

NEW ODISHA • EMPOWERED ODISHA



Government of Odisha



ODISHA ECONOMIC SURVEY 2021-22

Odisha Economic Survey 2021-22

March 2022

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

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Planning and Convergence Department
Government of Odisha

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FOREWORD

Suresh Chandra Mahapatra, IAS
Chief Secretary
Government of Odisha

As I write the foreword of this Economic Survey 2021-22, people all over the world have almost come out of the shadow of COVID-19. While each phase of the virus lasted for a few months, the economic impact it has left behind would take years to repair. Every government, including our own government, has taken a number of initiatives to ameliorate the pain and grief of the people impacted by the Pandemic. I hope we do not have to witness that phase again in near future. At this juncture two neighboring countries are engaged in war which may impact the global, national and the state's economy.

Odisha Economic Survey of 2021-22 is prepared in the backdrop of a contractionary economy. It provides a snapshot of the State's Economy, composition of Gross State Domestic Product, sectoral developments, development in mining and industries, services sector and its growth prospects, social sector development including education, health, nutrition and social protection measures, governance reform and the state's finances.

The State's GSDP contracted by 5.3 per cent in 2020-21 which is lower than contraction experienced at all India level, i.e. 6.6 per cent. In spite of the adverse impact of COVID-19 second wave, the state economy is likely to grow by 10.1 percent in 2021-22. The rebound in growth is attributed to robust growth in manufacturing sector.

Odisha's mineral resources were largely catering to the production needs of other states. Multiple industries are coming to set up their plant here in the State. Our industry sector is diversifying and our focus is to have more downstream and ancillary industries in the State. Our new industrial units are now much more diversified and covering the vast hinterlands and erstwhile uncovered districts. It will provide better employment opportunities to our people. It will also increase per capita income. We aim to grow with the nature and adopt environmental sustainable measures. Our forest coverage is growing. We are promoting MSMEs and our MSME policy is geared towards faster growth of the sector.

Growth without development will deepen inequality. The State Government have kept this aspect in mind in all its development interventions. We are committed to provide access to health, education, water, electricity, housing, and sanitation to people in both urban and rural areas. Our developmental spending is geared towards providing a better-quality of life to the citizenry.

We want to create an empowered society. Our Mission Shakti has enabled more than seventy lakh women to engage themselves in economic activities. Our KALIA scheme has empowered the farming communities. Biju Swasthya Kalyan Yojana, a fitting true tribute to the builder of Modern Odisha, has brought about remarkable change in access to modern health facilities to the weaker section of the society.

The developmental efforts of the State Government in various sectors are highlighted in the survey to build a **'New Odisha, Empowered Odisha'**. The State Government have prioritized governance reform with a concrete plan. Our ST initiatives are geared towards making real and long-lasting changes. While we understand the competitive federalism and the need to be ahead of others, our priorities are set by our own reform agenda and sequencing. The results are visible on the ground.

Since there are limited resources with unlimited needs, we need to prioritize our focus areas. I hope the survey will help the Government to identify the 'most binding constraint' to growth through a **'Growth Diagnostic'** framework. The unleashing of the binding constraint would give a spur and momentum to other sectors and other activities. It would result in higher growth.

The various data on important socio-economic indicators referred to in the Report will be of use to researchers, policy planners, academicians and members of the civil society.

I compliment the efforts of Planning and Convergence Department and Directorate of Economics and Statistics, Odisha in bringing out Odisha Economic Survey, 2021-22 and wish the publication all success.



(S.C. Mahapatra)



PREFACE

Pradeep Jena, IAS
Development Commissioner-cum-
Additional Chief Secretary
Government of Odisha

Economic Survey is the premier publication of Government of Odisha. It chronicles the developments in the State's Economy, summarizes the performance of key development programmes, highlights the policy initiatives of the Government and offers a perspective in terms of social and economic progress of the State. The report also provides behavioural and analytical review of major economic and fiscal performances of the State as well as various policy interventions to achieve inclusive and sustainable growth. It offers a comparative perspective in terms of Odisha's progress in the country vis-à-vis other States.

The state's economy has seen a rebound in the year 2021-22 in spite of the second and third wave of Covid-19 hitting the state and real GSDP has grown at a rate of 10.1 per cent as per advanced estimate which is much higher than the national growth rate of 8.8 per cent. This has been possible due to development approach of the Government, effective handling of the pandemic and vaccination in full swing and pro-active fiscal measures. Per capita income of Odisha has grown at a double-digit rate of 16.8 percent in 2021-22. In absolute terms, the per capita income of INR 48,499 in 2011-12 has gone up to INR 1,27,383 in 2021-22 (AE). This is attributed to rapid economic growth, capital investment, employment generation and stabilization in population.

The Agriculture & Allied sector exhibited contraction of 3.37 per cent in 2021-22, due to multiple natural calamities like heavy rain, unseasonal cyclonic rain and severe cyclonic storm 'Yaas' followed by flood water inundation, cyclone 'Gulab' and 'JAWAAD' in December, 2021. Incessant rain on standing and harvested crop in December 2021 and January, 2022 brought widespread damage to paddy and vegetable crops in the state. The broad industries sector has shown steady recovery from the impact of COVID-19 loss and registered 14.46 per cent growth in 2021-22 over 2020-21, against a negative base. Start-up policy, Make-in-Odisha conclaves, and various facilitation measures for ease of doing business have helped to boost mining and manufacturing activity, attracted investors to the State and the state is gradually becoming the industrial hub of the eastern region of the country. Industries and Service sector have become the lead sectors and the new driver of growth in Odisha. In 2021-22, Agriculture and Allied Activities contributed 20.61 per cent, Industry contributed 39.51 per cent and Services contributed the remaining 39.88 per cent to GSVA.

Odisha has set an example in prudent fiscal management with consistent revenue surplus for several years and keeping fiscal deficit and government debt within limits. In 2021-22, the State is expecting significant increase in mining revenues. In future, these would provide further strength to public finances of the State and provide resources to build up a stable medium-term expenditure framework. The state has made significant progress

in terms of providing houses, improving connectivity and ensuring provision of drinking water facilities and sanitation in rural and urban areas. The investment scenario in new industries is undergoing diversification in terms of both portfolio and outreach.

To analyze and understand people's sentiments, attitudes and emotions towards implementing schemes, a sentiment analysis based on Social Media Analytics has been introduced in this Report for Agriculture and investors' sentiment in Industry Chapter on various facilitation measures. There are Tables, Charts, Graphs, Info-graphics and Photographs illustrating the status of various economic activities in the document. Some of the Time Series Data Tables are placed in Annexures. Highlights of the Survey are presented in info-graphics for better data visualization.

Each Chapter contains a "Head Note" containing chapter summary and towards the end, there is a section titled "In Conclusion" which indicates the key take aways and the broad areas where further interventions are required. There is a need for further discourse within the Government on these findings.

Economic Survey, 2021-22 presents a comprehensive picture of the state's economy, sectoral development scenario, challenges and opportunities ahead for the State. It has been possible through the collective effort of all Departments of the Government, Officers and the staff of the Planning and Convergence Department, Directorate of Economics & Statistics and intellectual contributions of various resource persons who have put in their best efforts in preparing the Report. Finance Department has provided several key inputs and perspectives which have enriched the quality of this volume. The professional inputs from PwC India's Economics and Public Policy Team has added a new outlook to the Survey.

I hope, the Economic Survey, 2021-22 will serve as a useful reference document for the economists, policy makers, students, researchers and the general public.



(Pradeep Jena)



INTRODUCTION

Shri Vishal Kumar Dev, IAS
Principal Secretary,
Finance Department
Government of Odisha

Economic Survey provides the basic data on the State's economy and various fiscal indicators pertaining to the previous years for preparation of the Budget Estimates for the next financial year. It is the mirror which reflects the health of various sectors of the economy and their growth potential. It paves the way for preparation of an informed budget to achieve sustained economic growth over the years.

Fiscal performance of Odisha continued to be satisfactory during 2020-21 and this trend is likely to continue in 2021-22. The state has consistently generated revenue surplus and has maintained gross fiscal deficit within the threshold limit set by the FRBM Act. The state has been taking prudent measures to keep the fiscal indicators healthy. The state has been successful in increasing the Capital Outlay over the years and the revenue surplus has helped to lessen the dependence on borrowing. The state has been successful in providing for the developmental needs across the sectors consistently. Odisha is one of the few States in the country to have managed the State's Finances very well without breaching the FRBM Limits and did not resort to high-cost borrowing during the Pandemic. Odisha Economic Survey 2021-22 reveals that the state has reached a stage from where it can step up capital expenditure and maintain a reasonably high level of developmental expenditure.

The Survey provides an overview of the State's Economy, sectoral contribution to GSVA, current development interventions in fulfilling the basic necessities of citizens like, access to housing, drinking water, education and quality health care, governance reforms undertaken by the State Government to improve public service delivery and future strategies. It also provides a detailed account of the prudent management of state's finances and public financial management reform measures, which I hope will receive wider appreciation.

A handwritten signature in blue ink, appearing to read 'Vishal Kumar Dev'.

(Vishal Kumar Dev)



ACKNOWLEDGEMENT

Debendra Kumar Jena, I.A.S. (Retd.)
OSD-cum-Special Secretary,
Planning & Convergence Department
Government of Odisha

Odisha Economic Survey of 2021-22 presents a comprehensive view of the State's economy, development scenario and the possibilities ahead for the State. This task has been accomplished with the collective effort of all Departments of State Government, intellectual contributions of various resource persons and stakeholders.

We express our sincere gratitude to Shri Suresh Chandra Mahapatra, I.A.S, Chief Secretary & Chief Development Commissioner for sparing his time to go through the Draft Report and his kind words of encouragement and valuable guidance. He chaired the meeting of the Steering Committee in which the broad features of the Draft report was discussed and further inputs were solicited from the Secretaries present. This helped us in quickly finalizing the draft and bring out the publication in time.

We are extremely grateful to Shri Pradeep Kumar Jena, I.A.S., Development Commissioner & Additional Chief Secretary for sharing his vision, insights and inputs at every step of the preparatory work for the report and continuously guiding us to enhance its quality without which it would not have been possible to prepare the Document in its present form.

Shri Vishal Dev, I.A.S., Principal Secretary, Finance provided guidance at every step in enriching the document especially the portion relating to Public Financial Management. We sincerely express our gratitude to the Additional Chief Secretaries, Principal Secretaries and Secretaries of different Departments for their personal involvement in providing up to date inputs and continuous feedback in preparing an analytical and useful document like the present Survey.

We are thankful to the Members of Contract Monitoring Committee, Smt. Anu Garg, I.A.S., Additional Chief Secretary, Sri Hemant Sharma, I.A.S., Principal Secretary, Industries, Shri Vishal Dev, I.A.S., Principal Secretary, Finance, Sri Pratap Kumar Patra, O.S.J.S., Principal Secretary-in-Charge, Law and Sri Manoj Kumar Mishra, Secretary, E&IT for their guidance in on boarding the professionals from PwC India for editing and content improvement and their valuable suggestions on the design, layout and comments on the first draft Report.

We thankfully acknowledge the contribution of Prof. Asit Mohanty, Chair Professor, CEFT, Xavier University, Bhubaneswar for his valuable inputs on the economic outlook for 2022-23 and various aspects of the Economy and State Finances. Our thanks to the Team that put in untiring and diligent work in drafting the chapters. Eminent Resource persons like Dr. R. N. Patra, Retired Reader and Honorary Prof, Council of Analytical Tribal Studies, Koraput and Dr. Manoj Kumar Das, Senior Assistant Professor, (Economics), Ravenshaw University were part of the resource team in drafting various Chapters. Their valued contributions are highly acknowledged. Dr. Satya Priya Rath IAS, Director ,Budget and Smt. Supriya Prusty, Deputy Director (Statistics) of Finance Department, Dr. Sujata Priyambada Parida, Deputy Director, (Statistics), Agriculture & Farmers Empowerment Department were part of the resource team for drafting the respective chapters. Their valued contributions have enriched the document in many ways.

Dr. B. B. Nanda, Director, Economics and Statistics and his team of Officers and staff : Ms. Prabhati Rani Pradhan, Joint Director, Dr. Kailash Chandra Pani, Joint Director, Dr. Biranchi Narayan Mohapatra, Joint Director, Berhampur, Sri P. M Dwivedi, Joint Director, Sri L.D. Biswal, Deputy Director, Sri Nirmal Kumar Sahoo, Deputy Director, Sri Dillip Kumar Bariha, Deputy Director Smt. Jayashree Rath, Assistant Director, Sri Byomokesh Patra, Assistant Director, Sri Saroj Mohan Panda, Assistant Director, Sri Kshiroda Kumar Sahoo, S.O. and Sri Bishnu Prasad Rath, A.S.O. contributed relentlessly in data collection, compilation and drafting of different chapters of the Economic Survey 2021-22. Their untiring effort to bring out this publication is praiseworthy.

We thankfully acknowledge the support provided by the team of Officers of Planning and Convergence Department Smt. Sudhapriya Das, Additional Director, Smt. Sudha Panda, Assistant Director, Sri Debashis Mishra, S.O., Sri Nabhendu Mallik, SEI and Ms. Subhasree Priyadarsini, A.S.O. who provided unstinted support in keeping track of all the background work for the chapters and in preparation and printing of the report through timely coordination with all stakeholders, which made it possible to bring out the report in the present form.

Our special thanks to Smt. Madhusmita Samal, Additional Secretary, Smt. Manasi Satapathy, Additional Director, Sri Gopinath Mohapatra and Smt Alka Jena, Assistant Directors of Planning & Convergence Department for their involvement and support in the preparation of the Survey Report. We thank all Officers of Planning & Convergence Department Smt. Kasturi Pradhan, F.A.-cum-Special Secretary, Smt. Niyati Pattnaik, Addl. Secretary, Dr. C. Pasayat, Addl. Secretary, Sri K. M. Khatej, Addl. Secretary, Sri Manish Agarwal, I.A.S., Joint Secretary, Sri P.K. Mahakud, Joint Secretary, Sri D. Behera, Sri Amulya Mohanty, Sri D. Satpathy, Joint Directors and Sri Abhya Mohanty, Deputy Secretary for their encouragement and support in various stages of the preparatory work.

Our Special thanks go to the PwC Team, which came forward to take up the daunting task of review, editing, developing the info-graphics, putting the cover design and the overall layout of the document in a short span of time. The PwC Team including Dr. Manoranjan Pattanayak, Executive Director, Professor Tapas Sen, Advisor, Dr. Debdeep De, Associate Director, Mehul Gupta, Associate Director, Devkanya Chakravarty, Manager, Pradeep Sahoo, Manager and Vineet Chetan Tolia, Senior Consultant were working day and night on the Survey Work. Besides, several other team members from PwC India's Economics and Public Policy Team with highly specialized skill sets in machine learning, behavioral science, economics, statistics, public policy, and geospatial modeling have made seminal contributions to make the Odisha Economic Survey, 2021-22 a visually impressive and analytically rich document. We are really indebted to them for their professional commitment to provide us all a quality document.

We extend our sincere thanks to Shri Jyoti Ranjan Swain of "Third Eye" and his Team for the cover design, layout and preparation of printable format of the document and enhancing it's look and feel while racing against time. We appreciate their effort in making an esoteric document like Economic Survey look attractive to the reader.

Our profound thanks to the team of Officers and staff of Odisha Government Press, Cuttack for producing high quality print of the Highlights and Executive Summary of the document. We gratefully acknowledge the contribution of all those persons who are directly and indirectly associated with this publication.

Though every care has been taken to ensure the accuracy and correctness of the contents to the Economic Survey, 2021-22, yet, in case the readers come across any errors or omissions, they may kindly bring the same to the notice of the Planning & Convergence Department by email to progammesection1@gmail.com. Any comments or suggestions for the improvement of Economic Survey will be gratefully appreciated.



(Debendra Kumar Jena)

HIGHLIGHTS

REAL SECTOR AND EMPLOYMENT



Figure 1

GSDP Growth



Source: Directorate of Economics & Statistics (DES), Odisha

Figure 2

Agriculture and Allied Sectors GSVA Growth



Source: DES, Odisha

Figure 3

Manufacturing GSVA Growth

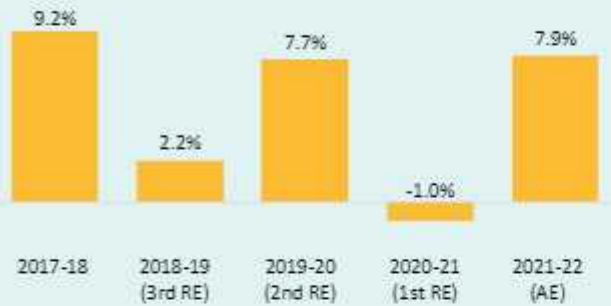


Source: DES, Odisha

Note: In the Odisha Economic Survey of 2021-22, for the National Accounts Statistics of India (GDP, GVA, etc.), we have used the revised estimate (RE) for 2020-21 that was released on January 31, 2022 and 1st advance estimate for 2021-22 that was released on January 7, 2022.

