346	824358	915612
5.	Construction	1963596	1966117	2174138	2253299	2253111	2423566	2582328
	Secondary	5818279	6128378	7003544	6379164	6762436	7527340	8130765
6.	Trade, Repair, Hotels and Restaurants	1982274	2370054	2689608	2939663	2989513	3415956	3834841
6.1	Trade & Repair Services	1794251	2162611	2463946	2703294	2728636	3117670	3500103
6.2	Hotels & Restaurants	188023	207443	225663	236369	260877	298285	334739
7.	Transport, Storage, Communication & Services related to Broadcasting	1074690	1257367	1368697	1616123	1811241	2096976	2445509
7.1	Railways	139537	188886	211485	275905	310146	344610	412213
7.2	Transport by means other than Railways	651717	750917	805397	911060	990685	1152656	1334895
7.2.1	Road transport	551673	641618	694430	768707	847507	993528	1147930
7.2.2	Water transport	28152	26062	23822	30485	22049	25872	29121
7.2.3	Air transport	910	4070	2594	5976	14056	14117	20256
7.2.4	Services Incidental to Transport	70981	79167	84551	105892	107073	119139	137588
7.3	Storage	11922	13201	15393	15769	16360	18076	20925
7.4	Communication & Services related to Broadcasting	271514	304363	336423	413389	494050	581634	677476
8.	Financial Services	783729	894227	946268	1045500	1170021	1348399	1542688
9.	Real estate, Ownership of Dwelling & Professional Services	1520729	1674815	1873545	1997025	2127526	2307331	2550758
10.	Public Administration and Defence	666151	762906	1089498	1200884	1246192	1357846	1853740
11.	Other Services	1590856	1734373	1762316	1963187	2203489	2661754	3058901
	Tertiary	7618428	8693743	9729931	10762381	11547981	13188261	15286437
12	TOTAL NSVA at Basic Prices	19347056	22077583	24494463	25589223	26429031	30051952	329335063
13	Net State Domestic Product	20422595	23331248	26097738	27494054	28861860	32967389	36333518
14	Per capita NSDP (In Rupees)	48370	54703	60574	63173	65650	74234	80991

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.10 : Statement 3.2.0: Net State Value Added by economic activity at constant (2011-12) basic prices :

Sl. No.	Economic Activity	Rs. Lakh						
		2011-12 (2nd R)	2012-13 (2nd R)	2013-14 (2nd R)	2014-15 (2nd R)	2015-16 (2nd R)	2016-17 (1st R)	2017-18 (A)
1.	Agriculture, Forestry and Fishing	3655362	4259737	4050611	4369442	3708482	4416219	4222035
1.1	Crops	2323278	2907474	2599028	2869312	2137565	2722805	2428236
1.2	Livestock	528869	539280	591186	569448	589232	616678	659454
1.3	Forestry and Logging	565936	546025	597087	631243	654578	677991	695065
1.4	Fishing and Aquaculture	237279	266958	263310	299439	327107	398745	439279
2.	Mining and Quarrying	2254986	2185032	2721218	2510952	3335727	3665450	3840597
	Primary	5910349	6444769	6771829	6880394	7044209	8081669	8062632
3.	Manufacturing	3273608	3259701	3798066	3251093	3935848	4138724	4355975
4.	Electricity, Gas, Water Supply & Other Utility Services	581075	699196	722380	599174	745274	747734	819367
5.	Construction	1963596	1906551	2012619	2007958	1937764	2057100	2135109
	Secondary	5818279	5865449	6533064	5858225	6618887	6943558	7310451
6.	Trade, Repair, Hotels and Restaurants	1982274	2212037	2381396	2572856	2722847	3056541	3350932
6.1	Trade & Repair Services	1794251	2018505	2182013	2366272	2485298	2789765	3058504
6.2	Hotels & Restaurants	188023	193532	199383	206584	237549	266776	292428
7.	Transport, Storage, Communication & Services related to Broadcasting	1074690	1218464	1261674	1451283	1627754	1861398	2096806
7.1	Railways	139536	180852	197142	238713	253735	302160	349709
7.2	Transport by means other than Railways	651717	732897	749876	824723	906229	1020206	1139641
7.2.1	Road transport	551673	626277	646812	695258	774663	876437	979309
7.2.2	Water transport	28152	25544	22172	27355	19976	22622	24625
7.2.3	Air transport	910	3995	2416	5369	12871	15138	17312
7.2.4	Services incidental to Transport	70981	77081	78477	96742	98720	106010	118396
7.3	Storage	11922	11980	11721	11208	12552	15750	17722
7.4	Communication & Services related to Broadcasting	271514	292735	302935	376638	455237	523281	589733
8.	Financial Services	783729	882747	913891	1000968	1091228	1197309	1325384
9.	Real estate, Ownership of Dwelling & Professional Services	1520729	1557935	1641435	1724828	1893418	2009712	2153215
10.	Public Administration and Defence	666151	713663	968442	1054332	1136000	1216708	1615088
11.	Other Services	1590856	1590586	1507477	1568115	1657399	1878327	2048387
	Tertiary	7618428	8175433	8674315	9372382	10128646	11219994	12589813
12	TOTAL NSVA at Basic Prices	19347056	20485651	21979209	22111001	23791742	26245221	27962896
13	Net State Domestic Product	20422595	21630107	23312186	23593533	25571297	28277488	30290909
14	Per capita NSDP (In Rupees)	48370	50714	54109	54211	58165	63674	67522

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.11 : Gross State Domestic Product At Current Prices; Base Year 2011-12

S. No.	State/UT	GSDP - CURRENT PRICES (in Crore)														% Growth over previous year		
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2012-13	2013-14	2014-15	2015-16	2016-17	2016-17	2016-17	2016-17			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		
1	Andhra Pradesh	379402	411404	464272	526468	609934	699407	843	12.85	13.40	15.85	14.65						
2	Assam	11063	12547	14581	17931	20294	NA	13.41	16.21	22.98	13.18	NA						
3	Bihar	143175	156864	177445	195723	226276	NA	9.56	13.31	10.11	15.61	NA						
4	Chhattisgarh	247144	282368	317101	342951	381501	438030	14.25	12.30	8.15	11.24	14.82						
5	Goa	158074	177511	206690	234982	260776	290140	12.30	16.44	13.69	10.98	11.26						
6	Gujarat	42367	38120	35921	47814	54275	NA	-10.02	-5.77	33.11	13.51	NA						
7	Haryana	615606	724495	807623	921773	1033791	NA	17.69	11.47	14.13	12.15	NA						
8	Himachal Pradesh	297539	347032	400662	437462	485184	547396	16.63	15.45	9.18	10.91	12.82						
9	Jammu & Kashmir	72720	82820	94764	103742	112852	125227	13.89	14.42	9.47	8.78	10.97						
10	Jharkhand	78256	87144	95619	98333	119093	NA	11.36	9.72	2.84	21.11	NA						
11	Karnataka	150918	174724	188567	218525	231294	253536	15.77	7.92	15.89	5.81	9.62						
12	Kerala	606010	695413	816666	912647	1016910	1132690	14.75	17.41	11.75	11.42	11.39						
13	Madhya Pradesh	364048	412313	465041	512564	556616	NA	13.26	12.79	10.22	8.59	NA						
14	Maharashtra	315561	380924	437737	481982	543975	640484	20.71	14.91	10.11	12.86	17.74						
15	Manipur	1275948	1454612	1646043	1773744	2001223	NA	14.00	13.16	7.76	12.82	NA						
16	Mizoram	12915	13748	16198	18129	19233	NA	6.45	17.83	11.92	6.09	NA						
17	Nagaland	19918	21872	22938	23235	25767	NA	9.81	4.87	1.29	10.90	NA						
18	Odisha	7259	8362	10293	13509	15339	NA	15.20	23.10	31.24	13.55	NA						
19	Punjab	12177	14121	16612	18401	19816	NA	15.97	17.64	10.77	7.69	NA						
20	Rajasthan*	227872	258275	291709	321971	341887	378991	13.34	12.95	10.37	6.19	10.85						
21	Sikkim*	266628	297734	332147	354908	391543	427870	11.67	11.56	6.85	10.32	9.28						
22	Tamil Nadu	434366	493007	548391	606465	672707	NA	13.50	11.23	10.59	10.92	NA						
23	Telangana	11165	12338	13862	15407	16954	18852	10.51	12.35	11.14	10.04	11.20						
24	Uttar Pradesh	751486	855476	969216	1072775	1161963	1298511	13.84	13.30	10.68	8.31	11.75						
25	West Bengal	359434	401594	451580	505664	567588	646265	11.73	12.45	11.98	12.25	13.86						
26	Andaman & Nicobar	19208	21663	25593	29667	NA	NA	12.78	18.14	15.92	NA	NA						
27	Chandigarh	724050	822393	940356	1011790	1120836	1275141	13.58	14.34	7.60	10.78	13.77						
28	Delhi	115328	131613	149074	161439	176171	195192	14.12	13.27	8.29	9.13	10.80						
29	Puducherry	8736329	9944013	11233522	12445128	13682035	15183709	13.82	12.97	10.79	9.94	10.98						
30	All-India GDP	3979	4421	5023	5478	5932	NA	11.13	13.61	9.06	8.29	NA						
31	Islands	18768	21909	25155	26541	29049	NA	16.74	14.81	5.51	9.45	NA						
32	Chandigarh	343767	391238	443783	492424	551963	622385	13.81	13.43	10.96	12.09	12.76						
33	Puducherry	16818	18875	21870	22574	24701	27586	12.23	15.87	3.22	9.42	11.68						

Source : For Sl. No. 1-33 -- Directorate of Economics & Statistics of respective State Governments, and for All-India -- Central Statistics Office
 Note : 1) The estimates of West Bengal for new series with base year 2011-12 compiled by the DES, West Bengal are under examination
 *Provisional

Annexure 2.12 : Gross State Domestic Product At Constant (2011-12) Prices; Base Year 2011-12

S. No.	State/UT (2)	GSDP - CONSTANT PRICES (in Crore)											(% Growth over previous year)				
		2011-12 (3)	2012-13 (4)	2013-14 (5)	2014-15 (6)	2015-16 (7)	2016-17 (8)	2012-13 (8)	2013-14 (9)	2014-15 (10)	2015-16 (11)	2016-17 (12)*					
1	Andhra Pradesh	379402	380629	407115	441741	490134	547021	0.32	6.96	8.51	10.96	11.61					
2	Arunachal Pradesh	11063	11299	12338	14376	16744	NA	2.14	9.20	16.52	16.47	NA					
3	Assam	143175	147342	154525	165212	178930	NA	2.91	4.88	6.92	8.30	NA					
4	Bihar	247144	256851	269650	279482	300566	331572	3.93	4.98	3.65	7.54	10.32					
5	Chhattisgarh	158074	165937	182229	196023	209012	223932	4.97	9.82	7.57	6.63	7.14					
6	Goa	42367	35850	31568	40116	44717	NA	-15.38	-11.94	27.08	11.47	NA					
7	Gujarat	615606	682650	734284	811428	901375	NA	10.89	7.56	10.51	11.09	NA					
8	Haryana	297539	320570	346799	366636	399646	434608	7.74	8.18	5.72	9.00	8.75					
9	Himachal Pradesh	72720	73384	82847	89068	97207	103914	6.41	7.06	7.51	9.14	6.90					
10	Jammu & Kashmir	78256	80775	85087	84824	97289	NA	3.22	5.34	-0.31	14.70	NA					
11	Jharkhand	150918	163250	165816	186534	197536	212721	8.17	1.57	12.49	5.90	7.69					
12	Karnataka	606010	643292	701849	751908	814803	873854	6.15	9.57	6.68	8.36	7.25					
13	Kerala	364048	387693	402781	419956	447692	NA	6.50	3.89	4.26	6.60	NA					
14	Madhya Pradesh	315561	351461	364197	383994	414607	465212	11.38	3.62	5.44	7.97	12.21					
15	Maharashtra	1275948	1352471	1451208	1530211	1659776	NA	6.00	7.30	5.44	8.47	NA					
16	Manipur	12915	12985	14116	15100	15856	NA	0.54	8.71	6.97	5.01	NA					
17	Meghalaya	19918	20354	20726	20158	21903	NA	2.19	1.83	-2.74	8.66	NA					
18	Mizoram	7259	7778	9038	11261	12488	NA	7.15	16.21	24.59	10.89	NA					
19	Nagaland	12177	12868	13793	14399	14851	NA	5.68	7.19	4.39	3.14	NA					
20	Odisha	227872	238370	259179	274721	291227	314364	4.61	8.73	6.00	6.01	7.94					
21	Punjab	266628	280823	299450	312025	328973	348487	5.32	6.63	4.20	5.43	5.93					
22	Rajasthan*	434366	455155	480982	511987	545991	NA	4.79	5.67	6.45	6.64	NA					
23	Sikkim*	11165	11421	12114	13071	14087	15095	2.29	6.07	7.90	7.77	7.16					
24	Tamil Nadu	751486	792164	852213	893896	948674	1019078	5.41	7.58	4.89	6.13	7.42					
25	Telangana	359434	369262	388694	415210	452063	497957	2.73	5.26	6.82	8.88	10.15					
26	Tripura	19208	20873	22819	25086	NA	NA	8.67	9.32	9.94	NA	NA					
27	Uttar Pradesh	724050	758205	802070	834432	901257	967517	4.72	5.79	4.03	8.01	7.35					
28	Uttarakhand	115328	123710	134182	141278	152175	162824	7.27	8.47	5.29	7.71	7.00					
29	West Bengal																
30	Andaman & Nicobar Islands	3979	4157	4489	4742	5133	NA	4.47	7.98	5.64	8.25	NA					
31	Chandigarh	18768	20563	22392	22951	24745	NA	9.56	8.90	2.50	7.82	NA					
32	Delhi	343767	366538	391718	422920	460217	498217	6.62	6.87	7.97	8.82	8.26					
33	Puducherry	16818	17310	19170	18207	20089	21704	2.93	10.74	-5.03	10.34	8.04					
	All-India GDP	8736329	9213017	9801370	10536984	11381002	12189854	5.46	6.39	7.51	8.01	7.11					

Source: For S.I. No. 1-33 - Directorate of Economic & Statistics of respective State Governments, and for All-India - Central Statistical Office

Note: * The estimates of West Bengal for new series with base year 2011-12 compiled by the D.E.S. West Bengal are under examination

* Provisional

Annexure 2.13 : Net State Domestic Product At Current Prices; Base Year 2011-12

S. No.	State/UT	NSDP - CURRENT PRICES (In Crore)											% Growth over previous year										
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2012-13	2013-14	2014-15	2015-16	2016-17	(8)	(9)	(10)	2015-16	2016-17	(11)	(12)				
1	Audhra Pradesh	339996	370196	413161	469909	545638	620974	8.88	11.61	13.73	16.12	13.81	15.14	23.16	16.12	13.81	15.14	23.16	16.12	13.81			
2	Assam	10229	11617	13377	16175	18566	NA	13.57	15.14	23.16	16.12	13.81	15.14	23.16	16.12	13.81	15.14	23.16	16.12	13.81			
3	Bihar	228497	261327	292143	315732	351871	404438	14.37	11.79	8.07	11.45	14.94	14.37	11.79	8.07	11.45	14.94	14.37	11.79	8.07			
4	Chhattisgarh	142273	159431	185939	211016	233023	256346	12.06	16.63	13.49	10.43	10.01	12.06	16.63	13.49	10.43	10.01	12.06	16.63	13.49			
5	Goa	38009	34567	32043	43233	49222	NA	-9.05	-7.30	34.92	13.85	NA	-9.05	-7.30	34.92	13.85	NA	-9.05	-7.30	34.92			
6	Gujarat	532809	634572	707456	804764	908442	NA	19.10	11.49	13.75	12.88	NA	19.10	11.49	13.75	12.88	NA	19.10	11.49	13.75			
7	Haryana	271152	314353	363590	395890	438140	491090	15.93	15.66	8.88	10.67	12.77	15.93	15.66	8.88	10.67	12.77	15.93	15.66	8.88			
8	Himachal Pradesh	60536	69432	80129	87510	96038	105450	14.70	15.41	9.21	9.75	9.80	14.70	15.41	9.21	9.75	9.80	14.70	15.41	9.21			
9	Jammu & Kashmir	67274	73003	79692	81003	100341	NA	8.52	9.16	1.65	23.87	NA	8.52	9.16	1.65	23.87	NA	8.52	9.16	1.65			
10	Jharkhand	137383	160304	172030	200357	211905	234147	16.68	7.32	16.47	5.76	10.50	16.68	7.32	16.47	5.76	10.50	16.68	7.32	16.47			
11	Karnataka	554952	635924	746569	824506	917472	1022008	14.59	17.40	10.44	11.28	11.39	14.59	17.40	10.44	11.28	11.39	14.59	17.40	10.44			
12	Kerala	328021	371384	417265	460614	502689	NA	13.22	12.35	10.39	9.13	NA	13.22	12.35	10.39	9.13	NA	13.22	12.35	10.39			
13	Madhya Pradesh	282370	333936	391369	429896	483969	571934	18.26	17.20	9.84	12.58	18.18	18.26	17.20	9.84	12.58	18.18	18.26	17.20	9.84			
14	Maharashtra	1122173	1277163	1445116	1551628	1748771	NA	13.81	13.15	7.37	12.71	NA	13.81	13.15	7.37	12.71	NA	13.81	13.15	7.37			
15	Manipur	11501	12193	14456	16420	17542	NA	6.01	18.56	13.59	6.83	NA	6.01	18.56	13.59	6.83	NA	6.01	18.56	13.59			
16	Meghalaya	18028	19653	20415	20697	23124	NA	9.01	3.88	1.38	11.72	NA	9.01	3.88	1.38	11.72	NA	9.01	3.88	1.38			
17	Mizoram	6404	7375	8989	12067	13651	NA	15.17	21.88	34.24	13.13	NA	15.17	21.88	34.24	13.13	NA	15.17	21.88	34.24			
18	Nagaland	10554	12318	14545	16104	17368	NA	16.71	18.08	10.72	7.85	NA	16.71	18.08	10.72	7.85	NA	16.71	18.08	10.72			
19	Odi-sha	201111	229888	256211	282322	300236	334067	14.31	11.45	10.19	6.35	11.27	14.31	11.45	10.19	6.35	11.27	14.31	11.45	10.19			
20	Punjab	239227	267116	297908	316534	351198	384319	11.66	11.43	6.25	10.95	9.43	11.66	11.43	6.25	10.95	9.43	11.66	11.43	6.25			
21	Rajasthan*	396710	447203	490951	512657	602648	NA	12.73	9.78	10.53	11.06	NA	12.73	9.78	10.53	11.06	NA	12.73	9.78	10.53			
22	Sikkim*	9742	10817	12203	13556	14973	16640	11.03	12.82	11.08	10.16	11.13	11.03	12.82	11.08	10.16	11.13	11.03	12.82	11.08			
23	Tamil Nadu	674478	768946	859556	957447	1037488	1164311	14.01	11.78	11.39	8.36	12.22	14.01	11.78	11.39	8.36	12.22	14.01	11.78	11.39			
24	Telangana	325139	364030	408282	456110	512282	583621	11.96	12.16	11.71	12.32	13.93	11.96	12.16	11.71	12.32	13.93	11.96	12.16	11.71			
25	Tripura	17419	19631	23329	27484	NA	NA	12.70	18.84	17.81	NA	NA	12.70	18.84	17.81	NA	NA	12.70	18.84	17.81			
26	Uttar Pradesh	645132	732995	833825	891798	991836	1129290	13.62	13.76	6.95	11.22	13.86	13.62	13.76	6.95	11.22	13.86	13.62	13.76	6.95			
27	Uttarakhand	101960	117041	131814	143789	157456	174768	14.79	12.62	9.08	9.51	10.99	14.79	12.62	9.08	9.51	10.99	14.79	12.62	9.08			
28	West Bengal	3404	3793	4288	4916	5248	NA	11.44	13.05	14.63	6.76	NA	11.44	13.05	14.63	6.76	NA	11.44	13.05	14.63			
29	Andaman & Nicobar Islands	16930	19768	22522	23498	25941	NA	16.76	13.93	4.33	10.40	NA	16.76	13.93	4.33	10.40	NA	16.76	13.93	4.33			
30	Chandigarh	314619	357251	404664	447435	501104	565655	13.55	13.27	10.57	11.99	12.88	13.55	13.27	10.57	11.99	12.88	13.55	13.27	10.57			
31	Delhi	15160	16984	19778	20143	22212	25098	12.04	16.45	1.85	10.27	12.99	12.04	16.45	1.85	10.27	12.99	12.04	16.45	1.85			
32	Puducherry	7819154	8883108	10037547	11101191	12236662	13597811	13.61	13.00	10.60	11.12	11.12	13.61	13.00	10.60	11.12	11.12	13.61	13.00	10.60			
33	All-India NDP																						

Source: For S.I. No. 1-33 - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistical Office
 Note: *The estimates of West Bengal for new series with base year 2011-12 compiled by the DIES, West Bengal are under-revision.
 *Constitutional.

Annexure 2.14: Net State Domestic Product At Constant (2011-12) Prices; Base Year 2011-12

S. No. (1)	State/UT (2)	NSDP - CONSTANT PRICES (in Crores)												% Growth over previous year				
		2011-12 (3)	2012-13 (4)	2013-14 (5)	2014-15 (6)	2015-16 (7)	2016-17 (8)	2012-13 (8)	2013-14 (9)	2014-15 (10)	2015-16 (11)	2016-17 (12)						
1	Andhra Pradesh	339996	341335	360239	391373	434433	484930	0.39	5.54	8.64	11.00	11.62						
2	Arunachal Pradesh	10229	10399	11225	13081	15219	NA	1.65	7.95	16.35	16.35	NA						
3	Assam	129354	132518	138725	146425	160426	NA	2.45	4.68	5.55	9.56	NA						
4	Bihar	228497	236933	246915	255739	274882	303332	3.69	4.21	3.57	7.49	10.35						
5	Chhattisgarh	142273	148719	163187	175414	184693	198922	4.53	7.73	7.49	5.29	7.70						
6	Goa	38009	32453	27971	36042	40233	NA	-14.62	-13.81	28.85	11.63	NA						
7	Gujarat	532809	596659	641489	705629	786451	NA	11.98	7.51	10.00	11.45	NA						
8	Haryana	271152	289414	314224	331413	361231	392729	6.73	8.57	5.47	9.00	8.72						
9	Himachal Pradesh	60536	64519	69509	74486	81817	87958	6.58	7.74	7.16	9.84	7.51						
10	Jammu & Kashmir	67274	67324	70508	69605	80876	NA	0.07	4.73	-1.28	16.19	NA						
11	Jharkhand	137383	149526	150609	170568	180593	195778	8.84	0.72	13.25	5.88	8.41						
12	Karnataka	554952	586811	640323	674762	728721	781416	5.74	9.12	5.38	8.00	7.23						
13	Kerala	328021	348616	364707	382134	409019	NA	6.28	4.62	4.78	7.04	NA						
14	Madhya Pradesh	282370	306632	321660	337522	363224	408193	8.59	4.90	4.93	7.61	12.46						
15	Maharashtra	1122173	1184240	1267144	1332239	1441675	NA	5.53	7.00	5.14	8.21	NA						
16	Manipur	11501	11507	12521	13615	14403	NA	0.05	8.81	8.74	5.78	NA						
17	Meghalaya	18028	18323	18397	17911	19609	NA	1.64	0.40	-2.64	9.48	NA						
18	Mizoram	6404	6836	7831	9960	10965	NA	6.75	14.56	27.18	10.09	NA						
19	Nagaland	10551	11163	11923	12406	12745	NA	5.77	6.81	4.05	2.73	NA						
20	Odisha	201111	211307	226410	239051	253296	273914	5.07	7.15	5.58	5.96	8.14						
21	Punjab	239227	251813	267515	277727	292629	309452	5.26	6.24	3.82	5.37	5.75						
22	Rajasthan*	396710	410394	429044	455500	485646	NA	3.45	4.54	6.17	6.62	NA						
23	Sikkim*	9742	9970	10590	11437	12388	13271	2.34	6.21	8.00	8.32	7.12						
24	Tamil Nadu	674478	709683	750654	791896	838901	903373	5.22	5.77	5.49	5.91	7.69						
25	Telangana	325139	333647	348330	371776	403975	445124	2.62	4.40	6.73	8.66	10.19						
26	Tripura	17419	18857	20623	22584	NA	NA	8.26	9.36	9.51	NA	NA						
27	Uttar Pradesh	645132	673552	707469	729686	790135	848884	4.41	5.04	3.14	8.28	7.44						
28	Uttarakhand	101960	109528	117778	125702	135725	145138	7.42	7.53	6.73	7.97	6.94						
29	West Bengal																	
30	Andaman & Nicobar Islands	3404	3558	3811	4151	4552	NA	4.52	7.13	8.92	9.66	NA						
31	Chandigarh	16930	18583	20101	20431	22047	NA	9.76	8.17	1.64	7.91	NA						
32	Delhi	314619	334103	355337	382103	414964	448529	6.19	6.36	7.53	8.60	8.09						
33	Puducherry	15160	15507	17239	16055	17909	19523	2.29	11.16	-6.87	11.55	9.02						
	All-India NDP	7819154	8202356	8700760	9356260	10116809	10841917	4.90	6.08	7.53	8.13	7.17						

Source: For S.I. No. 1-33 -- Directorate of Economics & Statistics of respective State Governments, and for All-India -- Central Statistics Office

Note: 1. The estimates of West Bengal for new series with base year 2011-12 compiled by the DES, West Bengal are under examination

*Provisional

Annexure 2.15 : Per Capita Net State Domestic Product At Current Prices; Base Year 2011-12

S. No. (1)	State/UT (2)	PER CAPITA NSDP AT CURRENT PRICES (₹)														(% Growth over previous year)			
		2011-12 (3)	2012-13 (4)	2013-14 (5)	2014-15 (6)	2015-16 (7)	2016-17 (8)	2017-18 (9)	2018-19 (10)	2019-20 (11)	2020-21 (12)	2012-13 (8)	2013-14 (9)	2014-15 (10)	2015-16 (11)	2016-17 (12)			
1	Andhra Pradesh	69000	74687	82870	93699	108163	122376	NA	8.24	10.96	13.07	15.44	13.14						
2	Arunachal Pradesh	73068	81353	91809	110793	122466	NA	11.34	12.85	20.68	10.54	NA							
3	Assam	41142	44599	49734	52895	60526	NA	8.40	11.51	6.36	14.43	NA							
4	Bihar	21750	24487	28671	31454	35990	NA	12.59	10.05	6.39	9.71	13.15							
5	Chhattisgarh	55177	60849	69839	78001	84767	91772	10.28	14.77	11.69	8.67	8.26							
6	Goa	259444	234354	215776	289185	327059	NA	-9.67	-7.93	34.02	13.10	NA							
7	Gujarat	87481	102826	113139	127017	141504	NA	17.54	10.03	12.27	11.41	NA							
8	Haryana	106085	121269	138300	148485	162034	180174	14.31	14.04	7.36	9.13	11.19							
9	Himachal Pradesh	87721	99730	114095	123532	134376	146073	13.69	14.40	8.27	8.78	8.70							
10	Jammu & Kashmir	53173	56834	61108	61185	74653	NA	6.89	7.52	0.13	22.01	NA							
11	Jharkhand	41254	47360	50006	57301	59628	64823	14.80	5.59	14.59	4.06	8.71							
12	Karnataka	90263	102319	118829	129823	142906	157474	13.36	16.14	9.25	10.08	10.19							
13	Kerala	97912	110314	123388	135537	147190	NA	12.67	11.85	9.85	8.60	NA							
14	Madhya Pradesh	38550	44931	51897	56182	62334	72599	16.55	15.50	8.26	10.95	16.47							
15	Maharashtra	99173	111542	124724	132341	147399	NA	12.47	11.82	6.11	11.38	NA							
16	Manipur	39762	41246	47852	53187	55603	NA	3.73	16.02	11.15	4.54	NA							
17	Meghalaya	60013	64036	65118	64638	70693	NA	6.70	1.69	-0.74	9.37	NA							
18	Mizoram	57654	65013	77581	103049	114524	NA	12.76	19.33	32.83	11.14	NA							
19	Nagaland	53010	61225	71510	78367	83621	NA	15.50	16.80	6.70	NA	NA							
20	Odisha	47632	53900	59468	64869	68293	75223	13.16	10.33	9.08	5.28	10.15							
21	Punjab	85577	94318	103831	108897	119261	128821	10.22	10.09	4.88	9.52	8.02							
22	Rajasthan*	57391	63775	69018	75201	82325	NA	11.12	8.22	8.96	9.47	NA							
23	Sikkim*	158667	174183	194624	214148	239954	257182	9.78	11.74	10.03	9.25	9.93							
24	Tamil Nadu	92984	105031	116329	128385	137837	153263	12.96	10.76	10.36	7.36	11.19							
25	Telangana	91121	101007	112162	124058	137955	155612	10.85	11.04	10.61	11.20	12.80							
26	Tripura	47079	52434	61570	71666	NA	NA	11.37	17.43	16.40	NA	NA							
27	Uttar Pradesh	32002	35812	40124	42267	46299	51920	11.91	12.04	5.34	9.54	12.14							
28	Uttarakhand	100305	113610	126217	135881	146826	160795	13.27	11.12	7.63	8.06	9.51							
29	West Bengal																		
30	Andaman & Nicobar Islands	88183	96032	106413	119312	124361	NA	8.90	10.81	12.12	4.23	NA							
31	Chandigarh	159116	183039	205492	211313	229976	NA	15.03	12.27	2.83	8.83	NA							
32	Delhi	185343	206503	229518	249004	273618	303073	11.42	11.15	8.49	9.89	10.76							
33	Puducherry	119649	130548	148147	146921	157871	173687	9.11	13.48	-0.83	7.45	10.02							
	All-India Per Capita NN	63462	70983	79118	86454	94130	103219	11.85	11.46	9.27	8.88	9.66							

Source: For Sl. No. 1-33 -- Directorate of Economics & Statistics of respective State Governments, and for All-India -- Central Statistics Office
 Note: *The estimates of West Bengal for new series with base year 2011-12 compiled by the DES, West Bengal are under examination

**Provisional

Annexure 2.16: Per Capita Net State Domestic Product At Constant Prices; Base Year 2011-12

S. No. (1)	State/UT (2)	PER-CAPITA NSDP AT CONSTANT PRICES (C)											
		2011-12 (3)	2012-13 (4)	2013-14 (5)	2014-15 (6)	2015-16 (7)	2016-17 (8)	2013-14 (9)	2014-15 (10)	2015-16 (11)	2016-17 (12)		
1	Andhra Pradesh	69000	68865	72254	78039	86118	95566	-0.20	4.92	8.01	10.35	10.35	10.97
2	Andhra Pradesh	73068	72820	77044	87966	100387	NA	-0.34	5.80	14.18	14.12	14.12	NA
3	Assam	41142	41609	43002	44809	48465	NA	1.14	3.35	4.20	8.16	8.16	NA
4	Bihar	21750	22201	22776	23223	24572	26693	2.08	2.59	1.96	5.81	5.81	8.63
5	Chhattisgarh	55177	56761	61293	64841	67185	71214	2.87	7.98	3.62	3.62	3.62	6.00
6	Goa	259444	220019	188358	241081	267329	NA	-15.20	-14.39	27.99	10.89	10.89	NA
7	Gujarat	87481	96683	102589	111370	122502	NA	10.52	6.11	8.56	10.00	10.00	NA
8	Haryana	106085	111648	119522	124302	133591	143211	5.24	7.05	4.00	7.47	7.47	7.20
9	Himachal Pradesh	87721	92672	98974	105146	114478	121843	5.64	6.80	6.24	8.87	8.87	6.43
10	Jammu & Kashmir	53173	52413	54066	52576	60171	NA	-1.43	3.15	-2.76	14.45	14.45	NA
11	Jharkhand	41254	44176	43779	48781	50817	54201	7.08	-0.90	11.43	4.17	4.17	6.66
12	Karnataka	90263	94417	101918	106245	113506	120403	4.60	7.95	4.25	6.83	6.83	6.08
13	Kerala	97912	103551	107846	112444	119763	NA	5.76	4.15	4.26	6.51	6.51	NA
14	Madhya Pradesh	38550	41257	42654	44110	46783	51852	7.02	3.38	3.41	6.06	6.06	10.84
15	Maharashtra	99173	103426	109364	113629	121514	NA	4.29	5.74	3.90	6.94	6.94	NA
16	Manipur	39762	38927	41445	44101	45652	NA	-2.10	6.47	6.41	3.52	3.52	NA
17	Meghalaya	60013	59703	58681	55936	59949	NA	-0.52	-1.71	-4.68	7.17	7.17	NA
18	Mizoram	57654	60261	67591	85056	91985	NA	4.52	12.16	25.84	8.15	8.15	NA
19	Nagaland	53010	55482	58619	60372	61363	NA	4.66	5.65	2.99	1.64	1.64	NA
20	Odisha	47632	49543	52551	54926	57616	61678	4.01	6.07	4.52	4.90	4.90	7.05
21	Punjab	85577	88913	93238	95546	99372	103726	3.90	4.86	2.48	4.00	4.00	4.38
22	Rajasthan*	57391	58526	60315	63123	66342	NA	1.98	3.06	4.66	5.10	5.10	NA
23	Sikkim*	158667	160553	168897	180675	193569	205112	1.19	5.20	6.97	7.14	7.14	5.96
24	Tamil Nadu	92984	96937	101591	106186	111454	118915	4.25	4.80	4.52	4.96	4.96	6.69
25	Telangana	91121	92577	95692	101119	108788	118684	1.60	3.37	5.67	7.58	7.58	9.10
26	Tripura	47079	50366	54429	58888	NA	NA	6.98	8.07	8.19	NA	NA	NA
27	Uttar Pradesh	32002	32908	34044	34583	36883	39028	2.83	3.45	1.58	6.65	6.65	5.82
28	Uttarakhand	100305	106318	112803	118788	126562	133534	5.99	6.10	5.31	6.54	6.54	5.51
29	West Bengal												
30	Andaman & Nicobar Islands	88183	90070	94575	100760	107873	NA	2.14	5.00	6.54	7.06	7.06	NA
31	Chandigarh	159116	172063	183400	183734	195448	NA	8.14	6.59	0.18	6.38	6.38	NA
32	Delhi	185343	193123	201541	212646	226583	240318	4.20	4.36	5.51	6.55	6.55	6.06
33	Puducherry	119649	119196	129127	117102	127284	135110	-0.38	8.33	-9.31	8.69	8.69	6.15
	All-India Per Capita NNP(2011-12 base)	63462	65538	68572	72862	77803	82269	3.27	4.63	6.26	6.78	6.78	5.74

Source: For Sl. No. 1-33 - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: 1) The estimates of West Bengal for new series with base year 2011-12 compiled by the DES, West Bengal are under examination

*Provisional

Annexure 2.17 : Labour Force Participation rate(LFPR), Worker Population ratio(WPR) and Un-employment rate(UR) States (per 1000) for persons aged 15 years & above in different States (2013-14)

under Usual Principal Status Approach (PS)										
Sl.No.	Name of the State	L.F.P.R. (RU + UR)			W. P. R. (RU+UR)			U.R. (RU + UR)		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	820	474	645	795	454	622	30	43	35
2	Arunachal Pradesh	663	495	580	581	414	499	123	164	140
3	Assam	817	230	537	782	196	503	43	149	64
4	Bihar	775	156	495	727	137	461	61	119	70
5	Chhatisgarh	798	459	633	769	435	606	36	52	42
6	Delhi	688	105	417	660	90	396	40	138	52
7	Goa	735	277	514	677	226	459	79	184	106
8	Gujarat	797	241	530	789	236	524	10	18	12
9	Haryana	725	125	444	693	115	423	43	80	48
10	Himachal Pradesh	759	433	600	706	396	555	69	85	75
11	Jamu & Kashmir	716	143	443	658	108	397	80	242	105
12	Jharkhand	782	156	489	731	138	453	66	120	74
13	Karnatak	788	319	558	776	310	548	15	28	18
14	Kerala	720	299	497	687	218	438	47	270	108
15	Madhya Pradesh	827	294	577	803	286	560	29	29	29
16	Maharashtra	750	340	554	730	320	539	27	30	28
17	Manipur	727	324	527	677	292	486	69	100	78
18	Meghalaya	750	475	617	725	442	587	34	71	48
19	Mizoram	794	511	656	767	488	631	34	44	34
20	Nagaland	653	340	509	602	296	461	78	130	94
21	Odisha	794	223	522	754	201	491	50	100	60
22	Punjab	724	109	432	695	88	407	40	190	58
23	Rajasthan	745	218	498	707	191	466	50	122	65
24	Sikkim	774	359	587	706	236	495	87	344	158
25	Tamil Nadu	784	374	581	763	253	560	28	56	36
26	Telangana	787	535	663	769	509	641	23	48	33
27	Tripura	808	221	513	754	156	453	67	294	116
28	Uttarakhand	697	202	450	651	175	414	65	132	80
29	Uttar Pradesh	614	96	460	581	77	431	54	195	63
30	West Bengal	804	164	496	769	148	470	44	97	52
31	A & N Island	759	381	586	685	279	498	98	268	149
32	Chandigarh	663	124	408	641	123	397	32	6	28
33	Dadra & Nagar Haveli	720	135	441	711	103	421	13	239	46
34	Daman & Diu	728	34	462	688	19	432	55	429	66
35	Lakshadweep	673	238	455	624	175	399	73	263	123
36	Puducherry	706	278	484	642	255	441	91	85	89
	All India	744	258	525	714	238	499	41	77	49

Source: Labour Bureau, Chandigarh

Annexure 2.18 : Labour Force Participation rate(LFPR), Worker Population ratio(WPR) and Un-employment rate(UR) States (per 1000) for persons aged 15 years & above in different States (2013-14)

under Usual Principal & Subsidiary Status Approach (PS + SS)										
Sl.No.	Name of the State	L.F.P.R. (RU + UR)			W. P. R. (RU+UR)			U.R. (RU + UR)		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	826	513	668	805	496	648	26	34	29
2	Arunachal Pradesh	747	609	679	703	561	634	59	78	67
3	Assam	838	360	610	823	339	593	18	58	29
4	Bihar	777	181	508	737	167	480	53	75	56
5	Chhatisgarh	813	520	670	795	510	656	22	20	21
6	Delhi	690	111	421	664	100	402	37	96	44
7	Goa	738	309	530	685	260	479	71	159	96
8	Gujarat	798	247	533	791	245	529	8	8	8
9	Haryana	729	172	469	709	165	455	26	38	29
10	Himachal Pradesh	785	604	697	770	594	684	19	16	18
11	Jamu & Kashmir	723	194	471	676	164	433	64	156	82
12	Jharkhand	832	465	660	817	457	648	18	17	18
13	Karnatak	793	353	578	782	345	568	14	23	17
14	Kerala	734	347	529	708	278	480	36	199	93
15	Madhya Pradesh	835	347	606	815	340	592	23	20	23
16	Maharashtra	756	354	564	740	346	552	21	23	22
17	Manipur	739	526	634	713	508	612	35	34	34
18	Meghalaya	793	612	705	779	589	687	18	38	26
19	Mizoram	821	629	727	808	613	712	16	25	20
20	Nagaland	671	375	534	628	347	498	64	75	67
21	Odisha	802	301	564	770	285	540	39	53	43
22	Punjab	724	114	435	698	94	411	37	176	54
23	Rajasthan	752	348	563	727	339	545	33	26	31
24	Sikkim	804	569	698	764	507	648	49	109	71
25	Tamil Nadu	786	416	603	766	396	583	26	48	33
26	Telangana	794	546	672	777	521	651	21	45	31
27	Tripura	823	349	585	786	314	549	45	102	62
28	Uttarakhand	706	286	496	674	264	469	46	76	55
29	Uttar Pradesh	647	155	501	625	140	481	34	97	40
30	West Bengal	806	187	508	779	172	487	34	77	42
31	A & N Island	782	422	617	716	325	537	84	228	130
32	Chandigarh	663	124	408	641	123	397	32	6	28
33	Dadra & Nagar Haveli	720	135	441	711	103	421	13	239	46
34	Daman & Diu	728	34	462	688	19	432	55	429	66
35	Lakshadweep	706	252	479	666	192	428	57	239	105
36	Puducherry	706	279	485	642	257	442	91	80	88
	All India	757	311	556	735	296	537	29	49	34

Source: Labour Bureau, Chandigarh

Annexure 2.19 : Employment in the Organised Sector in Odisha 2004 to 2015(In lakh)

Year	Public Sector		Private Sector		Total	Women employees in Organised sector	Women employees to total employees (Percent)
	Total	Women	Total	Women	Organised sector employment		
2004	6.57	0.96	0.89	0.11	7.46	1.07	14.3
2005	6.55	1	0.9	0.11	7.45	1.11	14.9
2006	6.27	1	0.89	0.11	7.16	1.11	14.9
2007	5.98	0.92	0.9	0.1	6.88	1.02	14.8
2008	5.98	1.03	1.02	0.09	7	1.12	16
2009	6.19	1.03	1.16	0.11	7.35	1.14	15.5
2010	6.08	1.06	1.23	0.12	7.31	1.18	16.2
2011	6.05	1.09	1.17	0.12	7.22	1.21	16.8
2012	5.88	1.04	1.25	0.14	7.13	1.18	16.5
2013	6.78	1	1.17	0.12	7.95	1.12	14.03
2014	5.39	1	1.19	0.11	6.58	1.1	16.7
2015	4.89	0.88	1.04	0.1	5.93	0.98	16.5

Source : Directorate of Economics and Statistics, Odisha

Annexure 2.20 : District-wise Occupational Classification of Main Workers, Marginal Workers and Total Workers in Odisha, 2011 Census

District	Main Workers(Nos)			Marginal workers(Nos)		
	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7
Angul	3,17,547	2,57,456	60,091	2,08,973	1,98,171	10,802
Balasore	6,18,064	5,44,455	73,609	3,14,643	3,02,716	11,927
Bargarh	4,74,390	4,26,776	47,614	2,87,702	2,80,109	7,593
Bhadrak	3,28,097	2,82,414	45,683	1,40,502	1,28,740	11,762
Bolangir	4,02,227	3,46,025	56,202	3,18,374	3,07,264	11,110
Boudh	1,23,724	1,17,656	6,068	95,733	94,667	1,066
Cuttack	6,96,274	4,78,649	2,17,625	2,40,091	2,05,250	34,841
Deogarh	83,408	76,904	6,504	82,027	80,486	1,541
Dhenkanal	2,77,338	2,45,779	31,559	1,58,195	1,52,607	5,588
Gajapati	1,70,371	1,49,121	21,250	1,23,562	1,18,144	5,418
Ganjam	9,00,744	6,76,888	2,23,856	6,01,028	5,55,034	45,994
Jagatsinghpur	2,90,170	2,55,228	34,942	1,13,479	1,09,149	4,330
Jajpur	4,07,564	3,72,543	35,021	1,44,670	1,39,062	5,608
Jharsuguda	1,72,069	1,03,420	68,649	75,638	65,684	9,954
Kalahandi	3,76,757	3,41,282	35,475	3,75,173	3,67,994	7,179
Kandhamal	1,67,112	1,45,835	21,277	1,88,237	1,83,842	4,395
Kendrapara	3,22,265	2,99,189	23,076	1,44,625	1,40,509	4,116
Kendujhar	4,42,497	3,68,952	73,545	3,24,017	3,13,494	10,523
Khordha	6,32,625	2,91,625	3,41,000	1,59,568	1,08,017	51,551
Koraput	3,96,460	3,23,033	73,427	2,96,946	2,87,580	9,366
Malkangiri	1,79,030	1,63,217	15,813	1,31,636	1,28,255	3,381
Mayurbhanj	5,48,390	4,93,359	55,031	6,75,144	6,62,964	12,180
Nuapada	1,51,694	1,41,621	10,073	1,53,744	1,51,261	2,483
Nayagarh	2,29,076	2,08,001	21,075	1,14,557	1,10,228	4,329
Nabarangpur	2,79,115	2,54,500	24,615	3,31,791	3,22,672	9,119
Puri	4,50,536	3,66,582	83,954	1,71,140	1,61,345	9,795
Rayagada	2,27,815	1,83,867	43,948	2,39,307	2,29,832	9,475
Sambalpur	3,36,854	2,38,789	98,065	1,68,986	1,51,753	17,233
Sonepur	1,70,218	1,55,169	15,049	1,16,443	1,13,048	3,395
Sundargarh	5,35,112	3,15,612	2,19,500	3,38,115	3,09,890	28,225
Odisha	1,07,07,543	86,23,947	20,83,596	68,34,046	64,79,767	3,54,279

Source: Census of India

Annexure 2.21 : District-wise Occupational Classification of Workers in Odisha, 2011 Census

District	Total workers(in Nos)			% of main workers to total workers	% of marginal workers to total workers	Work Participation Rate		
	Total	Rural	Urban			Total	Rural	Urban
1	8	9	10	11	12	13	14	15
Angul	5,26,520	4,55,627	70,893	60.31	39.69	41.3	42.7	34.3
Balasore	9,32,707	8,47,171	85,536	66.27	33.73	40.2	41	33.8
Bargarh	7,62,092	7,06,885	55,207	62.25	37.75	51.4	53.1	36.8
Bhadrak	4,68,599	4,11,154	57,445	70.02	29.98	31.1	31.1	30.9
Bolangir	7,20,601	6,53,289	67,312	55.82	44.18	43.7	45	34.1
Boudh	2,19,457	2,12,323	7,134	56.38	43.62	49.7	50.5	34.9
Cuttack	9,36,365	6,83,899	2,52,466	74.36	25.64	35.7	36.2	34.3
Deogarh	1,65,435	1,57,390	8,045	50.42	49.58	52.9	54.2	35.9
Dhenkanal	4,35,533	3,98,386	37,147	63.68	36.32	36.5	37	31.6
Gajapati	2,93,933	2,67,265	26,668	57.96	42.04	50.9	52.7	37.7
Ganjam	15,01,772	12,31,922	2,69,850	59.98	40.02	42.6	44.6	35.1
Jagatsinghpur	4,03,649	3,64,377	39,272	71.89	28.11	35.5	35.7	33.9
Jajpur	5,52,234	5,11,605	40,629	73.8	26.2	30.2	30.2	30.1
Jharsuguda	2,47,707	1,69,104	78,603	69.46	30.54	42.7	48.5	34
Kalahandi	7,51,930	7,09,276	42,654	50.11	49.89	47.7	48.8	35
Kandhamal	3,55,349	3,29,677	25,672	47.03	52.97	48.5	49.9	35.5
Kendrapara	4,66,890	4,39,698	27,192	69.02	30.98	32.4	32.4	32.6
Kendujhar	7,66,514	6,82,446	84,068	57.73	42.27	42.5	44.1	33.2
Khordha	7,92,193	3,99,642	3,92,551	79.86	20.14	35.2	34.2	36.2
Koraput	6,93,406	6,10,613	82,793	57.18	42.82	50.3	52.9	36.6
Malkangiri	3,10,666	2,91,472	19,194	57.63	42.37	50.7	51.7	38.8
Mayurbhanj	12,23,534	11,56,323	67,211	44.82	55.18	48.6	49.7	34.8
Nuapada	3,05,438	2,92,882	12,556	49.66	50.34	50	50.8	36.9
Nayagarh	3,43,633	3,18,229	25,404	66.66	33.34	35.7	36	31.9
Nabarangpur	6,10,906	5,77,172	33,734	45.69	54.31	50	50.9	38.5
Puri	6,21,676	5,27,927	93,749	72.47	27.53	36.6	36.8	35.4
Rayagada	4,67,122	4,13,699	53,423	48.77	51.23	48.3	50.4	36.4
Sambalpur	5,05,840	3,90,542	1,15,298	66.59	33.41	48.6	53.3	37.4
Sonepur	2,86,661	2,68,217	18,444	59.38	40.62	47	47.9	36.9
Sundargarh	8,73,227	6,25,502	2,47,725	61.28	38.72	41.7	46.2	33.6
Odisha	1,75,41,589	1,51,03,714	24,37,875	61.04	38.96	41.8	43.2	34.8

Source: Census of India

Annexure 2.22 : Monthly Per capita Consumer Expenditure (MRP based) over broad categories of goods and services by Rural and Urban Sector (2011-12)

Sl.No.	Item Category	Rural		Urban	
		Odisha	India	Odisha	India
1	2	3	4	5	6
1	Cereal	166.55	155.13	203.41	175.52
2	Gram	0.57	2.15	0.6	2.92
3	Cereal Substitute	0.01	0.88	0	1.27
4	Pulses and Pulses Products	32.32	39.73	43.57	51.55
5	Milk & Milk Products	27.07	116.13	62.07	186.47
6	Sugar	12.73	23.64	17.23	27.69
7	Salt	2.93	2.46	3.14	2.75
8	Edible Oil	31.56	48.22	41.56	63.62
9	Egg, Fish & Meat	39.32	45.62	63.24	66.94
10	Vegetables	68.64	61.88	88.96	81.4
11	Foods (Fresh)	11.76	19.18	25.6	42.02
12	Foods (Dry)	0.55	5.59	2.81	13.85
13	Spices	22.05	28.78	27.62	36.99
14	Beverages, Refreshment ,etc.	54.24	74.59	138.82	169.9
15	Food : Total (1 - 14)	470.3	621.96	718.65	922.91
16	Pan, Tobacco & Intoxicants	19.15	30.1	25.76	33.56
17	Fuel & lights	110.27	118.26	145.27	182.54
18	Clothing & Bedding	67.08	86.78	114.74	144.5
19	Foot wear	7.79	14.7	16.53	27.1
20	Education	22.25	50.69	110.21	193.09
21	Medical (Institutional)	15.09	30.31	24.76	51.6
22	Medical (Non-institutional)	44.52	64.52	100.04	98.85
23	Entertainment	8.88	14.24	30.73	43.77
24	Minor durable - type goods	3.97	4.33	8	8.42
25	Toilet articles	22.4	30.67	35.44	56.88
26	Other Household consumables	18.24	28.18	33.16	48.9
27	Consume, services excl. Conveyance	28.33	57.57	84.66	155.78
28	Conveyance	23.18	60.92	121.33	180.98
29	Rent	1.55	6.31	134.19	166.93
30	Taxes & Cesses	0.7	3.59	11.02	22.22
31	Durable Goods	41.1	64.03	115.86	138.99
32	Non - Food : Total (16 - 31)	434.49	665.21	1111.7	1554.12
33	Total Expenditure (15 + 32)	904.78	1287.17	1830.33	2477.02
34	Cooked Meals recd free in workpl.*	0.82	1.61	2.02	5.79
35	Cooked Meals recd. As assistnace *	12.74	16.49	8.53	7.24
36	Clothing & Footwear (2nd hand) **	0.13	0.43	0.03	0.58
37	Books, Journals, etc.(2nd hand @)	0.17	0.26	0.11	0.41
38	Durables (2nd hands)	0.93	1.89	2.6	3.78

* include in item 14 ** included in item 18 and 19 @ included in item 20 \$ included in item 31

The Agriculture Sector



*C*rop, livestock, fishery and forest form the core sub sectors of broad agriculture sector under macro framework. Crop sector in Odisha was buoyant in 2016-17. The State experienced transient success in terms of crop area, production, productivity, food security, irrigation during the year, leading to rise in farmers' income. Odisha bagged national "Krishi Karman Award" four times consecutively between 2010-11 and 2014-15. The production, productivity and per capita availability of animal husbandry and fishery products were impressive in 2016-17. Forestry sector performed well with the rise in actual forest area, timber production and forest revenue during 2016-17. The share of crop sector to GSDP in Odisha consistently shrank over the decades since 1950s till early 2010s. But it started reviving from 2011-12, but the trend is fluctuating. Formulation of State Agriculture Policy 2013, Odisha Fishery Policy 2015 and exclusive agriculture budget by the State Government show the way for sustainable practices with higher investment, efficient production technology, post-harvest solutions, effective value addition and remunerative market options in agriculture sector.

Covering 35 percent of geographical area as the net cropped area and dependence of more than 60 percent of State's workforce on it for their sustenance, agriculture in Odisha is the sector that is closely connected to the welfare of the citizens. This is reinforced by a sectoral share of about 20 percent in total GSDP of the State. The State Government is keen to increase agricultural production and raise productivity through improved land and water management,

scientific rain-fed agricultural techniques, well-functioning agricultural markets, application of better technology, higher public and private investments and effective implementation of ongoing programmes in agriculture and allied sectors. Major initiatives by the State Government to make agriculture and allied sectors more viable and sustainable are presented in Box 1.

- Constitution of a State level task force on agriculture development and rejuvenation.
- Provision of an exclusive agriculture budget with constantly increasing trend from Rs. 7162.00 crore in 2013-14 to Rs.13181.89 crore in 2016-17.
- Forming a separate "Agriculture Cabinet" for farmer-centric development.
- State Potato Mission for making the State self-sufficient in production of potato by the year 2017-18.
- Formulating "Odisha Fisheries Policy, 2015" for aquaculture development

[Box 1]

3.1 Crop sector

3.1.1 Climate and Soil:

The climate and soil play a vital role in Odisha's agricultural economy given the rain-fed nature of its agriculture, which itself is largely a result of the climate. The tropical climate of Odisha is characterized by high temperature, high humidity, medium to high rainfall and mild winters. The normal annual rainfall is 1,451 mm of which the South-West monsoon contributes about 80 percent. The State has been divided into four physiographic zones, viz. (a) the Northern Plateau, (b) the Eastern Ghat Zone, (c) the Central Table Land, and (d) the Coastal Zone. On the basis of climate, soil, rainfall and topography, the State has been delineated into ten agro-climatic zones. Recurring natural disasters have a direct bearing on the output and productivity of State agriculture.

3.1.2 Agricultural manpower:-

Odisha had 41.04 lakh cultivators and 67.40 lakh agricultural labourers out of 175.42 lakh

total workers in 2011 census. The shares of cultivators and agriculture labourers together have fallen by 3 percentage points from 64.8 percent to 61.82 percent between 2001 and 2011 because of lower participation of women cultivators which decreased by 19 percentage points from 9 lakh to 7.29 lakh during the same interval. However, the number of male cultivators increased by 0.28 lakh during this period. Among the districts, Balasore has the highest number of cultivators (2.89 lakh). Mayurbhanj has the highest number of agricultural labourers (5.69 lakh) and persons working in household industries (1.14 lakh). Ganjam district recorded the highest number in the category of 'other workers' (5.95 lakh).

3.1.3 Land Use

Land use pattern in Odisha is presented in Table 3.1. After forest area, net sown area (NSA) is the most significant land use in Odisha. NSA witnessed a small reduction between 2007-08 and 2011-12 from 56.24 lakh hectare to 52.92 lakh hectare. But the trend reversed to increase from 52.92 lakh hectare to

56.31 lakh hectare between 2011-12 and 2016-17. The trend relating to area sown more than once (ASMO) was similar to NSA except a sharp fall in 2015-16 (30.36 lakh hectare).

ASMO rose marginally to 30.86 lakh ha in 2016-17. NSA and ASMO status in Odisha from 2010-11 to 2016-17 are presented in Figure 3.1.

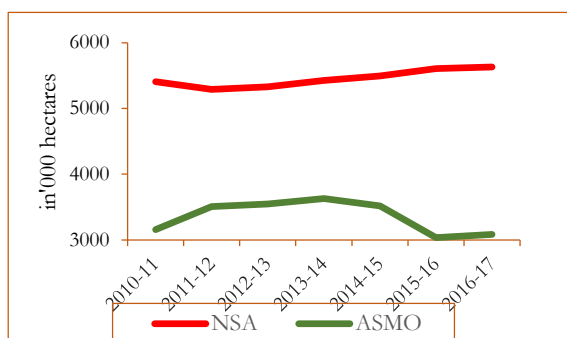
Table 1 : Land Utilization Pattern in Odisha

(Area in 000 ha)

Year	Geographical Area	Forest Area	Misc. Tree	Permanent pastures	Culturable waste	Land put to non-agril. Use	Barren and unculturable land	Current fallow	Other fallow	Net area sown
2007-08	15571	5813	342	494	375	1298	840	556	229	5624
2008-09	15571	5813	342	494	375	1298	840	576	229	5604
2009-10	15571	5813	342	494	375	1298	840	606	229	5574
2010-11	15571	5813	342	494	375	1298	840	773	229	5407
2011-12	15571	5813	342	494	375	1298	840	888	229	5292
2012-13	15571	5813	342	494	375	1298	840	849	229	5331
2013-14	15571	5813	342	494	375	1298	840	756	229	5424
2014-15	15571	5813	342	494	375	1298	840	684	229	5496
2015-16	15571	5813	342	494	375	1298	840	572	229	5608
2016-17(P)	15571	5813	342	494	375	1298	840	549	229	5631

Source: Directorate of Agriculture and Food Production, Odisha

Figure 3.1 : Trends of Net Sown Area and Area Sown More than Once in Odisha



Source: Directorate of Agriculture and Food Production, Odisha

3.1.4 Landholding

Landholding pattern is a prime determinate of the production structure and the socio economic conditions in a society. The detail picture is presented in Table 3.2. Per capita availability of cultivated land fell from 0.39 ha

in 1950-51 to 0.15 ha in 2010-11. By 2010-11, the State had 46.47 lakh operational holdings of which an overwhelming 91.8 percent were marginal and small holdings while a mere 8 percent were semi-medium and medium, and less than 1 percent were large holdings. The operational holdings has increased by 7.14 percent over 2005-06. The average size of holdings declined to 1.04 hectare during this period. Average sizes of holding in marginal, small, semi-medium, medium and large categories were 0.57 ha, 1.63 ha, 2.95 ha, 5.99 ha and 23.72 ha respectively. The State had 7.02 lakh SC and 14.26 lakh ST holdings. Female owned operational holdings constituted only 3.29 percent of total holdings in the State in 2010-11.

Table 3.2 : Size class of Operational Holdings in Odisha

Category of farmers	No of Holdings (lakh nos.)		Area (lakh hectare)		Percentage to total Nos. of Holding		Percentage to total Area	
	2005-06	2010-11	2005-06	2010-11	2005-06	2010-11	2005-06	2010-11
Marginal (< 1.0 hectare)	25.97	33.68	13.42	19.22	59.62	72.17	26.73	39.61
Small (1 – 2 hectare)	11.56	9.18	15.88	14.98	26.54	19.68	31.63	30.87
Semi- medium (2– 4 hectare)	4.72	3.11	12.5	9.19	10.84	6.67	24.92	18.94
Medium (4 – 10 hectare)	1.2	0.64	6.58	3.81	2.7	1.36	13.11	7.86
Large (> 10 hectare)	0.11	0.06	1.81	1.32	0.3	0.12	3.61	2.72
Total	43.56	46.67	50.19	48.52	100	100	100	100

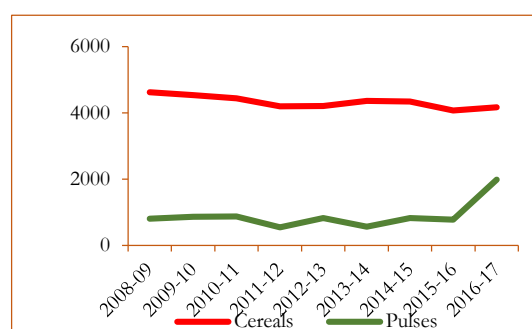
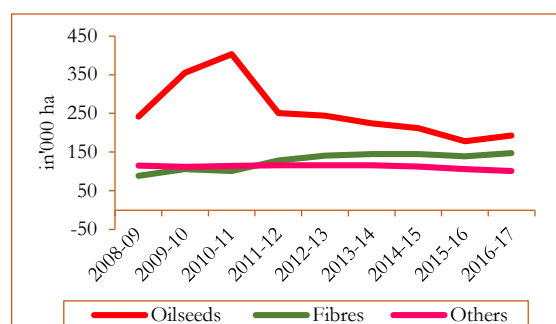
Source: Directorate of Agriculture and Food Production, Odisha

During this period, steps have been taken to address the problem of predominance of marginal and small farmers with improved strategy of enhancing their capability, increasing productivity per unit of land area, raising cropping intensity etc.

3.1.5 Cropping Pattern

The total cultivated area increased from 52.34 lakh hectare in 2015-16 to a record 65 lakh hectare in 2016-17 (Annexure 3.1). The food grains (cereals and pulses) production covered 93.26 percent area followed by oilseeds (2.95 percent), fibre crops (2.25 percent) and other crops (1.00 percent). Rice is the principal crop in the State, covering 60.55 percent of total cultivated area. Total area under crops exhibited a healthy increase of 25 percent over the previous year in 2016-17. The area under pulses increased significantly leading to that under food grains increasing by 25.8 percent during 2016-17 over 2015-16. The strategy of intensive cultivation and expanding irrigation played the key role in the increase in cultivated area. Area under different category of crops in Odisha is given in Figure 3.2. Efforts are being

made to further diversify the cropping pattern of the State.

Figure 3.2 : Area under Cereals and Pulses in Odisha**Figure 3.3 : Area under Oilseeds, Fibres and Others in Odisha**

Source: Directorate of Agriculture and Food Production, Odisha, Directorate of E and S, Odisha, and Directorate of Horticulture, Odisha

3.1.6 Crop Production

Production scenario of different crops in Odisha from 2011-12 to 2016-17 is presented in Annexure 3.2. In 2016-17, food grains contributed 90.5 percent of total crop production in the State. Total food grain production rebounded strongly with a record 109.70 lakh MT in 2016-17 after a slump in 2015-16 with only 64.18 lakh MT due to severe drought. Production of rice alone has increased sharply during the year 2016-17 with 97.94 lakh MT from 58.75 lakh MT during 2015-16 registering an increase of about 66.71 percent. The oilseed production during 2016-17 also exhibited an increase of 53.66 percent than the previous year. Sugarcane production

declined by 60 percent during 2016-17 over the 2015-16, while the production of potato increased significantly by 43.86 percent.

3.1.7 Horticultural Crops

Diversity in agro-climatic conditions and physiographic zones help Odisha to enjoy a natural comparative advantage for horticulture crops with possibilities for growing a diversified basket of fruits, vegetables, spices, tuber crops and flowers; whose potential has not been fully exploited. Hill tracts of KBK districts, Kandhamal and Gajapati districts are suitable for intensive horticultural activities. The area, production and yield rates of different fruits, is given in Table 3.3.

Table 3.3 : Major Fruits Production in Odisha

(Area in '000 ha, Production in '000 MT, yield rate quintal/ha)

Name of Fruits	2014-15			2015-16			2016-17		
	Area	Production	Yield Rate	Area	Production	Yield Rate	Area	Production	Yield Rate
Mango	197.74	769.93	38.94	199.29	778.69	54.23	199.42	817.91	41.01
Banana	24.76	469.25	189.52	24.47	462.64	201.02	24.49	466.77	190.57
Citrus	27.54	268.37	97.45	27.91	267.96	104.32	0.97	7.11	73.50
Pineapple	0.93	11.60	124.73	0.95	11.62	147.11	0.94	11.55	123.10
Papaya	3.01	69.88	232.16	3.03	70.10	259.64	3.05	71.02	232.62
Coconut*	50.68	3255	6423	50.91	3277.07	64.03	50.91	3424.44	46.30
Others	73.31	567.46	77.41	73.31	567.47	86.71	20.28	105.32	51.93
Total	328.99	2156.49		320.04	2158.48		300.06	1479.68	

* Production in lakh numbers

Source: Directorate of Horticulture, Odisha

Odisha produced about 14.8 lakh MT fruits in 3.00 lakh hectare area in 2016-17. Mango was the principal fruit with 8.18 lakh MT production followed by banana (4.67 lakh MT) and other fruits (1.05 lakh MT). The State produced 87.28 lakh MT vegetables in 6.45

lakh hectare area in 2016-17. Brinjals, cabbage and tomato are the major vegetables produced in the State (Table 3.4). Turmeric (2.18 lakh MT) and ginger (1.28 lakh MT) were the major spices produced in the State in 2016-17 (Table 3.5).

Table 3.4 : Major Vegetable Production in Odisha

(Area in '000 ha, Production in '000 MT, yield rate quintal/ha)

Name of Vegetable	2012-13		2013-14		2014-15		2015-16		2016-17	
	Area	Production	Area	Production	Area	Production	Area	Production	Area	Production
Beans	1.23	52.11	11.23	52.11	11.23	52.11	10.6	48.67	10.58	48.72
Bitter gourd	11.49	112.29	11.41	111.76	11.49	112.29	11.06	108.39	10.92	106.91
Bottle gourd	10.19	137.89	10.19	138.09	10.19	137.89	10.14	138.41	10.11	138.01
Brinjal	130.08	2193.72	125.2	2158.25	130.08	2193.72	120.08	2047.24	118.02	2012.56
Cabbage	40.98	1148.21	40.98	1150.88	40.96	1148.21	39.13	1098.22	37.73	1058.48
Cauliflower	44.7	675.47	44.07	667.73	44.7	675.7	42.96	649.14	40.73	616.59
Cucumber	2.45	34.51	2.46	34.59	2.45	34.51	2.14	29.22	2.08	28.43
Garlic			13.26	48.23					12.89	47.03
Mushroom		6.29		8.44		6.29		10.89		16.05
Okra/Ladies finger	67.04	593.93	65.24	578.53	67.04	593.93	64.01	566.39	63.97	565.79
Onion	34.92	419.09	35.81	432.05	34.92	419.09	30.84	369.45	33.44	378.67
Patato	14.14	201.06	14.66	249.76	14.14	201	16.24	273.83	25.19	302.22
Radish	12.65	134.8	12.65	137.38	12.65	134.8	12.55	136.11	12.52	136.04
Pumpkin							22.56	491.82	21.07	460.09
Sweet potato	43.46	410.1	42.03	396.2	43.46	410.1	41.43	391.4	40.80	384.89
Tomato	96.55	1382.78	97.02	1385.96	96.65	382.78	93.32	1327.28	91.04	1311.95
Others	168.26	1968.03	164.06	1931.93	168.18	2968.09	147.17	1487.83	113.45	1115.42
Total	688.14	9470.28	690.6	9481.89	688.14	9470.28	664.23	9174.29	644.54	8727.85

Source: Directorate of Horticulture, Odisha

Table 3.5 : Major Spices Production in Odisha

(Area in 000 ha, Production in 000 MT)

Spice	2014-15		2015-16		2016-17	
	Area	Production	Area	Production	Area	Production
Betel vine	-	-	-	-	2.05	99765.60 (in lakh no.)
Tamarind and others	-	-	-	-	10.93	83.80
Coriander	19.8	10.87	19.6	10.76	19.61	10.86
Chilly	76.02	73.58	71.69	68.57	71.70	69.28
Ginger	16.92	132.63	16.57	127.78	16.57	128.01
Turmeric	28.02	220.74	27.86	215.32	27.86	218.00
Total	186.85	880.79	182.06	847.97	148.71	509.95

Source: Directorate of Horticulture, Odisha

Odisha has a good potential in floriculture. In 2016-17, the State cultivated major flowers like

marigold, rose, gladioli and tuberose in about 6554 hectare area (Table-3.6).

Table 3.6 : Major Floricultural Crop Production in Odisha

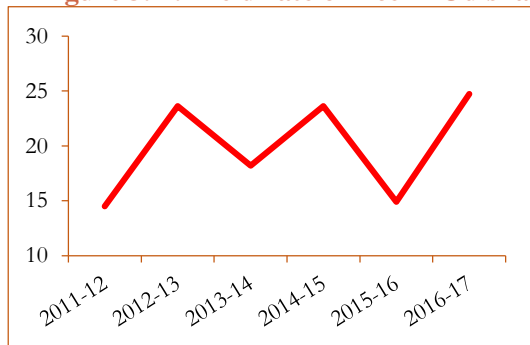
(Area in hectare; production in Qtl.; Gladioli in lakh spike)

Year	Marigold		Rose		Gladioli		Tuberose	
	Area (ha)	Production (in Qtls.)	Area (ha)	Production (in lakh stems)	Area (ha)	Production (in lakhs spikes)	Area (in ha)	Production (in Qtls.)
2013-14	2680	245810	1870	3580	2370	2350	510	12820
2014-15	2735	245810	1870	3598	2374	2359	511	12820
2015-16	2609	245820	1857	3575	1578	1558	503	12810
2016-17	2608	235221	1859	3584	1580	1560	507	12968

Source: Directorate of Horticulture, Odisha

3.1.8 Productivity and Cropping Intensity

Yield rate and cropping intensity are two primary indicators to assess the production trend of the agriculture crops in the State. State-wise area, yield rate and production of food grains during 2015-16 are given in Annexure 3.3. Odisha had a low profile in terms of food grain production and yield rates among major States due to severe droughts in the year.

Figure 3.4 : Yield rate of rice in Odisha

Odisha experienced buoyancy in crop sector in 2016-17 as shown in Table 3.7. Improvements in three major indicators showed the expansion in the crop sector in Odisha in 2016-17. The net sown area increased to 56.31 lakh hectare. The yield rate of rice, the principal crop of the State, was impressive at 24.72 qtl per hectare. The cropping intensity is also one of the indices of the level of agricultural development. The cropping intensity of the State remained unchanged in 2016-17 at 146 as in 2015-16, as shown in Table 3.8. Latest profile of cropping intensity across the States in 2013-14 is presented in Annexure 3.4 and Figure 3.5.

Table 3.7 : Yield Rate of Principal Crops in Odisha

(quintal/ha)

Crops	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Rice (Total)	14.5	23.61	18.21	23.63	14.91	24.72
Autumn rice	7.78	17.32	14.63	17.75	7.19	12.85
Winter rice	14.33	24.02	17.39	23.78	14.85	25.86
Summer rice	32.13	31.65	34.22	33.42	33.56	35.31
Ragi	5.62	7.7	8.09	7.38	6.2	7.06
Gram	7.8	7.74	7.68	7.7	7.75	7.68
Sugarcane 000'MT/ha)	610.19	655.45	658.91	719.51	644	626.79
Mustard	2.12	2.75	2.69	2.44	2.05	3.46
Jute	14.77	17.52	18.09	16.25	21.74	16.78
Cotton	3.86	4.82	4.1	4.23	4.04	4.78
Potato	109.03	122.12	115.98	123.24	101.73	125.93
Groundnut	11.89	12.31	14.49	12.68	10.97	12.29
Wheat	16.4	19	15.75	16.28	13.47	14.21

Source: Directorate of Agriculture and Food Production, Odisha, Directorate of Economics and Statistics, Odisha

Table 3.8 : Cropping Intensity in Odisha

Year	Net area sown (in '000 hect.)	Gross cropped area (in '000 hect.)	Cropping Intensity (percent)
2005-06	5,691	8,928	157
2011-12	5,292	8,799	166
2012-13	5331	8879	167
2013-14	5424	9054	167
2014-15	5496	9011	164
2015-16	5608	8180	146
2016-17	5631	8180	146

Source: Directorate of Agriculture and Food Production, Odisha

3.1.9 Agricultural Inputs

(i) Seeds

The use of certified/quality seed alone can raise productivity of the crops by about 15-20 percent. Hence, due importance has been given in the State Agriculture Policy to increase the Seed Replacement Rate (SRR) and production of certified seeds. Quality seed multiplication programme is organized through the agricultural farms of the concerned Department, Odisha State Seeds Corporation, and registered seed growers. Under the seed village scheme, registered seed growers are supplied foundation seeds and the seeds produced in their fields are certified by the Odisha State Seed and organic Produces Certification Agency. Certified seeds are also produced by Odisha State Seeds Corporation (OSSC) and Odisha Agro Industries Corporation (OAIC) which is marketed through a dealers' network. The year wise seed supply position is indicated below (Table 3.9).

Table 3.9 : Distribution of Certified Quality Seeds

Year	(Figures in qtls.)		
	Distribution of Certified/ Quality Seeds		
	Paddy	Non-Paddy	Total
2010-11	523298	149440	672738
2011-12	521375	158285	679660
2012-13	535129	151140	686269
2013-14	556938	46018	602956
2014-15	657267	84096	741358
2015-16	660200	72000	732200
2016-17	531696	80418	582114

Source: Directorate of Agriculture and Food Production, Odisha

Rice is the predominant crop and in order to increase productivity, supply of quality seeds of suitable varieties specific to the agro-climatic situation is essential. Scientists of the OUAT and CRRI are constantly in the lookout for evolving such promising high yielding and hybrid varieties through breeding programmes. Some popular high yielding varieties of paddy have been developed by OUAT and CRRI for upland, medium land and low land.

The farmers are being motivated by the agriculture extension machinery to grow the abovementioned high yielding varieties, by following recommended package of practices to harvest better yields. The Seed Replacement for Paddy has reached 35 percent, which is higher than the usual standard of 33 percent, by the use of improved variety seeds.

(ii) Irrigation

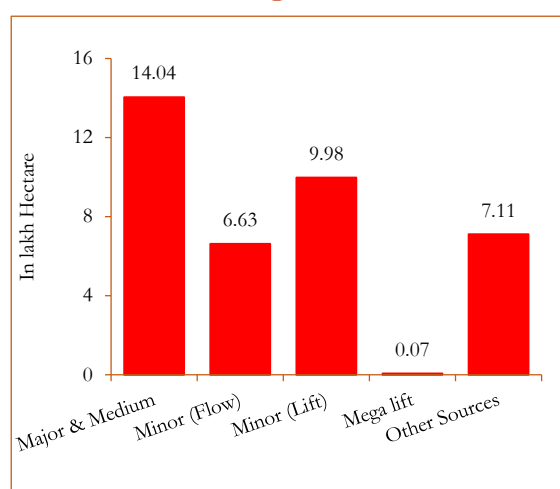
Irrigation is a crucial input for crop production. In Odisha, additional 1.17 lakh hectare of irrigation potential was created during 2016-17. Total irrigation potential created was 37.84 lakh ha in Khariff and 18.07 lakh hectare in Rabi season. Irrigation potential are created primarily by major and medium projects (20.48 lakh ha), minor (flow and lift) (22.32 lakh hectare), mega lift (0.07 lakh ha) and other sources (like Jananidhi I&II) (13.04 lakh ha) both in khariff and Rabi seasons. The source-wise irrigation potential created so far up to 2016-17 is indicated below in Table 3.10 and Figure 3.5

Table-3.10 : Irrigation Potential Created in Odisha

(Area in lakh hectare)

Sl. No.	Sources	2014-15		2015-16		2016-17(P)	
		Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
1.	Major and Medium	13.91	6.37	14.00	6.41	14.04	6.44
2.	Minor (Flow)	6.15	0.79	6.30	0.80	6.64	0.86
3.	Minor (Lift)	7.94	3.90	9.04	4.40	9.98	4.85
4.	Mega lift			0.03	0.00	0.07	0.00
5.	Other Sources	6.86	6.12	7.34	6.42	7.11	5.92
	Total	34.86	17.18	36.71	18.03	37.84	18.07

Source: Directorate of Agriculture and Food Production, Odisha

Figure 3.5 : Net Irrigation potential created in Odisha during 2016-17(Khariff)

Utilization of the irrigation potential created is an area of concern for the State, since unutilized potential does not contribute at all to agricultural development. As presented in Table 3.11, the total utilization of irrigation potential created in Odisha was 35.53 lakh hectare, which is about 63.55 percent of total irrigation potential created in 2016-17 for both Khariff and Rabi seasons. There is a constant endeavour to enhance the water use efficiency through adoption of proper water management practices in addition to appropriate irrigation devices.

Table 3.11 : Irrigation Potential Utilized in Odisha

(Lakh hectare)

Year	Kharif	Rabi	Total
2010-11	20.85	10.21	31.06
2011-12	20.79	10.08	30.87
2012-13	21.87	11.79	33.66
2013-14	22.54	12.67	35.21
2014-15	23.27	11.34	34.61
2015-16	22.41	10.53	32.94
2016-17	23.64	11.89	35.53

Source: Directorate of Agriculture and Food Production, Odisha

In addition to other source of irrigation created, efforts are being put in to establish a number of shallow tube wells, bore wells, dug wells and surface lifts on private ownership basis. Details of those installed from 2013-14 to 2015-16 are indicated below in Table 3.12.

Table 3.12: Installation of Minor irrigation Projects in Odisha

(In Nos.)

Items	2013-14	2014-15	2015-16
Shallow Tube Well	5148	2473	2019
Bore Well	6511	5983	8953
Dug well	1634	1098	1671
Surface lift	04	01	0
Total	13297	9555	12643

Source: Directorate of Agriculture and Food Production, Odisha

(iii) Fertilizer

Fertilizer consumption in the State had a mixed trend in last five years as outlined in Table 3.13. Total consumption and consumption per hectare are observed to be fluctuating in these

5 years. During 2016-17, although the total consumption of fertilizer increased notably to 4.94 lakh MT but its consumption per hectare fell sharply to 60.4 kg per ha as compared to about 66 kg per ha in 2015-16.

Table-3.13 : Fertilizer Consumption in Odisha

Year	Fertiliser consumption in nutrient basis in '000 MT				Consumption in Kg./ha	Ratio of NPK in use
	N	P	K	Total		
2012-13	315.04	124.19	50.97	490.2	58.74	6.2: 2.4: 1
2013-14	312.99	117.7	56.45	487.14	57.11	5.5: 2.1: 1
2014-15	314.07	126.22	59.24	499.53	58.91	5.3: 2.1: 1
2015-16	254.71	90.9	36.81	382.42	65.91	6.9: 2.5: 1
2016-17	302.44	130.89	61.02	494.35	60.43	5.0:2.1:1

Source: Directorate of Agriculture and Food Production, Odisha

The NPK use ratio needs to be balanced. The ratio in Odisha as shown in Table 3.13 got skewed because of differential pricing of urea verses DAP and other complex fertilizers.

(iv) PLANT PROTECTION

- E-Pest surveillance, Pest Management, 100 percent Seed Treatment Campaign under the Integrated Pest Management are being implemented in Odisha under Plant Protection/Programme. Details are given in Table 3.14.

- Pest Surveillance and Pest Management Programme under RKVY are implemented to monitor and manage the major pest and diseases of Rice/Pulses and Oilseeds i.e., Swarming caterpillar in wetland paddy, Yellow Stem borer in paddy, Cutworm and YMV in pulses etc.
- OUAT promotes block and pest-specific advisories, IEC programmes, and emergency mass spraying operations for plant protection at frequent intervals.

Table-3.14 : Seed treatment Campaign in Odisha

Year	Crop	Area in ha	No. of farmers involved	No. of villages
2011-12	Paddy Pulses/ G.nut	67900	70000	1358
2012-13	Paddy Pulses/ G.nut	271600	269660	2716
2013-14	Paddy, Pulses& Groundnut	298200	317472	3120
2014-15	Paddy, Pulses and Groundnut	483366	477689	4710
2015-16	Paddy, Pulses and Groundnut	157000	157000 approx.	1570

Source: Directorate of Agriculture and Food Production, Odisha

• **Consumption and Demand of pesticides**

Farmers’ increased awareness and preventive measures have led to rise in pesticide consumption to protect crops in Odisha. The average per ha pesticide consumption of the State is 149 gma.i compared to National average of 380 gma.i per hectare. The registration and issue of pesticide license of dealers are being done online .

(v) Power consumption

The power consumption for agricultural purposes, specifically minor irrigation, at 311 MU in 2016-17, shows a rising trend over last 5 years in the State. Expanding coverage of rural electrification, along with the incentives package announced under the State Agriculture Policy, Odisha to promote energy use, led to the rise in the share of the agriculture sector in consumption of power to 1.97 percent in 2016-17. (Table 3.15)

Table-3.15 : Power Consumption for Agriculture Purpose

Year	Share of power consumption for Agriculture Purpose	
	In million units	In percent
2010-11	188.00	1.4
2011-12	210.50	1.7
2012-13	162.94	1.2
2013-14	227.87	1.56
2014-15	308.14	1.94
2015-16	311.15	1.97

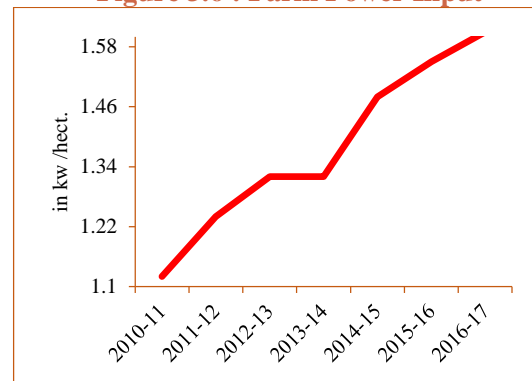
Source: Directorate of Agriculture and Food Production, Odisha

(vi) Farm Mechanization

Farm mechanization improves production and productivity and reduces drudgery of agriculture labour and cost of production. It also enables efficient utilization of agricultural inputs The State Government encourage the farmers to adopt improved farm machinery and

equipment by providing financial assistance in the form of subsidies and facilitating credit. The proto-type Development Centre (Odisha Farm Machinery Research and Development Centre, Bhubaneswar) designs, and manufacturers popularize the implements for supply to farmers. It also trains, tests and modifies the equipment as per the farmers’ requirement. The farm power consumption touched 1.61 KWH/ hect. by the end of 2016-17 and it continues to increase every year as shown in Figure 3.6.

Figure 3.6 : Farm Power Input



Source: Directorate of Agriculture and Food Production, Odisha

The use of mechanized equipment’s and vehicles like tractors, power tillers, combined harvesters and rotavators in agriculture is in increasing trend as shown in Table 3.16.

Table-3.16 : Sale of Farm Machinery and Equipment in Odisha

Year	Tractor	Power tillers	(in numbers)	
			Combine harvester	Rotavator
2010-11	4750	12742	123	311
*2011-12	9231	11257	78	96
*2012-13	11085	12503	103	469
*2013-14	11891	13032	399	4553
*2014-15	10325	14388	264	4631
*2015-16	11688	9166	407	5003
2016-17	12800	6296	495	6885

Source: Directorate of Agriculture and Food Production, Odisha
* N.B:-Total sale including Non-Subsidy.

(vii) Farm Credit

Since modern agriculture is capital intensive, farmers' access to farm credit is crucial in enhancing crop productivity, especially in Odisha's context. The crop loan disbursed to farmers exhibits an increasing trend and needs to be further increased (Table 3.17).

Table 3.17 : Disbursement of Crop Loan in Odisha

(Rs. crore)

Year	Crop Loan disbursed
2010-11	5449.00
2011-12	8520.00
2012-13	8457.00
2013-14	12582.00
2014-15	12866.00
2015-16	15869.00
2016-17	39819.65

Source: Directorate of Agriculture and Food Production, Odisha

3.1.10 Pradhan Mantri Fasal Bima Yojana (PMFBY)

PMFBY was introduced in the State from kharif 2016 season to ensure compensation to the affected farmers in case of crop loss due to natural risks. It was technology-based with use of smartphone to capture data on crop cutting experiments in the field. Five crops, namely paddy, groundnut, cotton, ginger and turmeric, were notified under this programme during kharif 2016 with a total of 17.63 lakh farmers covered (17.33 lakh with loans, 0.30 lakh without). The programme covered an area of 12.57 lakh hectare and the total sum insured was Rs. 6,888.61 crore. A total amount of Rs.137.70 crore of farmers' premium was collected and State share of premium subsidy of Rs.197.39 crore was released. Claims

amounting to Rs. 422.54 crore have been assessed and Rs. 421.68 crore of claims were settled. The balance claims of Rs. 86.21 lakh are to be settled. During Rabi 2016-17 season, six notified crops i.e., paddy, groundnut, mustard, green gram, black gram and potato were covered under PMFBY with 55,231 farmers (52,817 with loans, and 2414 without). The programme covered an area of 0.61 lakh hectare while total sum insured was Rs. 368.60 crore. A total amount of Rs.4.77 crore of farmers' premium was collected and State share of premium subsidy of Rs.0.83 crore was released. A claim of Rs 1.26 crore has been assessed.

3.1.11 State Intervention

Strategic intervention for increasing production and productivity of various crops are being implemented in the State through various schemes. Some of the major schemes and new initiatives taken up in the field of agriculture are enumerated below.

National Mission on Oilseeds and Oil Palm (NMOOP): The mission is implemented with a funding pattern of 75:25 between Centre and State for improving the production and productivity of oilseeds and oil palm crops. Under this mission, the achievements of 3 mini missions being implemented in 2016-17 are as follows:

In Oilseed Mission, during 2016-17, incentives worth Rs.4.80 lakh and Rs.29.93 lakh were extended for production of 480 quintals of foundation seeds and 2,800 quintals of certified seeds respectively. 1,849 quintals of breeder seeds has been procured for multiplication with assistance worth Rs.184.91 lakh. Twenty Farmers' Field School (FFS) and 120 Farmers' Training have been conducted. Publicly funded

demonstrations of improved methods of different oilseeds production in 5016 hectares land were held. Subsidy was extended to cover 5200 hectare under PP chemicals/ weedicide application.

Under Oil Palm Mission, an area of 1260 hectare has been earmarked for oil palm plantation with annual plan budget of Rs.465.30 lakh, out of which Rs.232.65 lakh has been spent during 2016-17.

Under National Food Security Mission (NFSM), a sum of Rs. 3871.16 lakh (NFSM-rice: Rs. 2011.42 lakh, NFSM-pulses: Rs. 1603.36 lakh, NFSM-coarse cereals: Rs.55.35 lakh, and NFSM-commercial crops: Rs.201.03 lakh) has been utilized in the State for implementation of various programmes during 2016-17.

National Mission for Sustainable Agriculture (NMSA)

There are five components of this Mission that were implemented during 2016-17: Soil Health Management (SHM), On-Farm Water Management (OFWM), Rain-fed Area Development (RAD), Climate Change and Sustainable Agriculture Monitoring, Modelling, and Networking (CCSAMMN), and Paramparagat Krishi Vikash Yojana (PMVY). 358,635 Soil Health Cards have been provided at a cost of Rs.403.05 lakh under SHM.

Location specific crops, fruits, vegetables, medicinal plants etc. are supported and natural resource strengthening activities are either converged or supplemented in 40 clusters with an Integrated Farming System in 5848 hectare with an approved outlay of Rs. 2400.65 lakh under RAD.

120 clusters of 50 acres each is being taken up under PKVY with the received sum of Rs. 642.43 lakh.

National Mission on Agriculture Extension and Technology (NMAET)

NMAET includes four Sub-Missions on Agricultural Mechanisation (SMAM), on Agricultural Extension (SMAE), on Seed and Planting Material (SMSP) and on Plant Protection and Plant Quarantine (SMPP). During 2016-17, a sum of Rs. 9899.77 lakh has been released (till February, 2017) for implementation of various Sub Missions under NMAET.

Rashtriya Krishi Vikash Yojana (RKVY)

RKVY, operationalised in Odisha since 2007-08, with a fund sharing pattern of 60:40 (GoI: State). 620 projects are being implemented by 24 implementing agencies. During 2016-17, the State have received Rs. 33048.00 lakh which include Rs. 21575.00 lakh under Normal RKVY, Rs. 10250.00 lakh under Bringing Green Revolution in Eastern India (BGREI), and Rs. 1223.00 lakh under Foot and Mouth Disease (FMD). Apart from these schemes, two sub-schemes – (i) targeting rice fallow areas in Eastern India for pulses and oilseeds with a project cost of Rs. 1500.00 lakh, and (ii) crop diversification programme for replacing tobacco farming with alternate crops in Koraput and Rayagada districts of Odisha with a project cost of Rs. 18.33 lakh – are also being implemented in the State.

Biju Krushaka Kalyan Yojana (BKKY)

The BKKY was launched in November, 2013 with the objective of providing health and accident insurance to all the farm families in the State. During 2016-17, around 5,764,359 farm

families have been enrolled and an expenditure of Rs. 20.97 lakh has been incurred (till January 2017). During 2017-18, it is projected to support all farm families in the State under health insurance cover free of cost with proposed cost of Rs. 8,811.00 lakh.

Integrated Watershed Management Programme (IWMP)

IWMP, launched in 2009, is taken up in clusters covering an area of 5,000-6,000 hectare in 26 districts except Puri, Kendrapada, Bhadrak and Jagatsinghpur. Currently six batches of projects in 310 clusters have been sanctioned covering an area of 17.02 lakh hectare with a project outlay of Rs. 2191.52 crore.

Odisha Watershed Development Mission

During 2016-17, 2.10 lakh hectare have been treated with different land and water management interventions. 12,120 hectare of cultivable wastelands have been brought under cultivation due to implementation of watershed activities. It is proposed to treat 2.08 lakh hectare during 2017-18.

Sustainable Harnessing of Ground Water in Water Deficit Areas

The programme was introduced in 26 districts of the State in 2010-11. During 2016-17, a total number of 13,796 bore wells have been energised.

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

PMKSY, launched during 2015-16, has 4 major components: Accelerated Irrigation Benefit Programme, Har Khet ko Pani, Per Drop More Crop and Watershed Development. Odisha Watershed Development Mission (OWDM) has been designated as State Nodal Agency for

PMKSY at State. Preparation of District Irrigation Plan (DIP) is mandatory for implementation of PMKSY. During 2015-16, DIPs of all districts have been prepared.

National Horticulture Mission (NHM)

National Horticulture Mission (NHM) is in operation in all 30 districts in the State since 2005-06. Some activities have been extended to 30 districts with the objectives of increasing fruit production, enhancing the economic status of the farmers, promotion of export oriented agro-based industries, training, and development of market infrastructure. 24 districts of the State were identified in 4 clusters under National Horticulture Mission for development of 9 major horticultural crops. The selected crops include: mango, citrus, litchi and banana in fruits, cashew in plantation crops, ginger and turmeric in spices, and rose, marigold and gladioli in floriculture.

Fruit Orchard Development

To encourage farmers to establish fruit orchards on their private holdings, assistance up to 40-50 percent of cost of cultivation is provided to the farmers with the following norms (Table 3.18):

Table 3.18 : Different fruit wise Financial Assistance per hectare cultivation norm under NHM

Name of the fruit	Financial Assistance per hectare (in Rs.)
Mango	12,750
Pineapple	35,000
Banana Sucker	26,000
Tissue Culture Banana	40,985
Papaya	30,000
Pomegranate	24,000
Litchi	17,675
Guava	19,170
Citrus	20,000
High Density Mango	16,400
High Density Guava	20,660

Source: National Horticulture Mission (NHM)

Development of Floriculture

Floriculture has a good potential in Odisha both in term of demand pull and increased income generation of flower cultivators. There is an increasing demand for flowers like rose, gladioli, marigold and tuberose in and around the urban centres of the State. During 2016-17, flower cultivation covering an area of 248.40 ha was taken up under NHM programme. It is planned to cover about 240 hectare under floriculture in 2017-18.

Vegetables Cultivation

During 2016-17, against the projected 3000 ha, 1809.86 ha have been covered by cultivation of hybrid vegetables. Besides, emphasis has also been given on Seed Production Programme with expenditure of Rs. 280.83 lakh till December, 2016 against a target of Rs.600 lakh.

Protected Cultivation

Under protected cultivation, 1281.56 ha under plastic mulching, 0.25 ha under tubular structure and 1.16 ha under shade net house has been achieved, at a cost of Rs. 246.77 lakh till December, 2016.

Horticulture Mechanisation

During 2016-17, subsidy has been provided for 16 tractors up to 20 PTO HP, 9 power tillers (Below 8 BHP), and 50 self-propelled horticultural machinery.

Integrated Post Harvest Management

28 pack houses, 1 pre-cooling unit, 1 Cold room, 13 preservation units (low cost), 129 low cost onion storage structures, 193 Pusa zero energy cool chambers and 6 cold storages have been operationalized during 2016-17.

Expansion Programme as per NHM guideline for 6 non-NHM districts namely Bhadrak, Boudh, Kendrapara, Jagatsinghpur, Jajpur and Jharsuguda has been taken up. During 2016-17, 274 hectares have been brought under fruit crops, 78 hectares under hybrid vegetables cultivation and 40 hectares under floriculture through the programme.

Strengthening of School of Horticulture

There are three training institutes namely School of Horticulture at Khordha, Horticulture Training Institute, Kalinga in Kandhamal and Horticulture Training Institute, Nildungri in Sambalpur districts under the Directorate of Horticulture for imparting training to the departmental staff as well as rural youth for self-employment. To preserve the heritage building housing the School of Horticulture Khordha, a sum of Rs.150 lakh has been spent during 2016-17. A sum of Rs.500.00 lakh has been proposed during 2017-18 for the purpose.

Establishment and Revival of Block Level Nurseries

43 Block level nurseries are being revived/ established with an outlay of Rs. 150 lakh during 2016-17.

Development of Potato, Spices and Vegetables

In order to encourage farmers to take up cultivation of onion and other vegetables, quality seed materials have been sold to the farmers at subsidized rates. During 2016-17, 200 qtl.s of potato seed in Kharif, 574 qtl.s of onion seeds in Rabi, and 70 qtl.s of onion seeds in Kharif have been supplied to the farmers at a subsidized rate.

3.1.12 Input Subsidy

Development of horticulture is dependent on supply and use of quality inputs. 580,024 quality planting materials of different plants like K.lime seedlings, coconut seedlings, mango grafts, cashew grafts, litchi gottees, sopota grafts, papaya seedlings and drumstick seedlings have been supplied to the farmers for backyard plantation at subsidized rate during 2016-17.

Inter-Cropping of Fruit Orchards

The main objective of the scheme is to increase the area as well as production of crops like pineapple, marigold, and vegetables. Besides, it also provides the nutritional security to the small and marginal farmers of the State.

3.1.13 Organic Farming

Organic farming in Horticulture is becoming increasingly important due to its manifold benefits to the society. During 2016-17, a sum of Rs.40 lakh has been spent for the purpose by covering an area of 500 hectare.

3.1.14 State Potato and Onion Mission

State Potato Mission has been implemented during 2015-16 with the aim of making the State self-sufficient in production and availability of potato. Accordingly, increasing area and production of table potato, production of seed potato and establishing cold storages have been emphasized. The budgeted outlay for the year 2016-17 was Rs. 60 crore and proposed outlay for 2017-18 was Rs.20 crore.

3.1.15 Marketing Company for Fruit, Vegetables and Flower

Appropriate marketing of horticultural produce is a necessary prerequisite to obtain good returns for the farmers. Besides, marketing also takes care of uniform distribution and minimizes post-harvest losses. To realize these objectives, establishment of a company for marketing of fruits and vegetables in the State was budgeted for during 2016-17. To develop a modern market building at Bhubaneswar for sale of fruits, vegetables and flowers an amount of Rs. 500.00 lakh has been spent during 2016-17. During 2017-18, an amount of Rs.1000 lakh has been proposed for completion of work.

3.1.16 Institutional support

a) Odisha University of Agriculture and Technology (OUAT)

OUAT focuses on new technology innovation, dissemination of knowledge through the education, training, research, extension, consultancy and policy support programmes. Ten agro-polytechnic centres started operating from 2012 in 10 different Agro-climatic Zones of the State. Major achievements of OUAT as on 2016-17 are given below.

- » 151 HYV crops suitable to different agro-climatic zones of the State released so far.
- » Released four crop varieties viz., two in paddy (Pratibha and Pradeep) and one each in sugarcane (Charchika) and ginger (Subhadra).
- » Developed 15 new cultivators of different crops (two each in finger millet, grain amaranth, chilli and cotton; one each in

- black gram, groundnut, sesame, tomato, turmeric, ridge gourd and country bean).
- » Identified profitable cropping systems for different Agro-climatic zones, both for irrigated and rainfed areas of coastal and inland districts of the State.
 - » Standardised the secondary and micro nutrient management practices for rice, maize, sesame, French bean.
 - » Developed integrated nutrient management practices for individual crops and cropping systems.
 - » Developed integrated pest management modules for rice, pulses, sugarcane, brinjal, cole crops, turmeric, mustard, banana and cotton.
 - » Standardised organic packages for rice-based high value cropping systems.
 - » Developed integrated disease pest and weed control measures for rice, black gram, groundnut, jute, cotton, cashew and linseed.
 - » Recommended potato varieties such as Kufri Khyati (yield - 209.1 q/ha) and Kufri Ashoka (yield - 192.9q/ha) of 60 days duration and Kufri Puskar (yield - 262.3 q/ha) of 75 days duration for higher yield under Odisha conditions.
 - » Cultivation of *Lilium* cv. Black Out, Nashville, Fangio, Pavia and Tresor for cultivation under Poly-house/ Green houses of the State which can earn profit up to Rs.1.00 lakh from 500 square metre land area.
 - » Recommended teat dipping with 5 percent (W/V) Haldi solution (*Curcuma longa*) for five minutes after each milking and oral administration of dicalcium phosphate powder 25 g/day for 90 days, to prevent subclinical mastitis.
 - » Developed coloured meat type poultry bird (Pallishree) for backyard rearing.
 - » Developed various farm machinery, viz. three-row rice transplanter (for female agricultural workers), tractor operated multi-crop seed cum fertilizer drill for direct seeding of rice (DSR), self-propelled 8-row rice transplanter, tractor operated groundnut thresher, bullock drawn 8 row drum seeder, manual mahua seed decorticator and power operated mahua stamen remover etc. for smooth and easy on- and off-farm operations as well as to reduce the drudgeries associated with farm and post-harvest operations.
 - » Identified two strains of *Volvariella* mushroom namely, OSM 11 and OSM 12 and oyster mushroom variety, *Pleurotus pulmonarius* for cultivation in coastal Odisha.
 - » Standardised the method of scientific beekeeping of *Apis cerena indica*.
- (b) ICAR- Central Rice Research Institute (ICAR-CRRI)**
- ICAR-CRRI conducts basic, applied and adaptive research on crop improvement and resource management towards increasing and stabilizing rice productivity in different rice ecosystems, along with special emphasis on rain-fed ecosystems and related biotic stresses. During 2016-17, nine varieties of seeds have been released (Table- 3.20)

Table 3.20 : Crop variety released by CRRI

Sl, No,	Variety	Ecology	Year of release	Duration	Yield potential per hac
1	CR Dhan 207(Srimati)	Aerobic	2016	110-115	3.07
2	CR Dhan 209(Priya)	Aerobic	2016	112-115	4.07
3	CR Dhan 409 (Pradhan Dhan)	Semi deep	2016	160-165	4.70
4	CR Dhan 507 (Prasant)	Deep water	2016	160	4.75
5	CR Dhan 800	Shallow low land	2016	140	5.75
6	CR Sugandh Dhan 910	Shallow favourable lowland and irrigated late	2016	142-145	4.38
7	CR Dhan 311 (Mukul)	Irrigated	2016	120-126	5.54
8	CR Dhan 508	Deep water	2017	187	4.40
9	CR Sugandh Dhan 908	Irrigated late	2017	145	5.00

Source: ICAR-CRRI, Cuttack

c) Agricultural Promotion and Investment Corporation of Odisha Limited (APICOL)

The Agricultural Promotion and Investment Corporation of Odisha Limited (APICOL), established during the year 1996 as a promotional organization is engaged in promotion of commercial agri-enterprises including agro-based and food processing industries in the State. It also invests in creation of captive irrigation source in farmers' fields through establishing shallow tube wells (STWs), bore wells (BWs), dug wells (DW), and river lift irrigation projects (RLIP). The corporation acts as the channelizing agency for release of subsidy under various schemes of State Agriculture Policy 2008 as well as New Agriculture Policy 2013 including farm mechanization under various Central and State Plan schemes including RKVY, and to provide escort services to the houses engaged in agri-business.

During 2016-17, there were 77 Commercial Agri-Enterprises and 317 Agro Service Centres

established (till end of December, 2016). Capital Investment Subsidy amounting to Rs.2155.00 lakh have been released for these projects. Subsidy amounting to Rs. 4064.00 lakh have been disbursed during 2016-17 (till December, 2016) against establishment of 7121 private lift irrigation projects (PLIP) in the State.

APICOL is acting as the Virtual Office of Agricultural and Processed Food products Export Development Authority (APEDA), it has sanctioned financial assistance to set up an integrated post-harvest pack house as common facility for fresh fruits and vegetables at Titilagarh in Bolangir district of Odisha. The integrated pack house is completed in all respects and is in operational stage. The fruits and vegetables growers of Bolangir and nearby districts can avail this facility. A walk-in type cold room of size 10'x10'x10' was also set up at Biju Patnaik International Airport, Bhubaneswar under the financial assistance of APEDA, Government of India to facilitate

export of agri-horti products from the State. APICOL is also acting as the State Agency for Small Farmers' Agri-Business Consortium (SFAC) under Ministry of Agriculture, Government of India. SFAC provides Venture Capital Assistance (VCA) to promote investments in agri-business projects by way of soft loan to supplement the financial gap worked out by the sanctioning authority of term loan, under means of finance with respect to cost of project.

(d) Odisha Agro Industries Corporation (OAIC)

OAIC aims at marketing various agricultural inputs and farm machineries through a wide network of offices at district and sub-district levels. The Corporation also executes tube wells, bore wells, and lift irrigation points for farming communities. It provides inputs such as fertilizer, pesticides, cattle and poultry feeds to farmers. During 2016-17, the Corporation had a turnover of Rs. 407.68 crore against the annual target of Rs. 552.83 crore. It sold 202 tractors, 165 power tillers, 1197 power reapers/threshers, 531 storage bins, 51168 sprayers and 11164 diesel pump sets. Besides, it has energised 15 bore wells, 15 shallow tube wells and also executed 2376 DLPs. It has also sold 90767 M.T of fertilizers and 4579 M.T of seeds. The Corporation has also produced 964 M.T of cattle feed during 2016-17.

e) Odisha State Cashew Development Corporation Ltd. (OSCDC)

The OSCDC Ltd. was established in the year 1979 to develop land, raise cashew plantation and other suitable species, render technical guidance and assistance to cashew growers and make available good planting materials. At

present, OSCDC Ltd. has 572 cashew plantations over an area of 28,218 ha spread over 20 districts of which 284 plantations over an area of 12,337 ha are old and less productive. OSCDC disposed of all the plantations through auction on annual as well as 3-years leasing basis. The OSCDC is now taking up replanting work in existing plantations by removing old and less productive cashew trees with high yielding varieties of cashew grafts. Since the year 1999-2000 till 2016-17, more than 7000 ha of replantation has been undertaken.

f) Odisha State Seeds Corporation (OSSC)

The Odisha State Seeds Corporation Ltd. (OSSC) has been designated as the nodal agency for production, procurement, processing and supply of quality seeds to the farmers of the State. The OSSC has been implementing the "Seed Village Programme" as "Mo Bihana Yojana" for production of certified paddy and non-paddy seeds through seed growers. Incentives at various rates are given to the seed growers under various schemes for taking up production of certified seeds. During 2016 Kharif, 10,427.50 ha of paddy area was certified. The expected certified seed production would be around 4.00 lakh quintals and procurement is in progress. Out of 4,000 ha registered area of Kharif Groundnut 3,200 ha was certified and altogether 12372 of various categories of certified seeds has been procured. During Rabi 2016-17 production season, 876 ha of paddy coverage has been achieved against the target of 900 ha. The targeted area of 181 ha of mustard and 2162 ha of groundnut has been achieved. During 2016-17, 344,350 quintals of seeds of different crops (as detailed below) were made available by OSSC. (Table 3.21)

Table – 3.21 : Quantity of seed supplied during 2016-17 : ICAR-CRRI, Cuttack

Sl No	Name of seeds	Total Quantity supplied (in quintals)
1	Paddy(Early)	21298
	Paddy(Long)	200652
	Paddy(Medium)	73791
	Paddy(superfine)	761
	Paddy(Scented)	
	Total (Paddy)	296502
2	Ragi	33
	Maize	180
3	Wheat	0
4	Moong	19993
5	Arhar	2022
6	Field Pea	90
7	Blackgram	5099
	Bengalgram	212
8	Groundnut	19934
9	Mustard	232
10	Niger	4
11	Til	49
12	Jute	0
13	Dhanicha	0
	Total(Non-Paddy)	47848
	Grand Total	344350

Source: Directorate of Agriculture and Food Production (Activity Report)

The OSSC achieved a turnover of Rs. 145.00 crore and profit of Rs. 1.08 crore (provisional) during 2016-17. Certified seeds of different varieties of paddy, pulses and oil seeds etc. are sold to the farmers of the State through authorized private dealers of OSSC and PACS/LAMPS on Direct Benefit Transfer (DBT) mode. To ensure quality of the seeds and to prevent sale of spurious seeds, seed samples were drawn for analysis by the quality control Inspectors.

g) Odisha State Seed and Organic Products Certification Agency (OSSOPCA)

OSSOPCA performs its defined activities within six broad phases of certification. It verifies the genetic identity of different crop varieties, high degree of physical purity and

germ immunity, and absence of other crop seeds, weed seeds and all designated seed borne diseases, thereby qualifying for the minimum prescribed standards both under laboratory and field conditions. From Kharif 2014, the entire process of seed certification has been made online and implemented throughout the State of Odisha. During the year 2016-17, the total area under registration is 25,012.14 ha, out of which 24,145.19 ha has been registered during Kharif-2016 and 866.95 ha during Rabi 2016-17. Similarly, the area certified during Kharif 2016 is 21,619.10 ha, out of which quantity certified is 16,685.75 qtl.s (in progress). In the broader perspective, OSSOPCA is committed towards quality seed certification and production as well as to making available desired quality seeds of different crop varieties to the farmers of Odisha.

3.1.17 New Initiatives

The Government have taken new initiatives such as

- Special programme for millets in Tribal areas, support to integrated farming system in tribal districts, system development (revamp of the existing system) of Training and Visit (T&V) model;
- Grant to State procurement agencies;
- Establishment of floriculture market;
- Setting up of a company for marketing of fruits and vegetables;
- Certification of agriculture programme;
- Development of agriculture in collaboration with international agencies, introduction of solar pump sets and dug wells with diesel/ solar pump sets, support to farmers'/ producers' organisation, agri-start up programme, and corpus funds for fertilizers, among others.

3.2 Livestock (LS)

Livestock is inextricably linked with sustained employment, income generating activities (IGA) and livelihoods of rural people, farming communities in particular. About 85 percent of livestock is owned by the landless, marginal and small landholding families. Livestock plays the deciding source of nutrition based diet in the form of milk, egg and meat. As per Basic Animal Husbandry Statistics, 2016, Odisha ranks 11th among Indian States in egg production, 13th in meat production and 16th in terms of production of milk. Odisha contributes about 4.05 percent of total livestock population in the country compared to the highest 13.42 percent in Uttar Pradesh, 11.27 percent in Rajasthan and 10.96 percent in Andhra Pradesh as per livestock census 2012.

Odisha had 207.33 lakh livestock population and 198.91 lakh poultry in 2012. But its composition is skewed. About 60 percent were cattle and buffaloes, 38 percent were small ruminants, and 2 percent were pigs. 70 percent of total poultry were local backyard breeds. The other area of concern is the declining trend of LS population in the State since 2003. The State Livestock population depleted at a faster rate of 10 percent between 2007 and 2012 as compared to 3.3 percent fall at all India level. Only goat population of Odisha increased during the period. Tables 3.22 and 3.23, and Figure 3.7 present the livestock population in Odisha under different censuses.

Table 3.22 : Livestock Population in Odisha (lakh number)

Census year	Cattle		Buffaloes	Goats	Sheep	Pigs	Others	Total Live stock
	Total	Cross breed						
2001	140.03	8.71	13.88	58.8	17.79	6.02	NA	236.52
2003	142.81	10.43	14.39	59.74	17.59	5.69	NA	240.22
2007	123.10	17.03	11.9	71.27	18.18	6.12	NA	230.57
2012	116.21	13.06	7.26	65.13	15.81	2.80	0.11	207.33

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

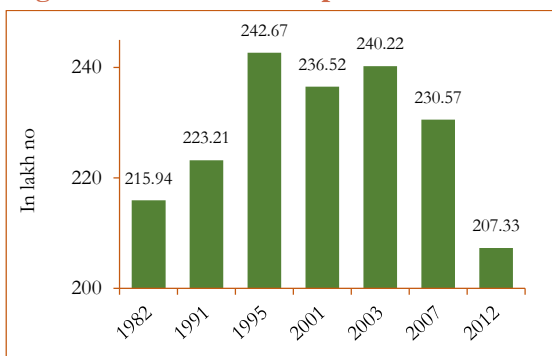
Table 3.23 : Cattle and Buffalo Population in Odisha, 2012

(lakh number)

Category	All Total		Female		Milch		Breedable	
	Total	C.B.	Total	C.B.	Total	C.B.	Total	C.B.
Cattle	116.21	13.06	57.99	9.86	30.83	5.29	33.98	5.71
Buffaloes	7.26	0	3.91	0	2.24	0	2.44	0
Total	123.47	13.06	61.90	9.86	33.07	5.29	36.42	5.71

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

Figure 3.7 : Livestock Population in Odisha



Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

3.2.1 Production and Availability of Milk, Eggs and Meat

The Production and per capita availability of major livestock products in Odisha are placed in Table 3.24, Annexure 3.6 and Figure 3.8.

Under the pressure of depleting livestock population, it is commendable that Odisha exhibits increasing production and productivity of milk, meat and egg during 2016-17. The per capita availability of milk, meat and egg of Odisha improved notably to 120 gms/day, 3.86 kg/annum and 46/annum respectively during 2016-17 as compared to 2015-16. Odisha has a relatively low profile of cattle, buffalo and poultry population among the major States. That leads to a small contribution of about 2 percent and 3 percent of total milk and egg production of India by Odisha respectively. The State has vast potential to increase production of milk, meat and egg.

Table 3.24 : Milk, Meat and Eggs Profile in Odisha

Year	Production of milk (thousand MT)	Per capita Availability of Milk (gms/day)	Production of meat (thousand MT)	Per capita Availability of meat (Kg./annum)	Production of eggs (in millions)	Per capita Availability of eggs (nos/annum)
2010-11	1670.00	109	138.00	3.29	2357.10	56
2011-12	1718.00	111	138.00	3.29	2300.70	55
2012-13	1784.00	113	141.83	3.29	2322.90	54
2013-14	1861.00	117	153.82	3.52	2360.90	54
2014-15	1903.00	118	162.50	3.66	1924.50	43
2015-16	1938.00	118	167.00	3.71	1927.30	43
2016-17	2002.00	120	176.00	3.86	1974.47	46

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

Figure 3.8 (A) : Milk per capita in Odisha (gms/day)

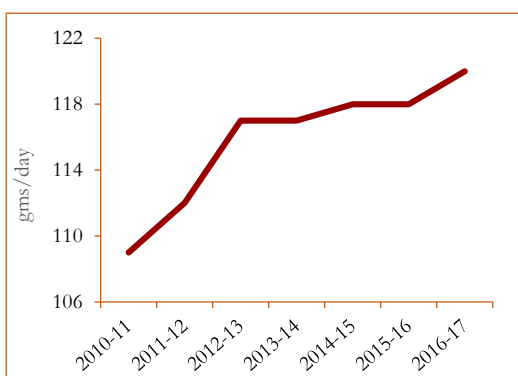
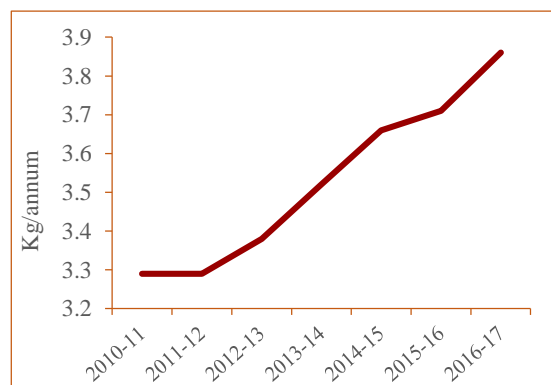


Figure 3.8 (B) : Meat Per Capita Odisha (kg/annum)



Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

Among the districts of Odisha, the coastal districts of Cuttack, Puri, Khorda, Jagatsinghpur, Jajpur, Ganjam and Balasore are major producers of milk with more than 100 million MT of milk each during 2016-17. While Balangir, Ganjam, Khorda and Mayurbhanj produced egg in the range of 150 – 490 million during the year 2016-17.

3.2.2 Development Initiatives

The underlying strategies for livestock development in the State are as follows: (i) produce adequate vaccines under GMP compatible conditions to meet local needs, (ii) monitor the disease control programme at district level, (iii) provide disease diagnostic services, (iv) share knowledge and technology

on livestock and dairy, (v) establish Livestock Aid Centres at GP level, and (vi) improve cattle breeds and fodder development programmes.

3.2.3 Institutional Network

Animal health care is being provided through a network of 541 veterinary hospitals/dispensaries and 3,839 Livestock Aid Centres (LAC) which is reflected in Annexure-3.7. Two Biological Products Institutes function at Bhubaneswar and Berhampur to prepare adequate quantity of different vaccines needed for the Disease Control Programme in the State. Animal health care facilities like vaccination, de-worming, castration and number of infertility camps organized in Odisha during 2016-17 are presented in Table-3.25.

Table 3.25 : Animal Health Care in Odisha

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Treatment of animals (in lakh nos.)	53.03	60.99	63.24	76.57	92.5	107.83	95.10
Vaccine production (in lakh doses)	235.27	192.63	166.34	209.31	175.84	232.49	216.74
Vaccination done (in lakh nos.)	302.14	280.93	240.29	237.70	246.13	293.63	364.62
Infertility camp organized	3172	2934	3012	2405	3190	3185	5810
De-worming of animals (in lakh nos.)	7.24	15.10	14.18	14.35	14.9	24.54	26.19
Animal castrated (in lakh nos.)	5.20	4.90	5.24	5.56	5.48	5.79	5.94

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

3.2.4 Live Stock Health Care Services

Adequate health care management of the livestock resources are being taken up through the network of veterinary hospital dispensaries and livestock aid centres. There are institutions like Animal Disease Research Institute (ADRI) at Phulnakhara, Cuttack and one State Veterinary Laboratory (SVL) at Chiplima, Samabalpur. In addition, there are 26 District Diagnostic Laboratory (DDL) and 3 Clinical Investigation Laboratory (CIL) locally at

district/regional headquarters for treatment and control of animal disease. Mobile veterinary units are working in all blocks of the State for providing medical services to the farmers at their doorstep. During 2016-17, 314 Mobile Veterinary Units (MVU) have been in operation covering 144,034 villages, 3,646,273 cases treated and 5,789,221 vaccinations done. A computerized network – National Animal Disease Reporting System (NADRS) – is feasible to 307 nodes at present.

3.2.5 Livestock Breeding Farms

There are 8 ECB/LBD farms in the State producing high pedigree bull calves to improve breeding and productivity of local animals through natural services/artificial insemination. The farms also produce and supply fodder and root slips to local farmers and propagate fodder cultivation programmes. In 2016-17, there were 511 animals comprising 128 milk producing cows, 72 dry cows, 137 heifers, 55 bull calves and 119 sucking calves maintained in these farms. About 2.89 lakh litres of milk was produced in these farms in 2016-17. State-wise milk production is presented in Annexure 3.5.

3.2.6 Artificial Insemination

Artificial insemination (AI) is an important component of dairy development and is being rendered through a network of 2985 departmental AI centres in the State. Apart from the departmental institutions, 1408 OMFED AI Centres, 674 JK Trust AI centres, 100 BAIF centres and 913 Gomitras are functioning in the State. AI in the State shows an increasing trend from 2005-06 to 2016-17 (Table 3.26). Frozen Semen Bank (FSB) located at Cuttack is the only semen producing station in the State. It produced 11.21 lakh Semen Straws during the year 2016-17 and is supplying semen to all the 30 districts and also awarded with ISO 9001: 2008 and Grade "A" Certificate for quality semen production by Government of India.

Table 3.26 : Status of Artificial Insemination Programme in Odisha

(in lakh number)

Year	Target for AI	Achievement	Progeny Born
2005-06	7.77	6.548	2.77
2006-07	9.84	8.13	3.14
2007-08	12.00	8.94	3.66
2008-09	13.20	10.23	4.00
2009-10	14.73	11.66	4.29
1010-11	14.93	12.38	4.92
2011-12	15.78	12.23	5.19
2012-13	16.74	12.96	4.84
2013-14	17.50	14.35	5.29
2014-15	18.02	15.18	5.49
2015-16	18.03	16.34	5.79
2016-17	18.80	15.44	6.13

Source: Fisheries and Animal Resources Development Department, Odisha

3.2.7 Poultry/ Duck Development

Poultry, backyard poultry in specific, bears huge income, livelihood and self-employment generating potential both for rural and urban poor people including SC and ST communities in the State. There are 8 State Poultry Farms and 2 Duck Breeding Farms functioning in the State under Central assistance, having present parent stock capacity of 3,434 low-input technology poultry birds and 1190 ducks. From these farms, 2.42 lakh numbers of day old chicks and 0.32 lakh of day old ducklings were supplied to interested farmers at reasonable prices.

Odisha launched its Poultry Development Policy in 2015-16. The achievements of the poultry development programme during 2016-17 are outlined below.

- In order to boost backyard poultry in the State, assistance was provided to 7,500 BPL beneficiaries in selected 30 districts

under centrally sponsored plan scheme and NLM.

- About 87 commercial layer farms having 62 lakh birds producing 50.00 lakh eggs per day were functional.
- 6,250 broiler farms with commercial broiler bird strength of 97.00 lakh are in operation. Broiler placements are to the extent of 20 to 25 lakh day-old-chicks per week and 18 to 23 lakh adult broiler birds are entering the market for use as meat.
- 48 number of district poultry hatcheries were established under the financial assistance of SGSY infrastructure fund to produce day old chicks to meet the demand of backyard poultry rearing scheme in the State. Out of 48 hatcheries, 47 are functioning successfully and produced 7.38 lakh Day Old Chicks (DOC).
- 11 broiler farms and 3 layer farms were set up in different districts of Odisha during 2016-17.

3.2.8 Fodder Development

Fodder is essential for animals; it not only provides sufficient nutrient to the animals but also reduces the production cost significantly. The demand for green fodder and dry fodder in the State was about 315.48 lakh MT and 94.64 lakh MT respectively during 2016-17, against their availability of 165.86 MT and 73.19 MT respectively. There are 8 departmental LBD fodder farms covering an area of 170.20 acres that provided 24.18 thousand quintals of fodder during 2016-17 (Table 3.27). Besides, 756,750 mini kits and 29.37 lakh perennial roots and slips were distributed to farmers. The State has 13 fodder farms producing 6,325,076 qtl.s of fodder and 247 qtl.s of fodder seeds. Fodder development programme has been strengthened through State Plan schemes like Minikit Programme, Enrichment of Crop Residue and Departmental Fodder Farms.

Table 3.27 : Fodder Production in the Departmental L.B.D Farms, 2016-17

Name of the Farm	Area (in Ac.) for Fodder Production		Fodder Production (in Qtls)	
	Target	Achievement	Target	Achievement
LBD Farm, Cuttack	6.00	6.00	3990.00	3404.26
ECB Farm, Chiplima	84.00	63.00	6241.50	6560.00
LBD Farm, Keonjhar	10.50	10.50	2847.00	2064.01
LBD Farm, Remuna	24.00	7.00	2847.00	1817.85
LBD Farm, Bhanjanagar	22.70	14.70	3480.00	3160.77
LBD Farm, Boudh	2.50	2.50	520.00	568.00
LBD Farm, Sundargarh	21.50	21.50	2847.00	3320.70
LBD Farm, Kuarmunda	45.00	45.00	5260.00	5093.00
ODISHA	216.20	170.20	28032.50	25988.59

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

3.2.9 Livestock Development

(a) Promotion of Dairy Entrepreneurship (PDE)

It has been intended to promote dairy entrepreneurs through provision of capital subsidy of 25 percent (for general category) and 33.33 percent (for S.C. and S.T. category persons) of total project outlay for establishment of dairy units. The objectives are to promote modern dairy farms, to upgrade traditional technology to handle milk on commercial scale, to generate self-employment and to provide infrastructure mainly for unorganized dairy sector. Under the scheme, 6,718 applications were sponsored out of which 1,657 were disbursed funds during 2016-17.

(b) Dairy Entrepreneurship Development Scheme (DEDS)

With objectives identical to those of PDE mentioned above, DEDS, a Centrally Sponsored Scheme of NABARD, sponsored 2329 applications out of which 280 have been disbursed funds during the year 2016-17.

(c) Small Animal Development

The objective of the scheme is to enhance meat production by improving existing Small Animal Resources of the State through several interventions like genetic upgrade with supply of improved bucks and rams, as also health care measures including routine de-worming and vaccination. There is 1 (one) sheep breeding farm, 5 (five) goat breeding farms and 1 (one) piggery breeding farm in the State to supply graded progenies to farmers for upgradation of local breeds. These farms are being strengthened in a phased manner. There are 153 sheep, 574 goats and 107 pigs in these farms. During the year 2016-17, under “Genetic Upgradation” programme, funds were

provided for strengthening of 7 numbers of small animal farms (Sheep, Goat and Pig) to produce graded male, for enhancing production.

(d) National Mission for Protein Supplementation

This programme has been launched from 2011-12 in Odisha as a subsector under RKVY. The “Goat/Sheep scheme” has been implemented in 30 districts of the State with an objective of undertaking goat production as a profitable enterprise and promotes better health care and management for higher productivity and production with employment generation. During the year 2016-17, 281 goat/sheep units have been assisted under NMPS.

(e) Integrated Livestock Development Programme (ILDP), Kalyani

The overall objective of the scheme is to provide gainful self-employment to the rural livestock keepers through dairy and livestock development programme. This project has four components: i) Cattle development programme, ii) Goat development programme, iii) Fodder development programme, and iv) Technology-knowledge and strategy partnership for development of Chiplima fodder farm. Cattle development programme is being implemented in 10 (ten) districts. Doorstep livestock services are provided to the rural livestock keepers to breed the local cows by using superior dairy breeds. 100 cattle development centres have been established and 88,008 artificial inseminations done and 30,930 progenies born under this project during 2016-17.

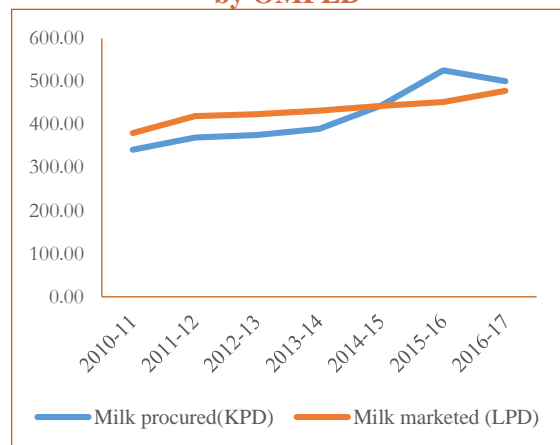
(f) Odisha State Cooperative Milk Producers Federation Ltd. (OMFED)

OMFED is symbolic of white revolution in Odisha through Dairy Cooperative Societies, as in the famous case of Anand, Gujarat. It promotes, produces, procures, processes and markets milk and milk products for economic development of the rural farming community in the State for last 37 years. There are 5,579 Milk Producers Co-operative Societies (MPCS) with 2.62 lakh members under OMFED in all districts of Odisha. Besides, 12 milk unions covering all the districts have been affiliated to OMFED. OMFED has 13 dairy plants with 6.55 lakh litres capacity per day, 3 milk chilling centres with 80,000 lakh litres capacity per day, 380 bulk coolers with 5.41 lakh litres capacity, one milk powder plant with 5 MT per day capacity at Bhubanewar and two cattle-feed plants with 200MT/150M.T capacity per day at Khuntuni, Cuttack.

During 2016-17, the Federation has procured 5.01 lakh and marketed 4.78 lakh litres of milk per day. In addition, it has also marketed milk products viz. ghee, paneer, butter, curd and milk powder and agriculture/organic products

viz. turmeric powder and mustard seeds produced by tribes in Kandhamal district. OMFED is now producing fruit juice, pickles, jam, sauces and pineapple sip also. The total turnover of OMFED during 2016-17 was Rs. 75,828.67 lakh, higher than Rs. 68,309.79 lakh achieved in 2015-16. OMFED is operating the RKVY dairy projects in all the 30 districts of Odisha. Total outlay on these projects was Rs. 6,960.23 lakh. Milk procured and marketed by OMFED from 2004-05 to 2016-17 is depicted in Figure 3.9.

Figure 3.9 : Milk procured and marketed by OMFED



Source: OMFED

Box 2 : New initiatives undertaken by OMFED in 2016-17

- Angul Dairy Plant with 30,000 LPD capacity
- Salapada Dairy with capacity of 30,000 LPD
- Concrete cowshed flooring for 300 Milk Producers
- 2 Ice cream plants at Sambalpur and Bhawanipatna each with capacity 3000 lakh litres per day
- An automated 5 lakh LPD Dairy Plant.

(g) Odisha State Poultry Producers Co-operative Marketing Federation Ltd. (OPOLFED)

OPOLFED, a State level apex poultry cooperative, functions to popularize poultry products and develop a market for them. OPOLFED operates in a two-tier system i.e., Primary Poultry Co-operative Society (PPCS)

and Women Poultry Co-Operative Society at grass root level, and the Federation at the apex level. Presently, 34 PPCS/WPCS are affiliated to OPOLFED. OPOLFED has undertaken marketing of eggs and chicken, production of chicks and balanced premixed poultry. During 2016-17, OPOLFED initiated the process of setting up of 83 Chicken Fresh outlets in major cities and suburban areas across the State

through PPP mode. Action has been taken to establish a poultry pellet feed mill at Jeypore, Koraput under SCA to TSP programme with a total project cost of Rs. 431 lakh with financial support from the ST and SC Development Department of Government of Odisha (Rs. 312 lakh) and OPOLFED's own funding (Rs.109 lakh). Capacity building of 2500 members of PPCS/WPCS through imparting training on Backyard Poultry (BYP) rearing is in progress to be followed by input supply like chicks, feed, medicines, vaccine, feeder and drinker etc.

3.3 Fisheries

The long coastline of 480 km with continental shelf area of 24,000 sq. kms along the Bay of Bengal speak of the rich potential of inland, brackish water and marine fishery resources in the maritime State of Odisha. The sector plays elemental role in uplifting economically the poor fisherman community in terms of income and employment generation. The State is keen to double the inland fish production and triple the present level of fish export using a promising policy framework and relevant development schemes. The total fish production of the State during 2016-17 was 6.08 lakh MTs and value of export generation was around Rs. 2204.78 crore, which is an all-time record in Odisha.

3.3.1 Fish Production and Consumption in Odisha

The State ranks 10th in terms of production of fish and produced 4.50 percent of the total fish production in the country during 2014-15. During 2016 -17, Odisha produced 608.10 TMT of fish of which 455.00 TMT came from inland sources and 153.11 TMT from marine sources. The inland fish production included 393.72 TMT from fresh waters and 61.27 TMT from brackish waters. Crab production has increased over the years. Fish production from Chilika has marginally increased to 12.24 TMT in 2015-16 to 26.36 TMT in 2016-17. The value of fish production in the State has increased by 24.42 percent over 2015-16. The value of inland fish increased by 33.98 percent whereas marine fish value declined by 5.34 percent over the year 2014-15. Out of a total of 608.10 TMT disposition of fish production, about 84 percent were marketed in raw form while 7 percent were kept for sun drying and salting. The per capita fish consumption in the State is also showing an increasing trend from 8.70 Kg. during 2004-05 to 13.49 Kg. during 2016-17 as against 11 kg recommended by the WHO. This indicates an improvement of the standard of living and change in dietary pattern of the people of Odisha (Table-3.28 and Figure.3.10). The source-wise fresh water fish production from 2011-12 to 2016-17 is given in Table 3.29. This may be due to implementation of Odisha Fishery Policy, 2015.

Table 3.28 :Production of Fish and Crab in Odisha

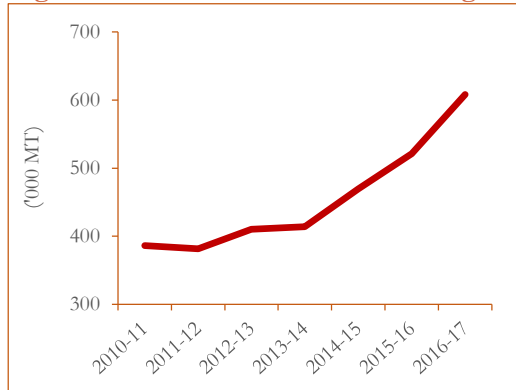
(in 000' MT)

Year	Inland Fish Production		Marine Fish	Total	Per capita consumption of fish (Kg.)	Crab Production
	Fresh water	Brackish water				
2010-11	224.96	27.75	133.48	386.19	9.42	3.37
2011-12	237.47	30.06	114.30	381.83	10.14	2.26
2012-13	261.92	29.91	118.31	410.14	9.13	2.35
2013-14	263.86	30.01	120.02	413.89	9.66	2.80
2014-15	300.96	35.37	133.21	469.54	11.06	3.22
2015-16	336.22	40.31	144.75	521.28	12.24	3.77
2016-17(P)	393.72	61.27	153.11	608.10	13.49	4.23

Note: (P) provisional

Source: Directorate of Fisheries, Odisha

Figure 3.10A : Production of fish Figure



3.10B Production of crab

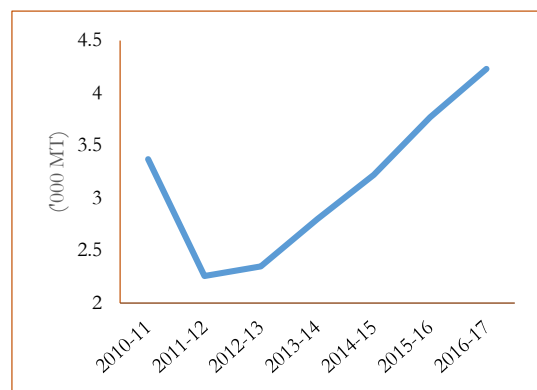


Table 3.29 : Fresh Water Fish Production from Different Sources in Odisha

(in 000'MT)

Year	Tanks/Ponds	Reservoirs	Lakes/Swamps/Ponds	Rivers/Canals	Total
2011-12	211.19	13.73	1.94	10.61	237.47
2012-13 (P)	230.43	18.57	2.41	10.51	261.92
2013-14	230.94	18.94	2.80	11.18	263.86
2014-15	261.85	21.83	2.94	14.34	300.96
2015-16	289.67	22.67	4.25	19.54	336.22
2016-17(P)	331.18	30.07	4.88	27.59	393.73

Source: Directorate of Fisheries, Odisha

Note: (P) provisional

3.3.2 Export and Import of Fish

During 2016-17, 151.67 TMT fish has been exported from Odisha to other States and foreign countries of which 78.91 TMT (52.02 percent) were exported from the marine sector. Generally marine products like frozen shrimp, frozen H.C., frozen pomfret, and ribbon fish are exported to foreign countries like Japan, China,

USA, UK, UAE, Indonesia, and Hong Kong. Export of frozen shrimps constitutes about one third of the total marine products exported every year. During 2016-17, 38,007 MT of frozen shrimp worth of Rs.2143.25 crore was exported to foreign countries. The import of fresh water fish during 2016-17, was about 35.15 TMT (Table 3.30). The Marine products export details are presented in Table 3.31.

Table 3.30 : Export and Import of Fish in Odisha

(in000'MT)

Year	Fish export to other States and Countries				Import of fresh water fish
	Marine Fish	Fresh Water Fish	Brackish Water Fish	Total Export	
2011-12	55.43	21.49	19.32	96.24	59.28
2012-13	69.45	26.34	20.62	116.41	21.22
2013-14	56.65	25.94	19.92	102.50	26.50
2014-15	65.69	24.56	25.37	115.62	38.12
2015-16	74.57	24.30	28.86	127.73	46.28
2016-17(P)	78.91	25.35	47.41	151.67	35.15

P: Provisional

Source: Directorate of Fisheries, Odisha

Table 3.31 : Export of Marine Products to Foreign Countries

Year	Quantity (in 000' MT)	Value (Rs. in Crore)
2011-12	21.31	800.92
2012-13	23.19	908.48
2013-14	29.48	1769.45
2014-15	32.47	1963.85
2015-16	35.63	1791.81
2016-17(P)	41.83	2204.78

P: Provisional

Source: Directorate of Fisheries, Odisha

3.3.3 Inland Fisheries

The inland fisheries can be classified broadly into two categories: i) fresh water fisheries and ii) brackish water fisheries. The fresh water fisheries area sources comprises of 1,31,743 ha of small and big tanks and ponds, 2,00,379 ha of small (area above 10 hectare) medium and large reservoirs, 1,80,000 ha of fresh water lakes, swamps, and ponds and 1,71,186 ha water area of rivers and canals. Similarly, the brackish water area comprises of 79,000 ha of Chilika lake, 297,850 ha of estuaries, 32,587 ha of brackish water tanks, and 8,100 ha of backwater. Different ongoing schemes like production of quality spawn, development of reservoir fisheries and development of highland fisheries are being implemented through FFDA. During 2016-17, for

development of highland fisheries in the State, an amount of Rs. 511.00 lakh was spent for training and subsidy by the Government of India and the State Government.

3.3.4 Fish Farmers Development Agency (FFDA)

FFDA is a Centrally Sponsored Scheme and implemented in all the 30 (thirty) districts of Odisha for promotion of pisciculture and providing technical and logistic support to fish farmers. By the end of 2016-17, about 71,036 ha of tank area has been developed, and 60,341 fish farmers were trained through these agencies. Further, 2624 fish farmers received benefits under this scheme.

3.3.5 Fresh Water Prawn Culture and Fish Seed

In order to meet the growing demand for quality fish seed in the State, greater emphasis has been given for production of quality fish seed in 23 departmental hatcheries, 19 departmental farms (FFDA), 20 OPDC farms, 5 hatcheries of Odisha Pisciculture Development Corporation, and 86 hatcheries in the private sector. About 75.73 crore quality fries have been produced and sold to pisciculturists for stocking in their tanks during 2016-17. The spawn and fry production in government and private sector farms is shown in Table 3.32.

Table 3.32 : Spawn and Fry Production in different Fish Farms

Year	Government	OPDC	Private	Total
Spawn Production (in lakh)				
2011-12	2315.50	7642.75	16803.00	26761.25
2012-13	3037.00	11735.50	13904.00	28676.50
2013-14	3487.00	9680.00	14704.00	27871.00
2014-15	3602.50	9616.25	20635.00	33853.75
2015-16	3588.00	8062.50	20467.00	32117.50

Year	Government	OPDC	Private	Total
2016-17(P)	3756.50	7575.75	18540.00	29872.25
Fry Production in Odisha (in lakh)				
2011-12	994.49	1332.40	3813.86	6140.75
2012-13	738.85	2415.23	3865.28	7019.36
2013-14	1121.13	2388.27	3490.33	6999.73
2014-15	742.87	2071.43	4279.31	7093.61
2015-16	706.08	1679.96	6599.34	8985.38
2016-17	589.56	1637.08	5310.18	7536.82

Source: Directorate of Fisheries, Odisha, Cuttack

The State Reservoir Fishery Policy

The State Reservoir Fishery Policy has been formulated with a view to introducing scientific and remunerative pisciculture in reservoirs. The policy aims to attract private sector investment for augmentation of fish production from the vast untapped/ under tapped reservoir resources. It permits the transfer of reservoirs having an area of 100 acres and above to the Fisheries and Animal Resources Department, Government of Odisha. The F&ARD Department has been empowered to lease out these reservoirs to Primary Fishermen Co-operative Societies registered under the Odisha Self-Help Co-operative Act 2001. Preference will be given to displaced persons/ project affected persons under the policy

3.3.6 CIFA projects in Odisha

The Central Institute of Fresh Water Aquaculture (CIFA) established in 1987 has implemented various development projects like Mera Gaon Mera Gaurav; Swachh Bharat; Farmers FIRST, Tribal Sub-Plan, Soil Health Card Scheme, Sansad Adarsh Gram Yojana, Cluster Demonstration of Oilseeds and Pulses and many others. Sustainable livelihood development of tribal and disadvantaged communities has been one of the thrust areas of CIFA's R&D wing. The Institute has worked in several under-developed region of Gujarat, Odisha, West Bengal, Maharashtra, Chhattisgarh etc. under several sponsored projects such as TSP and NEH and has contributed significantly towards empowerment of poor aquaculture intervention.

3.3.7 Brackish-Water Fisheries Development Agencies (BWFDA)

BWFDA have been set up in seven coastal districts abundant in brackish water resources. The State has a total brackish water area of 4.18 lakh ha out of which 32,587 ha is suitable for prawn culture. These agencies have developed an area of about 18,935 ha for prawn culture by the end of 2016-17. Brackish water prawn culture was undertaken in an area of 8389.62 ha and 29.41 MT brackish water shrimp was produced during 2016-17. About 962 shrimp farmers have benefited and 334 farmers trained on modern shrimp culture techniques during this period. Around 24,031 ha of suitable government land have been identified for development of brackish water shrimp culture on long term lease in future. Source-wise brackish water shrimp production is given in Table 3.33. Chilika lake, with average water spread area of 906 sq kms in summer and 1,165 sq kms in monsoon and island area of 223 sq kms, is the main source of brackish water

fishery in the State. The lake is surrounded by 132 fishermen villages with 22,032 families and 134,093 population. The fishermen actively engaged in fishing in the lake are around 34,536. Out of 185 registered

cooperative societies for fishing, 165 are in operation with 40,411 fishermen. There are 27 landing centres in which 26.010 MT of fish/shrimp and 351.37 MT crabs were collected during 2016-17.

Table 3.33 : Source-wise Brackish Water Shrimp Production in Odisha

(‘000 MT)

Year	Chilika lake	Brackish water shrimp	Estuaries	Total Production
2011-12	14.23	11.97	3.86	30.06
2012-13	12.47	13.23	4.22	29.91
2013-14	12.94	12.61	4.46	30.01
2014-15	12.05	19.25	4.07	35.37
2015-16	12.24	23.34	4.73	40.31
2016-17(P)	26.36	29.41	5.50	61.27

Source: Directorate of Fisheries, Odisha

3.3.8 Marine Fisheries

The State has 6 percent of the coastline and 4.7 percent of the continental shelf area of the country. Among six coastal districts, Puri has the longest coastline of 155 kms and Bhadrak the shortest with 50 kms. About 153.10 TMT of fish were caught from marine sector during 2016-17, of which prawn, catfish and pomfrets are some of the important species. The State has 73 marine fish landing centres. Odisha Maritime Fishing Regulation Act has been implemented in the State to safeguard the coastal water areas of the State. Registration/renewal of trawler licenses and conservation of endangered species of fish and turtles are being taken up. Upgradation works of Paradeep fishing harbour and Balugaon fish landing centre are under progress. In addition, Govt. Shrimp hatcheries at Chandrabhaga in Puri district, Gopalpur in Ganjam district, and 12 other private shrimp hatcheries have been established at different areas of Gopalpur, Konark and Puri. Odisha has a total inland

fishermen population of about 9.10 lakh according to the projected population estimates of 2016. Chilika region has the highest inland fisherman population of 1.49 lakh followed by Ganjam (1.10 lakh), Khurda (0.81 lakh) and Cuttack (0.76 lakh). Out of 10.28 lakh marine fishermen population in the State, Balasore has the highest population of 4.49 lakh followed by Kendrapara (2.65 lakh) and Puri (1.57 lakh) districts by 2016 (projected). Odisha has the highest number of 813 fishing villages among the coastal States. But has fewer fish landing centres (73) as compared to 407 and 353 landing centres in Tamilnadu and Andhra Pradesh.

3.3.9 Fishermen’s Welfare Schemes

There were 1,164 Primary Fishermen Co-operative Societies in the State during 2015-16 consisting of 138,341 members. Some of the ongoing welfare schemes for fishermen implemented during 2016-17 in the State are outlined below.

(a) Accident Insurance Scheme

A sum of Rs. 2.00 lakh has been provided in the event of accidental death or permanent disability and up to Rs. 1 lakh is given in the event of partial disability. Further Rs. 10,000/- is allowed as assistance to fishermen towards hospitalization expenses during serious disease that keeps them out of livelihood activities. In 2015-16 (up to December 2016), 11.50 lakh fishermen have been covered under this scheme with compensation paid of Rs. 23.00 lakh.

(b) On Line Registration of Fishing Vessels and Development of Model Fishermen village

11,338 country crafts, 10,336 motorized crafts and 1,754 mechanized crafts have been registered online, to provide basic civic amenities like houses, drinking water and community hall to eligible fisherman in inland and marine sector by the end of March 2017.

(c) Safety to Marine Fishermen

Out of 297,549 cards received in three phases, 294,191 Biometric Identity Cards and 1,255 numbers of Distress Alert Transmitters (DAT) have been distributed to selected fishermen of the State by 2015-16. It is proposed to procure additional 949 DATs and other safety equipment during 2016-17.

(d) Saving cum Relief and Motorisation of Traditional Crafts

Under saving-cum-relief scheme, 9935 fishermen have deposited their share. However, no funds have been allotted for the

year 2016-17. Besides, 803 traditional crafts have been motorized with a subsidy of Rs.228.45 lakh.

(e) Matsyajibi Basagraha Yojana

The scheme envisages providing pucca houses to the marine fishers under this State Plan scheme with assistance of Rs. 1.30 lakh for IAP and Rs. 1.20 lakh for non-IAP districts. An amount of Rs. 685.50 lakh has been allotted for construction of 553 houses during 2016-17.

(f) Biju Krushak Kalyan Yojana

Under Biju Krushak Kalyan Yojana, health insurance up to Rs.1.00 lakh has been provided to the fishermen families covering 5 members.

(g) Rastriya Krishi Vikash Yojana (RKVY)

Under RKVY programme, livelihood support has been provided to the families affected by natural calamities. Construction of FRP boat/wooden boat /FRP sheathing on wooden boats in marine/ Chilika fishing area have been facilitated with 75 percent subsidy assistance subject to a maximum of Rs. 0.25 lakh is the norm.

3.3.10 Fish Production at National and International level

The total fish production in different States for the period 2011-12 to 2014-15 is shown in Table 3.34. During 2014-15, Andhra Pradesh tops the list with 1798.58 TMT followed by West Bengal and Gujarat; Odisha held 10th position among the States. At the international level, China is the highest fish producing country followed by India, Indonesia, and Peru.

Table 3.34 : Fish Production by major States

(in 000' MT)

States/ Union Territories	2011-12	2012-13	2013-14	2014-15
Andhra Pradesh	1603.17	1808.08	2018.42	1798.58
Gujarat	783.72	788.49	793.42	891.88
Karnataka	546.44	525.57	555.31	613.24
Kerala	693.21	679.74	708.65	726.01
Maharashtra	578.79	586.37	602.68	711.45
Odisha	381.83	410.14	413.89	469.54
Punjab	97.62	99.13	104.02	114.77
Tamil Nadu	611.49	620.40	624.3	697.61
Uttar Pradesh	429.72	449.75	464.47	494.27
West Bengal	1472.05	1490.02	1580.65	1617.32
India	8666.49	9040.36	9578.97	10431.36

Source: Hand Book on Fisheries Statistics, 2011, GOI

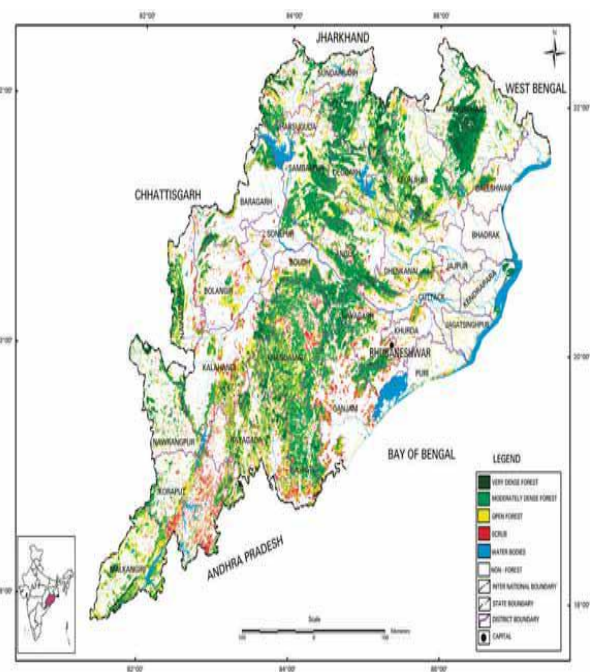
Box 3 : New Initiatives for Fisheries Development

- Modern hygienic pre-fabricated fish retail kiosks named ‘Chilika Fresh’ have been set up at 3 localities in Bhubaneswar where varieties of fresh water, brackish water and marine fish with crab and lobster are being sold. Another 26 retail outlets will be opened in PPP mode within the BMC locality.
- A new Odisha Fisheries Policy, 2015 has been put in place with the objective of increasing the production of fish from inland brackish water and marine resources

3.4. Forestry and Environment in Odisha

The multi-dimensional role of forest and environment is widely acknowledged. The sector maintains ecological balance, reduces impact of natural hazards, checks soil erosion, helps regulate the climate and water resources, serves as the habitat for wildlife, and improves livelihood and food security of rural people – people of indigenous tribes in particular. Policy documents like National Forest Policy 1988, Odisha Forest Sector Vision, 2020 and Joint Forest Management Resolution, 2011, and Odisha Climate Change Action Plan provide guiding principles for forest and environment management in the State.

Forest map of Odisha, SFR, 2015



3.4.1 Forest and Tree Cover

Forest area is assessed by two sources. The first is the Recorded Forest Area (RFA) (also called forest area) that refers to all the geographical area classified as ‘forest’ in government records of the State. The other source, ‘Forest Cover (FC)’ used in State of Forest Report (SFR) of Forest Survey of India (FSI) refers to all lands more than one hectare in area with a tree canopy of more than 10 percent irrespective of land use, ownership and legal status. The FC is captured with tree cover and growing stock data using remote sensing technology. As per RFA, 2016-17 and SFR, 2015, 37.4 percent and 34.9 percent of total geographical area of Odisha remained as ‘forest area’ and ‘forest cover’ respectively. The detailed components of forest area 2016-17 and forest cover 2015 for Odisha are presented in Table 3.35.

Table 3.35 : Forest area and forest cover in Odisha

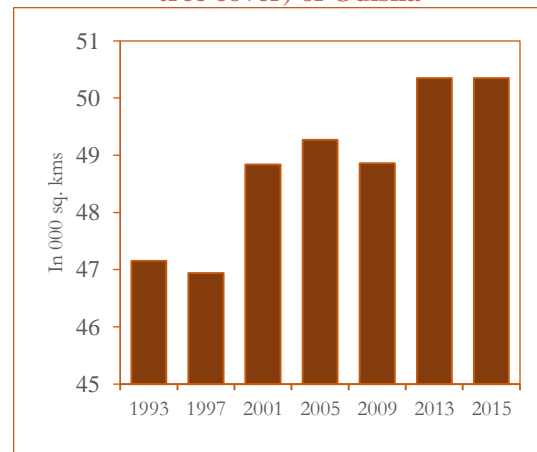
RFA, 2016-17	Area (sq.kms)	FC, 2015	Area (sq.kms)
Geographical area	155707	Geographical area	155707
Reserve forest(RF)	26329.12	VDF	7023
Unclassified forest	20.55	MDF	21470
DPF	11685.68	Open Forest	21861
UDPF	3838.78	Tree cover	3986
Other forest in Revenue Department	16261.34	Total	54340
Total Government forest	58135.47		
Private forest	12.29		

Source: PCCF, Odisha

As per RFA, the total forest area of the State remained unchanged. The State forest area is unevenly distributed among forest types as well

as regions. The coastal districts with high population density have comparatively smaller forest area. Balasore, Bhadrak, Jagatsinghpur, Kendrapara and Puri have less than 10 percent of forest area of the State. On the other hand, 35.6 percent of State forest area remains in five districts: Kandhamal, Sundargarh, Mayurbhanj, Ganjam, and Keonjhar. The actual forest cover of Odisha is assessed by SFR, 2015 as presented in Table 3.35. The actual forest cover (excluding tree cover) of Odisha in 2015 was 50354 sq km, which constitutes 32.34 percent of the State’s geographical area in terms of forest canopy density classes. Thus, the actual forest cover increased by 07 sq km from 2013 to 2015 owing to conservation measures and improvement in mangrove areas and plantation activities by the State Forest Department. The district-wise forest area of 2016-17 is presented in Annexure 3.8.

Figure 3.11 : Actual forest cover (Excluding tree cover) of Odisha



Source: PCCF, Odisha

3.4.2 Forest Area Diversion

Ministry of Environment, Forest and Climate Change, Government of India have allowed for diversion of forest land for non-forestry purposes under Section 2 of Forest

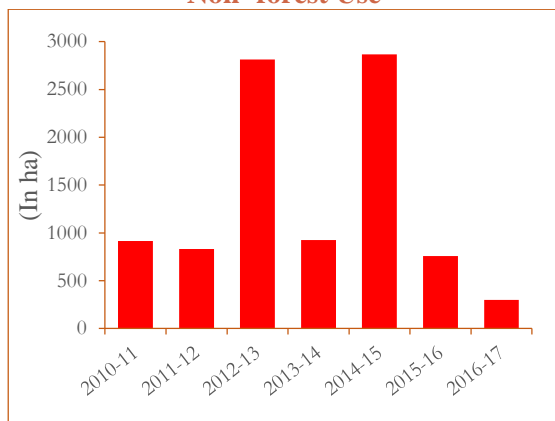
(Conservation) Act, 1980. During 2016-17, about 297.87 ha of forest land has been diverted for 17 developmental projects (05 mining projects and 12 other projects). This diversion of forest area to non-forest use contracted sharply in 2016-17 as compared to a much larger forest area diversion during 2014-15 and 2015-16. So far about 47660.52 ha of land have been diverted for 448 projects under the Forest Act 1980. Similarly, under Diversion of Forest Land under Section 3(2) of Forest Rights Act 2006 about 257.92 ha of land have been diverted for 486 projects. Table 3.36 and Figure 3.12 provide data on the extent of forest area diversion year-wise from 2010-11 to 2016-17.

Table 3.36 : Forest Area Diverted to Non-forest Use (2010-11 to 2016-17)

Year	Number of Projects	Area diverted to non-forest use (in hectare)
2010-11	13	915.95
2011-12	13	831.18
2012-13	10	2813.74
2013-14	18	925.407
2014-15	21	2867.588
2015-16	7	756.001
2016-17	14	297.872

Source: PCCF, Odisha

Figure 3.12 : Diversion of Forest Area to Non-forest Use



Source: PCCF, Odisha

3.4.3 Afforestation Programme

A series of State and Centrally Sponsored afforestation programmes are being implemented in the State to combat the degradation of forest area occurring due to economic and developmental activities. During 2016-17 (as on 28th February 2017) the State achieved 401,452 ha of plantations. Of this, 15358 ha was under Artificial Regeneration (AR) plantation, 127,972 ha under Assisted Natural Regeneration (ANR) with gap plantation, and 258,112 ha under ANR silviculture plantation. Besides, 1010 Running Kilo Metre (RKM) was achieved with planting of 2.53 lakh saplings and planting of 16 lakh saplings under bald hill plantation/ avenue plantation. 333.48 lakh seedlings were distributed and 13.90 lakh seedlings were planted in the urban areas of the State. Under management of plantation 10 lakh seedlings were planted over an area of 665 ha. Similarly, under mangrove plantation, 3.07 lakh and 0.25 lakh seedlings were planted under Compensatory Plantation (CP) and Integrated Coastal Zone Management Project (ICZMP). Under enrichment of plantation, Principal Chief Conservator of Forest and Wild Life (PCCFWL), 0.64 lakh seedlings were planted on 48 ha of land. Besides, Odisha Pollution Control Board has planted about 21.96 lakh saplings over 919.07 hectare of land. The details of the implementation of the afforestation programme during different years are provided in Annexure 3.9.

3.4.4 Forest Protection and Management

With growing population, there has been tremendous pressure on the forests, both for forest produce as well as for forest land. Protection of forests and wildlife has become one of the most important mandates of the government. The forest protection unit comprises of 50 divisions, (37 territorial and 13 wildlife divisions), 283 Ranges, (223 territorial and 60 wildlife Ranges), 1017 sections (827 territorial and 190 wildlife sections) and 3,683 Beats (3,082 territorial and 601 wildlife beats).

Table 3.37 : Details of Forest Offence Cases Detected

Year	Offences detected	Offences involved (nos.)	Timber seized		Vehicles seized
			Quantity (in cum.)	Value on lakhs	
2010-11	62777	53153	2952	219	1591
2011-12	64942	56253	2038	243	961
2012-13	60072	53281	2537	267	2538
2013-14	60299	49404	2680	759	1386
2014-15	59920	54280	4030	274	1726
2015-16	66225	56978	1881	273	747

Source: Forest and Environment Department, Government of Odisha

The following measures have been taken to strengthen forest protection and management of forest and wildlife in Odisha during 2016-17:

1. Set up 199 forest check gates,
2. Deployed 91 forest protection squads, 65 para-forest staff units and 216 fire protection squads.
3. Formed 530 Eco-Development Committees.
4. Operated 500 nos. of VHF stations and 880 nos. of walky-talky.
5. Maintained 5866.50 Kms. of forest road.
6. Constructed 567 culverts and 1224 causeways.
7. Constructed 1121 beat houses, 291 foresters' quarters, 78 range office-cum-residences, forest barracks, and 51 malkhanas.
8. Purchased 91 vehicles, 261 motorcycles purchased for vulnerable areas of the State.
9. Recruited Forest Guards and Foresters to assist two platoons of Odisha Special Striking Force for protection of Berber and Dhaunalli forests.

The details of offence cases detected with timber and vehicles seized are given in Table 3.37.

3.4.5 Production and Revenue Collection from Kendu leaf

Odisha is the third largest producer of kendu leaf (11 percent of the country's production) next to Madhya Pradesh and Chhattisgarh. The annual production of kendu leaf in the State is around 4 to 4.5 lakh quintal. Seventeen districts located at the Western and Southern parts of the State are the main kendu leaf producing districts. During 2016-17, 327 thousand quintals of kendu leaves were collected and 307 thousand quintals were sold with a value of Rs. 725.78 crore. About 150 lakh person-days of employment was generated under different kendu leaf operations. The procurement price of green kendu leaves was enhanced from 35 paise to 60 paise per kerry (i.e., a bundle comprising 20 leaves) from 2014. About 8 lakh pluckers and binders mostly belonging to weaker sections have been covered under Aam Admi Bima Yojana that provides life insurance and disability insurance.

Timber and Bambo

112 timber coupes has been worked out by OFDC Ltd. with felling of 113,684 trees involving a production of 34,680 m³ timber and selling of 54,447 m³ timber with a value of Rs. 118.40 crore during 2016-17. About 30,404 M.T of fire wood has been produced and 2,979 M.T of firewood has been sold with a value of Rs. 12.55 crore. Similarly, during 2016-17, 20,875.43 SU bamboo were produced and 10,084 SU bamboo worth Rs. 4.74 crore has been sold during 2016-17.

3.4.6 Odisha Forest Development Corporation Limited (OFDC)

OFDC aims at securing sustainable and scientific forestry; greening of landscape; meeting people's requirement of timber, firewood and bamboo; promoting forest based industries, and creating employment opportunities. OFDC trades mainly in timber, kendu leaf, bamboo, sal seeds and other non-timber forest produce and supply timber and firewood to the people and industries through its 136 depots. Production and revenue collection from different forest produce during 2016-17 is shown in Table 3.38.

Table 3.38 : Production and Revenue Collection from Forest Products by OFDC

Item	Unit	2014-15			2015-16			2016-17		
		Production	Quantity sold	Revenue Collected (Rs. in crore)	Production	Quantity sold	Revenue Collected (Rs. in crore)	Production	Quantity sold	Revenue Collected (Rs. in crore)
Timber and Timber Product (Round and Swan)	m ³	48170	33047	73.67	60466	45114	96.33	34680	54447	118.40
Fire wood	MT	32367	28306	8.93	32247	33553	11.33	30404	2979	12.55
Bamboo	SU	3964.53	23973	5.45	19151	8507	3.00	20475.43	10084	4.74
Kendu Leaf	Lakh Qtls.	3.96	4.08	390.73	3.76	4.09	554.4	3.27	3.07	725.78
Total output	Rs in crore									861.47

Source: Odisha Forest Development Corporation (Director, Operations)

3.4.7 Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

The scheme is in operation since 2006-07. By the end of 2016-17, afforestation has been done in 17928 hectare. Besides, AR plantation was raised in over 88 hectare and 225 hectare of ANR with gap plantation during the period. During this period, 1.27 lakh saplings have been planted and 1010 RKM avenue plantation has been done.

3.4.8 Odisha Bamboo Development Agency (OBDA)

OBDA has been formed to promote the bamboo sector in the State with special focus on commercial cultivation of bamboo in private land, thereby promoting sustainable livelihood for tribal and rural poor with special emphasis on women empowerment. Since inception of the OBDA in 2006-07 till January 2017, total bamboo plantation has reached over 16,617 ha

(12, 200 ha in government land and 4,417 ha in private land). Moreover, 15,648 farmers were trained and 3,742 bamboo artisans were given skill development training. The major achievements of the OBDA during 2016-17 include:

- Revival of 64 old nurseries.
- Raising of bamboo plantation over 2190 ha of forest area, and 374 ha of non-forest private land.
- Improvement of 619 ha of existing stock in both forest and private land.
- Provision of micro irrigation for 70 ha in farmers' land.
- Organisation of 64 farmers' trainings, 2 artisan training programmes and organisation of 1 bamboo bazaar and 25 domestic trade fairs in Odisha.

3.4.9 State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Odisha

The State CAMPA was constituted during the year 2009 with the objectives of conservation, protection, regeneration and management of existing natural forest, wildlife and their habitats, and raising site specific compensatory afforestation. The State CAMPA has so far formulated 7 Annual Plans of Operation (APO) starting with APO 2009-10. The last APO was formulated during 2015-16. The CAMPA annual plan operation 2016-17 was implemented with financial outlay of Rs. 540.43 crore. Highlights under APO during 2016-17 are as follows:

- Regeneration of degraded bamboo forests over 150,000 ha

- 2nd year maintenance of bamboo plantation on 10,088 ha, bald hill plantation on 1,000 ha and ANR on 1,471 ha
- 3rd year maintenance of bamboo plantation on 13,656 ha and ANR on 43,640 ha
- APO for ANR plantation over 100,000 ha and bald hill plantation over 1,000 ha
- Site specific compensatory plantation, penal compensatory afforestation etc. over 3,026.49 ha under block and ANR interventions.
- Development of 791 sites of sacred groves.
- Completion of residual work of mega nursery and permanent nursery.
- Completion of 20 ACF quarters, 35 Range Officers' residence, 70 Foresters' quarters, construction of forest roads (336 kms) culverts and causeways.
- Forest protection for 32 vulnerable sites.

3.4.10 New Schemes

i) e- Green Watch

Web-based monitoring portal e-Green Watch has been launched for monitoring and evaluation of all activities undertaken out of CAMPA funds in the State which are geo-referenced and uploaded into the portal.

ii) Ama Jungle Yojana (AJY)

The Ama Jungle Yojana (AJY) has been launched with the objective of forest restoration, promotion, participatory forest management and improving livelihood of forest communities. The scheme is being

implemented by Odisha Forestry Sector Development Society (OFSDS) which will cover 7000 VSS and Eco-development Committees during 6 years period from 2016-17 to 2021-22. It will include activities such as survey, demarcation, preparation of micro plan, capacity building of VSS, restoration of degraded forest, soil and moisture conservation works, and construction of community buildings etc. The total outlay of the scheme is Rs. 1170.03 crore. AJY scheme has so far received Rs. 62.22 crore from the State Government that includes Rs.41.02 crore from CAMP and Rs 21.20 crore from State plan. By end of June 2017, Rs 59.75 crore has been allocated for expenditure at PMU and DUM levels.

iii) Ekamravan at Bindusagar

Ekamravan literally meaning one-mango-tree forest has been developed and maintained by city forest division, Bhubaneswar. It is situated on the western bank of the Bindusagar Lake adjoining the ancient Lingaraj Temple in the capital city Bhubaneswar. In this garden, medicinal plants have been exhibited amidst laterite and sandstone masonry of aesthetic and heritage design. The nursery established in Ekamravan is offering 60 varieties of medicinal plants.

iv) State Medicinal Plant Board

The State Medicinal Plant Board has taken up the following activities during 2016-17.

- Created awareness on conservation, use, cultivation and marketing of medicinal plants.

- Conducted state and regional level Kalinga Herbal Fairs at Rairangpur , Bhawanipatna, Berhampur, Rourkela and Nawarangpur.
- Raising of free Home Herbal Garden will be provided support under 5 forest divisions of Berhampur, Balasore (WL), Rourkela, Ghumsur (N) and City forest division.
- Maintenance of medicinal plant garden over an area of two acres in Bhanjabihar University by Berhampur Division.

GAGAN enabled GPS PDA SYSTEM

The Gagan system established during August 2016 with enabled GPS will help in uploading the geotagged photographs in the web portal www.odishaforestgis.in. The capture details are also shown over bing map, bhubhan maps, google maps for GIS queries and analysis. Application software like forest patrolling, incident repairing, and project area have been developed under the system.

3.4.11 Odisha Biodiversity Board (OBB)

Odisha Biodiversity Board (OBB), functioning since 2009 in Odisha under the legal provision of Biological Diversity Act 2002, envisages conservation of biodiversity, sustainable use of its components and fair and equitable sharing of benefits arising out of use of biological resources and associated traditional knowledge.

3.4.12 Wildlife, Ecology and Environment Wildlife Organisation:

The State Government is committed to protection, conservation, and management of wildlife and their habitat within and outside the protected areas of the State.

(a) Wild Life Sanctuaries and National Parks

The total protected area in the State is 8352.19 Sq. Kms. which constitutes 5.36 percent of the total geographical area. There are nineteen wildlife sanctuaries, one national park at 'Bhitarkanika', one wildlife sanctuary at Kapilas in Dhenkanal district, One Zoological Park at Nandankanan, one proposed National Park, 2 Tiger Reserves, one proposed Tiger Reserve, 3 Elephant Reserves and one Biosphere Reserve in the State for protection and conservation of wildlife, apart from 8 mini Zoos. Similipal will be declared as a national park very soon. Similipal has dense forests and hills and is home to a wide variety of wild animals, reptiles and birds. Bhitarkanika is a wetland and one of India's finest coastal ecosystems. It has rich mangrove area on the deltaic region of the river Brahmani and Baitarani and is crisscrossed by creeks and rivulets. After Sundarbans, it is home to the second largest mangrove "forest" in India. UNESCO has bestowed the world heritage status to Bhitarkanika.

(b) Tigers and Elephants

Odisha has two "notified" tiger reserves; the Similipal Tiger Reserve (2750 sq. km.) in Mayurbhanj district and the Satakosia Tiger Reserve (963.57 sq. km.) in Angul district. With the help of the Camera Trap method introduced by National Tiger Conservation Authority (NTCA) and Wild Life Institute of India (WLI), scientists calculated the presence of 45 tigers during January 2006 to February 2008. This number has come down to 28 in the census undertaken during 2014-15 which further increased to 40 during 2015-16. Leopard population in the State was recorded at

318. There are 3 Elephant Reserves in the State, located in Mayurbhanj, Mahanadi and Sambalpur with an area of 7,043.74 sq. km., 1,038.30 sq. km. and 426.91 sq. km. respectively. Elephant population during 2010-11 was 1886, which increased to 1,930 during 2012-13; in 2014-15 it is recorded as 1,954.

(c) Turtles

The mass nesting sites of Olive Ridley Sea Turtles are located at Gahiramatha Sanctuary. During 2016-17 nesting season, 9.75 lakh Olive Ridley Sea Turtles visited Odisha coast for mass nesting as against 0.52 lakh in 2015-16. At Rusikulya River mouth 3.71 lakh turtles nested in the year 2016-17. The State Government is giving top priority for the safety of these turtles. Under Integrated Coastal Zone Management Project, 10 river squads at Bhitarkanika and 2 patrolling boats at Rushikulya have been engaged for protection of Olive Ridley Sea Turtles.

(d) Migratory Birds

The winter welcomes many avian guests to Chilika, Bhitarkanika, Hirakud Reservoir and other water spread areas in the State. Chilika lagoon received over 9.24 lakh birds of 100 different species during 2016-17 against 8.39 lakh birds of 94 species during 2015-16. The island named Nalabana inside Chilika lagoon is an abode of avifauna and becomes a paradise for the migratory birds in winter. Bhitarkanika mangrove forest also received 0.76 lakh birds of 109 species and Hirakud Reservoir received 0.78 lakh birds of 57 species during 2016-17. Different wildlife species in the forests of Odisha for the year 2010-11 to 2015-16 has been depicted in Annexure 3.10.

3.4.13 Man Animal Conflict

Accelerated developmental activities and promotional aspects of industries added with biotic pressure has created a challenge for protection of wild life and its habitat; as a result human and wild life conflicts occur quite often. Man-animal conflict has been an increasing concern for Odisha in recent years. Depletion of dense forest areas has led to life and food insecurity of wild animals, elephants to be specific. Death and injury of people and domestic animals, mass damages of houses and crop areas by elephants and other wild animals have risen causing serious concern. During 2016-17, 85 persons were killed, 46 persons were injured, 4 cattle killed, and 800 houses and 11,211 ha crop areas were damaged due to elephant attacks mostly in forests and forest adjacent villages /towns of the State. Further, 18 people died, 165 injured and 17 cattle died because of other wild animal attacks during the year. The number of human deaths and injuries and house and crop area damage due to elephant attacks have decreased as compared to the last year. State Government had paid compensation amount of Rs. 1636 lakh to the victims of elephants and other wild animals' attacks and for damages to houses and crop areas of the State during 2016-17.

In order to minimize this conflict and to protect the life and property of human beings, the following steps have been taken up:

- Relocation from villages like Kabatghai, Jamunagarh, and Kiajhari of Similipal was a milestone achievement.
- Developed eco-tourism facility at 30 locations for increasing tourists for nature education; for protection and conservation of forest and wildlife with the help of local people, constituted 512 Eco-Development Committees.

- To provide protection to our coasts and for conservation and development of the mangrove ecosystem, raised 75 ha of mangrove plantation.
- Developed 665 ha of meadows to provide palatable grasses for ungulate species.
- Deployed 494 anti-poaching/ elephant squad at strategic locations for prevention of poaching of wild animals.
- Deployed 145 nos. of anti-depredation squads.
- Deployed 112 member Special Tiger Protection Force (STPF) for exclusive protection of Similipal forest.
- Engaged 169 fire-fighting squads.
- Established 5 offshore and 55 on-shore camps during 2016-17 in 6 Coastal Divisions of the State.
- Engaged 10 river squads at Bhitarkanika and 2 patrolling boats at Rushikulya for protection of Olive Ridley turtles.

State Pollution Control Board (SPCB)

The SPCB ensures the implementation of the Environmental Acts, particularly the Water (Prevention and Control of Pollution) Cess Act, 1977, Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986. In addition, the Board implements the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008; the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; the Bio-medical Waste (Management and Handling) Rules 1988, the Batteries (Management & Handling) Rules, 2001 and the Plastic Waste (Management and Handling) Rules 2016, the e-

waste (Management and Handling) Rules 2011, and other pollution controlling rules and regulations. The achievements of SPCB during 2016-17 are given below:

- Granted consent with stipulation of appropriate pollution control measures to 906 industries, hotels, and brick kilns and DG sets (as standby) etc. and also provided consent to operate to 2,780 industries, mines, hotels, mineral processing units etc.
- Issued 497 show cause notices, 290 refusals, and 92 closure directions to defaulting units.
- Conducted 30 public hearings for major industrial/ mining/ development projects for environmental clearance from Government of India.
- Collected and analysed waste water samples from 3,458 industrial units, 1,251 stack emissions, 2,217 ambient air samples and 18 solid waste samples from different industrial premises.
- Granted authorization to 95 hazardous waste generating units under the Hazardous Waste Rules 2008, for collection, storage, treatment and disposal of hazardous wastes.
- Implementation of GPRS based real time data transmission system with Y-Cable for online monitoring and transmission system in 139 industries and 22 mines.
- Setting up of the Fly Ash Resource Centre (FRC) in SPCB for safe management and utilisation.
- Granted authorization to 868 health care establishments under provision of the bio-

medical (Management and handling) Rule, 1998 and also issued show cause notices to 348 units for inadequate management of bio-medical wastes and refusal of authorization to 50 HCEs issued for improper management of Bio-medical wastes.

- Under the municipal solid waste (M & H) Rules 2000, authorization granted to 32 number of ULBs. 11 notices have been issued to the ULBs for non-compliance with the above Rules.
- World Environment Day, International Coastal Clean-up Day and National Pollution Prevention Day were observed to create awareness on environmental protection among the public. During Diwali and Holi festivals, greater awareness has been created on air pollution, noise pollution and use of natural colours in order to maintain safe habitable conditions. A series of trainings were imparted to officials of medical institutions, treasury, engineering, police personnel etc. on pollution control and environmental protection.

The Odisha State Coastal Zone Management Authority (OCZMA)

OCZMA, constituted by Government of India, is meant for protecting and improving the quality of coastal environment and preventing, abating and controlling environment pollution on the coastal areas. Chilika Development Authority being one of the PEAs. ICZM project for Odisha is undertaking a five year project entitled "Strengthening of Wetland Research and Training Centre and Species Research" with total budget outlay of Rs. 2801.60 lakh that started from 2010-11 which has been

further extended up to December 2017. During the year 2016-17, an amount of Rs.110.61 lakh has been spent under the project. The important activities undertaken are as follows:

- Upgradation of Wetlands Research and Training Centre (WRTC) to a State of the art lab equipped with all modern research facility for wetland research.
- Installation of sensor mounted floating data buoys at 10 strategic locations for transmission of water quality on real time basis at 15 min. interval to the CDA laboratory at Chilika.
- Preparation of Tourism Master Plan for Chilika Lake.

Chilika Development Authority (CDA)

Chilika is one of the important hotspots of biodiversity. It shelters a number of endangered species and migratory birds. The highly productive eco-system with its rich fishery resources sustains the livelihood of more than 0.2 million fisher folk living in and around the lagoon. Some of the important ongoing restoration activities taken up during 2016-17 include: (i) Participatory Watershed Management, (ii) Water exchange and salinity gradient of de-siltation in Chilika lake, (iii) Bio-diversity conservation and wise use of natural resources, (iv) Fishery resource development, (v) Strengthening of wetland research and training centre, and (vii) Socio-economic development and restoration, and sustainable management of Ansupa lake with funds support of Government of India (MoEF & CC).

3.4.14 Climate Change Action Plan

Odisha was a leading State that formulated State Climate Change Action Plan way back in 2010. Now, the State Government is earnestly implementing the Climate Change Action Plan. Forest and Environment Department is the nodal department for coordinating the implementation of various activities envisaged under State Climate Change Action Plan. A Climate Change Cell has been constituted for interfacing with other departments, stakeholders and external agencies for implementation of key and prioritized activities.

The following activities have been carried out during the year 2016-17:

- “Conserve water through the management of runoff in the river basin to reduce vulnerability and enhance resilience for traditional livelihood in Nuapada district” under the National Adaption Fund on Climate Change.
- “Ground water recharge and solar micro irrigation to ensure food security and enhance resilience in vulnerable tribal area of Odisha” under Green Climate Fund.
- Demonstration project on Remote Village Electrification and installation of solar water pump in Khordha district.
- Draft Report of the “Odisha State Climate Change Action Plan 2015-20” has been prepared and public opinion has been sought.

3.4.15 Awards

The State Government have awarded 217 Prakruti Mitra and Prakruti Bandhu during 2016-17 on World Environment Day 2016. State Forestry Awards and “Biju Pattnaik Award for Wildlife Conservation”, are being given for outstanding contribution in the field of afforestation, plantation and wildlife conservation in the State

Annexure 3.1 : Cropping Pattern in Odisha

(Area in 000 hectare)

Crops	2014-15		2015-16		2016-17	
	Area	percent to Total	Area	percent to Total	Area	percent to Total
(A) Cereals						
Rice	4166	73.92	3942	75.31	3963	60.55
Wheat	1	0.02	0.3	0.01	0.06	0.00
Maize	92	1.63	55	1.05	72	1.10
Ragi	51	0.90	46	0.88	47	0.72
Others	30	0.53	34	0.65	35	0.53
Total (A) Cereals	4340	77.00	4077	77.90	4117	62.90
(B) Pulses						
Gram	47	0.83	39	0.75	40	0.61
Arhar	138	2.45	138	2.64	136	2.08
Other pulses	641	11.37	598	11.42	1811	27.67
Total (B) Pulses	826	14.66	775	14.81	1987	30.36
Total Food grains (A+B)	5166	91.66	4852	92.70	6104	93.26
(C) Oilseeds						
Groundnut	49	0.87	51	0.97	45	0.69
Sesamum	26	0.46	20	0.38	16	0.24
Nizer and mustard	10	0.18	7	0.13	25	0.38
Caster seeds	11	0.20	11	0.21	9	0.14
Others	116	2.06	48	0.92	98	1.50
Total (C) Oil seeds	212	3.76	137	2.62	193	2.95
(D) Fibres						
Cotton	127	2.25	125	2.39	136	2.07
Jute	1	0.02	1	0.02	1.00	0.01
Other fibers	17	0.30	14	0.27	11	0.17
Total (D) Fibres	145	2.57	140	2.67	147	2.25
(E) Other crops						
Sugarcane	10	0.18	9	0.17	5	0.08
Tobacco	2	0.04	1	0.02	1	0.02
Potato	8	0.14	6	0.11	6	0.09
Chillies	76	1.35	72	1.38	72	1.10
Ginger	17	0.30	17	0.32	17	0.26
Total (E) other crops	113	2.00	105	2.01	101	1.54
Grand Total (A+B+C+D+E)	5636	100.00	5234.3	100	6545	100

Source : Directorate of Agriculture and Food Production, Odisha, Directorate of E and S, Odisha, Directorate of Horticulture, Odisha

Annexure 3.2 : Production of Major crop in Odisha

(in 000'MT)

Crop	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Rice	5807	9497	7613	9845	5875	9794
Maize	212	227	264	188	111	205
Other Cereals	50	62	64	55	47	47
Total (A) Cereals	6069	9786	7941	10088	6033	10046
Tur	115	128	124	124	123	120
Other Pulses	132	296	295	315	262	804
Total (B) Pulses	247	424	419	439	385	924
Total Food grains(A+B)	6316	10210	8360	10527	6418	10970
Groundnut	79	82	87	62	56	55
Other oilseeds	87	182	83	80	41	63
Total (C) Oilseeds	166	264	170	142	97	118
Cotton	231	336	299	316	298	382
Other fibers	120	98	98	87	68	26
Total (D) Fibers	351	434	397	403	366	408
Sugarcane	885	952	937	723	577	344
Potato	63	65	71	104	57	82
Other crop	75	75	75	74	70	70
Ginger	135	134	134	133	128	128
Total (E) Other crops	1158	1226	1217	1034	832	624
Grand Total (A+B+C+D+E)	7991	12134	10144	12106	7713	12120

Source: Directorate of Agriculture and Food Production, Odisha, Directorate of Economics and Statistics, Odisha, Directorate of Horticulture, Odisha.

Annexure 3.3 : Production of Food grains across States 2015-16

(Area in million hectare, production in million tonnes, and yield rate in Kg/hect.)

State	Area	Percentage to all India	Production	Percentage to all India	Yield
Uttar Pradesh	19.32	15.75	44.01	17.45	2278
Madhya Pradesh	13.62	12.73	30.21	11.98	1935
Punjab	6.65	5.42	28.41	11.26	4273
Rajasthan	12.99	10.59	18.10	7.18	1393
West Bengal	6.39	5.21	17.78	7.05	2783
Haryana	4.47	3.64	16.38	6.50	3665
Bihar	6.00	5.38	14.10	5.59	2135
Tamilnadu	3.86	3.15	11.94	4.73	3090
Andhrapradesh	4.14	3.37	10.57	4.19	2555
Karnatak	7.16	5.84	9.97	3.95	1393
Maharashtra	10.12	8.25	8.07	3.20	797
Chhatisgarh	4.99	4.07	6.96	2.76	1395
Odisha	4.85	3.95	6.35	2.52	1310
Gujarat	3.16	2.58	6.23	2.47	1976
Assam	2.68	2.19	5.35	2.12	1995
Telengana	2.19	1.78	5.03	1.99	2300
Jharkhand	2.65	2.16	4.09	1.62	1544
Uttarakhand	0.88	0.72	1.73	0.68	1967
Others	3.42	2.79	6.71	2.66	-
India	122.65	100.00	252.22	100.00	2056

Annexure 3.4 : Cropping Intensity across major States

State	2010-11	2011-12	2012-13	2013-14
Punjab	189.6	191.2	189.6	189.3
West Bengal	177.3	179.9	185.9	183.8
Haryana	184.9	184.7	181.5	-
Tripura	-	-	-	150.0
Uttar Pradesh	154.4	156.0	155.9	156.5
Odisha	158.4	166.3	167.0	167
Kerala	127.8	130.5	126.5	-
Bihar	136.8	141.7	144.0	-
Madhya Pradesh	145.8	147.8	150.7	-
Maharashtra	133.1	126.6	126.1	134.3
Assam	148.0	148.5	149.3	-
Rajasthan	141.7	135.9	137.0	143.0
Andhra Pradesh	129.7	123.3	122.8	-
Gujarat	118.9	127.1	122.3	-
Jharkhand	115.1	114.4	117.9	-
Chhattisgarh	120.8	121.1	121.8	-
Tamil Nadu	116.1	118.1	113.1	125.1
Karnataka	124.1	121.3	120.0	-
Nagaland	-	-	-	131.2
Meghalaya	-	-	-	120.0
Manipur	-	-	-	100.0
Mizoram	-	-	-	100.0
Sikkim	-	-	-	190.5
Uttar Pradesh	-	-	-	156.5
All-India	2422.5	2434.4	2431.4	1688.7

Source : *Agricultural Statistics at a Glance Ministry of Agriculture, 2015,*
Odisha figure from Directorate of Agril. and Food Production, Odisha

Annexure 3.5 : State-wise Milk Production

(in 000 MT)

State	2010-11	2011-12	2012-13	2013-14	2014-15
Andhra Pradesh	11203	12088	12762	13007	9656
Assam	790	796	800	815	829
Bihar	6517	6643	6845	7197	7775
Gujarat	9321	9817	10315	11112	11691
Haryana	6267	6661	7040	7442	7901
Himachal Pradesh	1102	1120	1139	1151	1172
J and K	1609	1614	1631	1615	1951
Karnataka	5114	5447	5718	5997	6121
Kerala	2645	2716	2791	2655	2711
Madhya Pradesh	7514	8149	8838	9599	10779
Maharashtra	8044	8469	8734	9089	4542
Odisha	1671	1718	1724	1861	1903
Punjab	9423	9551	9714	10011	10351
Rajasthan	13234	13512	13946	14573	16934
Tamil Nadu	6831	6968	7005	7049	7132
Uttar Pradesh	21031	22556	23330	24193	25198
West Bengal	4471	4672	4859	4906	4961
Chhattisgarh	1029	1119	1164	1209	1232
Uttaranchal	1383	1417	1478	1550	1565
Jharkhand	1555	1745	1679	1700	1734
All India	121844	127899	132431	137686	146314

Source: Department of Animal Husbandry, Dairying and Fishing, Ministry of Agriculture, GoI

Annexure 3.6 : Milk and Egg Production in Districts

Districts	2015-16		2016-17	
	Milk (000' MT)	Egg (Mil. Nos.)	Milk (000' MT)	Egg (Mil. Nos.)
Angul	45.4	23.58	46.86	22.66
Balasore	164.52	84.19	162.03	95.46
Bargarh	82.73	85.45	79.49	58.18
Baudh	22.54	16.86	24.37	14.69
Bhadrak	43.18	23.65	45.29	19
Bolangir	83.27	195.95	79.33	220.25
Cuttack	202.05	59.88	204.74	76.21
Deogarh	13.74	11.89	14.43	9.8
Dhenkanal	70.71	57.55	73.32	50.5
Gajapati	33.13	21.55	33.96	24.85
Ganjam	120.04	463.73	120.77	485.22
Jagatsinghpur	113.22	30.86	120.21	26.39
Jajpur	105.94	25.25	102.28	20.4
Jharsuguda	14.68	13.03	16.7	10.43
Kalahandi	56.53	85.3	54.61	79.85
Kandhamal	19.12	20.97	26.58	15.2
Kendrapara	69.31	23.93	76.66	26.2
Keonjhar	46.88	37.34	42.38	28.33
Khurda	85.31	137.55	100.29	184.64
Koraput	49.96	54.9	62.5	54.51
Malkangiri	34.36	41.92	35.27	37
Mayurbhanj	91.59	163.42	95.77	157.56
Nawarangpur	17.8	20.31	24.4	13.68
Nayagarh	27.45	17.05	28.82	31.41
Nuapada	35.4	24.9	33.23	14.4
Puri	121.08	35.59	123.58	30
Rayagada	46.14	31.7	43.4	45.5
Sambalpur	33.01	34.83	36.42	34.22
Sonepur	38.13	18.65	36.4	28.93
Sundargarh	50.78	61.55	57.92	59
State Total	1938.26	1927.33	2002	1974.47

Source: Directorate A.H.V.S, Odisha

Annexure 3.7 : Veterinary Institutions and Personnel in Odisha, 2016-17

(in No.)

District	Veterinary Hospitals/ Dispensaries	Live Stock Aid Centres	LACs doing A.I.	A.I Centres (A.H. Deptt.)	A.I Centres (Others)	No. of Veterinary Doctors in position	No. of L.I.in position
Angul	16	117	117	92	73	16	40
Balasore	21	163	163	129	128	30	87
Bargarh	19	152	152	124	186	20	69
Bhadrak	13	129	129	88	145	19	65
Balangir	21	157	157	135	61	33	78
Boudh	7	39	39	28	53	8	19
Cuttack	26	224	224	184	259	68	111
Deogarh	4	33	33	20	8	4	9
Dhenkanal	18	112	112	102	69	21	57
Gajapati	11	70	70	47	19	7	24
Ganjam	38	306	306	244	87	50	105
Jagatsinghpur	13	120	120	100	207	19	56
Jajpur	18	153	153	112	108	21	60
Jharsuguda	9	44	44	38	9	8	14
Kalahandi	21	152	152	125	105	20	114
Kandhamal	20	106	106	62	0	23	56
Kendrapara	14	116	116	73	119	22	49
Keonjhar	22	155	155	122	69	31	70
Khurda	20	129	129	111	51	50	69
Koraput	25	159	159	117	126	26	116
Malkangiri	13	79	79	33	64	10	52
Mayurbhanj	42	223	223	186	125	60	100
Nawarangpur	17	94	94	71	74	14	48
Nayagarh	16	97	97	73	43	21	62
Nuapada	8	62	62	51	45	7	35
Puri	15	179	179	128	252	22	97
Rayagada	16	122	122	100	45	21	71
Sambalpur	18	144	144	115	44	28	66
Sonepur	10	49	49	47	50	11	29
Sundargarh	30	154	154	128	65	33	46
ODISHA	541	3839	3839	2985	2689	723	1874

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

Annexure 3.8 : District wise Forest Area of 2016-17

(in Sq. KM)

Name of the District	Geographical Area	Total Forest Area	Forest land under control of Forest Department				
			Reserve Forest	Unclassified Forest*	Demarcated Protected Forest (DPF)	Undemarcated Protected Forest	Other forests under Revenue Deptt.
Angul	6375	2716.82	1760.76	1.15	273.21	11.99	669.71
Balangir	6575	1543.85	1105.68	0.14	3.63	0	434.4
Balasore	3806	332.21	202.69	0.19	21.54	0	107.79
Bargarh	5837	1216.13	583.52	0.13	451.19	0	181.29
Bhadrak	2505	97.07	0	0.01	3.96	32.98	60.12
Boudh	3098	1277.17	983.33	1.02	43.48	0	249.34
Cuttack	3932	787.9	522.39	0.45	101.41	0	163.65
Deogarh	2940	1560.22	578.4	0.04	243.86	0	737.92
Dhenkanal	4452	1737.6	1141.02	0.04	13.78	0	582.78
Gajapati	4325	2469.01	416.89	0.13	108.15	1149.44	794.4
Ganjam	8206	3149.9	1485.69	0.86	143.54	1167.36	352.45
Jagatsinghpur	1668	132.92	1.23	0.02	4.77	83.06	43.84
Jajpur	2899	725.27	6.35	0.01	299.32	0	419.59
Jharsuguda	2081	202.44	35.53	0.04	109.97	0	56.9
Kalahandi	7920	2538.01	1449.03	0.54	488.51	313.37	286.56
Kandhamal	8021	5709.83	2010.06	2.00	1783.3	0	1914.47
Kendrapara	2644	248.05	14.49	4.50	127.57	62.32	39.17
Keonjhar	8303	3097.18	1834.09	0.26	273.64	220.79	768.4
Khurda	2813	618.67	298.81	0.68	209.87	0	109.31
Koraput	8807	1879.53	478.86	0.68	984.58	0	415.41
Malkangiri	5791	3355.88	352.44	0.30	940.61	661.92	1400.61
Mayurbhanj	10418	4392.13	3330.14	2.20	245.06	0	814.73
Nuapada	3852	1849.69	0	0.44	1504.00	0	345.25
Nayagarh	3890	2080.97	1301.99	0.25	188.03	135.58	455.12
Nawarangpur	5291	2462.73	535.34	0.07	685.77	0	1241.55
Puri	3479	137.1	15.66	0.51	85.88	0	35.05
Rayagada	7073	2812.33	771.62	0.96	1147.19	0	892.56
Sambalpur	6657	3631.77	2151.71	1.18	363.01	0	1115.87
Sonepur	2337	415.75	309.52	0.03	0	0	106.20
Sundargarh	9712	4957.32	2651.88	1.72	836.85	0	1466.87
Odisha	155707	58135.47	26329.12	20.55	11685.68	3838.81	16261.31

Annexure 3.9 : Achievements under Different Afforestation Programme, 2010-11 to 2016-17

(Area covered in hectare)

Programme	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Economic Plantation	1800	2000	2050	2100	2300	2300	2268
Compensatory Afforestation	4285	4188	4325	2114	5464	10741.6	4076.40
National Afforestation Programme through FDA,s	2784	2240	2083	1875	4910	4590	1975
Odisha Forestry Sector Development Project	78220	25745	13677	3410	14247	-	2341
Industrial Plantation	290	55	12	-	-	-	0
National Bamboo Mission/OBDA/Plantation @50 plants per hectare/regeneration of bamboo degraded forest 2015-16	1040	1023	2083	1545	2915	16396	123441
NREGS and Other Schemes	9543	146935	83057	93889	169055	28354	17928
Bald hill plantation /OEMF/CAMPA	-	-	-	-	-	-	2120
Management of Plantation and Forests (IWP/OWP)	-	-	-	-	-	-	2109
CSR(founded by M/s OMC Ltd.)	-	-	-	-	-	-	625
JBP plantation OEMF	-	-	-	-	-	-	755.50
Green India Mission	-	-	-	-	-	-	2070
Plantation of forest species in private land	-	-	-	-	-	-	387
Enrichment of plantation (PCCF WL)	-	-	-	-	-	-	40
Odisha Pollution Control Board	-	-	-	-	-	-	919.07
RWC in the coupe of 2016-17	-	-	-	-	-	-	93101
OMBADC	-	-	-	-	-	-	1938
SSO(T) of 2013-14,2014-15,2015-16	-	-	-	-	-	-	145168
Mangrove plantation(CP/ICZMP)	-	-	-	-	-	-	90
Grand Total	97962	182186	107287	104933	198891	62381.6	401351.97

Source : PCCF, Odisha

Annexure 3.10 : Wildlife Census in Odisha

Sl. No.	Species	Census and Site	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	Salt water	Bhitarkanika	1670	1659	1661	1655	1678	1683	1694
2	Mugger Crocodile	Satkoshia/Mahanadi	91	81	76	90	86	103	86
		Similipal Tiger Reserve	85	82	80	79	81	79	77
		Ghodahada Reservoir, Digapahandi, Ganjam	-	40	48	46	49	55	55
3	Gharial	Mahanadi river system	03	6	6	02	01	03	9
4	Olive Ridley sea turtle	Gahirmatha (in lakh)	4.72 lakh	1.68 lakhs	4.06	-	4.13 lakh	0.52	6.04 lakh
		Rushikulya river mouth (in lakh)	2.52 lakh	4.01 lakhs	2.88	0.60	3.09 lakh	0	3.71 lakh
		Total (lakh no.)	7.24	5.69	6.94	0.60	7.22 lakh	0.52	9.75 lakh
5	Irrawaddy Dolphin	Chilika lagoon	156	145	152	158	144	-	121
	Bottle nose	Chilika lagoon							13
6	Dolphin	7 species					450	450	257
7	Blackbuck	Balukhand- Konark Wildlife Sanctuary	34	13	22	-	3806	-	-
		Balipadar- Bhetnoi area in Ganjam District	2181	-	-	-	-	-	-
8	Elephant	Entire State	1886	1930	1930		1954	1954	-
9	Tiger	Entire State	32	-	-		28	40	-
10	Leopard	Entire State	-	-	-	-	-	318	-
11	Migratory Birds	Chilka lagoon	7.92 lakh 103 species	8.68 lakhs 106 species	8.62 lakh 112 species	7.07 lakh 99 species	7.46 Lakh 102 species	8.39 lakhs 94 species	9.24 lakhs 100 species
		Bhitarkanika Mangrove Wetland	0.53 lakhs 107 species	0.53 lakhs 118 species	0.82 lakh 111 species	0.67 lakh 142 species	1.13 lakh 145 species	1.06 lakh 131 species	0.76 lakh 109 Species
		Hirakud reservoir	0.11 lakh 34 species	0.47 lakh 52 species	N.A	0.64 lakh 54 species	0.58 lakh 64 species	0.96 lakh 60 species	0.78 lakh 57 species

Source : PCCF Wild Life

Industry Sector



The fast growing industrial sector of Odisha has increased the visibility of the State at national and international level and the State has emerged as a major destination for industrial units. The Government, armed with a proactive industrial policy, focuses on providing institutional infrastructure and need-based fiscal incentives to consolidate and reinforce the industrialization process in the State. The thrust of public policy is on environmentally suitable industrialization, with generation of maximum employment opportunity and augmentation of State revenue. The contribution of manufacturing and mining sector to State's GSDP has been a sizable 16.23 percent and 7.72 percent respectively during 2017-18. The State having been bestowed with a rich stock of minerals, occupies a prominent place in the mineral map of the country. Assured availability and proximity of mineral resources play an important role in giving a competitive edge to the State's industrial units. A series of revised and new orientation IPRs between 1980 and 2015; post economic reforms in 1990s; rise in domestic demand for industrial products; favourable investment destination for outside State large industrial houses due to rich stock of minerals, water and energy resources and State's policy decisions etc. steered the industrialization process in Odisha. The State Government has developed viable strategies to make industry sector efficient and competitive with the accelerated support of technological, infrastructural, institutional and entrepreneurial skill development. This would enable the State of Odisha to compete in the domestic market as well as capture international markets with its industrial products. Industrialization is crucial not only for income redistribution but also for people's attitude towards self-reliance. The new regime of national level industrial reform includes measures such as Make in India programme; E-Biz project by launching of Government to Business (G2B) portal; new Ministry of Skill Development and Entrepreneurship; streamlining of environment and forest clearances, and labour sector reform through new Shram Suvidha portal. Besides, a number of technological interventions have been carried out as part of improving Ease of Doing Business such as Go-i PLUS, Single Sign On(SSO), CICG, APAA, and e-Subidha, which expect to instil confidence among business community and boost industrial growth in the State.