Figure 4

Services Sector GSVA Growth



Source: DES, Odisha

Figure 5

Employment Growth

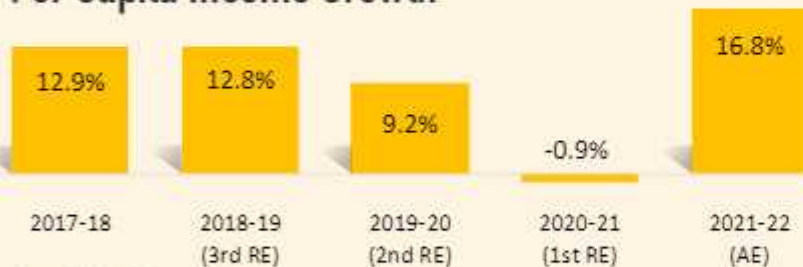


Source: Periodic Labour Force Survey (PLFS), NSO, MoSPI

PER CAPITA INCOME AND PRICE SITUATION

Figure 6

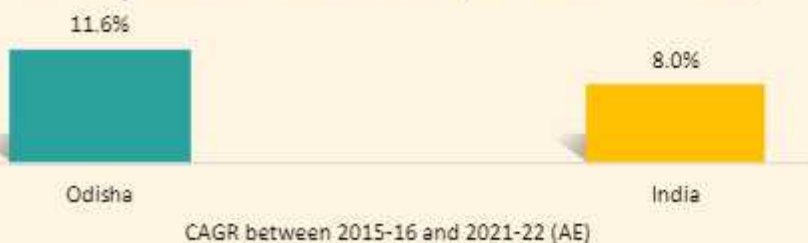
Per Capita Income Growth



Source: DES, Odisha

Figure 7 (A)

Per Capita Income Growth (Odisha vs. India)



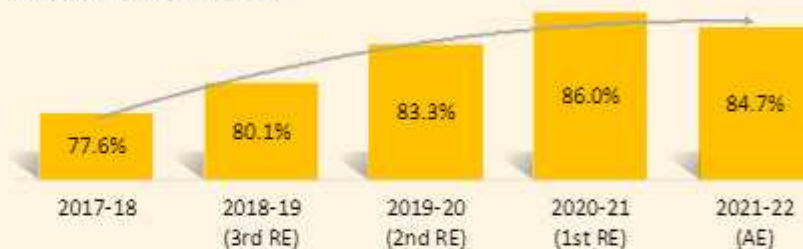
Source: DES, Odisha; MoSPI, India





Figure 7 (B)

Odisha's Per Capita Income relative to India



Source: DES, Odisha; MoSPI, India

Figure 8 (A)

Inflation in Odisha

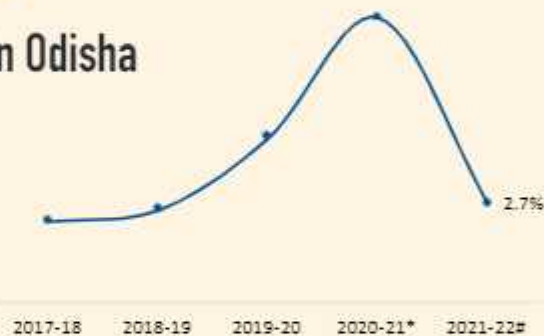
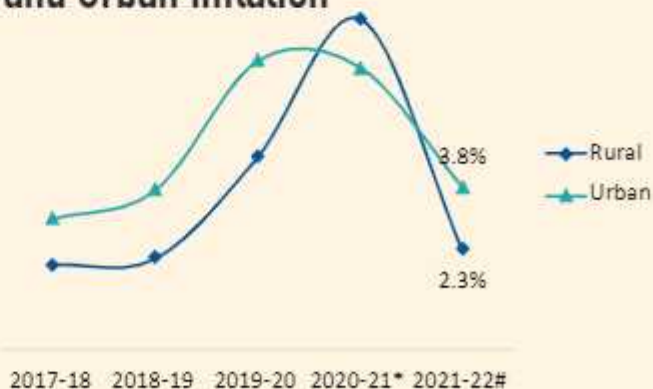


Figure 8 (B)

Rural and Urban Inflation



Note: * CPI Inflation for 2020-21 is calculated for 10 months (June 2020 - Mar 2021). #Data for 2021-22 is until Jan 2022; Source: MOSPI, GOI.

FISCAL MANAGEMENT

Figure 9

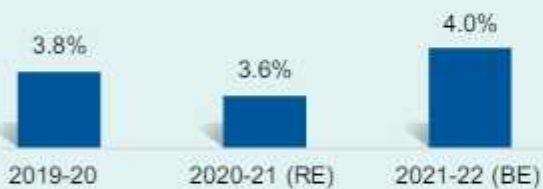
Fiscal Deficit to G(S)DP – Odisha vs India



Note: 2021-22 figures for Odisha are Budget Estimates, and Revised Estimates for India.
Source: Annual Budget documents, Odisha; Budget at a Glance, GoI

Figure 10

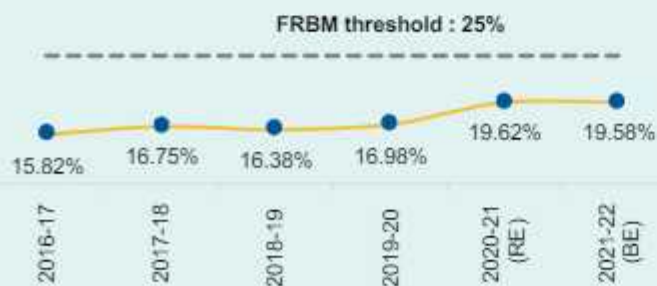
Capital Outlay to GSDP



Source: Annual Budget documents, Odisha

Figure 11

Debt to GSDP Ratio



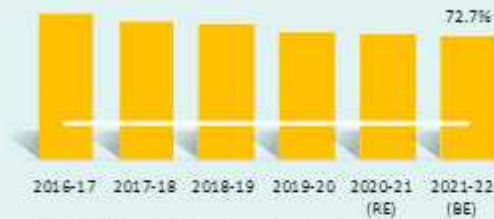
Source: Annual Budget documents, Odisha



Figure 12

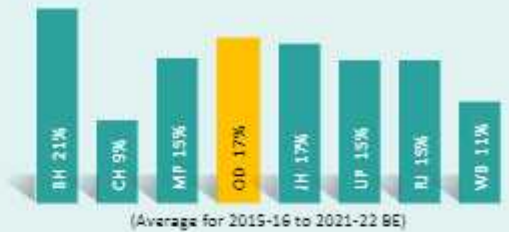
Development Expenditure

Development expenditure to Total Expenditure*



Source: Annual Budget documents, Odisha
 Note: *Total Expenditure is a sum of Revenue Expenditure and Capital Outlay

Development expenditure to GDP



Source: State Finances: A Study of State Budgets, RBI

Figure 13

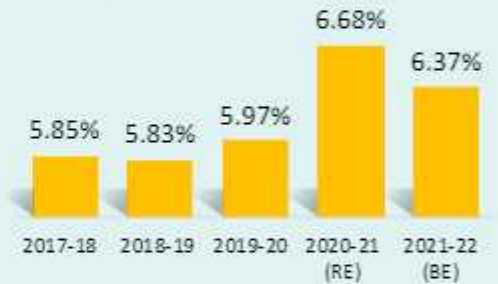
Interest Payout

Interest Payment to GDP



Source: Annual Budget documents, Odisha

Interest Payment to Total Revenue Receipts



Source: Annual Budget documents, Odisha

AGRICULTURE AND ALLIED SECTOR

Figure 14

Growth of Agriculture and Allied Sector



Source: DES, Odisha, and CSO, MOSPI, India

Figure 15

Growth of Agriculture and Allied Sector - Major States (Average growth during 2012-13 to 2019-20)



Source: DES, Odisha, and CSO, MOSPI, India

Figure 16

Share of Agriculture and Allied Sector in G(S)VA: Odisha vs. India (2021-22 AE)



Source: DES, Odisha, and CSO, MOSPI, India

Figure 17

Total Foodgrain Production (in '000 MT)



Note: P: Provisional;
Source: Directorate of Agriculture and Food Production, Odisha





Figure 18

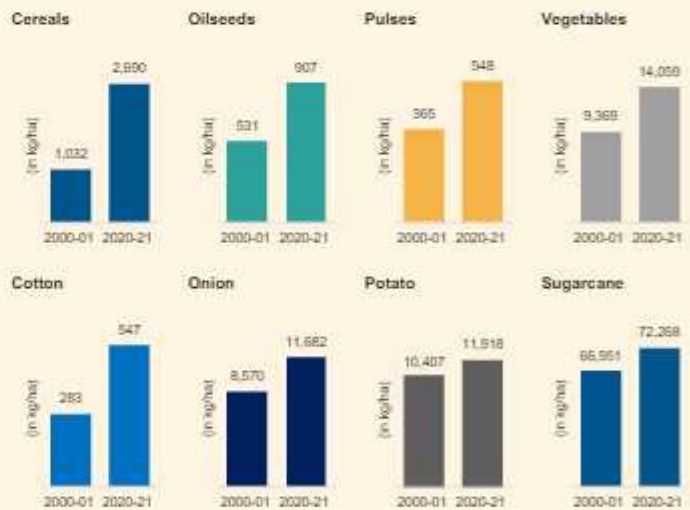
Rural Employment through MGNREGA



Source: MGNREGA Dashboard, MoRD

Figure 19

Yield Rate (Productivity) of Crops in Odisha



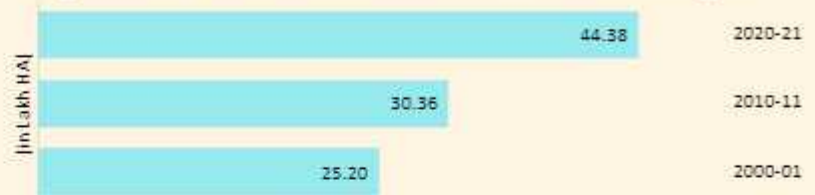
Source: Directorate of Agriculture and Food Production, Odisha





Figure 20

Irrigation Potential Created for Kharif Crops



Source: Water Resource Department, Odisha

Figure 21

Power Consumption in the Agriculture sector: Odisha



Source: Directorate of Agriculture and Food Production, Odisha

Figure 22

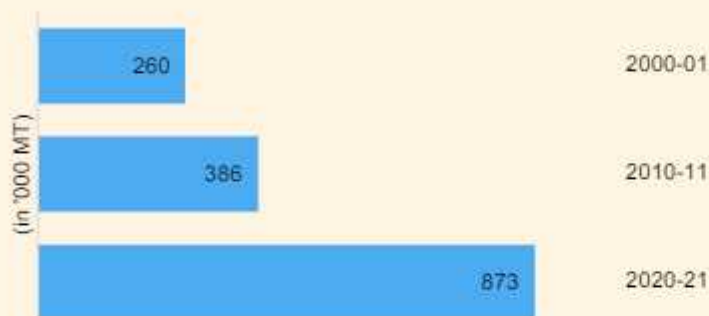
Crop Loan Disbursement



Source: SLBC, Odisha

Figure 23

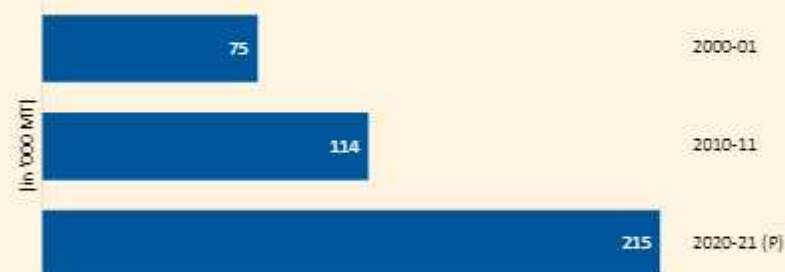
Fish Production in Odisha



Source: Directorate of Fisheries, Odisha

Figure 24

Export of Fish (to other states/ countries)



Note: P: Provisional;
Source: Directorate of Fisheries, Odisha

Figure 25

Milk Production in Odisha

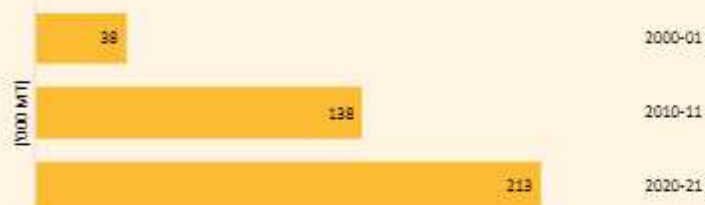


Source: F&ARD Department, Odisha



Figure 26

Meat Production in Odisha



Source: F&ARD Department, Odisha

Figure 27

Egg Production in Odisha



Source: F&ARD Department, Odisha

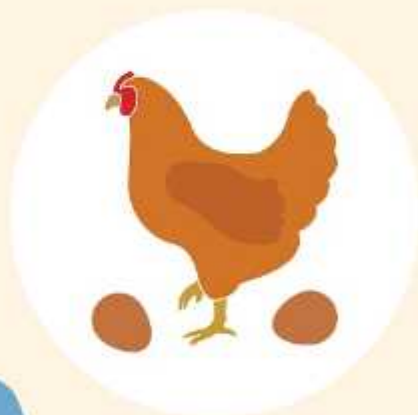
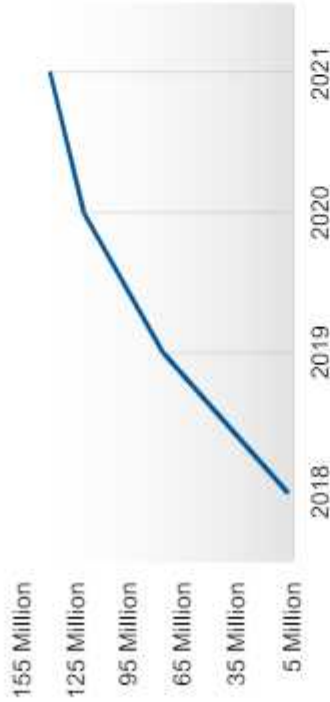


Figure 28

A SENTIMENT ANALYSIS OF THE KALIA SCHEME...

YouTube views*



*Cumulative count of views

About 4,000 likes and 5,500 retweets on Twitter*



*Based on data collected for 191 tweets from Twitter API between year 2018-2021



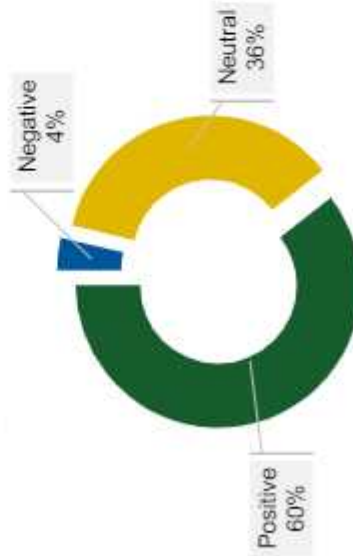
Over 140 million views on YouTube*

*Based on data collected for 1975 videos from YouTube API between year 2018 and 2021

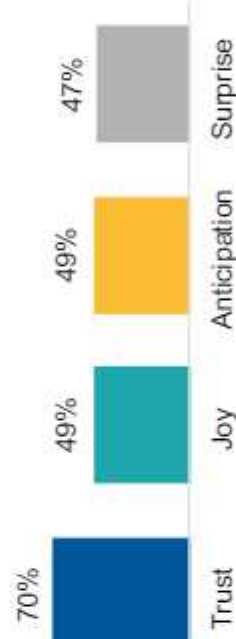
[about 91k comments]



Sentiment analysis of YouTube comments



Emotion classification of YouTube comments

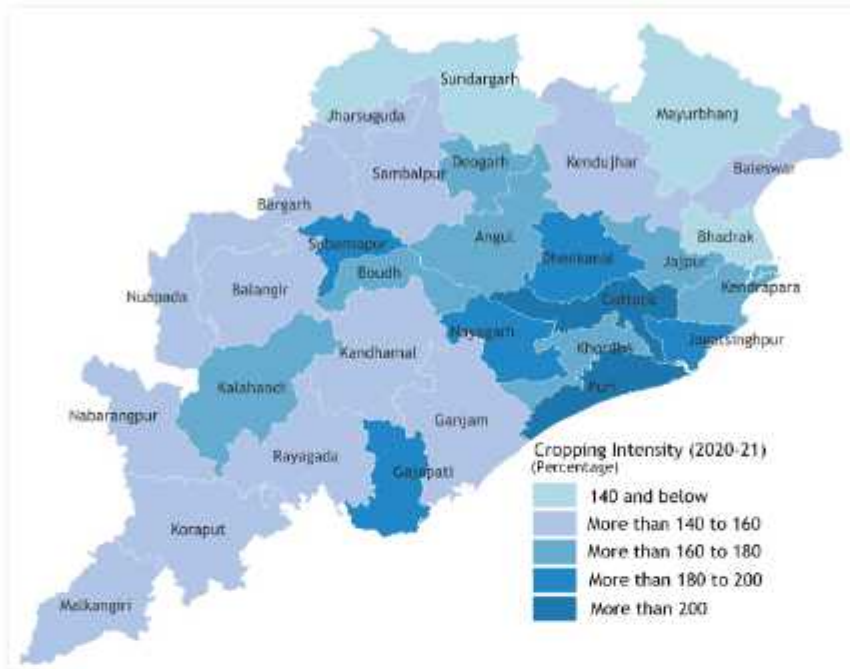


*Comments are subjected to more than one emotion classification; *Tweets and YouTube comments are subjected to more than one emotion classification; # of Tweets and YouTube data are limited by Twitter and YouTube data restriction. Search terms used are: #kaliaforodisha; #kaliascheme; #kaliyojana; #kaliascholarship

Data was collected on 29th December 2021 from YouTube and Twitter. A sentiment lexicon called Syuzhet was used for the classification.* Posts and comments with at least 50% English words were considered. Public data extraction API limitations applies, whereby only a sample of the data can be scraped at any given time.