Introduction

Industrial development is one of the major components of economic development of the State. To promote industrialization, the State Government have adopted strategic initiatives based on policy intervention, creation of infrastructure, investment promotion and business rule simplification. To make Odisha an attractive investment destination and diversify industrial growth with identified focus sectors, the Department has notified a new Industrial Policy 2015 to facilitate the development of more Special Economic Zones (SEZ). Besides, to ensure investment in the focus sectors, the Department is assisting with the formulation of policies such as Pharmaceutical Policy, Start-up Policy, and Apparel Policy. The Department has brought out the Odisha Industrial Development Plan (OIDP) with an objective to transform Odisha over 10 years into a major industrial State in the country by harnessing its strategic advantages in the area of infrastructure, location, natural resources and skilled manpower. The plan aims at creation of additional twenty lakh jobs with an investment of about ₹2.5 lakh crore in the five focus sectors by the year 2025.

Manufacturing, and mining & quarrying sub-sectors play a decisive role in the growth trajectory of the industry sector in Odisha. The average sectoral (both sub-sectors together) share and growth rate of GSDP in the industry sector in Odisha between 2011-12 and 2017-18 remain 38.36 percent and 6.06 percent respectively. The industry sector has become

the employment provider for more than 12 lakh persons (both skilled and unskilled) in the State. The strong institutional base with PSEs, IPICOL, IDCO, KVIB, Cooperatives, etc. facilitates good governance, production, management, operation and marketing of industrial products. Odisha has become a leading investment destination for outside-State key industrial players owing to the advantages inherent in the rich mineral reserves, high industrial growth trajectory, effective single window system, competitive power tariff, political will and stability, availability of industrial manpower, and development of road and communications, to make Odisha the eastern gateway to industrial power.

This chapter discusses in some detail the manufacturing, and mining and quarrying sub-sectors as the key components of the industrial sector of Odisha.

4.1 Index of Industrial Production (IIP) of Odisha

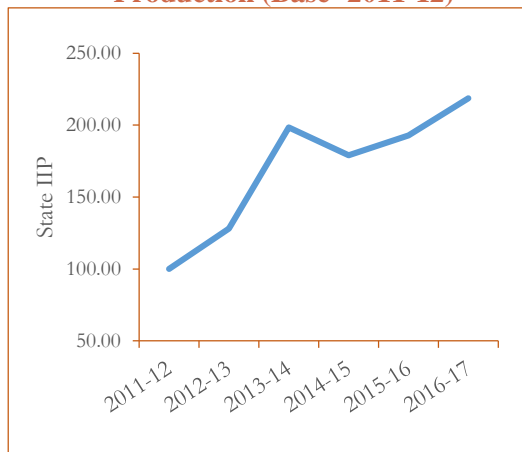
Index of Industrial Production (IIP) is the index which measures the growth of the industrial sector of an economy and represents the status of production in the industrial sector for a given period of time as compared to a reference period of time (called base year). In order to study the development as well as growth of industrial production over a period of time, IIP for Odisha compiled by Directorate of Economics and Statistics for the period from 2012-13 to 2016-17 with base 2011-12 is presented in Table 4.1 and Figure 4.1.

Table 4.1 : Sector-wise Index of Industrial Production (Base 2011-12) of Odisha

Sector	2012-13	2013-14	2014-15	2015-16	2016-17
Manufacturing	155.849 (55.85)	289.005 (85.44)	237.109 (- 17.96)	241.899 (2.02)	282.520 (16.79)
Mining and quarrying	104.305 (4.30)	121.779 (16.75)	129.175 (6.07)	152.482 (18.04)	168.926 (10.78)
Electricity	103.421 (3.42)	113.188 (9.44)	126.240 (11.53)	142.039 (12.51)	138.485 (-2.50)
General	128.124 (28.12)	198.518 (54.94)	178.951 (-9.86)	192.964 (7.83)	218.738 (13.36)

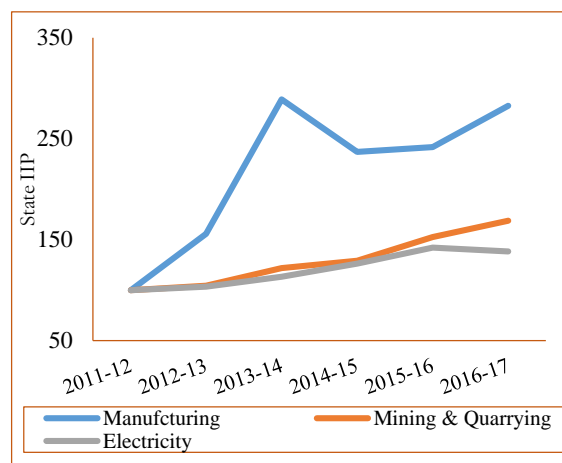
(Figures in the parentheses indicate percentage growth over previous year)
Source : ASI Divison DES Odisha

It is observed that the growth of IIP in Odisha shows a positive trend from 2012-13 to 2013-14, a negative trend from 2013-14 to 2014-15 and then a consistent rising trend from 2014-15 to 2015-16 and 2016-17. Comparing the point-to-point sectoral growth, it is found that, the manufacturing, mining and quarrying and electricity sectors registered growth rates of 81.28 percent, 61.95 percent and 33.90 percent respectively during the period 2016-17 over 2012-13.

Figure 4.1 General Index of Industrial Production (Base- 2011-12)

Source: ASI Division, D E and S, Odisha

The trend of growth of IIP (sector-wise) from 2011-12 to 2016-17 with base 2011-12 is also shown in Figure 4.2.

Figure 4.2 : Sector-wise Index of Industrial production (Base 2011-12)

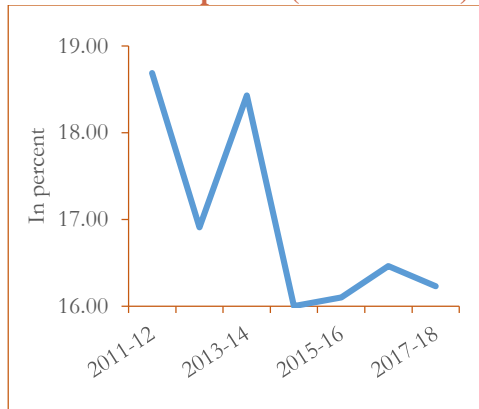
Source: ASI Division, D E and S, Odisha

The broad sector-wise and item-wise index of industrial production of the State from 2012-13 to 2016-17 (Base 2011-12) is given at Annexure 4.1.

4.2 Manufacturing sub sector

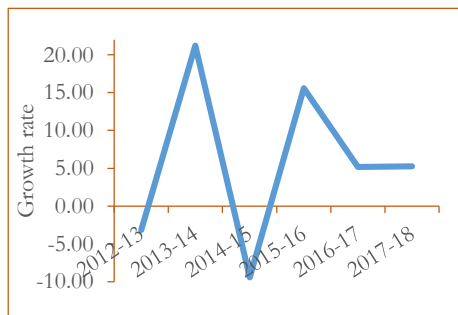
The Gross Value Added (GVA) of manufacturing sector in Odisha was about ₹62016 crore in 2017-18 at current prices accounting for 16.23 percent of GSDP of the State. The sector grew by 5.23 percent in 2017-18 over 2016-17 at constant prices.

Figure 4.3 : Percentage shares of manufacturing to GDP of Odisha at current prices (2011-12 base)



Source: State Income Division, DE&S, Odisha

Figure 4.4 : Growth rates of manufacturing sub sector in Odisha at 2011-12 prices



Source: State Income Division, DE&S, Odisha

Manufacturing of basic iron and steel and nonferrous metal categories alone contribute around 61 percent of total GVA of manufacturing. This is commensurate with the rich stock of major minerals in the State. Manufacturing of non-metallic mineral products, food and non-food industrial products like paper, wood, textiles, apparels, petroleum, chemicals, machinery, recycling of wastes, plastics, transport equipment, and pharmaceutical categories contribute around 24 percent of GVA of manufacturing sector.

4.2.1 Annual Survey of Industry

The Annual Survey of Industries (ASI) is the major source of industrial statistics, which provide estimates of various aggregates like fixed and working capital, input, output, value added, and employment pertaining to registered manufacturing sector. It covers all factories registered under the sections 2m(i) and 2m(ii) of the Factories Act, 1948 and Bidi and Cigar units registered under Bidi and Cigar Workers (Conditions of Employment) Act, 1966. Values of key indicators of organized manufacturing sector in Odisha and All India based on ASI from 2012-13 to 2014-15 are shown in Table-4.2.

Table 4.2 : Key Indicators of Organized Manufacturing Sector in Odisha and All India (2012-13 to 2014-15)

Particulars	2012-13		2013-14		2014-15	
	Odisha	All India	Odisha	All India	Odisha	All India
No. of Registered factories	2854 (1.28)	222120	2714 (1.21)	224576	2803 (1.22)	230435
Fixed Capital	163775.25 (7.51)	2180260.22	210865.99 (8.88)	2373719.03	229478.86 (9.27)	2474454.61
Working capital	6249.89 (1.04)	603411.07	11014.87 (1.66)	662685.77	-2978.70 (-0.46)	640840.31
Total Output	113696.89 (1.89)	6025945.36	122379.46 (1.87)	6555251.16	131179.79 (1.91)	6883812.05
Total Input	88973.60 (1.77)	5018665.86	93036.58 (1.69)	5490139.52	105747.92 (1.85)	5719109.56
Gross Value Added	24722.43 (2.45)	1007279.50	29342.88 (2.75)	1065111.64	25431.87 (2.18)	1164702.49
Net Value Added	18057.25 (2.12)	851948.69	21339.80 (2.38)	895341.87	16684.93 (1.71)	975161.72
Employment(in Nos)	263651 (2.04)	12950025	260771 (1.93)	13538114	262817 (1.89)	13881386

(Figures in the parenthesis indicate percentage over all India)

Source: ASI Division, DE&S, Odisha and CSO, Government of India

The results of ASI 2014-15 reveal that the number of factories in the State increased from 2714 in the year 2013-14 to 2803 in the year 2014-15 registering growth of 3 percent. The gross value added in the above period decreased from ₹29342.88 crore to ₹ 25431.87 crore showing a decrease of 13 percent. The factories in the State generated employment for 262817 persons by the end of 2014-15 showing a growth of 0.8 percent over the year 2013-14.

4.2.2 Large Scale Industries

Odisha promotes large and medium industries for value additions, as also for larger employment and revenue generation for the State. As on March 2017, the State had 252 numbers of large and medium industries (213 large industries and 39 medium industries) operating in 22 districts with a total investment of ₹92786.94 crore and employment creation

of 1.18 lakh persons. The number of large and medium scale industries in Odisha as on March 2017 is presented in Table 4.3. The State has become a promising industrial hub for the establishment of a number of large and medium industries, mostly on basic metals and nonferrous metals.

Table 4.3 : No of Industries as on March 2017

Industry	Nos
Large	213
Medium	39

Source : Directorate of Industries, Odisha

4.2.3 Core Industries in Odisha

Steel Industries

The Steel scenario of the State is summarized in Table 4.4

Table 4.4 : Status of MOUs signed with different Iron Ore based industries in Odisha

Company Type	MOU/Approved Capacity	Installed Capacity	2015-16	2016-17	Annual Growth (%)
A MOU (STEEL)	80.76	20.96	6.799	10.172	49.61
B Non-MOU(Steel)	27.97	7.13	3.167	3.219	1.64
C SI Units Producing Steel	-	0.40	0.000	0.068	-
Total(Steel)			9.966	13.459	35.05
D Sponge Iron	Estimated Capacity 13.46		5.813	6.209	6.81
E Pellet	Capacity : 28.85		9.900	14.702	48.51
F Pig Iron/ Ferroalloys	-	-	0.000	0.867	-
Grand Total (Iron Ore Based Industries)	-	-	25.237	35.237	37.22

Source : Steel & Mines Deptt., Govt. of Odisha

Odisha has 33 percent of total iron ore reserves of India. The State is the largest producer of stainless steel in the country, and has more than 20 percent of the total steel production capacity of the country. Rourkela Steel Plant (RSP) and Nilachal Ispat Nigam Limited (NINL) are the two PSUs in Odisha. There are seven major private sector steel plants in the State which include most of the reputed groups in this

sector. Besides, the National Investment and Manufacturing Zone (NIMZ) spread over 160 km² is being developed at Kalinga Nagar. The zone is envisaged to become a self-contained ecosystem along with residential, commercial and social amenities and will enable potential investors to establish downstream facilities for value addition.

As a part of mineral development policy, the State Government have been pursuing value additions, mass employment generation and welfare-oriented revenue collection. This has enabled the State Government of Odisha to sign 49 MoUs with different national and international steel companies for establishment of steel plants in the State with a production target of 77.16 MT and subsequent capacity enhancement to 80.76 MTPA. Of these 49 MoUs, 35 steel plants and one pellet production plant have commenced partial production with investment of over ₹ 130,000 crore. Besides, 33 iron ore based industries are coming up through non-MoU route, out of which 12 are in production.

The State Government have approved the policy for long term linkage of iron ore, chrome ore and other minerals to the MoUs signed by steel companies of Odisha through OMC. The State Government have collaborated with Ministry of Steel, GoI to upgrade Biju Pattnaik National Steel Institute to a Centre for Excellence, and to establish ultra-mega steel projects through NMDC (a CPSU).

Aluminium Industries

Bauxite is the basic raw material for aluminium production. The present capacity of alumina refinery of National Aluminium Company Limited (NALCO) is 22.75 lakh tonnes per annum. The alumina refinery is located at Damanjodi, Odisha. NALCO has planned to set up a 0.5 MTPA smelter and a 1050 MW power plant in Sundargarh district of Odisha at an estimated investment of ₹19,000 crore. It has plans for establishment of approx. 14 MW wind-power project in mined out areas of Damanjodi with an estimated investment of ₹ 82 crore. The Company has taken the initiative to commission roof-top and ground-

mounted solar power systems in its corporate office and another building at Bhubaneswar. To promote downstream and ancillary industries that would increase value addition within the State, the Company has committed 50,000 tonnes of hot metal to the Angul Aluminium Park, which has been established in Joint Venture (JV) mode with IDCO.

4.2.4 Micro, Small and Medium Enterprises (MSME)

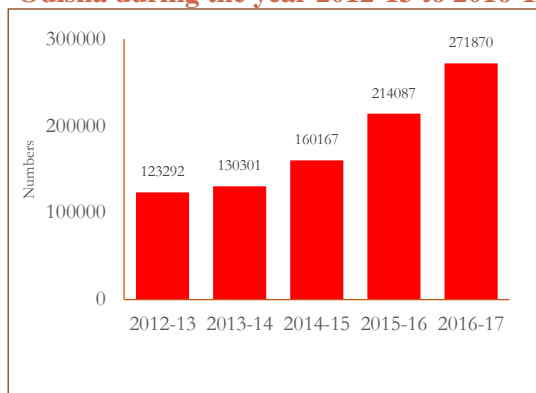
The Directorate of Industries, Odisha is the Nodal Agency for promotion of MSMEs including khadi and village industries, coir industries and salt producers in the State. Besides, Prime Minister's Employment Generation Programme (PMEGP) is also being implemented. Growth of MSME sector is being emphasized not only because of its potential for generation of employment opportunities, but also for its contribution to the output of the State. Government of Odisha aim to create adequate space for MSME development in the State over the years through various fiscal and non-fiscal incentives under IPRs including IPR 2015 and MSME Development Policy 2015. The State Government have introduced the single window clearance system – a three tier mechanism to attract industrial ventures through expeditious clearance at a single contact point. Downstream industries have been categorized as “Thrust Sector” in the recent IPR.

MSME sector shows an increasing trend over years in number of units, investment, and employment generation. During 2016-17 financial year, the MSME sector in Odisha has achieved a record growth with 57,783 units going into production with an investment of ₹3034.64 crore and employment generation of 1.75 lakh persons. Details are given in Table 4.5

Table 4.5 : MSME Industries in Odisha during the year 2012-13 to 2016-17

Year	MSME units set up (cumulative)	SSI/MSME units set up during the year	Investment made (₹ in Crore)	Employment generated (persons)
2012-13	123292	5931	432.90	27104
2013-14	130301	7009	669.41	32136
2014-15	160167	29866	2267.24	107011
2015-16	214087	53920	2679.64	166731
2016-17	271870	57783	3034.64	175221
Total	271870	154509	9083.83	508203

Source: Directorate of Industries, Odisha

Figure 4.5 : No. of MSME Industries in Odisha during the year 2012-13 to 2016-17

Source: Directorate of Industries, Odisha

During last 5 years between 2012-13 and 2016-17, a total of 154509 MSME units were set up and started production with a total investment of ₹ 9083.83 crore and employment generation of 5.08 lakh persons in the State (Figure 4.5).

By the end of 2016-17, a total of 2.72 lakh MSME units were operating in Odisha with an investment of ₹13726.40 crore and generating 11.87 lakh employment. The sector-wise details are given in Table 4.6.

Table 4.6 : Sector-wise MSME units set up, investment made and employment generated in Odisha by the end of 2016-17

Category	No. of units set up (%)	Investment (₹ in crore)	Employment (persons)
Food and Allied	35246(12.96)	2018.45(14.70%)	179115((15.08%)
Chemical and Allied	3854(1.42)	317.00(2.31%)	26980(2.27%)
Electrical and Electronics	1945(0.72)	109.94(0.80%)	9917(0.84%)
Engineering and Metal Based	16603(6.11)	1219.68(8.89%)	111972(9.43%)
Forest and Wood based	13124(4.83)	200.48(1.46%)	61748(5.20%)
Glass and Ceramics	10326(3.80)	752.48(5.48%)	148312(12.49%)
Livestock and Leather	619(0.23)	14.58(0.11%)	3060(0.26%)
Paper and Paper Products	3940(1.45)	177.18(1.29%)	19962(1.68%)
Rubber and Plastics	2066(0.76)	285.99(2.08%)	12558(1.06%)
Textiles	15109(5.56)	351.84(2.56%)	73247(6.17%)
Misc. Manufacturing	16450(6.05)	753.87(5.49%)	69544(5.86%)
Repairing and Services	152588(56.13)	7524.91(54.82%)	471026(39.67%)
Total	271870(100)	13726.40(100%)	1187441(100%)

(Figures in the parenthesis indicate % share)

Source: Directorate of Industries, Odisha

Due to issues and problem areas related to literacy, skills, opportunities, marketing, credit facility etc., majority of young entrepreneurs in Odisha prefer to engage themselves in repairing and services units under MSME sector. Figure 4.6 reveals that the repairing and services sub-sector alone accounts for 56 percent of units with 55 percent share of investment and 40 percent of employment under MSME sector in Odisha. The food and allied products sub-sector units have a share of 13 percent in total number of units, 15 percent in total investment and 15 percent in employment generation by the MSME sector. The engineering and metal based sub-sector follows with a share of 6 percent of the units, 9 percent of the investment and 9 percent of the employment generation.

The district-wise breakup of MSME with employment generation is given in Annexure 4.2. It is observed that maximum number of MSME units are in Sundargarh district (4844) followed by Khurda (3704) and Cuttack (3374) during 2016-17.

4.2.5 Salt Industry

Odisha is bestowed with a long coast line of about 480 kms which runs along Bay of Bengal.

At present, salt is manufactured in our State from sea water in coastal districts of Ganjam, Puri and Balasore. Financial Assistance is provided for improvement of salt land and infrastructure facilities.

Besides, for undertaking developmental and labour welfare works, centrally sponsored schemes are being implemented under joint venture of Government of India and State Government. Under this Programme, construction of school building, provision of scholarships to the meritorious students etc. have been taken up to extend educational facilities to the children of salt workers. Health centres with medical facilities have been provided to salt workers. Under the scheme 'Namak Majdoor Awaas Yojana', dwelling units have been constructed for providing shelters to bona fide salt workers. Drinking water facilities are also being provided in the vicinity of the salt producing area.

4.2.6 Coir Industry

There is ample scope for development of coir industry in Odisha. The status of coir industry for the year 2016-17 is given in Table 4.7.

Table 4.7 : Status of Coir Industry of Odisha (2016-17)

Sl. No	Description	Unit	Value
1	Coconut Cultivation	Hectare	50780
2	Coconut Production	lakh	3250
3	Coir Fiber Production	MT	4400
Government Training Centre			
4	State Level 1 year Advanced Course		1
	District Level 6 months Artisan Course.		3
	Annual Intake Capacity		150
	Number of Trained Cooperative Societies.		2029
5	Number of Working Societies		13
	Membership		6362
6	Coir Cluster Development		
	Number of Coir Cluster		73

Sl. No	Description	Unit	Value
	SHG Promoted.		288
	Artisans under SHG fold		4320
7	SSI units	Number	202
8	Micro Enterprises.	Number	890
9	Total Employment	Number	11525
10	Production of Coir Fiber, Coir goods per Annum including Rubberized Coir	₹ in Crore	103.10
11	Field Training Centers (FTCs)	Number	27
	Trained Personnel	Number	540
12	Artisans Deputed on Exposure Visit	Number	456
13	Infrastructure Assistance Provided to Cooperative Societies	Number	08
14	Infrastructure Assistance Provided to SHGs	Number	23

Source: MSME Activity Report 2016-17, Government of Odisha

4.2.7 Handicrafts and Cottage Industry

Odisha has acquired fame for its cottage and handicraft products, which is a part of the State's cultural heritage. As many as 50 different crafts are practiced by about 1.30 lakh artisans, dispersed throughout the State. It provides employment to lakhs of artisans in rural and urban areas especially in the weaker sections of our society with small capital investments. During 2016-17, 2759 cottage industries have been established with an investment of ₹23.93 crore and providing employment to 5571 persons (Table 4.8).

Table 4.8 : Handicraft Industry in Odisha (2012-13 to 2016-17)

Year	No. of units established	Investment (₹ In Crore)	Employment Generated (no. of persons)
2012-13	1027	2.96	1393
2013-14	1204	3.45	1507
2014-15	1596	7.15	1952
2015-16	2278	8.44	3867
2016-17	2759	23.93	5571

Source: Directorate of Handicrafts and Cottage Industries, Odisha

It is realized that with development and modernization, there has been a transformation in peoples' choice from the products of the cottage industries to alternative products available from other sources. In order to tide over this issue, State Government have taken various measures for strengthening infrastructure and financial base of this sector by assisting co-operatives and artisans to intensify production and sale. During 2016-17, an amount ₹75 lakh has been provided to assist 750 numbers of handicraft artisans under Rehabilitation of Handicraft Artisans (RHA) scheme. Besides, 57 clusters covering 1920 artisans in 128 SHGs have been assisted under craft village scheme. Under the scheme "Modernization and Technologies Upgradation of Handicraft Industries", financial assistance up to ₹12.00 lakhs is provided as back-ended subsidy for availing bank loan for projects up to ₹50.00 lakhs. During the year 2016-17, 48 handicraft enterprises have been established against the target of 40. During 2016-17 about 2420 artisans have participated in different exhibitions organized at district /state /outside the State with a sales turnover of

₹1850.00 lakh by providing marketing assistance to co-operative/ SHGs/ individual artisans through exhibitions organized inside as well as outside the State. 2329 candidates have completed the training during 2016-17 through Departmental Training Centres established at State/District level which play an important role in creating new generation craftspersons with adequate skill. For promotion of handicraft Industries a scheme of “Construction of Workshed-cum-Housing for Handicraft Artisans” was introduced during 2013-14, to provide a hygienic environment, with well-ventilated and naturally lighted working place to artisan’s families to enhance their productivity. The uniform unit cost of construction of workshed-cum housing under the scheme is ₹70,000. During 2016-17, against a target of 75 numbers, 109 numbers of worksheds have been sanctioned in 31 District Industries Centers (DICs) of Odisha.

Under the scheme “Distribution of Solar Lanterns to Artisans Households” during 2016-17, solar lantern has been distributed to 7142 artisan households against a target of 6000, with a budget provision of ₹140.76 lakh. Under Aam Aadmi Bima Yojana during 2016-17, it was targeted to provide insurance coverage to 18,000 handicraft artisans with premium amount placed with LIC and 17,710 numbers of handicraft artisans have been covered under the scheme. For revival and strengthening 20 handicraft cooperative societies, financial support of ₹40 lakh has been released to seven DICs of Odisha during 2016-17.

4.2.8 Handloom and Textile Industry Handloom Sector

The Handloom Sector occupies an eminent place in preserving the country’s heritage and

culture and plays a vital role in the economy of the country. The sector is only next to agriculture in providing employment, mainly to the rural artisans. So far as Odisha is concerned, it has a rich tradition of producing handloom products. The skill and knowledge imbibed over generations has given the Odisha hand-woven textiles industry an unparalleled depth, range, strength and vigour. Also, handloom cloth is one of the richest and more resilient medium of ethnic expression.

As per the census conducted in 2009-10, there were 40,683 weaver households having 43,652 looms, with a population of 192,339 weavers in the State. By end of 2016-17, there were 1,140 Primary Weavers Co-operative Societies (PWCS) of which 514 were working PWCs, 53 numbers are dormant and 573 were under liquidation. During 2016-17, out of 39,174 numbers looms in PWCS, 22,824 were working looms which produced 115.19 lakh sq. mtrs of handloom products valued at ₹ 216.96 crore. During 2016-17 about 109.56 lakh sq. mtrs of handloom products valued at ₹ 214.13 crore were sold, of which 18.44 lakh sq. mtrs were silk products valued at ₹ 8569.31 crore. The productivity per loom per annum during 2016-17 stood at 505 sq. mtrs in the Co-operative fold as against 576 sq. mtrs in 2015-16.

In order to improve the socio-economic condition of weavers, the State Government have implemented some major developmental and welfare schemes such as Mahatma Gandhi Bunakar Bima Yojana, Promotion of Handloom Industries, Integrated Handloom Development Scheme, Cluster Development Programme on group approach, 10 percent rebate on sale of handloom cloth, and Health Insurance Scheme. Besides, weavers are being provided with work shed, skill upgradation

training, and weaver's photo identity card etc. under the programme "Special Package for Weavers". Sales of handloom products have been on an upswing and new inroads are being made in penetrating the national and international markets. A special project "Design Reference for Collection of Odisha Handloom" is under implementation with involvement of eminent designers of national and international repute to establish a sustainable market linkage with buyers from inside and outside the country. Similarly, to provide sustainable and continuous business in the sector in association with leading retail brands, MOUs have been signed with AMFPL, New Delhi for setting up of Community Owned Company (COC) in the State. Government have taken positive steps for registration of Odisha "Ikat" product under Geographical Indication (GI), to protect the weavers from competition in various fields. Registration of all the products under GI, such as Kotpad Handloom Fabrics and "Odisha Ikat" has been made.

Sericulture Sector

Sericulture is an agro-based industry, providing employment to the rural poor on a large scale. The State has a rich heritage of tassar culture adopted mostly by tribal farmers concentrated in 14 districts of the State with forests. Government of Odisha have focussed on sericulture as a sustainable livelihood programme for scheduled tribes and scheduled caste under-privileged people of the State. The major activity of sericulture comprises of food-plant cultivation to feed the silk worms, spin silk cocoons, rearing of silkworms and reeling of the cocoons for unwinding of the silk filament for value added benefits such as processing and weaving.

About 46,828 numbers of SC/ ST families are practising tassar culture in Odisha. Annually more than 75,000 kahans of tassar cocoons are produced and farmers are getting income of about ₹22.89 crore with a very nominal investment on seed. During 2016-17, tassar food saplings were planted in 17052 hectares of land and 20.95 lakh Dfls were produced. During the year, 1320.53 lakh number of reeling cocoons, 115.5 MT of raw silk and 21 MT of silk waste were produced in the State.

Eri rearing is traditionally cultivated in 15 districts. During 2016-17, castor plantation covered 1520 acres with 3040 beneficiaries. During the same period, the production of cut cocoons was 7.90 M.T which was 8.90 M.T during 2015-16. The production of raw silk was 6.3 M.T during 2016-17. Development of castor plantation not only increases the number of Eri farmers in the State, but also contributes substantially to oilseed production. Similarly increase of tapioca plantation causes growth in eri farmers.

Mulberry sericulture is non-traditional in the State and is practised in 12 districts. During 2016-17, mulberry area in the State was about 1628 acres. Around 27.40 MT of reeling cocoons, 3.30 MT raw silk and 0.30 MT of silk waste were produced in the State involving 1455 SC/ST farmers. There is scope for further developing mulberry sericulture in Odisha, particularly in tribal districts with irrigation facilities.

The details of tassar, mulberry and eri sector in Odisha during the year 2014-15 to 2016-17 is shown at Table 4.9. The raw silk product in tassar and mulberry sector shows upward trend.

Table 4.9 : Tassar, Mulberry and Eri Sectors in Odisha (2014-15 to 2016-17)

Activities	2014-15	2015-16	2016-17
Tassar Sector			
Tassar Food Plants (Ha)	13835	15370	17052
Production of Dfls (lakh nos.)	17.40	20.14	20.95
Procurement of Dfls (lakh nos.)	4.70	5.06	4.98
Consumption of Dfls (lakh nos.)	22.10	25.20	25.93
Production of reeling cocoons (lakh nos.)	1009.12	1220.80	1320.528
Production of Raw Silk(M.T.)	88.30	107.00	115.5
Production of Silk Waste(M.T.)	17.00	20.00	21.0
No. of farmers covered(Nos.)	13919	15486	16294
Mulberry Sector			
Mulberry area in Acre	1157	1460	1628
Procurement of Dfls (lakh nos.)	1.32	1.34	1.14
Consumption of Dfls(lakh nos.)	1.32	1.34	1.14
Production of reeling cocoons (lakh nos.)	25.50	25.94	27.40
Production of Raw Silk(M.T.)	3.18	3.00	3.3
Production of Silk Waste (M.T.)	0.318	0.30	0.3
No. of farmers covered (Nos.)	1209	1465	1455
Eri Sector			
Existing Castor Plantation (Ac)	1345	1405	1520
Consumption of Dfls (lakh nos.)	1.72	1.57	1.48
Production of cut cocoons M.T.)	10.22	8.90	7.9
Production of raw silk (M.T.)	7.00	7.00	6.3
No. of farmers covered (Nos.)	2690	2810	3040

Source: Directorate of Textile, Odisha

To support Seri culturists in tassar, eri and mulberry sector, several schemes under promotion of sericulture industry (State Plan and State share of CSP, and CSS of Central Silk Board) are under implementation. Under the scheme, the farmers are being provided with improved technology for high yielding variety food plant, HYV DFLs, Chawki worms, rearing houses, rearing equipment, Grainage houses, disinfectants and marketing support. Besides, technology upgradation, exposure

visits and trainings were carried out for farmers and private grainers to improve the productivity.

4.2.9 Prime Minister's Employment Generation Programme (PMEGP)

Prime Minister's Employment Generation Programme (PMEGP) is implemented through Khadi and Village Industries Commission (KVIC), Khadi and Village Industries Board (KVIB), and District Industries Centre (DIC),.

PMEGP is a central sector scheme for generation of employment opportunities through establishment of Micro Enterprises in rural as well as urban areas. The maximum cost of the project/ unit admissible under manufacturing sector is ₹25 lakhs and in the case of business/ service sector it is ₹10 lakhs.

During 2016-17, a revised target of ₹31.12 crore was fixed for the DICs under PMEGP as subsidy against which ₹28.92 crore has been utilized. Against a physical target of 1556 units, 1502 units have been achieved.

4.2.10 Export Promotion & Marketing

The Directorate of Export Promotion and Marketing (DEPM) is functioning under MSME Department, Government of Odisha to promote export of goods from Odisha and to

provide marketing assistance to MSMEs of the State. DEPM has taken up various measures like rendering guidance in export procedures and formalities, organising seminar/ workshop/ training programme for entrepreneurs, participation in trade fair, and awarding the best exporters for their outstanding export performance.

Due to active initiation and export promotion activities of the State, the export turnover of Odisha has been doubled from ₹19,082 crore in 2015-16 to ₹40,872 crore. During 2016-17, 2431 MSME units have been registered. To ensure quality, 11143 samples were tested in six departmental testing laboratories and testing fees collected. Table 4.10 shows the value of goods exported from Odisha to foreign countries during 2012-13 to 2016-17

Table 4.10 : Value and Percentage of Goods Exported from Odisha to Foreign Countries during 2012-13 to 2016-17

(₹ in crore)

Item	2012-13	2013-14	2014-15	2015-16	2016-17
Metallurgical products	5211.38 (49.08)	7677.49 (40.88)	10836.98 (62.92)	12335.80 (64.65)	25185.93 (61.62)
Engineering, chemical and allied products	61.00 (0.57)	3531.21 (18.80)	3330.73 (19.34)	1497.65 (7.85)	4478.72 (10.96)
Mineral products	2427.57 (22.86)	3546.78 (18.89)	705.79 (4.10)	2762.49 (14.47)	8389.53 (20.53)
Agriculture and forest products	0.05 (0.00)	02.92 (0.02)	03.34 (0.02)	253.53 (1.33)	16.51 (0.04)
Marine products including Fish and shrimps products	747.30 (7.04)	1699.41 (9.05)	1771.86 (10.29)	2141.86 (11.22)	2508.32 (6.14)
Handloom and textile products	0.01 (0.00)	10.64 (0.06)	84.09 (0.49)	62.19 (0.33)	240.60 (0.58)
Handicraft products	0.17 (0.00)	0.27 (0.001)	0.10 (Neg.)	1.76 (0.01)	2.37 (0.00)
Electronics	2169.94 (20.44)	2300.46 (12.25)	476.12 (2.76)	1.46 (0.01)	5.65 (0.01)
Others (Computer software, Gems and Jewels, Service provider and pharmaceutical etc.)	0.02 (0.00)	10.93 (0.06)	14.53 (0.08)	25.36 (0.13)	44.20 (0.10)
Total	10617.43 (100.00)	18785.45 (100.00)	17223.54 (100.00)	19082.10 (100.00)	40872.19 (100.00)

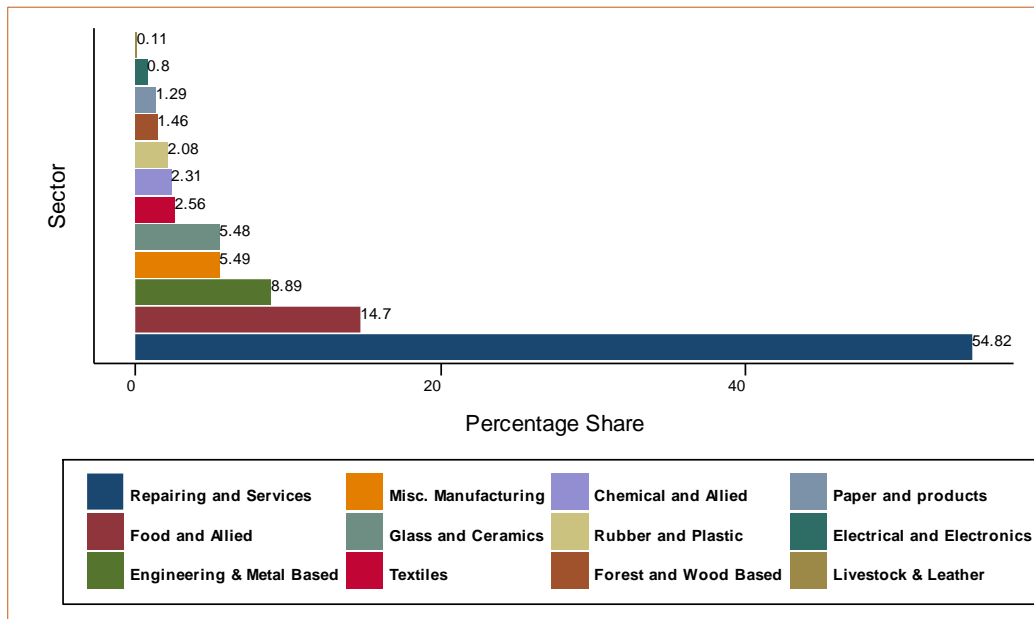
(Figures within parentheses indicate the percentage share to total)

Source: Directorate of Export Promotion and Marketing, Odisha

Figure 4.6 indicates the item wise percentage value of export during 2016-17. It is observed that during the year 2016-17, the metallurgical products, Mineral products, Engineering/ Chemical and Allied Products and Marine products including Fish and shrimps products

constituted 61.62 percent, 20.53 percent, 10.96 percent and 6.14 percent respectively of total exports from Odisha. Table 4.11 indicates the item-wise number of countries where goods have been exported during 2016-17.

Figure 4.6 : Compositions of Exports (in Percentage) from Odisha during 2016-17



Source: Directorate of Export Promotion and Marketing, Odisha

Table 4.11 : Item-Wise Exports of Goods from Odisha, 2016-17

Sl No	Name of the Products	No of Countries to which Exported	Value in ₹Crore
1	Metallurgical	41	25185.93
2	Engg./Chemical & Allied	70	4478.72
3	Minerals	18	8389.53
4	Agriculture and Forest	08	16.51
5	Marine	42	2508.32
6	Handloom	17	235.16
7	Handicraft	9	2.37
8	Textile	5	5.44
9	Pharmaceutical	5	6.30
10	Electronics & Software	40	5.65
11	Others	20	37.90
Grand Total			40872.19

Source: Directorate of Export Promotion and Marketing Odisha.

The Directorate has been declared as the nodal agency for providing marketing support to registered and rate contract holding industrial units and rendering technical assistance for promoting exports. The State Government initiatives to promote exports of goods include establishment of an Export Promotion Industry Park (EPIP); improved overseas marketing information and trade enquiries; liaison with related International, Central, State and other corporate stakeholders agencies; presenting export awards annually to the best exporters to generate competitiveness; and collaborating with recognized national level institutions like Indian Institute of Foreign Trade (IIFT), Director General of Foreign Trade (DGFT), Export Credit Guarantee Corporation (ECGC)

and Export Promotion Councils (EPC). DEPM provides marketing support to MSME units with updated market data base, rate contract, inspection and quality control programmes.

4.2.11 Policy Initiatives

Industrial Policy Resolution (IPR) 2015

The Industrial Policy Resolution 2015 has been formulated to create a conducive environment through an enabling Policy and regulatory framework to drive sustainable industrial growth in the State with the following mandates. Industries both existing and upcoming are expected to avail the benefits as per IPR 2015 and create employment opportunities, and augment revenue in the State.

- The State is committed to simplify the processes and procedures and expedite the project approvals and clearances.
- To provide quality industrial infrastructure, creation of a large land bank, financial assistance to the private sector for development of industrial infrastructure and sustainable environmental protection measures by the MSME Units.
- Emphasizes on strengthening institutional and regulatory mechanisms for faster industrial development.
- The three tier single window clearance system at State, Region and District level is expected to maximize the triple objectives of value addition, employment generation and revenue augmentation.
- To improve existing industrial parks, estates and areas in the State.

- To develop new industrial estates, parks, areas, growth centres by IDCO, OIIDC and PPP under a comprehensive land zoning plan.
- Establishment of National Investment and Manufacturing Zone (NIMZ) at Kalinganagar, Dhamra and Gopalpur; Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) in Jagatsinghpur and Kendrapada districts.
- Paradeep Investment Development Region Limited shall add to the State industrial cluster substantially.
- IPICOL is the Technical Secretariat and Nodal Agency of Team Odisha and the State Level Single Window Clearance Authority (SWCA). It offers a wide range of proposals for social and urban infrastructure, HRD, labour reform, marketing support to MSME, revival of sick units, export promotion and monitoring plan etc.

MSME Development Policy 2015

Odisha MSME Development Policy 2015 aims to attract new investments and provide support to the existing enterprises and the framework has been designed to include Enabling, Supporting and Incentivizing. The new IPR 2015 targets some of the fiscal incentives towards MSMEs such as providing land at concessional rates, interest subsidy, exemption of stamp duty, VAT reimbursement, assistance for technical knowhow and marketing supports. The main emphasis of this new MSME policy is to make Odisha “a destination of choice” for MSME enterprises with the following objectives.

- i. To enhance competitiveness of MSME sector.
 - ii. To provide a conducive eco-system to attract and encourage new investments.
 - iii. To provide opportunities to local entrepreneurial talents.
 - iv. To focus on the sustainable industrial growth in MSME sector.
 - v. To enhance the contribution of MSME's in manufacturing and services sector of the economy.
- To achieve the above objectives, some strategies have been designed such as:
- a) Single- Window facilitation cell.
 - b) Cluster development approach.
 - c) Facilitate setting up ancillary and downstream units of existing and upcoming large industries.
 - d) Flow of credit and industry institutional linkage.

Special Economic Zone (SEZ) Policy 2015

SEZ is specifically designated as a duty-free enclave and treated as a foreign territory for the

The thrust areas of SEZ shall include sectors like IT, ITES, Biotechnology, Electronic systems and Manufacturing, Automobiles and Component Manufacturing, Engineering Goods, Textile and Handlooms, Agro based and Marine products, Ship repairing and Building, Gems and Jewellery, Petroleum and its products, Pharmaceuticals, Tourism and Primary Metal Based Downstream and Ancillary Industries etc.

Odisha Youth Innovation Fund (OYIF)

Odisha Youth Innovation Fund (OYIF) aims to make Odisha a creative and innovative society and national leader in sustainable technology by scouting, spawning and sustaining innovations. It provides institutional support to innovation at grassroots level as well as outstanding traditional knowledge and to seek self-reliance through competitive advantage of innovative idea-based enterprises. The size of

purpose of trade operations, duties and tariffs. The prime objectives of SEZ are as follows:

- To stimulate more efficient use and value addition of local resources
- To attract investments
- To increase export of goods and services
- To develop world class infrastructure
- To create centres of excellence for manufacturing services and other economic activities
- To increase employment opportunities
- To improve the skills
- To facilitate transfer of technology and modern management skills to local enterprises
- To provide need-based incentive package to SEZ developers etc.

For Odisha, the SEZ approach offers a flexible strategy to expand its industrial and economic base and result in incremental employment opportunities. The SEZ in Odisha will be developed both by public and private sector developers individually or jointly.

the fund shall be ₹200 lakh funded by the State Government and the Corporate houses including the cost of management of funds, publicity and documentation of the program. The implementing agency shall be Odisha Small Industries Corporation (OSIC) or "Youth Entrepreneurship Development Agency" (YEDA) as proposed in Odisha State Youth Policy 2013. The target group of OYIF shall be the entire mass of youth of Odisha.

The focus areas of OYIF include: Education and Life Skills, Skill Development, Entrepreneurship and Employment, Health and Wellbeing, Sports and Physical Education, Active Citizenship and Community Engagement, Environment, Sustainable use and Conservation, Heritage, Culture and Diversity, Gender Justice and Equality, Globalization and Technology

Single Window Concept and Public-Private Partnerships (PPP)

The Public-Private Partnership mode has been employed in the State to mobilize the private sector efficiencies for the development of economic and quality infrastructure in the State. Some of the PPP projects that encourages value addition and employment creation are:

- * Establishment of an Info Park in Bhubaneswar;
- * Upgradation of industrial infrastructure at Kalinganagar and Industrial Complex through Odisha Industrial Infrastructure Development Corporation (IDCO) and user industries;
- * Development of Haridaspur-Paradeep Rail Link jointly by Rail Vikas Nigam Limited and user industries;
- * Promotion of Special Economic Zones (SEZ) at different locations;
- * Establishment of a Bio-Tech Park; and
- * Development of the second INFOCITY for establishment of IT industries in Bhubaneswar and for promotion of export oriented industrial units.

Odisha Food Processing Policy, 2013

The Odisha Food Processing Policy, 2013 aims:

- * To create a dynamic environment for investments in the State for the promotion of food processing industries, for higher value addition and creation of employment opportunities.

- * Aid creation of necessary supply chain and infrastructure facilities in rural areas.
- * Encourage entrepreneurs to establish Food Parks and to set up food processing units on their own.

MSME Department and IDCO have been looking into the development of infrastructural facilities like establishment of Mega Food Parks and Sea Food Parks to facilitate the growth of Food Processing Industry in the State.

4.2.12 Public Sector Enterprises (PSEs)

Department of Public Enterprises is the Nodal department for State Enterprises. It renders services in all functional areas of control and management in State Public Sector Enterprises, regulates industrial projects proposal, prescribes financial norms and model MOU, reviews the progress of Memoranda of Understanding and oversees PSU reforms.

Corporate Governance Manual for the State PSUs

The State Government have adopted the “Corporate Governance Manual” for the State PSUs as a policy to institute a system of good corporate governance practices for public enterprises so as to enhance transparency, accountability and certain measure of autonomy in their operations and improving their performance.

Categorization of the State PSUs

Government of Odisha have initiated the process of categorizing its PSEs and grant certain level of autonomy to the Board of

Directors of the State PSUs. The process of categorization of PSEs would be an ongoing exercise with a system of periodic reviews in every two or three years.

Memorandum of Understanding (MoUs) with State PSUs

A task force has been constituted in the Public Enterprises Department for monitoring and assessment of the achievements of the PSUs. For the Financial Year 2016-17, 25 PSUs have signed MoUs.

Odisha State Renewal Fund Society (OSRFS)

In order to continue the Public Enterprises reform programme for the State Public Sector undertakings, the Department is taking necessary steps through OSRFS with a corpus fund of ₹63.00 crore over a period of 5 years from 2014 to 2019.

Recruitment of Professionals through Public Enterprise Selection Board

The Government have reconstituted the Public Enterprise Selection Board with the provision to co-opt experts to the PESB for selection of top professionals of PSUs like OMC, OPTCL and OHPC.

Computerization of Accounting System in State PSUs

The Department of Public Enterprises is going to provide necessary assistance for computerization of accounts of some selected PSUs. A sum of ₹7.00 crore has been earmarked for providing the necessary assistance during the extended period of OSRFS i.e., 2014-15 to 2018-19. Out of ₹7.00 crore, a sum of ₹28.00 lakh has already been provided to OAIC, OSSC, OSCDC, OSWC,

OPDC and APICOL for purchase of computers and other peripherals during the year 2016-17.

4.2.13 Major State-level Institutions

Odisha Industrial Infrastructure Development Corporation (IDCO)

IDCO is acting as the Nodal Agency for providing industrial infrastructure and land for industrial and infrastructure projects in the State. IDCO has already developed 106 Industrial Estates/Areas (IEs/IAs) in different strategic locations. During the year 2016-17, 102 small and medium units have been allotted around 205 acres of land in different industrial estates/areas. The cumulative position of construction/ development and allotment of land/sheds in different Industrial Estates/ Areas up to the year 2016-17 is as under:

i.	No. of IEs/IAs	106
ii.	Gross area of I/Es and I/As	9601 Ac.
iii.	Built up sheds	1545 Nos
iv.	Sheds allotted	1482 Nos
v.	Land allotted	5157 Ac.
vi.	Land available for allotment	2144 Ac.

During the year, IDCO has taken up establishment of new Industrial Estates at Jayamangal, Bisiapada and Chhatabar in Khurda district, Ramdaspur in Cuttack district and Balarampur in Dhenkanal district. Steps are being taken to establish another 5 new industrial Estates in Khurda district and one each in the district of Cuttack and Berhampur.

IDCO has taken steps to develop 3 investment regions in the State with an objective to promote both domestic and foreign investment in the State. Under the scheme "Petroleum, Chemicals and Petrochemicals Investment

Regions (PCPIRs)” of Government of India, the State Government is developing a PCPIR at Paradeep to be set up on 284.15 sq km (70,214 acres) of land spread over Jagatsinghpur and Kendrapara district. The PCPIR hub is expected to attract investment to the tune of ₹2.74 lakh crore. Around 3300 acres of land have been acquired and handed over to IOCL for its 15 million tonne per annum oil refinery with an investment of approximately ₹30,000 crore. IOCL has also announced implementation of a 700 KT per annum Polypropylene unit at Paradeep with an investment of ₹3150 crore. IDCO has formed an SPV, Paradeep Investment region Development Ltd for development of required infrastructure for the project. Besides, land acquisition of approximately 7400 Acres for industrial development in the PCPIR has been undertaken.

For development of Natural Gas infrastructure, IOCL has also signed a memorandum of understanding (MoU) with Dhamra Port Company Ltd (DPCL) for installation of a five Million Tonne Per Annum (MTPA) LNG (Liquefied Natural Gas) terminal within the port premises at a cost of ₹5000 crore.

Based on the development of Dhamra Port and upcoming LNG Terminal facility by IOCL at Dhamra, IDCO intends to develop a Special Investment Region (SIR) spread over 10000 acres of land in 43 villages and has notified it as lease barred area. The SIR shall have delineated zones for various purposes – industrial, social, logistics, residential etc. It shall create an opportunity for manufacturing industries in the sectors downstream of aluminium, steel, fertilizer and other gas based Industries etc.

The Steel Complex at Kalinganagar has been established over an area of 13000 acres of land where 9 major steel companies have already set up their units and are producing 3.5 Million tonnes of steel per annum, and have generated employment amounting to 40,000. Government of Odisha is planning to develop this complex as National Investment Manufacturing Zone, under the National Manufacturing Policy of Government of India.

For promotion of investment in downstream and ancillary units, IDCO has taken up the following projects

- 1) Angul Aluminium Park at Angul,
- 2) Seafood Park at Deras,
- 3) Plastic Park at PCPIR at Refinery Complex of IOCL,
- 4) Textile Park,
- 5) Food Park at Dhamnager, Bhadrak,
- 6) Development of Electronic Hardware Manufacturing Cluster at Info Valley, Bhubaneswar,
- 7) IT hub at Info Valley, Bhubaneswar, and
- 8) Development of 2 nos of SEZs/IT Incubation Center at Chandaka, Bhubaneswar.

During the year 2016-17, over 2471 acres of land has been acquired and allotted to both existing and upcoming MOU/Non-MOU projects. So far, over 63828 acres of land has been allotted to both MOU/non-MOU industries like Aluminium, Ferro Alloys, Cement, and Power in the State.

Land Bank

IDCO is the Nodal Agency for creation of “Land Bank” and allotment of such land for industrial use and infrastructure in designated Industrial Estates, industrial areas, Industrial Parks and Growth Centres etc. Under the Land Bank scheme, IDCO has identified 2,21,340 acres of land covering 25 districts and requisition filed so far for alienation/acquisition with district authorities is 1,31,494 acres. Besides, an area of 4810 acres of land has been sanctioned in favour of IDCO under Category A and 44581 acres have been kept reserved with district authorities under Category B of the land bank scheme.

IDCO also provides comprehensive project construction and management services for execution of civil, electrical and public health, engineering projects in social sectors. IDCO has executed construction work worth ₹315.89 crore during the year. For the year 2016-17, the turnover has come to ₹426.44 crore (P) against the revised MOU target of ₹454.90 crore.

Odisha Film Development Corporation (OFDC)

The Odisha Film Development Corporation Ltd, Cuttack is a promotional agency for the growth and development of film industry in the

State functioning since April 1976 for construction of new Cinema House, Production of Film in the State, Establishment of Film Archive, Organization of Film Festivals and Renovation of Kalinga Film Studio.

During 2016-17, the corporation has released subsidies towards refund of entertainment tax and for production of Oriya films in the State. Besides a sum of ₹26.64 lakh have been spent towards renovation of Kalinga Studio Ltd. during 2016-17.

Industrial Promotion and Investment Corporation of Odisha Ltd. (IPICOL)

IPICOL has taken pro-active measures for Investment Promotion and Industrial Facilitation in the State. The major activities of IPICOL after being declared as SLNA under Odisha Industries Facilitation Act, 2004 are to extend Single Window Facilitation services to investors and to take up Promotional activities for the State. In the year 2016-17, the State Level Facilitation Cell approved three new projects. Besides, the State Level Single Window Clearance Authority (SLSWCA) approved 44 project proposals, aggregating proposed investment of ₹10991.40 crore. The position on industrial projects for which MoU were signed is given in Table 4.12.

Table 4.12 : Construction activities

Sector	Nos.	Capacity	Investment in Crores	Production started
Steel Sector	50	92.60 MTPA	2,58,263.15	36
Power Sector	28	37420 MW	1,70,063.00	4
Aluminium and Alumina	3	Aluminium: 2.135 MTPA Alumina: 6.20 MTPA	66,444.00	2
Cement/Cement Products	4	7.30 MTPA	2,982.00	2
Auto Ancillary	1	2008460 TPA	365.00	1
Petroleum and Petrochemicals	1	9.0 MTPA	29,777.00	1
Titanium Complex	1	0.226 MTPA	1,150.00	
Down Stream Industrial Park	4	411 units	1,680.58	

Source: Report of IDCO, BBSR

Ease of doing business

To ensure a hassle-free business environment to the investors, a number of reforms along with technological interventions have been carried out by various departments of the State Government.

CICG: IPICOL has developed Central Inspection Framework (CIF) to simplify business regulations and bring in transparency and accountability in inspections conducted by the office of the Labour Commissioner, Odisha, Pollution Control Board, and Director of Factories and Boiler. Both large and MSME sector units can avail this facility. The inspection of the units are being undertaken based on risk assessment and computerized allocation of inspectors. The inspection reports are being uploaded online within 48 hours of inspection process.

Go iplus: It is a web-enabled GIS based platform developed for mapping of industrial land, other related infrastructure, raw materials and finished products of industries in Odisha.

e-Biz: An online portal developed for submission and approval of Common Application Form (CAF) which serves as a one-stop shop for the business community in obtaining information and services.

APAA: Automated Post Allotment Application is an online portal developed to facilitate online registration application for any post-allotment matters, online payments, and application tracking etc. for MSME business units associated with IDCO.

The Investment Promotion wing of IPICOL has constantly and consistently increased the visibility of the State at the national and international level. A large number of

investment promotion events have been organized/participated in by IPICOL under 'Invest Odisha' banner. A few such important events are given at Annexure 4.3.

Single Sign-on (SSO):

This is a browser based application which can be accessed on the internet through Single Sign-on mechanism. The application provides access to CICG, APAA, Go-iplus, e-Biz, e-Suvidha and CSR application services with Single Sign-on facility.

Invest Odisha Mobile App and Website

A new website and mobile app has been developed to provide key information about State's competitiveness, focus sectors, investment opportunities and incentives etc. to prospective investors.

Single Window Portal

IPICOL has developed this single integrated application/portal/dashboard consolidating the information from the key independent software applications for effective utilization and monitoring.

Revision of Amended MDF OTS-07 for Revival of sick and closed Industries

The scheme was operational with effect from 15.07.2016 till 14.1.2017. IPICOL has received 11 proposals for settlement under this scheme.

To address the problems faced by various companies during implementation of the project, the State Project Monitoring Group (SPMG) has been constituted which looks after the problems of the companies having investments between ₹100 crore to ₹1000 crore to clear the bottlenecks during implementation of the project. Besides, the IPICOL has set up

an IT promotion and facilitation unit (ITPFU) to be managed by a team of experienced consultants based in IPICOL. The alliance between IPICOL and TIESV will promote investment in IT, ITES, ESDM sector in the State to ensure more employment in this hi-tech sector.

IPICOL has made use of social media for promoting the Invest Odisha brand, activities undertaken by the Industry Department and steps taken for Easing of Doing Business in the State. A long term roadmap, namely Vision 2025 has been prepared. For promotion of investment into the State in the identified focus sectors and sub-sectors, a consultant firm has been engaged to provide advisory services, interact with potential investors, assist in grounding of investment proposals and act as an Investment Advisor to IPICOL.

Industrial Development Corporation of Odisha Ltd. (IDCOL)

IDCOL was set up in 1962 to support large and medium scale industrial units, and has set up 15 such units in the State. As a part of the Public Sector Reforms Policy of the Government, many industrial undertakings, sick subsidiary companies were disinvested or assets were sold. Presently, it continues as the holding company of the following subsidiary companies:

- I. IDCOL Kalinga Iron Works Ltd. (IKIWL) at Barbil, engaged in manufacturing foundry grade pig iron and cast iron spun pipe.
- II. IDCOL Ferro Chrome and Alloys Ltd. (IFCAL) at Jajpur Road, which produces high carbon ferro-chrome (HCFC).
- III. IDCOL Software Ltd. at Bhubaneswar which acts as one of the nodal IT agents of the Government.

IV. Konark Jute Limited, Dhanamandal, engaged in jute products, is under divestment pending before Hon'ble High Court of Odisha.

V. IDCOL operates Talangi Chromite Mines and Roida 'C' Iron Ore and Manganese mines.

Odisha Small Industries Corporation (OSIC)

OSIC has been established in the year 1972 with the main objective to aid and assist the MSME units for their all-round growth and development. The Corporation has been administering various schemes like (a) Consortium Marketing (b) Raw Material Assistance (c) Brand building and Marketing (d) MSME Infrastructure Development, and various other Government Schemes for the MSME of the State. Apart from the above activities, OSIC has been undertaking civil construction activities, rural electrification work and supply of bitumen and TMT bars for construction of roads and houses respectively in all corners of the State.

During the year 2016-17, the OSIC has undertaken the above activities and achieved a turnover of ₹531.00 crore. The target and achievement of OSIC for last 3 years is given in Table 4.13.

Table 4.13 : Target and achievement of OSIC, 2014-15 to 2016-17

SI No.	Year	Target	Achievement	% of achievement
1	2014-15	660	647	98%
2	2015-16	750	552	74%
3	2016-17	658	531	81%

Source: OSIC, Odisha

Apart from the above, the Corporation has also been administering various Government schemes like Odisha Youth Innovation Fund, Cluster Development Programme, MSME Infrastructure Development (SIDCO), organization of MSME trade fairs, opening of Export Division, and tie-up with World Trade Centre and FIEO for marketing of MSME products outside the country. The Corporation has declared and paid 20 percent dividend of ₹ 2.26 crore to the State Government.

Odisha State Financial Corporation (OSFC)

Odisha State Financial Corporation (OSFC) came into existence in 1956. It is engaged in financing micro, small and medium scale industrial units in the State. It provides loan assistance for setting up units in tiny, small and medium scale through consortiums formed with commercial banks. It extends term loan up to ₹ 10.00 crore per project/unit for acquisition of fixed assets to set up industrial units.

Besides, the corporation extends financial assistance for expansion, diversification, modernization and revival of potentially viable units. The credit delivery of OSFC is being taken up by its network of 9 Branches.

In its 61 years of operation, the corporation has disbursed ₹ 1310 crore to 28222 micro, small and medium scale units resulting in direct employment for more than two lakh persons in various sectors such as iron and steel, hospitality and healthcare, transport, and agro based industries. It also created scope for self-employment. In fact, OSFC created seed-bed for the first generation entrepreneurs.

OSFC played a major role in the process of industrialization of the State in the MSME sector. Besides, the State Government Capital Investment Subsidy and National Equity fund of SIDBI were channelized through the Corporation. Some details of its financial operations are given in Annexure 4.4.

Table 4.14 : Progress under PMEGP Scheme by KVIB from 2012-13 to 2016-17

(Employment in No. and Margin Money Rupees in lakh)

Year	Target			Achievement		
	No.	Margin money	Employment Generated	No.	Margin money	Employment Generated
2012-13	1036	2381.28	8288	1184	2314.54	9529
2013-14	1036	2381.28	8288	641	1315.08	4843
2014-15	1576	2177.59	12608	626	1374.79	4602
2015-16	718	1434.60	5744	777	1624.79	5618
2016-17	1167	2333.79	9335	841	2041.63	6728

Source: Odisha Khadi and Village Industries Board

Odisha Khadi and Village Industries Board (OK and VIB)

Odisha Khadi and Village Industries Board is a statutory organization constituted in 1956 for organizing, developing and regulating Khadi and Village Industries in the State with a view to provide gainful employment to rural artisans and the economically backward classes. The

Khadi and Village Industries Commission (KVIC), Mumbai provides funds for implementation of schemes as per guidelines issued by KVIC, Mumbai from time to time. The establishment expenses of the Board have been borne by the Government. During 2016-17, the Board has provided margin money of ₹ 20.42 crore for establishment of

841 village industries and generated employment for 6728 persons. The targets and achievements from 2012-13 to 2016-17 are given in Table 4.14.

Table -4.15 : Honey Processing and its value in Odisha (2015-16 and 2016-17)

(Amount in Qtls and value in ₹ lakh)

Year	Raw Honey Purchased	Value	Processed Honey	Value
2015-16	61.26	9.22	52.40	12.17
2016-17	27.99	4.20	31.14	7.32

Source: Odisha Khadi and Village Industries Board

During 2016-17, the Board has received a grant to the tune of ₹ 1.25 crore for providing assistance to 2500 beekeepers under the Bee-keeping programme. The achievement of the departmental Honey processing unit during 2015-16 and 2016-17 is given in Table 4.15.

Khadi

During 2016-17, 75 Khadi Societies are working with valid Khadi Certificates. During this period, for revival of 4 Khadi Societies, ₹ 35.38 lakh (out of the provision of ₹ 40.00 lakh) has been utilized by providing Spindle Charkhas (100), Kisan Charkhas (50), Muslin Charkhas (25), Traditional Loom (14), Jakarta Looms (5) and training to artisans. To promote sales of Khadi and Village Industries product, renovation of Gramodyog sales depots have been taken up with sales turnover of ₹ 91.79 lakh during 2016-17.

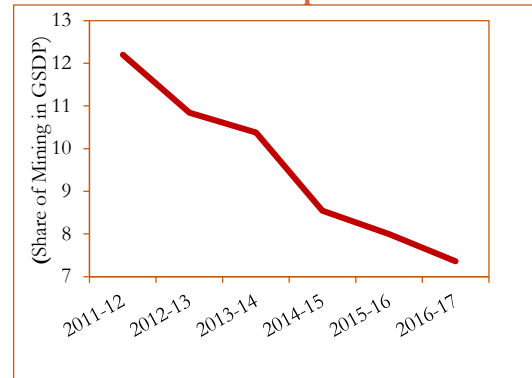
A departmental Oil unit namely “Udyogpuri” has started functioning in December 2016 where eight ghanis are producing mustard oil.

4.3 Mining and Quarrying

Mining and quarrying sector has a share of 7.72 percent of GSDP of Odisha. It generates direct

employment of about 52 thousand in mineral-based industries in the State. The sector provides sizable fiscal resources as taxes and royalties. The contribution of Mining and Quarrying sector to Odisha’s real GSDP is shown in Figure 4.7.

Figure 4.7 : Share of Mining and Quarrying sector in Odisha’s GSDP at current prices



Source: State Income Division DE&S, Odisha

4.3.1 Minerals in Odisha

Minerals in Odisha contribute multi-dimensionally to its economy. The State Government of Odisha envisions achieving optimal utilization of State’s mineral resources for its industrial growth and socio-economic development through scientific exploration, sustainable mining practices and geo-scientific research. Availability of vast reserves of a variety of minerals has opened up immense possibilities for locating mineral-based units to manufacture steel, ferro-alloys, cement, alumina/aluminium, refractories, thermal power etc., along with setting up other auxiliary and ancillary downstream units.

Odisha occupies a prominent place in the country as a mineral rich State. Abundant reserves of high grade iron ore, bauxite, chromite, and manganese ore, along with other minerals such as coal, limestone, dolomite,

Platinum Group Metals (PGM), nickel, vanadium, graphite, gemstones, diamond, dimension and decorative stones are extensively available in the State. By the end of 2016-17, Odisha accounted for 96 percent of chromite, 92 percent of nickel, 52.65 percent of bauxite, 24.57 percent of coal, 35 percent of iron Ore and 45 percent of manganese in the respective totals for the country.

4.3.2 Minor minerals

“Minor Minerals” include building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes and any other mineral, notified in the official Gazette by Government of India. The State Government has now promulgated ‘Odisha Minor Mineral Concession Rules, 2016 which has come into force from 15.12.2016. Accordingly, in Odisha the following minerals have been notified as minor minerals:

- | | |
|-----------------|------------------|
| 1. Quartzite, | 2. Pyrophyllite, |
| 3. China clay, | 4. Dolomite, |
| 5. Soap stone, | 6. Fire clay. |
| 7. Silica sand, | 8. Sand Stone. |

Annexure 4.5 provides information on total reserves, production (in quantity and value), and despatch of, as also collection of revenue from minor minerals in the State during 2015-16 and 2016-17.

4.3.3 Major Minerals

Among the major minerals, Odisha has 75895.67 million tonnes of coal, 300.83 million tonnes of chromite, 7168.16 million tonnes of iron ore, 2047.72 million tonnes of bauxite and 1764.45 million tonnes of lime stones reserves by end of 2016-17. Table 4.16 shows total reserves, exploration and rate of exploration of important major minerals in the State during 2013-14 to 2016-17.

Table 4.16 : Total Reserves, Exploration and Rate of Exploration, of important major minerals during 2013-14 to 2016-17

Minerals/ Ores	Total reserves in 2016-17 (P)	Exploration in Million tonnes during			
		2013-14	2014-15	2015-16	2016-17
Iron ore	7168.16	77.78 (1.36)	53.33 (0.963)	80.87 (1.42)	102.66 (1.43)
Chromite	300.83	2.86 (1.62)	2.16 (1.24)	3.10 (1.81)	4.13 (1.37)
Coal	75895.67	108.18 (0.14)	122.76 (0.02)	138.55 (0.02)	135.31 (0.18)
Bauxite	2047.72	7.64 (0.41)	9.19 (0.49)	10.84 (0.57)	11.91 (0.58)
Lime stone	1764.45	3.72 (0.21)	3.41 (0.19)	4.52 (0.26)	4.76 (0.27)
Mineral sands	266.38	0.18 (0.07)	0.24 (0.09)	0.226 (0.08)	0.24 (0.09)
Graphite	18.94	0.01 (0.12)	0.01 (0.12)	0.018 (2.10)	0.02 (0.11)
Manganese ore	211.85	0.66 (0.35)	0.32 (0.17)	0.43 (0.23)	0.63 (0.30)

NB: Figures in parenthesis indicates rate of exploration to total reserves (%)

Sources: Directorate of Mines, Odisha, and Directorate of Geology, Odisha

The district-wise exploration of major minerals in Odisha during 2016-17 has been presented in Annexure 4.6. It may be observed that about 58 percent of coal has been extracted in Angul district and the rest from Jharsuguda, Sundargarh and Sambalpur districts. Iron ore extraction is mostly confined to Keonjhar district which accounts for 68.46 percent of total extraction, followed by Sundargarh (27.36 percent). Exploration for bauxite mining takes place in Koraput district, followed by Rayagada, while exploration for chromite is solely confined to Jajpur district.

4.3.4 Mineral Production in Odisha and other major States of India

The State has shown consistent growth in the production of bauxite, chromite and iron ore, limestone, and manganese ore over the last three years. The production of iron ore has increased substantially from 533.29 lakh MT in 2014-15 to 1026.63 lakh MT in 2016-17. Similarly the production of bauxite has increased from 91.92 lakh MT in 2014-15 to 119.14 lakh MT in 2016-17 while the production of chromite has increased from 21.62 lakh MT in 2014-15 to 41.30 lakh MT in 2016-17. Table 4.17 shows the production and value of various minerals in Odisha from 2014-15 to 2016-17. The production of major minerals in major States of India is depicted in Annexure 4.7.

Table 4.17 : Production and Value of Various Minerals/Ores in Odisha, 2014-15 to 2016-17 (Major Minerals)

(Value ₹ in Crore and Production in Lakh MT)

Minerals/Ores	2014-15		2015-16		2016-17	
	Production	Value	Production	Value	Production	Value
Bauxite	91.92	615.86	108.40	726.25	119.14	798.24
Chromite	21.62	2170.86	31.03	3212.16	41.30	5653.57
Coal	1227.63	27007.86	1385.55	20007.31	1353.14	19539.39
Graphite	0.05	0.33	0.18	1.16	0.20	1.33
Iron ore	533.29	23971.38	808.66	16553.32	1026.63	14233.05
Lime stone	34.13	200.34	45.25	179.63	47.62	189.06
Manganese ore	3.20	423.10	4.25	563.74	6.28	865.37
Total	1919.24	54861.11	2396.47	41535.57	2609.81	41621.4

Source: Directorate of Mines, Odisha

4.3.5 Value of Output

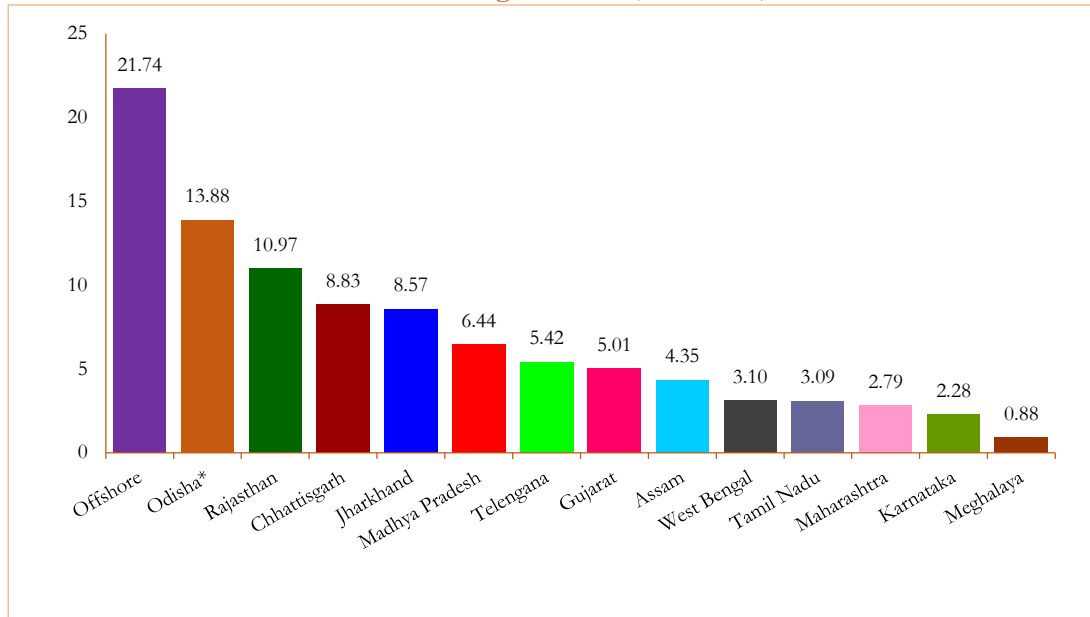
The value of mineral production of major States (including offshore) and India from 2012-13 to 2016-17 (up to February 2017) along with their percentage share in the all-India total has been given in Annexure 4.8.

During 2016-17, 13 States (including offshore areas) accounted for about 97.36 percent of total estimated value of mineral production in

India. Offshore areas are in leading position with 21.74 percent share in the national output. Odisha leads the major States with a share of 13.88 percent followed by Rajasthan (10.97 percent) and Chhattisgarh (8.83 percent).

Figure 4.8 compares Odisha with other major States (including offshore) in 2016-17 (up to February 2017) in terms of percentage share of total value of mineral output in India.

Figure 4.8 : Percentage share of Value of Mineral Production, of Major States to all India during 2016-17 (estimated)



Source: Annual Report, IBM, GOI, 2016-17

4.3.6 Minerals Exports

The Table below reflects the exports of minerals /ores from Odisha during 2015-16 and 2016-17. It is observed that there is remarkable increase in in exports from 6.58 lakh MT in 2015-16 to 63.86 lakh MT in 2016-17. Similarly in terms of value, export has increased from ₹158.72 crore to ₹1261.40 crore.

Table 4.18 : Exports of Minerals/Ores from Odisha during 2015-16 and 2016-17
(Quantity in lakh MT, Value in crores of rupees)

Items	2015-16		2016-17	
	Qty.	Value	Qty.	Value
Chromite	1.33	137.22	1.737	237.85
Iron Ore	0.78	15.86	60.13	833.58
Mineral sand	0.23	0.00	2.0	189.97
Manganese	4.25	5.64	-	-
Total	6.58	158.72	63.86	1261.40

Source: Directorate of Mines, Odisha

4.2.7 Mineral Revenue

A sum of ₹ 4925.66 crore has been collected during 2016-17 towards mineral revenue out of the production of 285.26 Million Tonnes and dispatch of 264.85 Million Tonnes in the State. The collection of mineral revenue from 2012-13 to 2016-17 is given in Table 4.19.

The production, despatch and collection of mineral revenue in Odisha from, 2012-13 to 2016-17 has been presented in Table - 4.19.

Table 4.19 : Production, Dispatch and Collection of Mineral Revenue 2012-13 to 2016-17

(Production and dispatch in Million Tonne and revenue collection in ₹ crore)

Year	Produ Ction	Dispa tched	Revenue collection
2012-13	186.68	173.55	5679.35
2013-14	201.81	226.35	5519.58
2014-15	190.35	193.19	5310.09
2015-16	239.64	241.60	5797.79
2016-17	285.26	264.85	4925.66

Source: Activities Report of Steel and Mines 2016-17, Government of Odisha

4.3.8 Employment in Mining Sector

Mining and quarrying provides employment to different sections including tribal groups. Table 4.20 reports the number of workers directly engaged in various mining activities in different years. By end of 2016-17, 52405 numbers of workers were employed directly in major mineral activities. Coal mining directly

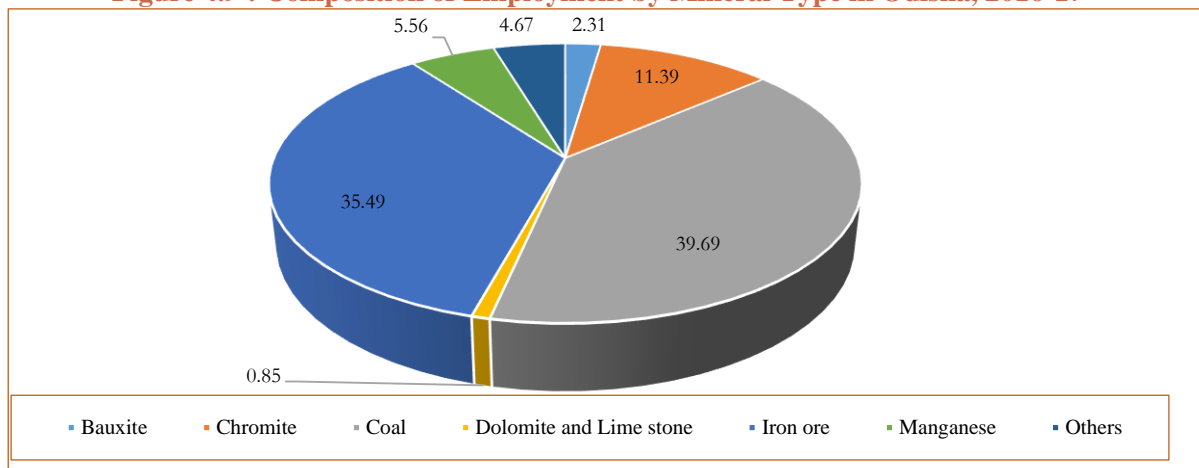
employs the largest number of 20800 workers followed by iron ore 18600 workers, chromite 5974 workers, and manganese 2915 workers, on the same basis. The sector has been increasingly employing labour-saving and capital-intensive production techniques and technology over the years. It was noted that 75 percent of the workers are employed in iron ore and coal sub-sectors.

Table 4.20 : Number of workers directly employed in Major Mineral Activities, during the period 2012-13 to 2016-17

Mineral Ores/District	2012-13	2013-14	2014-15	2015-16	2016-17
Bauxite (Koraput, Sundargarh)	895	674	674	896	1215
Chromite (Dhenkanal, Jajpur, Keonjhar)	6030	5328	5328	5974	5974
Coal (Angul, Jharsuguda, Sundargarh, Sambalpur)	14320	19700	19700	19800	20800
Dolomite and lime stone (Bargarh, Bolangir, Koraput, Sundargarh)	1760	367	367	450	450
Iron ore (Jajpur, Keonjhar, Mayurbhanj, Sundargarh)	32901	17611	17611	18100	18600
Manganese ore (Keonjhar, Sundargarh, Rayagada, Bolangir)	2186	2359	2359	2415	2915
Others (China clay, quartz and quantity, graphite, mineral sand, gem stone, pyrophyllite etc.)	1325	1331	1331	1451	2451
Total	59417	47370	47370	49086	52405

Source: Director of Mines, Odisha.

Figure 4.9 : Composition of Employment by Mineral Type in Odisha, 2016-17



Source: Directorate of Mines, Government of Odisha

4.3.9 Implementation of MMDR (Amendment) Act, 2015

In pursuance to the provision of Section 8A(3) and 8A(6) of MMDR (Amendment) Act, 2015, the State Government has extended the period of mining lease in respect of 85 leases so far. The break-up of the said mining leases is shown in Table 4.21.

Table 4.21 : Details of Mining leases

Bauxite	2
Chromite	8
Chromite and Pyroxenite	1
Dolomite	2
Iron and Manganese	17
Iron Ore	28
Limestone	2
Limestone and Dolomite	7
Manganese Ore	11
Sand (Stowing)	3
Iron and Bauxite	2
China clay	1
Pyrophyte and Quartzite	1
Total	85

Source: Directorate of Mines, Government of Odisha

Out of the total of 85 extended leases, 42 leases have been executed so far. In addition, in pursuance of the provision of section 10A(2)(c) of the MMDR Act, the State Government has granted eighteen mining leases, out of which, 16 mining leases have been executed and registered for different major minerals in the State.

4.3.10 Mining Leases and Auction of Mineral Blocks

As per information provided in Annexure 4.9 there were 607 mining leases both working and non-working in Odisha during 2016-17, covering an area of 102107.760 ha. Out of these, 131 leases over an area of 54077.671 ha were in operation.

The State Government has decided to grant mining leases through auction in pursuance of the relevant provisions of MMDR (Amendment) Act 2015.

As per Mineral Auction Rule, 2015, the mineral bearing blocks which have been explored up to G2/G3 level are processed for auction. By the end of 2016-17, three mineral blocks have been auctioned and fifty seven applications for P.L., six applications for M.L. and two applications for RML for decorative stone have been disposed of. The Government has now promulgated Odisha Minor Mineral Concession Rules, 2016 which has come into force with effect from dt.15.12.2016 for disposal of applications for minor minerals.

4.3.11 Enforcement Activities

For effective control of illegal mining and illegal transaction of ore/minerals, stringent steps are being taken for enforcement of the Odisha Minerals (Prevention of Theft, Smuggling and Illegal Mining and Regulation of possession, Storage, Trading and Transportation) Rules 2007, so as to prevent the leakage of mining revenue. During the financial year 2016-17, 108 cases of illegal extraction, storage, transportation of various ores /minerals have been detected leading to seizure of 31754.965 MT of ores/minerals and 14 vehicles, and ₹ 50.13 lakh has been realized towards penalty by District Level Enforcement Squad. Similarly the State Level Enforcement Squad has conducted raids in 1237 cases and seized 109.36 MT ores/minerals and 9 vehicles, and have also collected ₹ 48.30 lakh penalty during the year 2016-17.

4.3.12 Integrated Mines and Minerals Management System (i3 MS) Project

The IT based i3 MS project has been implemented by the Steel and Mines Department w.e.f. November 2010 on pilot basis and since 2013-14, the Directorate of Mines and all 14 Circle Mining offices have been included in this project. The Project which is self-sustaining (user fee ₹ 1/- per transaction is realized) aims at bringing a transparent and effective management system for monitoring and supervision of mineral transition in the State in totality, i.e., from source point to destination through one Project Management Unit (PMU) at headquarters, Bhubaneswar and has linked it with Project Implementation Units (PIU).

To check the illegal transportation of minerals, the above project has been integrated with the online system at six ports, Commercial Tax and Commerce & Transport Departments, and Railways. A mobile application named National Mineral Statistics (NMS) has also been developed wherein the production, despatch and sale value of minerals are captured on real time basis. Apart from these, following major steps have been taken during 2016-17 to further strengthen the checking and monitoring system.

- Space based surveillance system (through ORSAC) for monitoring of iron and manganese mining lease area.
- GPS based tracking system in the mineral carrying vehicles to reduce unauthorized transportation and despatch of minerals.
- Procurement of 3-D scanner for volumetric assessment of the mining pits and dumps.

4.3.13 District Mineral Foundation

Odisha District Mineral Foundations Rules, 2015 have been framed and notified by the State Government and subsequently amended on 15.01.2016. District Mineral Foundations came into existence w.e.f. 12 January, 2015. 'Pradhan Mantri Khanij Kshetra Kalyan Yojana' (PMKKKY) was incorporated into the DMF Rules with the objective to work for the interest and benefit of persons and areas affected by mining related operations. Accordingly, District Mineral Foundation Trusts have been constituted in all 30 districts with the Collector as the Chairperson and other designated members. The funds of the Trust will be utilized for implementing the PMKKKY under drinking water supply, environmental preservation and pollution control measures, health care, education, welfare of women and children, welfare of aged and disabled people, skill development, sanitation, housing etc.

4.3.14 Odisha Mining Corporation (OMC)

The Odisha Mining Corporation Limited (OMC), established in 1956, is the largest State public sector unit in the country's mining sector. In 2016-17, 34 leases covering an area of 18206.013 ha. were held by OMC. The details of leases held are shown in Table 4.22.

Table 4.22 : Leases Held by OMC at the End of 2016-17

Minerals/Ores	Leased held	
	Nos.	Area (in hect.)
Chromite	11	5829.304
Iron	11	5786.914
Iron and Manganese	5	4175.689
Manganese	3	685.241
Limestone	1	1300.79
Gemstones	2	-
Bauxite	1	428.075
Total	34	18206.013

Source: Odisha Mining Corporation, Bhubaneswar

(a) Production of Minerals by OMC

Table 4.23 shows the production of minerals by OMC during 2012-13 to 2016-17. Iron ore is produced from 4 mines of OMC i.e. Daitari, Gandhamardhan, Kurmitar and Mahaparbat

mines, while chrome ore is produced in 3 mines of OMC i.e. South Kaliapani, Bangur and Sukurangi mines. During 2016-17, OMC has produced iron ore to the tune of 63.66 lakh MT which is 84 percent of the total mineral production by OMC

Table 4.23 : Production of Minerals by OMC

Minerals/Ores	2012-13	2013-14	2014-15	2015-16	2016-17
Iron Ore	24.55	18.72	32.06	60.20	63.66
Chrome Ore	5.97	5.81	7.01	9.60	11.71
Manganese Ore	Nil	Nil	Nil	Nil	Nil
Chrome concentrate	0.84	0.76	0.37	0.30	0.35
Total	31.36	25.29	39.44	70.10	75.72

(in lakh MT)

Source: Odisha Mining Corporation, Bhubaneswar

(b) Sales of Minerals by OMC

Table 4.24 gives a detailed picture of domestic sales of minerals made by OMC. During 2016-17, OMC made domestic sales of 71.62

lakh MT, 8.18 lakh MT and 0.31 lakh MT of iron ore, chrome ore and chrome concentrates respectively.

Table 4.24 : Domestic sales of Minerals/ Ores by OMC (2013-14 to 2016-17)

(Quantity in lakh MT; Value in ₹ crore)

Sl. No.	Minerals/Ore	2013-14		2014-15		2015-16		2016-17	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1	Iron Ore	31.91	1007.43	34.97	1,083.92	43.38	83804.11	71.62	1257.80
2	Chrome Ore	5.85	736.82	566384.39	747.46	6.14	69512.00	8.18	1026.58
3	Chrome Concentrate	1.24	109.63	48269.75	49.09	0.14	1326.15	0.31	47.05
4	Total	39.00	1853.88	-	-	49.66	154642.26	80.11	2331.43

N.B. Value is inclusive of excise duty of ₹5.23 crore.

Source: Odisha Mining Corporation, Bhubaneswar.

During 2016-17 Odisha Mining Corporation has signed sales agreement with 41 domestic buyers for supply of 37,67,044 MT of iron ore per year, and 10 domestic buyers for supply of 7,77,399 MT of chrome ore per year under Long Term Linkage (LTL) basis. OMC Ltd. sells iron ore and chrome ore to both in-State and out of State companies/buyers through national e-auction.

Table 4.25 reflects the annual turnover, profit and dividend paid to the State Government from 2012-13 to 2016-17.

(In crores of rupees)

Year	Turnover	Profit before tax	Dividend paid to Government
2012-13	1658.15	1383.46	NA
2013-14	1853.88	1449.95	NA
2014-15	1881.26	1456.25	500.00
2015-16	1546.42	1017.42	500.00
2016-17	2331.43	1320.51	500.00

Source: Odisha Mining Corporation, Bhubaneswar

In order to meet the demand of local market, OMC has decided to go for a 2.5 MTPA iron ore project at Daitari Mines in Keonjhar district with a project cost of ₹ 600 crore for installation of crushing and screening plant along with distance conveyors and rail mode of dispatch of the product which will be completed by 2017 end.

4.4 Geological Surveys and Exploration

Directorate of Geology, Odisha with an objective to fulfil the need of mineral based

industries and to augment the mineral resources of the State executes various mineral exploration programme through its field units and six zonal offices at Balangir, Berhampur, Dhenkanal, Keonjhar, Koraput and Sambalpur. During the year 2016-17, eleven investigation programmes for minerals like iron, manganese, chromite, limestone, graphite, base metal, garnet, dolomite and quartz have been taken up in the State for upscaling of resources. The achievement of geophysical surveys under Directorate of Geology, Odisha during 2015 - 16 and 2016-2017 are shown in Table 4.26.

Table 4.26 : Geological exploration in Odisha during 2016-17

Sl. No.	Item of work	Achievement/area covered Samples collected	
		2015-16	2016-17
1	No. of Geological Explorations	11	11
2	Geological mapping(1:25000) (1:2000)	416 sq. km.	910 sq. km
		3.45km.	3.97sq. km
3	Trial excavation	567 cu.m.	534.00 cu. m
4	Drilling	5004.6 m	2300.5 m
5	Sampling –mineral rock	2607 nos.	1321 Nos. Garnet-6860 kg of abrasive grade
6	Sampling –coal	433.68 m	108.31 m
7	Geophysical survey		
	i) Self potential survey (50m x 10m) ii) Resistivity sounding	1.14 sq. km. 3 nos.	1.5 sq. km 3 nos.
8	Technical Evaluation of Prospecting Reports	-	57 nos.
9	Finalization of Geological reports of auctionable Blocks	1 no.	3 nos.
10	Identification of mineral Blocks for upgradation of resource	19 nos.	8 nos.
11	i) Gem testing laboratory	i) 3460 nos.	i) 3161 nos.
	ii) Testing charge collected	ii) ₹ 7,44,199.00	ii) ₹ 686091.00
12	Petrology Laboratory	186 samples	

Source: Directorate of Geology, Odisha

The major achievements of the exploration programme during 2016-17 is presented in Table 4.27.

Table 4.27 : The major achievements of the exploration programme during 2016-17

Sl No.	Name of the Project	Geological resources explored(in MT)
1.	Netrabandh Pahar Iron ore block(at G2 stage)	81.97(auctioned)
2.	Kotametta lime stone Block	98.69(auctioned)
3.	Uskalvagu lime stone (reassessed)	189.524
4.	Netrabandh Pahar Iron Ore west Block of Sundargarh district	17.265
5.	Crysatalline limestone in Pipalmunda of Bolangir district at (G2 stage)	3.67 MT
6.	Graphite in Naringapanga Block of Rayagada district at (G2 stage)	0.333
7.	Coal in Madhupur Block of Ib Valley Coal field at G2 stage	134.28

Source: Directorate of Geology, Odisha.

Considering the need of minerals in the State, the Directorate of Geology has taken the following exploration programme for the financial year 2017-18.

- Exploration for Iron ore in Dholtapahar of Sundargarh district.
- Exploration of Crystalline limestone in around Lukapada, Bolangir district.
- Prospecting for chromite over an area of 208 hectare in village Madhuban of Keonjhar district.
- Exploration for assessment of Garnet around Birlamunda and Sarai village in Angul and Keonjhar.
- Investigation for pyrophyllite around Janghira-Rampakot area, Keonjhar District.
- Investigation for assessment of rocks suitable for use as Dimension stone and other Minor Minerals in freehold areas around Taraba and Lubarsingi.
- Investigation for assessment of rocks suitable for use as Dimension stone and other Minor minerals in freehold areas around Antarba and KandhaAdaba.
- Investigation for Dimension and Decorative stone and other Mineral Minerals in parts of Dhenkanal and Angul Districts.
- Continuation of Geophysical investigation for delineation of Base metal mineralization by induced polarization method to the North of Kesharpur, Mayurbhanj District.
- Exploration for iron ore around Balia Pahar, Sundargarh District.
- Exploration for iron around Mankarnacha, Sundargarh District.
- Continuation of Exploration for graphite around Khalpadar in Rayagada District.

4.5 New Initiatives

IDCO

1. IDCO is developing an Electronic Manufacturing Cluster (EMC) for establishment of information technology and Electronic System Design, and manufacturing industries.
2. The Petroleum, Chemical and Petrochemical investment Region (PCPIR) is developed in Jagatsinghpur and Kendrapara District for establishment of petrochemical industries.
3. PRIDE, DHAMRA: Kalinga Nagar national Investment Manufacturing Zone (KNIMZ) is developed for establishment Zone under the PPP for Regional Integrated Development Enterprise (PRIDE) Scheme is under development at Dhamra of Bhadrak District by IDCO. Many other Industrial Parks and Estates are developed by IDCO for housing Industrial Projects.
4. A special fund named Industrial Infrastructure Development Fund with a corpus of ₹ 100 crore has been created to assist various Departments in funding external infrastructure projects work of Industrial Clusters/parks.

5. IDCO has taken new initiative to construct office-cum- commercial complex in different districts of the State to attract corporate houses to open up their business activities.
6. Development of Agro Industrial Estate by IDCO on behalf of Deptt. of Agriculture and farmers Empowerment, Government of Odisha in Semela Village, Block-Papadahandi of Dist – Nawarangpur.

IPICOL:

1. During 2016-17, two major industrial conclaves were organized – one at Bengaluru and the other in Bhubaneswar – inviting investors of international fame and showcasing the advantages of the State.
2. To ensure smooth establishment of industrial units, the Department has taken several initiatives regarding business regulatory reforms. The Odisha Industrial Facilitation Rules 2004 have been amended keeping in mind the changing requirements and opportunities. Online portals like e-Biz, CICG (Centralized Inspection Coordination Group), GO IPLUS (Government of Odisha Industrial Portal for Land Use and Services) and APAA (Automated Post Allotment Application) have been developed to facilitate online mode for various clearances and information on industrial infrastructure including land.
3. A long term road map for industrial Development of the State – Vision 2025 – has been prepared. It envisages creation of additional 30 lakh jobs with an investment of around ₹ 2.5 lakh crore. The Vision gives special emphasis on the development of five chemicals, textile, downstream and ancillary industries.
4. IPICOL has taken other initiatives such as developing a mobile application to promote and facilitate in Odisha for the targeted users, promoting Odisha as a preferred destination through engaging a consultancy agency, M/s J Walter Thompson India (JWT), Industrial facilitation services, engagement of third party assessment and evaluation of implementation of business reforms in Odisha, engagement of professional agency to provide investment promotion advisory services for focus sector for promotion of investment, engagement of M/s SPAN Communications as a creative agency for preparing various promotional materials for use in the print, television, online, outdoor and social media.

IDCOL

1. Negotiation is going on with KIOCL Ltd., a central PSU for induction as a Strategic Investor with 51 percent equity for long-term sustenance of IDCOL
2. IDCOL has signed MoU with IREL for development of Beach Sand Project through JV Company. Action has been taken to execute JV agreement with IREL.

EPM:

1. The Odisha Export Policy 2014 is being recast with more effective export promotion activities to be finalized very soon. As a part of the new focus on exports, Raptani Bhawan at Bhubaneswar has been set up to provide single window clearance facility to the exporters of Odisha.

**Annexure - 4.1 : Broad Sector-wise Index of Industrial production of the State for the ,
period 2012-13 to 2016-17 (Base -2011-12=100)**

SI No. Sector-wise items	NIC 2-Digit	2012-13	2013-14	2014-15	2015-16	2016-17
Manufacturing						
1. Food Products	10	102.937	92.050	94.914	89.368	67.633
2. Beverages Products	11	100.821	115.844	134.150	142.323	118.521
3. Tobacco Products	12	94.660	89.806	77.123	93.905	266.755
4. Textiles	13	110.508	111.967	99.298	69.125	55.490
5. Wearing apparels, dressing and dyeing of Fur	14	107.578	114.633	112.856	116.162	120.810
6. Tanning and dressing of leather, manufacturing of luggage, handbags, saddler and harness etc.	15	NA	NA	NA	NA	NA
7. Manufacture of wood and products of wood and cork, except furniture	16	85.213	66.685	97.573	55.467	41.527
8. Paper and paper products	17	100.199	169.092	283.877	315.407	330.197
9. Printing, Publishing and reproduction of recording media	18	106.429	103.883	104.476	113.457	115.902
10. Coke and refined petroleum products	19	151.002	153.143	145.845	197.832	218.683
11. Chemicals and Chemicals products	20	91.564	96.428	100.950	106.545	95.522
12. Pharmaceuticals, medicinal chemical and botanical products	21	99.240	255.389	203.926	302.406	480.904
13. Rubber and Plastic products	22	77.632	72.671	57.887	112.626	160.042
14. Other Non-metallic minerals products	23	105.562	105.491	121.057	144.183	135.711
15. Basic metals	24	174.999	363.555	286.052	284.203	341.137
16. Fabricated metal products except machinery and equipment	25	107.774	97.133	80.028	92.265	310.005
17. Radio, Television and communication equipment and apparatus and watches and clocks	26	NA	NA	NA	NA	NA
18. Electrical Machinery and apparatus	27	88.898	118.712	153.050	226.062	127.251
19. Machinery and Equipment	28	71.420	45.394	83.227	50.285	28.258
20. Motor vehicle, Trailers and Semi trailers	29	79.967	84.954	114.405	124.196	114.999
21. Other Transport Equipment	30	NA	NA	NA	NA	NA
22. Furniture	31	86.914	95.656	94.200	129.527	131.388
23. Medical, Precision and Optical Instruments,	32	NA	NA	NA	NA	NA
Manufacturing (Total)		155.849	289.005	237.109	241.899	282.520
M and Q Sector		104.305	121.779	129.175	152.482	168.926
Electricity Sector		103.421	113.188	126.240	142.039	138.485
General Index		128.124	198.518	178.951	192.964	218.738

Source: ASI Division, DES, Odisha

Annexure 4.2 :District-Wise Break-up of MSMEs and Employment Generated during 2016-17
 (₹ in crore)

Districts	No. of MSME units set up	Investment (In Rs. crores)	Employment Generated				Employment of women
			SC	ST	General	Total	
Angul	2325	20936.67	2337	704	4175	7216	405
Balasore	2911	8378.28	2592	732	5417	8741	2496
Bhadrak	2206	7724.25	523	23	4666	5212	786
Bolangir	2266	11334.29	1348	851	5900	8099	617
Boudh	540	2254.54	71	23	1228	1322	93
Cuttack	3374	13898.27	1710	112	8805	10627	2067
Deogarh	1102	2365.43	970	494	3238	4702	3131
Dhenkanal	1482	9486.22	52	12	1636	1700	20
Gajapati	525	2561.71	95	317	1105	1517	329
Ganjam	3134	11013.85	741	35	8194	8970	1164
Jagatsinghpur	1100	6048.09	1196	38	1979	3213	502
Jajpur	2240	13038.95	1112	148	4813	6073	933
Jharsuguda	1517	12335.47	463	466	2921	3850	151
Kalahandi	2232	14840.73	2352	1519	5889	9760	163
Kandhamal	1204	3460.6	1077	1080	909	3066	320
Kendrapara	1661	4903.82	610	52	3173	3835	1243
Keonjhar	1375	4440.6	557	1067	1739	3363	342
Khurda	3704	26387.58	668	192	12484	13344	3001
Koraput	2201	9723.65	2329	1466	3219	7014	721
Malkangiri	315	1464.1	241	195	841	1277	11
Mayurbhanj	2420	6715.41	1155	1671	3233	6059	1443
Nabarangpur	1321	6819.08	1633	1512	1117	4262	20
Nayagarh	1241	6734.93	442	45	3383	3870	281
Nuapada	1008	3557.25	389	209	1370	1968	132
Puri	1510	4670.41	467	35	3626	4128	555
Rayagada	1721	9457.17	1030	1277	2237	4544	125
Sambalpur	3319	19961.98	2792	2902	6868	12562	4532
Sonepur	685	1706.88	293	31	1821	2145	61
Sundergarh	4844	41296.67	2164	4579	8723	15466	810
Total	57783	303463.96	32826	22656	119739	175221	26975

Source: Director of Industries, Odisha

Annexure 4.3 : List of Events and Seminars organized /participated by IPICOL during 2016-17

SI No	Name of the Event	Date
1	P4 Expo	April 2016
2	TIECon, Santachlar USA	May 2016
3	Regional Awareness Camps at Cuttack, Balasore, Rourkela, Sambalpur, Berhampur, Raygada	May and June,2016
4	Round Table on CSR in Odisha	May 2016
5	Odisha Investors Meet at Bangalore	August 2016
6	India Chem, Mumbai	September 2016
7	Electronica India	September 2016
8	Taitronioics	October 2016
9	Ambassadors Meet at New Delhi	November 2016
10	Road Shows at New Delhi, Hyderabad and Kolkota	November 2016
11	Make in Odisha Conclave	December 2016
12	Non Resident Odia (NRO) Conclave at New Delhi	January 2017
13	Facilitation meets at Delhi, Mumbai, Kolkata and Hyderabad	January 2017
14	Facilitation meets at Bangalore	February 2017

Source: Activity report of Industry Deptt 2016-17

Annexure 4.4 District-wise Loans Sanctioned, Disbursement and Recovery Position , of OSFC by the end of 2016-17

(₹ in lakh)

Sl. No.	District	Sanctioned		Disbursement		Recovery made	Outstanding
		No.	Amount	No.	Amount		
1	Angul	359	1317.99	359	1317.49	2949.36	262.93
2	Bolangir	1068	4048.52	1068	4047.23	3645.55	710.31
3	Balasore	1331	10073.40	1328	10004.80	15784.27	2829.56
4	Bargarh	414	1636.76	414	1636.76	1652.94	287.67
5	Bhadrak	488	2284.74	488	2284.22	1148.14	863.67
6	Boudh	225	522.84	225	522.84	618.27	61.60
7	Cuttack	4156	21410.54	4156	21365.98	28362.64	4020.32
8	Deogarh	80	287.39	80	287.39	3384.41	215.34
9	Dhenkanal	1130	2524.01	1130	2524.01	3732.32	614.29
10	Gajapati	86	651.20	86	651.20	4116.58	479.54
11	Ganjam	1693	6886.66	1693	6632.58	7321.75	1345.19
12	Jagatsinghpur	2246	3246.73	2246	3246.52	3481.27	431.09
13	Jajpur	656	7318.35	656	7317.09	3625.79	1424.13
14	Jharsuguda	395	2048.51	395	2048.51	2815.47	137.61
15	Kalahandi	736	2103.49	736	2103.49	2417.83	508.21
16	Kandhamal	515	1619.39	515	1619.06	1487.44	446.94

Sl. No.	District	Sanctioned		Disbursement		Recovery made	Outstanding
		No.	Amount	No.	Amount		
17	Kendrapara	1182	2533.61	1182	2533.10	12057.49	438.72
18	Keonjhar	962	4369.02	962	4369.02	6044.37	328.41
19	Khurda	2629	19490.74	2627	19190.36	32018.83	5278.97
20	Koraput	687	2601.78	688	2608.92	3233.17	287.79
21	Malkangiri	128	179.92	128	179.92	1322.53	19.71
22	Mayurbhanj	1263	4099.83	1263	4098.57	6136.29	685.42
23	Nabarangpur	224	701.83	224	701.83	1540.52	73.14
24	Nuapada	124	422.06	124	422.06	1445.50	89.12
25	Nayagarh	1266	2169.88	1266	2169.88	1160.16	751.84
26	Puri	1188	5061.69	1188	5061.69	9525.80	431.22
27	Rayagada	289	1608.44	287	1596.98	2354.34	111.53
28	Sambalpur	736	5672.73	735	5662.73	9239.68	722.22
29	Sonepur	149	65.52	149	65.52	2070.65	22.87
30	Sundargarh	1826	14802.43	1824	14720.34	23125.88	2314.92
	Total	28231	131760.00	28222	130990.09	197819.24	26194.28

Source: Odisha State Financial Corporation, Cuttack

Annexure 4.5 : Minor Minerals: Reserves, Production, Dispatch and Revenue collection in Odisha during 2015-16 and 2016-17

(Quantity in Lakh MT and Rupees in Lakhs)

Sl No	Name of Minor mineral	Total Reserves		Production in quantity		Production in Value		Dispatch (in quantity)		Revenue collection	
		2015-16	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16	2016-17
1	China Clay	2809.12	2809.12	0	0	0	-	0	0	17.5	11.78
2	Dolomite	8228.71	8221.21	10.352	12.5	7609	9187	9.48	12.666	676.18	987.33
3	Fire clay	1700.76	1700.76	0	0	0	0	0	0	0	0
4	Pyrophilite	122.59	122.59	0.045	0	27	0	0.05	0	6.19	0
5	Quartzite	602.03	601.56	0.501	0.48	502	49.811	0.50	0.561	35.43	35.66
6	Soapstone	8.2	8.2	0	0	0	0	0	0	0	0
7	Sand stone	0	0	0	0	0	0	0	0	0	0
8	Silica sand	74.06	74.446	0.004	0	2	0	0	0	0	0

Source: Director of Mines, Odisha, Bhubaneswar

Annexure 4.6 : District-wise Break-up of Exploration and Value of Major Minerals in Odisha during 2016-17

(Quantity in lakh MT, Value in crores of rupees)

District	Chromite		Coal		Iron-Ore	
	Qty.	Value	Qty.	Value	Qty.	Value
Angul			785.01	11335.547		
Dhenkanal	-	-	-	-	-	-
Jajpur	41.297	5653.56	-	-	28.242	391.546
Jharsuguda	-	-	457.129	6600.938	-	-
Keonjhar	-	-	-	-	702.906	9744.953
Koraput						
Mayurbhanj				-	14.590	202.266
Sundargarh		-	109.498	1581.155	280.896	3894.281
Sambalpur		-	1.51	21.749	-	-
Bolangir			-	-	-	-
Rayagada						
Total	41.297	5653.56	1353.14	19539.389	1026.634	14233.046
District		Manganese Ore			Bauxite	
	Qty.		Value		Qty.	Value
Angul						
Dhenkanal			-		-	
Jajpur			-		-	
Jharsuguda			-		-	
Keonjhar	3.918		540.167		-	
Koraput					68.25	457.275
Mayurbhanj			-		-	
Sundargarh	2.3.6		325.200		-	
Sambalpur			-		-	
Bolangir			-		-	
Rayagada			-		50.89	340.963
Total	6.276		865.367		119.14	798.238

Source: Directorate of Mines, Odisha

Annexure 4.7 : Major Mineral Production Recorded in Major States by the End of 2016-17

(In Lakh tonnes)

State	Bauxite	Coal	Chromite	Lime stone	Manganese ore	Iron ore
Andhra Pradesh	-	-	-	319.98	2.18	4.44
Assam	-	4.44	-	15.03	-	0
Bihar	-	-	-	1.84	-	0
Chhattisgarh	17.69	1253.34	-	283.21	-	275.94
Goa	-	-	-	-	-	70.96
Gujarat	53.47	-	-	225.83	0.42	-
Himachal Pradesh	-	-	-	98.95	-	-
J and K	-	0.11	-	7.12	-	-
Jharkhand	21.11	1083.52	-	10.24	-	193.58
Karnataka	-	-	0.01	270.27	2.20	242.89

State	Bauxite	Coal	Chromite	Lime stone	Manganese ore	Iron ore
Kerala	-	-	-	3.31	-	-
Madhya Pradesh	5.64	981.07	-	319.85	5.63	14.69
Maharashtra	16.14	294.71	-	108.56	5.42	10.38
Meghalaya	-	32.27	-	45.92	-	-
Odisha	112.93	1257.93	29.34	42.96	5.01	899.95
Rajasthan	-	-	-	603.82	0.01	11.09
Tamil Nadu	0.07	-	-	220.39	-	-
Telangana	-	541.67	-	222.97	0.10	-
Uttar Pradesh	-	144.01	-	24.43	-	-
West Bengal	-	242.15	-	-	-	-
India	227.05	5830.78	29.35	2487.83	18.79	1719.48

Sources: Annual Report of IBM 2016-17, Government of India and Directorate of Mines.

Annexure 4.8 : Value of Mineral Production of Major States from 2012-13 to 2016-17 and its Percentage to all India Total

(Rupees in crores)

State	2012-13	2013-14	2014-15	2015-16	2016-17
Chhattisgarh			17569.71	13265.03	19082.44
%			(8.29)	(6.36)	(8.83)
Assam	10999.93	11153.47	9814.57	9260.66	9407.27
%	(7.59)	(4.94)	(4.63)	(4.44)	(4.35)
Meghalaya			3550.43	2580.19	1912.83
%			(1.67)	(1.23)	(0.88)
Gujarat	13046.24	12389.43	10554.04	10258.43	10827.69
%	(9.00)	(5.49)	(4.98)	(4.92)	(5.01)
Karnataka	4409.11	5741.68	5782.47	4121.95	4930.39
%	(3.04)	(2.54)	(2.73)	(1.98)	(2.28)
Maharashtra	6151.88	6898.96	6316.65	5925.81	6029.89
%	(4.24)	(3.06)	(2.98)	(2.84)	(2.79)
Madhya Pradesh	10502.08	11077.07	12568.14	15624.52	13928.43
%	(7.25)	(4.91)	(5.93)	(7.49)	(6.44)
Odisha*	29450.41	54281.60	26470.10	29528.57	29997.44
%	(20.32)	(24.05)	(12.50)	(14.16)	(13.88)
Telangana			7080.07	8344.43	11720.34
%			(3.34)	(4.00)	(5.42)
Jharkhand	16516.01	20645.27	25645.19	24244.46	18531.05
%	(11.39)	(9.15)	(12.11)	(11.63)	(8.57)
Rajasthan	23502.70	24714.06	22361.36	22689.53	23726.58
%	(16.21)	(10.95)	(10.56)	(10.88)	(10.97)
Tamil Nadu	5744.29	6075.44	5599.24	5321.99	6682.15
%	(3.96)	(2.69)	(2.64)	(2.55)	(3.09)
West Bengal	8882.36	11750.94	4044.37	3528.52	6696.77
%	(6.13)	(5.2)	(1.91)	(1.69)	(3.10)
Offshore			49792.63	49186.84	46991.79
%			(23.51)	(23.59)	(21.74)
All India	144945.17	225659.68	211712.22	208488.13	216188.01
%	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Sources: Annual Report of IBM 2015-16, Government of India and Directorate of Mines, Odisha.

Annexure 4.9 : Mineral-Wise Leases, 2016-17

Minerals/Ores	Total Leases		Working Leases	
	Nos.	Area in Hectares	Nos.	Area in Hectares
Asbestos	1	117.350	0	0
Asbestos and Pyroxenite	1	49.220	0	0
Bauxite	7	4542.387	2	2704.004
China clay	16	1557.352	2	117.044
China clay and F. Clay	2	93.161	0	0
Chromite	25	6998.608	12	1887.417
Chromite and Pyroxenite	1	406.000	1	406.000
Serpentinite, Manganese and Chromite	1	187.030	0	0
Coal	30	18685.995	27	17471.438
Dolomite	5	521.649	4	441.897
Fireclay	24	2675.984	0	0
Fireclay and Sandstone	1	192.175	0	0
Fireclay and Silica sand	1	255.160	0	0
Galena	1	5.261	0	0
Gemstone	16	271.184	3	5.918
Graphite	104	2834.076	6	182.265
Iron ore and Manganese	63	14589.589	15	4770.356
Iron ore	77	25805.065	28	17272.842
Iron ore and Bauxite	2	480.163	2	480.163
Iron, Dolomite and Lime stone	1	134.733	0	0
Iron Ore, Quartzite, Soapstone	1	92.895	0	0
Kyanite	1	55.490	0	0
Limestone	9	2850.404	2	787.644
Limestone and Dolomite	39	5625.594	6	2485.218
Manganese Ore	42	6421.331	10	2387.355
Manganese Ore and Bauxite	2	95.243	0	0
Mineral Sand	1	2464.054	1	2464.054
NephelineSyenite	1	14.277	0	0
Pyrophyllite	3	198.294	0	0
Pyrophyllite and Quartzite	6	299.978	1	3.920
Quartz	68	1147.604	0	0
Quartz and Feldspar	1	8.127	0	0
Quartz and Gemstone	2	60.141	0	0
Quartz and Quartzite	7	148.583	1	25.046
Quartz and Silica Sand	1	111.980	0	0
Quartz, Gemstone and Mica	2	55.497	0	0
Quartzite	23	541.254	6	116.639
Red-Oxide	1	381.619	0	0
Sand (Stowing)	5	502.885	1	17.805
Sand Stone	2	9.921	0	0
Silica Sand	1	17.446	0	0
Soap stone	6	465.377	0	0
Soap stone and Pyroxenite	1	50.646	1	50.646
Soapstone, Steatite and Talc	1	3.640	0	0
Tine Ore	1	20.855	0	0
Talc	1	62.483	0	0
Total	607	102107.760	131	54077.671

Source: Director of Mines, Odisha



Banking, construction and tourism are among the sub-sectors of the services sector that are covered here under the services sector. The macro outlook has shown that the economy of Odisha has been predominantly services-led. These three sub-sectors can be called primary drivers of the services-led economy. Banking and institutional finances are crucial for inclusive growth. Construction, with its capital good characteristics and employment generation, augments the investment and growth process. Tourism enhances livelihood as well as financial resource generation for the State. Developments like the growth and functioning of banking network, PMJBY, PMJDY, core banking solution, kiosk facilities, and e-platform in the state cooperative sector are quite impressive for Odisha during the year. The share of trade, hotel and restaurants sector in GSDP increased from 4.85 percent in 1950-51 to 10.37 percent in 2017-18 in real terms backed by the secular growth in the rest of the services sector. Odisha Tourism policy 2016 has also been implemented to promote tourism sector in a big way, which should positively impact several other sub-sectors within the services sector.

As for the country as a whole, growth of the Odisha economy is being led by the services sector, although growth in other sectors also contribute to its growth. It contributes substantially to the State economy in terms of employment, diverse income generating activities (IGA), FDI inflows and overall value additions. Trade, transport, communication, banking, financial, real estate, business services, community, social and personal services come within the ambit of the service sectors otherwise termed as tertiary sector. In World Trade Organization (WTO) and Reserve Bank of India (RBI) classifications, construction is also included with its services characteristics. This chapter discusses institutional finances, tourism, trade, hotel & restaurants sectors along with the construction sector.

GSDP under Services Sector

The size and dynamics of services sector in Odisha’s economy is well pronounced with its imposing average share of 41 percent to GSDP at basic prices during 2011-12 to 2017-18 (series with 2011-12 base at current prices). The sector was expected to contribute 45.25 percent to the GSDP of Odisha during 2017-18. The services sector in Odisha emerged as a potential growth engine with an expected robust real growth rate of 12.42 percent during 2017-18.

Table 5.1 : Sub-sector wise share of GSDP of service sector (2017-2018)

Sub-Sector	Percentage share
Trade, Hotel and Restaurant	10.37
Other Services	8.74
Real Estate	7.81
Transport, Railway, Storage, Communication	9.38

Source: DE&S, Odisha

As per advance estimates for the year 2017-18, the share of each sub-sector in the GSDP of the service sector is given in Table 5.1. Though the share of each sub-sector reflects its direct contribution to GSDP, some of them have huge indirect contributions and multiplier effects. For instance, “transport and communications” add to infrastructure (discussed in Chapter 6), which is crucially important for any economy. By providing liquidity, “banking, insurance and financial services” support the businesses and ensure smooth functioning of the economy. Construction adds to real capital stock, which is a major input for production in various sectors. Year wise share of service sector is shown in Figure 5.1.

Figure 5.1 : Percentage Share of Service Sector in Odisha (2011-12 to 2017-18)



Source : DE&S, Odisha

5.1 Institutional finances

Banking network and financial institutions enhance the savings potential of the State’s economy. Their appropriate utilization augments the diversification of economic activities with productive investment in the State. There has been a phenomenal growth and spread of banking services throughout the State

of Odisha, particularly in rural areas, in recent years. Commercial banks have been directed to open many rural and semi-urban branches and those have shouldered the responsibility for mobilizing public savings. At current prices, the banking and insurance sector is expected to contribute 9.10 percent of GSDP of the Service Sector and to achieve a real growth rate of 10.70 percent in 2017-18 in Odisha over the previous year.

5.1.1 Banking Network

Banking network expanded in Odisha in 2016-17 in tune with the population growth. Bank density, the average population served by a bank branch, remains 8.59 thousand. Nearly 55 percent of all bank branches are located in rural Odisha as shown in Figure 5.2. To promote financial inclusion through penetration of banking services in rural areas, and to provide sustainable banking services in unbanked areas, a phase wise approach has been adopted to provide doorstep banking facilities in all the unbanked villages in the country. Banks have covered 43,472 unbanked villages having population below 2000 with provision of banking outlets as on March, 2017, which constitutes 94.74 percent of the total target. Out of these villages, 657 are covered through Brick & Mortar (B&M) branches and the rest by branchless modes mainly through Business Correspondence (BC) mode. During 2016-17

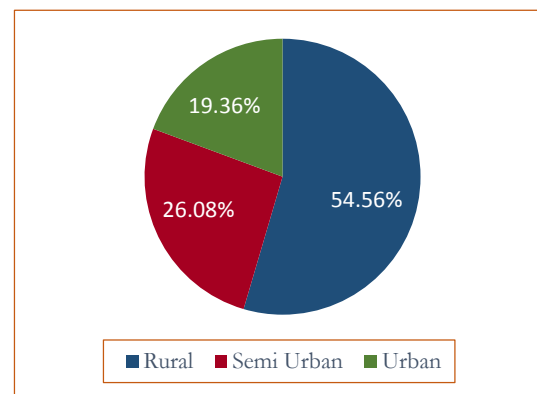
about 27 branches of all banks opened in unbanked Gram Panchayats, which was 69 and 125 during 2015-16 and 2014-15 respectively. The Banks increased their penetration further with the total number of ATMs reaching 6129 by end of March, 2017. The extent of the Banking network in Odisha as on March, 2017 has been summarized in Table 5.2. Progress of banking network in Odisha from 2012-13 to 2016-17 is shown in Figure 5.3.

Table 5.2 : Banking Network in Odisha, as on March, 2017

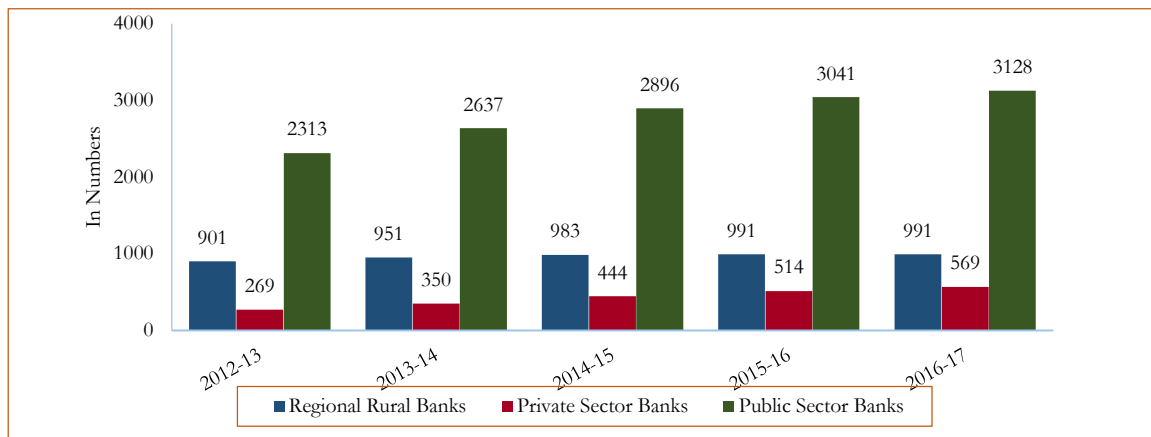
Type of Banks	Number of Banks	Number of Branches
Public Sector	26	3128
Private Sector	15	569
Regional Rural	2	991
Total Commercial	43	4688
State Co-operative	1	343
Total Number of Bank Branches		5031
i. Rural		2745
ii. Semi-Urban		1312
iii. Urban		974

Source: SLBC (147th issue)

Figure 5.2 : Distribution of Bank branches in Odisha



Source: SLBC (147th issue)

Figure 5.3 : Progress of banking network in Odisha

Source: SLBC (147th issue)

2 Bank Deposits, Advances and Credit Deposit Ratio

The total deposits of all banks in Odisha grew by 15.71 percent in 2016-17 over 2015-16. More than 96 percent of total bank deposits were with commercial banks. However, co-operative banks also play a pivotal role as they concentrate on rural areas and support agriculture in a strategic way. Table 5.3 reflects the major banking indicators of 2016 and 2017.

Total deposit, advances utilized and total advance sanctioned and utilized in the state shows a growth of 15.71, 6.60 and 12.41 percent respectively during 2017 over 2016. From sectoral advances point of view, DRI (Differential Rate of Interest) advance has the highest growth of 109.37 percent during 2017 over 2016.

Table 5.3 : Major Banking Indicators in Odisha

(₹ in Crore)

Sl. No	Indicators	2015-16	2016-17	% growth in 2016-17 over 2015-16
1	Total Deposit	218748.65	253115.90	15.71
2	Total Advance utilized	163733.85	174539.42	6.60
3	Total Advance sanctioned and utilized in the State	114780.51	129025.39	12.41
4	Priority sector advance	73386.15	84202.78	14.74
5	Agriculture advance	38463.05	40883.12	6.39
6	MSME advance	28495.25	27982.21	(-1.80)
7	Education loan	2294.33	2198.43	(-4.18)
8	Housing loan	9802.86	10981.45	12.02
9	Advance to Minority community	2791.50	2896.10	3.75
10	Advance to weaker section	24334.85	23250.18	(-4.46)
11	DRI advance (Different Rate of Interest)	86.52	181.15	109.37
12	% of Priority Sector Advance to Total Advance (Benchmark-40%)	63.94	65.26	
13	% of Agriculture Sector Advance to Total Advance (Benchmark: 18%)	33.51	31.69	
14	% of weaker section advance to Priority Sector advance. (Benchmark:25%)	33.16	27.61	
15	CD Ratio (%) [Benchmark: 60 %]	74.85	68.96	
16	Credit investment to Deposit Ratio	75.62	70.59	

Source: SLBC (147th issue)

Public Sector banks played a pivotal role in the banking field comprising 62.02 percent of total bank branches, and accounted for 76.37 percent of total deposits and 74.45 percent total advances made by all banks in the State by the end of March 2017. The CD Ratio is highest i.e. 122.47 in the case of co-operative banks whereas it was 67.22 in public sector banks by the end of March 2017. It is evident from the advances scenario depicted in Annexure 5.1 and 5.2 that Agriculture sector predominates

with 23 percent followed by MSME with 16 percent.

Table 5.4 shows the year wise share of co-operative banks and commercial banks in total deposits from 2007-08 to 2016-17. Share of co-operative banks in total deposit is very small, which declined from 4.43 percent during 2007-08 to 3.63 percent during 2016-17. In the case of Commercial banks the same increased from 95.57 percent to 96.37 percent during the same period of time.

Table 5.4 : Share of Commercial and Cooperative Banks in Total Deposits (₹ in Crore)

Year	Commercial Banks	Coop. Banks	Total Deposit	Share of Coop. Banks (%)	Share of Commercial Banks (%)
2007-08	52272.25	2422.06	54694.31	4.43	95.57
2008-09	67766.26	2914.30	70680.56	4.13	95.87
2009-10	82891.56	3652.63	86544.38	4.22	95.78
2010-11	102176.90	4148.32	106325.20	3.90	96.10
2011-12	124826.40	4683.99	129510.40	3.62	96.38
2012-13	140877.40	5587.77	146465.20	3.82	96.18
2013-14	162948.40	6693.72	169642.20	3.95	96.05
2014-15	189056.90	7175.05	196231.90	3.66	96.34
2015-16	210851.20	7897.50	218748.70	3.61	96.39
2016-17	243935.89	9180.01	253115.90	3.63	96.37

Source: SLBC (147th Issue)

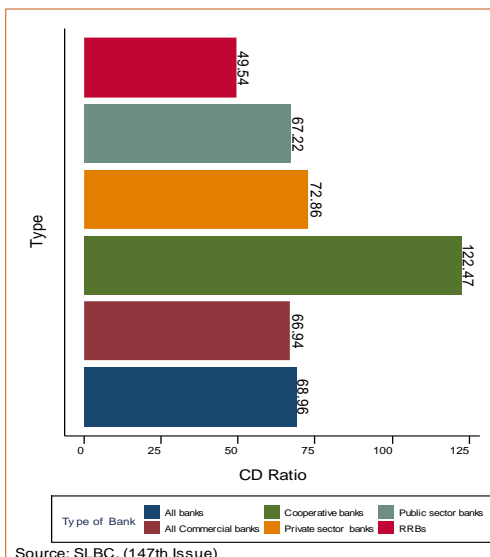
The total advances utilized increased from ₹1,63,733.85 crore as on March 2016 to ₹1,74,539.42 crore as on March 2017, registering an increase of ₹10,805.57 crore (Box 5.2). The incremental advance growth as on March-2017 is 6.60 percent. Priority sector advance registered a growth of 14.74 percent. Out of total advances sanctioned and utilized, the banks in Odisha extended 65.26 percent to priority sectors; 31.69 percent to agriculture sector and 18.02 percent to weaker sections in 2016-17 as against the national benchmark norms of 40 percent, 18 percent and 25 percent respectively.

Credit-Deposit Ratio (CD Ratio)

Credit Deposit Ratio is the proportion of loan created by banks from deposits it receives, in other words it is the capacity of banks to lend. High ratio indicates banks are generating more credit from its deposits and vice versa. The national norm of benchmark CD ratio in India is maintained at 60 percent. Figure 5.4 reveals that the credit deposit ratio in the year 2016 -17 is 68.96 which is lower than the previous year's tally of 74.85. CD ratio of Commercial Banks is 66.94 percent and that of Co-operative banks is 122.47 percent. CD ratio can be measured either basing on total utilization of advances (including sanctioned in and outside the State)

or basing on those sanctioned and utilized in the State. Usually the CD Ratio is measured based on the first approach in order to ensure comparability with national level and other state level estimates. Based on this approach, the cooperative banks in Odisha have much higher CD Ratio of 122.47 percent followed by private sector banks (72.86 percent), public sector banks (67.22 percent), and RRBs (49.54 percent) during 2016-17. This signifies a high risk approach of the co-operative banks in the State (Figure 5.4).

Figure 5.4 : CD Ratio of Banks Odisha



Based on the second approach (Basing on advances sanctioned and utilized in the State), the CD ratio of eight districts of the State namely Bargarh, Balasore, Bhadrak, Boudh, Jajpur, Kalahandi, Jharsuguda and Subarnapur are higher than the benchmark of 60 percent during 2016-17, whereas twelve districts namely Deogarh, Angul, Gajapati, Ganjam, Kandhamal, Kendrapada, Keonjhar, Jagatsinghpur, Mayurbhanja, Nuapada, Puri and Sambalpur, whose CD ratios are below 40 percent, need to take priority steps to improve

it. Bhadrak and Sambalpur districts have registered the highest (76.35 percent) and the lowest (23.23 percent) CD Ratio respectively. The CD Ratio for different sectors is given in Table-5.5.

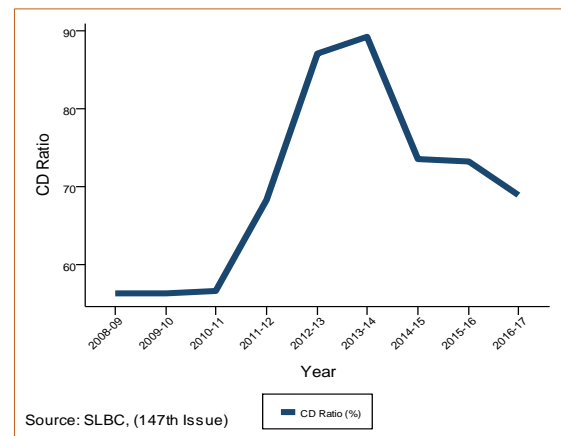
Table 5.5 : Sector wise CD Ratio in 2016-17

Sector	CD Ratio
Rural	62.24
Semi Urban	49.18
Urban	45.66

Source :SLBC, (147th Issue)

Year-wise CD ratio of Public sector banks from 2008-09 to 2016-17 is given in Figure 5.5.

Figure 5.5 Trend in CD Ratio of Public Sector Banks in Odisha



5.1.3 Non-Performing Asset (NPA)

An asset including a leased asset becomes nonperforming when it ceases to generate income for the bank. Share of nonperforming assets (NPA) in total assets in Odisha, as on March 2017, is detailed in Table 5.6

Table 5.6 : NPA in Odisha as on March 2017

Category of Bank	NPA %
Public Sector Banks	14.23
Private Sector Banks	0.7
RRBs.	25.91
Cooperative Banks	6.84
Total	11.5

Source: SLBC (147th Issue)

During 2016-17 Gross NPA and Overdue amounts were 11.50 percent and 35.68 percent for the banks in the State, which is higher than prudent and hence alarming. With regard to Government sponsored schemes, the NPA and Overdue percentages are even higher. RRBs had the highest NPA percentage of 25.91. The NPA percentage ranging between 3-19 percent and Overdue ranging between 26-45 percent for all major schemes are surely a matter of critical concern. NPA and overdue badly affect the productive recycling of funds. Introduction of a dynamic recovery mechanism will promote reinvestment and ensure better recycling of funds by banks to a great extent. Details are given in Table 5.7.

Table 5.7: Sector wise Non-Performing Assets (NPA) and Overdue as on 31st March 2017

Sl. No	Sector	NPA %	Overdue %
1	Short term Crop Loan	12.79	44.38
2	Agricultural Term Loan	18.29	40.78
3	Agriculture Allied	15.76	42.57
4	Total Agriculture	14.32	43.80
5	MSME Sector	12.28	32.94
6	Education Loan	15.02	38.40
7	Housing loan	3.83	26.93
8	Total priority Sector	12.29	37.29
9	Total Advance	11.50	35.68

Source: SLBC (147th Issue)

5.1.4 Annual Credit Plan (ACP)

Banks in the State are not totally unregulated in granting loans. The District Level Coordination Committee (DLCC) for each district prepares the Annual Credit Plan (ACP) under the leadership of NABARD. Banks extend loans to priority sectors as per the ACP. During 2016-17, ₹39819.65 crore of loan assistance was provided to Odisha, which is

about 67.63 percent of the target fixed under ACP for the year. The sector wise achievement under ACP 2016-17 is given in Annexure 5.3.

5.1.5 Co-operative Banks

Cooperative banking has made remarkable strides in the rural credit delivery system in the State. With its short term and long term rural credit delivery, cooperative structures play a crucial role in dispensation of credit for agricultural activities and rural development. Cooperative banks dispense both farm and non-farm credit in the State by three institutional networks, namely:

- Short-term co-operative credit,
- Long-term co-operative credit, and
- Urban Co-operative Banks.

Short-term Co-operative Credit

The Short-term Co-operative Credit Sector plays a vital role by providing financial credit support for agricultural sector including purchase of agricultural inputs like certified high yielding varieties of seeds, fertilizers, pesticides and agricultural implements. It also renders assistance for storage and marketing of agricultural produce and helps members to get remunerative prices for their produce. Primary Agriculture Cooperative Societies (PACS) take the lead role in providing short term cooperative credit to small and marginal farmers, and the marginalized sections of society. The recommendations of the Vaidyanathan Committee, including the revitalization package that envisaged financial assistance in the shape of recapitalization to the PACS and District central Co-operative Central Banks, have been implemented in Odisha. The three tier Short-term Co-operative Credit structure consists of the following institutions. (Table 5.8). The Odisha State Cooperative Bank is the apex institution at the state level to monitor the activities of these institutions.

Table 5.8 : Short term co-operative credit structure

Institution	Numbers
PACS	2708
LAMPCS	214
FSCS	6
Dist. CCB	17
Agril. Financing branch	291

N.B: Figures relate to societies functioning under RCS, Odisha

Source : Register Co-operative Society, Odisha

The details of membership, loans advanced and outstanding of primary agricultural and non-agricultural credit co-operatives are presented in Table 5.9.

Table 5.9 : Membership, Loans Advanced and Outstanding of Primary Agricultural and Non-Agricultural Credit Cooperative Societies in Odisha (2007-08 to 2016-17)

Year	Membership (thousands)		Loans Advanced (₹ Lakh)		Loans Outstanding (₹ Lakh)	
	Agri	Non-Agri	Agri	Non-Agri	Agri	Non-Agri
2007-08	5519	967	146304	136595	186284	67161
2008-09	5623	964	158394	167912	159615	80927
2009-10	5924	1082	277038	168144	234610	89221
2010-11	5874	374	353417	157272	302601	90267
2011-12	6254	422	452266	162236	378306	106025
2012-13	6325	425	552665	172545	450842	114560
2013-14	5370	232	542649	98897	598654	60138
2014-15	5466	228	709664	37708	663351	58397
2015-16	5545	218	834360	43568	804346	62201
2016-17	5551	189	1039704	41873	859057	62506

Source: Registrar, Co-operative Societies, Odisha

By the end of 2016-17, PACS have enrolled 55.51 lakh of agricultural families as its member in Odisha. Table-5.9 shows that the Crop loan financed by PACS in the State was 66 percent.

Table 5.10 : Farmers Registration, sold paddy and paddy procurement

Year	Farmers Registered (in No.)	Farmers sold paddy (in No)	Paddy procured (in MT)
2012-13	-	1014918	4778626.27
2013-14	-	810429	3916943.40
2014-15	800123	1003321	4960784.58
2016-17	1135558	847640	5426616.08

Source: Registrar, Co-operative Societies, Odisha

PACS are also involved in procurement of paddy through purchase from farmers at Minimum Support Price (MSP) as agents of the State Agency. MARKFED and TDCC are

procuring paddy through PACS from 2016-17. Paddy Procurement Automation System (P-PAS) has been extended to all the 294 paddy procuring blocks of the State during KMS(Khariff Marketing Season) 2017. Direct Fund Transfer (DFT) has been introduced for the first time in all PASC, to transfer paddy costs directly to the farmers' bank accounts under P-PAS. Table 5.10 shows the number of farmers registered, paddy sold and total paddy procured by PACS from 2012-13 to 2016-17.

The registration of farmers was not mandatory before 2014-15. During 2016-17, 2,522 PACS in 30 districts have procured 43.55 lakh MT of kharif paddy from 7,42,678 farmers through 3,011 Paddy Procurement Centres (PPCs) as commission agents of OSCSC Ltd, MARKFED and TDCC. In Rabi paddy

procurement 326 PACS in 19 districts have procured 10.42 lakh MT paddy from 1,04,962 farmers through 433 number of PPCs. The DFT system is an innovative idea for payment of MSP to farmers with less time and minimum error. To ensure MSP to green gram

(Mung) cultivators, PACS of four districts of the State are procuring green gram under the agency of MARKFED in 2017. As on 30.06.2017, 1,136.29 MT of green gram has been procured from 2,273 farmers by the PACS.

Table 5.11 : Market Share of Commercial and Cooperative Banks in Dispensing Crop Loan

Year	Commercial Banks	Cooperative Banks	Total	Market share of Banks (%)	
				Cooperative	Commercial
2007-08	875.02	1501.74	2376.76	63	37
2008-09	764.13	1489.46	2253.59	66	34
2009-10	1432.83	2682.17	4115.00	65	35
2010-11	1877.52	3396.39	5273.64	64	36
2011-12	2270.13	4415.89	6686.20	66	34
2012-13	3175.67	5426.49	8457.02	62	38
2013-14	3103.86	7096.64	10200.50	70	30
2014-15	4590.89	8351.11	12942.00	65	35
2015-16	6520.90	9572.22	16093.12	59	41
2016-17	5330.44	10200.65	15531.09	66	34

Source: Registrar, Co-operative Societies, Odisha

There has been a quantum jump both in the membership and amount of finance through the cooperative network. The loans disbursed increased to ₹10,200.65 crore in 2016-17 from 9,572.22 crore in 2015-16 registering a growth rate of 6.56 percent in respect of the amount of finance and 1.06 percent in respect of number of farmers as compared to 2015-16 (Table 5.11 and Table 5.12)

Table 5.12 : Season-wise Dispensation of Short-Term Credit by Cooperative Banks in Odisha

(Members in lakh and amount in ₹in Crore)

Year	Kharif		Rabi		Total	
	Members	Amount	Members	Amount	Members	Amount
2007-08	7.21	899.24	4.44	602.50	11.65	1501.74
2008-09	4.65	546.41	7.04	943.05	11.69	1489.46
2009-10	10.11	1407.82	8.21	1274.35	18.32	2682.17
2010-11	11.26	1811.09	9.10	1585.30	20.36	3396.39
2011-12	13.07	2381.37	10.39	2034.52	23.46	4415.89
2012-13	13.66	2902.75	11.41	2523.74	25.07	5426.49
2013-14	15.26	3624.29	13.52	3472.35	28.78	7096.64
2014-15	16.21	4386.82	14.08	3964.29	30.29	8351.11
2015-16	17.35	5077.41	14.66	4494.80	32.01	9572.22
2016-17	17.34	5299.65	15.01	4901.00	32.35	10200.65

Source: Registrar, Cooperative Societies, Odisha

Long-term Co-operative Credit Sector

The long-term credit co-operative sector is two-tiered, consisting of the Odisha State Co-operative Agriculture and Rural Development (OSCARD) Bank at the Apex and 46 Co-operative Agricultural and Rural Development (CARD) Banks at primary level. But the financing on long term basis has been stopped since long as NABARD has also stopped the line of credit to OSCARD Bank. The State Government is contemplating for merger of Long term sector with short term sector.

Urban Co-operative Banks

At present, 9 Urban Cooperative Banks are functioning in the State and providing finances for self-employment to un-employed youth and other minimum banking services like acceptance of deposits in urban and semi urban areas and disbursement of loans to Artisans, small business units etc. The State Government have provided ₹11.00 crores for computerization of Urban Banks and its branches. The deposit mobilization and loans advanced by these banks are given in Table 5.13. The trend in agriculture credit outstanding (excluding RIDF) is presented in Table 5.14.

Table 5.13 : Deposits Mobilized and Loan advanced by Urban Cooperative Banks in Odisha

(₹ In crores)

Year	Deposits mobilized	Loan advanced
2007-08	615.02	415.43
2008-09	840.52	495.37
2009-10	944.48	566.21
2010 -11	992.92	533.13
2011-12	1065.95	613.74
2012-13	1130.52	596.69
2013-14	1172.03	601.66

Year	Deposits mobilized	Loan advanced
2014-15	1092.07	613.77
2015-16	1126.26	622.01
2016-17	1130.63	625.06

Source: Register Cooperative Societies, Odisha

Table 5.14 : Trend in Agriculture Credit Outstanding (Excluding RIDF) as on 31st March

(₹ In Crore)

Year	Public +Private Sector Bank	RRBs	Co-operative bank	Total
2014	11240.24 (52.83)	2966.01 (13.94)	7070.13 (33.23)	21276.38 (100)
2015	11716.58 (52.53)	3195.74 (14.32)	7390.73 (33.15)	22303.05 (100)
2016	15076.58 (52.82)	3551.39 (12.44)	9916.5 (34.74)	28544.47 (100)
2017	8110.07 (40.58)	1394.27 (6.98)	10480.7 (52.44)	19985.02 (100)

NB: Figures in Bracket indicates share in %

Source: SLBC (147th Issue)

The Agriculture Term Loan

The agriculture term loan, otherwise called investment credit, is open to both farm sector and non-farm sector for agriculture and allied purposes, capital investment, asset creation, land improvement, farm mechanisation, plantation, horticulture and other activities. During 2016-17, a sum of ₹196.39 crore has been provided as term loan to 22,190 members. Both number of members and the total amount disbursed were lower by 35.68 percent and 20.24 percent during 2016-17 compared to 2015-16 (Table 5.15).

Table 5.15 : Investment Credit in Odisha by Cooperatives

(Amount in ₹crore)

Year	Farm sector		Non-farm sector		Total	
	Number	Amount	Number	amount	Number	Amount
2010-11	27542	151.34	22181	109.77	49723	261.11
2011-12	21677	114.79	17621	121	39298	235.79
2012-13	14738	93.07	11269	75.2	26007	168.27
2013-14	15872	101.25	9662	61.79	25534	162.94
2014-15	14946	108.23	8382	61.7	23328	169.93
2015-16	22759	143.71	11741	102.52	34500	246.23
2016-17	13640	112.18	8550	84.21	22190	196.39

Source: Registrar, cooperative Societies, Odisha

Self Help Groups (SHG)

SHGs play a pivotal role in fostering social and economic empowerment of under privileged, women and rural poor in particular. To extend institutional credit to the poor and marginalized sections, a bank linkage Programme for Self Help Groups (SHGs) has been put in place since 2003-04 through PACS and DCCB branches. 83,446 such groups have been organized by the end of 2016-17. Credit support of ₹413.50 crore has been provided to 69,140 groups having a loan outstanding of ₹149.28 crore against 25,791 SHGs.

Credit Linkage to Tenant Farmers Groups (TFG)

For providing access of share croppers and oral lessees to institutional credit for agricultural operations, Odisha has taken the lead in organizing exclusive Self Help Groups for them with 1:10 deposit credit ratio facility, in place of the regular 1:4 ratio. 8,872 such groups were formed and 5,641 of them were provided credit, amounting to ₹44.94 crore by Co-operative Banks at the end of 2016-17.

Implementation of Interest Subvention Scheme

To reduce the interest burden on farmers, Central and State Governments are providing subsidy to reduce rate of interest on STSAO (Short Term Seasonal Agricultural Operations) loan. Initially the scheme was introduced by GOI in 2006-07 by providing STSAO loan to farmer members @ 7 percent interest. During Rabi 2008-09, the State Government provided further interest subsidy of 2 percent and ultimately the farmers were provided crop loan at 5 percent interest rate. Besides, Government of India has declared a 3 percent incentive to farmers for timely repayment of loan. Thus, in such cases the effective rate of interest on crop loan in case of farmer members of PACS is 2 percent only. Further, Government have proposed to reduce the rate of interest to 1 percent for loan amount of ₹50,000/- or less with effect from 01.10.2015. During 2016-17, the State Government have provided ₹416.43 crore towards interest subvention. The total amount of funds provided by the State Government under this scheme was released by Co-Operative Banks/PACS (₹386.43 crore) and Commercial Banks (₹30.00 crore). Provision for Interest Subvention Scheme for the financial year 2017-18 is ₹435.00 crore.

Credit Linkage to “Share Croppers and Oral Lessees” through Joint Liabilities Groups (JLGs)

Odisha has taken the lead in organizing exclusive Self Help Groups for providing access to Institutional Credit operations to Joint Liabilities Groups (JLGs): 70,831 such groups were formed and 67,715 groups were provided credit amounting to ₹394.40 crore by Cooperative Banks at the end of 2016-17.

Computerization of PACS

The PACS of the State are being computerized as a part of the existing Co-operative Banking Society (CBS) to ensure complete integration of all the three tiers of Short-Term Co-operative Credit Sector (STCCS). The PACS will be connected to the Data Centre of OSCB and DR with Faridabad so that the Real Time Data with regard to the transaction of PACs can be obtained at the State Level for policy intervention. The State Government have provided ₹48.77 crore for computerization of 2,544 PACS. A special online software package “Kissan” has been developed to facilitate transactions. To accelerate this system, 581 VSAT are to be installed for

operation of banking activities, and for ease of use of Kissan cards through micro ATMs where connectivity through broadband or dongle is not available. Besides, 200 Panel Systems on the roof of PACS are to be installed to supply power through one UPS, where electricity connectivity is not available.

Core Banking Solution

The OSCB has taken the lead to implement Core Banking Solution to automate its operation together with the affiliated Central Cooperative Banks. The integrated Core Banking Solution (CBS) project is set to come to NPCI platform for connecting its ATMs to the network for providing its customers access to all the outlets of commercial Banks. Besides, 20 mobile ATMs are being provided in 20 tribal blocks of the State to provide doorstep banking services in the area. The Kissan Credit Cards are also being converted to RuPay Debit Cards which will be linked to NPCI platform enabling the farmer members of the PACS to access their credit limit through ATM and PoS network in the National payment gateway NPCI. The State Government have provided ₹44.00 crores for bringing out 355 units of OSCB and DCCBs on to the CBS platform.

.New Initiatives of PACS

- **Distribution of Seeds:** PACS are also entrusted with the responsibility to supply quality and certified seeds to the farmers in right time at a subsidized rate. Direct Benefit Transfer (DBT) scheme has been implemented in distribution of seeds from the financial year 2016-17. During 2016-17, 1,73,825.4 quintals of seed were supplied to the farmers by 2,206 PACS.
- **Warehousing:** There is a wide gap between the requirement of storage capacity and its availability. In 2016-17, 22 warehouses have been constructed with storage capacity of 18,000 MT., adding to the existing 148 warehouses with capacity of 1 lakh MT. There is a proposal to construct 2,601 more under warehousing infrastructure fund (WIF) scheme with NABARD assistance.
- **RIDF:** Under this scheme, Government have decided to construct 472 warehouses, of which 256 have been completed and 100 inaugurated during 2017. Under this scheme, 1,11,556 MT storage capacity has been created at different PACS/ LAMPCS level.

- **Aadhar seeding:** For the purpose of maintenance of data base of farmers for online payments, it has been decided for seeding of Aadhar in all loan and deposit account. Seeding have been completed for 1.97 lakh farmer members of PACS by the end of June 2017 and the target has been fixed to complete the task by end-2017.
- **Kissan Credit Card:** These are being converted to RUPAY kisan credit cards which will help the farmers to draw cash from any ATM and PoS. RUPAY kisan card have been lunched on July 2017 and 17,14,729 cards have been issued.
- For promotion of digital transaction among the farming community, a proposal for installation of Micro ATMs in the PACS has been implemented for providing basic banking facilities to their customers. The process of installation of 3000 Micro ATMs in PACS is in progress.
- The Odisha State Marketing Federation Ltd. (MARKFED) is the apex co-operative institution mandated to distribute chemicals, fertilizers, pesticides and agricultural implements to the farmers of the State. During 2016-17, MARKFED distributed 2,52,381 MT of fertilizers, which constitutes 23% of the total fertilizers consumed in the State.
- MARKFED has procured 164.56 MT sunflower seeds from farmers of Bhadrak district. MARKFED has planned to procure oilseeds, pulses, maize, potato and other agricultural products other than paddy for the financial year 2017-18.

5.1.6 Credit Cards

(A) Kissan Credit Cards (KCC)

The scheme aims at providing timely adequate and hassle free credit to farmers on the basis of their landholding, cropping pattern and scale of finance. Under the scheme, 6,14,990 Kissan Credit Cards (KCC) have been issued to farmers by the end of 2016-17 (up to March 2017). Of these, 5,28,262 (85.90 percent) were issued by Commercial Banks and the rest by Cooperative Banks.

(B) Kalinga Kissan Gold Cards (KKGK)

With a view to motivate the members for timely repayment of loans, Kalinga Kissan Gold Cards (KKGK), an innovative scheme, was designed and introduced by the Odisha State Cooperative Bank, in 2001. Farmers who are members of PACS with a default-free status for at least two years are eligible under this scheme. Through KKGK, a farmer gets facilities like consumption and educational loans with less interest, free personal accident insurance etc. At the end of 2016-17, KKGK were issued to 2,57,891 members and number of valid card

holders at the end of 2016-17 comes to 1,16,817.

(C) Swarozgar Credit Card and Artisan Credit Card

This credit card aims at providing timely and instant credit, as working capital and block capital, for self-employment and income generating activities. It targets small artisans, handloom weavers, fishermen, self-employed persons, rickshaw owners and other micro entrepreneurs. During 2016-17, total 7,776 Swarozgar Credit Cards were issued by all banks except Private Sector banks. The details are given in Table 5.16.

Table 5.16 : Different types of Credit Cards issued by All Banks during 2016-17

Credit Card Type	Credit Card issued (No)	Amount (₹ in crore)
Artisan	230	1.41
Weavers	2328	9.57
Kissan	614990	2729.06
Swarozgar	7776	41.59

Source: SLBC (147th Issue)

5.1.7 Pradhan Mantri Fasal Bima Yojna (PMFBY)

Odisha became the second State in India after Maharashtra by implementing PMFBY since 2016. The scheme provides insurance coverage

and financial support to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests and diseases. Five insurance companies are selected as implementing agencies on the basis of bidding process. Different committees have been constituted from state level to block level for smooth implementation of the scheme. For conducting crop cutting experiment, a mobile app has been used for uploading yield data directly to Crop Insurance Portal. Crops covered are paddy, groundnut, cotton, turmeric, and ginger. PMFBY has been implemented in Rabi 2016-17 with 6 notified crops: paddy, groundnut, mustard, green gram, black gram, and potato. During Kharif 2016, a total of 17.63 lakh farmers were covered under PMFBY with claims settled at ₹422.67 crore and 1.69 lakh farmers were benefitted. The details are given in Table 5.17.

Table 5.17 : Achievement under Pradhan Mantri Fasal Bima Yojna(PMFBY),2016-17
(₹ in crore)

Achievement	Kharif 2016	Rabi 2016-17
Farmers Covered in lakh	17.63	0.55
Gross Premium	532.48	6.38
Farmers Premium Collected	137.7	4.76
State Share of Premium Subsidy	197.39	0.81
Centre Share of premium Subsidy	197.39	0.81
Claims Settled	422.67	-
Farmers Benefitted(in lakh)	1.69	-

Source: Registrar, Cooperative Society, Odisha

5.1.8 Bank Assistance to Non-agricultural Sectors

Housing

Banks also provide housing loans, under different loan schemes. During the financial year 2016-17, an amount of ₹2,451.44 crore has

been disbursed under housing loan benefiting 26,902 account holders. Out of the disbursed amount, 75.48 percent (₹1,850.34 crore) were disbursed by public sector banks as a whole.

Fisheries

Financial assistance for pisciculture development is being given in the State through a centrally sponsored scheme 'Fish-farmer's Development Agencies' (FFDAs). A total number of 30 FFDAs are functioning – one in each district. As on 31 March 2017, loans amounting to ₹194.97 crore have been disbursed by different banks of Odisha to 19,259 beneficiaries under the scheme.

Odisha Livelihood Mission (OLM)

Odisha Livelihoods Mission (OLM) looks after NRLM for enhancing the socio-economic condition of the rural poor through promotion of sustainable community based institutions. The targeted poor households are mobilized into Self Help Groups (SHGs) which are in turn federated into higher level institutions at village as Cluster Level Forum (CLF) and at GP level as Gram Panchayat Level Federation (GPLF). OLM has worked in 30 districts covering 107 blocks under intensive approach during the FY 2016-17. The remaining 207 blocks of the state are considered as non-intensive blocks where normal activity like Financial Inclusion, Livelihoods Intervention, Skill enhancement through DDU-GKY (Deendayal Upadhyay Grameen Kaushal Yojana) and entrepreneurship development programme through RSETIs are being implemented. The non-intensive blocks will be covered under the intensive approach in a phased manner.

Major Achievements of OLM

- Common facility centre in Odisha has been accepted as national best practice by MoRD.
- OLM is recognised as Business Correspondent of SBI.
- MoRD appreciates Odisha model of DDU-GKY and advised other States to follow.
- 16,000 community cadres were developed in various competency areas.
- 2 SHGs and 1GPLF have received national award by MoRD.
- 3. Covered 03 lakh WSHGs in 314 blocks.
- Brought 11,611 (69%) new SHGs to NRLM fold.
- Formed 13,236 CLFs by involving 1.25 lakh SHGs in 2016-17.
- Formed 307 (96%) of GPLFs against the target of 320.
- 17,065 community cadres and placed at CLF & GPLF level to provide handholding support to community member's itinerary.
- Revolving fund 15,990 SHGs of ₹ 22.05 crore.
- 77,135 SHGs have been credit linked against the target of 75,000 amounting to ₹1,031.81 crore.
- Trained 31,604 youths under placement linked skill development programme against a target of 30,000 youths.
- Placed 25, 245 youths against a target of 21000 youths.
- 20,371 rural youths under RSETI against the target of 18000.
- Odisha Aam Admi Bima Yojana covered 87,821 households. 74,875 students availed ₹ 8.98 crore towards scholarships, and 1,272 members were benefitted with death claims of ₹ 3.87 crore under OAABY.
- 2.59 lakh households have been covered under farm and non-farm livelihood activities.
- Mahila Kisan Sashaktikaran Pariyojana (MKSP) in 9 districts
- Startup Village Entrepreneurship Programme (SVEP) in 2 districts
- Value chain projects in 3 districts
- Sansad Adarsh Gram Yojana (SAGY) in 30 GPs.
- Livelihood in full employment project in 30 districts.
- Governance and Accelerated Livelihood Support (GOALS) in 4 districts
- Model village programme with TATA Trust in 250 villages in 5 blocks of 3 districts

National Urban Livelihoods Mission (NULM)

Government of India launched the National Urban Livelihoods Mission (NULM) on September 23, 2013 to reduce urban poverty on a mission mode. The programme has replaced the erstwhile SJSRY scheme, covering cities/towns with one lakh or more population and district headquarters towns. Based on this criterion, 33 ULBs consisting of all the district headquarters and ULBs having one lakh and above population are covered under NULM in Odisha. To address the concerns of the ULBs not covered under any central/state government

schemes on poverty reduction and livelihoods, a new state level mission named “Odisha Urban Livelihoods Mission (OULM)” was launched on 1st April 2015.

Under Self-employment Component, 2715 individual beneficiaries have been provided with bank loan of ₹25.13 crore by the end of March 2017. Besides, under SEP (Group) 60 women groups have been provided with bank loan of ₹1.23 crore, 72 SHGs have been linked with banks with a loan amount of ₹1.23 crore. Interest subsidy of ₹4.68 lakh under SEP (individual) and ₹69,307/- under SEP (group) have been utilised up to 2015-16.

Credit Facility to Minority

As per the implementation of Prime Minister's New 15 points Programme for the welfare of minority communities, all public sector banks have been advised by Government of India that the credit flow to minority community should be 15 percent of the total priority sector advances. ₹423.29 crore have been disbursed to 46759 minority account holders by all commercial banks in Odisha during the financial year 2016-17. In this process, the public sector banks play a pivotal role contributing 75 percent of the loans. Private Sector banks contributed only 21 percent and RRBs just 4 percent.

5.1.9 Recovery Position of Banks

Despite several initiatives, the recovery of loans has not been satisfactory during 2016-17. Poor recoveries remain a major impediment to the expansion of banking. But during 2016-17 (up to March 2017) the recovery position of all banks increased to 64.32 percent from 60.46 percent during the year 2015-16. Details are given in Table 5.18.

Table 5.18 : Overall Recovery Scenario of all Banks in Odisha

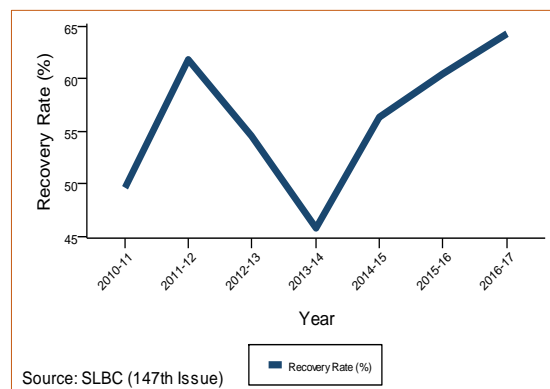
Year	% of Recovery	% of Overdue
2011	49.59	50.41
2012	61.82	38.18
2013	54.55	45.45
2014	45.72	54.28
2015	56.35	43.65
2016	60.46	39.54
2017	64.32	35.68

Source: SLBC (147th Issue)

Figure 5.6 shows the year wise position of recovery of all banks in Odisha from 2011 to March 2017. During 2017 the recovery position is slightly better than that of other years. As on March 2017 the recovery of all banks in Odisha

being 64.32 percent is slightly better but not satisfactory as it increases the non-performing assets (NPA) which adversely affects profitability.

Figure 5.6: Trend in Recovery Rate (%) of Banks in Odisha



Except for the SHGs, the recovery rate for all government sponsored schemes are lower than the overall recovery rate. This shows some problems regarding selection of beneficiaries and other structural issues relating to providing loans under these schemes.

Table 5.19 : Recovery Position of Government Sponsored Schemes

(As on 31st March 2017)

Schemes	% of Recovery	% of Overdue
SHG	67.98	32.02
PMRY	48.78	51.22
SJSRY	49.55	50.45
WCC	44.19	55.81
DRI	46.35	53.65

Source: SLBC (147th Issue)

5.1.10 State-level Non-banking Financial Institutions

Odisha State Financial Corporation (OSFC)

This is the largest non-banking, State Government-owned financial institution, providing financial assistance for the establishment of small and medium scale industries in different sectors of the State's

economy. By the end of 2016-17, OSFC had sanctioned loan amounting to ₹1,317.60 crore in favour of 28,231 entrepreneurs and disbursed ₹1,309.90 crore to 28,222 units. The corporation recovered ₹1980.80 crore during 2016-17 and ₹264.93 crore remained outstanding by the end of March, 2016. Its activities have been detailed in Chapter 4.

Odisha Rural Housing and Development Corporation (ORHDC)

The ORHDC was established in 1994 to provide finance to rural poor for construction of their dwelling units. The corporation had released ₹566.85 crore for construction of 1,62,458 units under six rural housing schemes during the year 2016-17, and recovered ₹559.68 crore against total demand of ₹2001.73 crore, the percentage of recovery thus being 27.96 percent. Details are presented in Table 5.20.

Table 5.20 : Activity-Summary of Odisha Rural Housing Development Corporation (ORHDC) during 2016-17

Scheme	No. of Beneficiaries	Amount			% of Recovery
		Disbursed	Amount Due		
			Recovered		
EWS Housing (Kalinga Kutir scheme)	28521	59.2	170.00	74.85	44.02
Credit Linked Housing Scheme	102286	296.71	1190.76	224.27	18.83
Corporate	28364	126.36	238.26	83.30	34.96
Individual Housing Finance Scheme	3195	58.88	235.88	147.11	62.36
Builder/Project Finance	25	19.74	126.50	28.12	22.22
Building Centre Finance	67	5.96	40.33	2.03	5.03
Total	162458	566.85	2001.73	559.68	27.96

Source: ORHDC

Odisha SC & ST Finance Development Cooperative Corporation Ltd (OSFDC)

In 2016-17, OSFDC financed ₹11.66 crore under various programmes to 11619 beneficiaries belonging to SC and ST scavengers and other minorities. The physical and financial achievements of OSFDC during 2016-17 are presented in Table 5.21.

Table 5.21 : Activity Summary of Odisha SC & ST Finance Development Cooperative Corporation, 2016-17

Programme	No. of Beneficiaries	Amount (₹. in crore)	
		Amount Directly Financed by OSFDC	Amount Financed Through Bank loan
SCA to SCP (SC Sector)	9908	9.05	14.11
SCA to TSP (ST Sector) (DTDP)	1591	1.47	2.69
Term Loan Scheme	120	1.14	0.83
Total	11619	11.66	17.63

Source: OSFDC

Private Non-Banking Financial Companies (NBFCs)

Non-Banking Financial Companies are an important part of the Indian financial system. At present there are 17 NBFCs registered with RBI, Bhubaneswar. All these companies are registered as category 'B' (Non deposit taking) and not authorized to accept deposit from public. Out of these companies, three were registered by RBI as NBFC-MFI (Micro Finance Institution). In order to strengthen the co-ordination between Bank and other financial sector regulators, the State Level Co-ordination Committee (SLCC) was reconstituted in May 2014. 124 financial literacy programmes were held by RBI in various districts of the state during 2016-17 wherein, among other things, the general public were cautioned against depositing/ investing their hard earned money with unauthorized/unregulated entities.

New Financial Platform for Common Man

(A) Pradhan Mantri Jan Dhan Yojna (PMJDY)

A scheme to empower citizens financially was highly needed so that everyone can reap the benefits of growth and development. Pradhan Mantri Jan-Dhan Yojana (PMJDY) is a national mission for financial inclusion to ensure access to financial services, namely, banking services like savings and deposit accounts, remittances, credit, insurance, and pension in an affordable manner.

The scheme has been started targeting 'universal access to banking facilities' starting with basic Saving Bank account, with an overdraft facility up to ₹5000. The facility is subject to satisfactory operation of the account for six months and RuPay Debit card with inbuilt accident insurance cover of ₹1 lakh under Pradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), and Atal Pension Yojana (APY). By March 2017 about 126.55 lakh accounts were opened, out of which the number of rural account is 88.42 lakhs. The number of accounts opened with zero balance is 25.83 lakhs which is 20.41 percent of the total number of accounts. As at March 2017, the total deposit under the scheme is ₹2729.49 crore. Till March 2017, the number of RuPay card is 93.83lakhs and 94.82 lakh passbooks were issued.

(B) Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY)

The scheme is a one year life insurance scheme cover, renewable from year to year, offering coverage for death. All savings bank account holders in the age 18 to 50 are entitled to join. A yearly premium amount of ₹330 is payable

to avail ₹200,000/- life insurance cover. The Policy holder will be allowed to enjoy the risk of life cover till the age of 55 years. By March 2017, a total of 10.79 lakh persons enrolled in this scheme offered by all banks in Odisha.

(C) Pradhan Mantri Surakhya Bima Yojana (PMSBY)

PMSBY covers accidental insurance of ₹2 lakh for death/full disability and ₹1 lakh for partial disability. The policy holder should be within the age group of 18-70 with a bank account and a yearly premium of ₹12/- is auto-debited from his/her account. The insurance period is 1st June to 31st May and renewable every year. By March 2017, a total of 38.58 lakh persons were enrolled in this scheme.

(D) Atal Pension Yojna (APY)

The scheme intends to bring pensionary benefits to people of the unorganised sector so that they can enjoy social security with a minimum contribution per month. This scheme was effective from 1st June 2015 which is open for all Indians between age group of 18-40. They can opt for fixed pension of ₹1000/- , ₹2000/-, ₹3000/-, ₹4000/- or ₹5000/- by attaining the age of 60. The amount of contribution and age of the individual will determine the amount of pension. By the end of March 2017, total 1.60 lakh persons were enrolled in this scheme both in rural and urban Odisha.

(E) Pradhan Mantri MUDRA Yojana (PMMY)

PMMY is a Government of India Scheme, which enables a small borrower to borrow from banks, MFIs, NBFCs for non-farm income generating activities. The idea is to provide financial support for small business which

employ majority of the Indian working population. The borrowers are classified into three segments: the starters (Sishu), the mid-stage finance seekers (Kishore) and the next level growth seekers (Tarun). As on March 2017, total 26,06,769 accounts were sanctioned and ₹7,600.68 crore were disbursed against the sanctioned amount of ₹7,891.36 crore.

5.1.11 National level Non-banking Financial Institutions

(A) Postal Life Insurance (PLI) and Rural Postal Life Insurance (RPLI)

The Postal Department of Government of India provides life insurance under a number of

schemes for employees in government, public sector banks and government-aided education institutions aged between 19 to 55 years. The Central Government has also introduced the Rural Postal Life Insurance Scheme (RPLI) since 1995. Life insurance activities under both schemes increased significantly till 2014-15, but have slowed down since. The detailed picture is given in Table 5.22. 6551 new PLI policies with an assured sum of ₹307.55 crore and 12518 RPLI policies with assured sum of ₹156.77 crore were collected during 2016-17.

Table 5.22 : Activities of Postal Life Insurance/Rural Postal Life Insurance of Odisha circle

(₹ in crore)

Year	PLI		RPLI	
	Number of new policies	Amount Insured	Number of new policies	Amount Insured
2007-08	9547	107.06	71220	428.89
2008-09	11092	160.45	62711	439.42
2009-10	12534	210.57	144487	472.46
2010-11	15820	308.25	261081	649.94
2011-12	11975	263.96	165401	394.76
2012-13	23529	554.65	58396	340.09
2013-14	20689	616.24	85501	560.57
2014-15	15350	577.72	38275	332.54
2015-16	4963	229.35	5846	66.65
2016-17	6551	307.55	12518	156.77

Source: PMG, Odisha

B) Life Insurance Corporation of India (LIC)

The business of Life Insurance Corporation of India in Odisha has decreased during 2016-17. LIC issued about 8.76 lakh policies and collected ₹1,196.24 crore towards first premium. Details are given in Table 5.23.

Table 5.23 : Business of LIC in Odisha

(₹ in crore)

Year	Total no of policies	Total sum insured	First year premium
2007-08	1186679	7212.04	1342.21
2008-09	1001415	8630.12	611.86
2009-10	1249332	11968.13	960.13
2010-11	1192204	13256.84	991.82
2011-12	1132735	13517.53	657.54
2012-13	1249702	13887	700.36
2013-14	1251804	16257.23	791.93
2014-15	765465	13094.07	865.65
2015-16	692925	9714.24	792.22
2016-17	875524	16271.59	1196.24

Source: Life Insurance Corporation Ltd. (4 Divisions in Odisha).

(C) Small Industries Development Bank of India (SIDBI)

Established in 1990, SIDBI serves as a principal financial institution for promoting, financing and developing industries in the small-scale sector, especially in rural and semi urban areas. Through primary lending institutions such as State Financial Corporations, SIDBI provides refinance assistance for expansion, upgradation,

modernization and diversification of existing SSI units and rehabilitation of sick units. It extends financial support to small road transport operators, qualified professionals for self-employment, small hospitals and nursing homes and hotel and tourism related activities. During 2016-17, SIDBI has sanctioned loans amounting to ₹222.01 crore in favour of 50 units and disbursed ₹224.97 crore to 52 units. Performance of SIDBI in Odisha since 2007-08 is presented in Table 5.24.

Table 5.24 : Performance Summary of SIDBI (2007-08 to 2016-17)

(₹ in crore)

Year	Loan sanctioned		Loan disbursed	
	No.	Amount	No.	Amount
2007-08	13	12.43	13	9.57
2008-09	15	21.54	9	7.16
2009-10	8	14.85	8	4.97
2010-11	16	12.27	13	16.11
2011-12	303	358.26	302	296.33
2012-13	318	412.78	320	404.56
2013-14	228	181.47	228	171.98
2014-15	109	141.78	104	125.26
2015-16	112	110.78	109	95.91
2016-17	50	222.01	52	224.97

Source: SIDBI

(D) National Bank for Agriculture and Rural Development (NABARD)

NABARD plays pivotal role in rural prosperity through effective credit support, institutional development, rural infrastructure, development of financial institutions, facilitating financial inclusion and augmenting agricultural production. The achievement of NABARD in Odisha during 2016-17 is outlined below:

NABARD provided credit support of ₹9155 crore to the banks in the form of concessional refinance. It also provided refinance support of ₹475.59 crore to the commercial banks,

cooperative banks and Regional Rural Banks (RRBs), as well as NBFC-MFIs in the State, in 2016-17.

- It has sanctioned RIDF assistance of nearly ₹17835.00 crore to the State cumulatively for creation of irrigation potential of 11.48 lakh ha. and connectivity of over 8740 kms.
- It has sanctioned ₹156.85 crore for warehouse infrastructure to the State Government for construction of 398 rural godowns having estimated scientific storage capacity of 1.94 lakh MT.

- As many as 104 watershed and tribal development projects are being implemented in Odisha by NABARD.
- NABARD has launched Area Development Schemes covering Freshwater Fishing, Farm Mechanisation, Dairy and Poultry etc. and facilitated capital formation in agriculture with an outlay of ₹5912.23 crore and bank loan of ₹4729.78 crore to be implemented from 2016-17 to 2018-19.
- NABARD is implementing 51 WADI projects for orchard development by tribal farmers in 17 districts covering 44367 tribal families with an area of 36564 acres with marketing support.
- During 2015-16, NABARD has sanctioned 13 special projects involving financial assistance of ₹72.75 lakh in the field of diversification based irrigation (DBI), centralized nursery project of cashew, mango, vegetables and spices, and conduct of sensitization programmes to the farmers.
- During 2016-17, Government of India placed a corpus of ₹200 crore in NABARD, known as Producers Organisation Development and Upliftmen Corpus, in short, PRODUCE. Under PRODUCE, NABARD has sanctioned financial assistance for formation of 100 FPOs (Farmers Producer Organisations) in 27 districts of the State.
- NABARD is also supporting, in collaboration with German Development Agencies under “Umbrella Programme on Natural Resource Management”, leveraging of the natural resources in the rural areas by community based institutions. At the end of March 2017, nine projects have been sanctioned by NABARD in the State in areas such as agro-forestry, fisheries, organic cotton, medicinal and aromatic plants etc.
- NABARD has also extended grant assistance of ₹4.01 crore to 78 JLGPIs (Joint Liability Groups Promoting Institutions) for promotion and credit linkage of 43772 JLGs (Joint Liability Groups).
- During 2016-17, NABARD sanctioned a climate change project for Department of Water Resources under National Adoption Fund. The total outlay of the project is USD 166.297 million with GCF support of USD 34.357 million and the balance funds would be supported by Government of Odisha and World Bank.
- It has supported nearly 113 Micro Entrepreneurship Development Programmes and seven Livelihood and Enterprise Development programme (LEDP) for SHG members which have benefited nearly 4300 SHG members with an investment of ₹42.73 lakh. Keeping in view the positive results of the pilot project on digitisation of SHGs, the E-Shakti project has been extended to cover 175 more districts of India, out of which 10 districts are from Odisha.
- As on March 2017, NABARD has extended financial grant of ₹100.56 lakhs for creating awareness on financial inclusion. It has sponsored 5400 village level, 1100 block level and 4520 district level awareness programmes in the State.

- It has supported setting up of Financial Literacy Centre (FLC) in CCBs and RRBs to facilitate free financial literacy, education and credit counselling. As on March 2017, 110 FLCs have been sanctioned to 15 DCCBs and 2 RRBs in the State.

Apart from the above, NABARD has provided support for setting up 3 (three) village knowledge centres (VKCs) at Bhadrak, Lingagada (Boudh district) and Nischintakoili (Cuttack district).

(E) Housing and Urban Development Corporation (HUDCO)

HUDCO, India's premier techno-financing Company with a pan-India presence is a major player in the area of housing and urban infrastructure finance, offering a wide range financing options and services. Apart from those operations, HUDCO offers consultancy services, promotes research and studies. Its main thrust has been on meeting the housing needs of the deprived i.e. Economically Weaker Section (EWS) and Low Income Group (LIG).

In Odisha, HUDCO has so far sanctioned 456 schemes with a loan commitment of ₹3819 crore since it started operation in the state. During the current financial year HUDCO sanctioned one model village in Kendrapada under HUDCO-KfW interest accrued funds. It has also sanctioned a project loan of ₹559.31 crore towards a power transmission project of Odisha Power Transmission Corporation Ltd (OPTCL) in the current financial year.

HUDCO also has sanctioned an amount of ₹17.96 lakh in PMAY-CLSS scheme for the year 2016-17. Further HUDCO has so far

done site inspection of 16 schemes of Shelters for Urban Homeless (SUH) under National Urban Livelihoods Mission (NULM).

5.2 Construction

Construction sector has direct bearing on economic development of the state. It contributed significantly (about 8 percent) to the total GSDP of Odisha during 2016-17. Odisha Building and Other Construction Workers Welfare Board has been constituted to extend a series of benefits such as educational assistance, purchase of working tools, bicycles, safety equipment, marriage assistance, maternity benefit, death benefit, funeral assistance, skill development, housing scheme, pension scheme etc. for construction workers and their families. By 31 January 2017, ₹1121.73 crore (approx.) has been collected towards cess and transferred to the Welfare Board. So far about 18.11 lakh construction workers have been registered as beneficiaries under the Board, out of which about 6.98 lakh beneficiaries have been provided different benefits at the cost of ₹398.54 crore. Among the major beneficiaries, about 2.91 lakh, 1.21 lakh, and 1.68 lakh construction workers were assisted for purchase of working tools, bicycle and safety equipment respectively. The State have been implementing Nirman Sramik Pucca Ghar Yojana through Panchayati Raj Department (both in IAP and Non-IAP districts), Nirman Sramik Pension Yojana for the old and disabled persons, and widows, and pension through Social Security and Empowerment Department in order to ensure social and economic security of the construction workers and their families.

5.3 Tourism

Odisha is a rich tourist hub with its golden history, strategic geographical location, diverse demography and abundant bounties of nature. The sector has rich potential of employment – direct and indirect, as also income generation, foreign exchange earnings and value addition to the State economy. By an estimate, tourism sector creates 89 jobs as against 45 jobs in primary sector and 13 jobs in secondary sector for an investment of ₹One million. The ratio of indirect jobs to direct jobs in tourism sector is approximately 3:1. In Odisha, tourism is a labour intensive sector. The sector contributes significantly to the economy, from local to state level in terms of employment and income generation, foreign exchange earnings and value addition for the State economy. Odisha has a high intensity of overnight domestic tourism, with an average of 541 trips per 100 households, as compared to the all India average 418 trips per 100 households as per National Council of Applied Economic Research, 2015 report.

Tourist Destinations in Odisha

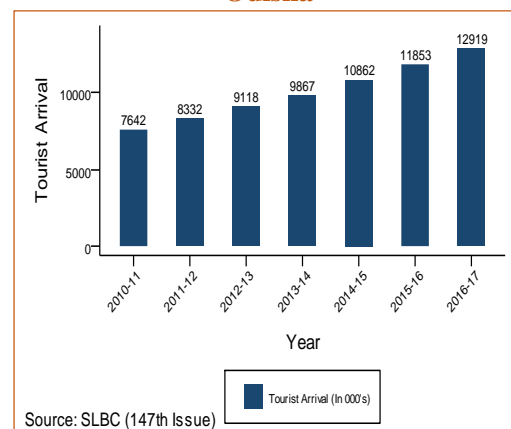
Odisha has 357 number of identified tourist destinations located all over 30 districts of the State. Cuttack (28), Balasore (22), Ganjam(22), Puri(21), Mayurbhanj(19) and Khorda (19) are the leading districts of tourist destinations. The ‘Golden Triangle’ of Bhubaneswar-Puri-Konark is the biggest tourist attraction. Puri, the shrine of Lord Jagannath, one of the oldest pilgrimage centres, famous for the Car festival, attracts lakhs of pilgrims round the year. The world famous Sun Temple, a UNESCO heritage site at Konark (12th century), and the temple city of Bhubaneswar (9th century) are other major tourist attractions. The ‘Tri-Ratna

Triangle’ comprising Lalitgiri, Udayagiri and Ratnagiri is yet another attraction for the Budhists from eastern countries. The Ashokan rock-inscriptions of 3rd Century BC at Dhauli where the historic war of Kalinga was fought is testimony to the existence of strong Buddhist tradition in Odisha. The sanctuaries and wildlife parks viz. Bhitarkanika, Similipal National Park, Chandaka Elephant Reserve, Nandankanan and Chilika Lake with migratory birds are some of the major natural tourist attraction points of Odisha. Apart from those currently identified as tourist attractions, there are several others in the state, particularly in western and southern parts of the state that are yet to be developed for popular tourism with adequate tourist infrastructure.

Tourist Arrivals/Visits

The development of tourism is generally measured in terms of tourist arrival to the State. The trend of the total number of tourist arrivals is shown in Figure 5.7. It may be observed from Figure 5.8 that Odisha used to get less than one percent share of foreign tourists arrived in India. However, in absolute terms, the number of tourists from within the State, outside the State and abroad has been increasing.

Figure 5.7: Trend of Tourist Arrival in Odisha



The tourism department has adopted a multi-prong strategy to promote tourism aggressively in the source market. During 2016-17, the tourist arrival in the State was 129.19 lakh against 118.53 lakh in 2015-16 with a growth rate of 8.99 percent over previous year. This steady increase in tourist arrival is partly attributable to regular and extensive marketing.

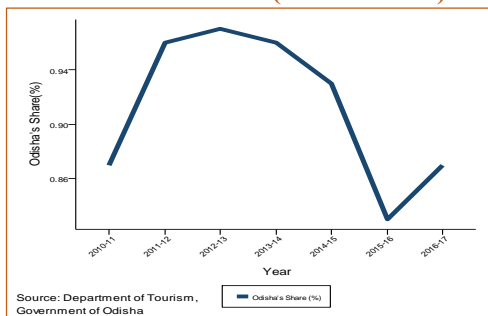
Table 5.25 : Odisha’s Share in National Tourist Arrival. (2007 to 2016)

(In lakh numbers)

Year	India	Odisha	Odisha’s share (%)
2010	57.76	0.50	0.87
2011	63.09	0.61	0.96
2012	65.78	0.65	0.97
2013	69.68	0.67	0.96
2014	76.79	0.71	0.93
2015	80.27	0.67	0.83
2016	57.76	0.50	0.87

Source: Department of Tourism, Government of Odisha

Figure 5.8: Odisha’s share in national tourist’s arrival. (2007 to 2016)



Source: Department of Tourism, Government of Odisha

Table 5.26 : Tourist Composition in Odisha (2007 to 2016)

(No. in lakhs)

Year	From within the State	From India but outside the State	From abroad	Total
2007	32.52	26.93	0.42	59.87
2008	38.47	25.12	0.44	64.02
2009	41.39	27.52	0.46	69.37
2010	45.63	30.29	0.50	76.42
2011	46.57	36.14	0.61	83.32
2012	54.37	36.16	0.65	91.18
2013	58.82	39.18	0.67	98.67
2014	64.74	43.17	0.71	108.62
2015	70.71	47.15	0.67	118.53
2016	77.05	51.37	0.76	129.19

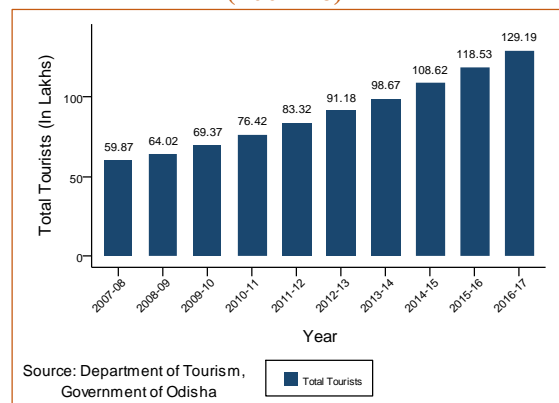
Source: Tourism Department, Government of Odisha

Table 5.26 depicts the composition of tourists arrived in Odisha from 2007 to 2016. It is observed from the table that tourists within the State increased 2.4 times between 2007 and 2016 but the increase is far less in the case of Indian tourists from outside the State and those from abroad.

Inflow of Money

A tourist profile survey was conducted during 2013-14. According to the survey, the average duration and spending of a domestic tourist is 3.7 days and ₹2,763 per day respectively while that of a foreign tourist is 11 days and ₹4,167 per day. Estimated inflow of money to the State through tourist spending during the year 2016-17 has been assessed at ₹13760.49 crore, a rise of 8.82 percent over 2015-16. A longer-term picture is presented in Figure 5.9, while Table 5.27 gives detailed information on this sub-sector since 2007-08.

Figure 5.9: Year wise Tourist in Odisha (2007-16)



Source: Department of Tourism, Government of Odisha

Tourist Infrastructure

Tourist infrastructure include development of roads, public convenience centre, interpretation centre, wayside amenities centre, Panthanivas, Panthashala, illumination, floating musical fountain etc. at tourist points. The State Government of Odisha have promoted the

tourist infrastructure development in the State with high priority by increasing the funds provision from ₹ 1375 lakh in 2012-13 to ₹7593 lakh in 2016-17.

Table 5.27 :Inflow of Money via Tourist Spending in Odisha (2007-08 to 2016-17)

(₹ Crore)

Year	Domestic tourists	Foreign tourists	Total	Growth rate
2007-08	3088.21	106.93	3195.14	15.3
2008-09	3254.65	135.46	3390.11	6.1
2009-10	3566.89	150.83	3717.72	9.7
2010-11	3901.61	170.39	4072.00	9.5
2011-12	4253.81	201.14	4454.95	9.4
2012-13	4665.29	209.81	4875.10	9.4
2013-14	10288.60	308.94	10597.54	117.4
2014-15	11297.91	331.01	11628.92	9.7
2015-16	12336.93	308.78	12645.71	8.7
2016-17	13405.27	355.22	13760.49	8.8

Source: Department of Tourism, Government of Odisha

Tourist Units

At present, 20 tourist units in various categories (namely, Panthasala, Panthika, Tourist Complex and Yatrivas) with 508 rooms and 1086 beds function under the (OTDC) Odisha Tourism Development Corporation. Four tourist units with 28 rooms and 64 beds are in operation under the Tourism Department.

5.4 Odisha Tourism Policy 2016

The Industrial Policy Resolution (IPR) 2015 was announced in August, 2015 and Tourism was declared as a priority industry. The State Government have published Odisha Tourism Policy, 2016 with following objectives:

- To promote sustainable and green tourism with a view to create employment opportunities and to bring about socio-economic benefits to the community.

- To preserve, enrich and promote Odisha's unique cultural heritage, natural resources and environment with a view to achieve inclusive development; addressing the regulatory and tourism promotion/development functions in Private Public Partnership (PPP) mode at all levels in an effective and well-coordinated manner.
- To promote Odisha as one stop destination to experience its great history, culture, society and natural beauty so as to boost foreign and domestic tourist arrival in the State.
- To promote circuit tourism in association with other State of Eastern Zone of the country to facilitate easy arrival and movement of the tourist.
- To upgrade skill and professionalism and promote employment opportunities in tourism sector.
- To promote digital tourism.
- To promote responsible tourism and developed tourism product in an environment friendly manner.
- To promote barrier-free tourism.

To promote (1) Beach Tourism, (2) Eco Tourism, (3) Buddhist Tourism, (4) Heritage Tourism, (5) Religious Tourism, (6) Knowledge Tourism, (7) Medical Tourism, (8) Travel Tourism, (9) Caravan Tourism, (10) Wellness Tourism, (11) Cruise Tourism, (12) Sand Art Tourism, and (13) Adventure Tourism in a mission mode

New Initiatives on Tourism Sector

- MoU signed between Forest and Environment Department and Tourism Department, Odisha for development, management and operation of tourist resort/accommodation and markets at eco-tourism sites in eco-friendly manner to attract the tourists.
- 2, 931 pilgrims from Odisha visited Madurai, Rameswaram, Allahabad, Varanasi, Haridwar and Rishikesh in three phases by train during 2016-17 under the newly launched Baristha Nagarika Tirtha Yatra Yojana of Government of Odisha .
- Dhauli 3D light and sound show attracts tourists with spectacular retelling of history of Odisha.
- Direct air connectivity from Bhunabeswar to Kualalumpur started in April 2017 with the MoA signed with Air Asia Berhad.
- An Eternal Gandhi Peace Centre, and interactive Museum on promotion of Gandhism and Jainism is being contemplated at Khandagiri-Udaygiri with the signing of MoU between Tourism Department, Odisha and Aditya Birla Group.
- Odisha tourism promoted and extended financial support to Indian Hockey League, 2nd Asian Athletic Championship and World cup hockey. The Department also sponsored Kalinga Lancers Team.
- Indian Association of Tour Operators (IATO) organized 33rd Annual convention in Bhubaneswar in association with Tourism Department, Odisha.
- Organised Odisha Travel Bazar (OTB) for the first time at Bhubaneswar in October 2017 by Odisha Tourism Department in association with Indian Chamber of Commerce and Industry to promote Odisha as a premier tourist destination.
- Formulated Odisha Water Sports Guidelines, 2017 and Revised Guidelines for identification of Tourism Centres in Odisha.
- Tourists' police cell with tourist police functions, 100 life guards and 266 private life guards (Nolias) at Puri sea beach and 50 Nolias at Gopalpur sea beach with insurance coverage and 160 social workers are deployed for safety and security of tourists. Tourism emergency fund of ₹ 1.00 crore has been created to provide financial assistance to the tourists during disaster situations.
- To develop Samuka Sea Beach on 3000 acres in three phases. Based on the Master Plan for Samuka Beach, 2008, constituted Samuka Tourism Development Corporation, a joint venture company of OTDC & IDCO in October 2016 with an authorized capital of ₹ 10.00 crore.
- With a view to promote Odisha Tourism, outdoor branding at IG International Airport, New Delhi, CST International Airport, Mumbai, BP International Airport, Bhubaneswar and Mumbai Metro Train branding has started.

5.5 Trade, Hotels and Restaurants Industry

The Trade and Hotel industry sector has been growing consistently since 1950-51. Both hotel and tourism industry go hand in hand. So the growth of tourism depends on the development of hotel industry. The tourism and hospitality

industry has emerged as one of the key drivers of growth among the services sector in India. Its share in the GSDP increased from 4.85 percent in 1950-51 to 10.37 percent in 2017-18. This sub-sector is expected to contribute 10.66 percent share to the real GSDP of Odisha in 2017-18. This sub-sector also records the

highest share within the broader Services sector in the State, rising consistently for the last six years. The growth rate of 'trade, hotels and restaurants' sub-sector, however, exhibits a fluctuating trend since 2011-12. It slides down to a modest 7.22 percent in 2016-17 from a buoyant 11.22 percent in 2012-13. Over the last 10 years, the number of hotels at 1823 by the end of 2016 has increased by 65.94 percent.

The trend in the standard of hotels in terms of servicing lower spending groups (LSG), middle

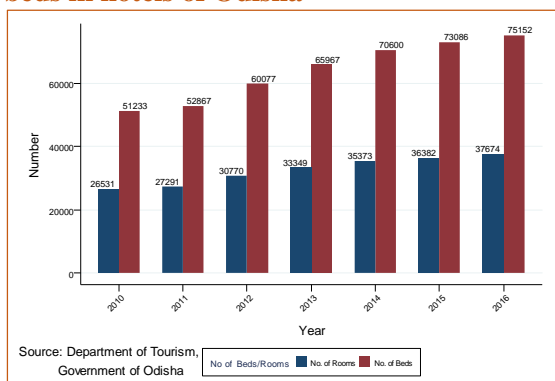
spending groups (MSG) and high spending groups (HSG) from 2007 to 2016 can be seen from Table 5.28. During 2016, there were 1,823 hotels with 37,674 rooms and 75,152 beds, of which, 433 catered to high-spending groups (HSG), 474 to middle-spending groups (MSG) and 916 to lower-spending groups (LSG). It is observed from Table 5.28 that the number of HSG and MSG hotels in Odisha is increasing rapidly during the last four years while the number of LSG hotels is in a declining trend.

Table 5.28 : Hotel Position in Odisha (2007 to 2016)

Year	Number of Hotels				Number of Rooms	Number of Beds
	HSG	MSG	LSG	Total		
2007	62	204	936	1202	23341	44948
2008	86	211	935	1232	24197	46809
2009	96	232	948	1276	24962	48408
2010	114	263	942	1319	26531	51233
2011	150	245	933	1328	27291	52867
2012	251	288	918	1457	30770	60077
2013	306	356	923	1585	33349	65967
2014	334	399	956	1689	35373	70600
2015	383	455	921	1758	36382	73086
2016	433	474	916	1823	37674	75152

Source: Tourism Department, Government of Odisha

Figure 5.10: Trend in Number of rooms and beds in hotels of Odisha



Policies for Promotion of Tourism and Hospitality Industry

Of late, high priority has been given to the development and promotion of tourism as well as the hotel industry sector in Odisha. During the 10th Five Year Plan, the State spent public funds of ₹38.45 crore on this sector. During the 11th Plan, ₹157.49 crore was spent for this purpose. The plan ceiling for the 12th plan (2012-17) was ₹511.05 crore. During 2015-16, an outlay of ₹136.24 crore was provisioned. In all, 350 tourist centres have been identified for their development and promotion in Odisha.

Organization of State and District Level Festivals

Several festivals including the Rath Yatra, Konark Festival, National Crafts Mela, Mukteswar Dance Festival and other festivities have been recognised as state-level festivals in Odisha and are geared towards attracting tourists. Similarly, there are district-level festivals like the Parab in Koraput and Mahotsava in Sambalpur. While these are official festivals, interest groups such as industry sub-groups and civil society organizations also organise festivals such as Beach Festivals at Puri, Gopalpur and Chandipur. Besides, Odisha tourism also participated in a number of tourism trade fairs within and outside country for promotion of tourism.

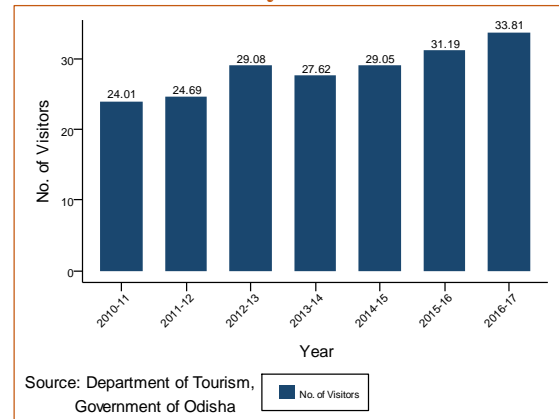
Nandankanan Zoological Park is one of the premier large zoos in Odisha located amidst a beautiful natural setting recognized by Central Zoo Authority, Government of India. Unlike conventional zoos, it spreads over a vast 3.62 sq.km of undulating topography with natural moist deciduous forest, water bodies and enchanting landscape that provides the zoo inhabitants an appropriate ambience to live in harmony with nature. During 2016-17, 33.81 lakh visitors visited Nandankanan and revenue of ₹9.70 crore were collected. The details are given in Table 5.29.

Table 5.29 : Number of Visitors and Revenue Collected at Nandankanan (2010-11 to 2016-17)

Year	No. of visitors (in lakh)	Revenue collection (in ₹Crore)
2010-11	24.01	5.27
2011-12	24.69	5.75
2012-13	29.08	6.45
2013-14	27.62	6.64
2014-15	29.05	7.17
2015-16	31.19	8.57
2016-17	33.81	9.70

Source: Directorate of Nandankanan

Figure 5.11: Number of Visitors and Revenue Collected by Nandankanan



Future plans and projects

Odisha tourism has the strength of rich and varied spectrum of nature, heritages, culture as well as peace loving population. Its weakness is ingrained in its poor air connectivity, infrastructural gap, brand value problem and absence of Tourism Act framework etc. The opportunities are being explored in the form of smart city tag to Bhubaneswar, improvement in air connectivity, aggressive branding and promotion, conclaves, seminars, tourism events etc. Exclusive land bank for tourism have been provisioned for tourism related projects and destinations like Puri-Konark Marine Drives (700.00 Ac.), Puri-Satapada (samuka) (1000.00Ac), Talasari-Udaypur (51.00Ac), Chilika (1000.00Ac), Deomali-Damanjodi, Hirakud-Sambalpur and Gopalpur- Tampara routes.

Forest Department have identified eco-tourism projects at Tikarapada, Satakosia, Bhattarakanika, Similipal and Ushakothi (Sambalpur). The State expects to generate two lakh employment in tourism sector by 2019.

Annexure 5.1 : Bank-Wise Key Indicators at the end of 2016-17

(₹ in Crore)

Banks	Total branches	Deposit	Advance	CD Ratio	Total Adv. to Agrl.
Public Sector	3120	193313.37	129945.25	67.22	11516.22
Private Sector	569	35416.74	25848.81	72.86	3703.34
RRBs	991	15145.78	7502.60	49.59	3607.46
RIDF (NABARD)	0	0.00	0.00	0.00	12324.11
Total commercial Bank Branches	4688	243935.89	163296.66	66.94	3152.13
Total Co-operative Bank	343	9180.01	11242.76	122.47	9730.99
Grand Total	5031	253115.90	174539.42	68.96	40883.12

(contd)

Banks	Adv. to MSME	Adv. to services sector	Adv. to weaker section	Adv. to DRI	Adv. to women	Adv. to SC/ST
Public Sector	21037.63	11310.48	8930.18	181.00	6801.09	6020.14
Private Sector	5165.91	1664.11	2483.07	0.15	2146.49	236.77
RRBs	1713.88	666.38	2734.95	0.00	1653.58	1397.66
RIDF (NABARD)	0.0	0	0.00	0.00	0.00	0.00
Total commercial Bank Branches	27917.42	13651.52	14148.20	181.15	10601.16	7744.57
Total Co-operative Bank	63.79	0.00	9101.98	0.00	6690.26	1911.16
Grand Total	27981.21	13651.52	23250.18	181.15	17291.42	9655.73

Source: SLBC (147th Issue)Annexure 5.2 : Banking Key Indicators as on 31st March 2017

(₹ in Crores)

Bank	Number of Branches	Total Deposits	Total Advances utilised	C.D Ratio
Allahabad Bank	101	4350.20	3749.11	86.18
Andhra Bank	178	10140.33	3692.11	36.11
Bank of Baroda	131	5010.05	2662.49	53.14
Bank of India	253	13298.95	9505.81	71.48
Bank of Maharashtra	8	201.23	83.99	41.74
BharatiyaMahila Bank	6	25.13	7.12	28.33
Canara Bank	169	6686.12	4416.36	66.05
Central Bank of India	105	3270.93	5278.89	161.39
Corporation Bank	57	1342.00	990.78	73.83
Dena Bank	19	404.40	213.58	52.81
Indian Bank	98	3517.66	1937.14	55.07
Indian Overseas Bank	131	5861.40	2966.52	50.61

Bank	Number of Branches	Total Deposits	Total Advances utilised	C.D Ratio
Oriental Bank of Commerce	64	4456.97	5318.46	119.33
Panjab National Bank	172	5717.36	4256.20	74.44
Panjab& Sind Bank	17	407.43	899.03	220.66
State Bank of India	861	80894.24	54157.26	66.62
State Bank of Bikaner & Jaipur	5	137.35	177.38	139.29
State Bank of Hyderabad	16	943.09	284.83	30.20
State Bank of Travancore	1	119.10	65.26	54.79
State Bank of Mysore	3	53.97	88.18	163.39
Syndicate Bank	108	6661.91	3651.29	54.81
Union Bank of India	129	12667.75	8186.53	64.62
United Bank of India	135	5692.83	2243.87	39.42
UCO Bank	250	16168.00	11777.00	72.84
Vijaya Bank	35	1224.68	505.07	41.24
IDBI Bank	76	4070.29	2850.99	70.04
Total Public Sector Banks	3128	193313.37	129945.25	67.22
Laxmi Vilas Bank Ltd.	4	446.49	7.14	1.60
Federal Bank	25	541.02	348.37	64.39
HDFC Bank	141	9317.30	6863.86	73.67
ICICI Bank	136	7980.46	5448.58	70.94
The South Indian Bank Ltd.	2	678.35	143.88	21.21
Karnataka Bank Ltd.	8	344.00	492.24	143.09
Kotak Mahindra Bank Ltd.	17	773.99	310.98	40.18
Bandhan Bank	20	343.23	463.11	134.93
Standard Chartered	1	37.14	20.93	56.35
Axis Bank	142	11179.77	9102.31	81.42
Indus Ind Bank	31	2551.00	1550.00	60.76
Karur Vysya Bank	5	333.12	126.37	37.94
City union Bank	1	12.72	11.57	90.96
DCB Bank Ltd.	32	333.09	340.93	102.26
Yes Bank	4	904.76	618.54	68.37
Total Private Sector Banks	569	35476.74	25848.81	72.86
Odisha Gramya Bank	549	9593.74	4413.99	46.01
Utkal Gramya Bank	442	5552.04	3088.61	55.63
Total of RRBs	991	15145.78	7502.60	49.54
RIDIF (NABARD)	0	0	0	0
Total Commercial Banks	4688	243935.89	163296.66	66.94
Odisha State Co-Op. Bank	338	9180.01	11242.76	122.47
OSCARD Bank	5			
Total of Co-operative Bank	343	9180.01	11242.76	122.47
Grand Total	5031	253115.9	174539.42	68.96

Source: SLBC (147th Issue)

Annexure 5.3 : Target and Achievement under Annual Credit Plan (ACP) 2016-17

(₹ in Crores)

Sl. No	Name of the Sectors		Total public sector Banks	Total Private sector Banks	Total RRBS	Total Commercial Banks	Total Co-operative Banks	Grand Total
1	Agriculture + Allied	T	12648.51	2006.37	5258.76	19913.64	12203.98	32117.62
		A	5871.59	2238.48	139427	9504.34	10480.68	19985.02
		%	46.42	111.57	26.51	47.73	85.88	62.22
2	MSME	T	9731.51	2926.96	1659.93	14318.40	235.63	14554.03
		A	11267.99	2253.43	1281.08	14802.50	13.24	14815.74
		%	115.79	76.99	77.18	103.38	5.62	101.80
3	Education	T	831.23	107.62	168.62	1107.47	2.28	1109.75
		A	157.39	48.19	3.72	209.30	0.12	209.42
		%	18.93	44.78	2.21	18.90	5.26	18.87
4	Housing	T	2966.09	530.30	461.17	3957.56	60.45	4018.01
		A	1500.13	307.26	74.77	1882.16	20.58	1902.74
		%	50.58	57.94	16.21	47.56	34.04	47.36
5	Others	T	3958.30	320.53	1590.91	5869.74	208.68	6078.42
		A	806.61	36.54	1063.86	1907.01	193.98	2100.99
		%	20.38	11.40	66.87	32.49	92.96	34.56
6	Totals	T	30743.83	6187.45	9220.85	46152.13	12723.14	58875.27
		A	20406.95	4886.40	3817.70	29111.05	10708.60	39819.65
		%	66.38	78.97	41.40	63.08	84.17	67.63

N.B:- T- Target, A- Achievement, %- Percentage.