Figure 29

Cropping Intensity (2020-21)

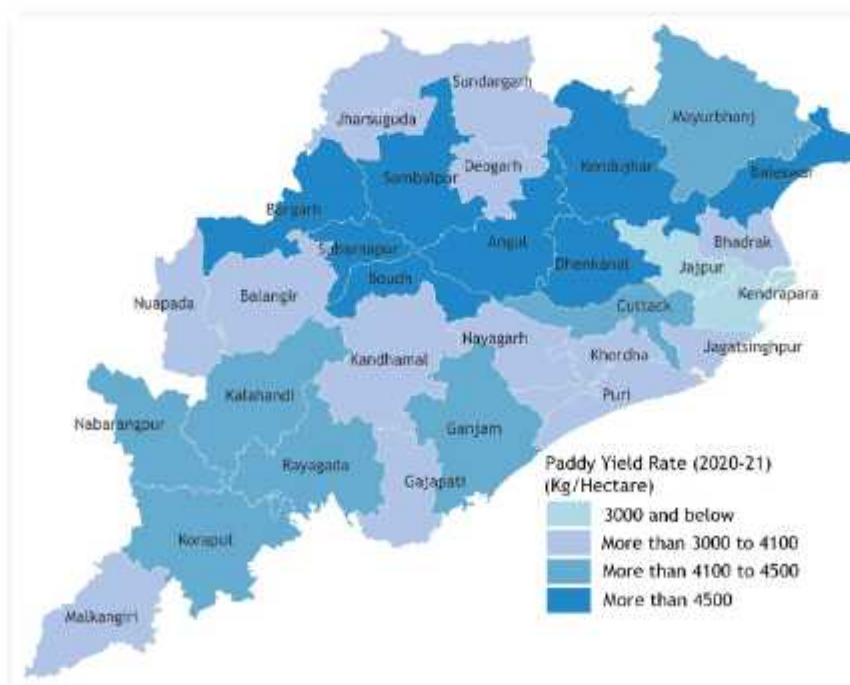


Source: Directorate of Agriculture and Food Production, Odisha



Figure 30

Paddy yield rate (2020-21)



Source: Directorate of Agriculture and Food Production, Odisha



INDUSTRY SECTOR

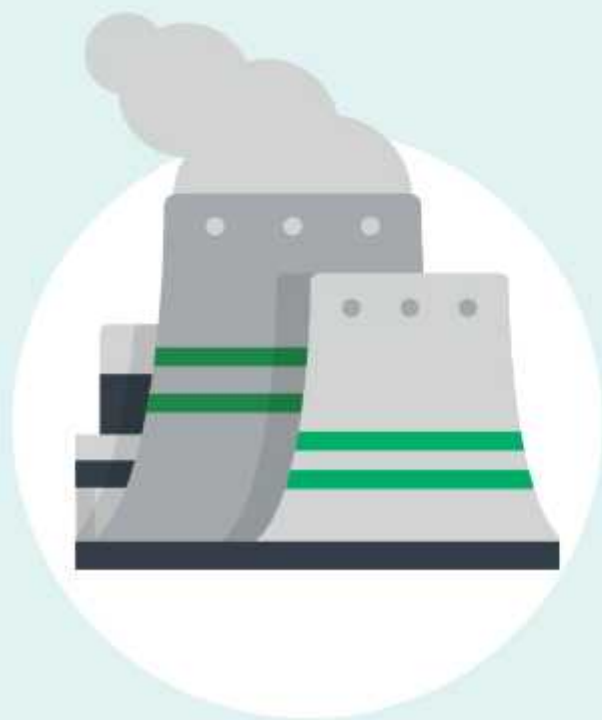
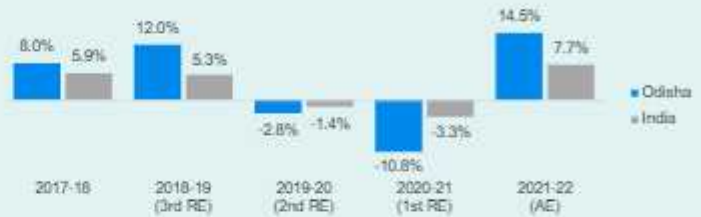


Figure 31

Growth of Industry Sector: Odisha vs. India

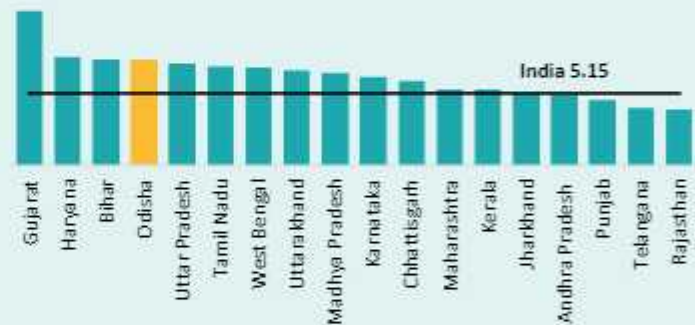


Source: DES Odisha and MOSPI, India

Figure 32

Growth of Industry Sector - Major States

(Average growth during 2012-13 to 2019-20)



Source: DES Odisha and MOSPI, India

Figure 33

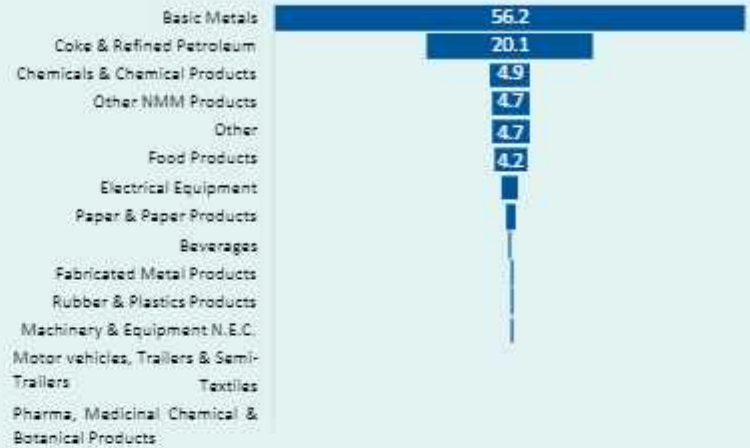
Share of Industry Sector in G(S)VA: Odisha vs. India (2021-22 AE)



Source: DES, Odisha, and CSO, MOSPI, India

Figure 34

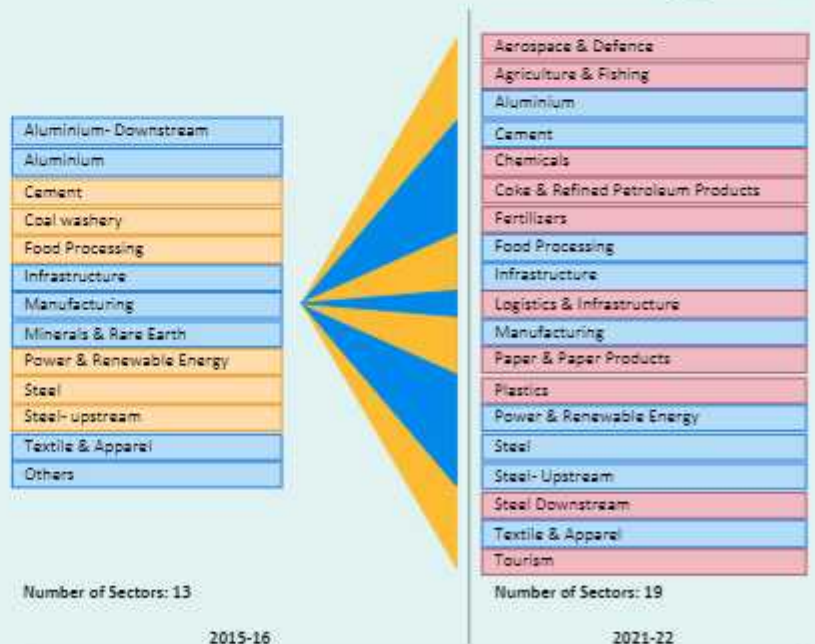
Share of Various Sectors in Odisha's total manufacturing output, 2018-19 (in per cent)



Source: Annual Survey of Industries 2018-19, MOSPI, India

Figure 35

Number of Sectors where Investment Approved



Source: IPICOL

Figure 36

Industrial Diversification



Source: IPICOL



Figure 37

District Coverage of Approved Investment



23 districts in 2021-22



16 districts in 2018-19



Figure 38

Spatial Dimension of Approved Investments

Source: Industrial Promotion and Investment Corporation of Odisha Limited (IPICOL), Govt. of Odisha
* Up to 04-Feb-22

Figure 39

Reserve Position of Major Minerals



Source: Directorate of Geology, Odisha

Figure 40

Production of Minerals



Source: Directorate of Mines, Odisha

Figure 41

Revenue Collection from Minerals

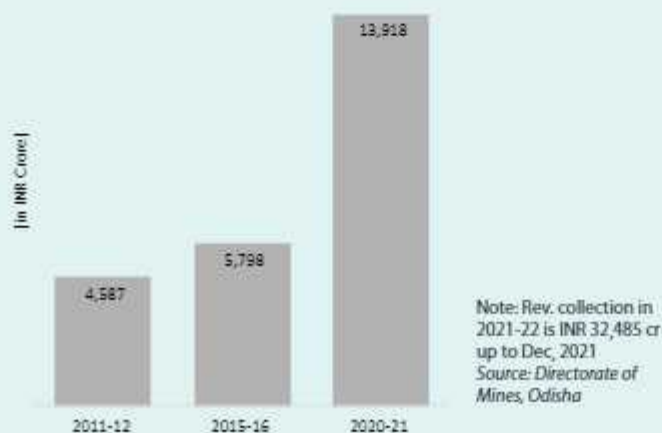
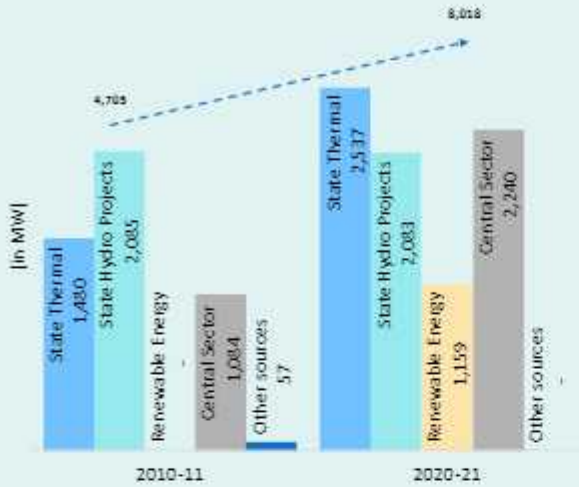


Figure 43

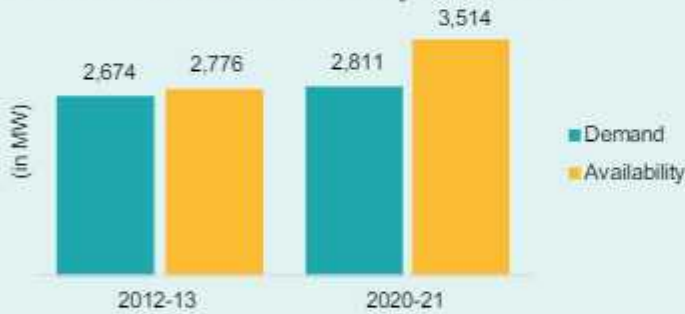
Installed Capacity of Power Procured by GRIDCO



Source: GRIDCO, Odisha

Figure 44

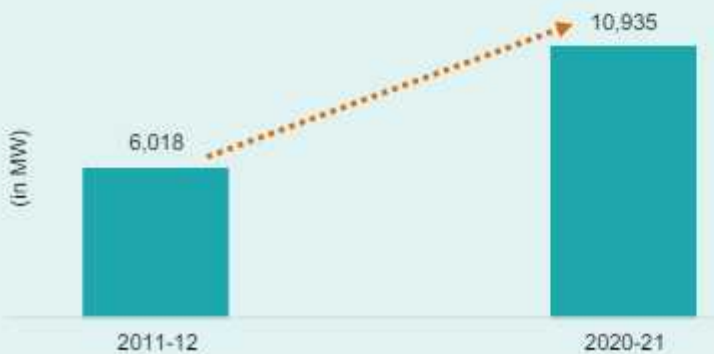
Demand and Availability of Power



Source: GRIDCO, Odisha

Figure 45

Installed Capacity of Captive Power Plants

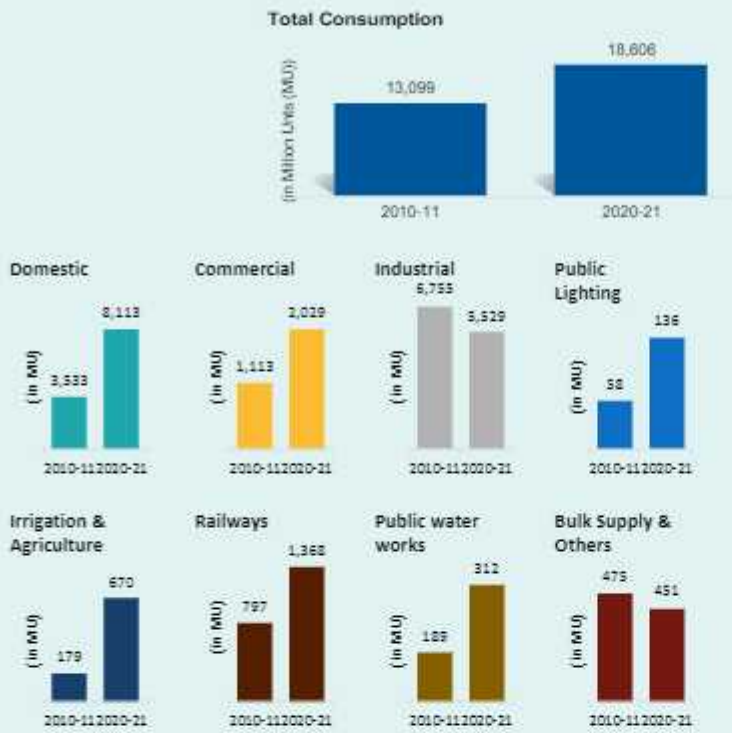


Source: GRIDCO, Odisha

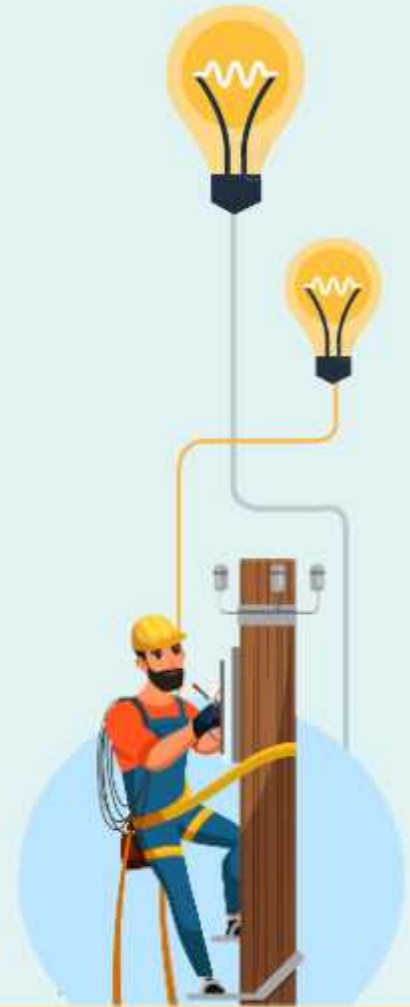


Figure 46

Power Consumption



Source: GRIDCO, Odisha



SERVICES SECTOR

Figure 47

Growth of Services Sector: Odisha vs. India



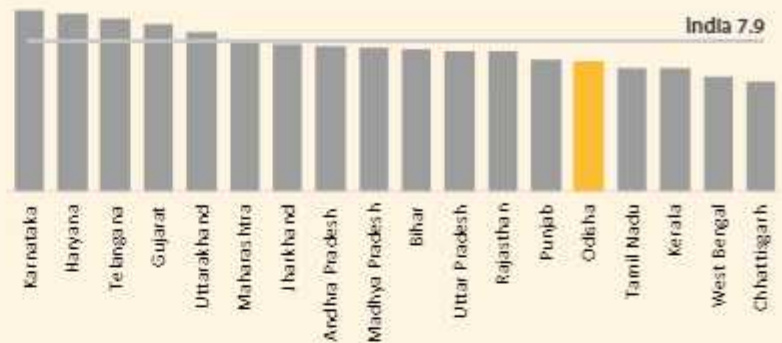
Source: DES, Odisha, and CSO, MOSPI, India



Figure 48

Growth of Services Sector - Major States

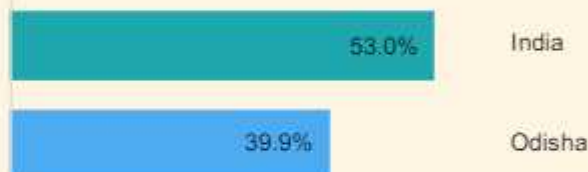
(Average growth during 2012-13 to 2019-20)



Source: DES, Odisha, and CSO, MOSPI, India

Figure 49

Share of Service Sectors in G(S)VA: Odisha vs. India (2021-22 (AE))



Source: DES, Odisha, and CSO, MOSPI, India

Figure 50

Tourism Sector Consumption from other Sectors



Source: India - Regional Tourism Satellite accounts, 2015-16, Odisha

Figure 51

Total Tourist Spending



Source: Department of Tourism, Odisha

Figure 52

Total No. of Tourists



Source: Department of Tourism, Odisha

Figure 53

Hotel Categories and Total beds by category (2020)

Category of Hotels



Total Beds by star category

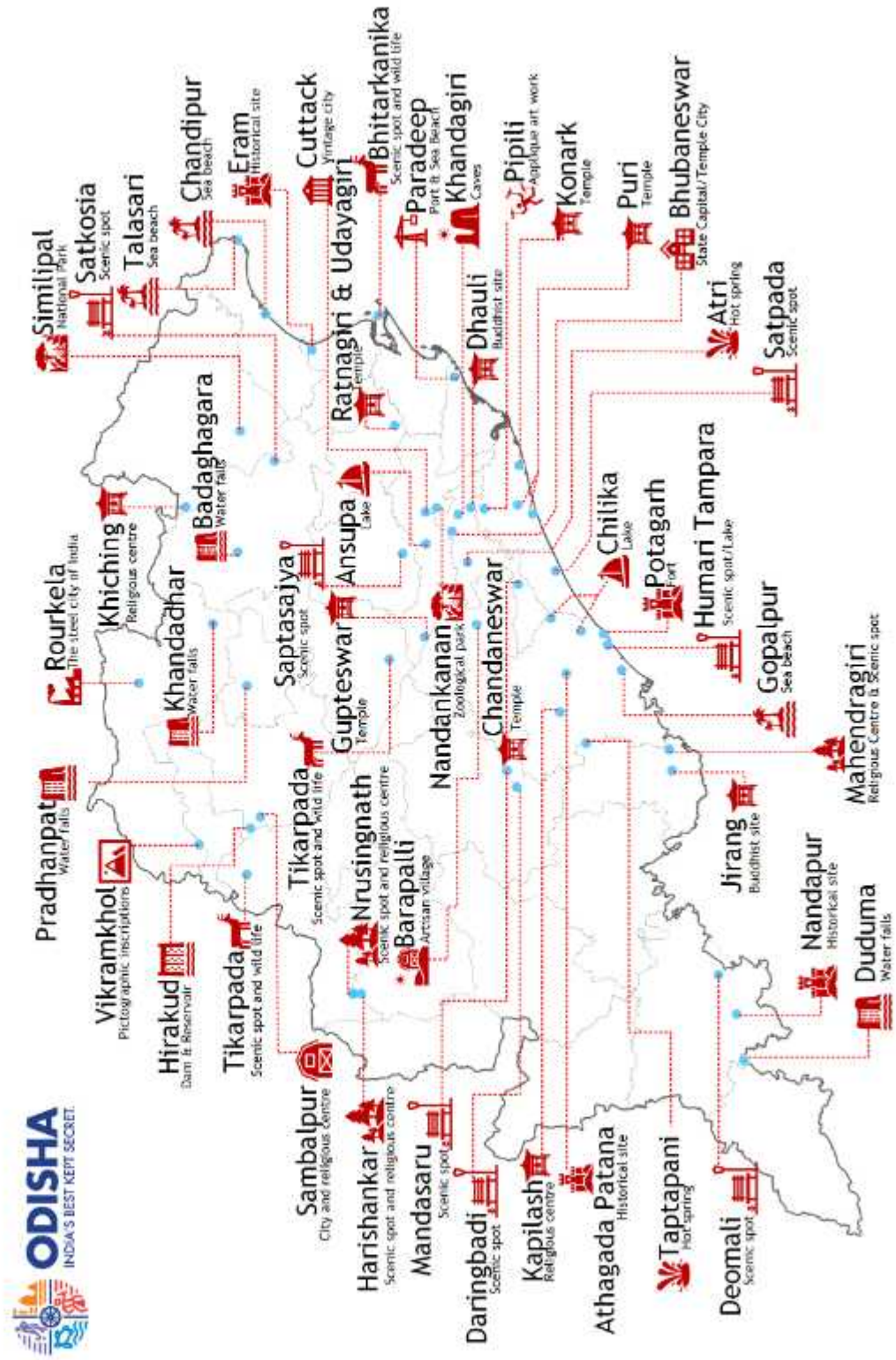


Source: Statistical Yearbook 2020, Department of Tourism, Odisha



Figure 54

Major Tourist Destinations in Odisha



URBAN SECTOR

Figure 55

Urbanisation Rate: Odisha vs. India

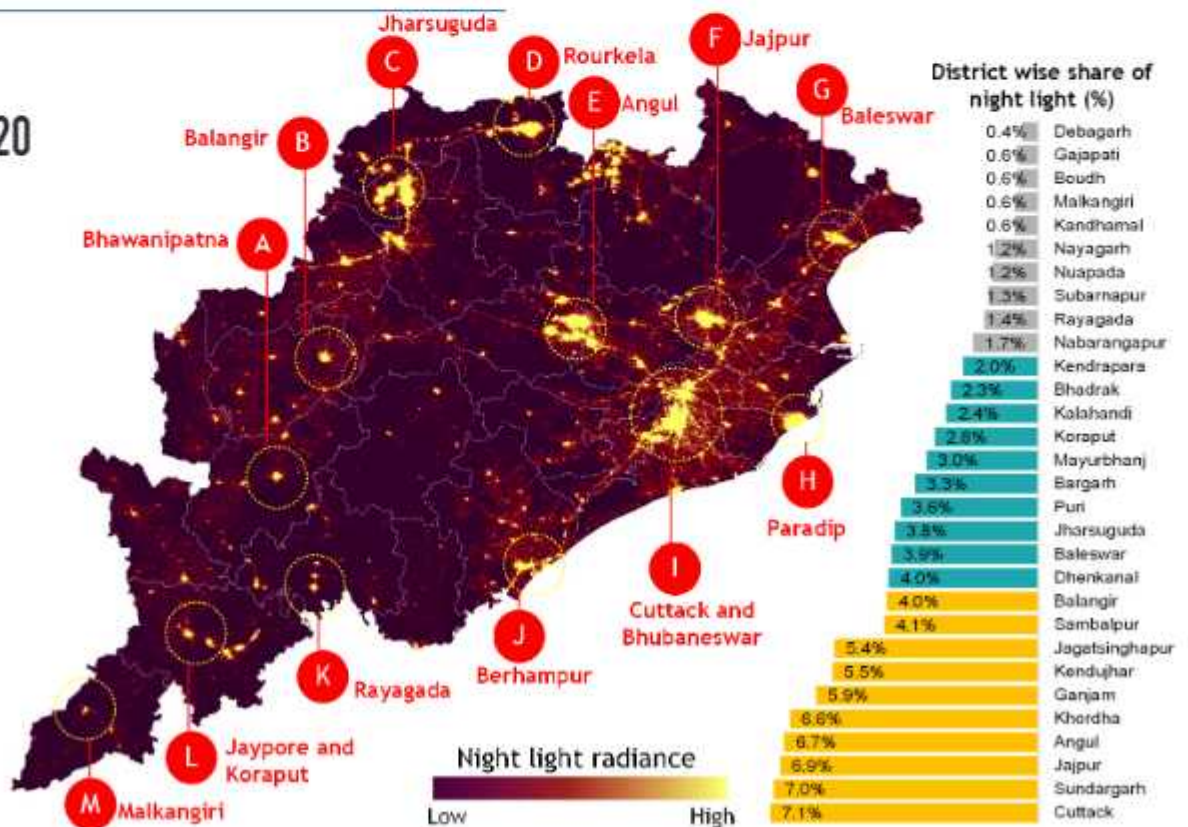


P: Projection; Source: Population Census; Projection - Ministry of Health & Family Welfare (MoHFW)



Figure 56

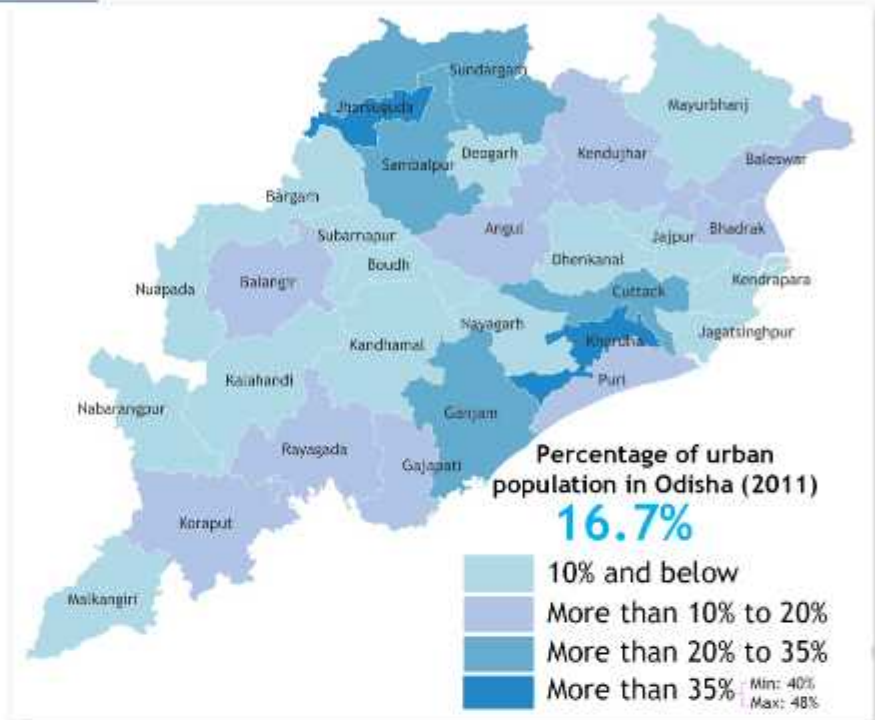
Urban Nightlight: 2020



Source: Earth Observation group, Payne Institute for Public Policy

Figure 57

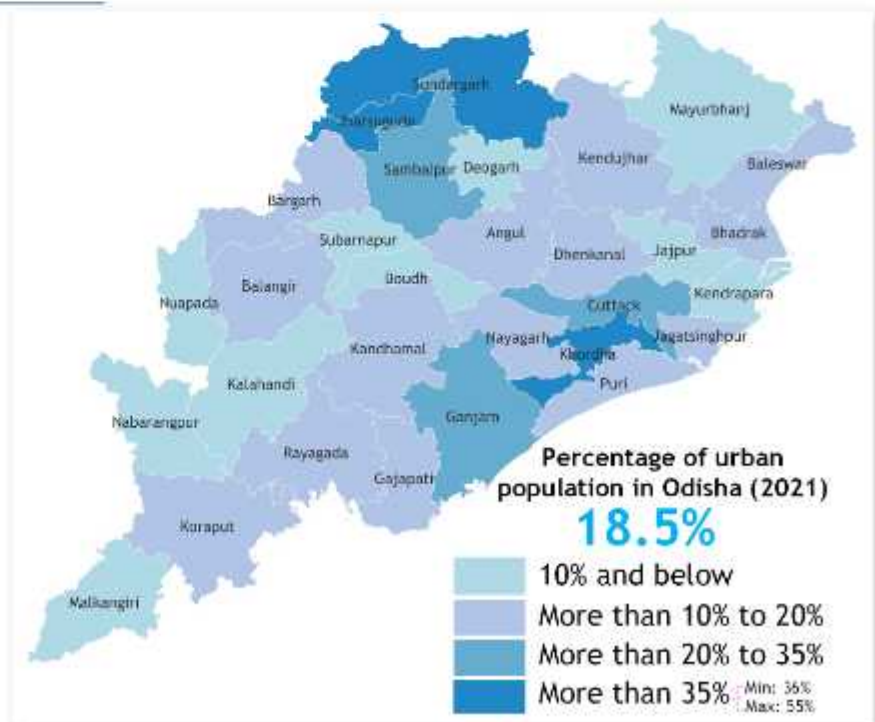
Urban Population in 2011 (in per cent)



Source: Census 2011

Figure 58

Urban Population in 2021 (in per cent)

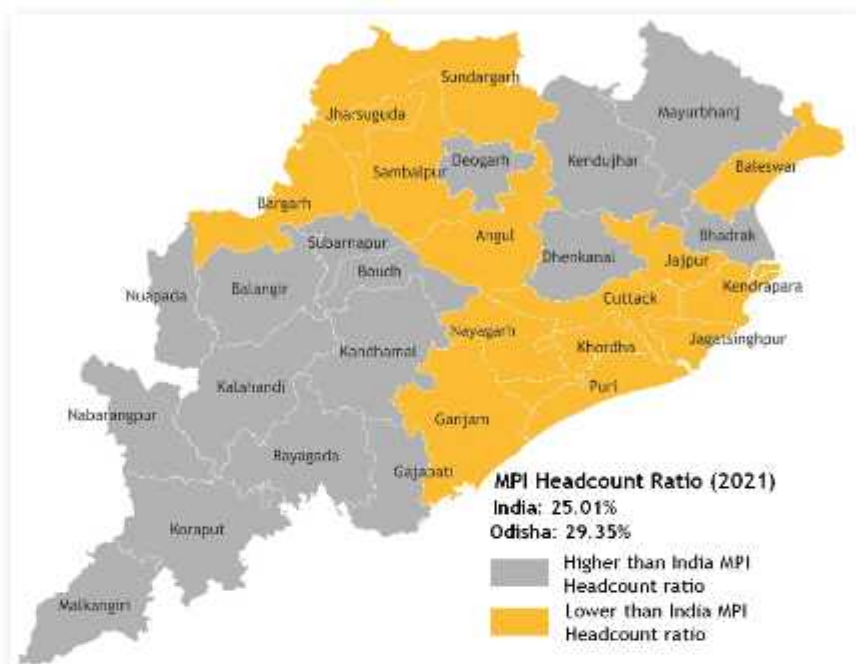


Source: District at a Glance 2022 by DES, Odisha and DES, Odisha Provisional Estimate

SOCIAL SECTOR

Figure 59

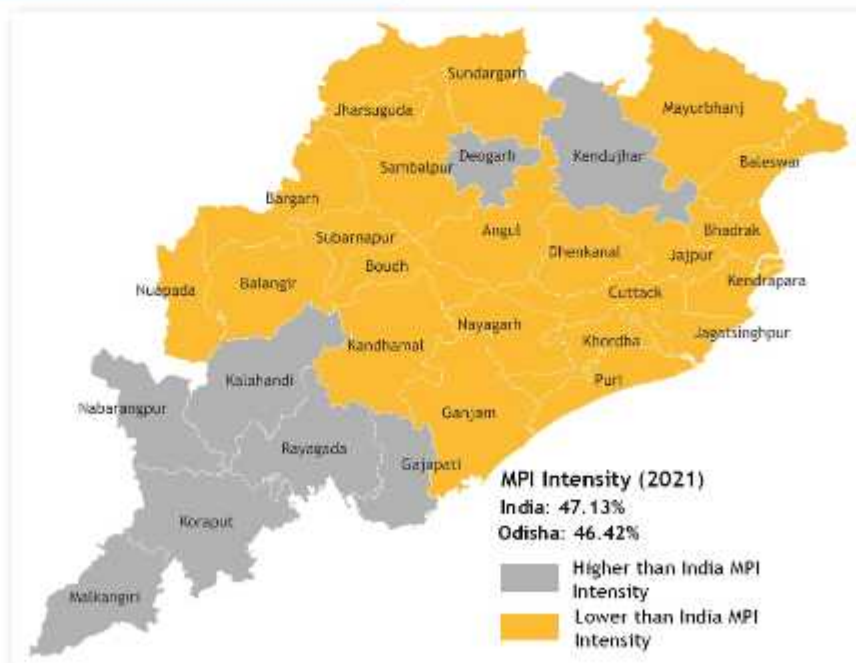
MPI Headcount Ratio (2021)



Source: Map based on National Multidimensional Poverty Index, 2021, NITI Aayog

Figure 60

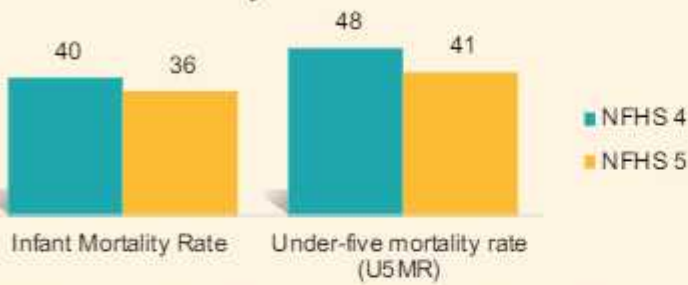
MPI Intensity (2021)