Source: SLBC (147th Issue)



Infrastructure plays a vital role in the growth of an economy . Power, transport & communication, science & technology are the major components of infrastructure, which facilitates the smooth functioning of the economy to accelerate growth. Concerned with climate change issue, Odisha is one of the few states to have announced its Renewable Energy Policy 2016 with more emphasis on solar energy. State share in installed capacity in solar energy was 138 MW and in generation of power 26.46 MW during 2016-17. Energy sector, the core component, accounts for about 3.6 percent of GSDP during 2017-18 but is growing with a fluctuating trend. Plan outlay rose to 11 percent of total outlay in the 12th Plan as against 6 percent in the 11th plan. Hydro & thermal power together (both State & Central) constitute 76 percent of total installed capacity of power projects in the State. The State Government has a commitment of ensuring electricity to each household of rural and urban areas with the launching of new State sponsored schemes like BGJY, BSVY, RGGVY, IPDS, DDUGJY, SCRIPS, and OPSIP besides central schemes. The newly launched State programmes including Biju Setu Yojana, Mukhyamantri Sadak Yojana, Biju Expressway, constituency-wise allotment, State plan PPP mode, and OSRP expect to improve rural & urban roads and bridges, enhancing connectivity within the State. The State attaches prime importance to safety, management & governance in transport system. Biju Gadi Yojana is one of many to embark upon rural-urban connectivity effectively. Rural & urban tele-density are continuously increasing. Remarkable strides in IT sector are on the pipeline with the launching of State ICT Policy 2014.

Development of both qualitative and adequate infrastructure development are basic necessities for unleashing high and sustained economic growth as well as alleviating poverty particularly of backward regions. Infrastructure development that covers energy, transport, communication and science & technology sub sectors leads to effectiveness, higher productivity, inclusiveness, competitiveness, wider market accessibility, cost effectiveness and saving potential of agricultural, industrial and services sectors. Supply of infrastructure services is a joint effort; from a policy perspective, both Government and private sector together ensure technical efficiency, adequate scale of investment, and internal consistency of infrastructure development. Energy drives the economy while transport accelerates its growth and communication and science & technology manage and maintain the economic development sustainably. The Government of Odisha continues to attach high priority to infrastructure development through several ongoing and proposed programmes and projects. This chapter addresses the sub sectors like power, transport, mail & communication and science & technology.

6.1 Power

Energy is the driving force of economic growth, either in the form of finite resources such as coal, oil and gas or in renewable forms such as hydroelectric, wind, solar and biomass, or its converted form of electricity. The energy sector not only profoundly influences the diversified economic activities but also has

direct bearings on the quality of the State's air, water, land, forest resources, and climate changes. The power sub-sector along with gas and water supply sub-sectors contributes about 3.6 percent of the Odisha's GSDP during 2017-18. The growth of this sub-sector has however, widely fluctuated from year to year due to several factors including availability of inputs such as coal, gas or oil, environmental constraints and natural shocks. Significantly, the 12th Plan proposed ₹ 13,485.25 crore outlay for energy sector in Odisha as against ₹ 2,649.94 crore plan expenditure for same sector in the 11th plan.

6.1.1 Power supply-demand scenario

A. Installed capacity: The total installed capacity of all power projects (Share of power from central & other sources) in the State was 5593.08 MW in 2015-16 which declined to 5509.37 MW in 2016-17. Table 6.1 presents time series data of both installed capacity of power and availability of power from different sources. From Table 6.1 it is clear that installed capacity was increasing continuously from 2007-08 to 2011-12 but after that it declined except in the year 2014-15 & 2015-16. The installed capacity is temporarily lower due to the on-going renovation and modernisation work at Hirakud and Chipilima Hydro Station. Besides, the 1st unit of the proposed 2x350 MW thermal plant of M/S Ind-Barath Energy (Utkal) Ltd. (IBEUL) is likely to supply State share of power @12% (about 40 MW) during 2nd half of 2017-18 financial year.

Table 6.1: Demand and Availability of Power

(in MW)

Year	Demand (Estimated)	Availability of Power from different sources					Installed Capacity*	Sold to other States
		State Sector	Central Sector	Other Sources	Purchase from Captive Plants of the State	Total		
2007-08	1997	1563	736	-	82	2381	6067.90	311
2008-09	2107	1375	763	-	130	2268	6745.75	32
2009-10	2240	1157	773	-	485	2415	7990.25	50
2010-11	2398	1295	814	-	729	2838	9456.60	128
2011-12	2674	1136	1170	68	225	2599	10114.00	49
2012-13	2674	1226	1221	89	239	2776	8859.00	136
2013-14	2746	1521	1223	67	89	2900	5054.00	213
2014-15	2910	1552	1310	33	124	3019	5532.00	137
2015-16	2934	1466	1275	85	75	2900	5593.08	44
2016-17	3090	1851	998	28	85	2962	5509.37	156

Source: GRIDCO

* Includes installed capacity of the state's share in central sector projects and captive power plant capacities

The power projects include state sector, central sector, other power sources and captive power plants (CPP) of some industries in the State. Power is generated by hydro power, thermal power and renewable energy sources like solar & bio-mass plants in Odisha. As on 2016-17, the State had 10 hydro power and 9 thermal power projects (both State & Central sectors), one bio-mass project, two small hydroelectric projects, 14 Solar Photo Volatic (SPV) projects and 32 captive power plants in major industries to supply power to the State. Power is also supplied to Odisha through other trading companies' sources like ER UI Pool, PTC, APPCPL, NRVNL IEX etc. The hydro power, thermal power (State & central sector) and other power sources (renewable, independent & CPP) account for 39.31, 38.04, and 22.65

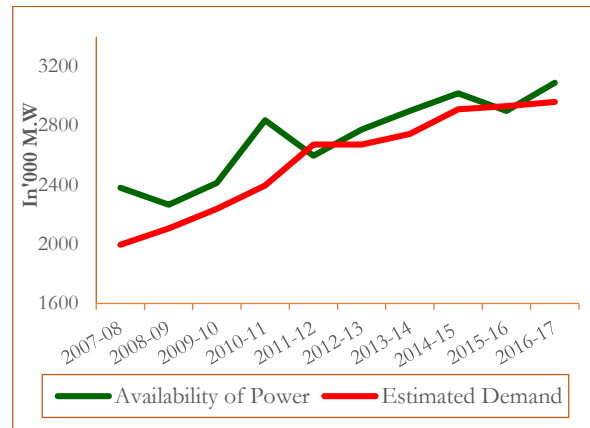
percent respectively of total installed capacity of the power projects in Odisha.

B. Power Generation (availability): During 2016-17, 2962 MW of power was available for consumption from all sources that stood at 53.76 percent of total installed capacity of power projects in the State. The state sector, central sector and other sources (including CPP) contributed 62, 34 and 4 percent respectively of total power generation in Odisha during 2016-17. Details have been indicated in Table 6.1. Among the 32 CPP that supplied 84.66 MW to GRIDCO in 2016-17, Bhushan Power & Steel Ltd, Jharsuguda (21.73 MW), JSL, Duburi (10.88 MW), Bhushan Stainless Ltd, Meramunduli (20.91), and Vedanta Aluminium Ltd, Jharsuguda (6.90 MW) are the leading Captive Power Plants

(CPPs). Global climate change necessitates developing alternative renewable energy sources like biomass and solar power to ease out the pressure on climate change due to the generation process of thermal and hydro power generation. The Renewable Energy policy of 2016 aims at augmenting the generation of renewable energy with more emphasis on solar energy. By the year 2022, Odisha envisages generation of 2200 MW of solar power, 200 MW of wind power, 180 MW of bio-mass power, 150 MW of small hydro power and 20 MW of Waste-to-Energy (WTE) power. During 2016-17, the installed capacity of SHEP (Small Hydro Electronic Project) was 57 MW and States share in power generation was 27.31 MW. Similarly, in the case of biomass, it was 20.00 and 6.60 MW, and in solar power 138 MW and 26.46 MW. The power generation share of biomass projects and solar projects were only 2.72 and 19.24 respectively during 2015-16. More emphasis was given to renewable source to save the environment from pollution created by thermal and hydro power plants.

C. Estimated Demand for power: The demand for power in Odisha in 2016-17 is estimated at 3090 MW as against 2934 MW in 2015-16. The estimated demand during 2016-17 increased by 54.73 percent over 2007-08 (with 1997 MW). If we compared the estimated demand with availability of power, the State has had a consistent surplus every year except in 2011-12 and current years i.e. 2015-16 and 2016-17 (Table 6.1).

Figure 6.1: Trend of Estimated Demand for Power in Odisha (in MW)



Source: GRIDCO

6.1.2 Power consumption

Power consumption is a flow concept while demand for power is a stock concept. The total power consumption of Odisha was 16343 MU in 2016-17 as against 15923 MU in 2015-16. Industrial and domestic consumption together share about 73.98 percent of total power consumption of the State. However, domestic consumption (38.53 percent) exhibits a rising trend while industrial consumption (35.45 percent) shows a continuous decline from 2010-11. The downswing can possibly be ascribed to the impact of global slowdown since 2008-09. The State has a total of 65.54 lakh power consumers in 2016-17, out of which 60.46 lakh (92.25 percent) were domestic consumers. Further, in sector-wise distribution of consumers, 65.54 lakh power consumers or about 78.5 percent were from rural Odisha. The power consumption status of Odisha is depicted in Table 6.2. and Sector wise power consumption is presented in Figure 6.2.

Table 6.2: Power Consumption in Odisha

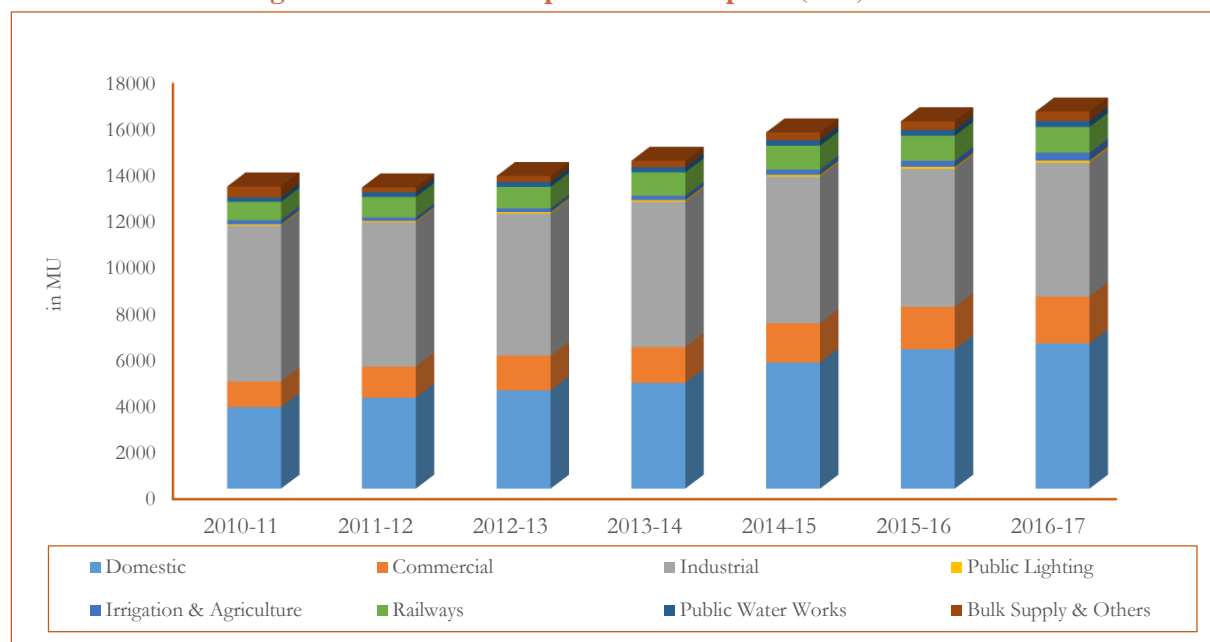
(Consumption in MU)

Year	Total Consumption	Consumption Sector							
		Domestic	Commercial	Industrial	Public Lighting	Irrigation & Agriculture	Railways	Public Water Works	Bulk Supply & Others
2010-11	13099	3533	1113	6755	58	179	797	189	475
		(26.97)	(8.50)	(51.57)	(0.44)	(1.37)	(6.08)	(1.44)	(3.63)
2011-12	13054	3946	1349	6246	61	151	891	200	210
		(30.23)	(10.33)	(47.85)	(0.47)	(1.16)	(6.82)	(1.53)	(1.61)
2012-13	13552	4261	1513	6147	65	162	930	213	261
		(31.44)	(11.16)	(45.36)	(0.48)	(1.20)	(6.86)	(1.57)	(1.93)
2013-14	14213	4585	1559	6291	72	186	1015	222	283
		(32.26)	(10.97)	(44.26)	(0.51)	(1.31)	(7.14)	(1.56)	(1.99)
2014-15	15440	5473	1703	6344	81	229	1031	236	343
		(35.45)	(11.03)	(41.09)	(0.52)	(1.48)	(6.68)	(1.53)	(2.22)
2015-16	15923	6042	1845	5970	88	261	1088	247	382
		(37.95)	(11.59)	(37.49)	(0.55)	(1.64)	(6.83)	(1.55)	(2.40)
2016-17	16343	6296	2035	5793	92	338	1118	260	411
		(38.53)	(12.45)	(35.45)	(0.56)	(2.07)	(6.84)	(1.59)	(2.51)

Sources: CESU, NESCO, SOUTHCO and WESCO

Note: Figure in bracket indicates percentage to total consumption

Figure 6.2 :Sector wise power consumption (MU) in Odisha



Sources: CESU, NESCO, SOUTHCO & WESCO

6.1.3 Rural Electrification

Electricity is basic requirement of life today. Like other states, Odisha has also been making efforts for village electrification. Out of 47,675 villages in Odisha, 94.37 percent villages have been electrified by the end of 31st March, 2017 as against all India figure of 99.25 percent. Twenty (20) states and Union Territories have achieved 100 percent village electrification. Odisha, with 94.37 percent village electrification, lags behind the national average by 4.88 percent. In Odisha only two districts – Sonepur and Jharsuguda – have achieved 100 percent village electrification. Four districts, Koraput, Malkangiri, Kandhamal and Rayagada have remained among lowest achieving districts (69-85 percent) and all others above 90 percent. The State had 65.54 lakh power consumers in 2016-17 with 78 percent of them in rural users. The rural-urban disparity in consumption of power remains high; details are given in Table 6.3.

Table 6.3 : Sector-wise Distribution of Power Consumers, 2016-17

(No. in lakhs)

Sector	Rural Consumer	Urban Consumer	Total	% of Rural Consumer to Total Consumers
Domestic	49.06	11.40	60.46	81.14
Commercial	1.58	1.90	3.48	45.40
Industrial	0.05	0.21	0.26	19.23
Others	0.75	0.59	1.34	55.97
Total	51.44	14.10	65.54	78.49

Sources: CESU, NESCO, SOUTHCO & WESCO

6.1.4 Major initiatives in Energy Sector

A. Biju Gram Jyoti Yojana (BGJY):

Initially there was a target to cover 10,000 habitations during the 11th Five Year Plan. The scheme was continued during the 12th Five

Year Plan; 17,167 have been electrified as on 30.11.2016 under the scheme.

B. Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY)

This flagship programme of Government of India was launched in April, 2005 to provide access to electricity to villages having population of 100 or more. Its financing envisages 90 percent capital subsidy and 10 percent as loan component for the State. The scheme is executed through CPSUs viz. NTPC, NHPC & PGCIL. There is a target to electrify 14856 un-electrified/ de-electrified villages, 29351 partially electrified villages and 3257471 BPL households in all 30 districts. During the 12th Plan period, electrification of 3144 un-electrified villages and 16533 un-electrified habitations were undertaken for which Government of India sanctioned ₹3550.75 crore under RGGVY. As on 30.11.2016, 511 un-electrified villages remain to be electrified out of the 3144 villages taken up for electrification.

C. Biju Saharanchal Vidyutikaran Yojana (BSVY):

BSVY was launched in 2010-11 for providing electricity to the people living in un-electrified areas of urban local bodies. Under the scheme, for un-electrified habitations with minimum population of less than 100 along with BPL household, electrification and system improvement are taken up. Five Municipal Corporations, 45 Municipalities and 61 NACs of the State have been covered under the Scheme. During 2016-17, a budgetary provision of ₹ 12.00 crore has been made under the scheme. As on November 2016, State Government have released ₹118.15 crore with which 2635 no. of slums/wards/habitations have been electrified.

D.CAPEX: CAPEX programme, launched in 2011-12 with an investment of ₹ 2400 crore, aims to improve power distribution network of the State of Odisha, quality of power to the consumers and to reduce T & D losses. In the Expenditure Finance Committee (EFC), it was decided to close the CAPEX programme, so to complete the ongoing projects, a provision of ₹ 122 crore has been made in the supplementary budget for the financial year 2016-17.

E. Energy conservation is a priority issue for Odisha. Major initiatives on energy conservation by Government of Odisha include

- Odisha is the first State in India to notify Odisha Energy Conservation Building Code (ECBC). Energy Conservation Day is observed on 14th December and awareness campaigns are being organized among the school students and general public to promote energy conservation issue in the State.
- Implementation of Energy efficiency in the 3763 lift irrigation (LI) system under the Pani Panchayat is being implemented through Odisha Lift Irrigation Corporation (OLIC) in 2 phases. This project is estimated to contribute towards substantial reduction of grid demand, benefiting the farmers of the State by reducing their operating energy expenses. Investment Grade Energy Audit (IGEA) is being implemented in four (4) Drinking Water Pumping Stations in phase-I & Nine (9) major drinking water pumping stations in phase-II, with the support of respective Public Health Divisions, Government of Odisha. Investment Grade Energy Audit of

137 number of DWPS are also being undertaken to widen the opportunity for energy savings. Implementation of high impact street light projects in 105 ULBs of the State by undertaking retrofitting of existing street lights with LED equipment with associated control systems to demonstrate and showcase benefits of energy efficiency is being undertaken. LED Village Campaign is in full swing in support of CESU wherein 3 LED Bulbs (10w) are distributed to each family and 20W street lights to selected villages.

- In order to strengthen the electrical infrastructure along the elephant corridor and thereby to provide safety to the elephants and other wild animals, a special scheme called System Strengthening for Elephant Corridor has been launched.
- For quality supply of power to the consumers and to address the low voltage problem in rural area, it is planned to commission 500 new 33/11 KV sub-stations within a period of 3 years at a cost of ₹ 2600.00 crore to be executed by OPTCL as the nodal agency. This will help to reduce T&D loss of DISCOMS which will reduce their financial burden.
- The concept of State Capital Region Improvement of Power System (SCRIPS) is visualized with an objective of 24X7 uninterrupted stable power supplies to all classes of consumers including public services in the target area. Underground cabling work is in progress. In the financial year 2015-16, ₹ 70.00 crore was made available under the scheme whereas in 2016-17 it was ₹180.00 crore.

- Odisha Power Sector Improvement Projects (OPSIP): The State Government has evolved new schemes and projects like Radial to Ring Conversion Project, Disaster Response Centre, Disaster Resilient Power System, District Headquarters Projects for reliable and un-interrupted power supply to the consumers during natural shocks by adoption of ultra-modern technology and creating new and renovating the existing infrastructure.
- Smart Grid: Government of Odisha has taken initiatives for adaption of Smart Grid Technology in power sector (transmission and distribution) having the component name viz. GIS, SCADA, OPGW and AMI for un-interrupted and reliable power supply to the consumers of the State.
- Green Energy Development Corporation Ltd. (GEDCOL) is a subsidiary of OHPC that has started its operation from 2013-14 to promote green energy in the State. Pre-feasibility Report (PFR) of 13 Small Hydro Electric Project (SHEP) have been prepared, out of which 4 are in favour of GEDCOL. Both GEDCOL and SAIL have agreed to develop Mandira SHEP (15MW) in joint venture mode with the help of M/S MECON. GEDCOL has successfully completed commissioning of 20MW Solar Power Plant at Manamunda in Boudh district.
- Deendayal Upadhaya Grama Jyoti Yojana (DDUGJY) is a Government of India scheme. It aims at strengthening the sub transmission and distribution infrastructure in the rural areas with separation of agriculture and non-agricultural feeders to regulate power supply to agricultural consumers.
- Integrated Power Development Scheme (IPDS) has been introduced in 2015-16 by the Government of India in order to create a strong infrastructure for strengthening sub-transmission and distribution network. Rooftop solar projects, installation of solar panels and smart and net metering are mandatory components under the scheme. In the financial year 2016-17, a plan provision of ₹ 50.00 crore was made as the State share.
- Radial to Ring Conversion Project: In this system one substation can be fed from two sources of power which is capable of supplying power at the time of need from other sources to ensure uninterrupted power supply to consumers. Plan position for 2015-16 was ₹ 34.99 crore and ₹ 40.00 crore for the financial year 2016-17.
- Disaster Resilient Power System: This State scheme is aimed at creation of energy infrastructure having capability to combat natural calamities like cyclone and flood. A budget provision of ₹ 20.01 crore was made for the scheme in financial year 2015-16, and a plan provision of ₹ 30.00 crore has been made for financial year 2016-17.
- Disaster Response Centre: Energy Department have launched this project to restore power supply with minimum time span to meet the requirement at the time of natural calamities. A budget provision of ₹ 10.00 crore has been made in the financial year 2016-17 under this scheme

6.1.5 Institutions

A. Grid Corporation of Odisha Ltd (GRIDCO Ltd): GRIDCO presently carries out its bulk supply function as a Deemed Trading Utility. Being designated by the State Government as the State Designated Entity for procurement & sale of power in bulk to meet the State demand, GRIDCO procures the State share of power from inside and outside the State and supplies the same in bulk to the electricity distribution companies (DISCOMs) for onward retail sale to the consumers of the State.

Power Scenario

Odisha has 5509.37 MW of installed capacity including its share from central & other sources including CPPs. The first Unit of the proposed 2x350 MW thermal power plant of M/s. Ind-Barath Energy (Utkal) Ltd. (IBEUL) is likely to start supply of power (40MW) during second half of 2016-17. M/s. Monnet Power Company Ltd. (MPCL) is expected to commission their 2x525 MW thermal power plant, with Odisha share of 126 MW during 2016-17. In view of comparatively high cost of power of NTPC stations and surplus power situation in the State, GRIDCO has requested for surrender of capacities allocated to the State from proposed stations of NTPC and its JV companies.

Power Procurement & Sale

During 2016-17, GRIDCO procured 25,796 MU of energy at an average rate of ₹ 2.69 paisa per unit at a cost of ₹ 6542 crore which included renewable energy (solar & non solar) of about 618 MU. GRIDCO sold around 23,679 MU of energy to the four DISCOM utilities amounting

to ₹6539 crore for retail sale to the state consumers. GRIDCO also sold 582 MU of energy through National Power Exchange and sale to captive generation plants (CGPs). GRIDCO earned revenue of about ₹ 151 crore out of such transactions. GRIDCO as a member of Eastern Region Power Committee (ERPC) follows disciplined and prudent management practices that helps grid operation by the State Load Dispatch Centre (SLDC).

Power Banking

GRIDCO has been very active in supplying electricity through power banking. During 2016-17, it has transacted about 903 MU of power through power banking. Being a cashless transaction like the one under barter system power banking has helped GRIDCO to balance the States power supply position effectively and at the same time provided much needed financial relief to its coffers.

Power for All

State is actively pursuing along with centre and committed to ensure power supply to each household under the “24x7 Power for All” by March 2019.

Development of Renewable Energy Sources

Finance

GRIDCO incurred losses of about ₹ 378.37 crore during financial year 2016-17. The financial position is expected to improve during coming years with improvement in operational areas like power sourcing, trading, power banking, and recovery of dues from DISCOM utilities, and above all through effective financial management.

New Management of DISCOMs

Regarding the revocation of licence appealed by Reliance Infrastructure Ltd., the appeal was dismissed by the Appellate Tribunal of Electricity on 21.07.2017. As per the judgement, it upheld the order of OERC, revoking the licence of 3 DISCOMs and appointing CMD GRIDCO Ltd. as the Administrator of 3 DISCOMs utilities.

B. Odisha Hydro Power Corporation Ltd.

(OHPC): Odisha Hydro Power Corporation (OHPC) Ltd., set up in 1995, has six ongoing Hydro-Electric projects at Hirakud, Chipilima, Balimela, Rengali, Upper Kolab, Upper Indravati and one joint Hydro-Electric project at Machkund having total installed capacity of 2063.50 MW which is a distinct improvement over its initial capacity of 1272 MW at the time of incorporation. OHPC provides the cheapest power to the State Grid. During 2016-17, 5938.50 MU of electricity was generated with a gross revenue collection of ₹599.34 crore and gross profit (before tax) of ₹ 205.56 crore. The profit after tax for the year 2016-17 is ₹ 129.11 crore. OHPC is categorized as Gold rated PSU. Plan to develop thermal & hydro renewable energy projects through joint ventures and subsidiary initiated. A 20 MW solar power project has been commissioned at Manamunda, Boudh district. During the year 2016-17, the plant generated 27.01 MU with a capacity utilization factor of 16.04 percent and with a revenue generation of ₹ 14.72 crore. PFR (Project Feasibility Report) have been prepared for 13 SHEPs (Small Hydro Electric Projects) out of which four are in favour of GEDCOL. A

10 MW SHEP at Mandira dam, Rourkela is to be developed on joint venture with SAIL.

Preparation of PFR for Garjon khol (approx. 10 MW) in Angul district and Cheliagarh in Ganjam district are under progress.

C. Odisha Power Generation Corporation

(OPGC): OPGC is a Government Company and a Gold category State PSU incorporated in 1984 and jointly managed by the Government of Odisha and AES, a private US company. It works to establish, operate and maintain electric power generating station, tie lines, substations and transmission lines & connection therewith. It develops and deals in fuels i.e., coal, lignite, coke, coal-bed methane etc. The paid-up share capital of OPGC is ₹ 490.22 crore, of which the share of the Government of Odisha is 51 percent. The company has set up two thermal power plants of 210 MW each in the Ib Thermal Power Station, Banaharpali in Jharsuguda district at a project cost of ₹ 1,135 crore. During 2016-17, the Corporation generated 3234.88 MU power with Plant Load Factor (PLF) of 87.92 percent with a turnover of ₹758.09 crore and net profit after tax of ₹ 68.16 crore. OPGC is pursuing expansion project comprising of (2X660 MW) power plants in IB Thermal Power Station (ITPS) at Sundargarh district at an estimated cost of ₹ 10,165 crore with the support of BHEL and BGRE. The power plant is scheduled for commercial operation towards the last part of financial year 2017-18; half of the power from the proposed units will be available to the State through GRIDCO. Details of year-wise turnover and net profits of OPGC have been given in Table 6.4.

Table 6.4 : Turnover and Net Profits of Odisha Power Generation Corporation (OPGC)

(₹ in crore)

Year	Power Generated (in MU)	PLF (%)	Turnover	After-Tax Net Profit
2010-11	3184.70	86.56	453.03	115.04
2011-12	2950.15	79.97	572.78	137.08
2012-13	3181.59	86.47	636.03	167.44
2013-14	2855.90	77.62	622.64	127.57
2014-15	2798.92	76.07	630.00	150.57
2015-16	3117.32	84.50	705.95	114.83
2016-17	3234.88	87.92	758.09	68.16

Source: OPGC

D. Odisha Power Transmission Corporation Ltd. (OPTCL):

Odisha Power Transmission Corporation Limited (OPTCL) ensures development of an effective and economical system of Intra-state and Inter-state transmission lines for smooth flow of electricity from generating station to load centre. The infrastructure of OPTCL includes 126 nos. of Grid Sub-Stations including Switching Station with transformation capacity of 15582 MVA and 12876 Ckt. Kms of transmission lines of 400KV, 220KV and 132KV rating. The present peak demand of the state is around 4166 MW, which is handled by the existing network and equipment of the system. Major activities of OPTCL during 2016-17 are outlined as follows:

- 1470 MVA transformation capacity augmentation in 22 grid substations were completed along with 10 new Grid Sub-stations.

- There are 12 ongoing projects of OPTCL that include work on upgradation of conductor, transmission lines, auto transformer capacity; conversion of A/C to D/C lines; installation of capacitor banks; addition of feeder bays; replacement of cold conductor, old & obsolete breakers, CT, PT, LA, isolators etc.; and construction of LILO lines of different districts.

E. Odisha Thermal Power Corporation Ltd (OTPC):

The Odisha Thermal Power Corporation Limited (OTPC) is a joint venture company having equal shares of Odisha Mining Corporation Ltd (OMC) and the Odisha Hydro Power Corporation Ltd (OHPC). OTPC is setting up a coal based super critical thermal power plant of 3200 MW (3x800 +1x800 MW) future capacity in Kamakhyanagar Tahasil of Dhenkanal district. The total land for the project including the railway corridor is finalized at 1833.927 acres. The cost of the project is estimated at ₹ 18,218 crore i.e., ₹ 7.59 crore per MW. Power Purchase Agreement (PPA) for the sale of entire power of OTPC has been executed with GRIDCO. Site specific studies like soil investigation, ground water survey, socio economic study, geological study, contour survey, area drainage study, hydrological study etc. have been completed. Department of Water Resources has confirmed allocation of required water for the project. IDCO has started the initial work for construction of boundary wall, site office, transit house etc.

F. Odisha Renewable Energy Development Agency (OREDA):

Thermal and hydro-based energy continue to dominate the energy supply sources in Odisha. But the State Government is

keen to tap alternative energy sources. The Odisha Renewable Energy Development Agency (OREDA) is the apex agency under the Department of Science and Technology, Government of Odisha. It looks after renewable and alternative energy projects. Major initiatives of OREDA during 2016-17 are highlighted below :

- NBMMP: The National Biogas and Manure Management Programme, is a high-priority central-sector scheme and a part of the 20-Point Programme, which educates the people to use biogas for cooking and lighting purposes. Under this scheme, family type biogas plants of capacity 2m³ each are being constructed in order to meet cooking and lighting need of the household. Besides, the plants supply enriched manure. So far, 2.41 lakh plants have been constructed with the financial support in terms of subsidy of the Ministry of New Renewable Energy (MNRE). In the financial year 2016-17, 966 plants were installed.
- Solar water Pumping Programme for Irrigation aims to provide irrigation facilities to farmers round the year. To achieve the objective, two types of pumps – 3 HP and 5 HP – are being provided. In 2016-17, 13 number of 5 HP and 572 number of 3 HP Pumps have been installed in farmers' fields. Besides work order for 163 number of 5 HP and 1992 number of 3 HP Pumps have been issued.
- Under the Off-Grid Rooftop Solar Power Plant Programme, electricity is being provided to households/ Ashram Schools/ Office buildings/ Private Schools/ Police Stations and other institutions. During 2016-17, 701 KW capacity SPV power plants have been installed. Apart from work order for electrification of 147 Tribal Schools with a capacity of 10 KW each, that for 10 street lights have been issued.
- Under the Programme of Distribution of Solar Lanterns, till date, 63,220 solar lanterns have been distributed. In 2016-17, 6821 solar lanterns have been distributed and OREDA has been awarded third prize in the country in distribution of solar lanterns by MNRE, Government of India during 2015-16.
- Solar Lighting to Tribal Villages: 92 Villages have been electrified in 2016-17 under TDCCOL.
- Unnat Chullah Abhiyan: To provide cleaner cooking energy and to mitigate climate change 247 Unnat Chullahs have been supplied by OREDA.
- Parishad Chullah Abhiyan: These Chullahs were installed in schools under Mid-Day Meal programme. Till date 9800 chullahs have been installed, out of which 2500 chullahs were installed during 2016-17.
- Decentralised Distributed Generation (DDG) under DDUGJY: A total of 406 number of villages have been identified for electrification under Deen Dayal Upadhyaya Gram Jyoyi Yojana (DDUGJY) during 2016-17.
- Solar City Programme: Bhubaneswar has been considered under the Programme for which a draft master plan prepared by BMC is being modified for approval of MNRE.

- Green Campus Development under Solar City Programme: KIIT University has been selected by MNRE for development of their Campus under the programme.
- Renewable Energy Policy 2016: Government of Odisha has introduced Renewable Energy Policy 2016 with objectives of reducing dependence on conventional sources of power generation, protecting the environment and providing conducive atmosphere to private investment by extending rational fiscal and promotional incentives.
- Dual Pump Drinking Water Supply Programme: The main objective of this programme is to supply drinking water to the villages through Solar Photo Voltaic (SPV) pumping systems which are fitted with the existing tube well. So far 6464 projects have been installed by OREDA.

6.2 Roads and Transport

Roads and transport have profoundly influenced the lifestyle, mobility, quality of life and even life risk of the people. Demographic trend, urbanization, industrialization and human settlements etc. have led to the upsurge of demand for mobility – both passenger and freight traffic – in the State. With the diversification of all social and economic activities, the requirement of mobility on major modes of transport like road, railways, airways and waterways remain very high in Odisha. The strength of transport development in the State largely depend on its network strength, quality, speed, economic efficiency, frequency of services, cost effectiveness, eco friendliness, energy efficiency and safety with fewer accidents etc. The State Government addresses these issues

with high priorities. Transport by other means and railways together shared 5.73 percent of GSDP of Odisha with an impressive annual growth rate of 12.62 percent in 2017-18. The State Government has accorded high priority to develop transport and communication infrastructure with a view to promoting development of backward areas and connecting remote habitations to growth and service centres.

6.2.1 Roads

Roads are crucial in providing connectivity to all human settlements, as well as commercial, industrial and cultural establishments. In the absence of adequate rail network in Odisha, roads play the predominant role in accommodating passenger and freight movements. The State has a total road length of 256401.02 kms by the end of 2016-17. The road network of the State consists of National Highways, Express Highways, State Highways, Major District Roads, Other District Roads, Rural Roads, Urban Roads, PS Roads, GP Roads, Forest Roads, Irrigation Roads, GRIDCO Roads.

Table 6.5 : Road Length in Odisha by Types, 2016-17

Type of Roads	Length (Kms)
National Highways	4855.71
Express Highways	38.38
State Highways	4100.63
Urban Roads	18590.69
Rural Roads	36128.34
Major District Roads	2816.98
Other District Roads	13453.94
GP/PS Roads	162476.45
Forest Roads	7574.90
Irrigation Roads	6277.00
GRIDCO Roads	88.00
Total (Kms)	256401.02

Source: C.E, NH, C.E R&B, P.R. Deptt

Odisha fares better than the all India average with respect to road density. The road length per 100 Sq. Km in Odisha was 165 Kms in 2016-17.

National Highways

National Highways (NH) constitute only about 2 percent of the road network in Odisha. It is the linking factor for all major and feeder roads of the State. 41 number of NHs traverse through Odisha with a total length of 4855.70 kms of which 2945.40 kms and 1910.30 kms of NH length are under the control of NH wing of Government of Odisha and National Highway Authority of India (NHAI) respectively, by August, 2017. The transfer of NH to NHAI is meant for improvement under the Golden Quadrilateral, NHDP Phase-III and Phase IVB and Port Connectivity Programmes. Two districts, Keonjhar and Ganjam, have NH with more than 300 kms length while eight districts Koraput, Mayurbhanj, Sambalpur, Angul,

Deogarh, Jajpur, Kalahandi and Kandhamal have 200-300 Kms of NH length. Nawarangpur and Kendrapada have NH network of less than 50 kms of length. Details on improvement/widening of National Highway are given below.

Table 6.6: Achievements of Roads / Bridges of National Highways

(in Kms)

Items	Achievement during 2016-17	Work under progress, 2017-18
Widening of Two Lanes	402.60	856.9
Periodical Renewal	236.60	11.7
Widening to four Lanes	0	0

Source: C.E, NH

Rural connectivity programmes are also funded under Biju KBK Plan, Gopbandhu Grameen Yojana and Biju Kandhamal O Gajapati Yojana. The status of GGY scheme from 2009-10 to 2016-17 is given below.

Table 6.7 : Gopabandhu Grameen Yojana

Sl. No.	Achievement	2009-10	2010-11	2011 - 12	2012-13	2013-14	2014-15	2015-16	2016-17
Physical									
A	Works taken up/ started								
I	Bijli	201	440	198	877	1101	840	906	8262
ii	Sadak	7520	12587	13745	9537	11651	10483	13669	43548
iii	Pani	115	280	183	20	453	181	3198	12674
iv	Other	10	24	281	199	108	84	485	14
	Total	7846	13331	14407	10633	13313	11588	20609	64500
B	Works completed	4960	10303	12213	8689	12278	8908	8038	48447
C	Man days generated (in lakh)	26.28	51.74	47.02	52.08	44.71	70.08	98.45	205.02
D	Villages covered	6197	9365	9400	N.A.	N.A	N.A	N.A	N.A
Financial									
A	Total funds available (₹ in crore)	162.21	251.42	251.78	199.10	261.80	248.89	710.26	1521.86
B	Expenditure (₹ in crore)	75.91	165.12	207.88	163.46	238.46	189.26	192.57	1126.22

Source: Panchayati Raj Deptt

6.2.2 Transport

A. Road Transport: Road transport accommodates an overwhelming proportion of passenger and freight traffic among all major modes of transport in Odisha. With remarkable expansion of road length (highways & other

roads) over the years, the motor vehicle (MV) population have grown manifold in Odisha. As on 31st March 2017, the State has 65.65 lakh ‘registered’ and 62.15 lakh ‘on road’ vehicles. 7.24 lakh new vehicles were registered during 2016-17. Details are given below.

Table 6.8 : Motor Vehicles on Road in Odisha

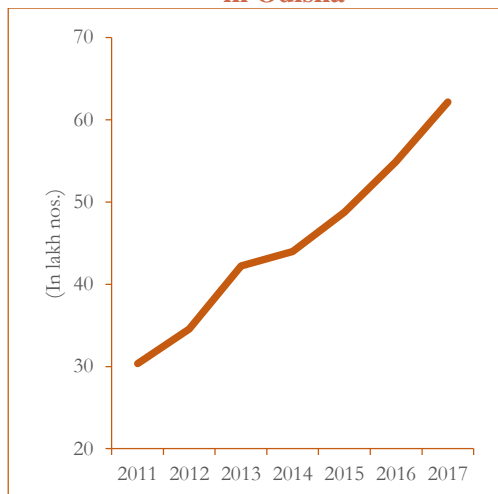
Vehicles	Number of vehicles on road as on 31 st March						
	2011	2012	2013	2014	2015	2016	2017
Goods vehicle (truck to tempo)	169032	188974	268065	235112	249001	270071	295932
Public/Private bus	12264	13565	25432	15755	16621	17770	19241
Motor car / jeep / taxi	189197	228921	315486	310641	349561	389787	434036
Auto rickshaw	55364	66847	80372	82695	97570	113125	129866
Motorcycle / scooter / mopeds	2453347	2784485	3307110	3544754	3928199	4430546	5027608
Others (tractor, trailers, treckers, & Others)	154740	171644	226995	208755	234950	269365	308267
Total	3033944	3454436	4223460	4397712	4875902	5490664	6214950

Source: State Transport Authority, Odisha

On Road Vehicles

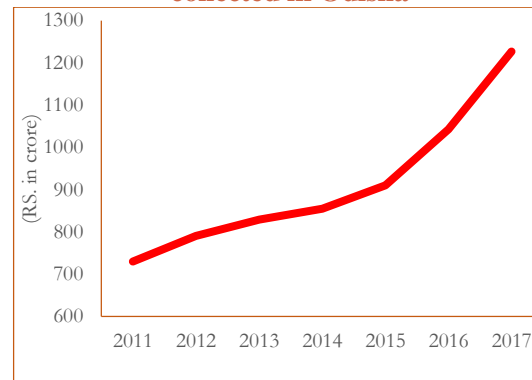
The trend of “on road” vehicles in Odisha is presented in Figure 6.3(A) and year-wise MV revenue collected since 2009-10 is presented in Figure 6.3(B).

Figure 6.3 (A) :Trend of ‘On Road’ vehicles in Odisha



Source: State Transport Authority, Odisha

Figure 6.3 (B)]: Trend of MV revenue collected in Odisha



Source: State Transport Authority, Odisha

Motor Vehicle Population

Odisha has a heterogeneous mix of MVs the percentage distribution of which is highly skewed. More than 80 percent of the MV population are 2-wheelers, followed by car/taxi (7 percent). The predominance of personalized vehicles like 2-wheelers and cars has become an area of concern for the State in terms of traffic congestion, management, vehicular

pollution, parking and road accident problems. The number of autorickshaws increased fast by 134.5 percent between 2010-11 and 2016-17, signifying its predominant role in passenger transportation on road. Heavy motor vehicles (HMV) such as buses, trucks, tractors are mostly privately owned in the State. As on 31st March 2017, 19241 buses were plying on roads in Odisha with 42 buses per lakh of population. Freight movements are predominantly managed by 2.96 lakh goods vehicles in Odisha. Of these vehicles, trucks bear the primary responsibility of goods movement, delivery, and accessibility to producers and consumers.

Motor Vehicle Revenue

During 2016-17, a sum of ₹ 1227.31 crore of motor vehicle revenue was collected against the target of ₹ 1300.00 crore and the same has increased by 17.67 percent over previous year. Details are given in table 6.9.

Table 6.9 : Motor Vehicle Revenue

(₹ in Crore)				
Year	Target	Collection	% of Collection	Growth Rate
2007-08	500.00	459.78	91.96	7.98
2008-09	580.00	525.30	90.57	14.25
2009-10	600.00	611.08	101.85	16.33
2010-11	725.00	730.12	100.02	19.48
2011-12	870.00	791.20	90.94	8.37
2012-13	850.00	829.55	97.59	4.85
2013-14	900.00	855.16	95.02	3.09
2014-15	972.00	910.76	93.70	6.50
2015-16	1070.00	1043.00	97.47	14.52
2016-17	1300.00	1227.31	94.40	17.67

Source: State Transport Authority, Odisha

Motor Vehicle offences

Motor Vehicle offences detected depend on enforcement activity, given the tendency to commit such offences. Detected offences increased in the State after a dip for two years in 2015-16. During 2016-17, ₹ 89.24 crore revenue was collected, as against ₹ 11.48 crore revenue collected during 2015-16. The details of revenue collected from motor vehicles offences are indicated below.

Table 6.10 : Revenue receipt from Motor Vehicle Offences

Year	No. of offences detected	Revenue collected (₹ in crore)
2007-08	109242	34.62
2008-09	106539	35.16
2009-10	96637	40.11
2010-11	107116	42.65
2011-12	107965	43.19
2012-13	103308	36.59
2013-14	77123	32.72
2014-15	81042	23.95
2015-16	208151	11.48
2016-17	N.A	89.24

Source: State Transport Authority, Odisha

Policy and administration of Road Transport:

Transport is a concurrent subject. Odisha is the leading State in India to declare State Transport Policy in 2007. The main objectives of this policy are: to increase competition, efficiency, transparency, accessibility and adequate availability of transport services in the State, ensure user friendly road transport and evolve an improved urban transport system. The policy included forming institutional and regulatory mechanisms like the Odisha Transport Infrastructure Development Authority (OTIDA) and Odisha Transport Regulatory and Advisory Council (OTRAC). It also identified special thrust areas to modernize railways, waterways and airways in the State.

The State Transport Authority (STA) is the apex regulatory body that manages transport administration, regulation, revenue collection and road safety in the State. The regulatory mechanism of STA includes economic regulation (fare, taxes, revenue etc.), physical and infrastructural regulation (vehicle, maintenance, fitness, amenities etc.), and social policy regulation (energy, safety, user interest etc.). Online application for learner's license, permit issue, tax collection, e-dispatch of driving license & registration certificate and enforcement (Tough book) have been introduced by STA.

Odisha has 35 RTOs, 1 Government driving training school at Bhubaneswar, 1 PPP mode

driving training school at Chatia of Jajpur district. It is proposed to set up 2 driving training schools on PPP mode at Berhampur & Keonjhar. Apart from these, 109 empanelled driving training institutes imparted training funded by Odisha Skill Development Authority. Odisha State Road Transport Corporation

(OSRTC) provides public transport bus services and amenities to passengers and road users. Presently there is no border check gates under Transport Department, though previously there were 13 gates to collect revenue; these have been removed from 31.03.2017.

Biju Gaon Gadi Yojana (BGGY)

Government of Odisha launched a rural transport connectivity scheme, named as BGGY, in February 2014 to make the mobility of rural people more accessible, comfortable, economical and diversified. BGGY is to be implemented in 3 phases – with the first, second and third phase covering 12, 5 and 13 districts respectively. As on 31st January 2017 583 number of vehicles are running under BGGY

Major initiatives on road transport during 2016-17 are outlined below.

Road Accidents and Safety Measures:

Road accident is closely associated with mobility. Factors like faster growth of vehicle population, heterogeneous mix of vehicles, technology development in transport, poor driving skills and deficient road conditions, and human error have led to a rising frequency and increasing severity of road accidents in the State. During 2016, 10532 road accidents were recorded against 10542 road accidents in 2015. Number of people killed in road accidents was 4463 during 2016 which was 4303 during 2015. The State Government collaborates with Odisha Road Safety Council, Ministry of Road Transport and Highways, Police Department, voluntary organizations and State Truck and

Bus Owners Associations to implement road safety measures.

Government of Odisha have formulated 'Road Safety Policy of Odisha 2016' with the objective of reducing road accidents and fatalities by 20 percent within 2020. There is a target to reduce fatality by 5 percent every year. A public call centre with toll free telephone number has been established in STA for redressal of grievances and assistance of general public and to act as an accident help line. School bus policy has been formulated for safe transportation of the school children. Accident prone black spots have been identified by Road Transport Department and traffic calming techniques have been adopted. 37 Highway interceptors are deployed for checking drunken driving and rash driving etc. 9 accident helpline centres has opened. Out of

eight Trauma Care Centres, six have been made operational. One traffic safety training park and one First aid Training Centre are established at Chandrasekharapur, Bhubaneswar. Out of the Road Safety Fund, around ₹ 5.00 crore has been placed with Commissioner, State Police to procure road safety equipment.

Odisha State Road Transport Corporation (OSRTC):

OSRTC functions to provide safe and dependable transport facilities to the public. During 2016-17, the Corporation had 379 on road buses with an average fleet strength of 455 and regular staff strength of 549 with a bus staff ratio of 1:3.69. Vehicle position and income performance of OSRTC during 2016-17 are

given in Table 6.11 and 6.12 respectively and the ear-wise values of some parameters relating to OSRTC have been indicated in Table 6.13.

Table 6.11 : Vehicle Position of OSRTC

On-road Vehicles	379
Off-road Vehicles	76
No. of Routes	212
Fleet Utilisation	83%
Average vehicle utilisation	246 Km.

Source: OSRTC

Table 6.12: Financial Position of OSRTC

Per K.M. Expenditure	₹ 28.03
Income	₹. 9701.00 Lakhs
Expenditure	₹ 9521.89 Lakhs
Per K.M. Income	₹ 28.56
Per K.M. Expenditure	₹ 28.03
No. of passengers transported	71.21 Lakhs
Parking fees collection	₹ 248.77 Lakhs
Profit/Loss during 2015-16	(+)₹ 179.57 Lakh

Source: OSRTC

Table 6.13 : Capital Assets of Odisha State Road Transport Corporation (OSRTC)

Year	Fleet strength	No. of buses on road	Capital investment (₹ in crore)	Employment/ Staff strength (Regular)	Number of passengers carried (in lakh)
2007-08	259	231	171.29	1114	50.52
2008-09	297	264	176.29	1045	51.18
2009-10	322	279	176.29	990	51.93
2010-11	359	283	176.29	940	48.25
2011-12	381	307	176.29	878	56.66
2012-13	376	294	159.43	870	56.55
2013-14	422	299	167.43	697	54.84
2014-15	446	339	162.44	623	63.62
2015-16	459	372	162.44	570	69.64
2016-17	455	379	182.44	549	71.21

Source: Odisha State Road Transport Corporation

Achievements of OSRTC in 2016-17:

Against 100 light commercial vehicles (LCV), 95 numbers of vehicles have been put into service in new routes of L.W.E. affected region under “Biju Gaon Gadi Yojana”. Out of 23 bus depots, 8 new ones have been opened at Phulbani, Malkangiri, Rayagada, Nawarangpur, Gajapati, Deogarh, Sundargarh, and Nuapada to strengthen services in the L.W.E. affected region. 440 Electronic

Ticketing Machines (ETMs) with GPRS and RFID have been implemented for all routes of OSRTC to check leakage of revenue. Web-based ticket booking system has already been introduced in 17 depots out of 23. Besides, new units to be opened will be computerized after necessary infrastructure facility is set up. Web booking through OSRTC portal (www.osrtc.in) has been developed, also using existing mobile apps for online booking of bus tickets. Total 87 prepaid franchised ticket booking agents have

been engaged as on 01.05.2017. Steps have been taken to increase number of franchisee to enhance the revenue of OSRTC. Out of 212 scheduled routes, 106 routes have been charted at present. Break-even analysis has been taken up to set minimum guaranteed revenue expectations.

Relative Efficiency of OSRTC:

The NITI Aayog measures the efficiency of different State Transport Corporations by four criteria: (a) vehicle productivity, measured by revenue earning per bus per km, (b) staff productivity, measured by revenue earning per km per worker per day, (c) fuel efficiency, measured by km per litre, and (d) fleet utilization in percentage terms. Vehicle productivity in case of OSRTC for 2016-17 is ₹ 28.56, staff productivity is 170 and bus-staff ratio is 1:3.69 whereas fuel efficiency is 4.72 km. per litre and fleet utilization is 83 percent.

B. Railways: Railway routes pass through twenty-four (24) districts of the State, excluding Boudh, Deogarh, Kandhamal, Kendrapara, Malkangiri and Nawarangapur. The density of coverage is relatively high in some regions of the State, while central parts remain largely untouched. A large disparity across districts exists. By the end of 2016-17, the State had 2606.267 km of railway lines. Overall, railway coverage is poor in the State and this is one of the factors that has hampered the pace of its industrial development. The railway route length in the State per thousand sq. km, which is the same as railway density, is about 16 km, while the national railway density is around 20 km. During 2016-17 the following progress of railways in Odisha have been made.

- Government of Odisha committed contribution of equity of 26 percent for 2 SPV mode railway projects. ₹ 114.80 crore and ₹ 127.80 crore were contributed by State Government for Haridaspur-Paradeep & Angul-Sukinda rail projects respectively from 2013-14 to 2016-17. In addition, close monitoring of Railway projects and coordination with concerned departments like Revenue & D.M, Forest & Environment, and IDCO is being done for all other ongoing Railway projects in the State such as Khurda Road-Bolangir, Talcher-Bimalagarh, Sambalpur-Angul doubling, and Sambalpur-Titilagarh doubling.
- ii) State Government provided free of cost land and 50 percent of construction cost for stretch of 112-289 kms (Daspalla-Balangir) segment of total Khurda road-Balangir Railway project after Ministry of Railways sanctioned for 0-112 km stretch (Khurda road-Daspalla) segment only of the same route due to low economic return factor. An amount of ₹ 10 crore was provided for land acquisition and ₹ 90 crore has been deposited in East Coast Railway towards State contribution for early completion of this important Railway project.
- Odisha will provide ₹ 60 crore for modernization of Bhubaneswar Railway Station.
- Now with commissioning of Rajsunakhala station in the Khurda Road-Bolangir

project, connectivity to Nayagarh district has been achieved.

- A budget allocation of ₹ 5102 crore during 2017-18 has been made in favour of the State in Railway Budget, 9 percent higher than last year. In October 2016, State Government have signed two MoUs with Ministry of Railways for two new projects – Jeypore- Malkanagiri (130 Km) and Nabarangapur-Jeypore (38 Km) – to bring Rail connectivity to Malkanagiri and Nabarangpur district.

C. Water Transport:

Paradeep Port: Paradeep Port, declared as the 8th major port of India in April, 1966 by Government of India, is the only major port in Odisha and the first major port on the East Coast commissioned in independent India. The port is situated 210 nautical miles south of Kolkata and 260 nautical miles north of Visakhapatnam on the East coast. The port is equipped with 15 berths, three single point moorings and one Ro-Ro jetty for handling various cargoes. Of these, 8 berths are fully mechanized for handling of iron ore, thermal coal and POL. Two berths are captive berths in which fertilizers are handled, one berth has been allotted to M/s. ESSAR for handling of iron-ore pellets on captive basis and the others are multi-purpose in nature and semi mechanized. The port has 143.44 million tons of cargo handling capacity as on 31st March 2017.

Table 6.14: Cargo handled at Paradip Port
(in million tonnes)

Year	Import	Export	Total	Growth (%)
2007-08	16.85	25.59	42.44	10.18
2008-09	19.89	26.52	46.41	9.35

Year	Import	Export	Total	Growth (%)
2009-10	29.18	27.83	57.01	22.84
2010-11	31.22	24.81	56.03	(-)1.72
2011-12	35.99	18.26	54.25	(-)3.18
2012-13	39.11	17.44	56.55	4.24
2013-14	40.67	27.33	68.00	20.25
2014-15	46.19	24.75	71.01	4.43
2015-16	47.90	28.49	76.39	7.57
2016-17	53.88	35.07	88.95	16.46

Source: Paradeep Port Trust

The major ongoing capacity addition projects in the Port are Southern oil jetty, multipurpose clean cargo berth, deep drought coal berth and deep drought iron ore berth on BOT basis. During 2016-17, 88.95 million tons of cargo (53.88 million tons of import and 35.07 million tons of export) was handled through this port with an average of 4.75 hours pre-berthing detention, 2.15 days turn-around time and 21139 MT ship berth-day output. POL and thermal coal together constituted 60 percent of the total cargo handled through this port during 2016-17. Details of the year-wise Cargo handled by Paradip Port have been indicated in Table 6.14.

Major achievements of Paradip Port Trust (PPT) during 2016-17 are given below:

- PPT handled 88.95 million tons of cargo, the second highest position of cargo traffic among all ports of major States for last 3 years.
- 3 projects were awarded with “Best Performance Award” for achieving second highest growth in the year 2016-17.
- Concession agreement has already been signed with Paradip International Cargo Terminal Pvt. Ltd. (Capacity 5 MMTPA) for development of Multipurpose cargo berth.

- Concession Agreement has been signed with the SPV “JSW Paradip Terminal Pvt Ltd.” (Capacity 10 MMTPA) for development of Deep Draught Iron Ore Berth on BOT basis.
- Mechanisation of EQ1 to EQ3 berths of 30MTPA capacity at Paradip Port on BOT basis has been taken up.
- Development of New Coal Berth for handling of Coal imports at Paradip port on BOT basis.
- An Environment Cell has been created since August 2015 to monitor the environmental protection activities in and around the port area.

Amongst the Major Ports, PPT is predominantly using Rail and pipeline mode for cargo conveyance and thereby reducing the road traffic. The port has its own railway system with a route length of 7.5 km and track length of 90 km. Coastal trade between India and Bangladesh commenced on December 2016. For the first time, 11,951 MT of Pet Coke produced in IOCL Refinery was shipped through Paradip port in February 2017; 17,495 tonnes of ATF were loaded on December 2016.

Other Ports: With 480 kms of coast lines, Odisha has 13 potential sites for minor ports development. These minor ports are located at Gopalpur, Behuda Muhan and Palur in Ganjam district; Baliharchandi & Astaranga in Puri district; Jatadhar Muhan in Jagatsinghpur district; Inchri, Chandipur, Bahabalpur, Kirtania and Bichitrapur (Talasari) in Balasore district; and Dhamra & Chudamani in Bhadrak district. Dhamra port is commercially

operational while Gopalpur and Kirtania minor ports are under development with private sector support. Government of Odisha is making efforts to develop a riverine port on Mahanadi River near Paradip to boost coastal shipping. Odisha has declared Port Policy 2004, Odisha Boat Rules 2004, and Maritime Board Bill, 2012 for proper development, management, registration, operation and monitoring of ports and boats with private participation.

Inland Water Transport (IWT): IWT has vast potential but a small network in Odisha. The passenger launch services are used in remote areas where other modes of transport are generally lacking. Inland water transport services are provided by the State Government. The Directorate of Port and Inland Water Transport is under the administrative control of Commerce and Transport Department. Government of Odisha is the nodal agency, which controls activities relating to passenger launch services, survey and registration of inland crafts. Passenger motor launch services are operative in six different water routes in two sectors, i.e., Chandbali and Balugaon sectors. Chandbali to Dhamra sector provides launch service from Chandbali to Talachuan, Chandbali to Aradi and Bhitarkanika (on reservation) using six motor launches. Balugaon sector provides services from Balugaon to Krushnaprasad Gada and Kalijai using six motor launches and also services from Nuagada to Ganda Kulai via Kaliakana. During 2016-17, 1.58 lakh passengers moved by IWT and ₹ 22.70 lakh revenue were collected from fare.

Table 6.15: Passenger Traffic and Revenue Collected from Inland Water Transport Services

Year	No. of Passengers (in lakh)	Fare Collected (in Lakh ₹)
2007-08	1.08	18.75
2008-09	1.04	19.19
2009-10	1.22	23.08
2010-11	1.42	24.96
2011-12	1.26	21.22
2012-13	1.25	20.29
2013-14	1.25	21.62
2014-15	1.42	20.26
2015-16	1.64	25.28
2016-17	1.58	22.70

Source: Directorate of Inland Water Transport, Odisha

Table 6.15 provides data on passengers and revenues raised from 2007-08 to 2016-17. Government of Odisha has formulated Odisha Boat Rules, 2004. As per these rules all types of boats are to be surveyed and registered before plying in inland waters of the State. During the financial year 2016-17 an amount of ₹ 8,00,550/- has been collected from 530 boats towards survey, registration and renewal charges. The Executive Engineer, Ports & IWT, Mechanical Division, Cuttack under the Director, Ports & Inland Water Transport conducts examination for granting certificates of competency to Serangs, Masters, Engine Drivers and Inland Engineers. During 2016, 252 candidates appeared for certificate examination and 179 of them passed. Crew Training Institute, Chandabali in the district of Bhadrak also functions under the Directorate of Ports and Inland Water Transport. At present the institute conducts two types of courses: (i) 10 Month Regular Course for general candidates, and (ii) 3-Month Refresher Course for in-service candidates in Engine & Deck

Rating. The trainees of this institute get their jobs inside and outside the State.

D. Civil Aviation: The Directorate of Civil Aviation looks after the use and maintenance of the State Government's passenger aircraft and trainer aircrafts, training of student pilots, and construction and development of air strips in the State. There are 19 airstrips across 15 districts of which 12 are owned by Government of Odisha. There are sixteen helipads in Odisha. Biju Pattnaik Airport at Bhubaneswar has been declared as an international airport. A proposal for procurement of new aircraft is under consideration. A Government Aviation Training Institute, set up under a public-private partnership mode, has started functioning since November, 2008. An amount of ₹30 crore has been proposed during 2015-16 for construction and development of existing airstrips, and their infrastructure along with construction of new airstrip at Malkangiri

6.3 Telecommunication and Post Offices

6.3.1 Telecommunication

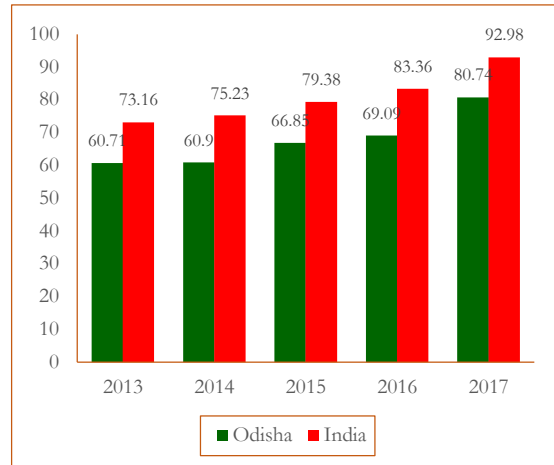
Telecom acts as a stimulus for the development process. Over the past decade, development of this sector in Odisha has been quite impressive. The effect of telecommunications on the productivity in various sectors of an economy is substantial. The network in Odisha, as for the country as a whole, has vastly expanded over the years. During 2016-17, there were 3.46 crore telephone subscribers in the State, which is about 2.90 percent of total telephone subscribers in the country. Out of a total of 3.46 crore subscribers, 99.15 percent were wireless subscribers and the balance 0.85 percent were wireline subscribers.

Table 6.16 : Tele density of Odisha and India as on 31st March, 2017

Particular	Odisha	India
Wireless Tele density		
Rural	58.02	56.47
Urban	180.92	166.71
Total	80.05	91.08
Wireline Tele density		
Rural	0.19	0.44
Urban	2.94	5.10
Total	0.68	1.90
Overall Tele density		
Rural	58.21	56.91
Urban	183.86	171.80
Total	80.74	92.98
Total Subscribers (in Millions)		
Rural	20.46	501.61
Urban	14.12	692.97
Total	34.58	1194.58

Source: TRAI, GoI

The overall tele-density of the State (i.e., number of telephone connections per 100 population) is less than the national average. There is also a wide gap between rural and urban tele-density. In Odisha, the rural tele-density during 2016-17 stood at 58.21 percent, while the urban tele-density was 183.86 percent. The corresponding figures for national level stood at 56.91 percent and 171.80 percent respectively during the same period. Table 6.16 shows the category-wise and region-wise tele-density for Odisha and all-India for the year 2016-17. Figure 6.4 compares rural tele-density in Odisha and all-India.

Figure 6.4:Tele density of Odisha and India

Source: TRAI, GoI

6.3.2 Post Offices

Odisha has higher Postal density than the national average. During 2016-17, there were 8,175 post offices in Odisha comprising 35 Head Offices, 1,169 SOs, One EDSO and 6,970 EDBOs. Among these, 7,578 (92.7 percent) were in rural areas. Many post offices provide regular products and services as well as premium postal services, including speed post, express parcel post, mass mailing service, corporate money order service and satellite mail service, greeting post and retail post. As per an evaluation made internally as well as through an external agency, Gopalpur Post Office in Berhampur Postal Division was rated as the best at the national level. Its staff was deputed for training abroad at the Asia Pacific Postal College, Bangkok for a week under the Reward and Recognition scheme. Details of availability of postal services in Odisha v/s all-India have been shown below.

Table 6.17 : Availability of Postal Services, Odisha and All-India

Year	Odisha			India		
	Rural	Urban	Total	Rural	Urban	Total
2007-08	7583	579	8162	NA	NA	NA
2008-09	7585	577	8162	NA	NA	NA
2009-10	7575	585	8160	139182	15797	154979
2010-11	7583	578	8161	139040	15825	154865
2011-12	7582	581	8163	NA	NA	NA
2012-13	7577	588	8165	139164	15692	154856
2013-14	7570	597	8167	139182	15700	154882
2014-15	7576	593	8169	NA	NA	NA
2015-16	7573	596	8169	139222	15717	154939
2016-17	7578	597	8175	138956	15939	154895

Source: Chief Postmaster General, Odisha

6.4 Science and Technology

6.4.1 Information Technology

The Government of Odisha has been proactive in incorporating IT in its own administration as well as helping the growth of IT in general. Electronics & Information Technology Department of the State has the mandate for development, co-ordination, and supervision of IT activities including computers, communication, software, and electronics in the State. OCAC, OSEDC, IIT, STPI & IDCO are the institutions that help in promotion of IT and e-governance projects in different agencies of the Government. IT Department has already formulated industry friendly ICT policy 2014 to enable IT to reach the common man so as to narrow down the digital divide. The policy aims at sustainable employment generation, increasing investment in IT/ITES/ESDM sectors, door-step delivery of host services, enhancing transparency in governance etc. The following achievements have been made by the Electronics & Information Technology Department during last one year i.e. 2016-17.

- MoU signed with STPI, Government of India on November 2016 for setting up new STPIs at Jajpur, Angul, Sambalpur and Koraput.
- The Electronic manufacturing Cluster (EMC) at Info valley covering an area of 203 acres has been approved by Government of India and development of EMC through a SPV formed by IDCO is in process.
- Setting of Characterization Lab at IIIT, Bhubaneswar is under progress in association with STPI.
- A NIELIT regional centre shall be set up at OCAC Tower soon.
- Three (3) new towers (IDCO Tower at Mancheswar, Incubation Tower at Infocity and STPI Tower at Gothapatna) are in their final stage of completion.
- OCAC has been designated as the Registrar for Aadhar Enrolment of the State. More than 80% enrolment is over.

- A draft Telecom Policy for the State to enhance its Tele-density has been prepared.
- Special Single Window Clearance Authority (SSWCA) has been constituted to approve investment proposal up to ₹50 crore in IT/ITES/ESDM sector.
- Under NoFN (Bharat Net), about 400GPs have been provided with High Speed Broad band facility.
- The State has been recognised as a progressive State in the field of IT by CSI –Nihilent and awarded at Coimbatore on 2016.

Some of the important activities (Roadmap) of the Electronics & Information Technology Department to be executed through OCAC and its Technical Directorate, IDCO Bhubaneswar & STPI Bhubaneswar during the financial year 2016-17 are:

1. Digital India Programme: This is a flagship programme of the Government of India with a vision to “transform India into a digitally empowered society and knowledge economy”. The three key vision areas of the Digital India Programme include “Infrastructure as a utility to every citizen”, “Governance and Services on Demand” and “Digital Empowerment of citizen”. The E&IT Department is the nodal Dept. for implementation of the programme.

2. IT Investment under IT/ITES/ESDM Sector: The State Government aspires to achieve the following milestones in the next five years with effective implementation of the ICT Policy 2014.

- The policy envisages a gross ICT Turnover (including exports of software

and IT services, ESDM, Domestic consumption and Training) of USD 4 Billion (₹ 24,000 crore) from the present ₹ 2400 crore.

- It aims at creating direct employment of 60,000 professionals in 800 IT/ITES/ESDM units.
- The State will invite 10 leading IT/ITES and five ESDM companies.
- Create a built-up space of 60 lakh square feet and a developed land bank of 2000 acres for IT/ITES/ESDM sectors.

3. Rural BPO Scheme to create more employment in the state:

The E&IT Department initiated the Rural BPO Scheme to create at least 5000–10000 seats in all the STPI locations of the state to provide employment opportunity to the youth of the state close to their home towns. The State Government will provide capital funds.

4. IT Procurement Procedure 2015: The Government of Odisha has an ambitious plan of implementing e-Governance for efficient public service delivery in the state. This IT Procurement Procedure addresses some impediments in implementing e-Governance projects.

5. Info Valley Project (Info city-II): Info valley project (Info city-II) is under construction at Goudakashipur, Bhubaneswar. IDCO, Bhubaneswar has been assigned the responsibility to implement the project by way of infrastructure development like construction of road and compound wall, water supply and electricity. The total land area earmarked for the project is 613 acres.

In the meantime, 50.92 acres of land in Info Valley SEZ area have already been allotted in favour of M/s. Infosys Ltd., which is the anchor tenant. Infosys has a plan of 15000 IT Manpower to be deployed at this centre in the next three years' time. It has constructed its 2nd Development Centre at Info Valley and started operation with manpower of 200.

6. Establishment of IT investment Region (ITIR): The State Government submitted a DPR for setting up of one IT investment Region (ITIR) as per the ITIR Policy of Government of India. The ITIR in Bhubaneswar covers about 10,210 acres (41.32 Sq Km) area at a distance of 15 Km from south Bhubaneswar in Jatni. The cost involved is expected to be around ₹ 3700 crore. Centre will be required to provide assistance of the order of ₹ 1750 crore. The final approval from the Ministry of Communication and Information Technology is pending with Government of India.

7. Green Field Electronic Manufacturing Cluster (EMC): As per the National Electronics policy guideline, the State Government has submitted a DPR to DeitY, Government of India for setting up of a Green Field Electronics Manufacturing Cluster (EMC) inside the info Valley in an area of 203 acres for necessary approval and placement of grant from Government of India to develop the same. Total project cost is ₹200.75 crore.

8. Setting Up of new STPI in Odisha: At present there are four Software Technology Parks (STPIs) in Odisha at Bhubaneswar, Rourkela, Berhampur and Balasore. From Government of India, a proposal has been received for setting up of 6 more STPIs in the State at Jajpur, Sambalpur, Koraput (Jeypore), Angul, Rayagada and Kalahandi

(Bhawanipatna), and Government of India has already signed MOU with STPI in November 2016 for setting up of four (4) new STPIs at Jajpur, Angul, Sambalpur and Koraput.

9. Bhubaneswar City WiFi: The STPI Bhubaneswar was originally entrusted with the work. Later, it was decided that Bhubaneswar Smart City Ltd. shall execute the city wi-fi connection project. City wi-fi connection of other cities like Cuttack, Berhampur and Sambalpur are under consideration.

10. Semiconductor Characterization Lab & ESDM Incubation Centre at Bhubaneswar: It has been decided to establish a Characterization Laboratory in the State jointly with STPI in the IIIT Campus, Bhubaneswar. It will be the first such lab in Eastern India which will help entrepreneurs to test the semiconductors for a minimal charge. STPI-Bhubaneswar has already signed the contract with the Agency. The DPR for ₹ 22 crore was submitted by Director, STPI for establishment of an Electronic Design and Manufacturing (ESDM) Incubation Centre in Bhubaneswar to start the project at IIIT, with proper Government approval.

11. OCAC Incubation Tower: To promote entrepreneurship in the State, Government have approved the construction of an IT tower named "OCAC Incubation Tower" adjacent to existing OCAC building, Bhubaneswar. As on date, 34 incubation units have been allotted to start up IT companies. Other such towers are being constructed by IDCO at Mancheswar Industrial Estate. Another incubation facility is being constructed in OCAC Tower.

12. National e-Governance Plan (NeGP)

Projects: The National e-Governance Plan (NeGP) envisages a three-pillar model for delivering web-enabled anytime, anywhere access to information and services in rural areas. These are State Wide Area Network (OSWAN); State Data Centre (SDC); and The Common Service Centre (CSC).

Odisha State Wide Area Networks

(OSWAN): OSWAN project is one of the core infrastructure projects under National e-Governance Plan (NeGP) and it has been executed as per the guidelines of DeitY, Government of India. This network is connected from the State Headquarter (SHQ) to District Headquarters (DHQ) down to Block Headquarters (BHQ). Government of India is also planning to connect the BHQ with GP through wireless connectivity. 44 video conferencing facilities have been established as part of OSWAN. Approximately 4700 field level officers under various departments will be provided horizontal connectivity under OSWAN. In the first phase, 1267 offices including Sub-Registrars, Treasuries, Health Institutions, ULBs, and DRDAs will be provided horizontal connectivity with 2 Mbps bandwidth through BSNL. Till date, 1061 officers have been provided OSWAN horizontal connectivity.

Odisha State Data Centre (OSDC): A State Data Centre has been set up in OCAC. Presently, 43 nos. of G2G and G2C applications of various departments like e-District, e-Municipality, e-Registration, CCTNS and IOTMS have been hosted in OSDC. Many more applications are in pipe line. Disaster Recovery (DR) site of OSDC has been activated from National Data Centre (NDC) at New Delhi, which ensures that OSDC

is up and running in case of a disaster. The database of the applications are updated in real time at DR site to ensure no or minimal loss in case of any type of failure in Data Centre.

Common Service Centre (CSC): The project aims to establish 8558 Jana Seva Kendra across the State under Common Service Centre (CSC) Scheme of National e-Governance. These will act as front-end delivery points for Government, private, and social sector services to rural Odisha in an integrated manner at affordable cost. 3335 number of CSC is now delivering e-District Services out of 8558 CSCs.

N. e-Governance Application:

e-District: As per the integrated framework for Delivery of Services under e-District, six Citizen Centric Services are being delivered through e-District Project: 1) Residential Certificate; 2) Income Certificate; 3) Caste Certificate; 4) Solvency Certificate; 5) Legal Heir Certificate and 6) SEBC/OBC Certificate. It has been rolled out in all the districts after successful implementation of the pilot project in Ganjam and Mayurbhanj district.

e-Registration: The project has been implemented to digitize registration process and delivery of documents across 185 Registration Offices of the State. It has improved administrative effectiveness and efficiency. The project is being implemented by Odisha e- Governance Services Ltd. (An SPV of OCAC & ILFS) in PPP mode.

e-Municipality: e-Municipality is one of the Flagship Projects that involves a significant amount of citizens' interaction. Municipalities provide a large number of basic services for millions of citizens living in urban centres. It

offers a single and integrated view of ULB and provides timely and reliable management of information. The action plan for the year 2016-17 is to provide all ULB services online to the citizens for entire 112 ULBs of the State.

Odisha Secretariat Workflow Automation System (OSWAS): The objective of OSWAS is to automate the functions at all the levels of administrative hierarchy in the Secretariat and to provide an effective method of storing, maintaining and retrieving the huge volume of data. It also provides Document Management, Workflow Management, Collaborative environment and Knowledge Management in an integrated fashion and delivers an Electronic Workplace.

Student Academic Management System (SAMS): OCAC has implemented this project as an extension of e-college Project for Higher Education Department to introduce e-Admission. The project has covered all the 671 Degree colleges and 1334 Junior colleges of the State. It is running successfully for the last five Academic Sessions.

e-Dispatch: OCAC is implementing the e-Dispatch system in different government departments and other subordinate offices to automate the issue and dispatch of Government letters in real time. The web-based application of this software is being implemented to field/line officers of different departments.

O. OCAC Restructuring:

After the approval of the OCAC restructuring committee headed by Special Secretary, E&IT Department, OCAC recruitment and service rule is being prepared. There are 6 divisions and each division is headed by a GM level officer. Several training programmes in IT/ITes are regularly conducted by OCAC by well-qualified and experienced faculty.

14. National Optical Fibre Network (NOFN)/ Bharat Net Project: BSNL is the Nodal agency to implement this project to provide High Speed broadband facility of 100 Mbps at all GPs, in the 1st phase, covering 18 districts. At present there are 3820 GPs under Bharat Net phase-I and 2390 GPs under phase II. OCAC has been declared as nodal agency for implementation of Bharat net phase II.

15. UID Project: Registrar General of India (RGI) was conducting the Aadhar enrolment of individuals above age 5 years through Census. OCAC has been appointed by UIDAI as one of the State Registrars and engaged 4 agencies to complete Aadhar enrolment. Special Enrolment Drives are being organised in all the Gram Panchayats of the State. For use of Aadhar in service delivery, State Registrar Data Hub (SRDH) has been set up at OCAC where demographic information along with Aadhar number of the resident of the State has currently been stored.

6.4.2 Institutions with State Government Initiatives

International Institute of Information Technology (IIIT), Bhubaneswar established by Government of Odisha at Bhubaneswar and notified as a Unitary University, aims to meet quality faculty requirement in the IT disciplines of Engineering Colleges and cater to the needs of IT & ITES industries. Its mandate is to nurture academic research in cutting edge technologies and industry sponsored research programmes. IIIT, Bhubaneswar has requested Government of Odisha to award scholarships to the Ph.D. scholars of the institute once the Ph.D. programme starts.

Odisha Space Application Centre (OSAC):

OSAC is an apex organization promoting remote sensing technology in the State. Remote sensing data are used in agriculture, transport, land use, revenue, urban development, drinking water, flood mapping, wetland and wasteland development, block level resource mapping, and forest and environment sectors. OSAC has undertaken several projects for the Central and State Governments. Important activities of OSAC during 2016-17 are noted below.

Block level resource atlas and GIS database generation has been developed under “Odisha Sampad”. Land-use map updation of Patamundai, Jagatsighpur, Jajpur, Joda, Nayagarh, Deogarh, Paralakhemundi, Boudh, Sonepur, Koraput, Malkanagiri, Nawarangapur and Sundargarh have been completed. Classroom teaching transmission in English, Mathematics, Science and Geography has been made for class IX and X under EDUSAT programme. GPS survey for 40 Iron and Manganese lease areas has been completed. Authentication of maps showing forest area proposed for diversion to accommodate 102 proposals have been completed. DGPS survey of 23 proposals has been completed. The Khariff rice production and area forecast, Odisha has been released in collaboration with Mahalanobis National Crop Forecast Centre (MNCFC). The khariff rice area of the state is estimated at 3.63 million ha. with production of 6.38 million tonnes. web base power atlas of Cuttack circle has been completed and this project has been developed for the entire State. Land bank clusters of 95,000 acres have been web hosted along with pollution potential indicator. This programme received the Special Achievement in GIS Award from ESRI for the year 2016 GPEPLUS version 2.0 has

been web hosted in public domain and updated with inputs from the Industries Department. This project received Geospatial World Excellence Award 2016 by Geospatial World Forum. Ground water quality mapping for Angul, Kendrapada, Bargarh, Khorda, Rayagada, Jagatsingpur and Malkanagiri districts have been completed and submitted to RWSS, Government of Odisha. Forest Administration, Management and forest density mapping for 20 divisions has been completed. GIS database development for 62 Municipal wards of Bhubaneswar has been completed. Mapping status of plantations for 15 Forest Divisions of Odisha has been completed.

Institute of Material Sciences (IMS): The IMS provides research facilities in material science and conducting inter-disciplinary research on special materials in order to exploit huge untapped natural resources available in Odisha and upgrade them to value added products. Proposal for starting two academic courses, Master course in Material Science and Post Graduate Diploma in Advance Material Science (to be introduced for the first time in Odisha), has been prepared and submitted to S&T Department. A high precision magnetic measure VSM instrument costing approximately ₹ 4.00 crore has been procured from GIS Quantum Design, USA and going to be installed by the Principal shortly in the new VSM laboratory located in new PSP building. A tubular furnace has been installed in IMS laboratory. Experimental research collaborations with UNISA, South Africa, and USA are continuing. TSP programme has been completed through scientific exposure visit covering 338 schools of ST & SC Development Department of Government of Odisha.

Odisha Bigyan Academy (OBA): OBA aims to promote and popularize science and technology amongst people of Odisha. Monthly science magazines in Odiya “Bigyan Diganta” and “Science Horizon” in English were published during 2015-16. OBA organized a series of science events such as its Foundation Day, National science Day-2017 and World’s Student’s Day observations, presenting many science awards on Scientific Literature in Odia and popular science lectures. Also district level interactive sessions of science teachers and students workshops etc. were organized inviting eminent scientists of international & national repute as Resource Persons and science students as target groups.

Pathani Samanta Planetarium (PSP):

Pathani Samanta Planetarium aims at creating awareness on astronomy, astrophysics and space science among people and young students in particular. Since its inception in 1990, the Planetarium has increased its activities manifold. Besides, presenting planetarium shows, PSP has taken up Night Sky Watch (NSW) programme, which helps the researchers and scholars. The work of Burla planetarium is in progress and 3 more are to be set up at Rayagada, Mayurbhanj and Ganjam. During 2016-17, 1421 numbers of PSP shows were conducted in this planetarium and about 1.49 lakh persons including 0.57 lakh children visited the shows. An amount of ₹ 35.07 lakh was collected as entrance fees. Year-wise details of visitors and revenue collected have been shown in Table 6.18.

Table 6.18 : Visitors and Revenue Collected at Pathani Samanta Planetarium

Year	No. of visitors	Revenue collection (in Rs.)
2007-08	112056	1336369
2008-09	90019	1097609
2009-10	88341	1116183
2010-11	47934	581657
2011-12	27166	3298851
2012-13	151508	2688914
2013-14	155516	2796520
2014-15	134724	2548290
2015-16	157855	3041110
2016-17	148926	3507480

Source: Pathani Samant Planetarium

Institute of Mathematics & Applications (IM&A): IMA aims at pushing research on mathematics, advance applications and nurture talents on mathematics. It conducts research activities in 7 advanced areas of mathematics. Regular workshops, seminars, training programmes for teachers and students, both for rural & urban areas are conducted. A proposal to make IMA a Centre of Excellence is under consideration of the Government. IMA coordinated the award of scholarship offered by the Science & Technology Department, Government of Odisha, to students pursuing post-graduate studies in basic sciences in the State.

National Informatics Centre (NIC): National Informatics Centre (NIC) is a core Science and Technology organization under the Department of IT of Government of India and is actively working for the last three decades in the areas of Information and Communication Technology (ICT) applications in the public sector. NIC, Odisha State Centre, has been playing the principal role in promoting IT culture for effective governance at the State and

district levels. Both the State Government and NIC have taken several initiatives in this regard. The major achievements of NIC, Odisha Centre include the following schemes during 2016-17:

- Aadhaar Enabled Jeevan Pramaan Certificate (Digital Life Certificate) for State Government Pensioners.
- Dynamic Portal of Odisha Crime Branch: This portal covers tracking the missing persons, cybercrime, women trafficking, Economic Offence Wing, Special task force, citizen charter, etc.
- ASSA (Automation of Small Savings Activities): This portal has been developed to capture data on small saving deposits at field level offices across the state. The system has been implemented in all the 30 districts of the State.
- Online portal for registration of Odisha Building and other Construction Workers' Welfare Board: It provides a system to get online help and cess collection benefits to labourers.
- Online Cataloguing System of Odisha State Archives: It includes archive of books, records, newspaper, publication, voice recordings of freedom fighters, maps, microfilms etc.
- Pathsala: The web-based application is an integrated module for faculty registration, student and teacher attendance, classes taken status, time-table management, online internal assessment etc.
- Odisha State Seed and Organic Products Certification Agency (OSSOPCA): It is a web-enabled workflow based on online application filling system for getting subsidy under horticulture sector and getting the schemes sanctioned and obtain the status online.
- RIDF (Rural Infrastructure Development Fund): This portal has been developed to capture RIDF project details to monitor the physical and financial achievements of the projects.
- Supplies and Transactions automation system for Odisha State Beverage Corporation Limited (OSBCL) under Department of Excise has been undertaken.
- e- Office has been implemented for the State Transport Authority.
- e-Granthalaya: Web-based Library software has been implemented in 152 different locations including Government offices, Universities and Public Libraries.
- Automation of Local Fund Audit (ALFA): This portal facilitate the audit of Government grants-in-aid institutions including Panchayat Samitis, Zilla Parisads, ULBs and aided colleges.
- Budget Execution Technique Automation (BETA): Annual budget, Supplementary and Re-appropriation activities are being executed through this application.
- E-Abhijoga: This is an on-line grievance redressal and monitoring mechanism across the State, covering the offices of the Chief Minister, all secretaries and all district collectors

State Council on Science and Technology (SCST): The SCST is the apex policy-making body for development of science and technology and overseeing the implementation of various programmes. It extends financial support for application-oriented research projects, publicity, seminars, workshops and conferences. The Council undertook some major activities during 2016-17. A scholarship programme @ ₹ 2,000/- per month for 200 students has been introduced to promote and encourage meritorious students to pursue their post graduate studies in basic science subjects viz. physics, chemistry, mathematics, botany, zoology and geology. Setting up of a sub-regional Science Centre at Tukurla Bhati Tahsil in Bargarh district is under progress. Three more centres – Umuri near Jeypore in Koraput district, Bodapalasa in Keonjhar, and Gopalpur in Ganjam – and one science centre at Khandapada are envisaged in the State under the State Plan. SCST have established patent information Centre (PIC) in Odisha. PIC has organised 7 workshop in different Universities and Research Institutes during 2016-17. Financial support is provided to regional Science Centre, Bhubaneswar for State level science exhibitions. There is a Documentation

Centre-cum-library in this department, which provides up-to-date information to Research Scientists having a good number of books and journals. The external selection committee has recommended 10 students to get award of Biju Pattanaik Fellowship in basic and applied science. A new programme on research and development projects in Basic & Applied Science has been approved in which 5 R & D projects will be funded.

6.4.3 Biotechnology

Biotechnology emerged as a leading component of science & technology that has direct bearing on food security, nutritional supplementation, healthcare production and industrial applications etc. Biotechnology Policy Resolution 2016 has been announced to bring investments into the Biotechnology sector. Government provides 10 Biju Pattanaik Research Fellowships in Biotechnology; 32 scholarships are being provided to students of post-graduate studies. Government provides financial support for research activities in this area including financing to Government universities, colleges, and both Centre- and State-funded research institutes to support research projects in Biotechnology.





*O*disha continues its march towards economic progress with its underlying development approaches maintaining a balance between economic growth and human welfare. The major components of development approaches in line with MDG and SDG in the State show the way to faster poverty reduction and improved human development indices. With the changing approach on the issue of measuring and identifying poverty by Niti Aayog in adherence to SECC 2011 in recent years, the poverty alleviation programme and social sector development are poised for a new leap forward in Odisha.

7.1 Poverty

The approach to the issue of poverty alleviation changed remarkably in the current decade. Niti Aayog of India has advocated elimination of poverty by creating gainful jobs and strengthening social programmes. The newly launched Sustainable Development Goals (SDG) mandate elimination of hunger in India by 2030. The conventional practices of dealing with poverty by measuring poverty, identifying the poor, allocating resources for poverty alleviation programmes, and tracking the extent of poverty over time were replaced by more realistic approaches.

7.1.1 Measuring poverty till 2011-12

Niti Aayog, and its predecessor the Planning Commission, has been the nodal authority for measuring poverty line and poverty ratio in India since the 1960s. Traditionally, poverty measures in India are computed in comparison to a threshold level of monthly per capita consumption expenditure (MPCE) necessary for providing a minimum nutritional diet in terms of calorie intake. The defined level and criteria have undergone a series of changes, revisions and modifications in the last 50 years between 1960 & 2010 to appropriately adjust the measures of poverty line and poverty ratio. The constitution of a Working Group in 1962, the Task Force in 1979 under the Chairmanship of Dr Y.K. Alagh, the Expert group in 1989 under the chairmanship of Prof. D.T. Lakdawala, the Expert Group under the chairmanship of Prof. S.D. Tendulkar in 2005, and the Rangarajan Committee, 2009 significantly contributed to these revisions and modifications to reflect changing socio-economic conditions of the nation, particularly those of the poor.

Poverty in Odisha

Among the mandates of the Niti Aayog, MDG and SDG, the achievements of Odisha are most striking in the domain of poverty alleviation in the last 10 years. Poverty estimates for Odisha as well as for all States of India were based on the Tendulkar Committee Report of 2011-12 and NSSO results during the last decade. Extent of poverty in the State can be assessed in terms of dimension of poverty, magnitude of deprivation and inequities.

Dimension of poverty

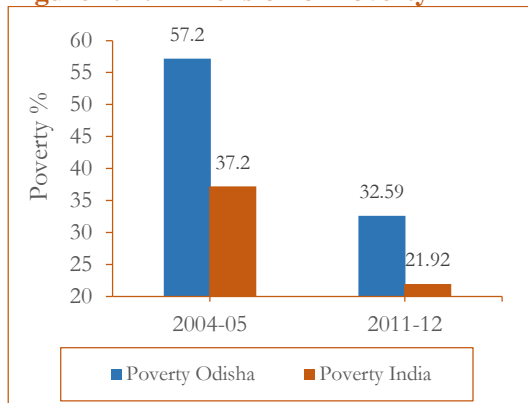
Dimension of poverty is reflected in poverty line and head count ratio. Poverty in Odisha is no more a chronic problem that cannot be significantly dented. The State is home to 5 percent of India's population, but includes 6 percent of India's poor. Based on MPCE, the poverty lines of Odisha are estimated at ₹ 695 for rural and ₹ 861 for urban area by 2011-12. About 32.59 percent of population (138.2 lakh people) were below poverty line in Odisha by 2011-12 and 82 lakh poor people in the state moved up from below poverty line to above poverty line in the span of 8 years. Poverty in Odisha has declined by 24.61 percentage points (average annual decline of 3.52 percentage points) from 57.20 percent in 2004-05 to 32.59 percent in 2011-12, the highest reduction among major States in India. India recorded 15 percentage points (average annual decline of 2.14 percentage points) of poverty reduction during the same period.

Table 7.1 : Dimension of Poverty (%)

Year	Odisha	India
2004-05	57.20	37.20
2011-12	32.59	21.92

Source : Niti Aayog, New Delhi & DES, Odisha

Figure 7.1 : Dimension of Poverty



Source: Niti Aayog, New Delhi & DES, Odisha

The rural urban status of poverty reduction in Odisha and India is shown in Table 7.2.

Table 7.2 : Rural and urban poverty dimension (%)

Year	Odisha		India	
	Rural	Urban	Rural	Urban
2004-05	60.80	37.60	41.80	25.70
2011-12	35.69	17.29	25.70	13.70
Poverty reduction	25.11	20.31	16.10	12.00

Source: Niti Aayog, New Delhi & DES, Odisha

The percentage of the poor in the total population of the respective groups dropped by 25.11 and 20.31 percentage points in rural and urban Odisha, as against 16 and 12 percentage points for India during the same period. However, the social class-wise and region-wise estimates of poverty head count ratios in Odisha remain areas of concern. Table 7.3 shows the social class-wise poverty head count ratio of Odisha and India for 2004-05 and 2011-12.

Table 7.3 : Head Count Ratio (Percent) by Social Groups for Rural Odisha

Year	HCR (%) by social group				
	SC	ST	OBC	Others	Total
2004-05	67.90	84.40	52.70	37.10	60.80
2011-12	41.39	63.52	24.16	14.20	35.69

Source: Niti Aayog, New Delhi & DES, Odisha

About 63.52 percent and 41.39 percent of ST and SC communities in rural Odisha were below poverty line in 2011-12. Notably, 48 percent and 40 percent of the population of rural areas of the southern region (that includes the KBK region i.e. undivided Kalahandi, Bolangir and Koraput districts) and the northern region of Odisha respectively were below poverty line in 2011-12. But it is reassuring to note that poverty among ST and SC communities has shrunk at a faster rate, i.e., by 20.88 and 26.51 percentage points respectively from 2004-05 to 2011-12, compared to overall poverty reduction.

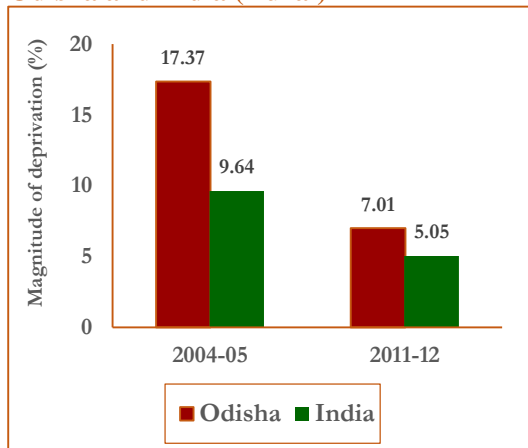
Among the regions, the northern region registered the highest reduction of poverty by 30.53 percentage points, followed by the southern region with 25.40 percentage points and the coastal region with 19.95 percentage points reduction between 2004-05 and 2011-12. Poverty reduction measures in the state led Odisha to improve its position from 30th rank to 25th rank among the States in terms of percentage of poor in total population during these 8 years. Kerala (7 percent), Punjab (8 percent) and Andhra Pradesh (9 percent) have the distinction of having very low poverty ratio i.e., single digit level among the major States in India.

Magnitude of deprivation

Poverty Gap Ratio (PGR) is the standard indicator to measure the extent of depth of poverty or magnitude of deprivation in any jurisdiction. The indicator of Poverty Gap Ratio (PGR) reflects the degree to which mean consumption of the poor falls short of the established poverty line, indicating the depth of poverty. The poverty lines for 2011-12 (under MRP method) were estimated as ₹ 695/- for

rural Odisha and ₹ 861/- for urban Odisha. For India, the poverty lines were ₹ 816/- for rural area and ₹ 1000/- for urban area in 2011-12. During 2004-05 to 2011-12, the Poverty Gap Ratio [estimated from monthly per capita consumption expenditure data based on Mixed Recall Period (MRP)] declined significantly in rural areas of Odisha from 17.37 in 2004-05 to 7.01 in 2011-12, while in urban areas the decline was from 9.64 to 3.15 during this period (Figure 7.2).

Figure 7.2 : Magnitude of deprivation in Odisha and India (Rural)



Source: Niti Aayog, New Delhi & DES, Odisha

In India, the PGR declined from 9.64 to 5.05 in rural areas and from 6.08 to 2.70 in urban areas between 2004-05 and 2011-12. Although the PGR of 10 States are higher than All India PGR, Odisha shows the fastest PGR reduction among them.

Inequities

Inequities can be assessed by two indicators – Gini coefficient and MPCE share of the poorest quintile. Gini coefficients depict the inequalities in the distribution of monthly per capita consumption expenditure.

The Gini coefficients of Odisha by social classes, region and rural-urban breakup

between 2004-05 and 2011-12 are presented in Table 7.4 and Table 7.5.