Source: Map based on National Multidimensional Poverty Index, 2021, NITI Aayog

Figure 61

Infant Mortality Rate, U5MR



Source: NFHS-4 (2015-16) and NFHS-5 (2019-21), State Fact Sheet – Odisha, MOFWH

Figure 62

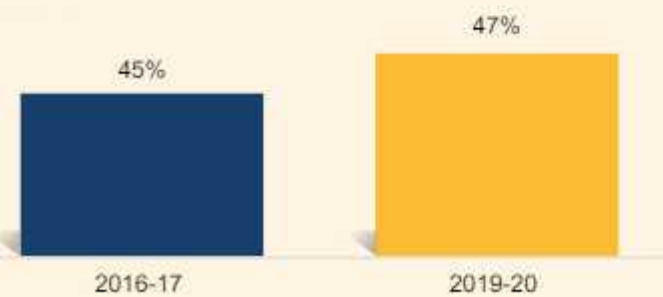
Maternal Mortality Rate (India Vs. Odisha)



Source: SRS, Office of the Registrar General, India

Figure 63

Female Enrolment in Higher Education (Odisha)

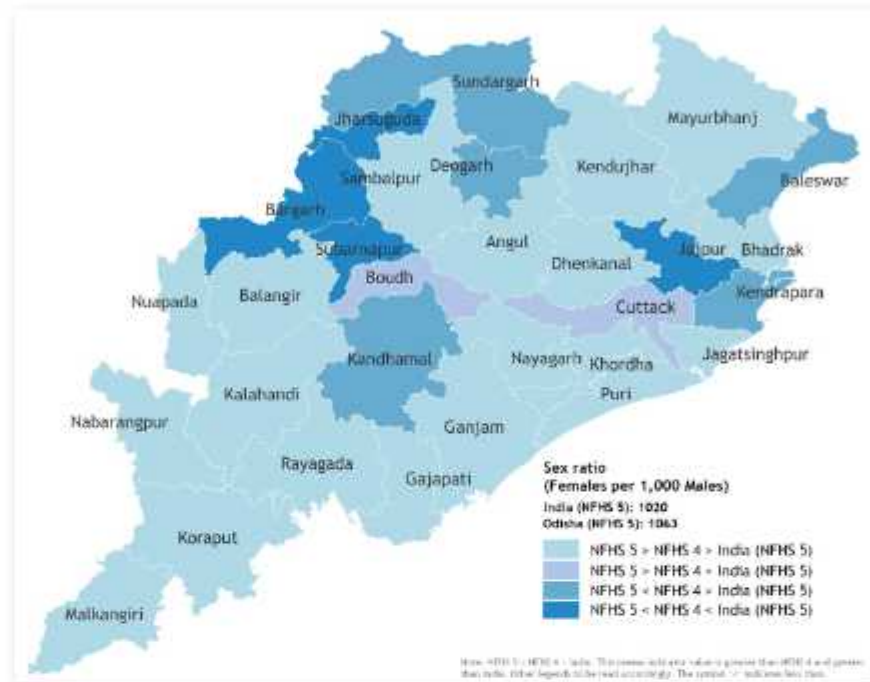


Source: AISHE 2019-20



Figure 64

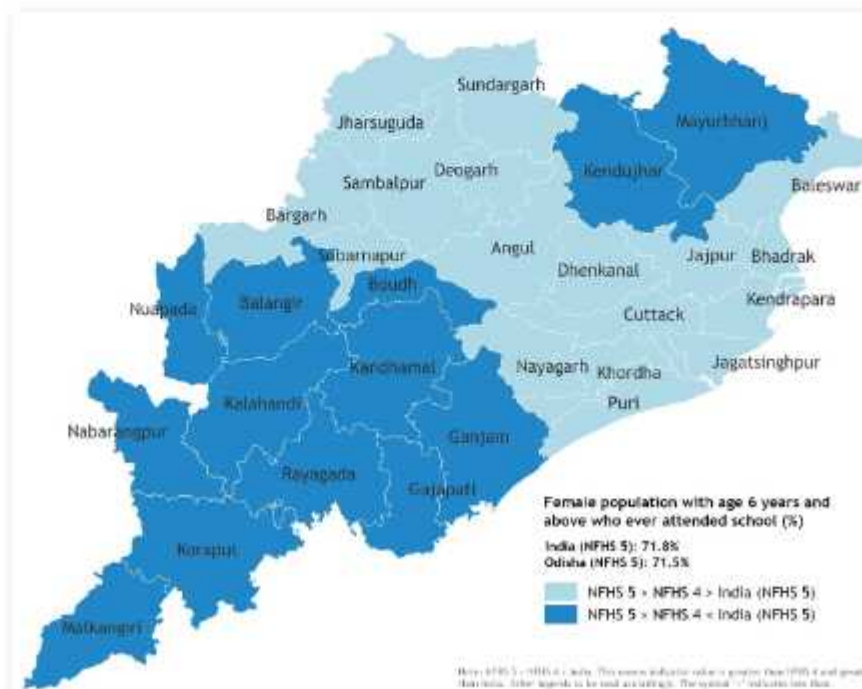
Sex Ratio (of population) in Odisha



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 65

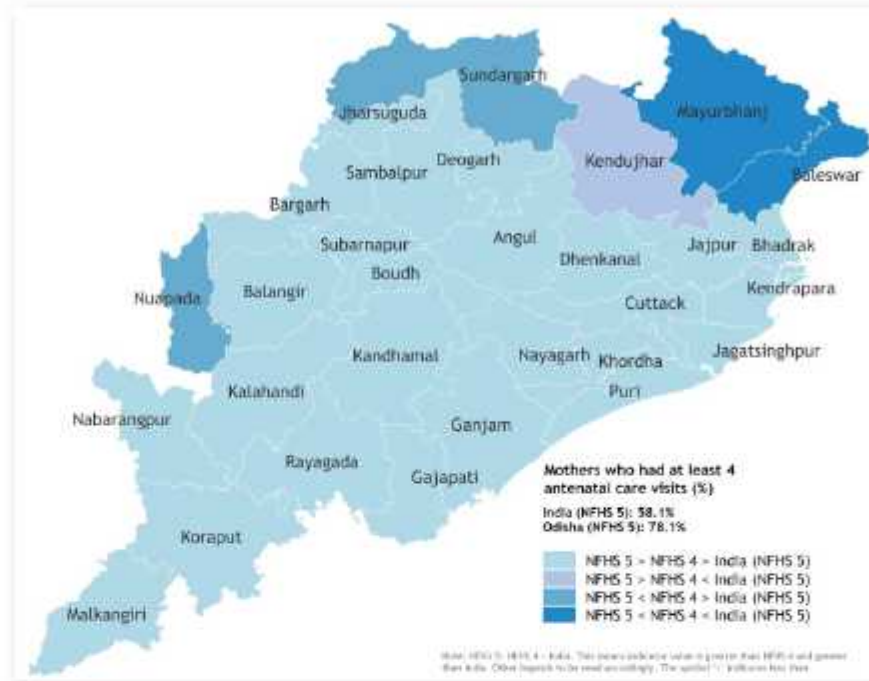
Female with age 6 years and above who ever attended school



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 66

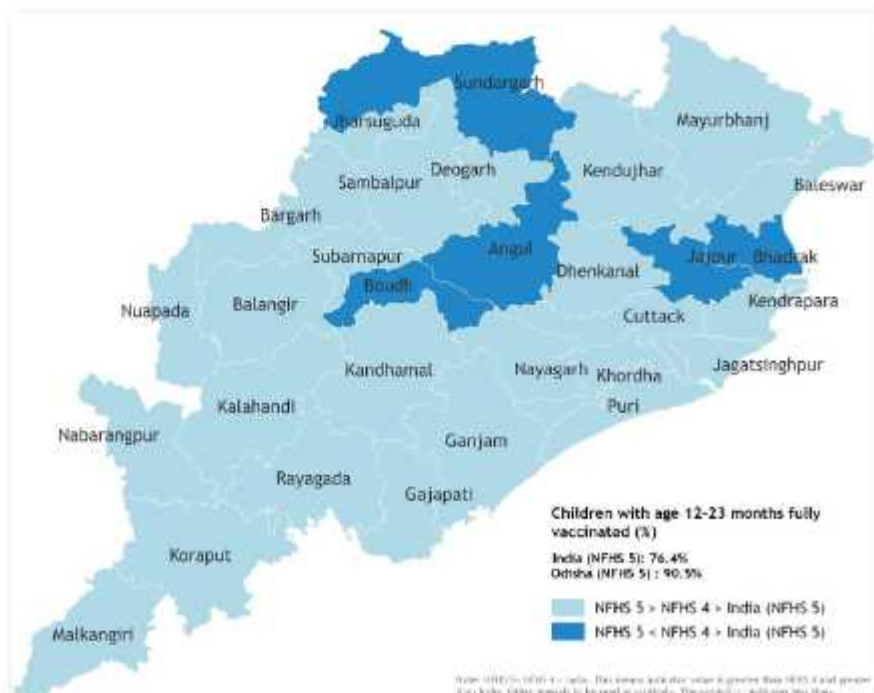
Mothers who had at least 4 antenatal care visits



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 67

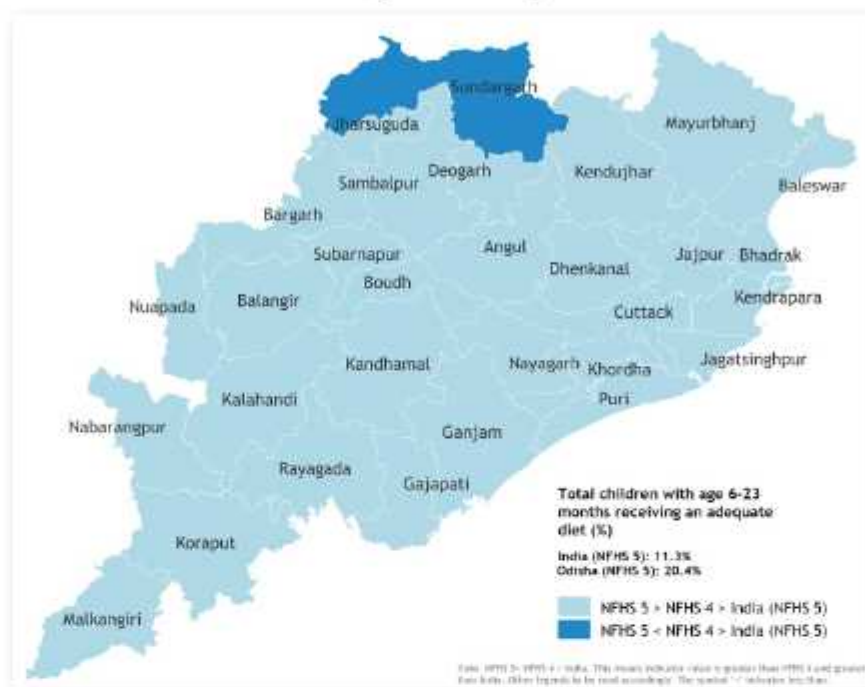
Children with age 12-33 months fully vaccinated



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 68

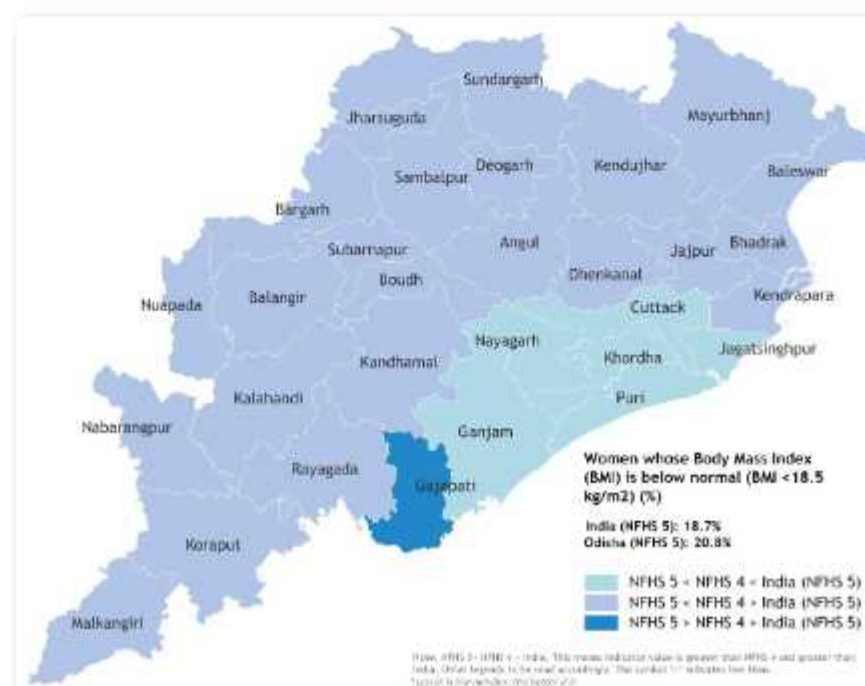
Children with age 6-23 months receiving an adequate diet



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 69

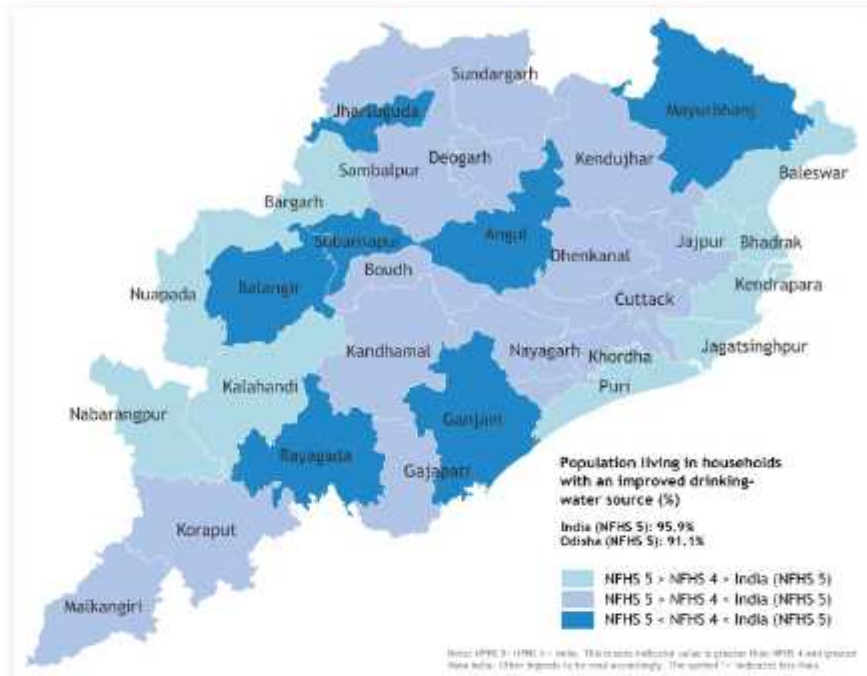
Women whose Body Mass Index (BMI) is below normal



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 70

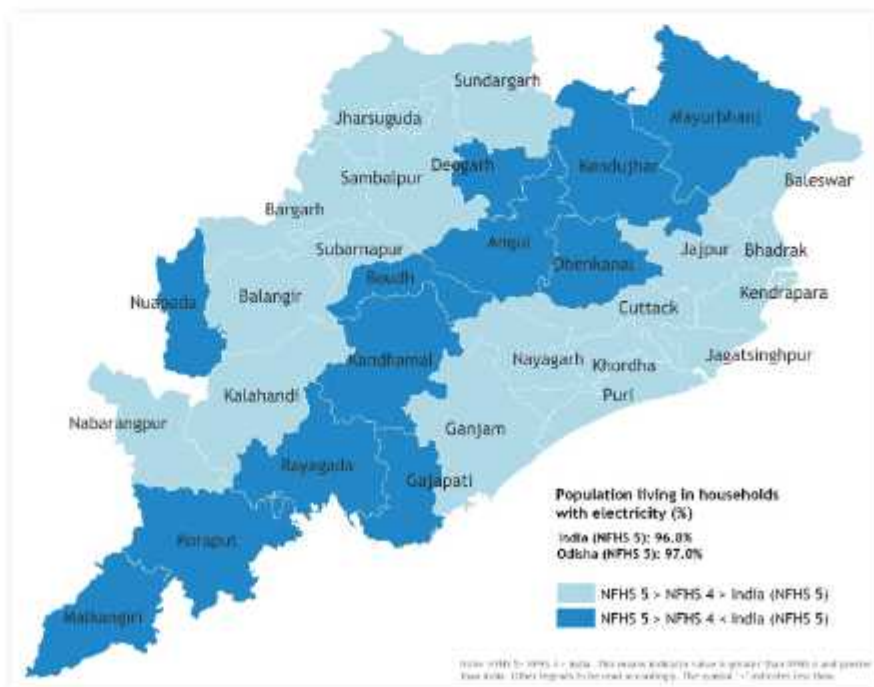
Population living in Households with an Improved Drinking Water Source



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

Figure 71

Population living in Households with Electricity



Source: NFHS-5 (2019-21) & NFHS-4 (2015-16)

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ACRONYMS

ABADHA	Augmentation of Basic Amenities and Development of Heritage and Architecture	CSOC	Cyber Security Operation Centre
ADB	Asian Development Bank	CTS	Child Tracking System
AEM	Adobe Experience Manager	DAMPS	Disaster Assistance Payment and Monitoring System
AEPS	Aadhaar Enabled Payment System	DARPG	Department of Administrative Reforms and Public Grievances
AHP	Affordable Housing in Partnership	DAY-NULM	Deendayal Antyodaya Yojana- National Urban Livelihood Mission
AHRCC	Acharya Harihar Cancer Centre	DBT	Direct Benefits Transfer
AHS	Annual Health Survey	DCCS	District Crisis Centre Service
AIF	Alternative Investment Fund	DDN	Digital Door Numbering
AISHE	All India Survey on Higher Education	DDUGJY	Deendayal Upadhyaya Gram Jyoti Yojana
AJY	Ama Jungle Yojana	DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
ALF	Area Level Federation	DFT	Direct Fund Transfer
ALMP	Alternate Learning and Mentorship Programme	DGCI&S	Directorate General of Commercial Intelligence and Statistics
ALS	Advanced Life Support	DIPA	District Investment Promotion Agency
AMRUT	Atal Mission for Rejuvenation Urban Transformation	DLFC	District level Facilitation Cell
ANM	Auxiliary Nurse Midwife	DLSWCA	District Level Single Window Clearance Authority
ANMOL	Auxiliary Nurse Midwife On-Line	DMEO	Development Monitoring and Evaluation Office
APC	Agricultural Production Clusters	DPDP	District Panchayat Development Plan
API	Application Programming Interface	DRI	Disaster Risk Index
APPA	Automated Post Allotment Application	DUHS	District Urban Housing Societies
APY	Atal Pension Yojana	EBM	Educationally Backward Minorities
ARC	Asset Reconstruction Companies	EBT	Electronic Benefit Transfer
ASHA	Accredited Social Health Activist	EBT	Evidence based training
ATSC	Adoptive Traffic Signal Control	ECCE	Early Childhood Care and Education
BALARAM	Bhoomihina Agriculturist Loan and Resources Augmentation Model	ECLGS	Emergency Credit Line Guarantee Scheme
BALIA	Bunakar Assistance For Livelihood and Income Augmentation	EDC	Eco-Development Committees
BASUDHA	Buxi Jagabandhu Assured Drinking water to all Habitation	EMAS	Emergency Medical Ambulance Services
BBSA	Bhima Bhoi Bhinnakhyama Samarthya Abhiyan	EMD	Earnest Money Deposit
BBSY	Baristha Bunakar Sahayata Yojana	ERP	Enterprise Resource Planning
BCBMP	Bhubaneswar City Bus Modernization Programme	ERSS	Emergency Response Support System
BFS	Bio-Tech Finishing Schools	ESDM	Electronics System Design and Manufacturing
BHIM	Bharat Interface for Money	Evs	Electric Vehicles
BLC	Beneficiary-Led individual house Construction	FARD	Foundation Agency for Rural Development
BLIS	Bank Credit Linkage and Interest Subvention	FCA	Fellow Chartered Accountant
BLRC	Bank Linkage and Recovery Committee	FDI	Foreign Direct Investment
BLS	Basic Life Services	FHTC	Functional Household Tap Connection
BLUIS	Bhubaneswar Land Use Intelligence System	FIH	International Hockey Federation
BNRGSK	Bharat Nirman Rajiv Gandhi Seva Kendra	FINTECH	Financial Technology
BOCWWCA	Building & Other Construction Workers' Welfare Cess Act	FRBM	Fiscal Responsibility and Budget Management
BOT	Build-Operate-Transfer	FRP	Fair and Remunerative Price
BPAS	Building plan approval systems	FSCS	Farmers' Service Cooperative Societies
BPDP	Block Panchayat Development Plan	FSR	Financial Service Representative
BPGY	Biju Pucca Ghar Yojana	FSSM	Faecal Sludge and Septage Management
BPRF	Biju Patnaik Research Fellowship	FSTP	Faecal Sludge Treatment Plant
BRLF	Bharat Rural Livelihood Foundation	G2B	Government-to-Business
BSCL	Bhubaneswar Smart City Limited	G2P	Government to Person
BSKY	Biju Swasthya Kalyan Yojana	GBS	Gender Budget Statement
BSSY	Biju Sishu Surakshya Yojana	GEM	Government e-market place
BSVY	Biju Saharanchal Vidyutikaran Yojana	GER	Gross Enrollment Ratio
BSY	Biju Setu Yojana	GFD	Gross Fiscal Deficit
CACP	Commission for Agricultural Costs and Prices	GFR	General Fertility Rate
CAF	Common Application Form	GGI	Good Governance Index
CAMPA	Compensatory Afforestation Fund Management and Planning Authority	GIS	Geographical Information System
CBDP	Community Based Disaster Preparedness	GJPA	Group Janata Personal Accident Policy
CBM	Coal Bed Methane	GKS	Gaon Kalyan Samiti
CBNAAT	Cartridge-Based Nucleic Acid Amplification Test	GPI	Gender Parity Index
CBT	Computer Based Test	GPLF	Gram Panchayat Level Federation
CCEA	Cabinet Committee on Economic Affairs	GPS	Global Positioning System
CCT	Conditional Cash Transfer	GUTSL	Ganjam Urban Transport Service Ltd
CCTNS	Crime and Criminal Tracking Network and Systems	GVA	Gross Value Added
CDRI	Central Drug Research Institute	GVP	Garbage Vulnerable Points
CES	Centre for Environmental Studies	HBNC	Home Based New-born Care
CFC	Continuous Function Charts	HCR	Headcount Ratio
CFTRI	Central Food Technological Research Institute	HDU	High Dependency Units
CGF	Credit Guarantee Fund	HFAPOA	Housing for all plan of action
CIPET	Central Institute of Plastics Engineering & Technology	HHE	Household Enterprises
CLF	Cluster Level Forum	HNI	High Net-worth Individual
CPP	Captive Power Plant	HRIDAY	Heritage City Development and Augmentation Yojana
CPR	Centre for Policy Research	HRMS	Human Resources Management System
CPS	Child Protection Service	HRPC	Human Rights Protocol Considerations
CSIR	Council of Scientific and Industrial Research	HSGs	High Spending Groups
		HT	High Tension (High Voltage)
		HWC	Health and Wellness Centre


i3MS	Integrated Mines and Mineral Management System	MCL	Mahanadi Coalfields Limited
ICC	Internal Complaints Committee	MCP	Mother and Child Protection
ICMR	Indian Council of Medical Research	MCS	Multipurpose Cyclone Shelters
ICOMC	Intelligent City Operations and Management Centre	MERS	Middle East Respiratory Syndrome
ICPS	Integrated Child Protection Scheme	MFS	Multipurpose Flood Shelters
ICT	Information and Communications Technology	MGNREGS	Mahatma Gandhi National Rural Employment Guarantee scheme
ICU	Intensive Care Unit	MIDH	Mission for Integrated Development for Horticulture
ICZMP	Integrated Coastal Zone Management Project	MKSP	Mahila Kisan Sashaktikaran Pariyojana
IEC	Information Education and Communication	MKUY	Mukhyamantri Krushi Udyog Yojana
IFMS	Integrated Financial Management System	MLD	Million Litres Daily
IFS	Integrated Farming System	MMDR	Mines and Mineral Development and Regulation
IGNDP	Indira Gandhi National Disability Pension Scheme	MMMSY	Mukhya Mantri Mahila Sashakti Karana Yojana
IGNOAP	Indira Gandhi National Old Age Pension	MMR	Maternal Mortality Rate
IGNWP	Indira Gandhi National Widow Pension	MOU	Memorandum of Understanding
IHHL	Individual Household Latrine	MOUD	Ministry of Urban Development
IIC	Integrated Infrastructure Complex	MPEDA	Marine Products Export Development Authority
IISER	Indian Institutes of Science Education and Research	MPI	Multidimensional Poverty Index
IKLMS	Integrated Kendu Leaf Management System	MRCB	Minimizing Regulatory Compliance Burden
IMA	Institute of Mathematics and Application	MSGs	Middle Spending Groups
IMD	India Meteorological Department	MSP	Minimum Support Price
IMIS	Intervention, Monitoring & Information System	MTFF	Medium-Term Fiscal Framework
IMR	Infant Mortality Rate	MTP	Medical Termination of Pregnancy
IPC	Indian Penal Code	MUB	Mo Upakari Bagicha
IPC	Irrigation Potential Created	MUKTA	Mukhyamantri Karma Tatpara Abhiyan
IPM	Integrated Pest Management	MVSN	Mahila Vikas Samabay Nigam
IPP	Independent Power Producers	MVU	Mobile Veterinary Unit
IPR	Intellectual Property Rights	MWH	Maternity Waiting Homes
IPSC	Integrated Public Services Centre	MXCS	Mobile X-ray Container Scanner System
IRDA	Insurance Regulatory and Development Authority of India	NACP	National Civil Aviation Policy
IRMS	Integrated Recruitment Management System	NAFED	National Agricultural Co-operative Marketing Federation
ISFR	India State of Forest Report	NAIP	Nationwide Artificial Insemination Programme
ISMW	Inter-State Migrant Workmen	NAIS	National Agriculture Insurance Scheme
ISSR	In-Situ Slum Redevelopment	NBSU	New-born Stabilization Units
ITES	Information Technology Enabled Services	NCAER	National Council of Applied Economic Research
IVRS	Interactive Voice Response System	NCDC	Non-Communicable Diseases
IYCF	Infant and Young Child Feeding	NCDEX	National Commodity & Derivatives Exchange Limited
JAM	Jan Dhan, Aadhaar, and Mobile	NCLP	National Child Labour Project
JAS	Jan Arogya Samiti	NCRB	National Crime Records Bureau
JFM	Joint Forest Management	NCVT	National Council for Vocational Training
JICA	Japan International Cooperation Agency	NDRF	National Disaster Response Force
JJM	Jal Jeevan Mission	NEFT	National Electronic Fund Transfer
JKSUTT	Jeypore, Koraput, Sunabeda Urban Transport Trust	NeGP	National e-Government Plan
JSSK	Janani Sishu Suraksha Karyakram	NER	Net Enrollment Ratio
JSY	Janani Suraksha Yojana	NFBS	National Family Benefit Scheme
KALIA	Krushak Assistance for Livelihood and Income Augmentation	NFSA	National Food Security Act
KCC	Kisan Credit Card	NIF	National Innovation Foundation-India
KLPSIS	Kendu Leaf Procurement & Storage Information System	NISER	National Institute of Science Education and Research
KMC	Kangaroo Mother Care	NNMR	Neonatal Mortality Rate
KMS	Kharif Marketing Season	NNP	Net National Product
KRUTI	Karigar Record for Upliftment and Tracking of Information	NPA	Non-Performing Asset
KSINC	Kerala Shipping & Inland Navigation Corporation	NPK	Nitrogen, Phosphorus and Potassium
KUTST	Kalahandi Urban Transport Trust	NPRPD	National Programme for Rehabilitation of Persons with Disabilities
KVIB	Khandi and Village Industries Board	NRDWP	National Rural Drinking Water supply Programme)
LAD	Local Area Development	NRETP	National Rural Economic Transformation Project
LAMPCS	Large Area Multi- Purpose Cooperative Societies	NRHM	National Rural Health Mission
LBW	Low birth weight	NRLM	National Rural Livelihood Mission
LCC	Live Call Centre	NSC	Non-Special Category
LCC	Local Complaint Committee	NSWS	National Single Window System
LEADS	Logistics Ease Across Different States	NTPC	National Thermal Power Corporation
LEC	Land Entitlement Certificates	NUHM	National Urban Health Mission
LED	Light Emitting Diode	NULM	National Urban Livelihoods Mission.
LFP	Labor Force Participation	OAP	Old Age Pension
LHV	Lady Health Visitor	OAWE	Own Account Worker and Employer
LMS	Litigation Management System	OBBD	Odisha Biodiversity Board
LRC	Land Rights Certificates	OBDA	Odisha Bamboo Development Agency
LSE	Life Skill Education	ODF	Open Defecation Free
LSGs	Low Spending Groups	ODMF	Odisha District Mineral Foundation
LT	Low Tension (Low Voltage)	ODRAF	Orissa Disaster Rapid Action Force
LTL	Long-Term Linkage	OECD	Organisation for Economic Co-operation and Development
MAKJS	Mukhyamantri Abhinav Krushi Jantrapati Samman (MAKJS)	OERC	Odisha Electricity Regulatory Commission
MAM	Moderately Acute Malnourished	OFC	Optical Fiber Cable
MBPY	Madhu Babu Pension Yojana	OFSDP	Odisha Forestry Sector Development Project
MCIT	Ministry of Communication & Information Technology	OGIP	Odisha Girls Incentive Programme

OLR Act.	Orissa Land Reforms Act.	RWS	Rural Water Supply
OMBADC	Odisha Mineral Bearing Areas Development Corporation	SAHAY	Sports Action towards Harnessing Aspiration of Youth
OMM	Odisha Millets Mission	SAM	Severely Acute Malnourished
OMVTS	Odisha Mineral Vehicle Tracking System	SAMS	Students Academic Management System
OPAMS	Odisha Public Asset Management System	SAO	Seasonal Agricultural Operations
OPELIP	Odisha PVTG Empowerment and Livelihood Improvement Programme	SARS	Severe Acute Respiratory Syndrome
ORIS	Odisha Registration Information System	SAUBHAGYA	Sahaj Bijli Har Ghar Yojana
ORMAS	Odisha Rural Development and Marketing Society	SBCC	Social and Behavior Change Communication
ORS	Oral Rehydration Solution	SBM	Swachha Bharat Mission
ORSAC	Odisha Space Applications Centre	SBMG	Swachh Bharat Mission Grameen
ORTPSA	Odisha Right to Public Services Act	SCRIPS	State Capital Region Improvement of Power System
OSAM	Odisha State Agricultural Produce Marketing	SDC	State Data Centre
OSCPCR	Odisha State Commission for Protection of Child Rights	SDG	Sustainable Development Goals
OSDA	Odisha Skill Development Authority	SDRF	State Disaster Response Fund
OSDI	Odisha Spatial Data Infrastructure	SEBC	Socially and Economically Backward Classes
OSDP	Odisha Skill Development Project	SECC	Socio Economic and Caste Census
OSEPA	Odisha School Education Programme Authority	SEP	Self-Employment Programme
OSIF	Odisha State Indicator Framework	SFC	Sequential Function Charts
OSTF	Odisha State Treatment Fund	SESS	State Food Security Scheme
OUEM	Odisha Urban Housing Mission	SIDR	State Institute for Disability Rehabilitation
OUIDF	Odisha Urban Infrastructure Development Fund	SJTA	Shree Jagannath Temple Administration
OWDM	Odisha Watershed Development Mission	SLNA	State Level Nodal Agency
PACS	Primary Agriculture Cooperative Societies	SLWM	Solid and Liquid Waste Management
PAL	Poverty Action Lab	SMID	Social Mobilization & Institutional Development
PBI	Participatory Budget Initiative	SNCU	Sick New-born Care Units
PCCF	Principal Chief Conservator of Forest	SNP	Single Nucleotide Polymorphisms
PCI	Pharmacy Council of India	SPCB	State Pollution Control Board
PCPIR	Petroleum, Chemical and Petrochemical Investment Regions	SPP	Scalable Parallel Processor
PCR	Police Control Room	SPV	Solar Photo-Voltaic
PDA	Pension Disbursing Authority	SRG	State Resource Group
PDS	Public Distribution System	SRR	Seed Replacement Rate
PESA	Panchayat Extension to Scheduled Areas	SSEPD	Social Security for Empowerment of Persons with Disability
PETI	Post-Eligibility Treatment of Income	SUM	Severely Under Weight
PFM	Public Financial Management	SUSV	Support to Urban Street Vendors
PGI	Performance Grading Index	SUY	Shilpi Unnati Yojana
PHDMA	Poverty and Human Development Monitoring Agency	SVEP	Start-up Village Entrepreneur
PIC	Patent Information Centre	SWAN	State Wide Area Network
PMAY	Pradhan Mantri Awas Yojana	SWIFT	Society for Worldwide Interbank Financial Telecommunication
PMEGP	Prime Minister Employment Generation Programme	SWM	Solid Waste Management
PMFBY	Pradhan Mantri Fasal Bima Yojana	TBI	Technology Business Incubator
PMFME	Pradhan Mantri Formalisation of Micro food Processing Enterprises	TDC	Talent Development Centre
PMJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana	TFR	Total Fertility Rate
PMMSY	Pradhan Mantri Matsya Samapada Yojana	TMC	Temporary Medical Camp
PMSBY	Pradhan Mantri Surakhya Bima Yojana	TRAI	Telecom Regulatory Authority of India.
PMSMA	Pradhan Mantri Surakshit Matritva Abhiyan	UDISE	Unified District Information System for Education
POA	Prevention of Atrocities	UIDSSMT	Urban Infrastructure Development Scheme for Small and Medium Towns
PPD	Permanent Partial Disability	UNCDF	United Nations Capital Development Fund
PPVRA	Protection of Plant Varieties Registration Authority	UNDP	United Nations Development Programme
PRADAN	Professional Assistance for Development Action	UNICEF	United Nations International Children's Emergency Fund
PRASHAD	Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive	UNWFP	United Nations World Food Programme
PRIs	Program-Related Investments	UPHC	Urban Primary Health Centre
PSS	Price Support Scheme	UPI	Unified Payments Interface
PTD	Permanent Total Disability	URL	Uniform Resource Locator
PTR	Pupil Teacher Ratio	URT	User Registration Tool
PVTG	Primitive Vulnerable Tribal Group	VHND	Village Health and Nutrition Day
PWCS	Primary Weavers Co-operative Societies	VHSND	Village Health Sanitation Nutrition Day
PWDV	Protection of Women from Domestic Violence	VRF	Vulnerability Reduction Fund
PWS	Piped Water Supply	VSS	Vana Surakhya Samitis
RBSK	Rashtriya Bal Swasthya Karyakarma	VSSUT	Veer Surendra Sai University of Technology
RGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana	WBM	Water Bound Macadam
RHC	Rental Housing Complex	WCP	Women Component Plan
RKS	Rogi Kalyan Samiti	WHO	World Health Organization
RKVY	Rashtriya Krishi Vikas Yojana	WMM	Wet Mix Macadam
RMSA	Rashtriya Madhyamika Shiksha Abhiyan	WOUTSL	Western Odisha Urban Transport Service Ltd
RPL	Recognition of Prior Learning	WSC	Water Supply Company
RPLI	Rural Postal Life Insurance	WSHG	Women Self Help Group
RPRC	Regional Plant Resource Centre	WSS	Water Supply and Sanitation
RSBY	Rasthya Swastha Bima Yojana		
RTE	Right To Education Act		
RTI	Right to Information Act.		
RWBCIS	Restructured Weather Based Crop Insurance Scheme		
RWHS	Rainwater Harvesting Structure		