- In economics, the Gini coefficient is a measure of statistical dispersion intended to represent the income or wealth distribution of a nation's residents, and is the most commonly used measure of inequality.
- The Gini coefficient measures the inequality among values of a frequency distribution (for example, levels of income). A Gini coefficient of zero expresses perfect equality, where all values are the same. A Gini coefficient of 1 (or 100percent) expresses maximal inequality among values.
- The Gini coefficient was proposed by Gini as a measure of inequality of income or wealth

Table 7.4 : Gini coefficients of Odisha by social classes (Rural)

Year	Social classes (Rural)Odisha				
	ST	SC	OBC	Others	Total
2004-05	0.22	0.22	0.24	0.25	0.26
2009-10	0.22	0.21	0.22	0.24	0.25
2011-12	0.19	0.20	0.22	0.23	0.23

Source: DE&S, Odisha; Niti Aayog, India; MOSP&I, India

Table 7.5 : Gini coefficients of Odisha by social classes (Urban)

Year	Social classes (Urban) Odisha				
	ST	SC	OBC	Others	Total
2004-05	0.33	0.30	0.32	0.31	0.33
2009-10	0.33	0.31	0.28	0.37	0.38
2011-12	0.36	0.29	0.31	0.33	0.35

Source: DE&S, Odisha; Niti Aayog, India; MOSP&I, India

Table 7.6 : Gini coefficients of Odisha and India by social classes

Year	Odisha		India	
	Rural	Urban	Rural	Urban
2004-05	0.26	0.33	0.27	0.35
2009-10	0.25	0.38	0.28	0.37
2011-12	0.23	0.35	0.28	0.37

Source: DE&S, Odisha; Niti Aayog, India; MOSP&I, India

Inequalities in consumption expenditure was less prevalent in both rural and urban Odisha than in rural and urban India by 2011-12 as shown in Table 7.6. The inequalities declined in rural Odisha while it increased marginally in urban Odisha between 2004-05 and 2011-12, while the inequalities for both rural and urban India increased during the period. In Odisha, among the social classes in urban areas, the SC and OBC category show declining trend of inequalities while ST and Others category show increasing trend of inequalities since 2004-05. In rural areas, all the social classes experience fall in inequalities, ST communities falling at faster rate than rest of the social classes.

Identifying the poor till 2011-12

Poverty line and the poverty ratio were prospectively used to identify the poor; to allocate financial resources for poverty alleviation programmes across regions, and to track poverty over time and across regions. The three BPL Censuses in 1992, 1997 and 2002 formed the basis for such identification, allocation and tracking of poverty. The intense debate on methodological issues of Tendulkar poverty line and legal issues of 2002 BPL census led to the launching of BPL census along with Socio Economic Caste Census (SECC) in 2011 which was approved in the Parliament in May 2011.

7.1.2 SECC 2011: Present practice

SECC 2011 has been adopted as a more realistic, transparent and good governance approach to the identification of the poor after the three previous BPL censuses. It is a comprehensive programme being conducted both for rural and urban areas of the country involving combined exercises of MoRD, MHUPA, RGI, Ministry of Home Affairs and

State Governments/ UT administrations. SECC 2011 aims at enabling ranking of households based on socio economic status; making available information on socio-economic and education parameters of various sections of the population and information on caste population. SECC 2011 is based on more realistic criteria of deprivation indicators in contrast to the income criteria of BPL census 1992, expenditure criteria of 1997 BPL census, and socio economic indicators criteria of 2002 BPL census. Under SECC 2011, the BPL numbers are assessed based on principle of household classifications in 3 steps. The first step involves automatic exclusion with 13 conditions (indicators). These conditions relate to households having vehicles used for crop sector and fishing purpose, kisan credit card, government services, income limit of more than ₹ 10000/- p.m, income or professional tax payees, pucca roofed house, refrigerator, land line phone, irrigated land (with area limit), and irrigation equipment. The second step involves compulsory inclusion with 5 conditions (indicators). These conditions relate to households without shelter; destitutes, manual scavengers, vulnerable tribal groups, and bonded labourers. The third step involves deprivation scores with 7 conditions (socio-economic indicators). These conditions relate to one room, no adult member, female headed family, disabled member, SC/ST member, no literate adult and landless family.

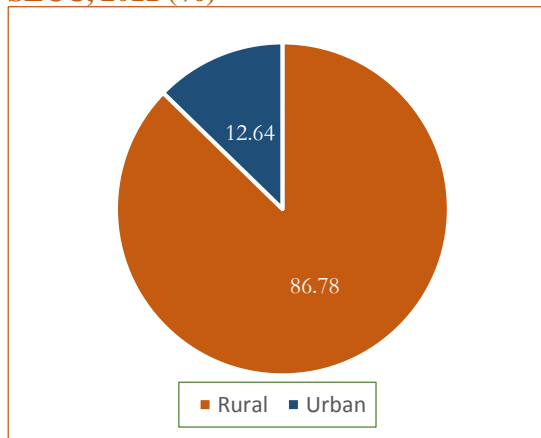
Poverty profile in Odisha: a brief relook

Poverty of Odisha has been redefined, re-measured and re-identified on the adopted principle of SECC 2011. The findings of SECC 2011 evaluate the predefined indicators of automatic exclusion, inclusion and deprivation criteria. The poverty profile of Odisha has been

prepared by the combined indicators of 7 deprivation and 5 compulsory inclusion criteria.

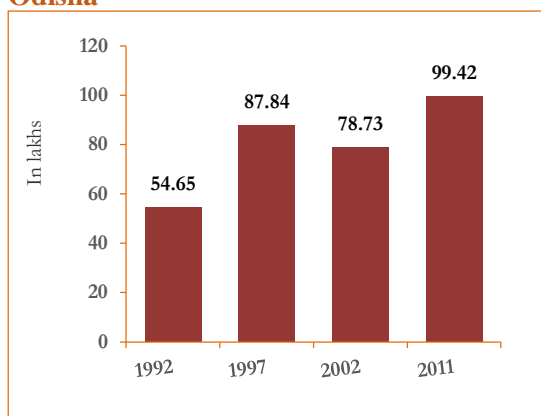
Odisha had 86.78 lakh rural households (87.28 percent) and 12.64 lakh urban households (12.72 percent) out of total 99.42 lakh households in the State as per SECC 2011 (Figure 7.3). Rural households are primarily focused on in Odisha for implementing poverty alleviation programmes. The number of BPL households of Census 1992, 1997, 2002 and 2011 are presented in Figure 7.4.

Figure 7.3 : Households in Odisha as per SECC, 2011 (%)



Source: SECC Report, 2011

Figure 7.4 : BPL Census Households in Odisha



Source: SECC Report, 2011

About 16.22 lakh rural households i.e., 18.81 percent of total rural households of the State had at least one social exclusion criteria out of total prescribed 13 criteria, thus excluded from poverty category. Households owning 3 or more pucca rooms (9.30 percent); vehicles and fishing boats (8.07 percent); refrigerators (4.84 percent); member earning more than ₹10000/- p.m. and member as government employee (4.40 percent) were the major contributors to automatic exclusion criteria. Rural households under compulsory inclusion criteria have a very low profile with only 1.18 lakh households comprising a mere 1.36 percent of total rural households in the State. Primitive Tribal Groups (0.68 percent) and destitute (0.57 percent) form the major part of compulsory inclusion criteria. Deprivation criteria play the crucial role in measuring and identifying the poor in the State. Out of 7 prescribed indicators of deprivation criteria, 4 indicators are given in the Table 7.7 which showed the sign of abject poverty.

Table 7.7 : Indicators of deprivation criteria of SECC 2011 in Odisha

Indicators	% of deprivation
HH having SC/ST	36.95
Landless with casual labour	36.19
Adult illiterate above 25 years	27.79
One Kuchha room	27.33

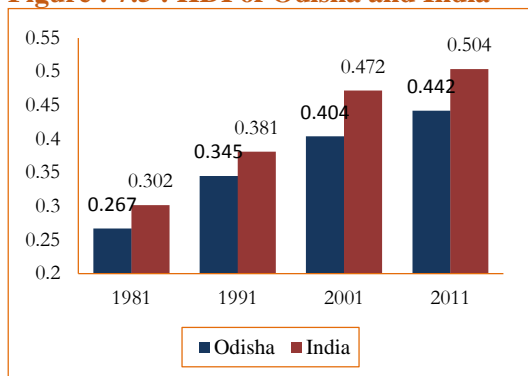
Source : SECC Report, 2011

Poverty profile is prepared on the combined criteria of deprivation and compulsory inclusion indicators. Based on this principle, 67.39 percent, 44.72 percent and 22.07 percent of total rural households of the State have at least 1, 2, and 3 deprivations respectively.

7.2. Human Development (HD)

Human development essentially deals with a minimum level of quality of life and adequacy of the means available to realise one’s full potential. While there are ongoing debates about quantification, efforts are made to measure HD by Human Development Indices (HDI) from global level to sub-regional level in the States. HD outcome is taken to be a function of economic growth, social policies and poverty reduction. The cause and effect relationships among economic growth, human capital formation and poverty reduction at macro level have been well established. Acquisition of quality and enhanced education, knowledge and skills; a long and healthy life and rising standard of living are the basis of measuring human development Indices. Human development index (HDI) is an average of health index, education index and income index. Health index is based on IMR and life expectancy at birth. Education index is a weighted average of adult literacy rates with 2/3rd weightage and combined Gross Enrolment Ratio (GER) with 1/3rd weightage. Income index is based on some acceptable measure of per capita income. UNDP estimate on State wise HDI in India indicate a perceptible improvement in the quality of life of people over the decades. A comparative estimate of HDI for Odisha and India is placed below in Figure 7.5.

Figure : 7.5 : HDI of Odisha and India



Source : UNDP

The interstate disparity in the level of human development exhibit a declining trend over the decades. Among the major States, Kerala has the highest improvement in HDI from 0.500 in 1981 to 0.625 in 2011 showing impressive quality of life in the State. Government of Odisha addresses the HD concerns and issues with the following initiatives on the basis of SDG goals (Box 7.1)

Box-7.1

- SDG Goals (related to poverty and human development)**
- Ending poverty and hunger;
 - Sustainable social infrastructure in health care, education and sanitation etc.
 - Decent work and growth
 - Reducing inequalities
 - Protecting environment
 - Sustained Industrial and urban infrastructure
 - Peace, justice and strong institutions and
 - Promoting partnerships

The first Human Development Report at sub regional level (district level) was prepared by Odisha in 2004 based on 2001 data assessment. The State is in the process of preparing the District Human Development Report (DHDR) for all 30 districts. DHDR is a tool to measure progress in people’s lives and to assess human development indicators such as education, health, gender, livelihood and infrastructure. The DHDR of 5 districts namely Mayurbhanj, Ganjam, Kandhamal, Kalahandi and Sundargarh have been published.

7.2.1. Education and Literacy Levels

Education has a direct bearing on human development. The sector not only builds up human capability, but also leads to sustained employability, faster income generation, poverty reduction, and higher economic growth. This is the integrated component of social infrastructure and also one of the major goals of MDG and newly launched SDG.

Odisha performed soundly on the literacy front. Increasing trend in literacy rate of Odisha and India is presented in Table 7.8.

Table 7.8 : Literacy of Odisha and India

Census Year	Odisha	India
1951	15.80	18.33
1961	21.66	28.30
1971	26.18	34.45
1981	33.62	43.57
1991	49.09	52.21
2001	63.08	64.80
2011	72.90	73.00
Annual Growth	2.59	2.35

Source: Census of India

By the end of June 2014 (as per estimated literacy rate of Odisha by 71st round NSS January-June 2014), the literacy rate of Odisha was 75.5 percent as against all India literacy rate of 75.4 percent. The literacy rate of Odisha has been increasing continuously.

Whereas the male literacy has increased 2.99 times from 27.32 percent in 1951 to 81.6 percent in 2011, the female literacy has grown much faster (i.e., 14.16 times) from a low level of 4.52 percent in 1951 to 64.0 percent in 2011. By the end of June 2014, the male and female literacy rates of Odisha increased to 83.2 and 67.8 percent as against national literacy rates of 83.2 and 67.1 percent respectively. Odisha achieved higher female literacy rate than that of All India. The gender gap in literacy in Odisha reduced to 15.4 percent in June 2014 as compared to 17.6 percent in 2011 census.

However the literacy rate of some social classes, ST communities in particular, in Odisha remain an area of concern. Substantial social, regional and gender disparities in literacy exist in the State. Scheduled Tribe communities have low levels of literacy.

Literacy rate as per social groups of Odisha from 1981 to 2011 are presented in Table 7.9

Table 7.9 : Literacy rate of SC and ST in Odisha

Year	ST			SC		
	Total	Male	Female	Total	Male	Female
1981	13.96	23.27	4.76	22.41	35.26	9.40
1991	22.31	34.44	10.21	36.77	52.41	20.74
2001	37.37	51.48	23.27	55.53	70.47	40.33
2011	52.24	63.70	41.20	69.02	79.21	58.76

Source: Census of India

The gap between rural and urban male literacy has however, been decreasing. Gross enrolment ratio in schools in Odisha is encouraging. The gross enrolment ratio in primary and secondary education level in Odisha was 104 and 100 per thousand students as compared to 100 and 87 at all India level respectively as on June 2014 (estimated result of 71st round NSS).

The State Government makes larger provision of outlays than previous years for improving the infrastructure and delivery services of primary, secondary, higher and technical education in the State. Odisha commits to convert outlays to outcomes of this high priority sector.

The low levels of learning outcomes of the primary and secondary level students is one of the human development concerns. The access and retention of students have improved remarkably in the State. But this achievement is undermined by low learning outcomes as about 72.6 percent of standard VIII students can read standard II text as per ASER 2016. Teacher absenteeism and shortage of professionally qualified teachers in schools are among the likely underlying causes of low quality of education in the State.

7.2.2. Health Conditions

Improved health care and health condition are the mandated preconditions for improved human development indices of the State. Sustained health conditions of people are closely linked with level of income, poverty, food security, nutrition, health care infrastructure, education (female literacy in particular) and awareness, access to health care system, delivery of services, health sector financing etc. The demographic & health sector indicators for Odisha exhibit a mixed trend of success. Some of the important demographic indicators of Odisha are given in Table 7.10

Table : 7.10 : Important demographic indicators of Odisha

Indicator	Rate
1 Birth Rate, 2015	19.2 per 1000 population.
2 Death Rate, 2015	7.6 per 1000 population
3 Natural Growth Rate, 2015	11.7%.
4 Total Fertility Rate, 2015 (NFHS-4)	2.1 %
5 Maternal Mortality Ratio (2011-2013)	2.22 per 1000 live births

Source: Directorate of Health & Family Welfare, Odisha

Key health indicators such as Infant Mortality Rate (IMR) and Life Expectancy at Birth (LEB) are compared across major states in Tables 7.11 and 7.12 respectively. Odisha performed remarkably by reducing IMR to 40 in 2015-16

as per NFHS-IV findings. As per SRS Report, IMR of Odisha reduced sharply form 77 in 2004 to 47 in 2015. The SRS survey reveals that the rates of reduction in IMR in both rural and urban areas in Odisha were better than the national averages and could be achieved largely through increase in institutional delivery and pre/post-natal care.

Table 7.11 : Inter-State Comparisons of IMR

State	Infant Mortality Rate		
	2004	2010	2015
Andhra Pradesh	59	46	37
Assam	66	58	47
Bihar	61	48	42
Gujarat	53	44	33
Haryana	61	48	36
Karnataka	49	38	28
Kerala	12	13	12
Madhya Pradesh	79	62	50
Maharashtra	36	28	21
Odisha	77	61	47
Punjab	45	34	23
Rajasthan	67	55	43
Tamilnadu	41	24	19
Uttar Pradesh	72	61	46
West Bengal	40	31	26
India	58	47	37

Source: SRS Bulletins

Figure 7.6 : Inter State Comparison of IMR

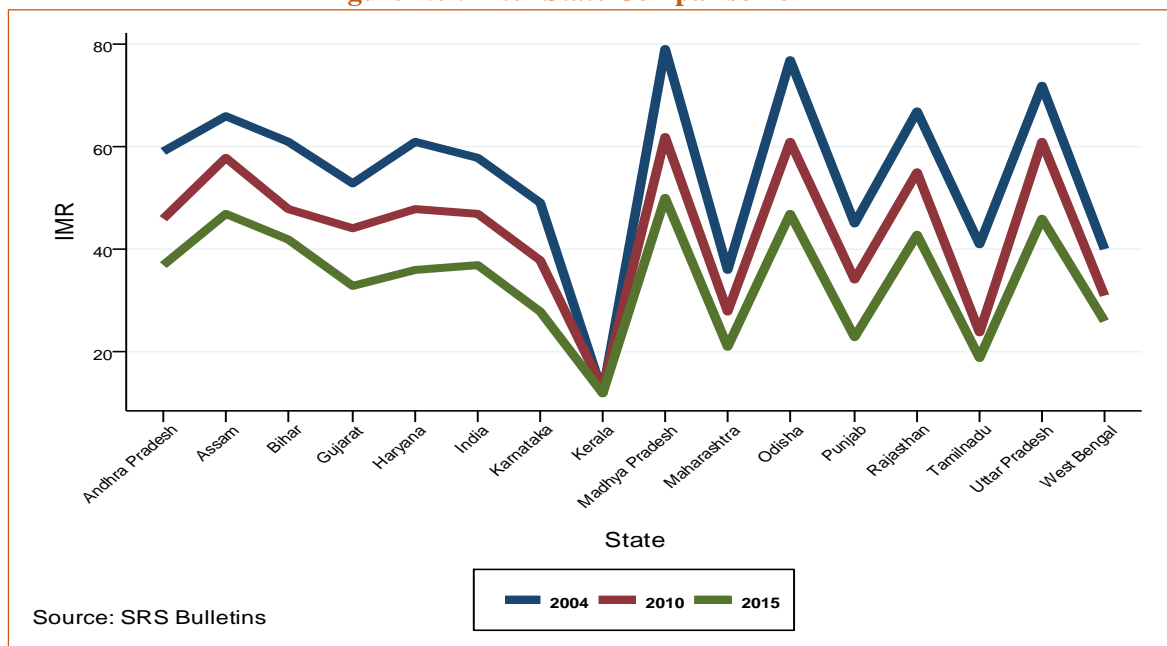


Table 7.12 : Inter-State Comparisons of Life Expectancy at Birth

State	2016-20*		2021-25*	
	Male	Female	Male	Female
Andhra Pradesh	68.4	72.1	69.4	73.3
Assam	65.6	66.8	67.1	68.8
Bihar	69.6	70.2	70.6	71.4
Gujarat	70.7	73.7	71.9	74.9
Haryana	69.9	72.5	70.9	73.7
Karnataka	69.0	73.5	70.0	74.5
Kerala	74.2	78.1	75.2	78.6
Madhya Pradesh	66.5	67.3	68.0	69.3
Maharashtra	69.9	73.7	70.9	74.7
Odisha	66.3	69.6	67.8	71.6
Punjab	70.7	73.8	71.5	74.8
Rajasthan	68.6	71.9	69.6	73.1
Tamil Nadu	69.6	73.0	70.6	74.0
Uttar Pradesh	67.5	69.2	68.7	71.2
West Bengal	70.2	73.3	70.0	74.3
India	68.8	71.1	69.8	72.3

*Projected figures,

Source:-Health & Family Welfare Statistics, India

Table 7.13 : Comparison of Health Indicators: National Family Health Surveys, Odisha

Sl. No.	Particulars	NFHS-I (1992-93)	NFHS-II (1998-99)	NFHS-III (2005-06)	NHFS IV (2015-16)
1	Total Fertility Rate (TFR)	2.92	2.45	2.4	2.1
2	Current use of any family planning method (%)	36.3	46.8	50.07	57.3
3	Female sterilisation (%)	28.3	33.9	33.1	28.3
4	Male sterilisation (%)	3.4	1.7	1.0	0.2
5	Spacing method (%)	12.7	8.7	6.9	4.7
6	Institutional delivery (%)	14.1	22.9	39.0	85.4
7	Children fully vaccinated (%)	36.1	43.7	51.8	78.6
	BCG	63.3	84.7	83.6	94.1
	DPT	56.3	61.9	67.9	89.2
	Polio	56.7	68.4	65.1	82.8
	Measles	40.2	54.0	66.5	87.9

Source: NFHS, Odisha

7.3. State interventions:

7.3.1. Key intervention on Poverty reduction

The State Government make concerted efforts in implementing a series of poverty alleviation programmes to reduce the dimension, deprivation and inequities in poverty in Odisha. These programmes also have direct bearing on

Odisha has launched an IMR Mission with a view to expediting faster reduction in IMR and MMR. Verbal autopsy has been made mandatory for each infant and child death. There is, however, some improvement in recent years. Table 7.13 compares results of the reports of National Family Health Surveys - NFHS-I, NFHS-II, NFHS-III and NHFS-IV conducted by the International Institute for Population Sciences (IIPS) and shows that there has been remarkable improvement in all health indicators of the State from 1992-93 to 2015-16.

social security, living standard, livelihood, human development and economic wellbeing of the poor, vulnerable and weaker sections of the society in the long run. The following are some of the major programmes being implemented by State Government of Odisha for poverty alleviation of people (Table 7.14).

Table 7.14 : Key intervention on Poverty reduction in Odisha

SI No	Programme & objectives	Target Group
1	SGSY, NRLM, MGNREGA (on employment generation)	Unemployed persons in unorganised labour force
	SGSY, NRLM, MGNREGA	
2	Rupee One a kg of rice , TPDS, AAY, MDM, SNP (on food security)	Persons identified as poor
3	IAY, Mo Kudia, Biju pucca ghar (on housing provision)	Economically weaker, houseless and lower income group
4	Madhubabu Pension Yojana (on social security)	Poor persons
5	Critical irrigation Projects (on improvement of economic condition)	Rural poor
6	Rashtriya Gram Swarojgar Yojana (RSSY), AABY (on economic upliftment)	Poor persons
7	OTELP, WORLP, JEEBIKA, TRIPTI, OCTMP (on improved livelihood)	Tribal and other vulnerable communities

Source: P.R., W & CD, SC&ST Department, Government of Odisha

The first goal of SDG is to end poverty by 2030. Among the targets of this goal are: to end extreme poverty for all people; reduce poverty of at least 50 percent of all poor men, women and children of all ages; promote social protection system, equal rights and access to basic services, ownership and control of natural resources; reduce exposure and vulnerability of the poor to natural risks; and improve resource mobilization.

7.3.2 Key interventions on employment

Expanded workforce and improved employability are major determinants of growth performance, poverty reduction and human development. Although main workers in Odisha rose by 3.2 percent between 2001 and 2011, its share in total workers fell sharply from 67.2 percent to 61 percent during the same period. The prime concern is the increase in under-employment in the State indicated by to the rise in the percentage of marginal workers to total workers from 32.80 percent in 2001 to 38.96 percent in 2011. Further, 18 percent worked for less than three months in a year. State Employment Mission and Chief Minister's Employment Generation

Programme (CMEGP) facilitate generation of adequate employment opportunities – both wage employment and self-employment – to tackle the problem of unemployment and under-employment in the State. The State targeted generation of 10 lakh employment and self-employment opportunities during the 12th Five-Year Plan. The employment situation is discussed in greater detail in Chapter 2.

7.3.3. Key Interventions for Improving Literacy

The literacy rate increased notably and gender gap relating to literacy narrowed noticeably in Odisha between 2001 and 2011. Sarva Shiksha Abhiyan (SSA) in all 30 districts caters to universal enrolment, retention and quality of education. National Programme for Education of Girls at Elementary Level (NPEGEL) and Kasturba Gandhi Balika Vidyalaya (KGBV) in educationally backward blocks of the State operate to reduce gender gap and greater participation of girls in education. Literacy rate in SC and ST communities remain lower than general population. Some major initiatives like provision of residential hostels, bi-cycles, and scholarships, smart class rooms in KBK

districts, introduction of Tribal dialects, and special B.Ed. College are being taken up for raising the literacy level of SC and ST communities and reducing their dropout rate in the State.

7.3.4 Key intervention on improving health services

National Health Mission

National Health Mission (NHM) plays the pivotal role to improve access of people, especially poor women and children, to equitable, affordable, accountable and effective primary health care, both in rural and urban areas of the State. NHM not only integrates health concerns with determinants of health like sanitation & hygiene, nutrition and safe drinking water through a district plan for health, but also subsumes all existing programmes like Reproductive health, Child Health, Immunization, National Disease Control Programme, and Integrated Disease Surveillance Project. It aims at integration of all vertical Family Health Programmes and funds for optimal utilization of funds and infrastructure and strengthening delivery of primary health care, through the existing health care system. NHM implements a series of central and state sponsored health care programmes on reproductive health, maternal and child health care, and adolescent reproductive health in the State. Some of the major NHM programmes include ASHA, First referral Units, Janani Surakshya Yojana, Janani Sisu Surakshya Karyakram, Rashtriya Bal Swasthya Karyakram (RBSK), Rashtriya Kishor Swasthya Karyakram (RKSK), New-

born care corner, and nutrition rehabilitation centres. NHM also intervenes on human resource mobilization, mobility concern, community process, and infrastructure development in health care sector on priority basis using PPP and NGO participation in the State. Institutional mechanisms in several forms like rehabilitation centres, sub centres, adolescent friendly health clinics, Zilla Swasthya Samiti, Rogi Kalyan Samiti, Gaon Kalyan Samiti, and new-born care units have been set up and strengthened for better service delivery and access of rural poor to health care services. The services are extended to urban areas of the State under National Health Mission. Under the Mission, the institutional mechanism have been strengthened with the establishment of urban health centres. City Programmes include Management Unit, City Health Society, City Health Mission, Mahila Arogya Samiti, Ward Kalyan Samiti, and Mobile Health Unit. NHM also integrates all national disease control programme with the State machinery effectively. As of 2016-17, the major activities of NHM included:

- * All 43530 ASHAs are trained
- * 53.90 lakh mothers are benefited in Janani Surakshya Yojana between 2005 and December 2016.
- * 420 numbers of 108 Ambulances and 408 numbers of 102 Ambulances are operational to provide free transport services for all types of medical emergency.
- * 46391 ASHAs are in place to promote health care delivery at community level

Success story

Gaon Kalyan Samiti (GKS) shows the way: Referral transport – journey of saving life

GKS under NHM is an integral component of community process. Its multi-dimensional functions include provision of emergency and modern health care, clean sanitation, safe drinking water, plantation activities, construction of social overheads and referral transport for the poor, under privileged, deprived and vulnerable needy villagers during troubled times. Bilmala Village of Kasipur block, Rayagada district is dominated by the Kandha tribals with low literacy rate. Majority of the community members are forest dwellers. On 30th Oct, 2015 Radhika Majhi, a pregnant woman of this village felt labour pain and the concerned ASHA informed 102 and 108. But the vehicle could not reach in time. For the sake of humanity and benefit of the community, subsequently GKS members and other community people took her to the nearby hospital by autorickshaw and GKS untied fund was utilized for this purpose. She delivered a male child and it was witnessed that both mother & child could be saved due to the intervention of GKS

7.3.5. Key intervention on nutrition, drinking water supply and sanitation.

Nutrition

The nutritional status of women in Odisha, as indicated in the NFHS-4 survey, shows that about 26.4 percent of women have a body mass index (BMI) below 18.5, indicating high prevalence of nutritional deficiency. Prevalence of severe malnutrition among children, mothers, old and indigent people is a matter of serious concern in the State. 51 percent women suffer from anaemia while 47 percent children remain anaemic and suffer from chronic energy deficiency.

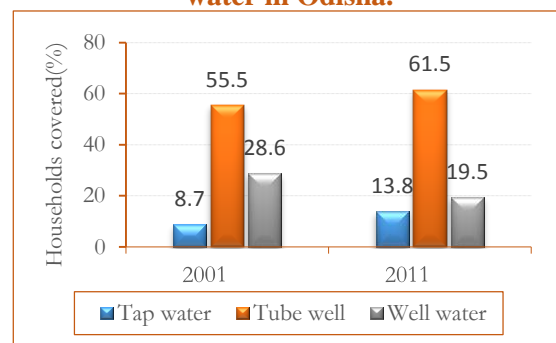
Several initiatives have been taken to ensure food security and to address nutritional concerns. Supplementary Nutrition Programme (SNP) has been implemented for children in the age group of 0-6 years, and pregnant and lactating mothers under ICDS Programme. The aim is to supplement the daily nutrition intake by 300 calories and 8-10 grams of protein for children and 500 calories and 20-25 grams of protein for expectant and nursing women. Anganwadi centres are being strengthened all over the State. Anganwadi buildings are being constructed wherever these do not exist. A special nutrition operational plan has been

implemented with support from DFID. This plan is based on five principles: (i) targeting the most vulnerable, (ii) flexibility, (iii) evidence and outcome based participatory planning, (iv) strong convergence and (v) strong monitoring and results based framework.

Drinking Water

Sustained access to safe drinking water and sanitation is critical for healthy living and has been included under the minimum needs programme. Odisha has witnessed substantially increased coverage of rural and urban habitations with safe sources of drinking water including piped water supply, tube wells and shallow wells. The percentage coverage of households in the State using tap water, tube well water and well water are presented in and Figure 7.7.

Figure 7.7 : Percentage of household covered under different types of drinking water in Odisha.



Source: Census of India

The percentage of households covered under different types of safe drinking water in Odisha as per census 2011 for rural and urban sector is presented in Table 7.15.

Table 7.15: Household covered under different types of safe drinking water in Odisha in 2011(%)

Type	Rural	Urban	Total
Tap water	7.5	48.0	13.8
Tube well water	66.9	31.7	61.5
Well water	19.8	18.4	19.5

Source: Census of India

Khurda, Cuttack, Sambalpur, Ganjam and Gajapati are leading districts in Odisha, where more than 20 percent households are using tap water as a major source of safe drinking water in 2011 whereas coverage in Bhadrak, Boudh, Kandhamal and Kalahandi districts remain less than five percent. However, about 22 percent households have safe drinking water facilities within their premises. In many pockets, water quality is a serious issue. In some areas such as Nuapada, the content of fluoride in the ground water is higher than the recommended safe level. Frequent breakdown in tube wells and rural piped water supply units is another concern.

Sanitation

Sanitation status of people across the State is generally poor. As per the 2011 Census estimates, only 22 percent of total households in Odisha had access to basic sanitation facilities like toilets within the premises. Out of the remaining 78 percent households, 1.4 percent households use public latrines while the rest defecate in the open. As a result, the incidence of diarrhoea in interior Odisha is generally

high and it is a major source of infant and other deaths. Several international and civil society organisations including DFID, UNICEF, CARE and local NGOs have joined hands with the Government to assist people in modifying their behaviour, improving their sanitation and making them aware of the value of sanitation and safe drinking water. Steps have been taken to reduce open defecation in the state through popularising the use of toilets and providing incentives to cent percent use of available public toilets.

In order to address rural sanitation needs through community empowerment, the scheme, “Total Sanitation Campaign (TSC)” has been implemented in all 30 districts in Odisha under Nirmal Bharat Abhijan. The entire operation has been looked after by the “Odisha State Water and Sanitation Mission” and “District Water and Sanitation Mission”. The programme is jointly funded by Government of India and the State Government.

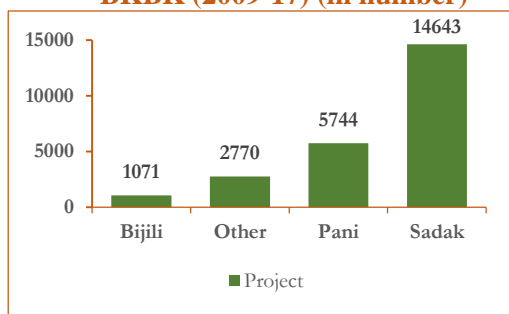
7.4. Addressing Regional Disparities

7.4.1 Biju KBK Plan

The Biju KBK Plan, a State Flagship Programme under State Plan, was launched in 2006-07. It aims to create opportunities for socio-economic-human capital development of the eight KBK districts and improve quality of life of people of the region, disadvantaged groups in particular. District Sector programme relate to Bijli, Sadak, Pani and Livelihood initiatives, i.e., village electrification including street lighting, construction of concrete roads within the village or any other form of connectivity, creation of irrigation/ drinking water sources and support for sustainable

income and employment generating activities. While State sector programmes relate to implementation of ongoing projects/ programmes of delinked Special Plan for the KBK Districts in the field of irrigation, electrification, welfare of ST and SC, and connectivity. Between 2009 & 2017, 24228 projects have been completed at the cost of ₹ 1076 crore under the BKBK plan. The Plan performed noticeably better in ‘Sadak’ projects (14643) followed by ‘Pani’ projects (5744), ‘Others’ projects (2770) and ‘Bijli’ projects (1071) during the last 8 years (Figure 7.8).

Figure 7.8 Completed projects under BKBK (2009-17) (in number)



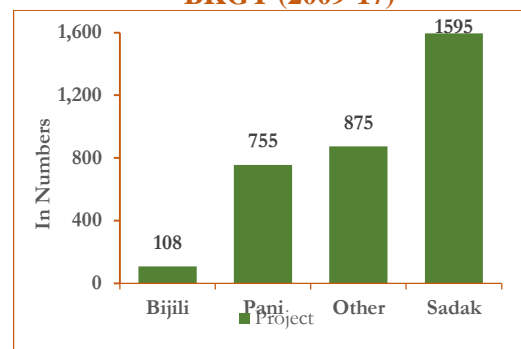
Source: P & C Department, Government of Odisha

7.4.2. Biju Kandhamal ‘O’ Gajapati Yojana (BKGY)

BKGY, launched in 2009-10 under State Plan (State’s own resources) with an annual allocation of ₹ 28.50 crore, is exclusively implemented in Kandhamal and Gajapati Districts. The objectives and thrust area of BKGY are almost similar to that of Biju KBK plan. Funds under the BKGY are used as additionality with other programmes and other sources of funds under “Convergence Mode” to fill the gap with a view to enhancing development effectiveness of various flagship programmes. The BKGY focuses on all components of Bijli, Sadak, Pani and

Livelihood Initiatives as embodied in Biju KBK Plan but with the added component of Social Safety Net programmes (i.e., support for programmes that address the needs of vulnerable groups of people). Between 2009-10 and 2016-17, 3333 projects have been completed at the cost of ₹ 174.35 crore. The details of completed projects are given below. The major component ‘Sadak’ (1595) has the highest number, followed by ‘Others’ (875), ‘Pani’ (755), and ‘Bijli’ (108). BKGY has been playing a vital role in improving road connectivity, drinking water accessibility and livelihoods of this region in recent years. (Figure 7.9).

Figure 7.9 : Completed projects under BKGY (2009-17)



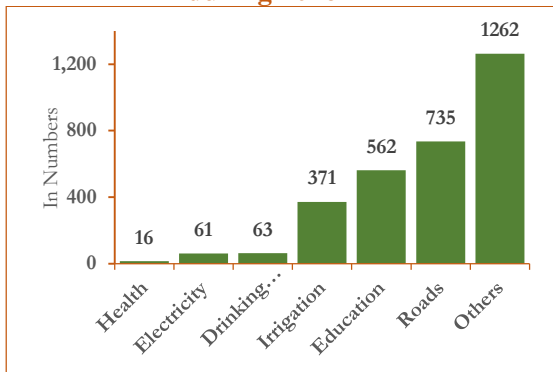
Source: P & C Department, Government of Odisha

7.4.3. Western Odisha Development Council (WODC)

WODC is mandated to develop appropriate long-term and short-term development plans and programmes for 10 western districts of the State such as Bargarh, Bolangir, Boudh, Deogarh, Jharsuguda, Kalahandi, Nuapada, Sambalpur, Sonepur, Sundargarh and Athmallik Sub Division of Angul district. Since inception in 1999-2000, the Council has approved 31,259 projects at an estimated cost of ₹.1324.460 crore consisting of different projects under road and communication (7603 projects), irrigation (5268), water supply

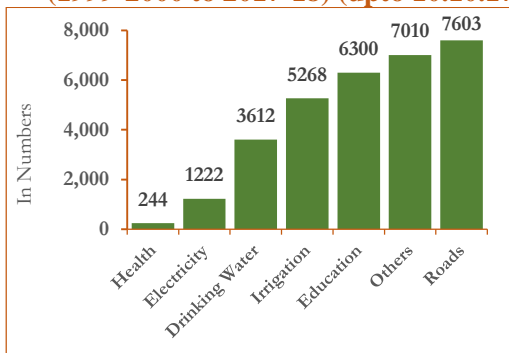
schemes (3612), education (6300), health services (244), electrification of villages (1222) and other projects (7010). By the end of September 2017, 26073 projects have been completed at the expenditure of ₹ 1158.08 crore. During 2016-17, 3070 projects were approved for all the above sectors as against 2806 projects approved in 2015-16. (Figure 7.10 and Figure 7.11).

Figure 7.10 WODC approved projects during 2016-17



Source: P & C Department, Government of Odisha

Figure 7.11 : WODC approved projects (1999-2000 to 2017-18) (upto 10.10.17)



Source: P & C Department, Government of Odisha

7.4.4. Gopabandhu Gramin Yojana (GGY)

GGY, an infrastructure based programme launched in 2006-07 by Government of Odisha, is being implemented across the State to bridge critical gaps in rural area infrastructure with special focus on Bijli (electrification), Sadak (roads) and Pani (irrigation and water supply)

by implementing and supplementing existing development grants. During 2016-17, 48447 projects have been completed at the cost of ₹ 1126.22 crore out of 64500 targeted projects with employment generation of 205.02 lakh mandays. The details are given in Table 7.16.

Table 7.16 : Completed Projects under GGY (2016-17)

Projects	Number
Bijili	8262
Sadak	43548
Pani	12674
Others	14
Total	64498

Source: PR Department, Government of Odisha

7.4.5. Special Central Assistance for TSP Area

Ministry of Tribal Affairs (MOTA), Government of India provides Special Central Assistance (SCA) for implementation of programmes under ITDA, MADA, and DTDP & MPC for development of pockets inhabited mostly by Scheduled Tribes in Odisha. The SCA is provided for implementing income generating schemes, infrastructure development programmes incidental to income generation, creation/acquisition of capital assets, integrated livestock development and community benefit, family benefit & individual benefit oriented schemes under these projects in TSP and outside TSP areas of the State with dominant tribal population. The State has 22 ITDAs in 119 blocks in TSP areas; 45 MADA pockets in outside TSP areas; 14 cluster pockets outside TSP areas in 13 Blocks of 10 districts; 17 micro projects clusters for 13 PTGs and dispersed tribal population throughout the State living in areas outside ITDA, MADA, Cluster and Micro project areas under DTDP. During 2016-17, 211 number of works have been completed covering 18664 beneficiaries at an expenditure of ₹ 34.76 crore under SCA to TSP. Under Article 275(1) scheme, 179 number of works have been taken up at a cost of ₹ 20.78 .crore during 2016-17.

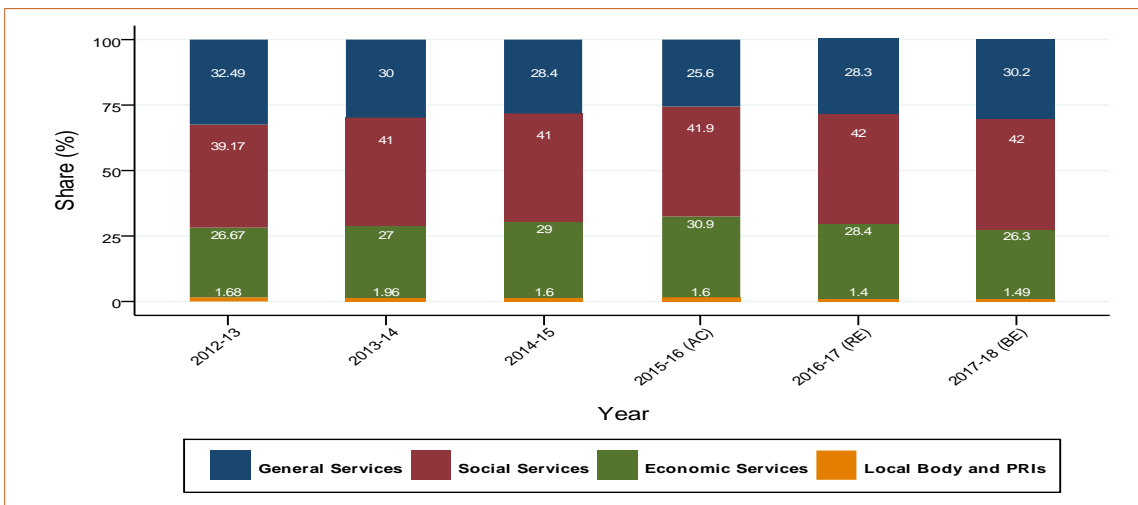


Social sector development in Odisha continues to strike well. The share of plan expenditure in social and economic services rise over the years. Although the literacy rate depicts an upward trend but the gender gap in literacy shows an down ward trend which is a positive sign. Dropout rate at primary education reduced sharply to 1.6 %. Number of teachers and schools at elementary and secondary level increased. Pupil -teacher ratio remains better than national ratio. School infrastructure in rural areas improved remarkably. Health sector development in the State received mixed response in its three crucial development indicators like outcome (IMR), process (institutional delivery) and input (infrastructure and public expenditure etc). While IMR and institutional delivery improved, Government is keen to promote health infrastructure and expenditure with strong institutional mechanisms like NHM etc. Access to safe drinking water is an area of concern. Welfare of women, child, SC, ST communities was accord high priority in State's development programme. Odisha Livelihood Mission, Mission Sakti, OTELP etc are few of many social security and welfare oriented measures by State Government that not only uplifted the wellbeing of these communities but also installed sustained livelihood confidence among weaker sections, both men and women, with financial and social inclusion.

The sector inter alia includes the Status of education, health, sanitation, welfare programmes for women, child, SC and STs subsectors. It builds up strong edifice for stimulating economy in terms of rising income and employment opportunities, productivity, technology advancement which improves the quality of life in the State. The Government of

Odisha is keen to accelerate the social sector services in the current decade. The rising %age share of social and economic services together overtake the share of general expenditure over the last 7 years. The consistent improvement in %age share of Government Expenditure in the prioritized sector in the State is well noticed in Figure 8.1.

Figure 8.1 : Percentage Share of Government Expenditure, Odisha, 2011-12 to 2017-18 (BE)



Source : DE&S, Odisha

8.1 Education

Education is the mirror which reflects the social and economic status of a State. Education strengthens the fabric of all round development of economic, social, technical, environmental and scientific areas in the State. It is a distinctive investment that ensures better access to a progressive future generation and improve the quality of life. Successful education policy leads to effective population policy, for women to be specific. The launching of Right of Children to Free and Compulsory Education Act, 2009 by Central Government, Odisha Right of Children to Free and Compulsory Education Rules, 2010, and Right to Education cell in the State with the support from UNICEF, retain education as a priority sector in Odisha.

Literacy

Literacy improves self-esteem, enhances social status and decision making power and confidence level of individual in the society. It impacts human development outcomes both as input and output .Odisha attained the literacy rate of 72.87 % at par with the national average of 72.99 % in 2011 Census registering a decadal increase of 9.8 % between 2001 and 2011. The State’s male literacy rate of 81.59 % was marginally higher and female literacy rate of 64 % was also at par with national averages by 2011. The female literacy rate in Odisha was highly impressive which increased sharply by 13.5 %age points as against 6.2 %age points rise for male literacy rate during the decade. It has resulted remarkable reduction of the gender gap in literacy rate from 24.84 % to 17.58 % in the decade.

A comparative picture of literacy rate of Odisha and India is presented in Table 8.1. But the dimension and gender gap on literacy front among social category remains an area of concern for the State. The SC and ST

communities had relatively lower literacy rate of 69.02 and 52.24 % in 2011. The gender gap among SC and ST remain high with 20.45 and 22.50 % in 2011 Census.

Table 8.1 : Growth of Literacy in Odisha vis-à-vis India

Year	Odisha (literacy in %)				India (literacy in %)			
	Male	Female	All	Decadal growth	Male	Female	All	Decadal growth
1951	27.32	4.52	15.80	-	27.16	8.86	18.33	-
1961	34.68	8.65	21.66	5.86	40.4	15.35	28.3	9.33
1971	38.29	13.92	26.18	4.52	45.96	21.97	34.45	6.15
1981	46.39	20.60	33.62	7.44	56.38	29.76	43.57	9.12
1991	63.09	34.68	49.09	15.47	64.13	39.29	52.21	8.64
2001	75.35	50.51	63.08	13.99	75.3	53.7	64.8	13.2
2011	81.59	64.01	72.87	9.79	80.89	64.64	72.99	9.24

Sources: Census of India 1951-2011

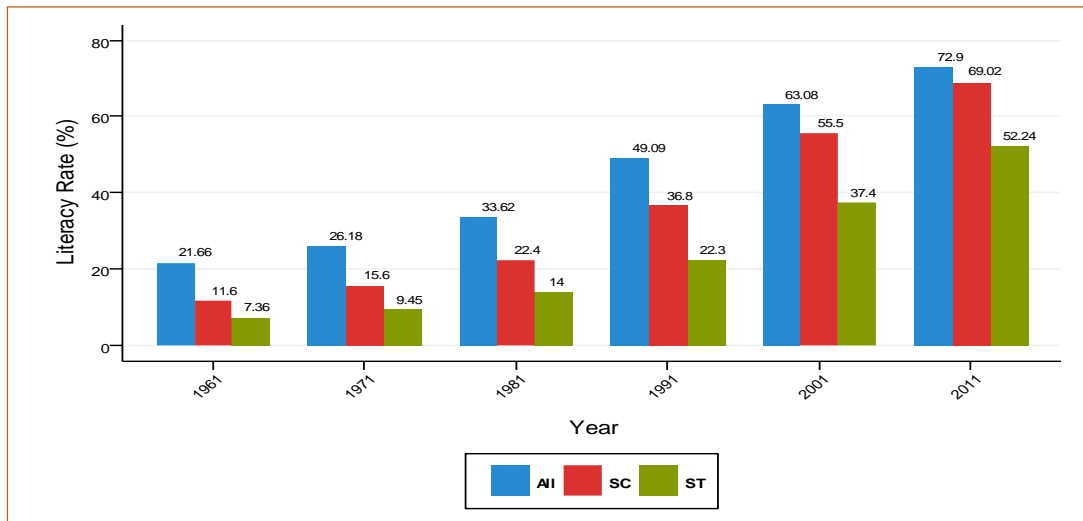
Regional disparity in literacy rate exist among the districts. Nabarangpur district is inflicted with very low literacy rate of 46.43 % while Khorda was highly literate with 86.88 % in 2011. The coastal district of Jagatsinghpur had the highest male literacy rate of 92.38 % while Khorda had the highest female literacy rate of 81.61 % by 2011. The 71st round of NSS (January-Jun, 2014) put Odisha's overall literacy rate at 75.5 % with male and female literacy rate of 83.2 and 67.8 of % respectively overtaking the India's overall literacy rate of 75.4 %. The State Government has accorded high priority to bridge the literacy gaps among major social groups.

Growth of the SC and ST literacy rates in the State has been traced in Table 8.2. The SC literacy rate has substantially improved between 1961 and 2011 and the gap between SC and overall literacy rates has been declining at a faster rate than that between ST and total literacy rates. The difference between literacy rates of SC and ST has increased from about 4 % in 1961 to around 17 % in 2011. Figure 8.2 compares literacy rates in Odisha by social groups from 1961 to 2001.

Table 8.2 : Literacy among ST and SC Population in Odisha (1961-2011)

Year	ST				SC			
	All	Male	Female	Gender Gap in Literacy (%)	All	Male	Female	Gender Gap in Literacy (%)
1961	7.36	13	1.77	11.27	11.6	19.8	3.44	16.38
1971	9.45	16.4	2.28	13.8	15.6	26	5.17	20.81
1981	14	23.3	4.76	18.51	22.4	35.3	9.4	25.86
1991	22.3	34.4	10.21	24.23	36.8	52.4	20.74	31.67
2001	37.37	51.48	23.37	28.11	55.53	70.5	40.33	30.14
2011	52.24	63.70	41.20	22.50	69.02	79.21	58.76	20.45

Sources: Census data 1961-2011

Figure 8.2 : Literacy Rate in Odisha by Social Groups (1961-2011 Census)

Source : Census of India

There are wide inter-district differences in the ST literacy rates. Performance of the northern districts has been better than that of the southern districts as per census 2011 (Annexure 8.5). As against 68.72 % literacy rate of ST in Jharsuguda, the ST literacy rate for Malkangiri district was only 35.23 % in 2011. It may be seen that the literacy rate of ST women is very low at 41.20 % in 2011, compared to 58.76 % of SC women and 64.01 % of all women in Odisha. Though literacy rates of both ST and SC women have increased over the years, the increase is less than that for their male counterparts. As a result, the gap between the male and female literacy rates of STs increased from 11.27 % in 1961 to 22.50 % in 2011. In the case of SCs, the gap kept on increasing from 16.38 % in 1961 to 30.14 % in 1991, but declined to 20.45 in 2011. The increase in literacy rate in Odisha during 2011 may be due to continuous effort of State Government to improve the quality of education and setting up of several residential schools for ST and SC students, especially for girls.

Elementary Education

Elementary Education, that include both Primary and Upper Primary Education, performed well during 2016-17. In Odisha there are 56,86,193 nos. of children of 6-14 age group studying in schools as per household survey, 2016. The pupil- teacher ratio in elementary level has moved from 1:34 in 2007-08 to 1:26 in 2016-17. The dropout rate which was 10.53% in 2007-08 has improved to 3.34 % in 2015-16. The dropout rates of SC, ST and girls students in upper Primary Education fell remarkably from 8.42, 9.72 and 8.24 % respectively in 2009-10 to 4.80, 8.82 and 3.52 in 2015-16. Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) in the State level was 96.20% and 57.57% during 2015-16 respectively. The GER to Primary and Upper Primary level are 91.62 and 107.07 respectively. Gender Parity Index is almost equal during the same period i.e 0.94. In spite of all out efforts of Government for strengthening infrastructure facilities in elementary education still a long way to achieve the target. This achievement may be due to establishment of residential schools in tribal dominated areas, appointing more teachers etc.

Scholarship for Elementary Students

To encourage, inspire and for retention, provision of primary and upper primary merit scholarship, primary and upper primary merit – cum – poverty scholarship are there for the meritorious students of class – III and class – V. During 2016-17, 10,000 students were getting scholarship for four categories i.e primary merit and primary merit-cum-poverty @ ₹100/- where as upper Primary and upper primary-cum-poverty @ ₹200/- per month for a period of 2 years.

Pathani Samanta Mathematics Talent scholarship have been introduced by the State Government to the regular students beginning from upper primary to +2 level. During 2016-17, 3,771 numbers of class – VI and 2,385 numbers of class – IX students have been awarded.

Sarva Sikshya Abhiyan (SSA)

Sarva Sikshya Abhiyan is an attempt to provide an opportunity for improving human capabilities to all children in the age group of 6-14 years through a provision of community owned education in a mission mode which was started in the State in 2001-02. The cost of the

programme is shared by the Centre and State in the ratio 60:40. The programme supports infrastructure development, viz. construction of new school buildings and class rooms, toilets, drinking water facility, free supply of school uniforms for girls and supply of text books. Kasturba Gandhi Balika Vidyalaya (KGBV), a residential school programme is an integral part of SSA, provides a dynamic framework to accelerate girls education programme. It is implemented in those Educationally Backward Blocks (EBB) where level of rural female literacy rate is less than national average of 46.13 % and gender gap is above the national average of 21.67 %. And also districts having at least 5 % SC/ST population where SC/ST female literacy rate is below 10 % are included in the programme. The targeted beneficiaries under KGBV are dropouts of Upper Primary School girls belonging to SC/ST/OBC/Minority/ BPL category. During 2016-17, the total number of 182 KGBVs in 23 districts have been made operational benefiting 18,245 girls. Odisha made self-defence training of girls to develop self confidence among the girls at Upper Primary Level.

Table 8.3 : Financial Position of SSA and KGBV

(Rupees in crore)

Year	Total Receipt		Expenditure	
	SSA	KGBV	SSA	KGBV
2010-11	1,255.05	-	885.52	21.73
2011-12	1,623.45	-	1,018.77	13.84
2012-13	1,748.08	0.00	1,219.41	3.01
2013-14	1,347.34	0.00	1,038.14	(Unaudited) 45.76
2014-15	1,379.55	-	1,323.88	53.28
2015-16	1,416.87	0.00	1,289.89	58.94

Source: Director, OPEPA and Director, Elementary Education, Odisha
 SSA:-Sarva Sikshya Abhiyan. KGBV:- Kasturba Gandhi Balika Vidyalaya.
 NPEGEL:- National Programme for Education of Girls at Elementary Level

Primary Education

Universalization of primary education addresses two major target groups, the out of school children during the primary school going age (6 to 14 years) and the children who were forced to drop out even before completion of primary grade classes due to social and economic impediments. Odisha made notable strides in primary and upper primary education by free and compulsory education, especially in rural and backward areas in the age group of

6-14. During 2016-17, there were 36,318 functional primary schools (Government 34,690, aided 309, private-unaided 809 other unrecognized 934 and 2 central Government schools and others 16) with 1.33 lakh teachers and 39.72 lakh students in the State as against 36,760 primary schools with 1.33 lakh teachers and 41.11 lakh students during the previous year. The growth in the number of schools and teachers from 2011- 12 to 2016-17 has been shown in Table 8.4 and Figure 8.3.

Table 8.4 : Number of Primary Schools, Enrolment, Teachers and Gross/Net Enrolment Ratio in Odisha

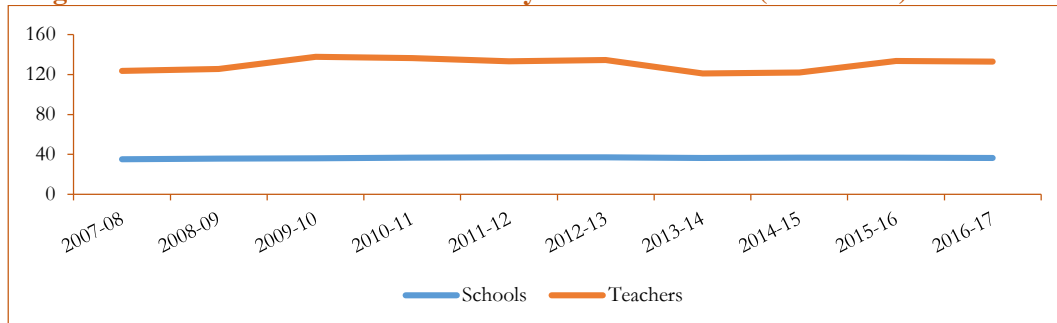
Year	Number of Primary schools	No. of Teachers	Primary school / 100 sq. km.	Teacher Pupil Ratio	Enrolment ('000)	Gross Enrolment Ratio (%) (6-11 years)	Net Enrolment Ratio (%) (6-11 years)
2011-12	37,012	1,33,262	35	1:30	4433	99.69	93.27
2012-13	37,056	1,34,578	35	1:28	4341	99.96	93.61
2013-14	36,399	1,21,193	23	1:35	4278	99.20	93.85
2014-15	36,550	1,22,214	24	1:26	4224	92.74	91.01
2015-16	36,760	1,33,541	24	1:25	4111	91.62	90.23
2016-17	36,318	1,32,927	24	1:24	3972	92.47	91.00

Source : Status of Elementary and Secondary Education in Odisha, 2016-17

The number of primary school teachers in Odisha is 1.33 lakh in 2016-17. The State has an average teacher pupil ratio of 1:24 in 2016-17 that is better than the national norm 1:40. With a view to improving of the teaching capabilities and assuring reasonable career growth, the Government of Odisha have introduced a career advancement policy. The increasing investment by State Government on expanding elementary school infrastructure,

reducing gender and social category gaps, enhancing teacher availability, sustained academic support, Mid-Day-Meal (MDM) programme, awareness generation, increased community participation, curricular reforms and a rights-based approach etc have contributed substantially for reduction in drop-out rates and improved retention rates in primary, upper primary and elementary education in Odisha.

Figure 8.3 : Trend of Growth of Primary School Teachers (in number) and Schools, Odisha



Source: Status of Elementary and Secondary Education in Odisha, 2016-17

Table 8.5 : Status of Elementary Education in Odisha

Indicator	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Enrolment (in lakh nos.)						
I . All	65.07	64.22	63.88	63.86	63.28	61.98
ii. S.C	12.43	12.43	12.27	12.21	11.93	11.67
iii. S.T	18.38	18.8	19.08	19.30	19.08	18.73
iv. Girls	31.66	31.13	30.95	30.89	30.58	29.90
Out of School children 9 in nos.)	30,591	19,591	6,001	5,152	9,368	41,656
Dropout Rate						
i. Primary	0.43	0.4	1.97	1.63	2.82	4.20
ii. Upper Primary	3.07	2.36	2.40	4.21	3.87	5.15
Gross Enrolment Ratio (GER)	101.31	100.56	102.36	97.67	97.67	96.47
Net Enrolment Ratio (NER)	93.27	92.65	93.09	88.42	88.42	88.47
Pupil Teacher Ratio	1:28	1:27	1:26	1:25	1:24	1:23

Source : Status of Elementary and Secondary Education in Odisha, 2016-17, OPEPA

Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) are the two most important indicators of enrolment. GER determines the %age of student enrolment and Net Enrolment is the ratio of the number of children who are enrolled in school. It is observed from Table 8.5 that the GER at primary education has increased marginally from 101.31 % in 2011-12 to 102.36 % in 2013-14 and then decreased to 96.47 % in 2016-17, while NER has decreased from 93.27 % to 93.09 % from 2011-12 to 2013-14 and again decreased to 88.47 % in 2016-17. During 2016 the highest GER 149.94 was in Mayurbhanj District and lowest 99.29 in Deogarh district.

It is observed from Table 8.6 that the dropout rates have significantly fallen over the years. At the primary level, the dropout rate declined from 4.95 % in 2008-09 to 4.20 % in 2016-17.

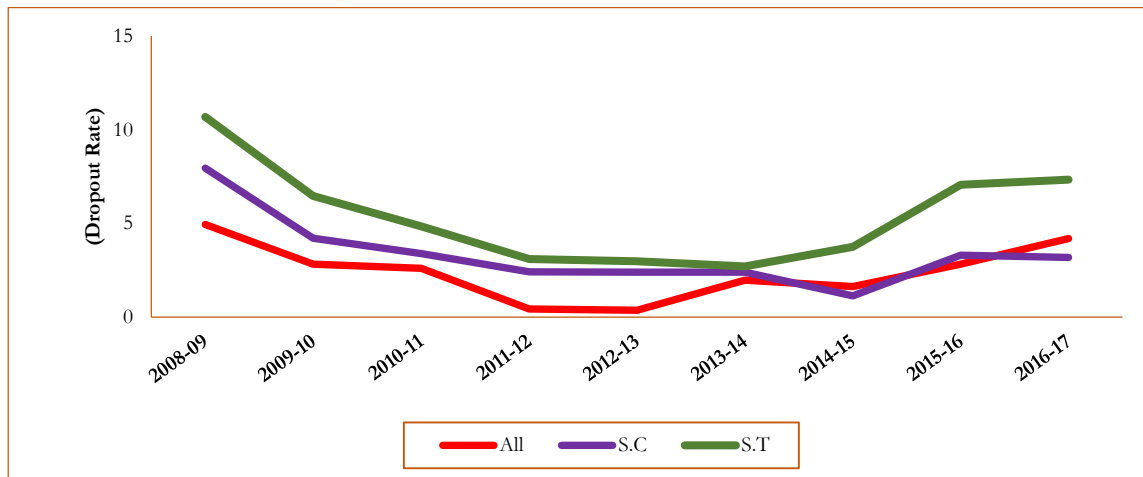
The dropout rates of boys fell from 5.00 % to 4.02 % and girls from 4.89 % to 4.41 % for the corresponding period. The dropout rate during 2016-17 is slightly higher than that of previous year. The dropout rate during 2016-17 in Primary level for, S.C, S.T and girls is 3.19, 7.34 and 4.41 respectively. The detailed picture is given in Table 8.7 and Figure 8.4. Though the dropout rates at the primary level have reduced as compared to 2008-09, such rates still remain high among ST during 2016-17. Dropout rate for Primary level is 4.20 for Odisha. It is the highest (10.50 %) in Rayagada district and recorded nil in Cuttack, Puri, Khordha and Balasore districts. Infrastructure facilities in schools have a direct bearing on enrolment and dropout rates. The State Government is making concerted efforts with its available resources to reduce the drop-out rate.

Table 8.6 : Dropout Rates in Primary Schools in Odisha

Year	All Categories			Scheduled Castes			Scheduled Tribes		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2008-09	5.00	4.89	4.95	7.7	8.22	7.96	9.05	12.34	10.69
2009-10	2.57	3.1	2.83	4.06	4.36	4.21	6.27	6.66	6.46
2010-11	2.35	2.86	2.60	3.08	3.89	3.38	4.12	5.35	4.85
2011-12	0.25	0.62	0.43	2.15	2.68	2.41	3.51	2.80	3.10
2012-13	0.73	0.22	0.37	2.36	2.42	2.39	2.76	2.85	2.97
2013-14	2.08	2.05	1.97	2.41	2.38	2.39	2.68	2.77	2.71
2014-15	1.58	1.78	1.63	0.93	1.34	1.13	3.57	3.93	3.75
2015-16	2.87	2.92	2.82	3.66	2.77	3.30	6.88	7.26	7.07
2016-17	4.02	4.41	4.20	3.25	3.13	3.19	7.07	7.62	7.34

Sources: OPEPA

Figure 8.4 : Dropout Rates in Primary School, Odisha, 2008-09 to 2016-17

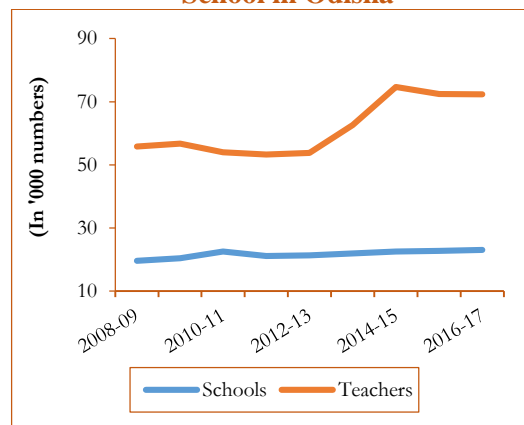


Source: Status of Elementary and Secondary Education in Odisha, 2016-17

Upper Primary Education

Upper Primary Education is equally important like primary education to boost the quality of education and minimize the dropout rates. In 1947-48 the State had only 286 Upper Primary Schools with 1,483 teachers with 32,000 enrolments. Due to continuous efforts of the Government, the number of Upper Primary Schools increased to 23,096 with 72.38 thousands teachers and 22.26 lakh enrolment by the end of 2016-17. Figure 8.5 traces the trend in the number of schools and teachers.

Figure 8.5 : Position of Upper Primary School in Odisha



Sources: OPEPA

Table 8.7 : Growth of Upper Primary School Teachers and Schools, Odisha

Year	No. of schools	No. of teachers	UP school /100 sq. km.	Teacher-Pupil Ratio	Enrolment (000 ³)	Gross Enrolment Ratio (GER)	Net Enrolment Ratio (NER)
2011-12	21,117	53,264	16	1:25	2,087	104.93	90.84
2012-13	21,289	53,791	16	1:24	2,081	101.83	91.57
2013-14	21,945	62,570	1	1:34	2,110	104.44	91.38
2014-15	22,497	74,647	15	1:25	2,163	108.99	82.49
2015-16	22,795	72,472	15	1:23	2,217	107.07	81.79
2016-17	23,096	72,380	15	1:23	2,226	104.52	83.36

Source: OPEPA

The overall dropout rate in Upper Primary Schools of the State declined substantially from 7.15 % in 2010-11 to 5.15 % in 2016-17 which is slightly higher than that in the previous year.

The dropout rates for SC, ST and girl students were 5.83, 9.51 and 5.02 relatively higher during 2016-17. (Table-8.8)

Table 8.8 : Dropout Rates in Upper Primary Schools in Odisha

Year	All Categories			Scheduled Caste			Scheduled Tribe		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2010-11	7.15	7.31	7.23	6.86	6.05	6.21	7.18	6.96	7.85
2011-12	3.85	2.23	3.07	2.20	1.23	2.74	3.20	6.31	4.70
2012-13	2.45	2.38	2.36	2.44	2.39	2.41	3.95	3.29	3.38
2013-14	2.71	2.08	2.40	2.84	2.24	2.58	3.48	3.89	3.63
2014-15	4.31	4.25	4.21	4.39	4.50	4.45	4.14	5.91	5.03
2015-16	4.20	3.52	3.87	5.46	4.11	4.80	9.38	8.27	8.82
2016-17	5.29	5.02	5.15	5.84	5.81	5.83	9.88	9.11	9.51

Source: Directorate of Elementary Education and Director, OPEPA

Box 8.1: Major Initiatives for Promotion of Elementary Education, 2016-17

- The State Government has relaxed the norm for opening of new primary schools to improve access and 100 % enrolment in elementary education. Opened 9,943 number of new primary schools and 11,008 New Upper Primary schools during 2001 to 2016-17.
- Provided transport/Escort facilities to 4049 children of sparsely populated and scattered habitation more than 1Km and 3 Kms in primary and upper primary schools.
- Constructed 176 KGBV building and 6 KGBV building are under progress.
- 56.86 lakh children - in 6-14 age group are studying in schools and 41,656 of children are reported out of school as per household survey 2016.
- 9,84,062 (57.42%) students achieved the outcome under Ujjawal a programme to ensure quality education in all elementary schools implemented in the State
- Distributed educational Kits containing school bag, teaching and learning materials and colour story book to 19,51,908 students of Class I – III to encourage enrolment and retention.
- Prepared a single window delivery system of unified training calendar for School and Mass Education in this year.
- Observed National Girl Child day in all schools to create awareness among the girls on gender issues.

- Undertaken Swachha Vidyalaya programme in all schools.
- Implemented “Beti Bachao Beti Padhao (a National Programme in Nayagarh district .
- Constructed 50 incinerators and installed CCTV 40 KGBVs.
- Under SSA 16603 buildings for primary and upper primary schools have been completed and 473 buildings are under progress, Besides that 72335 Additional class rooms for Government Elementary Schools has been completed and 2322 under progress.
- Organized Enrolment Drive (Prabesh Utsav), Purna Upasthan Divas and counselling of Mothers programme in all Government and Government aided elementary schools.
- Supplied Srujan Calendar (Activity Bank) and guide lines for conducting different (12) child centered activities under Srujan to all schools.
- School Management Committee (SMC) has been formed in 61945 schools out of 63158 schools (Government and Government aided)
- Notified and functionalised the State Commission for Protection of Child Rights (SCPCR).
- The policy of eight year of Elementary Education (Class- I to VIII) has been adopted by Government of Odisha.
- Declared the Director, TE and SCERT as Academic Authority.
- Notification for No Board Examination issued.
- Text books and Uniform declared as child entitlements at elementary level.
- 49.27 lakh students of 62,640 primary and upper primary schools are covered under MDM programme.
- Retention of 7420 children of migrant families in 208 seasonal Hostels functioning from November 2016.
- Operating 16 residential hostels for Urban deprived children, child labour and street children.

Secondary Education

There were only 106 high schools with 15,000 enrolments in the State in 1947-48. By the end of 2016-17 there were 9,873 high schools including 8,634 Government and aided schools, 1,239 Government recognized High Schools in the State. The Rastriya Madhyamik Sikhya Abhiyan (RMSA) is a national flagship programme initiated in 2009-10 to universalise Secondary Education by making quality education available, accessible and affordable to all children within the age group 14-18 years with strong focus on the elements of gender, equity and justice. The salient aspects of RMSA are summarized in Box 8.2. Inclusive Education for Disabled Children at Secondary Stage (IEDSS) scheme is being implemented in 108 blocks of 23 districts through 40 NGOs in 2014-15. The objective of the scheme is to

provide opportunity to disabled children to complete 4 years of Secondary Schooling in an inclusive and enabling environment. 93,534 numbers of Children With Special Needs (CWSN) are enrolled in the schools during 2016-17. 208 medical assessment camps have been organised and assistive devices / equipment have been distributed to 8,629 CWSN and 437 numbers of CWSN have been provided with surgical correction in convergence with hospitals. 2,306 sets of Braille books have been distributed to blind children. 9,911 severe OI (Osteogenesis Imperfecta)/ VI (Visual Impairment) / CP(Cerebral Palsy) / MR (Mental Retardation) students have been provided escort allowance and 4,975 CWSN have been provided transport allowance.

Box 8.2: Universalization of Secondary Education, 2016-17

- To support CWSN under Student Oriented Component, 100% Centrally Sponsored Scheme of Inclusive Education of the Disabled at Secondary Level, a total numbers of 4,032 disabled children of 1,307 schools have been covered and 528 numbers of special teachers have been engaged under this scheme.
- For engagement of quality teacher in secondary schools, Odisha Secondary School Teacher Eligibility Test (OSSTET) have been introduced in 2016-17 and 1st OSSTET has been conducted by Board of Secondary Education, Odisha in December 2016.
- 2,608 private high schools have been notified to receive block grant and 399 high schools have been notified during 2015-16. 773 number of new High schools have been sanctioned under RMSA, out of which 745 number of schools have been opened till date. 162 model high schools in educationally backward blocks have been approved. 100 model schools will be made functional from 2016-17.
- In order to ensure timely benefit to the students Government have decided to cover students of Class-IX and Class X under Free Bicycle Distribution Scheme. A sum of ₹294.88 crore have been provided for 11.34 lakh students. Apart from Government High schools, students reading in Sanskrit tolls, Madrasas and Government aided secondary schools have been benefited under this scheme.
- To cope-up with English medium school teaching, the State Government have decided to establish one Odisha Adarasha Vidyalaya in all 314 Blocks of the same standard in Kendriya Vidyalaya with stipulation on pupil teacher ratio, ICT language, holistic educational environment, appropriate curriculum and emphasis on output and outcome.

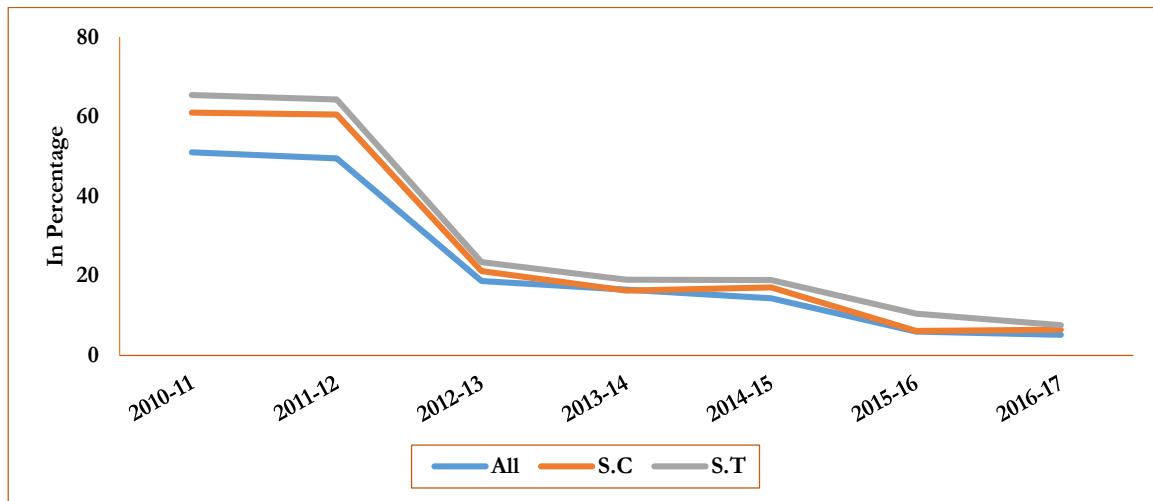
Dropout rates at the high school level have been declining at a slower pace. The overall dropout rate declined from 51.0 % in 2010-11 to 5.21 % in 2016-17. Dropout rates for STs and SCs are still higher with 6.50 and 7.63 % respectively during 2016-17. The dropout rates is the

highest in Malkangiri (12.81 %). The dropout rate of girls is slowing down from 2010-11 to 2016-17. There is a need for special attention to address this problem (Table 8.9 and Figure 8.6).

Table 8.9 : Dropout Rates in High Schools in Odisha

Year	All Categories			Scheduled Caste			Scheduled Tribe		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2010-11	49.9	52.1	51.0	60.0	63.0	61.0	66.7	64.0	65.4
2011-12	47.2	51.8	49.5	59.2	61.8	60.5	65.9	62.7	64.3
2012-13	21.1	16.21	18.7	25.0	17.3	21.2	26.7	19.7	23.4
2013-14	18.3	14.6	16.5	18.7	13.9	16.3	20.5	17.4	19.0
2014-15	14.98	13.74	14.36	18.11	16.01	17.06	26.73	26.95	18.90
2015-16	6.84	5.18	6.02	7.29	4.99	6.15	12.09	8.92	10.52
2016-17	5.97	4.43	5.21	7.40	5.58	6.50	8.73	6.55	7.63

Source: Director, Elementary Education, Odisha

Figure 8.6 : Dropout Rate in High School by Communities, 2010-11 to 2016-17

Source: Director, Elementary Education, Odisha

The Board of Secondary Education (BSE), Odisha regulates various types of examinations like HSC, Madhyama Sanskrit, D.El.Ed, C.P.Ed NRTS/NMMS, Primary Scholarship, Half yearly, Language Test, and OTET. It also grants recognition to institutions that provide education through correspondence courses. In 2017, 5.64 lakh students have appeared in the HSC examination conducted by Board of Secondary Education, Odisha. Out of 5.64 lakh

students appeared, 4.86 lakh passed the examination. The pass rate was 86.21 %. In addition, during 2017, 6,981 students have appeared the Class-X examination from 91 number of ICSE pattern in English Medium schools. Out of which 6,834 number of students passed the examination, showing the %age of success as 97.89 %. The success rate among girls, SC and ST in ICSE, was 98.46, 94.69 and 94.92 % respectively (Table 8.10).

Table 8.10 : Results of Secondary Level Examination, Appeared/Passed, in Odisha (In 000)

Year	BSE, Odisha			CBSE, New Delhi			ICSE, New Delhi		
	Appeared	Passed	% of success	Appeared	Passed	% of success	Appeared	Passed	% of success
2011	532.98	312.69	58.67	12.26	12.23	99.8	5.84	5.75	98.5
2012	567.84	353.93	62.3	15.39	15.27	99.22	5.94	5.87	98.8
2013	635.31	537.96	84.7	17.31	17.18	99.25	6.02	5.94	98.7
2014	542.79	457.31	84.25	16.76	16.73	99.83	6.26	6.13	97.92
2015	539.57	442.45	82.56	N.R	N.R	N.R	6.58	6.47	98.25
2016	584.01	488.20	85.00	21.72	21.39	98.48	6.85	6.73	98.22
2017	563.75	485.99	86.21	-	-	-	6.98	6.83	97.89

NR: Not Reported

Sources: Board of Secondary Education, Odisha; CBSE, India and ICSE, India

Higher Secondary Education

Higher Secondary Education including +2 educations along with Council of Higher Secondary Education (CHSE) has been transferred from Higher Education Department to School and Mass Education Department w.e.f. 01.07.2016. A new Directorate namely Directorate of Higher Secondary Education has been created under School and Mass Education Department to manage the Higher Secondary Education activities in the State.

The overall %age of success rate in examinations conducted by CHSE in 2017 was 67.94 %. The success rate was highest for the Science stream (81.11%) followed by Arts (70.17%), Commerce streams (71.43%) and vocational courses (61.22%). In addition, 182 schools affiliated to CBSE/ICSE also provide +2 level education. Table 8.11 presents the results of class XII examination conducted by CHSE whereas Table 8.12 depicts the same for CBSE and ICSE.

Table 8.11 : Results of Annual Higher Secondary Education (+2) under CHSE

Year	Appeared				Passed			
	Arts	Science	Comm	Total	Arts	Science	Comm	Total
2011	1,59,866	56,280	22,760	2,38,906	1,09,230	41,359	15,553	1,66,142
2012	1,72,895	69,379	25,029	2,67,303	1,22,132	50,325	16,777	1,89,234
2013	1,79,994	76,879	25,012	2,81,885	1,25,263	55,409	17,035	1,97,707
2014	1,96,959	85,723	27,696	3,10,378	1,34,315	60,119	17,766	2,12,200
2015	2,30,272	93,920	32,226	3,56,418	1,75,719	75,434	22,391	2,73,544
2016	2,02,994	84,154	31,707	3,58,855	1,73,902	68,003	22,320	2,64,225
2017	2,43,518	90,643	28,516	3,62,677	1,74,237	73,523	20,044	2,67,804

N:B: Besides the result in vocational +2 result 8,605 appeared, 5120 passed with 61.22% success

Sources: Council of Higher Secondary Education, Odisha;

Table 8.12 : Results of Higher Secondary Education in Odisha, CBSE and ICSE

Year	Schools	Students Passed (CBSE)			Schools	Students Passed (ICSE)		
		Total	Girls	% of success		Total	Girls	% of success
2011	95	5,855	2,490	90.5	24	1,445	622	94.9
2012	132	8,764	4,085	82.3	26	1,401	642	94.2
2013	148	10,490	4,884	84.1	27	1,642	777	91.6
2014	128	8,892	3,871	87.86	24	1,516	751	89.70
2015	147	9,979	4,347	80.77	25	1,545	697	93.38
2016	155	11,449	4,937	83.03	27	1,387	654	92.34
2017	-	15,278	-	-	26	1368	683	92.87

Sources: CBSE, New Delhi and ICSE, New Delhi

Vocational Education

Vocational education is being provided at +2 level in 231 Government Vocational Junior Colleges (GVJC) in 20 different vocational

trades with a view to produce semi-skilled personnel and to prepare students for self-reliance and gainful employment. During the year 2016-17, 7,767 students are admitted in different GVJCs. A total number of 8,605

(Regular and Ex-Regular) students were enrolled in 231 GVJCs, out of which 8,363 appeared in +2 examination and 5,120 have passed out successfully yielding 61.22 % success rate. To enhance the employability skill of +2 vocational students, the Director, Vocational Education in collaboration with Odisha Skill Development Authority (OSDA), Intensive Skill Training (IST) has been conducted at Centurion University of Technology and Management (CUTM), Jatni and Parlakhemundi and Central Institute of Plastics Engineering and Technology (CIPET), Balasore and Mancheswar for full time resource persons to update their knowledge. Vocational trade has been introduced in degree level as elective subject in all the Government and non-Government colleges.

Vocational education in IT and ITeS introduced in one selected high school in each district from 2016-17. During 2016-17 academic session 1,312 number of vocational students are successfully completed Intensive Skill Training to make them employable. 201 number of Full Time Resource persons have been regularised in the year 2016-17. Four Regional Boards of Practical Training (BOPT)/ Board of Apprenticeship Training (BOAT) are setup by the Ministry of Education and Culture, Government of India. An extension center of BOPT, Kolkata in collaboration with Directorate of Vocational Education has been operationalized from July, 2016. The pass out students are getting monthly stipend of ₹2,758/- under Apprentices Act.

Higher Education

The population in 18-23 years age group of Odisha is 47.15 lakh which accounts 3.3% of all India population. The GER in this age group

is 19.6 for general, 14.7 for scheduled caste and 9.4 in case of scheduled tribes whereas the GER in all India is 24.5. The literacy rate in this age group of Odisha is 72.87% and all India is 73.00%. The institutional density in this age group is 7.2/ 1000 sq. kms of Odisha as against 11 / 1000 sq. kms for all India.

Higher Education in Odisha comprises degree and post graduates level education including the higher secondary and +2 vocational education. From 1st July 2016 the junior colleges have been separated from degree colleges and put under School and Mass Education. At present the following institutions are running in Higher Education category. (Table 8.13).

Table 8.13 : Category wise Institutions in Odisha during 2017

Sl. No.	Category of Degree Collages / Universities	Number
1	Government colleges	51
2	Non-government aided colleges (488 category)	255
3	Block grant colleges (662 category)	120
4	Non-government unaided colleges	303
5	self-financing colleges	107
6	Sanskrit colleges	142
7	Other department	02
8	University	18
	a) State universities	12
	b) Deemed universities	02
	c) Private universities	04

Source : Higher Education Department

Besides, the opening of Institute of National repute like Central University at Koraput, National Institute of Science , Education and Research (NISER) at Bhubaneswar, National

Law University at Cuttack, and Indian Institute of Technology at Bhubaneswar, Indian Institute of Science, Education and Research (ISER) at Berhampur, Indian Institute of Management (IIM) at Sambalpur, has not only made the State of Odisha an Educational Hub but also thrown open source challenges and opportunities before the Higher Education Department. Government has also established Sambalpur University Institute of Information and Technology (SU-IIT) in Sambalpur university campus in line with IIT, Bhubaneswar.

Birla Global University, Odisha has been established at Bhubaneswar with effect from April, 2016 for providing high quality of education. Besides, there are 27 more proposals for establishment of Universities in

private sector, which are under consideration of State Government. The National Assessment and Accreditation Council (NAAC) have been made mandatory accreditation for all Universities, Government and non-Government aided degree colleges. In Odisha, Eleven (11) Universities and 127 colleges have been accredited and 205 colleges have submitted their letter intent for accreditation. Utkal University has been accredited with A+ grade by NAAC and 24 educational institutions with 6 Universities have been accredited with “A” grade. Autonomous status has been accorded to 16 Government and 16 non-Government colleges.

The major initiatives of Higher Education during 2016-17 has been given in Box 8.3

Box 8.3 :Major Initiation by Higher Education during 2016-17

- Introduced an unique education loan namely “Kalinga Sikhya Sathi Yojana” with 1% interest rate for financially weaker professional/Technical students up to 10.00 lakh for this purpose.
- Launched a separate website by Higher Education Department linked to Vidyalaxmi Portal of Banks for this purpose.
- Separation of Junior colleges from Degree colleges and kept under School and Mass Education Department to give special focus on higher education.
- Provided free education from +2 to post graduation for the children without biological parents, children residing in child care institution and children under foster care guardian whose income is less than 1.00 lakh under green passage to complete higher education study.
- Opened Civil Service Coaching Centres in Utkal University, Berhampur University, Sambalpur University, Ravenshaw University, Rama Devi Womens University and G. M. University from 2016-17.
- Opened Career and Counseling Cells in Utkal University, Berhampur University, Sambalpur University and Rama Devi Women’s university on pilot basis from 2016-17.
- In order to bring equity among the students “Virtual tutorials for tribal stuents” has been taken up under RUSA. The e content materials in micro chips developed by Utkal University will be available to students of 5 state universities.

Technical Education

The Industrial Policy of the State envisages a series of measures to improve technical education and enhance the quality of technical manpower. Technical education is imparted

through engineering colleges, engineering schools, polytechnics, Industrial Training Institutes (ITIs), Industrial Training Centres (ITCs) and vocational educational institutions and universities. The Directorate of Technical

Education and Training (DTET) functions as the nodal agency to plan and implement technical education programmes in the State and liaise with the State Council of Technical Education, universities, and national level technical institutions and agencies. In 2017 there are 48 Government ITI and all NCVT affiliated colleges with an intake capacity of 28,900 out of which 15 ITIs are located in KBK Districts. During 2016-17, there were 10,894 students admitted in Government ITIs out of which, 1,924 are SC and 1,968 are ST students.

At present there are two Technical Universities under the administration of State Government

(i) Veer Surendra Sai University of Technology, Burla offering B.Tech. in 11 disciplines, M.Tech in 7 disciplines and MCA. The intake capacity has been increased 354% i.e from 414 in 2000 to 1,468 in 2016-17. (ii) Biju Pattnaik University of Technology (BPUT), Rourkela has 153 colleges with 6 constituent colleges (Government) under its jurisdiction and one Government aided autonomous college (under PPP mode) affiliated to the University. Total 93 colleges (both Government and Private) offer courses in 33 disciplines intake of 44,494.

Box 8.4: New Initiatives in Technical Education during 2016-17

- Opened a special ITI for PwD at Jatni, Khorda.
- Observed the World Youth Skills Day as “Girl Child Day” for improving girl’s enrolment in ITI training system.
- Set up Biju Pattnaik IToT at Talcher in Angul district for good quality trainers for the ITIs and the skill development sector.
- Planned for one more IToT in partnership with CTTC, Ministry of MSME at Bhubaneswar and 5 more IToTs in PPP mode with viable gap funding on equipment.
- Set up dual system of training in 10 Government and 2 Private institutes for 13 Corporate Houses.
- Technological interventions for online admission system.
- Implemented uniform colour and architectural façade of ITIs and dress code for ITI trainees.
- Enhancing merit stipend from ₹55 to ₹250 per month and merit cum poverty stipend from ₹200 and ₹ 300 per month.
- Waived Tuition fees for ST,SC students, girls and PwD candidates.
- Opened 3 new Government Engineering colleges namely Parala Maharaja Engineering Collage, Berhampur, Government Collage of Engineering, Kalahandi and Government Collage of Engineering, Keonjhar.
- Established all India level institutes of repute, i.e. IIT-Bhubaneswar in 2008, IIM-Sambalpur in 2015 and IISER-Berhampur in 2016.

Education for ST and SC Communities

As a priority area of intervention, the State government is committed to improve the educational status of SC and ST communities in particular by a series of government sponsored measures like free education, award of scholarships, boarding facilities, free text books, to SC/ST students in the State. The

literacy rate of SCs and STs increased to 69.02 % and 52.24 % in 2011 respectively, a rise by 15.87 and 14.49 %age points respectively over 2001. The gender gap of SC and ST also reduced by 20.45 and 22.50 % in 2011 respectively. At present 1,688 educational institutions are functioning under the administrative control of ST and SC Development Department. (Table 8.14).

Table 8.14 : Educational Institutions under SC and ST Development Department 2016-17

Category of Schools	No. of schools
Ekalabya Model Residential Schools	13
Upgrade Higher Secondary Schools	40
High Schools (Boys)	164
Girls High Schools	173
Ashram Schools	766
Secondary Teachers Training Schools	2
Residential Sevashrams	5
Educational Complex for PTGs	19
Sevashrams	505
B.Ed. Training Colleges	1
Total	1688

Source: SC and ST Development Department, Odisha

Besides, 9 more EMRS schools are under progress. The State Government has established 11 KMRS (Kalinga Model Residential School) from Class VI to XII in TSP areas from its own resources. During 2016-17, there are 4.50 lakh of students including 2.50 lakh girls enrolled in these schools. Initiatives taken up during 2016-17 to improve the quality education among SCs and STs have been shown in Box 8.5.

A multi-language education training module have been developed for the teachers of SSD Department in TSP districts. During 2016-17 academic year, language hand books in 6 languages Oraon, Kisan, Koya, Desia (Parja), Kui and Kuvi have been developed. An analytical study report has been prepared on language mapping in SSD schools to facilitate the language issues in class. During the year 2016-17 an amount of ₹15.00 lakh has been released in favour of Academy of Tribal Language and Culture (ATLC) for developing supplementary readers and language dictionary in Didayi and Juang and printing of all manuscripts developed by ATLC.

For equipping the children of class IX and above with the information on vast and ever growing career opportunities the department has initiated the “Career Counselling Desk” in each of the 307 High schools. “School Cabinets” have been formed in each school of SSD Department supported by UNICEF, Odisha to provide a strong platform and opportunities to develop skills, communication, sense of responsibility and other social skills among students

Box 8.5 : Major Initiation for SC and SC Education during 2016-17

- Established E- enabled computer labs in 86 high schools
- Set up of English language labs in all 13 EMRS.
- Set up of Smart Class rooms with modern teaching , learning aids and lectures, multimedia contents in all 13 EMRS and 8 (eight) higher secondary schools
- Provided Online engineering coaching in 22 higher secondary schools and EMRS.
- Imparted with integrated + Science and medical coaching to 100 best performing SC/ST students.
- Upgraded 21 high schools to Higher Secondary Schools and 65 Ashram schools to High Schools.
- Operated School and Hostel Monitoring Cell (SHMC) to coordinate the monitoring activities of the Department and to act as Centralised Grievance Centre.
- Provided Hotline telephone connection to 1000 Residential Schools which are directly connected to SHMC.
- Functioning of toll free no 1800 345 3040 from July, 2016 for students, parents and public to access SHMU.
- Provided ₹ 600 lakh for construction of two (2) SC girls hostels in Boudh district.

Important Government Policies and Programmes

Mass Education

“Sakhyar Bharat”, a centrally sponsored scheme has been launched in September, 2009 by Government of India as a new variant to National Literacy Mission (NLM). It aims at imparting functional literacy to non-literates aged 15 year and above. In Odisha, 19 low female literacy districts were identified under this programme in 2009-10. The programme is being implemented in 19 districts covering 20,694 centers of the State. Out of 3,852 Adult Education Centres (AECs) of 19 districts, 2,100 AECs have opened in three districts. 15,00,967 learners have appeared in the Assessment Test out of 31,60,932 learners in 19 districts. An outlay of ₹200.00 lakh towards Central and State share in the ratio of 60:40 has been proposed under the CSS “Support for Educational Development including Teachers Training and Adult Education” during 2016-17.

Mid-Day Meal (MDM) Scheme

The national programme of nutritional support to primary education “Mid-Day Meal (MDM)” was launched by GoI in the year 1995 with an objective to provide nutritional meal to children in Government and aided schools to increase the enrolment, reducing the dropouts and improving the nutritional status of the children in the schools. As per the direction of the Hon’ble Supreme Court, cooked meal at noon time is being provided to all students of all the Government/ Government Aided primary schools with effect from 1st September 2004. Further, this has been extended to Upper Primary School children with effect from 1st October, 2007. During 2016-17, in Odisha

everyday 47.71 lakh (31.21 Primary + 16.50 Upper Primary) children of 62,784 schools are benefited with hot cooked nutritious food. The ration cost has been enhanced from ₹4.31 to ₹4.58 for Primary student and from ₹6.43 to 6.83 for Upper Primary student. The calorific value of the meal is now 493.6 K. calories and 13.8 gm. of protein for Primary Classes and 728.67. K calories and 20.5 gm. for UP Classes. In order to keep the teachers at bay, Government have entrusted the management of MDM programme at school level to WSHGs and served eggs twice in a week. Ministry of HRD, Government of India have accredited the two steps of Odisha i.e organized awareness generation Meals on MDM as the best practices under MDM scheme since 2014-15.

To run the scheme 1.45 lakh cook-cum-Helpers get honorarium of ₹1,000/ for 10 months in a year . Besides this 29,900 Women Self Help Groups (WSHG) and 2 Trust namely “Akshya Patra Foundation” and “Mana Trust” are also managing the MDM Programme. To ensure smoke free and eco-friendly environment 12,619 schools have been sanctioned budget from Government of Odisha. 14,737 schools have been connected with LPG and 10,000 more schools are proposed to be covered during 2017-18 @₹7,000/- per school. Besides this, the Odisha Renewable Energy Development Agency (OREDA) has installed 18,647 smokeless chullas in 9,335 schools by end of November, 2016. Government of Odisha has proposed ₹ 17,394.52 lakh as against the Central share of ₹76,632.11 lakh for implementation of the Scheme with a ratio of 60:40 during 2016-17.

Quality Improvement in Education

The State Government has taken initiatives not only for quantitative expansion but also for qualitative improvement in education at all levels. The Government provides grants to institutions, incentives to teachers and scholarships to students for improving performance. The following initiatives have been taken.

- Adhoc appointment to 623 number of lecturers in both the category of Junior colleges and Degree colleges.
- Implement a Personal Information Management System (PIMS) to monitor the financial expenditure and human resources in the colleges in 114 Junior and Degree colleges.
- Introduced e-Admission under the project ‘Student Academic Management System’ (SAMS), from the academic session of 2009-10 in 60 Junior colleges, but now it covers all Junior, Degree /Autonomous colleges (including self-financed colleges).
- Increased 1.2 lakh seats in Junior colleges and 0.54 lakh seats in Degree colleges which will result to increase the Gross Enrolment Ratio (GER) of higher education in Odisha from 17.5% to 30.0% by 2020.

Post matric scholarship Registration Release And Network Automation: PRERANA: Online Post Matric Scholarship for STs/SCs/OBCs.

ST and SC, Minority, Other Backward Classes Welfare Department has launched the integrated E-Governance Portal namely

PRERANA since 2011-12 with the collaboration of NIC, Bhubaneswar for streamlining and effective management of procedures related to application receipt, processing, sanction and disbursal of Post Matric Scholarship to the eligible students belonging to Scheduled Tribes, Scheduled Castes and Other Backward Classes through DBT (Direct Benefit Transfer) mode. Who are inhabitant of Odisha for pursuing Post Matriculation studies in General or Technical/Professional courses in any Government Institution or recognized Private Institution located inside and outside State. 4.06 lakh SC, ST, 1.76 lakh OBC/SEBC and 4381 Minorities have been benefitted through ‘PRERANA’ during 2016-17.

Quality Urban Education for ST and SC Students: ANWESHA

To provide quality education to ST and SC students in partnership with urban educational institution the Government of Odisha has launched a new scheme called ANWESHA from the year 2015-16 in 17 districts of the State. This scheme is pioneering initiative of the State Government to facilitate disadvantaged ST and SC students receive quality education provided by public schools. In the next 5 years 25,000 students are envisaged to be covered under the scheme. ANWESHA provides quality education to ST/SC students in 142 best private schools in 17 districts from 2015-16. 13, 440 ST/SC students have been admitted in Class I to III out of which 50% are girls. Construction of 250 number of hostels under ANWESHA have been initiated during 2016-17 to meet the accommodation demand for next 5 years.

Urban Hostel Complex for Post-matric ST and SC Students: AKANKSHA

Due to limited scope for studies in higher educational institutions, ST/SC students hailing from remote pockets fail to continue their higher studies as they have to incur additional expenses towards accommodation and other incidental expenses due to unavailability or limited availability of seats in the hostels of different Institutions in urban areas. Visualizing this problem faced by ST/ SC students, 2 urban hostel complexes have been constructed in Bhubaneswar- one at Pokhariput for girl students and the other at KalingaVihar for boys students having the capacity to accommodate 500 students in the ratio of 80% for STs and 20% for SCs provide accommodation free of cost to the students pursuing post-matric Professional, Technical, Degree and +2 courses in institutions located in Bhubaneswar. The Urban Hostel at Pokhariput with 250 girl boarders have been made operational from the academic Year 2016-17. The Urban Hostel at Kalinga Vihar for boy students will be made operational during 2017-18. Considering the importance of creating such residential facilities for ST and SC students in other major urban education hubs in the State, during 2016-17, steps have been initiated to establish another 6 new urban hostels at Berhampur, Sambalpur and Rourkela, one each for boys and girls in the above location.

Scholarships

Various scholarships are being awarded by the State Government to meritorious and poor students of Odisha for pursuing higher studies. In order to make the process easy, it has been made on line for application/ selection/ renewal

and disbursement. From 2010-11, the State Government has revised the rate of Junior Merit Scholarship, Senior Merit Scholarship and P.G. Merit Scholarship to ₹3,000, ₹5,000 and ₹10,000 respectively. The income ceiling of parents has been enhanced from ₹4.5 lakhs to ₹6.00 lakh per annum. For girl students the qualifying %age for applying scholarship is 60% . It is expected that as many as 24,500 students will be benefited. Besides, ₹10,000 per annum is being given to 10,000 brilliant students pursuing higher studies in the field of technical/ professional education. The Department of Higher Education has been awarding interest free loan stipends to 480 deserving meritorious students in the field of Science, Medicine and Technologies etc.@ ₹15,000, ₹12,000 and ₹8,000 for each academic year.

Vyasakabi Fakir Mohan Senapati Scholarship is awarded to the students securing more than 90% marks in Odia at college level and opting Odia as major subject can get one time scholarship of ₹20,000,00 through online application system. The students can avail study loan through bank for their higher education and pay the interest @1% after completion of their study under Kalinga Sikhya Sathi Yojana (KSSY). The differential amount of interest of their loan will be borne by the State Government, after the completion of moratorium period.