STATE PROFILE

Sl No.	Indicator	Year	Unit	Amount/ Value
1	Geographical Area		Sq. KM	155707
2	Districts		Number	30
3	Sub-divisions		Number	58
4	Tehsils		Number	317
5	C.D. Blocks		Number	314
6	Urban Local Bodies		Number	114
7	Gram Panchayat		Number	6798
8	Villages (Inhabited)	2011 Census	Number	47677
9	Total Population	2011 Census	000'	41974
10	Urbanisation	2011 Census	Percent	16.7
11	Sex Ratio	2011 Census	Female per 000' Male	979
12	Literacy Rate	2011 Census	Percent	72.9
13	Density of Population	2011 Census	Sq. km.	270
14	GSDP at current Prices	2020-21(1st R)	Rs. In crore	542889.59
15	GSDP at current Prices	2021-22 (AE)	Rs. In crore	638342.32
16	GSDP at constant Prices (2011-12)	2020-21 (1st R)	Rs. In crore	388328.13
17	GSDP at constant Prices (2011-12)	2021-22 (AE)	Rs. In crore	427592.17
18	Growth Rate of GSDP at constant price (2011-12)	2020-21(1st R)	Percent	-5.35
19	Growth Rate of GSDP at constant price (2011-12)	2021-22 (AE)	Percent	10.11
20	Share of Agriculture sector to GSDP at current price	2021-22 (AE)	Percent	20.61
21	Share of Industry sector to GSDP at current price	2021-22 (AE)	Percent	39.51
22	Share of Service sector to GSDP at current price	2021-22 (AE)	Percent	39.88
23	Per capita Income	2021-22 (AE)	Rupees	127,383
24	Un-employment Rate (UPS) by Labour Bureau	2019-20	Percent	6.2
25	Poverty Ratio	2011-12	Percent	32.6
26	Poverty Ratio (projected)	2017	Percent	26.9
27	Production of Food grains	2020-21	000, M.T.	13,039
28	Net Irrigation potential created till	2020-21	000, hectare	38.87
29	Per hectare consumption of fertilizer	2020-21	Kg/hectare	76.21
30	Per capita availability of Milk	2020-21	Gm./day	138
31	Per capita availability of egg per Annum	2020-21	Number	54
32	Per capita availability of meat per Annum	2020-21	Kg.	4.41
33	Per capita fish consumption per Annum	2020-21	Kg.	16.34

Sl No.	Indicator	Year	Unit	Amount/ Value
34	Total no. of Micro, Small and Medium Enterprises ((MSME)	2020-21	Number	44273
35	Employment Generated under MSME	2020-21	Lakh Number	18.1
36	Installed Capacity of Power by GRIDCO	2020-21	Megawatt	8018.25
37	Number of Primary of Schools	2020-21	Number	31,492
38	Number of Upper Primary of Schools	2020-21	Number	20,724
39	Pupil Teacher Ratio (Primary)	2020-21	Ratio	16
40	Pupil Teacher Ratio (Upper Primary)	2019-20	Ratio	15
41	Pupil Teacher (Secondary)	2019-20	Ratio	22
42	Percentage of GER at Primary level	2019-20	Percent	102.2
43	Percentage of GER at Upper Primary level	2019-20	Percent	98.0
44	No. of Govt. Elementary Schools with Drinking Water Facility	2020-21	Number	44,250
45	No. of Govt. Elementary Schools with Toilet Facility (Girl)	2020-21	Number	44,006
46	Dropout Rate at Primary Schools	2020-21	Percent	0
47	Colleges per lakh of population (18-23 years of age group)	2019-20	Number	24
48	Dropout Rate at Upper Primary Schools	2020-21	Percent	0
49	Dropout Rate at High Schools	2020-21	Percent	16.04
50	Credit Deposit Ratio	2020-21 (SLBC)	Percent	56.45
51	Number of Bank Branches	2020-21(SLBC)	Number	5548
52	No. of Accounts under Pradhan Mantri Jan Dhan Yojana	01-03-2021 (SLBC)	Lakh	173.2
53	No. of registered vehicles	2020-21	lakh number	96.59
54	Road density per 100 sq. km.	2020-21	K.M.	177
55	IMR	2019-21 (NFHS-5)	per 000, live births	36.3
56	MMR	2016-18 (SRS)	per 000, live births	150
57	Life expectancy at birth	2014-18 (SRS)	years	69.3
58	Under 5 Mortality Rate	2019-21 (NFHS-5)	per 000, live births	41
59	Number of PHCs	Upto March 2020	Number	1379
60	Number of CHCs	Upto March 2021	Number	384
61	Number of sub-divisional Hospitals	Upto October 2016	Number	33
62	Number of District Hospitals	Upto October 2016	Number	32
63	Institutional Delivery	2019-21 (NFHS-5)	Percent	92.2
64	Percentage of Forest area to States Geographical area	2019 (FSI)	Percent	33.50
65	Tele density (over all)	2020-21	Ratio	78.46
66	Internet Subscriber per 100 population	2020-21	percent	49.09



CHAPTER



1

State of the Economy: A Macro View



COVID-19 is a once in a century health crisis which led to an unprecedented economic downturn. No single economy in the World was immune to this crisis. Both lives and livelihood were lost. As of 18th February 2022, there were approximately 418 million confirmed cases and 5.8 million deaths. While the number of cases is lower than previous outbreaks such as H1N1 swine flu etc., the economic impact has been significant. World Economy contracted by 3.1 per cent in 2020. Indian economy too contracted by 6.6 per cent in 2020-21. Relative to rest of the World, India is projected to recover more strongly. In 2021-22, as per the advance estimates, India is likely to grow at 8.8 per cent and in 2022-23, by 8-8.5 per cent (Union Economic Survey 2021-22). This makes India fastest growing major economy in the World.

Real GSDP in Odisha got contracted by 5.3 per cent in 2020-21 and have registered a strong rebound in 2021-22. It is expected to grow at 10.1 per cent as per advance estimates. Per capita income in the State is also growing and it is catching up faster. This could be attributed to State taking the leading role in generating demand and crowding-in investment through high capital expenditure. In 2019-20, Odisha ranked no. 1 in capital spending as per cent of GSDP (among 20 major states¹) at 3.7 per cent. Odisha has been an example of prudent fiscal management reporting revenue surplus for several years and keeping fiscal deficit and Government debt within limits. This has helped Odisha to keep the interest cost low. In 2021-22, the State is expecting significant increase in mineral revenues. In future, these would provide further strength to public finances of the State and provide resources to build medium-term growth potential. Relative to neighbouring states², inflation has been moderate in Odisha. The effective supply chain management after the 2021 lockdown have played an important role. On a year-on-year basis, in January 2022, Odisha reported inflation at the rate of 4.5 per cent. The average inflation rate was 6.2 per cent in neighbouring states and 6 per cent in major states.

On the employment front, pandemic led large scale unemployment is moderating. In 2021-22, Agriculture and Allied Activities contributed 20.61 per cent, Industry contributed 39.51 per cent and Services contributed the remaining 39.88 per cent to GSVA. On the other hand, as per the latest available employment estimates for both rural and urban (2019-20), workforce is more skewed towards the Agriculture and Allied sector. This is a trend observed across India. Analysis of per-capita income and sectoral composition across states and growth contribution by various sectors to overall GSVA growth shows that as per-capita income increases, the services sector becomes more prominent. Based on analysis of contribution to growth by various sectors during 2012-13 to 2020-21, it is noted that agriculture and allied activities contributed only 10 per cent to growth while the remaining was equally contributed by Industry and services. Several reform measures in the manufacturing sector with IT enabled process facilitation is making Odisha an attractive place for investors. Industrial progress would bring the necessary synergy for primary sector and service sector to grow faster. It is expected that, going ahead new age service sector would gain traction and help the economy grow faster.

¹ The 20 major states are: Odisha, Uttar Pradesh, Punjab, Himachal Pradesh, Madhya Pradesh, Jharkhand, Chhattisgarh, Haryana, Goa, Karnataka, Uttarakhand, Bihar, Telangana, Gujarat, Rajasthan, Tamil Nadu, West Bengal, Maharashtra, Andhra Pradesh, and Kerala

² Neighbouring states are: Chhattisgarh and Jharkhand

1.1 INTRODUCTION

I. Global Macroeconomic Overview

1.1.1. World Economy was severely hit by the COVID-19 outbreak. It impacted both lives and livelihood through various mitigation measures adopted to prevent the spread. As of 18th February 2022, there were nearly 418 million confirmed COVID-19 cumulative cases and about 5.8 million deaths globally as per World Health Organisation (WHO). While the cumulative number of cases is less than previous outbreaks such as H1N1 Swine flu, SARS, MERS, Ebola, the economic fallout has been more pronounced. As per IMF estimates, the world economy contracted by 3.1 per cent in the calendar year 2020.

1.1.2. Due to the unprecedented progress made in rollout of vaccine, it is satisfying to note that more than 50 per cent of World Population has been vaccinated with at least one dose. This is particularly important for economic recovery given that longer the COVID-19 virus survives, the greater the likelihood of new mutations which increases the likelihood of mobility restrictions across the globe to prevent transmission.

1.1.3. As per IMF estimates, world economy grew by 5.9 per cent in 2021 on a low base of 2020. This was possible as COVID-19 induced restrictions were relaxed globally. However, with the emergence of new variant of COVID-19, Omicron, which has high transmissibility but low fatality, concerns over speedy recovery have emerged again. As shown in Table 1.1, there is consensus across agencies that global growth in 2022 would be in the range of 3.2 per cent to 4.5 per cent. IMF has downgraded its growth forecast for world economy for 2022 from 4.9 per cent made in October 2021 to 4.4 per cent in January 2022. The growth forecasts for 2022 assumes that severe illness, hospitalizations, deaths are brought to low levels in most of the countries by end of 2022. Given that large population is still to be vaccinated despite the unprecedented progress, downside risks to the growth forecasts remain.

Table 1.1

World Economy Growth Forecast by various agencies for 2022 and 2023
(in per cent)

Agency	World Real GDP Growth Projections	
	2022	2023
International Monetary Fund	4.4	3.8
World Bank	4.1	3.2
OECD	4.5	3.2
Nomura	4.3	3.3
Bank of England	3.2	3.0

Source: World Economic Outlook, IMF, January 2022; Global Economic Prospects, World Bank, January 2022; OECD Economic Outlook, December 2021; Nomura Global Outlook, December 2021; Bank of England Monetary Policy Report February 2022

Note: In the Odisha Economic Survey of 2021-22, for the National Accounts Statistics of India (GDP, GVA, etc.), we have used the revised estimate (RE) for 2020-21 that was released on January 31, 2022 and 1st advance estimate for 2021-22 that was released on January 7, 2022.

1.1.4. Different economies have been impacted differently depending on susceptibility of the population, severity of mobility restrictions, impact of infections on labour supply and importance of contact-intensive sectors. Growth forecasts for key trading partners for India, i.e., United States, China have been downgraded by IMF. Supply chain disruptions globally has been the key driver of downward growth revision for 2022 and 2023, apart from policies such as early withdrawal of monetary policy support in United States, stricter preventive measures (such as zero COVID-19 strategy in China), and weak harvest in Russia. On the contrary, India and Japan are some of the few economies projected to grow faster owing to stronger financial sector recovery and expected investment and consumption revival. However, Ukraine and Russia war could play a spoiler as it is likely to impact commodity prices, exchange rate, inflation as well as reactionary monetary policy.



1.1.5. While growth forecasts are downgraded for major economies, an additional risk of elevated inflation has emerged. Disrupted supply chains, uptake in goods specific consumption, increase in fuel prices are some of the key drivers. International agencies such as IMF expect that in the second half of 2022, these drivers should abate, and global inflation should be on declining path.

II. India Macroeconomic Overview

1.1.6. Relative to other major economies globally, India has managed to recover more strongly. This is largely due to large scale vaccination, accommodative monetary policy, and strong fiscal support both in terms of COVID-19 relief as well as public investment. As of 09th February 2022, nearly 1.7 billion vaccines doses were administered and nearly 95 crore adults (18+ age) have received at least one dose.

1.1.7. Indian economy is projected to grow by 8.8 per cent in 2021-22 against 6.6 per cent contraction in the preceding year, i.e., 2020-21. As per Union Economic Survey 2021-22, the economy is projected to grow between 8-8.5 per cent in 2022-23. IMF projects Indian economy to grow at 9 per cent in 2022-23 making India the fastest growing major economy in the World.

Table 1.2 Growth forecasts for India (In per cent)

Agency	India Real GDP Growth Projections	
	2022-23	2023-24
International Monetary Fund	9.0	7.1
World Bank	8.7	6.8
ADB	7.5	-
Union Economic Survey 2021-22	8 - 8.5	
74 th RBI Survey of professional forecasters Median projection	7.7	

Source: IMF World Economic Outlook, January 2022; World Bank Global Economic Prospects, January 2022; Asian Development Outlook, December 2021; Union Economic Survey 2021-22 and Reserve Bank of India

1.1.8. Government of India intends to increase capital expenditure by 24.5 per cent in 2022-23 over revised estimates of 2021-22. Major capital investment is going to sectors such as transport, urban development, and housing. This is expected to build medium-term growth potential for the economy and boost

India has recovered strongly from COVID-19. It is expected to grow at 8-8.5 per cent making it the fastest growing major economy.

confidence in the economy's growth forecasts in the coming years. Given that private investment remains muted and the key growth driver, i.e., private consumption has lost steam in the last few years, Government of India has taken the root of crowding-in private investment through public investment.

1.1.9. Union Budget 2022-23 has allocated INR 1 lakh crore to catalyse overall investment through a 50-year interest free loans to States. These loans are over and above the normal borrowings allowed to the State. Primarily these allocations will be spent for PM GatiShakti and other productive capital investments. It covers components such as: Supplemental funding for priority segments of PM Gram Sadak Yojana, including support for the States' share, Digitisation of the economy, including digital payments and completion of OFC network, and Reforms related to building byelaws, town planning schemes, transit-oriented development, and transferable development rights. Union budget mentions that, states will be allowed a fiscal deficit of 4 per cent of GSDP of which 0.5 per cent is going to be tied to power sector reforms for which conditions are led out earlier.

1.1.10. While the growth outlook for Indian economy remains positive, there are still some headwinds to be managed. Inflation remains elevated driven by food and fuel though demand side pressure remains low. Accommodative monetary policy may not continue for long in the face of rising price level as well as any further action by USA Federal reserve. Reserve Bank of India in its latest Monetary Policy Statement kept the rate unchanged citing scope for further recovery and expected easing of inflation in first half of 2022-23 and moving closer to the target of 4 per cent. It is also important to note that with aggressive borrowing plan of Government of India announced in budget 2022-23, interest rates on treasury bills and dated securities have climbed up. This may continue to pose another risk as high interest rate may push businesses to recalibrate their investment plan.

1.1.11. State Governments were never immune from global contagion as well as fiscal/monetary action at the country level. Export headwinds, be it through changes in trade policies, custom duties, or global demand shocks due to pandemic as well as global investors sentient about India due to credit rating or domestic development have direct impact on State economies. Therefore, monitoring the national and international macroeconomy at the State level has become a prerequisite.

1.2. MACROECONOMIC DEVELOPMENT IN ODISHA

1.2.1. Odisha ranks 9th in terms of area and 11th in terms of population in the country. Its nominal GDP is approximately USD 85.7 billion in 2021-22, higher than at least 121 countries in the World as per IMF World Economic Outlook GDP estimate for 2021. However, Odisha ranks marginally higher than the median state amongst 33 States and UTs in terms of overall size of the economy proxied by GSDP of 2019-20. Like the rest of the world, Odisha has also faced the wrath of the Coronavirus. Its GDP contracted by 5.3 per cent in 2020-21 against an average growth of 8.7 per cent in real terms over the preceding five years. Industry was the worst affected sector followed by service. Agriculture and allied sector remained resilient to COVID impact in 2020-21.