Pre and post-matric scholarships are given to SC and ST students to encourage them to pursue education. The SC and ST boarders studying in Classes I to X in the schools managed by the ST and SC Development Department and in Classes VI to X of the School and Mass Education Department get

scholarships at the prescribed rate. Day scholars in ME and High Schools are given scholarships. The Government provides post-matric scholarships at different rates for different courses. Table 8.15 indicates that during 2016-17, ₹455.72 crore has been released towards payment of post matric scholarships to 3.89 lakh SC and ST students

(₹267.81 crore to 2.08 lakh SC students and ₹187.91 crore to 1.81 lakh ST students). Similarly, during 2016-17, ₹581.68 crore has been released towards payment of pre-matric scholarships to 15.10 lakh SC and ST students (₹ 87.56 crore to 5.28 lakh SC students and ₹ 494.12 crore to 9.28 lakh ST students).

Table 8.15 : Achievement under Pre and Post- Matric Scholarship

Year	Pre-Matric scholarship						Post-Matric Scholarship					
	Amount released (₹ in crore)			Students benefited (In lakh nos.)			Amount released (₹in crore)			Students benefited (In lakh no.)		
	SC	ST	Total	SC	ST	Total	SC	ST	Total	SC	ST	Total
2010-11	26.97	176.41	203.38	5.16	6.93	12.09	28.72	18.96	47.68	0.79	0.60	1.39
2011-12	31.00	222.86	253.86	5.69	7.78	13.47	33.96	28.42	62.38	0.81	0.69	1.50
2012-13	65.88	261.61	327.49	5.97	8.30	14.27	51.94	63.59	115.53	1.01	0.85	1.86
2013-14	77.08	314.21	391.29	6.26	8.71	14.97	58.81	65.64	124.45	1.42	1.20	2.62
2014-15	86.53	337.93	424.46	4.66	8.38	13.04	92.79	68.42	161.21	0.69	0.82	1.51
2015-16	106.68	430.79	537.47	5.91	9.02	14.93	263.56	197.66	461.22	2.76	2.35	5.11
2016-17	87.56	494.12	581.68	5.28	9.82	15.10	267.81	187.91	455.72	2.08	1.81	3.89

Source: SC and ST Development Department, Odisha

Pre-Matric and Post-Matric Scholarship to OBC students

Pre-Matric and Post-Matric Scholarship to OBC students is a Centrally Sponsored Scheme of 50:50 share basis of state and Government of India. Allotment of funds of ₹1000.44 lakh has been released to all districts for distribution of Pre-Matric Scholarship to 1,000,544 OBC/SEBC students reading in class-IX and X. During 2016-17, allotment of funds of ₹3556.43 lakh has been released to all districts for disbursement of Post-Matric Scholarship to 1,57,982 OBC/SEBC students.

Revamping of Higher Education in Odisha through RUSA

The Odisha State Higher Education Council (OSHEC) has been formed to undertake the process of planning, execution, evaluation and also monitoring the capacity building programme through RUSA. The State is committed to spend 2.0 % of GSDP for implementation of RUSA to maintain student teacher ratio 15:1 and 12:1 in colleges and universities respectively. The objective of the council is to provide the resolution for bench marking, co-ordination and maintenance of standards and promotion of higher education and research, in college education at +3 and post graduate level and university education.

Biju Yuva Sashaktikaran Yojana

Biju Yuva Sashaktikaran Yojana is the scheme by Odisha Government under which the government distributes free laptops to the meritorious students in the 12th standard examination. The scheme targeted 15,000 students who stood merit in their CHSE (Council of Higher Secondary Education) and distributed laptops in batches via 30 nodal centers. Since 2014-15, vocational students passing from CHSE and Upashastri students passing from Sanskrit University have been included in this programme. Subsequently Odia Lipi Software is being preloaded in the Laptop from 2016-17.

Odisha Knowledge Corporation Limited

Government in Higher Education Department has established Odisha Knowledge Corporation Ltd.(OKCL) in joint venture with Maharashtra Knowledge Corporation Limited (MKCL) in the year 2011 with a objective to accelerate the socio-economic development of the State by providing IT enabled education to the masses through Odisha State Certificate in Information Technology (OS-CIT). Recently, OKCL has successfully registered more than 300 authorised learning centers with a total admission of more than 4,000 learners all across the 30 districts of Odisha to undertake E-Vidyalaya project, TE and SCERT project and digitization of State NSS Cell.

Teacher's Education and Training

There are 79 Government Teacher's Education Institutions (TEIs) functioning under and ME Department as follows:

Name of the Institution	No
Institutes of Advanced Study in Education	2
Colleges of Teacher Education	10
Government Teacher Training College	2
Districts Institutes of Education and Training	30
Block Institutes of Education and Training	4
Elementary Teacher Education Institutions	31

Source: SCERT, Odisha

The intake capacity of D.EL.Ed and B.ED are 6,650 and 2,000 respectively. Government of Odisha also introduced D.EL.Ed courses in Telugu and Olchiki language in the State. The National Council of Teachers Education (NCTE) has approved for opening of teachers training courses in 7 universities, 16 autonomous college and 8 DIETs of the State.

National Social Service Scheme (NSS)

This is a centrally sponsored scheme with 100% assistance from Government of India from 2016-17 that engages and encourages rural youth to undertake productive activities. Now the scheme is operating in 9 Universities, two deemed Universities, NIT Rourkela, VSSUT Burla and CHSE, Odisha. The +2 sections of CBSE schools, Polytechnics, Ekalabya Model Schools under ST and SC Development Department and Navodaya Vidyalaya are also included in the scheme. The total volunteer strength is 1,15,500. On Martyr's Day i.e 30th January 2017, 3,825 NSS volunteers including students and teachers have submitted willingness to donate their organs which is a Guinness Book of World Record.

National Cadet Corps (NCC)

NCC has been promoted in the State jointly by Government of India and the State Government. At present 55,679 students of 184 colleges and 614 high schools have been

enrolled under NCC programme. Cadets take part in national-level camps as well as in annual training camps. They are also involved in social welfare activities like plantations, sanitation, blood donation and awareness generation programme on HIV and AIDS etc. A sum of ₹15.16 crore out of non-plan and ₹2.00 crore out of plan was provided in the budget during the year 2016-17 for the development of NCC activities. Three (3) NCC units have been opened in the KBK area of Bhawanipatna, Nawarangapur and Rayagada and one at Keonjhar. Government have agreed for opening one naval unit at Paradeep and one air squadron in Jharsuguda.

Establishment of Language Laboratories in Odisha

As per the recommendation of the Task Force on Higher Education, Department has agreed to establish 108 Language- cum- Communication laboratories in 20 Government colleges and 17 non-Government colleges in order to improve the English speaking skills of the Oriya medium students as on 2016-17. A short term course in communication skill in English language is imparted in 25 colleges on pilot basis.

Model Degree Colleges in Educationally Backward Districts

Admission into 8 Model Degree Colleges one in each in the districts of Boudh, Deogarh, Malkangiri, Nawrangapur, Nayagarh, Nuapada, Rayagada and Sonepur under RUSA project was started during 2016-17 with 2,504 students.

8.2 Health and Family Welfare

Health care in Odisha no more remain a chronic challenge. The challenges relating to access, delivery and affordability of health care system were grossly averted by Government intervention in strategic manner. The

improvements have been the outcome of concerted and continued efforts of the Government of Odisha towards establishing more efficient systems through effective planning, financing, human resource management, infrastructure, supply chain management and e-governance. The State Government makes consistent initiatives to reduce the prevailing regional disparities and gaps in the access to safe drinking water, public and private health care infrastructure, rural health care infrastructure, access to preventive and medical care, public hygiene, information system on health care and nutrition, skilled manpower etc. The outcome was quite visible between 2000 and 2017. Some striking performance in Odisha showed the way.

Healthcare Infrastructure in Odisha

Types of Health Facility	Numbers
Medical College and Hospitals	3
District Hospitals	32
Sub-Divisional Hospitals	27
Community Health Centres	377
Other Hospitals	79
Infectious Disease Hospitals	5
Cancer Institute	1
Training Centres	5
Primary Health Centres (N)	1226
Sub-Centres	6688
A.N.M. Training Schools	19
G.N.M. Training School	8
M.P.H.W.(Male) Training School	3
Ayurvedic Hospitals	2
Ayurvedic College and Hospitals	3
Ayurvedic Dispensaries	619
Homoeopathic College and Hospitals	4
Homoeopathic Dispensaries	561
Unani Dispensaries	9

Source: Directorate of Health Services

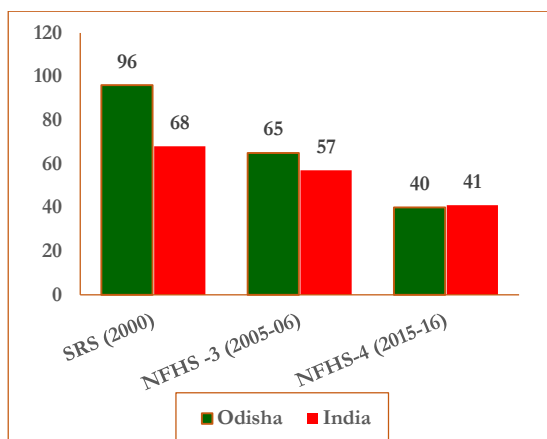
Health Indicators

Quality and adequate health care services lead to better learning ability, nutritional retention, capability enhancement and standard of living of people. It helps in limiting family size, improving basic amenities and reducing poverty significantly. Essentially three categories of health indicators like outcomes (Infant Mortality Rate etc.), process (institutional delivery etc.) and input (infrastructure, public expenditure, National Health Mission etc) describe the progress of health sector in the State.

Infant Mortality

Odisha has made quantum leap with 56 points decline by reducing IMR from 96 (SRS 2000) to 40 in 2015-16 (NFHS-4) which is the highest point decline in the country far ahead of national average decline of 27 points and better than major States like Gujarat (28 points), Rajasthan (38 points), Chhattisgarh (25 points), Jharkhand (26 points), MP (36 points), UP (19 points). This translates into 51,000 more children being saved annually compared to the year 2000. IMR in rural Odisha was 43 as compared to 21 in urban areas in 2015-16. At the national level, IMR stood at 41 and varied from 46 in rural areas to 29 in urban areas in 2015-16. (Figure 8.7).

Figure 8.7 : Infant Mortality Rate Point decrease: Odisha-56, India--27

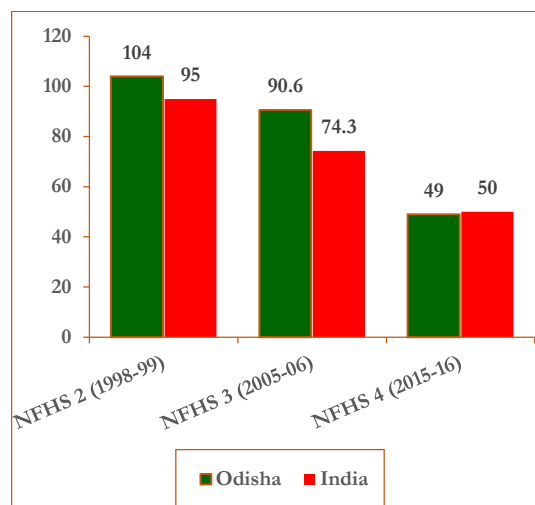


Source: National Family Health Survey

Under 5 Mortality Rate

The Under 5 Mortality of State has also declined from 104 in 1998-99 to 49 per 1000 live births in 2015-16 (NFHS-4) which is better than all India point decline from 94.9 to 50 during the said period. These encouraging achievements may be attributed to enabling policies, programmes and sustained efforts made by the State Government over last one decade like establishment of Newborn Care Corners, Newborn Stabilization Units and Sick New-born Care Units (SNCU), Nutrition Rehabilitation Centers, promotion of institutional deliveries through Janani Surakhya Yojana (JSY) and (Janani Sishu Surakhya Karyakram (JSSK) etc. (Figure-8.8).

Figure 8.8 : Under 5 Mortality Point decrease: Odisha-55, India-45



Source: National Family Health Survey

Post-natal care

As per NFHS-4 report, it can be said that the better care for women during pregnancy and childbirth contributed to the reduction of infant deaths and improved child survival. It reveals that 94.5% of mothers have been protected against neonatal tetanus. Almost all mothers

have received antenatal care for their most recent pregnancy and increasing number of women are receiving the recommended four or more visits by the service providers. As per the report, 62% of pregnant women in Odisha had 4 antenatal visits and 97.2% of pregnant women had registered under Mother and Child Tracking System.

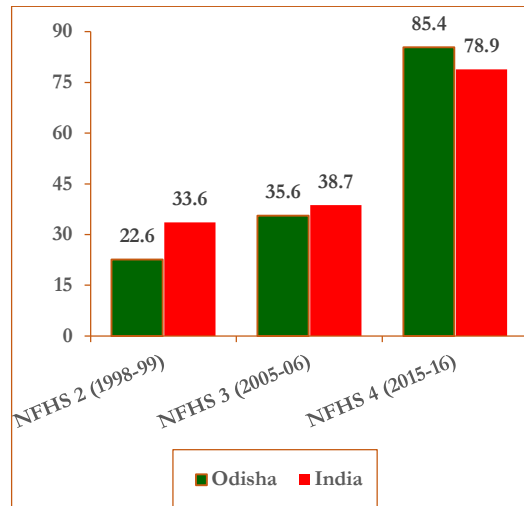
Neonatal Mortality Rate (NMR) has been reduced from 53 (SRS 2005) to 36 (SRS 2014) which has kept pace with decline in IMR.

Institutional Delivery

More and more women are now given birth at health care facilities as the institutional delivery rates have substantially improved as against 22.6 % coverage in 1998-99 (NFHS-2) to 85.4% in 2015 (NFHS-4) which is better than national average of 78.9%. Odisha recorded 47.1 point increase in Institutional Births in Public Facility from 28.8% in 2005-06 to 75.9% in 2015-16. This is better than the all India average of 52.1 %. Since 2000, Odisha has made significant dent in improving institutional delivery by 62.8 point which is 2nd highest in the country after Sikkim (63.28 point) and far better than National average of 45.3 point improvement. Odisha's achievement is also much better than major States like Gujarat (42.4 point), Maharashtra (37.7 point), MP (60.7 point), Bihar (49.2 point) and many other States. . The quantum of jump may be due to effective implementation of JSY, JSSK, free drugs schemes, 108/102 ambulance services, and establishment of maternity waiting homes, operationalization of 24x7 delivery points, (First Referral Units) FRUs, Blood Storage Units at CHC level and capacity building of service providers and overall improvement in

quality of care at public health facilities. Moreover, active participation of ASHAs in every village has really bridged the gaps between community and service providers for utilization of public health facilities and increased institutional deliveries.(Figure-8.9).

Figure 8.9 : % of Institutional Delivery Point increase: Odisha-63, India-45

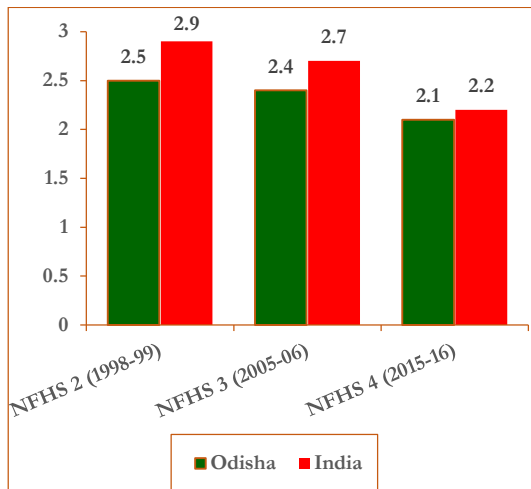


Source: National Family Health Survey

Total Fertility Rate

The total fertility rates or the average number of children per woman have been reduced from 2.4 to 2.1 in Odisha from 2005-06 to 2015-16, which is a very good achievement in the area of population stabilization (Figure-8.10). Hence, it can be harnessed and sustained for overall economic growth of the State. Family Planning across the methods has improved from 50.7% to 57.3% with sizable reduction in total unmet need from 16% to 13.6%. The rate of adolescent pregnancies (15-19 years) has dropped almost by 50% i.e from 14.5% to 7.6%. These improvements are mainly due to improved access to family planning devices, expansion of the basket of family planning for informed choice and home delivery of contraceptives by ASHAs.

Figure 8.10 : Total Fertility Rate Point decrease: Odisha-0.4, India--0.7

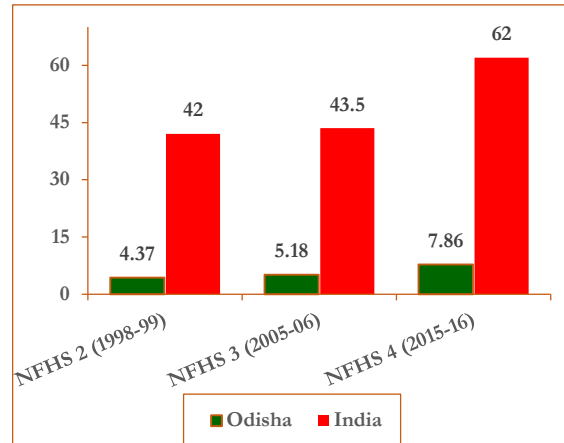


Source: National Family Health Survey

Full Immunization

The full immunization coverage among children aged 12-23 months children has increased substantially from 43.7% (NFHS-2, 1999) to 78.6% in 2015-16 (NFHS-4) in Odisha compared to National average of 62%. Moreover, the %age of improvement is far better than major states like Gujarat (-2.6%), Maharashtra (-22.1%), Tamilnadu (-19.1%) and jumped from 16th rank in 2000 to 5th rank in 2015-16 compared to other States in India, which is also a great achievement in terms protecting children from vaccine preventable diseases like TB, diphtheria, pertussis, whooping cough, tetanus, polio, measles etc. Further, children with diarrhoea in the last weeks who received ORS has also improved from 39.8% (NFHS-3) to 68.6% (NFHS 4) that means the availability of ORS has been ensured through ASHAs at community level. The NFHS-4 reveals that 72.9% of children with fever or symptoms of ARI in the last 2 weeks preceding the survey were taken to a health facility (Figure-8.11).

Figure 8.11 Children 12-23 months fully immunized (BCG, measles, and 3 doses each of polio/DPT) (%)Point decrease: Odisha-35, India—20

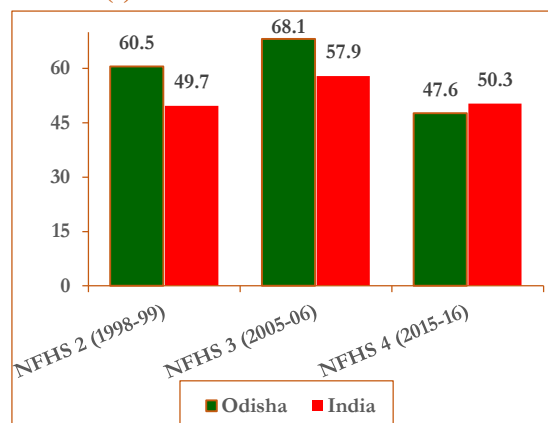


Source: National Family Health Survey

Anaemia

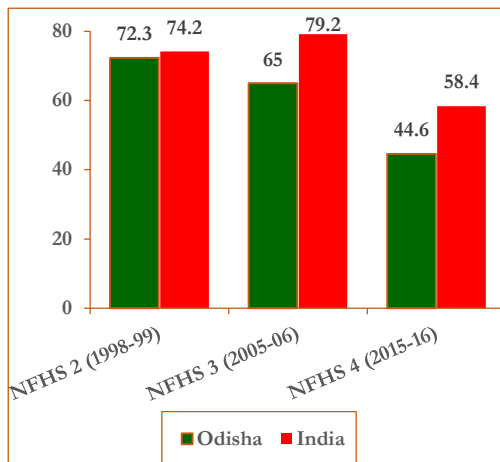
As per NFHS-4 (2015-16), Odisha recorded 20.5 point decrease in pregnant women age 15-49 years who are anaemic (<11.0 g/dl) (%) from 68.1 % in 2005-06 to 47.6 % in 2015-16 and is better than all India average of 50.3%. The anaemia among children in the age group of 6-59 months has also decreased from 65% to 44.6% in Odisha as against from 79.2% to 58.4% in India during last 17 years (Figure-8.12 and Figure-8.13).

Figure 8.12 : % of Pregnant women (age 15-49) anaemic Point decrease: Odisha-13, India- (-) 0.6



Source: National Family Health Survey

Figure 8.13 : Children age 6-35 months who are anaemic (%) Point decrease: Odisha-27.7, India--15.8



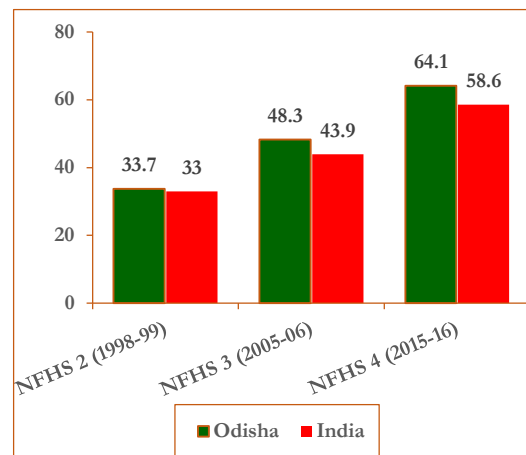
Source: National Family Health Survey

Besides, poor nutrition is less common than reported in the last round of National Family Health Survey. Fewer children under five years of age are now found to be stunted, showing intake of improved nutrition. In Odisha, 34.1% of children below 5 years of age are stunted (height-for-age) and 34.4% are underweight.

The NFHS-4 reveals that, there is an outstanding improvement in health insurance coverage of the households from 1.6 % (NFHS 3) to 47.7% (NFHS 4), which may be due to successful implementation of RSBY / BK KY and other Government sponsored insurance scheme in the State.

In addition to above key health indicators, NFHS-4 also provide information on various other social determinants like, sanitation, safe drinking water, population and demographic data, women’s empowerment, HIV/AIDS, tobacco and alcohol consumption etc.

Figure 8.14 : Mothers who had antenatal check-up in the first trimester (%) Point decrease: Odisha-30.4, India--25.6

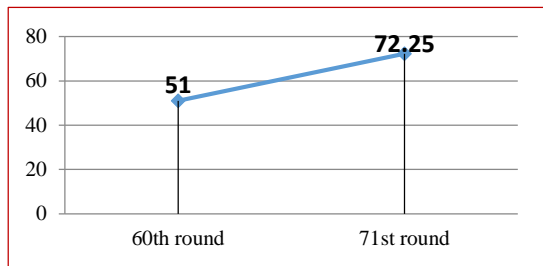


Source: National Family Health Survey

Result of National Sample Survey Office (NSSO)

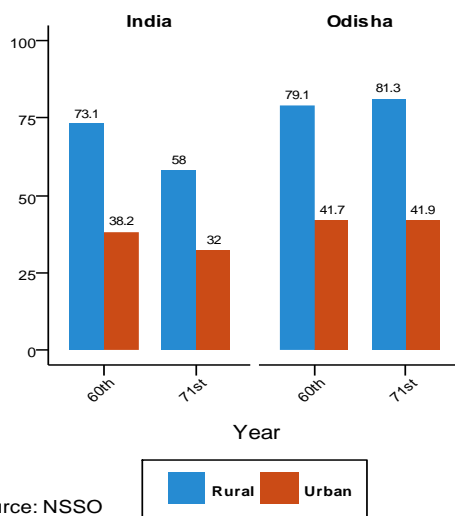
The pattern of health care utilization indicates that the utilization from public health care facilities, for both inpatient and outpatient care, is much higher than the national average. According to the 71st round of NSSO, around 81% in rural and 58% in urban areas availed of inpatient care facilities from public health care institutions in Odisha, whereas the split at the national level is 42% in rural and 32% in urban areas. It also indicates that in Odisha about 72% population utilize public health facilities as the first point contact, which is higher than the many comparable states like 13.34% in Bihar, 26.72% in MP etc. The utilization of public health care institutions has declined by 15 %age points from 2004 to 2014 in urban areas of Odisha, whereas the same has marginally increased in case of rural areas (Figure-8.15 and 8.16).

Figure-8.15 : Share of Public Health Facilities (outpatient)



Source: NSSO

Figure-8.16 : Share of Public Health Facilities (Hospitalized Care)



Source: NSSO

Clearly a higher inclination towards allopathic treatment (around 90% in both rural and urban areas) is found. Only 3 to 7 %age usage of “other” including AYUSH has been reported in rural and urban areas. Substantial increase in institutional deliveries found in both rural

(90%) and urban areas (97%), which is better than National average of rural (80%) and urban areas (90%). Average medical expenditure in Odisha is found to be lower than National average, but still alarming. Average medical expenditure on child birth is ₹ 3,893 in rural and ₹7,271 in urban context.

Major Interventions under RMNCH+A (Reproductive, Maternal, New-born, Child Health and Adolescent Health)

Several health initiatives were taken with State’s own resources like IMR Mission in the year 2001, followed by Nabajyoti scheme in 2004. In addition to theses, the State has devised a special strategy in the year 2015-16 for accelerating the reduction of IMR with a target to achieve IMR of under 30 by 2020. For this initiative, an additional budget allocation of ₹ 211 crore over a period of five years has been made by the State Government.

Incidence of Disease

People of Odisha suffer from multiple diseases. Details about the incidence of selected diseases in the State for 2014 and 2015 are given in Table 8.16. The increase in the number of reported patients is probably due to a substantial increase in the number of people suffering from minor diseases, grouped under other diseases.

Table 8.16 : Incidence of Selected Diseases in Odisha, 2014 and 2015

(in ‘ 000 numbers)

Sl. No	Diseases	2014			2015		
		OPD	IPD	Total	OPD	IPD	Total
1	Acute Respiratory infector	1,587.73	11.78	1,599.51	2,103.48	21.76	2,125.24
2	Acute diarrhea	611.11	45.73	656.84	694.62	72.95	767.57
3	Enteric fever	56.15	4.09	60.24	80.98	9.35	90.33
4	Pneumonia	34.68	3.76	38.44	35.38	7.03	42.41
5	Others	8.97	1.18	10.15	14.63	1.86	16.49
	Total	2,298.64	66.54	2,365.18	2,929.09	112.95	3,042.04

Source: Department of Health and Family Welfare, Government of Odisha

During 2015, OPD patients are 2,929.09 thousand which was 2,298.64 thousand during 2014. Expectedly, out-patients constitute a large proportion of the total number of patients. Five major diseases of Odisha, also called “Panchavyadhi” are malaria, leprosy, scabies, acute respiratory infection and diarrheas, which account for more than 70 % patient load. Number of indoor patients also increased during 2015 (66.54 thousand) in comparison to 2014 (112.95 thousand). The single most important cause of death is senility (35.12 %), followed by heart disease (9.6 %) and paralysis (3.59 %). Life expectancy at birth in the State has increased from 58.6 years for males and 58.7 years for females during 1999-2003 to 62.52 years and 63.9 years respectively during 2006-10. As per the report of the Technical

Group on Population Projection, the projected level of life expectancy at birth in Odisha will be 67.8 years for males and 71.6 years for females during 2021-25 as against 69.8 for males and 72.3 years for females at the national level.

Maternal Health and Family Welfare

Various family welfare programmes are in place in Odisha since 1956 with the objective of stabilizing population growth. Under this programme, the strategy has been to motivate eligible couples to limit their family size by adopting various family planning methods. It seeks to promote responsible parenthood with focus on one child norm. Table 8.17 shows the progress of the family welfare programme in Odisha since 2009-10.

Table 8.17 : Progress of Family Welfare Programme in Odisha

(In lakh number)

Year	Sterilizations	IUD insertion	Conventional Contraceptive users	Oral pill users	Medical Termination of pregnancy	No. of equivalent Sterilization
2009-10	1.24	1.36	2.57	1.75	0.27	2.03
2010-11	1.40	1.50	2.17	1.74	0.26	2.21
2011-12	1.45	1.45	1.94	1.88	0.21	2.25
2012-13	1.48	1.34	1.44	1.63	0.20	2.19
2013-14	1.39	1.40	0.91	1.40	0.22	2.06
2014-15	1.05	1.75	0.85	1.55	0.20	1.86
2015-16	1.17	1.95	1.04	1.63	2.42	2.06
2016-17	1.08	1.98	1.24	1.58	0.22	1.98

Source : Directorate of Health and Family Welfare, Odisha, Bhubaneswar

New Initiatives

Child Malnutrition

Malnutrition as a major public health and nutrition challenge faced by many developing states including Odisha. Malnutrition is a consequence of several social and economic factors like i) lack of education, ii) inadequate health care services and iii) ill-informed cultural behavior and there are three indices, i)

weight for age ii) height for age and iii) weight for height. The detail malnutrition status of 0-3 year and 3-6 year children in Odisha are given in Table 8.18, 8.19 and Figure 8.17. The %age of severely malnourished between the age group of 0-3 year's children was 5.32 % of total children during 2011-12, which declined to 1.29 % during 2015-16. Similarly between 3-6 years the same %age was declined from 3.76 during 2011-12 to 0.86 during 2015-16

Table 8.18 : Nutritional Status of 0-3 Years Children in Odisha (As per WHO Growth Standard)

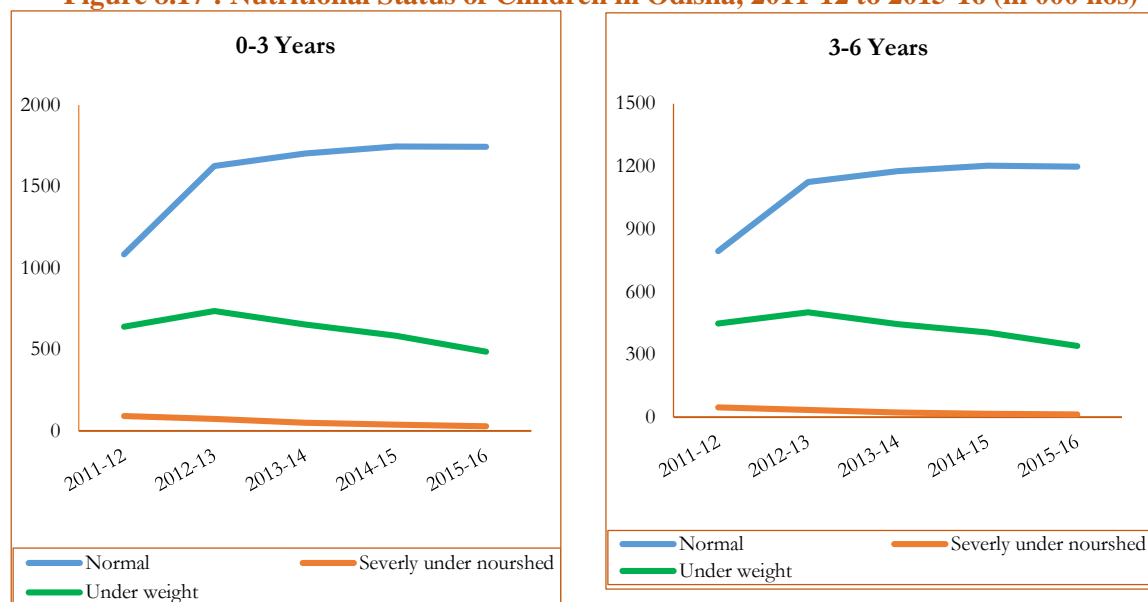
Year	Total children	Children weighed	% out of Col.2	Normal	% out of col.3	Moderately Undernourished	% out of col.3	Severely Undernourished	% out of col.3	Under Weight	% out of col.3
2011-12	1826524	1724247	94.40	1083961	62.87	548901	31.83	91701	5.32	640602	37.15
2012-13	2479657	2359089	95.14	1625963	68.92	661520	28.04	73967	3.14	735487	31.18
2013-14	2442569	2356350	96.47	1702765	72.26	602477	25.57	51108	2.17	653585	27.74
2014-15	2404752	2328313	96.82	1744774	74.94	545301	23.42	38585	1.66	583886	25.08
2015-16	2327318	2229479	95.80	1742863	78.17	457934	20.54	28682	1.29	486616	21.83

Source:-W and CD Department, Government of Odisha

Table 8.19 : Nutritional Status of 3-6 Years Children in Odisha (As per WHO Growth Standard)

Year	Total children	Children weighed	% out of Col.2	Normal	% out of col.3	Moderately Undernourished	% out of col.3	Severely Undernourished	% out of col.3	Under Weight	% out of col.3
2011-12	1351103	1242443	91.96	793771	63.89	401268	32.30	46740	3.76	448008	36.06
2012-13	1745041	1626312	93.20	1124960	69.17	467595	28.75	33942	2.09	501537	30.84
2013-14	1716557	1622362	94.51	1176909	72.54	423213	26.09	22240	1.37	445453	27.46
2014-15	1692880	1609291	95.06	1203774	74.80	388526	24.14	16991	1.06	405517	25.20
2015-16	1704432	1538894	90.29	1198707	77.89	326890	21.24	13297	0.86	340187	22.10

Source:-W and CD Department, Government of Odisha

Figure 8.17 : Nutritional Status of Children in Odisha, 2011-12 to 2015-16 (in 000 nos)

Source : W&CD Department, Govt.of Odisha

Source : W&CD Department, Govt.of Odisha

Supplementary Nutrition Programme (SNP)

Supplementary Nutrition is primarily designed to bridge the gap between the Recommended Dietary Allowance (RDA) and the Average Daily Intake (ADI). It is given to the children in the age group of 6 months to 6 years, pregnant women and lactating mothers under ICDS scheme. Under the Strengthened and Restructured ICDS for SNP has been revised to ₹6, ₹9 and ₹7 per beneficiary per day for normal, mild and moderately malnourished children (6 months to 3years), severely malnourished children and pregnant and lactating mothers respectively from the year 2013. The SNP Programme has been implemented by 72,587 AWC and Mini AWCs covering 47.90 lakh beneficiaries during 2016-17. ₹843.68 crore has been provided to run the scheme.

Immunization

Six vital diseases, viz poliomyelitis, diphtheria, pertussis, tetanus, tuberculosis and measles are major causes of child mortality, disabilities, morbidity and related malnutrition. In order to protect children (below 6 years) from these diseases and pregnant women against tetanus and in order to reduce IMR, an immunization programme has been implemented in the State as per national immunization schedule. The immunization programme has been further strengthened through ICDS. The National Pulse Polio programme has also been implemented throughout the State with the goal of making the State Polio free by immunizing infant and children aged 0-5 years. During 2016-17 (up to March, 2017), 6.74 lakh children have been immunized against DPT, 6.72 lakh against Polio, 6.62 lakh against BCG and 6.80 lakh against measles. Besides, 6.70 lakh pregnant women have been covered under TT immunization. (Table 8.20)

Table 8.20 : Progress of Immunization Programme in Odisha

Programme	(in Lakhs)						
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
TT (PW)	7.67	7.73	7.14	7.55	7.32	7.30	6.70
DPT	7.17	7.27	7.58	7.01	7.23	5.33	6.74
Polio	7.2	6.61	7.44	7.03	7.24	6.88	6.72
BCG	7.85	8.02	7.40	7.30	7.34	7.03	6.62
Measles	6.98	7.08	7.57	6.86	7.08	6.85	6.80
DT	5.68	5.53	6.39	6.19	6.24	6.46	7.19
TT (10 Yrs)	8.74	7.62	7.78	6.78	6.78	6.50	6.12
TT (16 Yrs)	8.15	7.22	7.77	6.77	6.58	6.16	5.82

Source: Directorate of Family Welfare, Odisha

Nutrition and Health Education (NHED)



NHED is a key element of ICDS, comprises information on basic health, nutrition, child care and development, infant feeding practices, utilisation of health services, family planning and environmental sanitation. This is imparted through counselling sessions during home visits on Fixed Immunisation Days (FIDs) and



in gatherings of women's groups and mothers' meetings in the area. All women in the age group of 15-45 years are covered under this programme so that they can look after their own health, nutrition and development needs as well as those of their children and families. During 2016-17 (up to March 2017) about 8.98 lakh women per month have been covered under NHED.

Rastriya Kishore Swasthya Karyakrama (RKSK)

- Established 148 Adolescent Friendly Health Centres (AFHC) designated as “SRADHA” clinics for adolescent girls and boys.
- Peer Education Programme is a community based component of RKSK. 4,700 out of 23,600 planned peer education have been identified till March, 2016.
- Established Integrated Counseling Centers in the areas of Adolescent Health, ANC and PNC, IYCF and GBV.
- Established 4 no. of One Stop Crisis Centers at Puri DHH, Sambalpur DHH, Capital Hospital and MKCG Hospital.

Major Interventions For Child and Adolescent Health:

- **Strengthening Facility Based New-born Care** by establishing 781 New-born Care Corners at delivery points for resuscitation at birth; 49 New-born Stabilization Units for special care of sick new-borns at CHC and FRU level; and establishment of 30 Special New-born Care Units with 516 beds for management of Low Birth Weight Babies and sick new-borns by specially trained Medical Officers and Staff Nurses. 1,35,611 new-borns were saved with these special efforts.
 
- **Operationalization of First Referral Units (FRUs):** In order to provide comprehensive maternal and child health services, 85 FRUs were made functional at high volume health facilities.
 
- **Operationalization of Home Based New-born Care (HBNC):** 44,023 ASHAs have been trained on HBNC for prompt identification and referral of sick neonates and infants through home visit.

- **Establishment of Nutrition Rehabilitation Centres (NRCs):** Keeping in view high incidence of malnourished children, 49 NRCs were set up at DHH, SDH and high burden CHCs to treat severe malnourished children and to counsel mothers on healthy feeding practices. 8,02,029 malnourished children have been treated in these NRCs during 2009 to 2016.
 
- Establishment of 10 Bedded Kangaroo Mother Care (KMC) units in 5 districts
- **Universal Screening for children for 4 Ds:** 640 Mobile Health Teams are engaged under Rastriya Bal Swasthya Karyakram (RBSK) for screening of children at the AWCs and School level to identify birth defects, diseases, delayed mile stone and deficiencies among children up to 18 years of age. More than 60 lakh school children have been covered under this scheme.
 
- **Strengthening of Immunization Programme:** In addition to continuance of BCG, DPT, Polio, TT, Measles and Hepatitis-B, four new vaccines have been

included in Immunization program, namely, Pentavalent (prevents Hepatitis-B, Diphtheria, Pertusis, Tetanus and HiB), Inactivated Polio Vaccine (prevents Polio), Rota virus vaccine (prevents Rota virus Diarrhoea) and Japanese encephalitis vaccine (prevents Japanese encephalitis fever).



- **Impact/Outcome:** As per NFHS-4 survey report the full immunization coverage has improved from 43.7 % in 1998-99 to 78.6% in 2015-16 which is better than national average. This translates into a staggering 2,84,000 more children being immunized annually compared to the year 1999.



- **Case to case tracking of MCH services: Under Mother and Child Track System / RCH Portal,** all children are registered and all types of services provided are recorded. This online system helps in facilitating timely delivery of and also helps early identification of high risk children. Accordingly, they are contacted through “**104 health help line**”, to validate the service delivery as well as encourage them to avail appropriate services at health facilities. In addition, time sensitive health message have been disseminated to all the mothers through their registered mobile numbers under “**Kilkari**” to avail all benefits and entitlements provided by Government.



- **Free Drugs Services (Niramaya):** Operationalised since 1st May 2015 across hospitals at all levels for providing free drugs to the citizens. 570 types of drugs are included in State EDL and Facility-wise EDL is in place which includes essential drugs, cancer drugs, drugs under mental health and consumables.
- **Free Referral Transport Services (108 and 102):** In order to ensure free referral transport services to patients, including pregnant women and sick infant of State, 892 ambulances under “102 ambulance services” and “108 ambulance service” are operational in the State.
- From State Plan additional 207 Ambulances / vehicles will be provided.
- Additional 92 BLS ambulances being provided under 108 Ambulance Service with State’s own resources from which 55 are allocated for tribal districts of Odisha.
- 4 out of 6 boat ambulances proposed for tribal districts under State budget.
- 68 hired vehicles at CHCs level under Special strategy for IMR / MMR.
- 41 Mobile Health Units in Tribal areas made functional.

Outcome: More than 11 lakhs patients in distress have been benefited till now under “108 ambulance service” and more than 6.6 lakhs pregnant women and sick infants benefited under “102 ambulance services” till now. Earlier for 50,000 population, 1 Ambulance was allotted, but after addition of 92 ambulances better coverage are being ensured in difficult areas. About 3.50 lakh children were referred for better treatment by the vehicles.

- **Rashtriya Swasthya Bima Yojana (RSBY)** in the year 2009-10, also rolled out a unique health Insurance Scheme i.e. **Biju Krushak Kalyan Yojana (BKKY)** in the year 2013, covering around 57,00,000 farmers. **Besides, the Odisha State Treatment Fund** was created by the State under Odisha State Treatment Fund Society under which patients belonging to BPL category or AAY category or having income up to ₹50,000/- in rural areas and ₹60,000/- in urban areas or referred from registered Mental Asylum / Destitute Home / Orphanage or unknown accident victims are entitled to cashless treatment at various hospitals in and outside the State.

Achievement during 2016-17

- **RSBY:** 9.77 lakhs families have been benefitted with a claim amount of ₹333.89 crore. There are 423 public and 162 private hospitals empanelled under RSBY.
- **BKKY:** 2.77 lakhs families have been benefitted with a claim amount of ₹147.27 crore. There are 423 public and 134 private hospitals have been empanelled under BKKY.
- **OSTF:** 28,134 patients benefitted and ₹ 60 crore worth of claim settled under OSTF. 32 District Headquarter Hospitals, Sishu Bhawan, Cuttack, AHRCC, Cuttack, SCB Medical College and Hospital, Cuttack, VIMSAR, Burla, MKCG Medical College and Hospital, Berhampur and 24 private empanelled hospital under OSTF (16 hospitals within the State and 7 outside the State).

It is observed from NFHS-4 report that due to successful implementation of BKKY, RSBY and other Government sponsored schemes in the State, the number of households with any

usual member covered by a health scheme / insurance has increased from 1.6 % in 2005-06 to 47.7% in 2015-16.

Reproductive and Maternal Health

In case of Odisha the decline in MMR from 346 per lakh in 1997-98 to 222 per lakh in 2011-13 is moderate compared to corresponding figures at all-India level of 398 in 1997-98 to 167 in 2011-13. The situation improved and MMR declined but still it remained behind the targeted MMR of 119 per lakh in Odisha and 100 per lakh at the all India level by the end of the 11th Plan period. Ante-natal and post-natal care is necessary for healthy motherhood and safe child birth. The number of women and infants who receive these health services has been increasing over the years. The pregnancy burden of women can be judged from the General Fertility Rate (GFR) and the order of deliveries of eligible women. GFR in Odisha was less than the all-India rate, and has declined marginally from 83.9 per lakh in 2010 to 69.0 per lakh in 2015. Higher birth orders indicate longer reproductive span and associated child-bearing problems. About one-fourth (23.9 %) of deliveries in the State were of 3rd and higher orders in 2011 as against 28 % at all India level. The proportion of such deliveries has recently declined from 34.8 % in 2004 to 23.9 % in 2011. Details of General Fertility Rate (GFR) and Total Fertility Rate (TFR) of Odisha and India are reported in Table 8.21

Table 8.21 : Child Birth Status in Odisha

Year	GFR		TFR	
	Odisha	India	Odisha	India
2009	78.1	86.5	2.4	1.9
2010	83.9	75.3	2.3	1.8
2011	79.3	88.0	2.2	1.7
2012	71.2	80.3	2.1	1.7
2015	69.0	76.2	2.0	2.3

Source : Department of Health and Family Welfare, Government of Odisha

New Initiatives

- Benefitted total 5.01 crore beneficiaries under Janani Surakhya Yojana (JSY) from 2005-06 to 2016-17.
- Increased the institutional delivery from 28 % in 2005 to 69 % in February, 2016 (HMIS) against expected delivery due to JSY.
- Provided free drugs, diagnosis, blood, referral transport, diet and free services (no user fees) to free to all pregnant women and sick infants. Under JSSK, 9 lakh pregnant woman and 1 lakh sick children benefited annually.
- As per NFHS-4 report JSY benefits (72.6%) received by mothers is the highest in Odisha, compared to other States.
- 2.04 lakh (352060male + 1820136 Female) sterilization have been done from 2005-06 to 2016-17.
- All 43, 530 ASHAS trained through a well-crafted module. Imparted training to skill Attendant at Birth (SAB) to the Paramedics and AYUSH doctors to augment the institutional delivery.
- Functioning of 85 hospitals out of 95 as First Referral Unit (FRU) institutions for providing comprehensive emergency obstetric care.
- State has target of 1,190 delivery points of which 624 institutions are functional at present and 566 are promising. 20 delivery points have improved their delivery status out of 610.
- Maternal Death Review (MDR) Committees are formed at State and District level to review the maternal death. 784 numbers of maternal death are reported during 2016-17.
- Organised Village Health and Nutrition Day (VHND) every Tuesday / Friday at village Anganwadi Centres. So far, 3.81 lakh VHND sessions held out of 3.89 lakh planned (97 %) during 2015-16.
- Standardization of labour room as per MNH tool kit in 18 districts under DAKSHATA Programme.
- Established Maternity Waiting Homes (Maa Gruha) near to delivery points to accommodate the expected delivery cased from difficult geographical pockets at least before 7-10 days of Expected Date of Delivery (EDD). So far 54 MWHs are operational out of 66 targeted in Odisha.
- 420 (108 Ambulances) and 408 (102 Ambulances) are operational to provide free transport services for all medical treatment. 892 Ambulances under 102 Ambulance services and 108 Ambulance services are operational in the State to provide free referral service to pregnant women and sick infant.

Expansion of specialized care at District Level

Strengthening Services under Non Communicable Diseases: Cancer, diabetes, Cardiovascular Disease and Stroke

- Odisha is the first State in the country to launch the national program for prevention and control of cancer, diabetes, cardiovascular disease and stroke and national program for health care for elderly in 2010-11 to reduce overall morbidity and mortality by 25% by the end of 2015 through behaviour and lifestyle changes. The programme was launched in Nuapada district and later extended all the 30 districts by the end of 2016.

- Construction of NCD Complex at 5 District Headquarter Hospitals (Koraput, Malkangiri, Bolangir, Nuapada and Nabarangpur) recognized as best practice in the country by GoI.



- Intensive Care Units (ICUs) are functional in 10 districts. In last seven years 35.52 lakh people were screened. Further, another 2,689 critical patients have been treated in ICUs since 2012-13
- In the same period, 2.36 lakh Diabetes Mellitus and 1.37 lakh Hypertension were

detected. 1.24 lakh Diabetes Mellitus and 0.99 lakh Hypertension were treated.

- Cancer Chemotherapy has been started in 13 districts which includes DHH Capital Hospital, Koraput, Nabarangpur, Sundergarh, Bargarh, Phulbani, Balasore, Mayurbhanj, Jharsuguda, Nuapada, Rayagada, Bolangir, Kalahandi and Puri. The facility will now be extended to all the 30 districts.
- Cancer consultancy camps held in Koraput, Nabarangpur, Sundergarh, Baragarh and 5,039 cancer cases counselled and 374 referred to higher centre. 1,384 cancer cases with 4,209 chemo cycles have been administered at DHH since May, 2016. OSMC Ltd is supplying chemo drugs free of cost under *Niramaya*.
- Physiotherapy units have been established at 15 DHH and 39 CHC Level
- 8 Trauma Care Centers made functional.



- Mental Health Institute at SCB Medical College and Hospital, Cuttack is functional since Dec, 2016. Free psychotropic drugs made available through “Niramaya”.
- Integrated Geriatric OPD started in 10 districts since the year 2013: Till date, 3,42,774 elderly persons have been provided OPD services, 27,525 elderly persons were provided IPD services, 24,812 elderly persons have been given rehabilitative services and 99,441 lab tests were performed on them.

Medicine Systems and Hospitals

- Healthcare in the State is mostly provided through public allopathic institutions. However, alternative health systems are also supported by the State.

System Load of Government Hospitals

- The system load of the healthcare infrastructure can be assessed from Table 8.22. Indicators of system load in Government hospitals have remained the same between 2009-10 to 2014-15

Table 8 .22 : System Load in Government Hospitals in Odisha

Year	Doctors per lakh population	Beds per 10,000 population	In patient to total population	Out patient to total population	Total patient to total population	Bed turnover rate	Bed occupant rate
2009-10	10.56	3.76	8.78	60.62	67.41	233.39	127.84
2010-11	8.24	3.71	9.45	64.42	73.88	254.26	139.32
2011-12	10.31	3.92	10.22	65.79	76.02	260.48	142.73
2012-13	9.75	3.87	8.28	60.37	68.65	213.54	117.01
2013-14	9.96	3.83	10.14	65.91	76.04	264.58	144.97
2014-15	8.54	3.75	10.41	71.21	81.63	277.03	151.80

Source : Department of Health, Odisha

Allopathic Medicine

In 1951, medical and healthcare facilities in the State were provided through a network of 365 Government medical institutions with 3,112 hospital beds and 1,083 doctors. The doctor-population ratio stood at 1:13,500. By the end of 2015-16, 1,944, medical institutions, comprising 141 hospitals, 377 community health centers, 1,227, primary health centers and 199 Mobile Health Units (MHU) were functional in the public sector with 16,537 beds. In addition, 1,771 numbers of private sector medical institutions with 15,977 beds are functioning in the State as on 2015-16. Thus 3,715 allopathic medical institutions provided medical care in the State with 32,514 number of beds. There are 6,688 sub-health centers in the public sector. At the end of 2015-16, there were about 6 medical institutions per lakh population and one medical institution per 59 Sq. km. The bed-population ratio is 1:1,388. District-wise medical institutions and hospital beds, in both public and private sectors in Odisha, are given at **Annexure 8.2**. While public health institutions are spread all over the State, private institutions are located mainly in cities. Out of 1,771 private institutions, highest number of 375 institutions are running in Cuttack district, (21 %) followed by Khurda 254 (14 %), 849 (8 %) in Kalahandi district. Boudh district has only three private medical

institution. There are no private medical institutions in Deogarh district.

Alternative Systems of Medicine

AYUSH system of medicine assumed significance with the emergence of lifestyle related diseases. The people of Odisha prefer AYUSH as the system of treatment for their indigenous, economical and gentler therapies for cure of diseases and improving quality of life. At present 5 ayurvedic hospitals, 4 homeopathic hospitals, 619 ayurvedic dispensaries, 561 homeopathic dispensaries and 9 unani dispensaries with 603 beds and 805 doctors out of which 315 are Homoeopathy, 486 are Ayurvedic and 4 are Unani providing AYUSH health care facilities in the State.

During 2016-17, 97.64 lakh patients were treated in these hospitals and dispensaries. There is only one drug testing laboratory in the State. There are 3 ayurvedic and 1 homoeopathic pharmacy for manufacture and supply of medicine to Government hospitals and dispensaries. Panchakarma treatment of Ayurveda has been provided in Government hospital in Puri, Bhubaneswar and Berhampur. (Table 8.23). Steps are being taken for construction of Ayush educational institutions as per CCH/CCIM norm, for which proposal have been sent to Govt of India for setting up of 50 bedded Integrated Ayush Hospital in the State

Table 8.23 : Government Ayurvedic and Homoeopathic Medical Institutions and Services in Odisha

Year	Type of institution	Hospitals	Dispensaries	Doctors in position	Bed	Patient treated (in lakh)
2010	Homoeopath	4	561	475	125	71.56
	Ayurvedic	5	619	603	468	65.99
	Unani	0	9	6	0	1.15
2011	Homoeopath	4	561	401	125	56.34
	Ayurvedic	5	619	577	468	58.98
	Unani	-	9	5	-	0.80
2012	Homeopath	4	561	338	125	48.53
	Ayurvedic	5	619	497	468	55.39
	Unani	0	9	5	-	0.77
2013	Homeopath	4	561	319	125	44.94
	Ayurvedic	5	619	483	468	56.58
	Unani	0	9	5	0	0.62
2014	Homeopath	4	561	304	125	44.96
	Ayurvedic	5	619	483	468	54.04
	Unani	0	09	04	0	0.63
2015	Homeopath	4	561	304	125	41.72
	Ayurvedic	05	619	483	468	51.99
	Unani	Nil	09	04	Nil	5.01

Source: Directorate of AYUSH, Odisha, BBSR

Employees State Insurance (ESI) Scheme

This is an integrated multi-dimensional health insurance and social security scheme, being implemented in the State since 1960. It is one of the most effective and sustainable social security measures available to workmen employed in industrial and commercial establishments of varying nature and sizes. At present, medical care is provided to 6,07,246 insured persons and their dependents through 5 ESI hospitals and 40 ESI dispensaries and 14 important Centres in 20 districts. There are 297 beds and 139 doctors and 11 contractual doctors out of total sanctioned strength of 200 engaged to provide medical services to

employees. Besides, there are two annex wards and one 50 bed ESI Model hospital at Rourkela run by ESI Corporation. The ESI Corporation has prescribed an expenditure ceiling of ₹2,150 on medical care per insured person per annum from 1st April, 2015. It is shared between ESI Corporation and the State Government in the agreed ratio of 7:1 and the expenditure in excess of the ceiling is entirely borne by the State Government. Besides, immunization and family welfare programmes are also performed in these hospital/ dispensaries. The details are given in Table 8.24. One AIDS cell has been set up at the ESI Directorate to implement AIDS control programme, which is fully financed by National AIDS Control

Organization (NACO). AIDS awareness programmes are being conducted in different industrial areas. One STD laboratory and clinic functioning in ESI hospital, Bhubaneswar since 2004-05 has been upgraded to VCTC. As per the guidelines of Odisha Pollution Control

Board hospital waste management in ESI hospital at Choudwar (100 beds) and Bhubaneswar (50 beds) has been entrusted to M/s Saniclean (P) Ltd. on a contract basis since 2004.

Table 8.24 Family Welfare Programme and Immunisation Programme Conducted under ESI Scheme in Odisha

(In Numbers)

Name of the programme	Achievement During						
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Family Welfare Programme							
Vasectomy	13	14	12	14	14	-	7
Tubectomy	65	72	57	55	3	48	59
IUD	72	48	49	58	45	40	71
MTP	100	65	80	117	53	62	83
Oral Pills	9805	7445	4685	4811	73	4331	5849
Nirodh	3320	11292	10702	11894	3565	9678	8659
Immunisation Programme							
BCG	1122	1242	2232	2099	1881	2099	2013
Polio	7285	6239	8828	9875	10201	9805	9518
DPT	5663	6053	10219	10722	10378	10220	9826
T. Toxoid	11787	10089	10052	11198	10951	12315	11132
Measeals	728	NA	701	695	590	614	673

Source: Directorate of ESI, Odisha, BBSR

Infrastructure Strengthening

- During last one decade, 7408 major civil projects amounting of ₹2791 crore have been taken up for infrastructure development of peripheral institutions.
- 9 new 300 bedded DHHs have been taken up at Jharsuguda, Dhenkanal, Malkangiri, Kendrapara, Deogarh, Nuapada, Baragarh, Deogarh and Rayagada.
- Construction of 46 MCH wing (100 Bedded-16, 50 Bedded - 15, 30 Bedded-15) are in progress at high case load facilities (15 completed).



- Construction of 2,918 Sub Centres, 2,312 staff quarters, 114 labour room, 56 Operation Theatre, 7 Urban PHCs, 714 Drug Distribution Centre, 156 government Ayurvedic /Homeopathy dispensary, other health buildings are in progress.
- The Government have proposed to incentivize private hospitals in difficult areas through the affordable healthcare project (in PPP mode) and the Health Investment Promotion Policy (HIPP). Further, the process to set up a Cardiac Care Hospital at Jharsuguda is in process.

Strengthening the Tertiary Care: Super Speciality Care added in Medical Colleges:**Enhancing the MBBS and PG seats in MCH and setting up of New Medical Colleges:**

- In order to meet the demands of doctors in the State the number of MBBS seats has been increased from 150 to 250 in SCB Medical College, Cuttack, MKCG MC, Berhampur in the academic session 2016-17. Besides that steps are being taken for increase of seats from 150-250 at VIMSAR, Burla.
- Two new Medical Colleges, one at Baripada and the other at Koraput have started functioning from the year 2017-18.
- Planned for five more Government Medical Colleges in the State with 850 intake capacity.
- Out of these three Government Medical Colleges are under construction.
- The PG seats in different disciplines have been increased manifold since the year 2000 when the PG seats were just around 100. The super speciality courses have also been increased from only 4 seats in the year 2000 in two disciplines to 34 seats in 12 disciplines. With this, the State is able to generate 450 specialists and 34 super specialists per year.

As a result of these initiatives, the issue of shortage of doctors would be resolved very soon.

- Super speciality care in Medical colleges
- 46 Bone Marrow and 127 Kidney Transplantations have been conducted at SCB MC Cuttack.
- 1,240 dialysis are done every month by 24 functioning dialysis machines.
- More than 100 Open Heart Surgeries have already been conducted at SCB MCH Cuttack. At present, at least 160 coronary angiograms, 90 angioplasty with stenting, 20 pacemaker implants are done every month.
- The out patients volume in super-speciality facilities has increased four times during 2016-17 compared to the year 2000. Today, it stands at nearly 25 lakh per annum with 3 lakh admissions per year.

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New Initiatives

Special Fund for Strengthening Transportation for Improving Institutional Delivery in difficult areas:

Free Referral Transportation coverage is inadequate in spite of existing network of 102/108 ambulances in hard to reach / cut-off areas. Hence, to encourage the population residing in hard to reach areas for institutional delivery, additional monetary support in the form of “Support for reimbursement of transportation cost” shall be provided where 102/108/any other Government vehicle can't reach due to any issues. The reimbursement cost will be limited to ₹1,000/- per pregnant woman belongs to notified difficult villages for institutional delivery. The reimbursement cost includes expenditure incurred towards payment to Stretcher bearers or any other means used to reach nearest vehicle point/ public health facility. The reimbursement cost will be transferred to the pregnant woman account through DBT along with Janani Surakshya Yojana (JSY) package. About 95,000 Pregnant Women are expected to cover every year under this scheme.

Mother and Baby Kits under SAMPURNA Programme

The special strategy for reduction of infant and maternal mortality envisages all those steps that directs towards the improvement of morbidity condition. Taking step against prevention of hypothermia for new-borns and providing infection free environment to delivery cases is one stepping stone towards making reduction in morbidity chances. Baby Kit under SAMPURNA programme is branded as “SURAKSHYA KABACHA”. The objective of providing baby kit is to prevent hypothermia

among new-borns which is one of the reasons for increasing neonatal morbidity and mortality. This kit will be provided to all new-born immediately after the delivery. All the new-born delivered at public facility and home will be entitled for this kit the items bundled in the kit are 2 good quality cotton sheets-1m for wrapping the baby, a pair of stitched dress, cap and socks for the baby, cotton diapers (washable langoti), mackintosh, soap for hand washing and clean towels-2 for receiving the baby. Similarly, to ensure all delivery cases to have infection free contact, few articles contributing to maintain personal hygiene is provided under SAMPURNA Kit for mothers. Pregnant woman coming for delivery in public health facilities will get a pair of slippers, one bed sheet and one soap. These articles are non refundable. She will carry them for her personal use for maintaining hygiene. Annually a tune of ₹20 crore will be spent on this head to cater 4.20 lakhs mothers and 3.16 lakhs children of 15 targeted districts.

Assured monthly package of incentives for ASHA

ASHAs function at grassroot level to mobilise community for adopting right health practices, maximally utilize health services and contribute thereby for achievement of health indicators. Assured monthly package of incentives for ASHA against accomplishment of a set of identified activities at field level is intended to ensure delivery of a package of health services to the community and enable each ASHA to get a minimum of. ₹ 1,000/- per month. The package is a consolidation of nine routine tasks performed by ASHA in her locality like VHND, attending monthly meeting, updating RCH register, organising GKS meeting, mobilize children for

immunization, birth death certificate, malaria test, outbreak reporting and conducting FGD at village level. This noble initiative will benefit more than 4,7000 ASHAs of the State amounting to annual budget of ₹56.6 crore.

NHM Employee Welfare Funds

To provide an ambit of social security provisions for the contractual employees working under NHM, the creation of Employees Welfare Fund has been approved so as to provide financial assistance to the staff working under NHM towards annual health check-up, treatment of critical health conditions and ex-gratia support in case of death and disability. At present, there is no social security provisions for such staff except EPF for staff getting monthly remuneration below ₹15,000/-. To start with ₹ 1.00 crore will be kept in Employees Welfare Fund, which has been proposed in NHM PIP 2017-18 and in subsequent years, each employee will be asked to deposit

₹ 100/- per annum in the Employees Welfare Fund and same amount will be allocated also in the NHM PIP.

Bridge Course for Nurses under IGNOU

The Bridge course for Nurses has been developed by IGNOU in collaboration with MoHFW, GOI to improve knowledge, skills and competencies of in-service registered nurses (RNRM) to enable them to serve as competent human resource essential for strengthening the primary health care services at peripheral level. Two (2) Programme Study Centres (PSC) accredited by IGNOU have been established at Sundargarh and Kandhamal with an intake capacity of 30 candidates per PSC. The duration of training is 6 months. The

training cost per candidate is estimated to ₹1,30,900/-. On successful completion of the course, the candidate will be posted at Health and Wellness Centre as Community Health Officer (CHOs). In first batch 12 candidates have taken admission at Sundargarh PSC and in second batch 29 candidates have qualified in the written examination.

Swasthy Sahaya:

Despite sincere efforts and adequate budget provision for health system strengthening for providing quality services at public health facilities, still there are gaps in many areas like fully equipped OPD services, provision of facilitation services for patients facing difficulties in assessing various kind of services, provision of diagnostic services at one place and availability of facilities for consulting specialists of higher facilities through telemedicine etc. In view of above context, a new scheme called Swasthya Sahaya scheme has been approved under State budget for the year 2017-18 and an amount to the tune of ₹20.97 crore has been allotted to undertake the following activities.

a. Strengthening OPD Services at DHHs

- Equipping OPD with necessary infrastructure facilities for ensuring privacy and branding etc.
- Ensuring at least 8 fully functional specialities as per IPHS norms through engagement of Part Time Specialists as decided by concerned RKS.

b. Help Desk at FRUs and MCHs to look after the special needs of these disadvantaged groups, and provide individual attention and personalized services to patients those are in need of

- help. All services rendered by the Help Desk will be given free of Cost to the public.
- c. **Model District Initiative** is designed to address existing implementation gaps to maximise benefits of on going Schemes/Programmes, currently being implemented under Hand FW Deptt. It is not a new initiative rather a comprehending effort to improve the implementation status through evidence based planning, expert advice and support. Two (2) districts each in three (3) Zones have been identified for focus under this model district initiatives. The districts are Mayurbhanj and Cuttack in central zone, Keonjhar and Bolangir in northern zone and Koraput and Kandhamal in southern zone. It will facilitate in establishing model units in selected areas of operation for bringing implementation excellency in health care delivery system and utilize these models units as demonstration centres for wider replications.
- d. **Digital Dispensary Centres**
Digital Dispensaries will be implemented on a pilot basis initially in 14 locations in Nabarangpur district and may be subsequently be scaled up to another 11 locations based on its performance. These digital dispensary centres will function as an OPD with basic tests and medication dispensing to deliver primary care. Each dispensary will be linked to higher centre with telemedicine network. These digital dispensary centres will function as an OPD with facilities to conduct basic tests which include malaria detection, haemoglobin, blood sugar, BP, urine analysis, ECG, pregnancy detection and medicine dispensing to deliver primary care.
- e. **Mukhya Mantri Swasthy Seva Mission (MMSSM)**
A special scheme has been conceived and an amount to the tune of ₹ 825 crore has been allotted under State budget out of which ₹ 760 crore has been sanctioned in the current financial year for Infrastructure development of Public Health Institutions and to augment civil infrastructure in 2017-18 (Non residential and residential).
- f. **Public Health Response Fund** : Odisha is perennially affected with natural calamities such as heat wave, flood, cyclone, flash flood, hurricane and earthquake. So as waterborne and vector borne disease outbreaks are commonly occur along with new emerging infections like H1N1, Anthrax, Dengue and Chikungunya. So to initiate preparedness and management of the situation, ₹ 5.00 crore has been allotted in the current financial year under State budget.
- g. **Odisha State Treatment Fund** : Odisha State Treatment Fund has been created under Odisha State Treatment Fund Society and started functioning from 15th December, 2011. Patients belonging to BPL category (1997), Antodaya Anna / Yojana, referred cases from registered Mental Asylum / Destitute Home / Orphanage / Child Care institutions, unknown accident victims, patients having annual income up to ₹50,000/- in rural areas and ₹ 60,000/- in urban areas,

are entitled to cashless treatment at Public Facilities. In case of treatment of diseases like cancer, cardiac surgery and renal transplantation, the annual income limit is up to ₹1,00,000/-. 12 private hospitals within the State and Outside have been empanelled under OSTFS for treatment of above category of patients, in case treatment facility is not available or a patient has to wait inordinately for treatment, Superintendent of 3 Medical College and Hospitals are empowered to refer any patient to any of the private empanelled hospitals.

As on 31.03.2017, a total of 64,699 (Government hospitals – 59,155 and private hospitals -5,544) patients have been treated under OSTF and an total amount of ₹133.94 crore has been utilized for treatment of above said patients. An amount of ₹60 crore has been allotted under State Budget in the financial year 2017-18.

National Health Programme

I. Revised National Tuberculosis Control Programme (RNTCP)

The Revised National Tuberculosis Control Programme is implemented in Odisha in 1997 with the objective to detect 70% of infectious sputum positive TB cases and cure at least 85% of them and provide free and domiciliary treatment to the patients detected under Directly Observed Treatment Short Course Chemotherapy (DOTs) strategy. The Programme is implemented as per the technical operational and financial guidelines of RNTCP with DOTS through 31 implementing units, 314 TB units and 584 Designated Microscopy Centers (DMC). In addition, 50,204 DOT centers are functioning under the programme.

The Anti-TB demonstration and Training Centre (ATD and TC), Cuttack conducts External Quality Assessment (EQA) to maintain good quality sputum microscopy. The Intermediate Reference Laboratory (IRL) has been established at ATD and TC for culture and drug susceptibility test to diagnose MDR-TB patients since 2009. One laboratory at Regional Medical Research Centre (RMRC), Bhubaneswar has been established as National Reference Laboratory (NRL) by Government of India for diagnosis of MDR-TB. It has been accredited for culture and drug susceptibility test for solid culture supporting for follow up cultures from 7 districts of Odisha. Since inception of RNTCP till 2016, a total of 6,95,650 TB cases have been detected and treated. Total 5,50,958 cases have been cured and successfully completed treatment. Total TB patients put treatment in 2016 in 46,733 with treatment success of 89 % . During 2016, 1,96,765 patients from Government and 3,994 (till January 2017) from private sector have been entered in the “NIKSHAY” portal. TB HIV intensive package is implemented in all districts since 2010. Drug Resistant TB (DR.TB) centers established at Medical Colleges, Cuttack, Burla and Berhampur to provide indoor treatment to the diagnosed MDR-TB patients. The 4th DRTB centre at DHH, Koraput is under process of establishment and the 5th and 6th DRTB center have been sanctioned at DHH, Mayurbhanj and Sundargarh respectively. Additional 125 STS posts have been sanctioned for decentralized and monitoring supervision of treatment services from block level to the patients.

II. National Programme for Control of Blindness (NPCB)

This programme was introduced in the State in 1976 as a World Bank assisted project to reduce prevalence of blindness of Odisha. During 2015-16, 78,566 cataract operations were performed as against the target of

1,57,300. During 2015-16, about 6.20 lakh students were screened and 0.40 lakh students were detected with refractive error. 30,950 spectacles were distributed freely among the detected students. The achievements made during 2008-09 to 2010-11 are presented in Table 8.25.

Table 8.25 : Achievement under NPCB in Odisha

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Student screened	564225	388703	467368	421462	445585	620103
Students detected with refractive error	22906	19705	28889	33284	34527	40255
Free spectacles distributed	11624	11787	17586	21186	25176	30950
Health worker trained	309	-				
No. of teachers	277	316	343	3500	31	

Source : NPCB

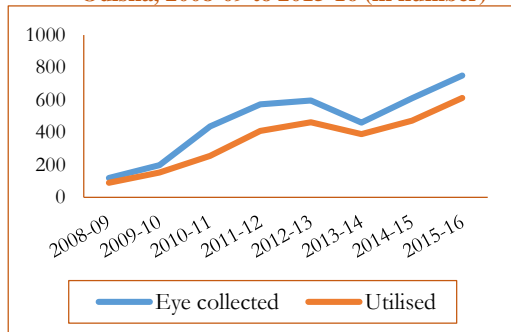
New Initiatives

- Strengthening of 75 Vision Centre and NGO Eye Unit.
- Construction of two number of 10 bedded Eye Ward at SDH.
- Mobile Ophthalmic Unit at DHH, Sundargarh
- Nine Eye Donation Counselor posted in Eye Banks and Eye Donation Centres

Eye Donation

Eye donation has been popularized and implemented in the State through different medical colleges and 9 private organizations. Figure 8.18 shows an increasing trend of eyes collected and utilized by five times from 2008-09 to 2015-16.

Figure 8.18 : Eye Donation: Collected and Utilized in Odisha, 2008-09 to 2015-16 (in number)



Source : Directorate of Health Services, Odisha

III. National Iodine Deficiency Disorders Programme (NIDDCP) :

IDD Monitoring laboratory has been established during 2014-15 in the State with the objective to supply iodized salt in place of common salt and identify the iodine deficiency by conducting IDD Survey safely in every 5 years. By the end of 2009, twenty districts have been surveyed and three districts were resurveyed. Out of the 23 surveyed districts, 17 districts are taken as endemic areas of Iodine Deficiency related disorders having goiter prevalence more than 10 % .

IV. National Leprosy Elimination Programme (NLEP)

The programme NLEP is now operations in the State supported by WHO, World Bank and other international agencies like Lepra India, HOINA and the German Leprosy Relief Association with the objective to eliminate leprosy by detecting all leprosy cases and to bring them under “Multi Drug Therapy (MDT).” Elimination of leprosy means to bring down the prevalence rate of leprosy to one or less than one per 10,000 populations. As a result of successful implementation of the programme, the prevalence rate of leprosy in the State came down from 121.4 per 10,000 population in 1982-83 to only one in 2015-16 and the Annual New Case Detection Rate (ANCDR) of 210 per 1,00,000 population during 1982-83 has come down to 16.55 by the end of January 2015. To reduce disability burden due to leprosy by strengthening Disability Prevention and Medical Rehabilitation (DPMR), 102 Blocks Leprosy Control Programme have been implemented in rural belt and in 22 urban areas with provision of 4,406 number of MCR foot wears to the needy. International Federation on Anti Leprosy Organisation (ILEP) is also providing additional support for successful implementation of DPMR programme in Odisha. Up to February 2016, reconstructive surgeries have been made on 338 deformed leprosy cured persons in Government health institution and one NGO named Mission Hospital, Bargarh. During 2017, the grade II disability was 174 as against 254 during 2014-15. During 2015-16, 4,000 ASHAs have been given training in leprosy. Besides, 25 medical and para-medical staff has been provided orientation and re-orientation training to

improve the quality of programme management in the State.

V. National Vector Borne Disease Control Programme (NVBDCP)

Out of the six vector borne diseases (Malaria, Lymphatic Filariasis, Japanese Encephalitis, Kalaazar, Chikungunya and Dengue) under the Indian National Vector Borne Disease Control Programme, Malaria control component takes the major share due to the sheer magnitude of the problem. In Odisha, out of 66.08 lakh fever cases screened for malaria 4.37 lakh are found positive during 2015. The number of Malaria positive cases per 1000 population was 9.97 during 2015 which was 9.08 during 2014. Around 73 lakh high risk population residing in 21 malaria endemic districts of the State are protected by Indoor Residual Spray (IRS) given twice in a year. Long Lasting Insecticidal Nets (LLIN) have been provided to 44 lakh family as intervention measure in different phases in high malaria endemic areas of the State by 2015. To protect the expectant mothers, the State has initiated a scheme “Mo Mashari”. 6.75 lakh LLIN have been distributed to the pregnant women in 12 districts in different phases by 2014. In Odisha, Dengue is endemic in all districts. Out of 12,632 dengue suspected samples 2,447 have been found positive during 2014-15. Death due to dengue during 2015 is only 2. In 2015 out of 81 blood samples, 46 positive chikungunya cases were found in Odisha. The most of the cases found positive from Shanti Nagar (17) and Trinath Basti (6) in Khordha district, Kudipadar (6) in Patrapur Block, Girisola village (12) and Kolipentha village (3) of Chikiti CHC of Ganjam district and Binjharpur (1) and Balichandrapur (1) of Jajpur district.

Regular trainings are conducted for specialists for management of complicated dengue cases in different hospitals. For Elimination of Lymphatic Filariasis (ELF) 10 districts have been covered under Mass Drug Administration (MDA) in 2015. Eight districts such as Malkangiri, Koraput, Nawarangapur, Nuapada, Gajapati, Puri, Balsore, and Kendrapara are being studied under Transmission Assessment Study (TAS) through WHO protocol.

Morbidity Management, Hydrocele operation and care of lymphedema are the other activities that are dealt under ELF programme. Details of Malaria positive and PF in Odisha are given in Table 8.26. During 2015 there are 34 positive cases of Japanese Encephalitis reported from Mayurbhanj (17), Jajpur (12), Ganjam (1), Sonepur (1), Kendrapara (1) and Khordha (2) districts, all cases are confirmed by RMRC, Bhubaneswar.

Table 8.26 : Malaria Epidemiological Situation in Odisha 2010 to 2015

Year	BSE/BSC	Positive cases	PF	Death	ABER	SPR	Pf%	API
2010	5240458	395651	350428	247	12.30	7.55	88.57	9.29
2011	4650799	308968	281577	99	11.13	6.41	91.47	7.13
2012	4609274	262842	244503	79	10.81	5.7	93.02	6.16
2013	5078132	227990	208488	67	11.76	4.49	91.45	5.28
2014	6352249	395004	342249	89	14.60	6.22	86.64	9.08
2015	6608453	436850	369533	80	15.08	6.61	84.59	9.97

Source : Directorate of Health Services, Odisha

Note :BSE : Blood Smears Examined,

PF :Plasmodium Falciparum,

ABER : Annual Blood Examination Rate

SPR : Slide Positivity Rate

API : Annual Parasite Incidence

PF5 : PF infections per 1000 malaria positive

VI. National AIDS Control Programme (NACP)

The district wise incidences of HIV/AIDS in the State as on March 2016 is given in **Annexure 8.3**. The highest number of HIV+ve cases (13,157) has been detected in Ganjam district, followed by Cuttack (5,025). Both

(44) is credited with the minimum number of positive cases. Out of 1,484 deaths due to AIDS, the highest number was registered in Ganjam (459) followed by Koraput (151). No death case has been recorded in Sonepur district so far. **Table 8.27** depicts the top and bottom five districts in Odisha according to incidence of death due to AIDS during 2016.

Table 8.27 : Top and Bottom Five Districts in Odisha according to Incidence of Death due to AIDS, 2016

Top 5 districts	Bottom 5 districts
Ganjam (459), Koraput (151), Bhadrak (82), Kendrapara (74) and Angul (72)	Sonepur (0), Deogarh (2), Boudh (4), Gajapati (6) and Keonjhar (6)

Source : Directorate of Health Services, Odisha

Table 8.28 indicates HIV+ve persons in the State by age, sex and mode of transmission by March, 2016. At present NACP-IV (2013-17)

has been implemented to prevent new infections, particularly among high risk groups.

Table 8.28 : Number of HIV +ve Persons by Age, Sex and Mode of Transmission (2002-17) March 2017

Sl. No.	Particulars	Male	Female	Total	%age
A. Age Group					
i.	Less than 14	1477	1198	2695	7%
ii.	15-24	1854	1829	3683	9%
iii.	25-49	20301	10112	30413	78%
iv.	50+	1719	578	2297	6%
v.	Not specified	44	20	64	0%
vi.	ANC	0	2166	2166	
	Total	25395	15903	41298	
B. Routes of Transmission					
i.	Sexual	22357	11983	34340	88%
ii.	Blood/Blood products	308	168	476	1%
iii.	Infected syringes and needles	600	50	650	2%
iv.	Parent to child transmission	1368	1127	2495	6%
v.	No. specified	762	409	1171	3%
vi.	ANC	0	2166	2166	5%
	Total	25395	15903	41298	

Source : Directorate of Health Services, Odisha Note :

ANC : Antenatal Clinics,

Infrastructure and human resources under the programme have been strengthened to develop a nation-wide Strategic Information Management System (SIMS). In order to institutionalize services at district and sub-district levels, 232 Integrated Counseling and Testing Centres and 202 facility integrated ICTCs are functioning in the State. In Odisha, more than 78 % of the total affected population are in the age group of 25-49 years and 38 % are female. There are 7 high vulnerable districts have been categorized as “A” and “B” according to HIV sentinel surveillance as follows.

“A” Category	Angul, Bolangir, Bhadrak and Ganjam
“B” Category	Balasore, Khordha and Koraput

More than 87 % of infections are occurring through sexual transmission. District AIDS Prevention and Control Unit (DAPCU) are functioning in 7 high vulnerable districts.

There are concerted efforts across the State to facilitate people living with HIVs access to different social benefit schemes for (PLHIVs). Through Madhu Babu Pension Yojana (MBPY) for People Living with HIV/AIDS (PLHIVs), 22,160 beneficiaries have been covered. 252 have been benefited from Mo Kudia Yojana, 984 benefited from Antodaya Anna Yojana and 472 have been receiving free ration.

Out of total allocation of ₹3469.90 lakh, an amount of ₹2981.40 lakh have been utilized for HIV / AIDS Control as on 31.03.2016.

VII. National Tobacco Control Programme (NTCP)

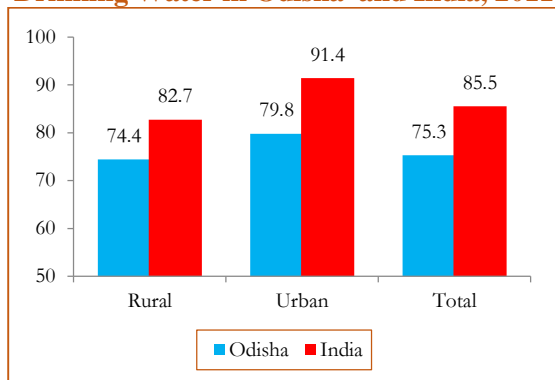
NTCP is evolved as national programme in 2007-08. Odisha is included in the second phase where District Tobacco Control Cell at Cuttack and Khordha. Another 11 districts were included under this programme till 2015-

16. The main objective of the programme is to train health and social worker, NGOs, school teacher, enforcement officers for control of tobacco user.

8.3 Water Supply and Sanitation

Safe drinking water supply and sanitation facilities are the essential ingredients to improved quality of life of people. The subsector not only remain a public health issue but also supplements to measure the human development index of the region. Odisha had a mixed response in the development of these health infrastructure in terms of access and delivery system. Figure 8.19 analyses access to safe drinking water (Taps/hand pump and tube well) in Odisha and India as per the 2011 census. In both rural and urban areas, the coverage in Odisha remained lower than national averages.

Figure 8.19 : Household Access to Safe Drinking Water in Odisha and India, 2011



Source : Census, 2011

However, Odisha lags far behind the national averages as regards access to toilet facilities. As per 2011 population census out of total 96.6 lakh households in the State 78.0 % households do not have any latrine within their premises and 76.6 % households still in habit of open defecation. The corresponding figures for SC and ST household stood at 66% and 77.4 %

respectively. As per 2011 census, out of total 96.61 lakh households in the State only 13.8 % households using tap water while 19.5 % using well and 61.5 % using hand pump tube well for drinking water purposes. In case of SC households the corresponding figures stood at 41.3 %, 8.3 % and 47.3 % respectively and in case of ST households, these figures were 24.8 % , 21.1 % and 47.0 % respectively. Besides, out of total 96.61 households, 22.4 % households have drinking water sources in their own premises while 42.2 % households are using water sources near their premises and 35.4 % away from their household.

Rural Water Supply

Safe drinking water is a basic necessity of human being. The “Rural Water Supply Programme” in the State has thus been included to provide portable water supply for the people of rural areas with the lunch of NRDWP (National Rural Drinking Water Supply Programme) from April 2009. In order to emphasize on ensuing sustainability of water availability in terms of portability, adequacy, convenience, affordability and equity with decentralized approach.

By the end of April 2017 there were 10,794 PWS schemes and 4,45,537 spot sources were installed in the State out of which 4,32,262 tube wells and 13,075 are sanitary wells. During 2016-17, total 356 PWS scheme were commissioned and 13,228 spot sources (both tube well and sanitary well) had been installed. This spot sources of drinking water supply also include 612 in schools, 559 in Anganwadies.

Besides, this 3,438 tube wells and 17 sanitary wells have been installed in different schemes like IAP, Biju KBK, and WODC during 2016-17. As per IMIS Report, there were 1,57,158

rural habitation in the State as on 1st April 2015 of which 61,872 were partially covered habitation. 356 quality affected habitations have been provided with drinking water facility during 2016-17 (Table 8.29). In first phase it will be implemented in 1,256 GP, and subsequently all the panchayats would be covered under this scheme. In the first phase, storage- based stand posts of 1,000-2,000 lts capacity will be constructed in 1,660 villages.

Table 8.29 : Achievement of Rural Water Supply Programme in Odisha

(in number)

Year	PWS commissioned	Spot sources (TW+CS)	Drinking water in schools
2010-11	907	12297	3207
2011-12	850	16795	2901
2012-13	691	32980	3250
2013-14	1074	31208	1526
2014-15	589	30714	1806
2015-16	391	21126	1245
2016-17	356	13228	612

Source : Rural Water Supply and Sanitation Organisation, Odisha

Swachha Bharat Mission (SBM)

Government of India launched “Swachh Bharat Mission” with effect from 2nd October 2014 aiming to achieve Swachh Bharat by 2019, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi. The National Flagship programme for sanitation i.e. Nirmal Bharat Abhiyan has been restructured and renamed as “Swachh Bharat Mission” (Gramin). The concept of Swachh Bharat encompasses ways to access every person with sanitation facilities including toilets, solid and liquid waste disposal systems, village cleanliness and provision of adequate drinking water. In line with the national goal, Government of Odisha

has also taken strong initiatives and strives to make Odisha Open Defecation Free (ODF) by 2019 by ensuring construction and use of Individual Household Latrine (IHHL) along with environmental cleanliness in rural and urban areas. The Unit cost of the Individual Household Latrine has been enhanced from ₹10,000/- to ₹12,000/- so as to provide water availability, including storing, hand washing and cleaning of toilets. The entire funding for incentive for construction of IHL i.e. ₹12,000/- will be met from Swachh Bharat Mission with share of both national and State Government. Up to September 2017, 30,595 numbers of Individual Household Latrine, 460 numbers of Community Toilet and 592 Public Toilets have been constructed.

Urban Water Supply and Sanitation Programmes

At present about 919.14 million liters of drinking water is supplied per day to 112 ULBs and two census towns benefiting a population of 66.04 lakh. Out of which, about 26.94 lakh urban population are benefited through 4.15 lakh house service connections and the rest 39.10 lakh population are served through 27,637 numbers of public stand posts. Besides, there are 33,997 numbers of hand pump tube-wells functional in different ULBs and census towns to cater to the water demand during non-supply hours and demand of population residing in areas uncovered by pipe water supply system. At present out of 2,016 wards of 112 ULBs and 2 census towns, 1,181 wards are fully covered, 708 wards are partly covered and 127 wards are not covered with piped water supply system. During the financial year 2016-17, a budget provision of ₹202.00 crore for ongoing and new schemes in different urban water supply and sewerage projects was made,

out of which ₹198.79 crore (98.41%) expenditure have been incurred. Out of 405 number of urban water supply projects during 2016-17 (384 ongoing and 21 new), 337 number of projects are completed and 68 numbers have been spilled over to current financial year. Similarly out of 58 urban

sewerage, 22 completed, 36 spilled over to 2017-18. There was a proposal for sinking of 922 number of hand pump tube wells during 2016-17 and 922 numbers have been sunk and commissioned. The details are given in Table 8.30.

Table 8.30 : Status of Urban Water Supply and Sewerage Schemes under State Plan during 2016-17

(₹ in Crores)

Scheme	No. of projects		Budget provision	Expenditure
	Sanctioned	Completed		
Urban Water Supply Programme	405	337	130.52	130.52
Urban Sewerage	58	22	2.50	2.24
Hand pump tube wells	922	922	7.14	7.14
Capacity Development and Preparation of Detailed Project Report (DPR)	64	8	2.50	2.27
RLTAP(Revised Long Term Action Plan)	-	-	-	-
SLB(Service Level Bench Marking)	19	02	0.37	0.29
Total	1468	1291	143.15	141.95

Source: Chief Engineer P.H.

Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

This is a centrally sponsored scheme with funding pattern 80:10:10 between Government of India, Odisha and concerned ULB. Implemented in Bhubaneswar and Puri town. Puri water supply scheme has been completed with a sanction amount of ₹ 166.90 crore. Expenditure up to March 2017 was ₹84.05 crore for this purpose.

Odisha Integrated Sanitation Improvement Project

Japan International Cooperation Agency (JICA)-assisted Odisha Integrated Sanitation Improvement Project works in the twin city of Cuttack and Bhubaneswar have been taken up to improve the sanitation condition of these two

cities including 632 kms of sewer network, (252 kms of in Bhubaneswar and 380 kms in Cuttack), 26 sewerage treatment plants and 48 pumping stations in the twin city. The project cost has been estimated around ₹2,974 crore out of which State Government share is ₹594 crore.

Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)

There are 17 numbers of scheme sanctioned under Urban Infrastructure Development Scheme for Small and Medium Towns with project cost of ₹406.83 crore. Out of these 9 works completed and commissioned, 4 works are in progress, and 4 projects will be taken up soon.

In order to improve the present water supply status a policy named “Odisha State Urban Water-Supply Policy” has been envisaged for

improvement of all Service Level Benchmarking (SLB) indicators in phases starting from 2015-16 to 2026-27.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

AMRUT programme for improvement of water supply in 9 ULBs (i.e. Bhubaneswar, Cuttack, Puri, Sambalpur, Rourkela, Balasore, Bhadrak, Baripada and Berhampur) has been taken up during 2015-16 and to be completed by 2019-20 with 50:50 % share between Government of India and Government of Odisha with the objectives to ensure that every household has access to a tap with assured supply of water and sewerage connection, to increase the amenity value of cities by developing greenery and well maintained open spaces (parks) and to reduce pollution by switching to public transport or constructing facilities for non-motorized transport (walking and cycling). Over 300 urban water supply projects have been completed / commissioned during 2016-17 and another 200 water supply projects are planned to be completed by the end of financial year 2017. A total of ₹1,26,79 crore for Rehabilitation of age old pipes water supply projects and metering projects are envisaged. During 2016-17, approximately 52 water supply projects with a cost of ₹487.00 crore are envisaged. For the year 2017-18 approximately ₹507.68 crore of water supply projects are envisaged.

AAHAAR

Aahaar program was launched on 1st April, 2015 in Odisha, with Housing and Urban Development, Government of Odisha as the nodal department to implement the program in the State with a objective to provide cooked hot meals : steamed rice and dalma, to the poor and needy people at affordable cost of ₹5.00 per meal from 11 AM to 3 PM each day at places

of public congregation in 21 outlets operative in five Municipal Corporation, 4 each in Bhubaneswar, Cuttack, Berhampur and Rourkela and 5 in Sambalpur. These outlets are mostly opened at hospitals and near bus stands, railway stations, courts, collectorate etc. In 2016-17, approximately 2 crores meals were served to the poor and needy people of the State. The successful implementation of Aahaar program in Municipal Corporations created natural demand and program got extended in phased mannered to 74 towns with 111 operational Aahaar centres covering all 30 districts of the State.

8.4 Welfare Programmes

To improve the quality of life of children and women, disabled, orphans, old age persons etc, a series of welfare programmers in the form of education, health care, social security measures has been implemented by the State Government.

Child and Women Welfare

The child populations (0-6 years) constitute 12.6 % of the State population as per 2011 census. The total children count 52.73 lakh comprising 27.16 lakh male and 25.57 lakh female. A number of schemes/programmes have been implemented by the Women and Child Development Department for welfare of children and women.

Integrated Child Development Scheme (ICDS)

This programme launched in 1975 is a unique early childhood development programme addressing health, nutrition, and the development needs of young children, pregnant and nursing mother. The State has achieved universalization of the programme by covering

all blocks through 318 ICDS projects, 20 projects in different urban areas through 72,587 Anganwadi Centres.

a) Services of ICDS

These are:- i) Early childhood care and Development (ECCD), Non-Formal pre-school education / Early Childhood Care and Education (ECCE),

Supplementary Nutrition, ii) Care and Nutrition Counseling, iii) Health Services iv) Community Mobilization, Awareness, Advocacy and IEC.

The centrally sponsored scheme with the funding pattern of 60:40 between the Center and the State respectively aims at providing a holistic development of children between 0 to

6 years of age and proper nutrition and health education of pregnant and lactating mothers, through packages of six essential services to children below the age of 6 years, pregnant women and lactating mothers. Figure 8.20 shows the trend of coverage of beneficiaries between 2011-12 and 2016-17. Details of information is given in Table 8.31. During 2016-17, 47.90 lakh beneficiaries have been covered under the scheme SNP in the State under different categories such as

- children below 6 months 4.12 lakh
- children 6 months to 3 years 19.18 lakh
- children 3years to 6 years 16.95 lakh
- pregnant and lactating women 7.65 lakh
- Total 47.90 lakh

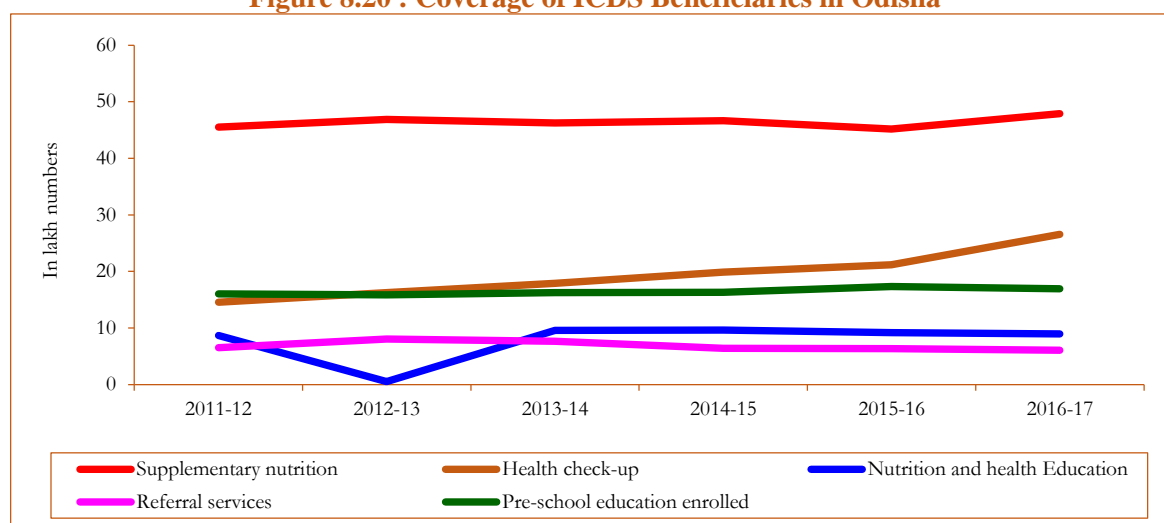
Table 8.31 : Beneficiaries Covered under ICDS Programme

(in lakh numbers)

Programme/ Scheme	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Supplementary nutrition	45.51	46.86	46.28	46.66	45.17	47.90
Health check-up	14.56	16.28	17.91	19.88	21.17	26.58
Nutrition and health Education	8.7	0.55	9.58	9.61	9.19	8.98
Referral services	6.54	8.05	7.67	6.40	6.33	6.07
Pre-school education enrolled	16.05	15.88	16.24	16.30	17.35	16.95
Immunisation attended						
i. D.P.T	4.48	6.67	6.37	6.46	5.91	4.58
ii. Polio	4.33	6.52	6.31	6.46	6.08	5.85
iii. BCG	4.41	5.73	5.45	5.17	4.85	4.48
iv. Measles	4.57	6.75	6.48	6.40	6.34	6.11
v. T.T	5.01	6.48	6.44	6.64	5.99	5.65

Source:- A.R.W and CD. Department

Figure 8.20 : Coverage of ICDS Beneficiaries in Odisha



Source : ARW & C.D. Department

Pre-School Education

Pre-school education kits with toys and different kinds of educational materials are provided to every AWC each year at a cost of ₹ 3,000/- per annum. During 2016-17, 16.95 lakh children in the age group 3 to 6 year were enrolled and 15.67 lakh attended up to March 2016.

Biju Sishu Surakshya Yojana

For creating a safety net for the children who are without biological or adoptive parents or legal guardians and the children who are affected with or infected by HIV and found to be the most vulnerable, assuring for their protection, development and sustenance by all possible ways, the Government has launched the Biju Sishu Surakshya Yojana on 22nd December, 2016. Support for technical education, scholarship assistance to meritorious student, support for Sukanya Samrudhi Yojana and marriage assistance are the major aspects covered under the scheme.

Rescue and Rehabilitation of the Children

Operation Muskan and Operation Smile have been taken in coordination with Home, Labour and ESI Department and the OSCPS for rescue and rehabilitation of children. The following Table - 8.32 shows light on the rescue position of children from other State and inside the State.

Table 8.32 : Rescue Position of Children of Odisha Inside and Outside

Name of the operation	Children rescued (in nos)	
	Inside the State	From other State
Smile	335	-
Smile-II	371	185
Muskan	779	87
Muskan-II	2417	193

Source : W&CD Dept., Govt. of Odisha

Introduced “Anganwadi Karyakartri Bima Yojana “ under LIC w.e.f 01.04.2004 with the premium of ₹280/- per annum per member.

Provided uniform to pre-school children @ ₹100/- per child.

Launched “Mamata”, a conditional cash transfer maternity benefit scheme during 2011 to provide partial wage compensation to pregnant and nourishing mothers, to increase ante-natal care, post-natal care and immunization to improve mother and child care practices especially breast feeding and complementary feeding of infants for pregnant women of 19 years of age and above for the first two live births except all Government/ PSU (Central and State) employees. The beneficiaries receive a total incentive of ₹5000.00 in four installments. Payment will be made by e-transfer from CDPO. The AWW and AWH will receive a cash incentive of ₹2000.00 and ₹1000.00 per beneficiary respectively. This scheme is being implemented in all ICDS projects of Odisha except Baragarh and Sundergarh district. During 2016-17 the benefit has reached more than 3.24 lakh women of the State. An amount of ₹203.59 crores has been provided under during 2016-17.

Launched MIS portal “Sishu Suchana on June 2017. To provide the multiple stake holders under the Integrated Child Protection Scheme (ICPS) such as JJBS, CWCS, DCPUs and SPUs for managing data pertaining to Child Need of Care and Protection (CNCP) and Child in Conflict with Law (CCIL).

“Adoption Leave” for adopting a child below 1 year to enable the female Government Servant to look after the child by taking 180 days maternity leave.

Odisha State Council for Child Welfare (OSCCW)

The Odisha State Council for Child Welfare is the nodal agency of the State to coordinate schemes, programmes and activities relating to children in difficult circumstances. There are six Balashrams (orphanages) and nine Anganwadi Training Centres in the State, under the supervision of the council. During 2016-17, ₹18.60 lakh under State Plan and ₹1.00 lakh under Non-Plan was provided for child welfare.

Adoption

A State Adoption Cell has been constituted for the promotion and monitoring of child adoption activities in the State. Grant-in-aid is given by the Government of India to NGOs for running Homes for Infants (Sishu Grehas) to promote adoption within the country. There are 18 Specialized Adoption Agencies (SAAs) in the State with a vision to have at least one SAA in each district. 19 numbers of children have been placed in inter country adoption and 175 children in in-country adoption.

Welfare of Persons with Disability The Handicapped

As per 2011 Census, there were 12.44 lakh disabled persons in Odisha, as against 268.11 lakh in India, which was 10.21 lakh during 2001 Census. Social group wise disabled persons in Odisha as per 2011 census is shown in Table 8.33 and disability by type in Odisha is presented in Table 8.34.

Table 8.33 : Social group wise disabled persons in Odisha (Census 2011)

Social group	Number(in lakh)
SC	2.38 (19.15 %)
ST	2.54 (20.39%)

Source: Census of India

Table- 8.34 : Disabled Persons by type in Odisha (Census 2011)

Sl. No	Type of Disability	Number (in lakh)
1	Visual	2.64 (21.20%)
2	Hearing	2.38 (19.11%)
3	Speech	0.68 (5.51%)
4	Orthopedic	2.60 (20.89%)
5	Mental	0.72 (5.82%)
6	Mental illness	1.26 (10.14%)
7	Multiple disability	1.73 (13.89%)
	Total	12.44 (100%)

Source:- Census 2011

A number of welfare schemes are being implemented in the State with financial support from Government of India to bring the handicapped in to the mainstream of the society. Some of these welfare schemes are detailed below:-

- i) Madhu Babu Pension Yojana.
- ii) Special schools for disabled children
- iii) Distribution of special aids and appliances.
- iv) Rehabilitation of cured leprosy patients.
- v) Training and rehabilitation of persons with disability.
- vi) Rehabilitation of physically and mentally challenged, socially disadvantaged persons.
- vii) Care and protection of spastic children.
- viii) Scholarship and stipend to disabled students.
- ix) Indira Gandhi National Disability scheme.

8.5 Social Security Measures

Indira Gandhi National Old Age Pension Scheme (IGNOAP)

This programme has been implemented in the State since 1995 to provide social security to the poor and destitute. It is a 100 % Central Scheme supported under National Social Assistance Programme (NSAP) and has been re-named since as Indira Gandhi National Old Age Pension (IGNOAP). All persons aged 60 and above are listed as BPL families and covered under IGNOAP. The rate of pension has been revised to ₹300/- per beneficiary per month up to age of 79 and ₹500/- for 80 years and above. During 2016-17, the provision of

₹55,496.91 lakh has been made under State Plan budget to cover 14.18 lakh beneficiaries. Besides, under Indira Gandhi National Widow Pension Scheme (IGNWPS) provision for ₹18,162 lakh was made under the State Plan to cover 4,95,459 beneficiaries.

Indira Gandhi National Disability Pension Schemes (IGNDPS)

Persons with severe or multiple disability in the age group of 18-79 years and belonging to a household below the poverty line will be eligible to get pension of ₹300/- per month in IGNDPS. During the year 2016-17, provision of ₹6353.64 lakh was made under the State Plan to cover 74,515 beneficiaries. (Annexure 8.4)

Madhu Babu Pension Yojana (MBPY)

Madhu Babu Pension Yojana (MBPY) by merging two pension schemes: "State Old Age Pension Rules, 1989" and "Odisha Disability Pension Rule, 1985" has been introduced in 2008. The present coverage under the scheme is 22.85 lakh beneficiaries and ₹44,999 lakh was provided under State Plan for the year 2016-17. The rate of pension is ₹300 per month per beneficiary up to the age of 79 years and ₹500 per month for 80 years and above.

Bhima Bhoi Bhinnakhyama Samarthya Abhiyan (BBSA)

The scheme is implemented from the year 2016-17 in Odisha. The aim of the scheme is for identification, certification, and distribution of Aids Appliances to the PwD by conducting single window camps in each block. For this purpose an amount of ₹.20 crore and ₹29.98 crore provided during 2016-17 and 2017-18 respectively.

National Family Benefit Scheme (NFBS)

Under NFBS one time grant of ₹20,000/- is being provided to a BPL family on the death of

the primary bread earner in the age group of 18-59 year. The assistance is paid to the head of the household such as the spouse, minor children, unmarried daughters and dependent parents. In case of an unmarried adult, the term household would include minor brothers and sisters. During 2016-17, ₹5940.00 lakh has been provided under State Plan budget to cover 24,700 number of beneficiaries.

Home for the Aged

In order to provide care and protection to needy persons of 60 years and above age, State Government is providing grant-in-aid to voluntary organisations for taking care of 75 elderly persons irrespective of sex, caste and religion to provide free food, clothing, and medical treatment and recreation facilities through three voluntary organization at Nimapara, Jagatsinghpur, Cuttack and a Day Care Centre at Ganjam . During 2016-17, ₹27.97 lakh was provided under State Plan. ₹ 3,050.00 lakh has been earmarked for the year 2017-18.

Besides, forty Old Age Home with intake capacity of 1,025 , sixty Day Care Centre with 3,000 intake capacity, three Mobile Medicare Unit and thirty three Drug De-addiction Centers are managed by different NGOs in the State.

The State Government has framed the Odisha Maintenance of Parents and Senior Citizens Rules, 2009 and constituted one Appellate Tribunal for each district and appointed the District Magistrate of the concerned district as presiding officer of the Appellate Tribunal. As per section 18(1) of the Act, the State Government has declared the District Social Welfare Officer (DSWO) of the concerned

district as “Maintenance Officer”. Government have decided to implement Winter Allowance@ ₹ 200/- per pensioner and Summer Allowance @ ₹100/- per pensioner out of State Plan funds along with the regular pension and given in every alternative financial years.

De-Addiction Center (Non-Clinical)

The scheme has been introduced in the year 2016-17 with a objective to conduct Information, Education and Communication Campaign, Project Management Unit and to support rehabilitation centres. ₹3.00 crore and ₹5.00 crore have been provided for the year 2016-17 and 2017-18 respectively.

Umbrella scheme for Transgender

The State Government have provided ₹ 250.00 lakh for the following welfare schemes for welfare of transgender during 2017-18.

- i. Financial support to the parents of transgender children.
- ii. Pre-matric scholarship for the transgender students studying in class VII to X.
- iii. Post-matric scholarship for transgender studying in class XI and above for studies in India.
- iv. Assistance for skill development training to transgenders.
- v. National pension scheme for transgenders.

8.6 Women Welfare

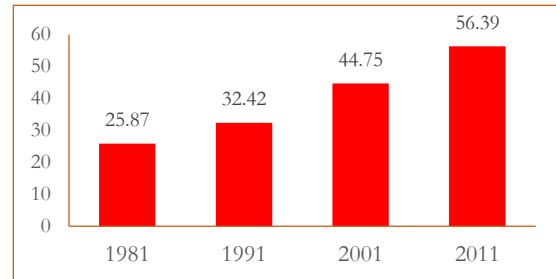
Women constitute nearly half (49.5 %) of the State’s total population as per census 2011. As such their socio-economic development is a sine qua non for sustainable growth of the economy. Generally, women experience considerable disadvantage and discrimination in

the society owing to gender differentiation. The gender bias propels disparities in terms of literacy, access to public health services and social development indicators. The female literacy of Odisha as per 2011 Census was 64% which was at par with national averages. But gender gap in literacy as per 2011 Census was the highest in Nuapada district and lowest in Khordha district.

Table 8.35 shows the Status of women in the total workforce in Odisha during the period from 1981 to 2011. The %age of women workers in Urban and Rural areas stood at 29.7 and 14.1 % respectively in the total workforce has been consistently increasing except 1981. The proportion of women in total main workers has increased from 16.18 % in 1981 to 17.87 % in 2011, while the proportion of women marginal workers as compared to total marginal workers has declined from 85.80 % in 1981 to 54.52 %

in 2011. This appears to be the outcome of increased literacy among women and higher participation of women in the Service Sector.

Figure 8.21 : Female worker in Odisha, 1981-2011



Source : Census of India

The proportion of women employees in the total workforce in the organised sector was 14.03 % by the end of December 2013. Their proportion in the public sector increased from 0.96 % in 2004 to 1.00 % in 2013, in case of private sector it increased from 0.11 to 0.12 during the same period.

Table 8.35 : Distribution of Female workers

Census Year	Female Workers (in Lakh)			Female Workers in Agriculture (in Lakh)			% of Female workers in agriculture to total female workers		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1981	25.87	24.51	1.36	11.06	10.8	0.26	42.75	44	19.12
1991	32.42	30.82	1.59	15.26	14.94	0.32	47.07	48.48	20.13
2001	44.75	42.13	2.61	9.59	9.45	0.14	21.43	22.43	5.36
2011	56.39	51.62	4.77	39.87	39.32	0.55	70.70	76.17	11.52

Source: Census of India 1981, 1991, 2001 and 2011,

**Government Policies and Programmes
Prevention of Dowry**

The following policies and programmes have been implemented in the State for welfare of women. The ‘Dowry Prohibition Act’ was enacted since 1991 to monitor dowry- related homicide, suicide and torture case, the

problems of sexual harassment of women in the work place, to propagate and organise dowry-less marriages, anti-dowry campaigns, seminars, workshops and street theatres to create mass awareness.

State Commission for Women

The State Commission for Women has been constituted in 1993 aims at protecting, preserving and safeguarding the rights and interest of women and dealing with atrocities on and offences against women in the State and intervenes the complaints of sexual harassment of women at working place and trafficking in women. It organized 9 Camp Courts covering 13 districts of Odisha during 2016-17. It received 2,924 complaints including 58 dowry deaths, 814 dowry tortures, 38 rapes, 69 kidnapping and 42 suspected deaths/suicide of 2,924 cases, 2,488 cases have been disposed off.

Odisha State Social Welfare Board (OSSWB)

The OSSWB was set up in 1954 to implement and organize regular welfare activities, seminars to generate awareness among the community about women's problem under

welfare programmes like Rajiv Gandhi National Crèche for Children of Working and Ailing Mothers and Family counselling Centres.

Working Women's Hostels

During the year 2016-17, an amount of ₹835.00 lakh has been provided for safe and affordable hostel accommodation for working women, singles, divorcees, separated women etc. at Ganganagar in Bhubaneswar for construction of 100 seated working Women's Hostel and identified the land in Sambalpur, Jajpur (Kalinga Nagar), Jharsuguda, Ganjam (Berhampur), Sundargarh (Rourkela), Dhenkanal and Rayagada districts.

Anti Human Trafficking Measures

Combating trafficking and bring offenders under custody, State Government has set up 37 Integrated Anti Human Trafficking Units (IAHTUs) during 2016-17 with budgetary support of ₹65.00 lakh.

Mahila Vikas Samabaya Nigam (MVSN)

The Nigam, an apex Co-operative Society working under Women and Child Development Department was established as the nodal agency for implementing schemes and programmes for welfare, development and empowerment of women and to enable them to take up different sustainable income generating activities. In collaboration with ORMAS, an agency of the Panchayati Raj Department, it has widened the scope of marketing of products of Women's Self Help Groups (WSHG) through Palishree Melas and "Sisir Saras". It provides funds for training of the poor and needy women in traditional occupations to upgrade their skills and sell their products. For the year 2016-17 an amount of ₹ 30.00 lakh has been provided for the different training programme under MVSN. It also facilitates loans to the disabled under the loan assistance scheme of the NHFDC. During the year 2016-17, MVSN has received the budgetary support of ₹90.72 lakh under the State Plan Scheme.

Odisha Livelihood Mission (OLM)

Aajeevika - National Rural Livelihoods Mission (NRLM) was launched by the Ministry of Rural Development (MoRD), Government of India in June 2011. In Odisha, the centrally sponsored programme Swarna Jayanti Gram Swarajgar Yojana (SGSY) has been restructured as National Rural Livelihoods Mission (NRLM). In Odisha, the scheme is being implemented by Odisha Livelihoods Mission (OLM) with a objective to enhance the socio- economic condition of rural poor through promotion of sustainable community based institutions. The targeted poor households are mobilized into Self Help Groups (SHGS) which are in turn federated into higher level institution at village as Cluster Level Forum (CLF) and G.P level Gram Panchayat Level Federation (GPLF). At present 24 districts (including 10 TRIPTI districts), 88 blocks, 1,498 GPs, 1.46 lakh SHGs, 13,236 new CLFs are functioning under NRLM. 11,296 community resource persons (CRP) for community mobilization under CLF, 1,626 Master Book Keepers (MBK) under GPLF are identified and placed for providing services.

31,604 rural youths have been trained under Placement Linked Skill Development Programme out of targeted 30,000 rural youth. 36,813 women farmers have been covered under Mahila Kisan Sasaktikaran Pariyojana (MKSP) till March, 2016. About 1, 26,328 households have been covered under livelihood intervention producer group that include agriculture/horticulture, livestock, NTFP and non- farm sectors etc. Besides, 805 Bank Mitras have been placed during 2016-17. About 58,113 SHGs have been credit linked with ₹682.00 crore. 798 (92.5%) Livelihood Support Persons (LSPs) have been selected to provide hand holding support. Rural Self Employment Institutes (RSETIs) are setup in all 30 districts of the State to promote rural entrepreneurship and self-employment. In 2016-17, 20,371 rural youths in the age group of 18-45 have been trained against the target of 18,000. To empower women in agricultural participation and productivity MKSP has been implemented in 9 districts of Odisha covering 27 blocks, 765 villages and 35,861 women farmers by the end of 31st March 2017. For ensuring sustainable livelihood of coastal fishermen households convergence have been made with Integrated Coastal Zone Management Project (ICZMP) by covering 21 GPs of 5 blocks in Puri and Ganjam districts.

181 Women Help Line Odisha

Inauguration of Toll free Women Helpline 181 on International Women's Day, 8th March 2017 in all 30 districts of Odisha to provide 24 hours immediate and emergency response to women

affected by violence through referral and information about women related government schemes programs. Total 86,153 calls received at the center till 31st July'2017.

Biju Kanya Ratna Yojana (BKRY)

The Biju Kanya Ratna Yojana (BKRY) has been implemented for the development of girls in three districts like Ganjam, Dhenkanal and Angul of the State on a pilot basis for three years with a objective to improve the Sex Ratio at Birth (SRB) and Child Sex Ratio (CSR), increasing enrolment of girls in elementary education and decreasing dropout of girls from schools, creating awareness on gender discrimination against girls, their nutrition, health and education. It also includes provision of toilets for girls in every school, self-defence training and along with promotion of access to education. It also seeks to sensitise adolescent girls on reproductive and sexual health issues, training of elected representatives and grassroots functionaries as community champions. Mass awareness on promoting the value of girl child is carried out by print and electronic media. Message on vehicle "Kanya Ratna" moved to villages in Dhenkanal, Angul and Ganjam districts.

8.7 Welfare of Scheduled Castes and Scheduled Tribes

Odisha occupies a unique position among the Indian states and Union Territories for having a rich and colorful tribal scenario. The scheduled tribes (ST) and scheduled castes (SC) constitute about 39.98 % of the State's total population (ST-22.85 % and SC- 17.13 % as per 2011 census). Out of 635 tribal communities in India, 62 are found in Odisha and 13 are Particularly Vulnerable Tribal Groups (PVTG). There are 93 scheduled caste communities in the State. The State Government implements several programmes for economic, educational and social development of the SC and ST communities.

Status of Scheduled Tribes (STs)

Tribal areas of Odisha present in extremely diverse socio-economic panorama. Tribals speak as many as 74 dialects. The PVTG in Odisha include Bonda, Chuktia, Bhunjia, Didayi, Dongaria Kondh, Juang, Hill-Kharia, Kutia Kondh, Lanjia Saora, Lodha, Mankirdia, Paudi Bhuyan, Soara and Birhor. Odisha comprise of 9.17 % of the total tribal population of our country followed by Madhya Pradesh (14.69 %) and Maharastra (10.08 %). About 44.7 % of the State's geographical area, which is known as Scheduled Areas extends over 119 out of 314 blocks in thirteen districts and a portion of Sorada Tahasil of Ganjam district. Table 8.36 provides the demographic and other details about ST population of Odisha and India.

Table 8.36 : Scheduled Tribe Population, Growth Rate and Sex Ratio In Odisha and India

Census	Population (in lakh)				Sex Ratio						Decadal Growth Rate (DGR)	
	Odisha		India		Odisha			India			Odisha	India
	Rural	Urban	Rural	Urban	Rural	Urban	Total	Rural	Urban	Total		
1961	41.36	0.88	291.1	7.74	1018	946	1016	989	897	987	-	-
1971	49.24	1.47	367.21	12.94	1009	958	1007	985	896	982	20.1	27.2
1981	56.42	2.73	484.28	32.01	1015	947	1012	988	912	983	16.6	35.8
1991	66.7	3.72	627.51	50.07	1006	930	1012	976	920	972	18.9	31.2
2001	76.98	4.47	773.38	69.88	1006	948	1003	981	944	978	15.82	24.5
2011	89.95	5.96	938.19	104.6	1031	991	1029	991	980	990	17.7	23.7

Source : Census of India, 2011

Status of Scheduled Castes (SCs)

Scheduled Caste population constitutes a sizeable chunk of the State population. The SC population in Odisha increased from 27.65 lakh (15.76 %) in 1961 to 71.88 lakh (17 %) in 2011. During 2011, the SC population constituted 17.13 % of total population of the

State as against 16.6 % at all India level. The State stood 11th among all States and UTs sharing 3.6 % of total SC population of the country. The SC population, sex ratio and decadal growth rate of Odisha over the Census years from 1961 to 2011 are presented in the Table 8.37.

Table 8.37 : Scheduled Castes Population in Odisha

Year	Total population	Male	Female	% of SC Population	Urban population	Rural Population	Proportion of rural SC population	Sex-Ratio*	Decadal Growth Rate (%)
1961	2764858	1371410	1393448	16	126026	2637832	95	1015	-
1971	3310854	1661038	1649816	15	207610	3103244	94	993	20
1981	3865543	1944071	1921472	15	363348	3502195	91	988	17
1991	5129314	2596464	2532850	16	550645	4578669	89	976	33
2001	6082063	3073278	3008785	17	703275	5378788	88	979	19
2011	7188463	3617808	3570655	17	969821	6218642	87	987	18

*Number of Females per 1000 males

Sources: Census data 1961-2011

Government Projects and Programmes

Development of ST and SC communities, elimination of all forms of exploitation and improvement of their quality of life has been the prime objectives of development policies of

the Government. A number of special programmes have been launched to uplift the socio-economic status of both ST and SC communities. Some of these programmes are briefly described below.

Special Central Assistance (SCA) to Tribal Sub-Plan (TSP)

The Special Central Assistance (SCA) is being provided by the Ministry of Tribal Affairs (MoTA) to the State Government as an additive to the state Tribal Sub-Plan (TSP) for all round socio-economic development of tribal people. About 44.70 % area of Odisha has been notified as scheduled area. It extends over 119 blocks in thirteen districts which covers ST population (about 68 %) of the total tribal population of the

State (Box 8.6). The SCA Funds are provided to the ITDA, Micro projects and MADA/ Cluster Blocks for implementation of Income Generation Scheme (IGS) and Infrastructure Development Scheme (IDS) in the ratio of 70:30. A portion of SCA is allocated to OSFDC for implementation of Dispersal Tribal Development Programme (DTDP). During 2016-17, ₹118.06 crore was received and spent as against the budget provision of ₹126.95 crore under SCA to TSP

Box 8.6: Scheduled Areas in Odisha

The entire districts of Mayurbhanj, Koraput, Malkangiri, Nabarangpur, Rayagada, Sundergarh and Kandhamal, R. Udayagiri Tahsil, Gumma and Rayagada blocks in Parlakhemundi sub-division of Gajapati district and Suruda Tahsil excluding Gazalbadi and Gochha Gram Panchayats of Ghumsar sub-division in Ganjam district, Kuchinda Tahsil of Sambalpur district, Telkoi, Kendujhar, Champua and Barbil Tahsils of Kendujhar district, Th. Rampur and Lanjigarh blocks of Kalahandi district and Nilagiri block of Balasore district.

Details of achievement under SCA to TSP from 2010-11 to 2016-17 are in Table 8.38

Table 8.38 : Achievements under SCA to TSP and Article 275 (I)

(₹ in crore)

Year	SCA to TSP				Article 275 (I)				
	Financial Achievement		Physical Achievement		Amount released			Expenditure Incurred	No. of works completed
	Amount released	Expenditure	Beneficiary covered (No)	Works completed (No)	For infrastructure	For EMRS	Total		
2010-11	123.93	123.93	82775	1205	64.66	31.78	96.44	96.44	955
2011-12	144.49	144.49	101038	1038	78.34	35.13	113.47	113.47	1625
2012-13	133.21	133.21	78212	1768	NA	NA	112.84	112.84	1131
2013-14	133.21	133.21	94374	1599	119.99	35.01	155.00	114.63	1437
2014-15	128.66	64.70	31753	625	68.18	10.39	79.57	70.30	858
2015-16	147.29	133.52	84274	1002	72.21	79.79	152.00	137.61	1376
2016-17	118.06	34.76	18664	211	52.05	67.49	119.54	20.78	1.79

Source SC and ST Development Department

Grants under Article - 275(1) of the Constitution of India

As per the provisions of Article 275 (1) of the Constitution of India, the Ministry of Tribal Affairs gives annual grants to States to promote welfare of STs on the basis of ST population %

age in the State. The assistance covers the entire TSP area. Under this scheme, 100 % grants are given to meet the cost of specific projects for tribals and raise the level of administration of Scheduled Areas. Projects like Ekalavya Model Residential Schools (EMRS) from Classes VI to XII, roads, bridges, minor irrigation projects,

hostel buildings, educational complexes, drinking water facilities and electrification of tribal bastis, and establishment of multipurpose service centres are usually implemented under the programme. During 2016-17, an amount of ₹159.54 crore was sanctioned under Article 275 (1) (Table 8.38)

Focused Area Development Programme (FADP)

Odisha Tribal Development Society (OTDS) has been facilitating implementation of Focussed Area Development Programme (FADP) with the objectives to ensure

sustainable livelihood of ST families through land and non-land based livelihood activities, to develop suitable infrastructure so as to improve the standard of living of tribal, to develop backward and forward linkages and strengthen the local institutions and to improve the governance system in the tribal villages by strengthening the Community Institutions. FADP, a decadal Perspective Plan is being implemented by converging resources from SCA to TSP, Article, 275(I), MGNREGS, NHM, RKVY, Biju Krushak Vikas Yojana (BKVY). The sectoral interventions taken up under FADP is presented in Table 8.39

Table 8.39 : Sectoral Intervention under FADP-2016-17

Sl. No	Name of the Intervention	ITDA covered	Number of beneficiaries	Expenditure (₹Lakhs)
1	WADI	22	1591	172.80
2	Horticulture Plantation	22	127	18.22
3	Improved Agriculture	22	570	12.58
4	Vegetable Cultivation	22	1802	78.61
5	Lac Cultivation and Processing	4	223	15.17
6	Rubber Plantation	5	246	116.03
7	Sericulture	1	200	4.00
8	Farm Mechanisation	4	477 families	39.11
9	Coffee Plantation	1	-	29.20
10	NTFP Collection and Marketing	3	20 SHG	5.00
11	Dairy	3	192 families	20.40
12	Fishery	3	132 families	13.08
13	Micro Enterprise Development	22	1199 SHG	124.01
14	Goat Rearing	2	198 families	19.40
15	Skill Training Programme for Tribal Youth	22	2207	280.74

Source: Annual Activity Report, ST and SC Development, Minorities and Backward Class welfare Department, Government of Odisha

Modified Area Development Approach (MADA)

Adopted during the 6th Plan, this programme aims at development of tribal populations residing outside TSP areas in contiguous patches having a population of 10,000 or more, of which, at least 50 percent are tribal. There are 45 MADA pockets in 46 blocks of 17 districts covering 5.68 lakh population.

Individual family oriented income-generating schemes for ST communities and critical infrastructure development programmes are implemented in these pockets. During 2016-17, a sum of ₹1.20 crore has been released under SCA to TSP for implementation of various IGS and infrastructure development programmes.

Clusters

The cluster approach was introduced during the 7th Plan in order to bring smaller areas with tribal concentrations beyond the MADA pockets into the mainstream of development. Contiguous areas with at least 5,000 population and 50 % tribal concentration are identified as clusters. There are 14 such clusters spread over 13 blocks in 10 districts with 62,021 tribal population. During 2016-17, funds to the tune of ₹40.00 lakh have been released under SCA to TSP.

Micro Projects

Seventeen Micro Projects have been implemented in the State for all round development of 13 Particularly Vulnerable Tribal Groups (PVTG), recognized by the Government of India, with 78,519 population residing in parts of 20 blocks of 12 districts. Out of these 17 Micro Projects, 13 are located within the scheduled areas and the remaining four outside the TSP area. During 2016-17, an amount of ₹2.10 crore was sanctioned out of SCA to TSP funds and 69 projects were completed covering 6,109 number of families. Since the socio economic indicator of PVTGs remain below the State average of other scheduled tribes and general categories the Conservation-cum-Development (CCD) Plan for 12th plan period (2012-13 to 2016-17) has been prepared as per the guidelines of MoTA, Government of India with different thrust areas like social sector development (Educational Complex for PVTGs boys, health and nutrition

and safe drinking water and sanitation), sustainable livelihood development (agriculture, horticulture, animal husbandry, irrigation, social security, promotion of SHG, market linkage), conservation of culture, (construction of community centre, promotion of traditional art, craft and dance, construction of tribal museum), infrastructure development (connectivity, electrification, housing) and capacity building institutional mechanism. During, 2016-17, an amount of ₹16.54 crore has been released to 17 micro projects under CCD plan.

Dispersed Tribal Development Programme (DTDP)

The dispersed ST population of the State (27 percent) located outside the ITDA/ MADA/ Cluster pocket areas, is covered under a special project for tribal development called “Dispersed Tribal Development Programme (DTDP). Odisha Scheduled Castes and Scheduled Tribes Development Finance Co-operative Corporation Ltd., is the nodal agency that operates DTDP for the total dispersed STs. For this population, DTDP has been implemented and has the following salient aspects: (i) to provide subsidy money for various bankable income generating schemes, (ii) to initiate community minor irrigation projects such as LIPs, WHS and Check-Dams, (iii) to conduct training programmes for promoting self-employment and wage-employment and (iv) to enrol ST households as members of cooperatives. ₹1.47 crore was utilised and 1,591 ST families were assisted during 2016-17. Details of the achievements of different programmes are given in Table 8.

Table 8.40 : Achievement under Different SC and ST Development Programmes 2008-09 to 2015-16

(₹ in lakh)

Year	MADA Project		Cluster project		MICRO project		DTDP	
	Expenditures	No. of families	Expenditures	No. of families	Expenditures	No. of families	Expenditures	No. of families
2008-09	700	4,889	70	593	200	2096	1179.85	9748
2009-10	610	4,772	70	546	200	2038	1200.00	8896
2010-11	843.4	5104	130.9	791	260.02	2015	1012.50	7088
2011-12	766.37	8241	56.30	172	242.03	2621	754.00	9756
2012-13	466.90	6215	47.36	1482	248.34	7433	725.52	8,456
2013-14	391.42	101.43	54.81	1039	265.46	7036	421.39	11,980
2014-15	220.00	7542	42.23	701	246.04	6929	173.37	9896
2015-16	364.90	7566	81.64	2073 (24 Projects)	727.32	10766 (190 projects)	290.00	6418

Source : Annual Activity Report, ST and SC Development, Minorities and Backward Class welfare Department, Government of Odisha

(PMAGY)

The scheme is implemented in the selected villages having 50 percent or more SC population by way of implanting various welfare schemes in convergent manner and to provide gap filling funds for further development of these villages to make them adarasha villages. The share of Government of India and Government of Odisha is 50:50. 100 villages having more than 50 percent SC population have been included in the scheme by Ministry of Social Justice and Empowerment. Under PMAGY, ₹40.00 crore have been provided for development works in 100 selected villages in first phase. In second phase, ₹9.50 crore have been provided for additional 75 selected villages.

Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP)

During 2016-17, amount of ₹2404.72 lakh has been received from the Ministry of Social Justice and Empowerment. 15,727 families have been provided with financial assistance

under IGS during 2016-17. Skill Development Training has provided to 4,791 SC youths during 2016-17 for which ₹15.14 crore have been utilised from SCA to SCSP.

Protection of Civil Rights of SC and ST

- **Legal Aid Assistance:** Legal aid is being extended to SCs/STs to fight cases for establishing their rights, titles, interest and possession over disputed land and also for cases under the PCR Act, 1955 and the POA Act, 1989. State government have opened 390 legal aid cells by engaging 400 legal retainers (30 numbers in district head quarters, 46 in sub divisional head quarters and in 314 blocks of the State). The retainers have been trained through Video Conferencing for providing free legal services to ST / SC people. Besides this, the State Government have set 3 special courts in Balasore, Bolangir and Cuttack for speedy trial of cases.
- **Inter-Caste Marriages:** Cash incentives of ₹50, 000 is being provided for inter-caste marriages between SCs and other castes in

Hindu communities for social integration and removal of untouchability. There have been increasing trend of inter-caste marriages from 197 to 1,107 between 2009 and 2016 with cash incentive of ₹545.48 lakh.

Atrocities against SC/ST communities:

Monetary Relief is being provided to the victims of atrocities belonging to SC/ST communities after joint enquires conducted by the Senior Police officers and the Magistrates as per the norms and scale prescribed in the schedule annexed to Rule -12 (4) of the SCs and STs (POA) Rules, 1995 and as per Amended Rules 2016. During the year 2016-17, ₹ 976.81 lakh has been spent for payment of monetary relief to 2,329 ST / SC atrocities victims.

Setting up of “SANJOG” a 24 hour help line (155335) developed and maintained by OCAC for public awareness generation programme for redressal of grievances relating to various schemes of Government Departments for implementation of PCR and POA Act.

State Level Scrutiny Committee for verification of Fake Caste Certificates

As many as 4,258 cases regarding issue of fake caste certificates have been received from different sources. 2,622 such cases have been forwarded to the District Vigilance Cell. All cases have been processed out of which 1,001 cases have been finalised and implemented.

Welfare of Minorities

Multi Sectoral Development Plan (MSDP) is being implemented since 12th Five Year Plan period in 15 blocks and in one ULB of 5 districts viz Sundargarh, Gajapati, Kandhamal, Rayagada and Bhadrak.

For construction of Haj House at Jagamara mauza of Bhubaneswar, a sum of ₹ 1.00 crore have been provided in the financial year 2016-17.

Odisha SC and ST Development Finance Co-operative Corporation (OSFDC)

Established in 1979-80, OSFDC aims at implementing various economic development programmes for the benefit of poor SC, ST (DTDP) and scavenger communities of the State under various income generating schemes. The detailed picture on the achievement of OSFDC has been presented in Table 8.41 from 2012-13 to 2016-17. For the year 2017-18, the OSFDC has planned to finance 32,717 beneficiaries under SC sector and 6,160 beneficiaries under ST sector.

Odisha PVTG Empowerment and Livelihood Improvement Programme (OPELIP)

OPELIP is launched in 12 districts of Odisha viz. Malkangiri, Rayagada, Angul, Deogarh, Ganjam, Nuapada, Keonjhar, Sundargarh, Gajapati, Kandhamal, Kalahandi and Mayurbhanj covering 1,019 villages and 84 GPs with duration of 8 years from 2016 to 2023-24 having financial outlay of ₹795.41 crore for 62,356 targeted households. Its objectives are to improve the food and nutrition security and livelihood opportunities adopted to tribal communities and build the capacity of the targeted households, improving their agricultural practices, promoting income generating micro-enterprises and ensuring access to education, health and other services and improving communities infrastructure .

Implementation of Forest Right Act (FRA), 2006

The enactment of “ Scheduled Tribes and other Traditional Forest Dwellers (Recognition of forest rights) Act, 2006” accorded access rights

of tribal over forest land. Till end of June 2017, 4,06,745 individual claims and 5,952 community claims have been distributed. The area coverage under individual claim is 6,09,552 Acres and under community claims is 3,27,171 Acres

Table 8.41 : Achievement of OSFDC

(₹ in Lakhs)

Sector	2013-14		2014-15		2015-16		2016-17	
	No. of beneficiaries	Amount subsidy	No. of beneficiaries	Amount subsidy	No. of beneficiaries	Amount subsidy	No. of beneficiaries	Amount subsidy
SCA to SCP (SC)	33449	3237.04	24843	3254.34	30293	3208.13	15727	2758.14
SCA to TSP (ST)	11980	741.48	9884	1145.25	4730	980.31	1591	147.35
NSKFDC (scavengers and dependents)	-	-	0	0	-	-	-	-
Term Loan Scheme	271	20.33	0	0	-	=	178	118.29

Source: Annual Activity Report, ST and SC, Development, Minorities and Backward Class welfare Department, Government of Odisha.

Odisha Tribal Empowerment and Livelihood Programme (OTELP)

This programme is being implemented from 2005 by ST and SC Development Department, Government of Odisha with the financial assistance from DFID, IFAD and WFP to ensure the livelihood and food security of poor tribal household through equitable self-managed and sustainable exploitation of natural resources. Currently, the programme is in its 3rd phase of implementation covering 1,042 villages, 30 blocks of 7 districts and benefiting 56,180 (42,201 STs and 8,069 SCs) households. The programme covers total 12,395 landless households, 39,474 BPL households and 6,121 vulnerable/ destitute households in its different stages of operation. The new OTELP plus covers 585 Micro Watersheds (MWS) in 32 Blocks of 9 districts. Government of Odisha have up-scaled the same to nearly 585 MWS in 9 districts covering 1,566 villages and is to be funded out of State

Plan and other convergence programme. Development of skill is primarily required for livelihood sustainability during 2016-17. By the end of December 2016, OTELP was conducting different vocational training programme for unemployed youths and trained 3,044 such youths in different institutions. This programme also helps the rural poor not only providing immediate wage employment but also improve natural resources in the long run with ecological balance resulting in improved availability of food and help the poor to get out of poverty. To achieve this poverty eradication goal, OTELP is also trained people regarding the following fields.

- i. Development of cultivable land
- ii. Diversification of cropping
- iii. Inter cropping system
- iv. Sequential cropping
- v. Introduction of new crops and varieties
- vi. Verme composing
- vii. Promoting farm mechanisation
- viii. Water resource development

Academy of Tribal Language and Culture (ATLC)

ATLC functions with a view to develop tribal languages and their cultural heritage in the State. Major activities of ATLC for the year 2016-17 are as follows;

- Published a series of bilingual dictionaries, folklore, journal “SARGIFUL”, and “BANAJA”, Bhasa Sikhya Pustika etc.
- Felicitated 20 talents on 26th January 2017 in different fields such as dance, music, art, craft, literature, social service etc.
- Organised two language training programme on Desia languages at Koraput
- Sponsored 14 Tribal Dance troupes to 8 different tribal Mohotsavs inside the State.
- Organised State levels children festival “SARGIFUL” from 20th to 22nd December 2016 and Annual Adivasi Mela-2017 from 26th January to 9th February as a Nodal Agency.

SC and ST Research and Training Institute (SCSTRTI)

This is the premier and the oldest Tribal Research Institute in the country established in 1952. The institute received the nodal status for the country in 2008-09 on the merit of its impressive performance. This institute has also been recognised as the National Resource Centre in December, 2014 by MoTA, Government of India. The Tribal Museum of the institute has been identified as Model Interactive Tribal Museum by UNESCO. It publishes the research journal titled the “ADIVASI” (bi-annual) under the theme-tribal society, culture, problems and developments. Its activities during 2016-17 are summarized below:

- Four national and state level research studies were undertaken and completed in 03 tribal dominated states of India.
- Two evaluation studies have been taken up by the Institute.
- Conducted 53 numbers of training programmes and six (6) State level seminar / workshop and National level seminar.
- Completed Empirical ethnic status studies for “Rajuar” and “Bagal” communities.
- Organised National Tribal Craft Mela from 18th to 24th November 2016 in collaboration with DH and CI, ATLC, Bhubaneswar and support from MoTA, Government of India. A total of 146 participants from 34 tribal communities of 8 States of India had participated in the Mela.
- National Tribal Dance Festival was organised in collaboration with ATLC, Bhubaneswar from 15th to 17th December, 2016 at Utkal Mandap Open Air Auditorium, Bhubaneswar.
- Total 14 tribal dance troupes were participated in the dance festival which attracted about 3,000 spectators.

Tribal Development Co-Operative Corporation of Odisha Ltd (TDCCOL)

This is the apex organization that functions mainly in the TSP area since 1971-72. Its field outlets include thirteen branch offices located in tribal areas of ten districts. It has 96 storage go-downs with 38,616 MTs capacity located in TSP areas. Its objective is to ensure fair and remunerative prices to primary tribal collectors of minor forest produce items by providing marketing linkages and granting consumption-cum-production loans to tribal in order to protect them from money lenders. During

2016-17, the following major interventions were taken up by the TDCCOL:

- Nominated TDCCOL as State Procurement Agency for implementation of Minimum Support Price for 10 Minor Forest Products under MSP and MFP in Odisha.
- To ensure marketing of the products processed / manufactured by tribal communities under its brand name “Adisha” for agri and forestry produces and “Tribes Odisha” for Handicraft and Handloom products with turnover of ₹ 128.38 lakh during 2016-17.
- Partnership with HPCL and BPCL petroleum companies for operating three petrol pumps in Gajapati and Sundargarh district with turnover of ₹ 5619.00 lakh during 2016-17.
- Launching the “Innovative Marketing Van” and “Tribal World Outlet” to facilitate the marketing of various exclusive products on wheel at strategic locations in and around Bhubaneswar.
- Launching the products like, Lemon Grass oil, Kusum oil, Neem oil handloom and handicrafts.
- Opened a souvenir shop and a tribal food court in the campus of SCSTRI, CRP square, Bhubaneswar to create platform for the tribal community to attract the local and foreign tourists and the SHG to earn their sustainable livelihood.
- Implemented the solar light project “Lighting the Million Lives” covering 225 to 250 villages in the first phase with a project cost of ₹.20.00 crore

Annexure 8.1 : District wise IMR, CDR and CBR for the year 2011 to 2013

District/State	2011-12			2012-13		
	IMR	CDR	CBR	IMR	CDR	CBR
Anugul	48	6.9	17.5	48	7.1	17.5
Balangir	98	10.3	20.8	97	9.9	20.7
Baleshwar	47	6.8	18.8	45	6.7	18.6
Bargarh	62	9.9	17.6	60	9.8	17.4
Baudh	60	10.5	28.8	57	10.3	29.1
Bhadrak	51	8.8	20.5	48	7.9	20.2
Cuttack	61	6.8	19.5	56	6.8	19.4
Debagarh	62	8.7	18.4	60	8.8	18.4
Dhenkanal	69	10.6	20.9	67	10.5	20.6
Gajapati	61	7.8	20.2	56	7.5	19.9
Ganjam	59	8.5	19	56	8.3	18.9
Jagatsinghapur	51	7.1	17.7	48	7	17.6
Jajapur	50	7.8	18.3	48	7.6	17.8
Jharsuguda	47	8.1	17.0	42	8	16.9
Kalahandi	56	6.7	20.2	54	6.7	19.9
Kandhamal	86	9.9	21.2	82	9	21.1
Kendrapara	61	9.9	18.7	58	8.8	18.3
Kendujhar	57	9.3	20.3	53	9.2	20.4
Khordha	72	8.4	18.9	67	8.2	18.7
Koraput	53	7.9	25.1	48	7.8	24.8
Malkangiri	52	7.1	24.4	48	7.1	24.3
Mayurbhanj	50	8.7	19.8	47	8.5	19.7
Nabarangapur	51	7.7	24.1	50	7.7	24.3
Nayagarh	65	9.1	20.6	60	8.9	20.3
Nuapada	52	7.6	22.5	49	7.4	22.2
Puri	78	8.9	17.5	75	8.7	17.3
Rayagada	61	8.5	22.7	58	8.4	22.5
Sambalpur	52	9.3	18.6	47	9.1	18.6
Sonapur	52	7.7	20.9	49	7.5	20.6
Sundargarh	49	7.2	17.9	47	7.2	17.8
Odisha	59	8.2	19.8	56	8.1	19.6

Source : Annual Health Survey, 2013, Government of India

Annexure 8.2 : Medical Institutions in Odisha with Beds as on 31st March 2016

Sl. No	Districts	Government Sector					Private Sector			
		Total Hospital	CHC	PHC (N)	MHU	Total Med. Instn.	Health	Beds	Medical Institution	Nos. of Beds
1	Angul	4	10	31	1	46	166	472	55	304
2	Balasore	3	16	68	2	89	275	636	48	345
3	Bargarh	2	14	46	5	67	204	249	52	350
4	Bhadrak	4	7	50	1	62	178	409	24	437
5	Bolangir	5	15	42	15	77	226	444	113	213
6	Baudh	1	5	12	2	20	67	167	3	6
7	Cuttack	13	18	57	0	88	332	2440	375	3357
8	Deogarh	2	4	7	1	14	42	118	0	0
9	Dhenkanal	7	10	32	5	54	167	385	26	238
10	Gajapati	2	8	20	8	38	136	259	9	164
11	Ganjam	5	30	89	0	124	460	1722	107	1073
12	Jagatsinghpur	1	9	37	1	48	189	268	33	138
13	Jajpur	4	12	56	1	73	260	482	30	181
14	Jharsuguda	2	6	15	1	24	66	182	20	266
15	Kalahandi	4	16	43	19	82	242	525	149	232
16	Kandhamal	6	14	36	17	73	172	494	16	80
17	Kendrapara	2	9	45	0	56	227	268	15	100
18	Keonjhar	9	17	61	12	99	351	533	35	153
19	Khurda	21	13	46	1	81	202	965	254	5415
20	Koraput	2	16	48	15	81	307	354	49	46
21	Malkangiri	4	8	25	10	47	158	286	15	0
22	Mayurbhanj	8	28	82	20	138	589	852	30	185
23	Nabarangapur	2	11	39	11	63	289	236	16	70
24	Nayagarh	1	12	37	1	51	166	489	28	165
25	Nuapada	1	6	17	7	31	95	180	10	134
26	Puri	6	16	45	1	68	241	684	58	243
27	Rayagada	4	11	36	17	68	235	293	19	284
28	Sambalpur	4	11	31	4	50	167	1349	79	589
29	Sonepur	4	5	18	7	34	89	161	18	21
30	Sundargarh	8	20	56	14	98	390	635	85	1188
	Odisha	141	377	1227	199	1944	6688	16537	1771	15977

N:B

CHC - Community Health Centre , PHC (N) - Primary Health Centre (New)

PHC - Primary Health Centre MHU- Mobile Health Unit

Source: Directorate of Health Services, Odisha, Bhubaneswar

N:B - 116 PHC converted to CHC, 35 area hospital converted to CHC

Annexure 8.3 : : District wise HIV Scenario in Odisha as on March, 2017

Sl. No	Districts	HIV +ve			Percentage	AIDS cases	Percentage	Death due to AIDS	Percentage
		Gen.	ANC	Total					
1	Angul	1333	134	1467	3.6	76	4.4	72	4.8
2	Balangir	1018	76	1094	2.6	61	3.5	61	4.1
3	Balesore	1217	87	1304	3.2	62	3.6	62	4.1
4	Bargarh	644	51	695	1.7	10	0.6	10	0.7
5	Baudh	46	7	53	0.1	4	0.2	4	0.3
6	Bhadrak	766	56	822	2.0	90	5.2	88	5.9
7	Cuttack	5388	102	5490	13.3	119	6.9	46	3.1
8	Deogarh	76	15	91	0.2	2	0.1	2	0.1
9	Dhenkanal	281	26	307	0.7	20	1.2	18	1.2
10	Gajapati	712	74	786	1.9	7	0.4	6	0.4
11	Ganjam	13232	751	13983	33.9	531	30.8	461	30.7
12	Jagatsinghpur	227	24	251	0.6	18	1.0	18	1.2
13	Jajpur	460	22	482	1.2	56	3.2	54	3.6
14	Jharsuguda	272	31	303	0.7	22	1.3	20	1.3
15	Kalahandi	755	26	781	1.9	7	0.4	7	0.5
16	Kandhamal	114	17	131	0.3	23	1.3	20	1.3
17	Kendrapara	405	38	443	1.1	75	4.3	74	4.9
18	Keonjhar	440	22	462	1.1	8	0.5	8	0.5
19	Khurda	2032	97	2129	5.2	60	3.5	52	3.5
20	Koraput	2042	102	2144	5.2	162	9.4	152	10.1
21	Malkangiri	202	12	214	0.5	11	0.6	6	0.4
22	Mayurbhanj	772	79	851	2.1	39	2.3	36	2.4
23	Nabrangpur	861	40	901	2.2	22	1.3	20	1.3
24	Nayagarh	866	39	905	2.2	11	0.6	10	0.7
25	Nuapada	453	14	467	1.1	19	1.1	19	1.3
26	Puri	777	37	814	2.0	75	4.3	68	4.5
27	Rayagada	759	50	809	2.0	68	3.9	53	3.5
28	Sambalpur	2236	74	2310	5.6	40	2.3	34	2.3
29	Sonepur	102	12	114	0.3	0	0.0	0	0.0
30	Sundergarh	644	51	695	1.7	28	1.6	23	1.5
	Odisha	39132	2166	41298	100.0	1726	100.0	1504	100.0

Source: Odisha State AIDS Control Society

Annexure 8.4: District wise Beneficiaries under MBPY, IGNOAP, IGNWP and IGNDP for 2015-16

Sl. No	Name of the District	No of Beneficiaries				
		MBPY	IGNOP	IGNWP	IGNDP	Total
1	Angul	57286	33512	13594	2651	107043
2	Balangir	73692	70405	18556	2864	165517
3	Balesore	87599	74570	25026	4710	191905
4	Bargarh	65774	51288	17972	3909	138943
5	Baudh	21177	13520	5531	857	41085
6	Bhadrak	65779	46769	14736	3798	131082
7	Cuttack	113385	76758	27815	5985	223943
8	Deogarh	16150	10882	3630	912	31574
9	Dhenkanal	60175	41257	14396	2616	118444
10	Gajapati	36564	15611	12234	1209	65618
11	Ganjam	165590	103735	49534	7795	326654
12	Jagatsinghpur	53803	43543	10757	2427	110530
13	Jajpur	89820	61211	19644	4623	175298
14	Jharsuguda	23795	16420	6355	1361	47931
15	Kalahandi	86901	54295	22013	2898	166107
16	Kandhamal	67787	19709	12253	1631	101380
17	Kendrapara	74009	63395	13161	3244	153809
18	Keonjhar	79274	47416	25148	3082	154920
19	Khurda	91168	51748	20604	5544	169064
20	Koraput	69857	65867	24378	2521	162623
21	Malkangiri	32580	29371	9585	976	72512
22	Mayurbhanj	117956	70160	42535	4823	235474
23	Nabrangpur	55719	50801	16764	2503	125787
24	Nayagarh	47567	37431	10456	2126	97580
25	Nuapada	37209	40090	8006	1234	86539
26	Puri	71331	60241	17713	4854	154139
27	Rayagada	49484	48184	21811	1904	121383
28	Sambalpur	60075	31713	12365	2630	106783
29	Sonepur	30545	30149	6779	1198	68671
30	Sundergarh	82973	58580	25219	3869	170641
	Odisha	1985024	1418631	528570	90754	4022979

Source : Activity Report, 2015-16, Social Security with empowerment of person with disability, Govt of Odisha

Annexure 8.5 : Literacy Rates in Odisha by Communities, 2011 Census

District	All Communities			S.T.			S.C		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1 Angul	77.53	85.98	68.64	61.86	72.55	51.19	70.45	80.27	60.42
2 Balasore	79.79	87.00	72.28	50.06	61.47	38.71	72.79	82.16	63.12
3 Baragarh	74.62	83.68	65.38	64.86	75.47	54.3	68.43	78.47	58.27
4 Bhadrak	82.78	89.64	75.83	43.49	53.21	33.6	74.03	84.07	63.89
5 Bolangir	64.72	75.85	53.50	54.93	67.78	42.34	63.42	74.23	52.52
6 Boudh	71.61	83.34	59.79	63.84	77.88	50.17	66.9	79.54	54.29
7 Cuttack	85.50	91.11	79.55	57.93	68.87	46.79	76.08	84.89	66.91
8 Deogarh	72.57	81.92	83.05	62.38	73.17	51.67	67.63	78	57.16
9 Dhenkanal	78.76	86.18	71.00	60.39	70.82	50.04	71.47	80.86	61.87
10 Gajapati	53.49	64.38	43.18	43.66	55.39	32.83	51.03	62.4	40.45
11 Ganjam	71.09	80.99	61.13	49.71	60.71	38.89	59.62	72.31	47.22
12 Jagatsinghpur	86.59	92.38	80.63	66.55	76.06	55.5	78.33	86.58	59.95
13 Jajpur	80.13	86.84	73.29	47.6	59.68	35.48	70.3	79.29	61.02
14 Jharsuguda	78.86	86.61	70.73	68.72	78.78	58.7	74.79	83.97	59.53
15 Kalahandi	59.22	71.90	46.68	49.29	63.31	35.84	61.97	73.95	50.29
16 Kandhamal	64.13	76.93	51.94	58.34	72.12	45.58	66.12	78.88	53.9
17 Kendrapara	85.15	91.45	78.96	62.39	70.7	54.01	75.16	84.34	65.99
18 Keonjhar	68.24	78.12	58.28	53.24	65.22	41.56	73.77	83.81	63.76
19 Khordha	86.88	91.78	81.61	69.33	69.42	58.64	76.82	84.99	68.36
20 Koraput	49.21	60.32	38.55	35.36	46.2	25.37	52.64	64.72	41.05
21 Malkangiri	48.54	59.07	38.28	35.23	44.91	26.25	65.59	75.82	55.12
22 Mayurbhanj	63.17	73.76	52.71	53.11	65.28	41.36	66.06	76.4	55.88
23 Nuapada	57.35	70.29	44.76	51.01	65.13	37.73	60.03	72.4	47.97
24 Nabarangpur	46.43	57.31	35.80	38.54	49.46	28.02	57.61	67.73	47.6
25 Nayagarh	80.42	88.16	72.05	66.29	78.62	54.2	71.59	81.49	61.25
26 Puri	84.67	90.85	78.28	74.62	83.08	64.71	75.77	84.6	66.77
27 Rayagada	49.76	61.04	39.19	36.69	47.87	26.72	53.48	66.19	41.46
28 Sambalpur	76.22	84.35	67.93	59.76	76	55.59	72.08	81.69	62.38
29 Sonapur	74.42	84.40	64.04	66.78	77.38	56.05	70.34	80.95	59.29
30 Sundargarh	73.34	81.01	65.48	65.08	73.98	56.39	70.92	79.75	62.03
Odisha	72.87	81.59	64.01	52.24	63.7	41.2	69.02	79.21	58.76

Source : Census of India



All the improvements in the fiscal indicators have emerged from rapid growth of GSDP. The advance estimate of GSDP for the year 2017-18 at constant 2011-12 prices representing a rise of 7.14% over the year 2016-17. The State Government is also lying higher emphasis on social sector development, which is an essential pre requisite for human and overall economic development of the State. Government has also focused on generation of employment opportunities through skilled work force which leads to improving the quality of life of the people. The gross per capita income increased from ₹11,935 in 1999-2000 to ₹77,193 in 2017-18. There has been a remarkable growth in total revenue receipts over the years. During 2017-18 it raised by 19.87% over 2016-17. Total revenue receipts and total revenue expenditure are budgeted at 21.38% and 19.77% of GSDP respectively in 2017-18. Capital outlay is estimated at 4.99% of GSDP in 2017-18. Higher growth rate in GSDP compared to growth in debt stock coupled with low cost of borrowing has made the fiscal policy of the State sustainable and has created solvency in debt. The State's overall fiscal scenario is stable.

9.1 Introduction

The economy of the State and its public finances influence each other. Many of the fiscal parameters are also measured in terms of GSDP. Therefore, it is useful to have a look at the State's economy first. The State economy has been growing relatively fast since 2002-03 onwards. It grew at an annual real average rate of 8.82 percent at 2004-05 prices during the 10th Plan (2002-07) and at 7.05 percent during the 11th Plan (2007-12). Continuing the momentum, the State has achieved an annual real average growth rate of 7.02 percent during the 12th Plan (2012-17) period at 2011-12 prices though the economy slowed down with a low growth rate of 1.80 percent in 2014-15 at market prices in real terms. The advance estimates of Gross State Domestic Product (GSDP) for the year 2017-18 at constant 2011-12 prices anticipate a level of ₹346,294 crore representing a rise of 7.14 percent over the first revised estimate for the year 2016-17.

The State finances were on an unsustainable path with high deficit and debt levels at the turn of the century and the subsequent couple of years. Through a slew of fiscal consolidation measures, the deficit and debt levels have been brought down. The fiscal space generated is being utilized to meet the developmental needs. The budget size has also increased manifold from ₹11,801 crore in 1999-2000 to ₹106,911 crore in 2017-18. The State Plan outlay too has increased substantially from ₹3,352 crore in 1999-2000 to ₹49,000 crore in 2016-17. As a budgetary reform measure, in the Budget Estimates for 2017-18, the State Government have done away with the distinction between Plan and Non-Plan in line with the Government of India. The Estimates of Expenditure are now grouped into four broad categories:

Administrative Expenditure, Programme Expenditure, Expenditure out of Disaster Response Fund and Transfers from the State Government. The distinction between Revenue and Capital account continues as before within these broad categories. With the removal of the Plan and Non-Plan distinction, the focus of budgeting and expenditure classification will shift to revenue and capital expenditure, which would form the basis of policy formulation and resource allocation. The Programme Expenditure was estimated at ₹57,800 crore in the Budget Estimates for 2017-18.

A sound infrastructural foundation is the key to the overall socio-economic development of the State that acts as a magnet to attract investment into the State and also help in improvement of the quality of life of the citizens. In keeping with this objective, the State Government have been consistently increasing investments in key infrastructure like road, railways, ports, airports, irrigation, and power. The public investment in creation of physical infrastructure has been consistently rising, raising capital outlay to about 5 percent of GSDP in 2016-17. The State Government is also laying emphasis on Social Sector Development, considered an essential pre-requisite for human and economic development of the State. It builds a strong edifice for stimulating the growth of the economy and enhances the quality of life of the people. The objective is to prepare a healthy, educated and appropriately skilled work-force so as to increase employment opportunities, reap productivity gains and raise the income levels. Government has also focused on generation of employment opportunities through skilling of manpower. All these developmental efforts have resulted in increase of annual per capita

income from ₹11,935 in 1999-2000 to ₹80,991 in 2017-18 at current prices.

It should be recognized that given the federal polity of India, no State exists in isolation and developments at the national level and often in other States have an impact on Odisha, though sometimes the impact is direct and easily observed while in some other cases, the effects are more indirect and less readily observed. An important development at the national level in the current financial year expected to impact the State's economy and finances are summarized below.

9.2 Goods & Services Tax (GST)

Constitution (One hundred and First Amendments) Act, 2016 was made in September, 2016 to enable the Centre and the States to implement Goods and Services Taxes. Odisha passed the Odisha Goods and Services Tax Act in May 2017 and implemented Good and Services Tax along with all the States and the Centre from 1st July 2017. The Commercial Tax Organization and the Government have undertaken massive stakeholders' education campaign and training of the officers and staff before implementing the GST. Since the GST Act is administered with a robust IT back up, managed by GSTN, the training on IT is regularly given to the officers and staff. The Stakeholders are also being updated through advertisement. Helpdesks are set up to meet the day to day queries of the taxpayers.

Seventeen taxes i.e. Central Taxes like Central Excise Duty, Services Tax and State Taxes like Value Added Tax, Central Sales Tax, Entry Tax, Luxury Tax, etc have been subsumed in

GST. Instead of plethora of taxes, one tax, that is, Goods and Services Tax is now collected. The GST has two components; Central GST collected by the Centre and Odisha GST collected by the State and besides, Integrated GST which is levied on inter-state transactions. However, to avoid dual control and make the administration hassle free for the taxpayers, central and state officers have been authorized in their respective Central GST Act and Odisha GST Act to administer the respective Acts. The taxpayers have been divided between the Central and State authorities. The Central authority will administer Central GST Act, State GST Act and also Integrated GST Act for the taxpayers allotted to them and similarly the State authority will do the same for the taxpayers allotted to them.

GST will now bring in simplicity in tax administration, eliminate cascading and make ease of doing business as the law and provisions are similar across the Centre and the States. GST will also help growth of industry and economy. State is to get compensation of any loss on account of introduction of GST for five years. For the purpose of compensation, the collection for 2015-16 is taken as base year collection and projected growth rate of 14 % has been taken. The projected collection is determined at applying annual 14% growth to the base year's collection and the actual collection is deducted from the projected collection to arrive at the loss to be compensated. The state is getting compensation on bi-monthly basis.

The State Government could successfully renegotiate with Indian Oil Corporation Limited (IOCL) to secure the revenue stream from oil sector through a revised agreement with IOCL signed on 25.9.2017 on the basis of the decisions taken in the meeting of Working Group held on 18.8.2017. As per the revised terms, the State Government will provide interest free loan @ ₹700 crore per annum for 15 years for the period 2016-17 onwards. This amount will be repaid by IOCL from 16th year onwards @ ₹700 crore per annum over a period of 15 years. The VAT collected by IOCL on oil will be deposited with the State Government. Accordingly, IOCL deposited ₹2,934.79 crore towards VAT withheld for the tax period December, 2015 to July, 2017. Subsequently, IOCL is also paying the current VAT dues.

9.3 Fiscal Situation till 2016-17 and outlook for 2017-18

The overall fiscal scenario of the State continued to be broadly satisfactory over the years. The basic prudential policy of maintaining revenue account surpluses to finance the capital outlays continued to be successfully implemented since 2005-06 thereby reducing the need for incurring fresh debt. Simultaneously, more fiscal space has been generated to enhance the capital expenditure for development of the State. However, there are certain inherent risk factors confronting the State.

The State Government has implemented the 7th Central Pay Commission recommendations for its employees and pensioners w.e.f. 01.01.2016 in the financial year 2017-18. There will be

pressure on the expenditure front on account of revision of pay and pension of the State Government employees and pensioners.

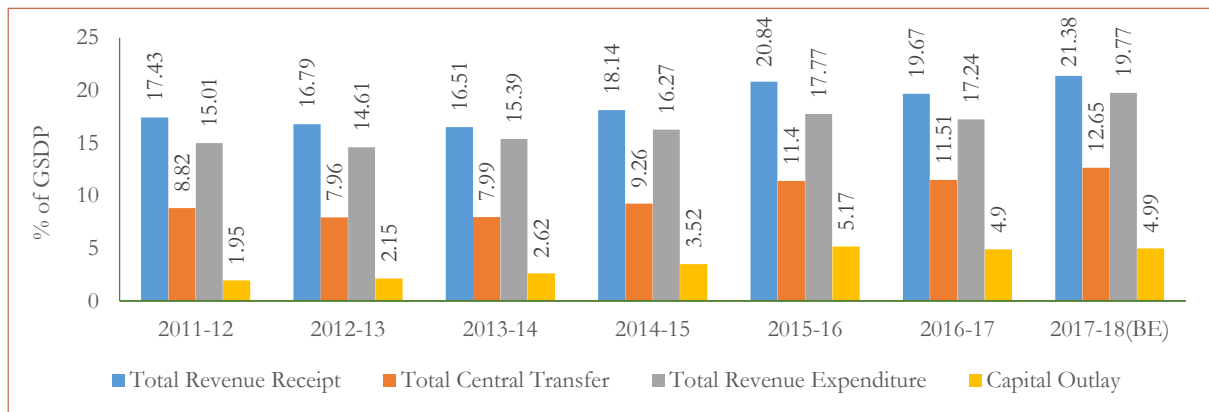
However, there has been remarkable growth in total revenue receipts over the years in line with the growth in GSDP, which has increased the revenue base substantially. The total revenue receipts of the State was ₹40267.02 crore in 2011-12 which is expected to be raised to ₹88931.52 crore in 2017-18 (BE), registering a growth of 120.85 percent during the period. Growth in revenue receipts during 2017-18 is expected to be 19.87 percent over 2016-17. Capital outlay as per 2017-18 (BE) was ₹20773.53 crore which was only ₹4496.09 crore in 2011-12. The total expenditure under consolidated fund has been estimated to be ₹106,911 crore in 2017-18 (BE), which is 23.02 percent more than the actual expenditure of ₹86,903 crore made during 2016-17.

Figure 9.1 presents the trends in broad fiscal aggregates that sum up the fiscal position of the State. Total revenue receipts (as % of GSDP) have gone up from 16.51 percent in 2013-14 to 19.67 percent in 2016-17, and 21.38 percent in 2017-18 (BE). The central transfers as a percentage of GSDP (including both shared taxes and grants), after dropping noticeably in 2012-13 and 2013-14, have increased from 2014-15 onwards mainly on account of the transfer of central assistance for 66 restructured Centrally Sponsored Schemes (CSS) through Consolidated Fund of the State and discontinuance of the previous practice of direct transfer of central assistance to various implementing agencies.

Revenue expenditures were slightly lower at 17.24 percent of GSDP in 2016-17 as compared to 17.77 percent in 2015-16. The State could exceed the capital outlay level of 3 percent of GSDP in 2015-16 and 2016-17 with the actuals at about 5 percent of GSDP. Total revenue

receipts and total revenue expenditure are budgeted at 21.38 percent and 19.77 percent of GSDP respectively in 2017-18. Capital outlay is estimated at 4.99 percent of GSDP in 2017-18.

Figure 9.1: Broad Fiscal Trends in Odisha

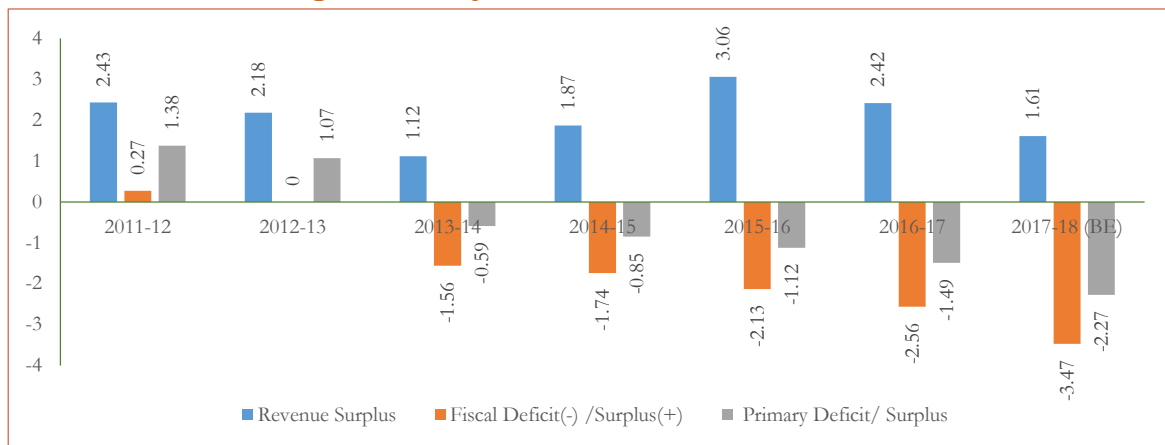


Source : Finance Dept. Govt. of Odisha

The fiscal deficit which indicates the net borrowing of the State has risen since 2012-13 to finance higher capital outlay. The zero fiscal deficit position in 2012-13 has changed to 2.56 percent of GSDP in 2016-17. This implies that the revenue surplus and entire borrowing

during this time period has financed higher capital outlay to the extent of about 5 percent of GSDP. It is budgeted at 3.47 percent of GSDP in 2017-18. Figure 9.2 depicts the trends of the major deficit indicators.

Figure 9.2: Major Deficit Indicators (% of GSDP)



Source : Finance Dept. Govt. of Odisha

Fiscal consolidation in Odisha has been undertaken under a rule based framework

through the enactment of Odisha Fiscal Responsibility and Budget Management

(FRBM) Act, 2005. The management of State finances in Odisha is guided by FRBM Act, 2005 and the recommendations of successive Finance Commissions.

9.4 State's Own Revenue

The State's Own Revenue (SOR) as proportion of GSDP has improved from 8.61 percent in 2011-12 to 8.73 percent in 2017-18 except for the year 2016-17 when it was 8.16 percent of GSDP because of substantially smaller mining revenue. The rising trend is mainly driven by

State's Own Tax Revenue (SOTR). The deterioration in collection of State's Own Non Tax Revenue (SONTR) as proportion of GSDP from 2013-14 onwards is generally ascribable to lower receipt of mining revenue consequent upon the fall in metal prices in the international market.

9.5 State's Own Tax Revenue

The tax structure of the State has been subtly changing over the years, and particularly in the recent period. The trends in collection of taxes as percentage of GSDP are presented in the table 9.1.

Table 9.1: Trends in Collection of Taxes (% of GSDP)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (BE)
Sales Tax (VAT)	3.55	3.69	3.62	3.76	3.96	3.55	3.81
State Excise	0.60	0.56	0.60	0.64	0.77	0.74	0.87
Stamp Duty & Regn Fees	0.22	0.20	0.20	0.24	0.65	0.36	0.28
Entry Tax	0.57	0.50	0.54	0.53	0.50	0.47	0.53
Motor Vehicle Tax	0.34	0.28	0.29	0.28	0.32	0.32	0.32
Electricity Duty	0.24	0.22	0.23	0.54	0.37	0.43	0.43
Land Revenue	0.23	0.15	0.15	0.20	0.18	0.12	0.15
Profession Tax	0.05	0.04	0.05	0.04	0.05	0.05	0.05
Other Taxes	0.03	0.02	0.02	0.00	0.01	0.01	0.01
Total :	5.82	5.74	5.70	6.31	6.81	6.06	6.44

Source : Finance Dept. Govt. of Odisha

The collection of sales Tax (VAT and CST), being a consumption based tax, has been ranging between 3.55 percent and 3.96 percent of GSDP during 2011-12 to 2017-18. Followed by VAT, the collection of state excise and entry tax are budgeted at 0.87 percent and 0.53 percent of GSDP during 2017-18. In this period, the entry tax has exhibited a fluctuating trend. A fluctuating trend is also observed in the case of motor vehicle tax and stamp &

registration fee. Profession tax has been stagnating between 0.04 percent and 0.05 percent of GSDP during this period. However, there is increasing trend in total own tax revenue from 5.70 percent of GSDP in 2013-14 to 6.06 percent in 2016-17.

9.6 State's Own Non-Tax Revenue

Mobilization of resources through non-tax sources serves the twin purpose of having a rational revenue structure and generating

resources to finance greater expenditure. During 2011-12 to 2017-18 (BE), the growth rate of collection of State's own non-tax revenue has been uneven. This high variation is mainly attributed to receipts from sources like Mining Royalty, Interest, Dividend, and receipts from the Forest and Irrigation sectors. The degree of unevenness in the collection of non-tax revenue from Non-Ferrous Mining and Metallurgical Industries is highest because of

volatilities in the global non-ferrous and metal prices. The SONTR as proportion of GSDP is estimated at 2.28 percent for 2017-18 (BE), which was 3.09 percent in 2012-13 and 2.10 percent in 2016-17. The SONTR constitutes only 26 percent of the State's Own Revenues for 2016-17. Table 9.2 presents the trends in collection of non-tax components as proportion of GSDP.

Table 9.2: Trends in Major Non Tax Components

(% GSDP)

Non Tax Components	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (BE)
Interest	0.25	0.22	0.42	0.11	0.17	0.11	0.08
Dividend	0.12	0.22	0.15	0.34	0.17	0.15	0.17
Education	0.01	0.03	0.03	0.01	0.02	0.01	0.02
Medical	0.02	0.00	0.01	0.01	0.02	0.01	0.01
Water Supply & Sanitation	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Housing	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Forest & Wildlife	0.08	0.07	0.03	0.02	0.05	0.03	0.01
Irrigation	0.14	0.15	0.15	0.20	0.21	0.19	0.17
Non-Ferrous Mining & Metallurgical Industries	1.98	2.18	1.86	1.69	1.75	1.31	1.59
Others	0.15	0.18	0.15	0.17	0.22	0.26	0.22
Total :	2.79	3.09	2.83	2.57	2.63	2.10	2.28

Source : Finance Dept. Govt. of Odisha

The collection in 2017-18 (BE) from Non-Ferrous Mining & Metallurgical Industries (Mining Royalty) is estimated at 1.59 percent of GSDP followed by dividends and irrigation receipts at 0.17 percent each of SONTR. Revenue collection from interest receipt is pegged at 0.08 percent of GSDP in 2017-18.

9.7 Central Transfers

Central transfers comprise of share in central taxes (devolution from the Centre) and grants from Centre. The central transfers as proportion to GSDP as well as proportion to Total Revenue Receipt are presented in Table 9.3

Table 9.3: Trends in Central Transfers

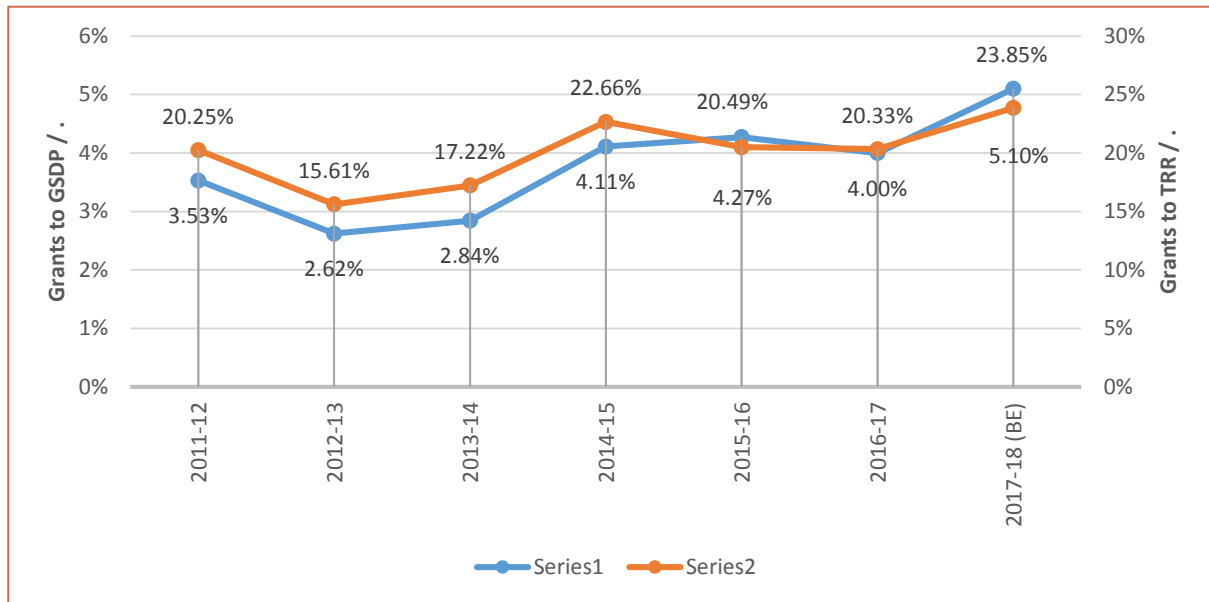
Year	Shared Tax (₹Cr)	Grants (₹ Cr)	Central Transfer	% of TRR	% of GSDP	Grants to GSDP (%)	Grants to TRR (%)
2011-12	12229.09	8152.19	20381.28	50.62	8.82	3.53	20.25
2012-13	13965.01	6859.73	20824.74	47.40	7.96	2.62	15.61
2013-14	15247.09	8429.42	23676.51	48.37	7.99	2.84	17.22
2014-15	16181.22	12917.50	29098.72	51.05	9.26	4.11	22.66
2015-16	23573.78	14129.46	37703.24	54.69	11.40	4.27	20.49
2016-17	28321.50	15082.41	43403.91	58.51	11.51	4.00	20.33
2017-18 (BE)	31421.67	21209.85	52631.52	59.18	12.65	5.10	23.85

Source : Finance Dept. Govt. of Odisha

In 2012-13 and 2013-14, the Central Transfers as a percentage of TRR and GSDP has declined mainly due to decline in grants as proportion to both GSDP and TRR. Figure 9.3 presents the

trends in grants component. However, central transfers as a percentage of TRR and GSDP shows an upward trend from 2014-15 onwards mainly because of increased devolution.

Figure 9.3: Trends in Grants



Source : Finance Dept., Govt. of Odisha

The share of central transfers to total revenue receipts in the case of Odisha has been over 50 percent over the years. It changed in 2012-13 and 2013-14 when central transfers fell below 50 percent because of lower amounts of grants received. However, consequent upon the decision to route the central assistance for 66 restructured CSS through State budget, the

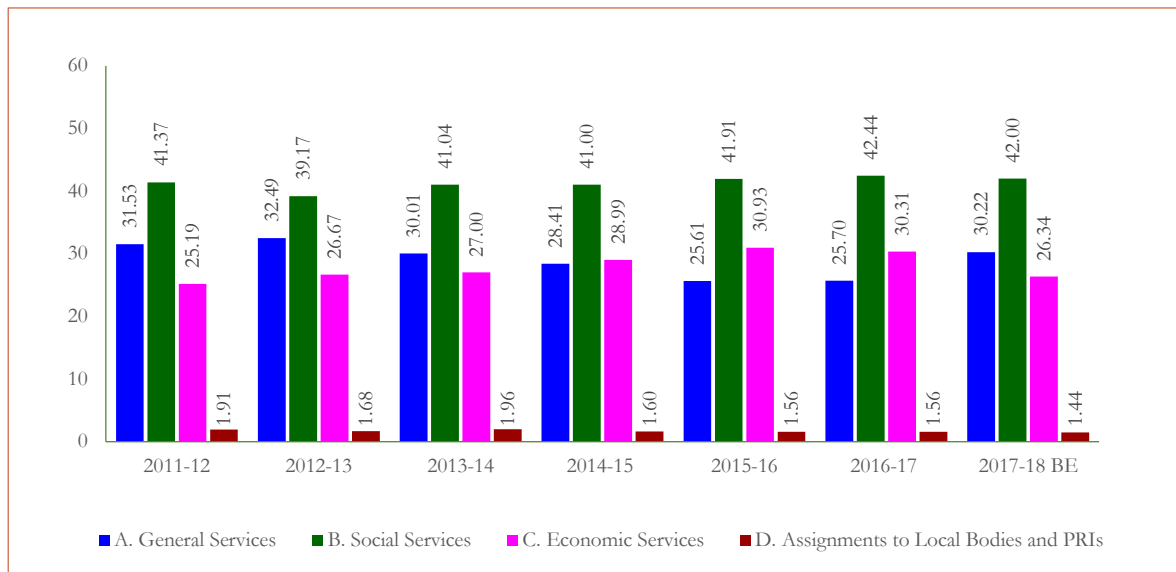
share of central transfers in total revenue receipts of Odisha increased to 58.51 percent in the year 2016-17, and it is expected to remain at 59.18 percent in 2017-18 (BE). Table 9.4 provides the trends in the components of central grants received by the Government of Odisha during the period from 2011-12 to 2016-17.

Table 9.4: Grants Received by Government of Odisha from the Centre

Category of Grant	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Grants-in-aid from central government	8152.19	6859.73	8429.42	12917.50	14129.46	15082.41
a. Non-Plan grants	2561.48	1505.49	2729.19	1929.34	3062.64	3248.00
b. Grants for state Plan schemes	3853.22	3483.61	3429.46	10886.18	10773.41	11769.07
of which, Block grants	3451.77	3219.57	3095.50	1331.47	87.57	377.16
c. Grants for central Plan schemes	108.60	183.00	121.67	101.90	293.37	65.23
d. Grants for centrally sponsored schemes	1628.89	1687.63	2149.11	8.26	0.04	0.10

Source: Finance Accounts, various issues

Figure 9.4: Composition of Revenue Expenditure in Odisha (%)



Source : Finance Dept., Govt. of Odisha

9.8 Public Expenditure

Revenue expenditure and capital outlay have fluctuated at around 15 percent and 2 percent of GSDP respectively during 2011-12 & 2012-13. Clearly, the intended push towards capital outlay was not materializing despite higher budgetary allocations, primarily because of institutional constraints. However, it has gradually increased to about 5 percent in 2015-16 and 2016-17. The capital outlay in the budget estimates for the year 2017-18 is

expected to be at 4.99 percent of GSDP. Simultaneously, revenue expenditure is expected to increase significantly to 19.77 percent of GSDP during the year. The structure of revenue expenditure in terms of distribution among broad groups of expenditure remains stable, with small year-to-year changes. Figure 9.4 summarizes the structure of revenue expenditure. The share of General, Social and Economic Services is fluctuating over the years.

Table 9.5: Composition of Revenue Expenditure in Odisha

(₹ In Crore)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 BE
Total Revenue Expenditure	34660.24	38237.56	45617.75	51135.74	58805.71	65040.53	82237.23
A. General Services of which	10928.58	12423.26	13689.41	14528.86	15058.66	16714.44	24852.46
1. Interest Payments	2576.43	2807.23	2888.22	2810.27	3343.30	4035.43	5000.00
2. Pensions	4740.76	5379.37	5935.17	6416.62	6346.22	6842.58	11317.50
B. Social Services of which	14338.07	14976.56	18721.55	20964.13	24643.16	27599.95	34540.42
1. General Education	6647.48	7050.73	8065.60	9585.74	10826.04	11550.96	15365.03
2. Medical and Public Health	1129.34	1467.34	1630.98	2512.66	2988.57	3735.72	4160.50
3. Water Supply and Sanitation	563.16	598.39	719.94	1051.98	1989.38	2327.71	2231.83

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 BE
C. Economic Services of which	8732.47	10196.24	12314.59	14825.38	18188.12	19713.73	21658.26
1. Agriculture and Allied Services	3165.99	4104.23	4701.12	5613.46	5802.49	6496.70	7064.60
2. Rural Development	1836.96	2178.70	2983.63	4446.25	7400.21	7991.39	8208.14
3. Irrigation and Flood Control	860.24	1043.22	1397.05	1376.40	1812.85	1870.11	2087.71
4. Roads and Bridges	1177.10	1536.76	1693.89	1884.36	1829.26	1970.76	2659.43
D. Assignments to Local Bodies and PRIs	661.11	641.49	892.20	817.37	915.76	1012.40	1186.09
Memo Item:							
Salaries and Wages	9081.77	9515.42	11004.89	15428.26	17458.69	18997.03	25784.53

Source: Finance Accounts (various issues) and Budget Document, 2017-18

9.9 Revenue Expenditure

The composition of revenue expenditure by budgetary categories in detail is provided in Table 9.5. While pensions are seen to be outstripping interest payments in recent years, expenditure on each of the key areas within social and economic services is seen to have grown apace.

Table 9.6 provides the sector-wise contribution to the revenue expenditure. The developmental

services sector contributes around 68 percent of the total revenue expenditure in the budget estimate of 2017-18. In the developmental sector, higher emphasis is given to Social Services as compared to Economic Services. This is on account of the policy orientation towards inclusive growth. General Education in social services and Rural Development in economic services are given higher allocation.

Table 9.6: Composition of Revenue Expenditure in Odisha

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 BE
Total Revenue Expenditure	100.00	100.00	100.00	100.00	100.00	100.00	100.00
A. General Services	31.53	32.49	30.01	28.41	25.61	25.70	30.22
Interest Payments	7.43	7.34	6.33	5.50	5.69	6.20	6.08
Pensions	13.68	14.07	13.01	12.55	10.79	10.52	13.76
B. Social Services	41.37	39.17	41.04	41.00	41.91	42.44	42.00
1. General Education	19.18	18.44	17.68	18.75	18.41	17.76	18.68
2. Medical and Public Health	3.26	3.84	3.58	4.91	5.08	5.74	5.06
3. Water Supply and Sanitation	1.62	1.56	1.58	2.06	3.38	3.58	2.71
C. Economic Services	25.19	26.67	27.00	28.99	30.93	30.31	26.34
1. Agriculture and Allied Services	9.13	10.73	10.31	10.98	9.87	9.99	8.59
2. Rural Development	5.30	5.70	6.54	8.69	12.58	12.29	9.98
3. Irrigation and Flood Control	2.48	2.73	3.06	2.69	3.08	2.88	2.54
4. Roads and Bridges	3.40	4.02	3.71	3.69	3.11	3.03	3.23
D. Assignments to Local Bodies and PRIs	1.91	1.68	1.96	1.60	1.56	1.56	1.44
Memo Item:							
Salaries and Wages	26.20	24.89	24.12	30.17	29.69	29.21	31.35

Source: Finance Accounts (various issues) and Budget Document, 2017-18

9.10 Outstanding Debt Stock and Outstanding Liability

Outstanding Public Debt and Outstanding Borrowing from State Provident Fund constitute outstanding debt stock of the State. Outstanding public debt, outstanding borrowing from Public Accounts and Contingency Fund constitute total liability of the State.

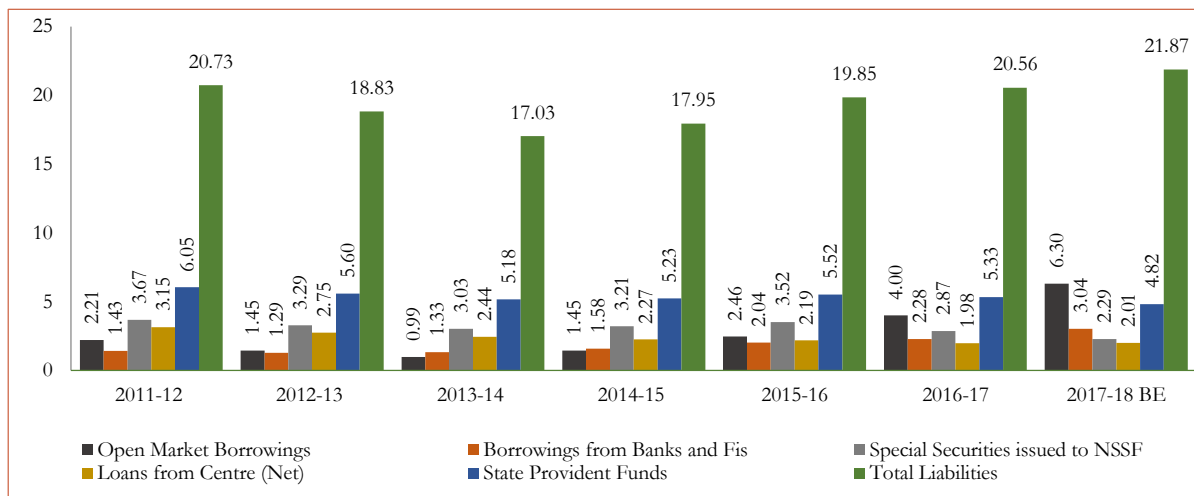
The trend in composition of liability as proportion to GSDP is given in Annexure 9.1

Figure 9.5 presents the trends in the composition of debt stock in terms of percentages to GSDP. Declining trend is observed in most of the components of the debt stock. Outstanding debt on account of State Provident Fund as proportion to GSDP has

declined from 6.05 percent in 2011-12 to 5.33 percent in 2016-17. Debt on account of NSSF as proportion to GSDP has declined from 3.67 percent in 2011-12 to 2.87 percent in 2016-17. Loans from Centre have also come down from 3.15 percent of GSDP in 2011-12 to 1.98 percent in 2016-17.

However, the Negotiated Loans from the financial institutions and banks have increased from 1.43 percent of GSDP in 2011-12 to 2.28 percent in 2016-17. Open Market Borrowing through State Development Loan has also increased from 2.21 percent of GSDP in 2011-12 to 4 percent of GSDP in 2016-17 and 6.30 percent in 2017-18(BE). The Liability as percentage of GSDP is expected to be 21.87 percent in the budget estimate of 2017-18 which was 20.56 percent during 2016-17.

Figure 9.5: Composition of Liability as % of GSDP



Source: Finance Accounts (various issues) and Budget Document, 2017-18

One of the reasons for the continuous decline in debt components is the need to keep fiscal deficits below the prescribed level under the fiscal responsibility legislation which reduces net debt burden of the State. If growth in GSDP exceeds the growth in outstanding debt, debt to GSDP ratio will decline and will be below the FRBM stipulation. Higher growth rate in

GSDP compared to growth in debt stock coupled with low cost of borrowing has made the fiscal policy of the State sustainable and has created solvency in debt. FRBM legislation as a fiscal policy rule has helped to achieve stability in State finances and efficiency in expenditure allocation.

Now that the State's finances are fairly stable, the tasks of further improving the quality of expenditure, regular expenditure review, expanding the coverage of public services, and of investing in social and physical infrastructure are very critical to achieve higher inclusive growth rate on a sustainable basis. In order to fulfil this objective, the State has the fiscal space to opt for higher capital receipts to fund capital outlay in developmental sectors, as there is capacity to sustain additional debt burden and the State economy has reached a stage wherein it can absorb higher capital outlay after the fiscal stabilization.

9.11 Strengthening Financial Management System in Government

The State Government attaches priority to improvement in public spending and productivity. A number of reform measures in budgetary & expenditure management have been initiated. Some of the important measures are: -

(i) **Integrated Financial Management System (IFMS):** In the area of automation of Treasury Management, Odisha is one of the frontrunners in the country and have graduated to an Integrated Financial Management System (IFMS). Important Financial Management functions starting from budget formulation, budget execution, receipts and expenditure reconciliation, generation of electronic accounts to online monitoring of audit compliance are being carried on electronically through Integrated Financial Management System. Existing platform of IFMS has been strengthened with the introduction of new functionalities for generation and repository of financial sanctions. Facility for the retired and retiring Government employees to submit online pension application was also launched.

This new functionality ensures end-to-end electronic processing of pension records. Electronic disbursements in IFMS, settled through National Electronic Funds Transfer (NEFT) platform, are now being settled on an hourly basis instead of earlier settlement of bi-hourly cycle. To provide a fillip to the electronic receipt platform and enhance the coverage of electronic payment for citizens, IFMS Odisha was integrated with SBI e-Pay, a payment gateway with the facility of payment through credit and debit cards besides internet banking. Integration with SBI e-Pay enables multi-account settlement, enabling citizens to make electronic payment to State Government agencies and parastatal organizations along with payment of taxes and dues to the Government in a single transaction. New arrangements in IFMS have helped the newly created "GO SWIFT" portal of the Industries Department to facilitate the investors and industrialists to make online payment for various purposes. It has also enabled the citizens to make payment of online fees relating to Registration offices.

The State received another recognition for successful implementation of IFMS during the financial year 2017-18. IFMS, Odisha was awarded with SKOCH Smart Governance Award for electronic receipt and disbursement system and SKOCH Order of Merit Award for Pension Reforms through automation for 2016-17. Representatives from other States namely Andhra Pradesh, Telangana, Manipur and Tripura had also visited Odisha to study successful implementation of IFMS.

Preparation for next level of automation IFMS-2.0 is underway. The major objectives for the next version is to enable end to end digital transaction using appropriate authentication

technology such as digital signature or e-Signature. The next phase of automation would commence from the financial year 2018-19.

ii) **Public Financial Management System (PFMS):** Odisha is one of the leading States in the implementation of Public Financial Management System (PFMS) designed by the Controller General of Accounts, Government of India to track last mile utilization of funds through various implementing agencies and

As many as 75 Centrally Sponsored Schemes have been mapped in IFMS and PFMS for recording the flow of information regarding receipt of central assistance and expenditure made against the central share and State share through the Treasuries. Further, the system will facilitate Aadhaar-based Direct Benefit Transfer (DBT) and record Expenditure, Advance and Transfer (EAT) made by the State, District and Sub-District level Implementing Agencies and also help generate Utilisation Certificate. It will improve transparency, efficiency and accountability in management of public funds.

(iii) **Online application for revision of pension in “ARPANA” portal**

To expedite the process of re-determination of pension without causing any hardship to the pensioners in a transparent and efficient manner, an online platform called “ARPANA” (Application for Revision of Pension using Aadhaar Number Authentication) has been developed.

9.12 Outlook

The State has to make the growth process sustainable and inclusive accompanied by

make just-in-time releases. Integration of PFMS with the Odisha Integrated Financial Management System (IFMS) has been completed. State Project Management Unit (SPMU) has been set up in the Directorate of Treasuries & Inspection for providing support to Departments and implementing agencies for implementation of PFMS. The State Advisory Group has been constituted for periodic monitoring of PFMS implementation

faster reduction of poverty, regional disparity, development of infrastructure and delivery of public services. In terms of natural resource endowment and demographic dividend, there are ample opportunities for the State to grow at a faster rate for which there is a stable Government, sound policy environment, robust public finances and an efficient and effective delivery system. The overall fiscal situation of the State is stable. It is capable of tackling fiscal and developmental challenges without departing from the prudent fiscal management policy and continue the thrust on socio-economic development for inclusive growth.

Annexure : 9.1 Composition of Liability (% of GSDP)

Liabilities	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 BE
Consolidated Fund	10.66	8.91	7.86	8.54	10.20	11.14	13.63
1(a+b+c+d+e+f) public Debt	10.66	8.91	7.86	8.54	10.20	11.14	13.63
a Open Market Borrowings	2.21	1.45	0.99	1.45	2.46	4.00	6.30
b Borrowings from Banks and Fis	1.43	1.29	1.33	1.58	2.04	2.28	3.04
c Special Securities issued to NSSF	3.67	3.29	3.03	3.21	3.52	2.87	2.29
d Bonds/ Debentures which are issued by the State Govt.	0.19	0.13	0.07	0.04	0.00	0.00	-0.01
e Loans from Centre (Net)	3.15	2.75	2.44	2.27	2.19	1.98	2.01
f Other Liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2(a+b+c) Public Account	9.90	9.76	9.08	9.28	9.53	9.31	8.14
a State Provident Funds	6.05	5.60	5.18	5.23	5.52	5.33	4.82
b Small Savings, Insurance and Pension Funds, Trust and Endowments, etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
c Other items in Public Accounts of which	3.85	4.16	3.90	4.05	4.01	3.98	3.32
i. Deposits	1.54	1.97	2.02	2.19	2.15	2.05	1.56
Bearing Interest	0.03	0.03	0.02	0.01	0.01	0.01	0.02
Not Bearing Interest	1.51	1.94	2.00	2.18	2.14	2.03	1.54
ii. Reserve Funds/ Sinking Fund	2.31	2.19	1.89	1.86	1.86	1.93	1.48
Bearing Interest	0.13	0.07	0.02	0.01	0.09	0.38	0.07
Not Bearing Interest	2.18	2.12	1.87	1.85	1.76	1.55	1.40
3 Contingency Fund	0.17	0.15	0.08	0.13	0.12	0.11	0.10
Total Liabilities	20.73	18.83	17.03	17.95	19.85	20.56	21.87

Source: Finance Accounts (various issues) and Budget Document, 2017-18



*O*disha marches ahead to 'Take off' stage of growth in its economy. Political stability and abled economic leadership pave the way for Odisha to an empowered and developed economy of the nation. The Perspective State policies, strong institutional mechanisms, skilling of potential youth and enhanced sectoral outlays in priority sectors expect to maintain the optimistic growth trajectory of Odisha's economy in future. Sustained Team work, Transparency and Technology may transform Odisha into a self sustained developed economy.

10.1. The growth trajectory of Odisha remained promising in current decade except few exceptions. Political stability and economic leadership in last two decades made Odisha the eastern gateway to a vibrant economy. Odisha Economic Survey 2017-18 evaluates the current scenario of State's economy. The Report assesses the efficiency, sufficiency and deficiency conditions while looking ahead with the emerging challenges, potential and opportunities ingrained in the State's economy. Its rich natural resources were sustainably and judiciously managed. Its potential human resources were adequately skilled and instilled with confidence for sustainable and quality livelihoods. The programme expenditure of the State becomes more people centric. Technologies play the supportive role to accelerate the process of development streams. Structural transformation of the State's economy is visible.

10.2. Odisha's macro aggregates showed upswing trend. The downside pressure of demonetization and global uncertainties did not deter the State to grow with a humble anticipated real growth rate of 7.14% in 2017-18. Odisha performed better than India's real growth rate 6.5%. The State Government enlarged the scope of State finances and fiscal space with higher allocations/expenditure over previous financial year. The budget estimates of Government expenditure of Odisha increased from Rs 94053 crore in 2016-17 to Rs 106911 crore in 2017-18. Poverty reduced incredibly by average annual reduction rate of 3.5% percentage points as against a lower reduction rate of 2.18 percentage points at All India level. Irrigation, inclusion and infrastructure frameworks resulted in resounding growth, faster fall in poverty and increased empowerment in Odisha.

10.3. Enlarged base of employment potential for unorganized workforce keep agriculture sector a high priority sector in Odisha. The depleting share of agriculture sector to GSDP showed sign of recovery with rise from 18% share in 2011-12 to 21.6 % in 2016-17. The exclusive agriculture budget for Odisha since 2013-14 played a vital role. With an total outlay of Rs 14,930 crore in 2017-18, the agriculture budget increased by 100% as compared to 2013-14 agriculture budget in the State. Small is beautiful. Besides ongoing major and medium irrigation projects, the State Government is keen to implement short gestation irrigation projects under a series of State run schemes such as Parbati Giri Mega Lift irrigation schem; Mukhyamantri Adibandha Tiyari Yojana (MATY), Jalnidhi, Biju Krushak Vikas Yojana, Micro irrigation under PMKSY etc. Odisha became the debutant State in India to implement farmer friendly Direct Benefit Transfer (DBT) programme for farm mechanisation. Blue Revolution for fishery development, White Revolution for animal husbandary and dairying development and Biju Krushak Kalyan Yojana will have direct bearing on rising value additions in crop and allied sectors of the State. The State need to put greater focus on pulses and oilseed production than cereal production for productivity gain in crop sector. Input cost revision and skill development for agriculture labour require to be promoted. As a natural risk prone State, Odisha received global recognition in advanced natural disaster management plan. That will help to counter the adverse impact of huge economic loss due to damage in agriculture sector in the event of natural disaster.

10.4. Odisha emerged as a strong industrial power in the country in recent years. Rational use of rich mineral resources, rising share of manufacturing sector to GSDP due to metallic production, effective single window system, liberal policy issues on competitive power tariff, infrastructural, market and input support, export promotion, forest & environmental clearance, skill development on entrepreneurship etc led to the faster industrialization in the State.

10.5. Odisha is poised for assured industrial and investment destination for the country. The State made pioneering efforts to launch GO SWIFT, GO SMILE, MIO, GO PLUS, APAA and GO CARE government portal projects. GO SWIFT integrates all existing technological applications of industries via the single sign on framework. GO SMILE relates to synchronized central inspection framework. MIO Conclave 2016, amongst the most successful investor meets by any State, expect to promote more number of industries from outside the State with huge investment and employment potential in the State. GO PLUS will ensure to display real time information with regards to industrial and associated utilities available in the State. APAA is meant to resolve any investor queries post allotment of land by IDCO. GO CARE, a Odisha portal, will administer corporate social responsibility and overall expenditure as per the developmental priorities. The newly launched Odisha MSME policy, Food processing policy, Start up policy

and Apparel policy will enhance the scope and coverage of MSME, handicrafts and handlooms industries along with the HRD, skill development, employment investments, production and productivities to significant extent in future years.

10.6. The State Government concern for enhancing quality of life is encouraging. Besides the series of human development and social sector & welfare related schemes, the newly launched State run Mukhya Mantri Swasthya Seba Mission, BASUDHA and UNNATI etc will have perspective improvement in human development in the State.

10.6. The State Government's make focused initiatives on long run development approaches as briefly outlined below :

- Emphasis on building rural and urban productive infrastructure.
- Higher growth rate of agriculture and allied sector.
- Strengthened social security system
- Focus on Sustainable Development Goals (SDG).
- Improvement in Governance and service delivery mechanisms.
- Promoting broad based growth, encouraging private investment, public private partnership (PPP), public private community partnership (PPCP).

Last mile.....



Nagada - way ahead

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