**Odisha
economy
likely to grow
by 10.1 per
cent rate in
2021-22 (AE)**

1.2.2. Notwithstanding the shock, Odisha economy is likely to post a strong recovery in 2021-22 as per advance estimate of GSDP. The economy is likely to grow by 10.1 per cent in 2021-22. What does this recovery mean? India's real GDP grew by 1.6 per cent between 2019-20 to 2021-22 leaving aside the covid year of 2020-21. The comparable figure for Odisha is 4.2 per cent. Odisha's recovery process is faster and broad-based.

1.2.3. The rebound in growth in 2021-22 could be attributed to robust growth in manufacturing sector in Odisha. The sector is expected to grow at 14.3 per cent in 2021-22. This is significantly higher than 5.5 per cent growth in manufacturing



ODISHA
NEW OPPORTUNITIES

sector at the national level. Manufacturing sector in Odisha is relatively concentrated in production of basic metals and coke and petroleum products. Rich natural endowment has driven so far, the industrial structure of the state. However, in the recent period, there is significant diversification into many value added sectors which is discussed in detail in the subsequent chapters. Recovery of Odisha economy augurs well for rest of the country and it could be a harbinger of good news. Rise in demand for intermediate goods or capital goods or raw material is the early signal for a sustained recovery. It may take a while to show in final production figures for rest of India.

Odisha has grown at higher rate than many comparable states.

I. Growth in Gross Value Added

1.2.4. Table 1.3 shows the GSVA growth rate of Agriculture, Industry and Services sector. Agriculture and allied sector have posted a contraction in real terms as per advance estimate of 2021-22 owing to drought, unseasonal rain, and cyclone "JAWAD" in harvesting period of kharif season. However, agriculture and allied sector have posted a growth rate of 9.5 per cent in the prior three years. During Covid year of 2020-21, when agriculture sector grew by only 3.3 per cent at all India level, in Odisha, the sector grew by 7.4 per cent. Industry sector posted a robust growth rate of 14.5 per cent as per the advance estimate of 2021-22. Mining and Manufacturing sector – two subsectors of Industry have posted a stellar growth rate of 18.1 per cent and 14.3 per cent respectively. Service sector grew at 8.8 per cent in 2021-22. Some of the sub-sectors within service sector which have posted very high growth rate are – Financial Services (9 per cent), Transport, storage, communication and broadcasting (9.2 per cent) and Public administration (8.4 per cent). In terms of relative sectoral share, agriculture share has come down to 20.6 per cent in 2021-22 and the share of industry sector has increased from 35.6 per cent in 2020-21 (1st RE) to 39.5 per cent in 2021-22 (AE). Service sector share has come down marginally to 39.9 per cent in 2021-22 (AE) in comparison to 40.8 per cent in 2020-21 (1st RE).

Table 1.3

Real GSDP and GSVA Growth and Sectoral Share in current price in Odisha (in per cent)

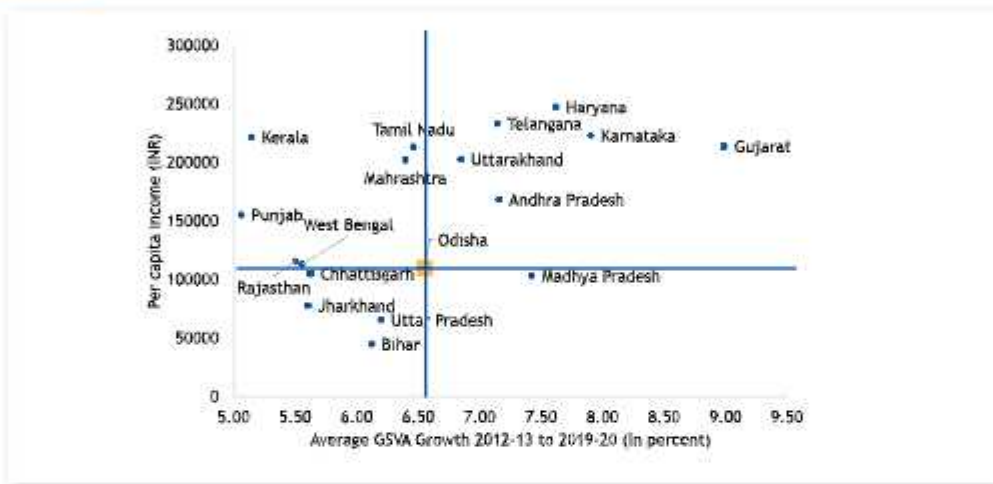
Year	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (AE)
Growth Rate (Constant Price)			
Agriculture and Allied Sector	11.9%	7.4%	-3.4%
Industry	-2.8%	-10.8%	14.5%
Service	7.7%	-1.0%	7.9%
GSVA	3.2%	-4.3%	8.8%
GSDP	6.1%	-5.3%	10.1%
Share in GSVA (Current Price)			
Agriculture and Allied	21.8%	23.6%	20.6%
Industry	38.4%	35.6%	39.5%
Service	39.8%	40.8%	39.9%

Source: National Income Statistics, MOSPI; DE&S, Odisha 2022

1.2.5. Figure 1.1 shows the mapping of average GSVA growth in pre-COVID period, i.e., from 2012-13 to 2019-20, and per-capita income in 2019-20. As shown in Figure 1.1, the states which have grown faster have also achieved high per capita income. Odisha has grown at a higher rate vis-à-vis comparable states such as Chhattisgarh, Rajasthan, Jharkhand, Uttar Pradesh and Bihar. High growth in Odisha resulted in having higher per capita income in the State. Another implication of this figure is that conventional convergence hypothesis, which states that low-income states

would grow at a faster rate given the lower base may only be operational when income grows beyond a certain threshold. Therefore, in case of Indian states, even relatively high-income states are also growing faster. This would mean that as Odisha attains higher per capita income, maybe multiple externalities would be working out to make the growth faster. It is also possible due to various forward and backward sectoral linkages amongst the sector as well. For example – rise in Industry sector would propel the demand for services hence service sector would catch up. Combined growth of Industry and service may propel to modernise agriculture as more worker would be coming out of agriculture and shortage of labour would ignite forces to go for mechanisation.

Figure 1.1 Per-capita income 2019-20 and Average GVA growth 2012-13 to 2019-20



Source: State Domestic Product and other aggregates, MOSPI; DES Odisha 2022

1.2.6. Due to COVID-19, across the world lives and livelihoods were lost. Odisha was no different. The State GSDP contracted by 5.3 per cent in 2020-21 which is lower than contraction experienced at all India level, i.e., 6.6 per cent.

Figure 1.2 G(S)DP Growth of Odisha and India at constant (2011-12) basic prices



Source: National Income Statistics, MOSPI; DE&S, Odisha 2022

Table 1.4 Annual Average Growth Rates of G(S)DP by sector, at Constant (2011-12) Basic Prices

Year	Sector-wise Growth Rates							
	Agriculture		Industry		Services		GDP/GSDP	
	India	Odisha	India	Odisha	India	Odisha	India	Odisha
2012-13 to 2021-22	3.53	4.07	4.56	6.35	6.42	6.23	5.47	6.48

Source: DE&S, Odisha (2022)

II. Per Capita Income

1.2.8. Per capita GDP or GSDP measure the economic size of the State relative to its population. While per capita income used as a proxy to measure the economic progress, it does not consider the distributional aspect. Had the GDP or GSDP uniformly distributed across the state, what would have been the GDP or GSDP per person in the country or State – is what GDP or GSDP per capita show. In current prices, per capita income in Odisha is INR 1,27,383 in 2021-22 in comparison to INR 1,50,326 at all India level.

1.2.9. While per capita Net State Domestic Product in Odisha is currently lower than India, Odisha has managed to reduce the gap over time. In 2011-12, Odisha's per-capita NSDP (proxy for per capita income) was nearly 76 per cent of per-capita Net National Income (NNI, proxy for Income at India level) at All-India level. Ten years later, in 2021-22, Odisha's per-capita NSDP is 84.7 per cent of per-capita NNI at India level.

1.2.10. The compound annual growth rate (CAGR) of per-capita income at current prices over the last 10 years in Odisha is 10.1 per cent in comparison to 9 per cent at India level. Even in the COVID-19 year, 2020-21, when growth plummeted in all sectors everywhere, the rate of decline in per capita income of Odisha was far lower (- 0.92 per cent) than that in per capita income of India (- 3.98 per cent). This speaks of the resilience of the State economy. A comparative picture of the trend of per capita income of Odisha and India since 2011-12 has been presented in Table 1.5.

Odisha's per capita income is rising at a faster rate

Table 1.5 Per capita income of Odisha and India at current prices (INR)

Year	Odisha	India	Difference (India PCI minus Odisha PCI)	PCI-Odisha as per cent of PCI-India	Growth Rate of	
					PCI-Odisha	PCI-India
2011-12	48,499	63,462	14,963	76.4		
2012-13	55,105	70,983	15,878	77.6	13.6	11.9
2013-14	61,305	79,118	17,813	77.5	11.3	11.5
2014-15	64,233	86,647	22,414	74.1	4.8	9.5
2015-16	65,993	94,797	28,804	69.6	2.7	9.4
2016-17	79,181	104,880	25,699	75.5	20.0	10.6
2017-18	89,392	115,224	25,832	77.6	12.9	9.9
2018-19 3 rd RE	100,838	125,946	25,108	80.1	12.8	9.3

Year	Odisha	India	Difference	PCI-Odisha as per cent of PCI-India	Growth Rate of	
			(India PCI minus Odisha PCI)		PCI-Odisha	PCI-India
2019-20 2 nd RE	110,081	132,115	22,034	83.3	9.2	4.9
2020-21 1 st RE	109,071	126,855	17,784	86.0	-0.9	-4.0
2021-22 (AE)	127,383	150,326	22,943	84.7	16.8	18.5

Note: Figures for 2019-20 are second revised estimates, 2020-21 are first revised estimates and 2021-22 are Advance estimates

Source: DE&S, Odisha (2022); National Accounts Statistics, MOSPI, Govt. of India

1.2.11 In comparison to other states, Odisha is among those states which has improved its ranking on per-capita income. As can be seen from Table 1.6, there are 10 states which remained at the same level in the last decade, nine states including Odisha improved its ranking, while there were 10 other states too which slipped in per-capita income ranking.

Table 1.6

Change in per-capita income rank across states (2019-20 relative to 2011-12)

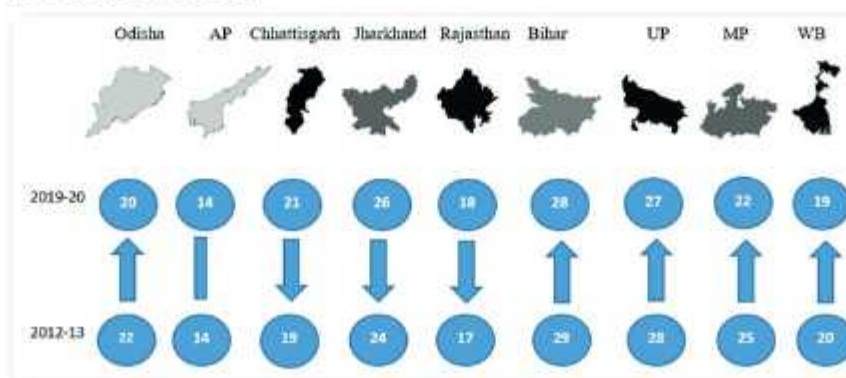
No change in rank 10 states	Improvement in rank 9 states	Fall in rank 10 states
Bihar (29), Uttar Pradesh (28), Manipur (26), Assam (25), Andhra Pradesh (14), Arunachal Pradesh (13), Kerala (6), Haryana (3), Sikkim (2), Goa (1)	Odisha (20) , West Bengal (19), Nagaland (17), Telangana (4), Karnataka (5), Gujarat (7), Mizoram (12), Madhya Pradesh (22), Tripura (16)	Rajasthan (18), Chhattisgarh (21), Punjab (15), Maharashtra (10), Uttarakhand (9), Meghalaya (24), Jammu and Kashmir (23), Jharkhand (27), Tamil Nadu (8), Himachal Pradesh (11)

Source: DE&S, Odisha (2022); State Income Aggregates, MOSPI

1.2.12. Odisha has managed to improve its ranking from 22nd 2011-12 to 20th in 2019-20. With firm economic growth and stabilisation in population, Odisha has been able to improve its ranking on per-capita income.

Figure 1.3

Ranking of States on per capita income at current prices (2011-12 Series)



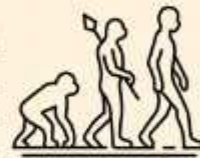
Source: DE&S, Odisha (2022); State Income Aggregates, MOSPI

Box 1.1

War & Peace

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way..." – A Tale of Two Cities, Charles Dickens (1859).

Human civilization is going through a series of crisis – some are bestowed upon us by nature, and some are the culmination of long drawn conflict. On 30th January 2020, COVID was declared as a Pandemic. As of 5th March 2022, there are more than six million deaths reported to WHO. This is equivalent to a country of the size of Singapore or Denmark or Finland wiped out from this planet at the hands of an invisible virus. The world economy contracted to a sizeable extent and livelihoods have been lost across continents. Amidst the gloom of the pandemic, a ray of hope emerged. Human ingenuity and collective effort produced vaccines in the shortest possible time in human history. While the corona virus mutation is now subdued, the fear and anxiety persist. The world is now gradually emerging from the shadow of Omicron.



At this critical juncture, when the world is trying to recover from a slump, another geo-political issue took an ugly turn. Russia and Ukraine are locked in armed conflict since 24th of February 2022. In this difficult situation, the UN General assembly on 2nd of March 2022 'overwhelmingly adopted a resolution...demanding that Russia immediately end its military operations in Ukraine'. However, it is far from over.

There are grave economic repercussions of this military engagement. Russia ranks 11th in the world in terms of nominal GDP, and 6th in purchasing power parity. Russia is India's 25th biggest trading partner. Similarly, India is one of Ukraine's major export destinations in the Asia Pacific and the fifth largest overall export market.

India imports many critical products from Russia such as Electrical machinery and equipment, pharmaceutical products, nuclear reactors, boilers & machinery, organic Chemicals, Seafood etc. Similarly, India exports crude oil, coal, mineral oils, precious and semi-precious stones, fertilizers, edible oil, etc. Between April-Dec 2021, India and Russia traded merchandise worth USD 9.4 bn. Of this, imports of USD 6.9 bn came from Russia (1.6% of India's total imports) and India exported USD 2.5 bn worth of merchandise to Russia (0.83% of India's total exports).

During the same period, India and Ukraine traded merchandise worth USD 2.4 bn out of which India imported USD 2 bn worth of goods from Ukraine (0.45% of India's total imports) and exported USD 0.4 bn to Ukraine (0.1% of India's total exports). Major imports include sunflower oil and fertilizer, and the key exports are pharmaceutical products, nuclear reactors, boilers & machinery, plastic and articles, iron and steel, chemical products, rubber and articles, electrical machinery and equipment, etc.

Besides trade, India has a strategic relationship with Russia. India receives crucial supplies of defence hardware and technology from Russia, while India's energy firms hold material investments in Russian O&G blocks. The two countries also cooperate on a number of priority areas such as nuclear cooperation, space program creation, development of semiconductor products, supercomputers, poly-vaccines, laser technology, seismology, high purity materials, software, and IT.

While so far India has maintained a neutral stand by abstaining in UN voting, major supply chain disruptions owing to the military operations, western sanctions and closing of businesses in Russia and Ukraine would impact India's trade. It would impact India's producers as well as consumers. The key sectors that are going to feel the heat are imports of India's sunflower oil, fertilizer, microchip and semi-conductors, India's pharma

exports, tea exports, India's defence procurement, etc.

The movement of exports to Russia, Ukraine and other eastern European countries through the Suez Canal and Black Sea may be affected as well with the shutting down of the Ukrainian Black Sea port of Odessa. Cargo destined for Russia may be stopped or diverted as the situation develops. India's shipping cost is therefore likely to increase.

Some of the sectors in India may gain but there is considerable uncertainty at this juncture.

For example – Russia is the 2nd largest exporter of Steel and Ukraine is the 13th largest steel producer. The key markets for Russia & Ukraine's steel exports have been Middle East, Turkey, Europe, US, Mexico, Taiwan and Egypt. With western sanctions, India may likely gain some market share in steel. Russia is also the third largest aluminium producer. Sanctions on Russia are likely to impact its aluminium production as well as gas supply to Europe, which will impact Europe's aluminium production. India could gain some market share in aluminium as well from US and European buyers who were dependent on Russia. However, these buyers may prefer to source aluminium from the Gulf region due to shorter transport distance.

India imports approximately 2.5 million tonnes of sunflower oil, of which 70 per cent comes from Ukraine and 20 per cent from Russia. The Government can incentivize farmers to increase production of sunflower crops in India through higher MSP and other benefits to substitute imports. Russia is also the world's largest wheat exporter. Some of the wheat producing states may thus gain market share abroad.

On the energy front, crude oil prices have already crossed USD 125 per barrel. It is likely to increase further with additional sanctions and supply disruptions. Major oil and gas corporations, including BP and Shell, announced plans to abandon Russian businesses and joint ventures. India's dependency on Russian crude oil is very low. 2.3 per cent of India's total petroleum crude was imported from Russia during Apr-Dec 2021. India's supply is likely to remain unhindered as India imports most of its crude oil from Middle East, Africa, and North America. However, the global crude oil price increase may impact domestic prices unless there is a major excise duty cut by the Government of India. Furthermore, the geopolitical uncertainty is likely to cause exchange rate volatility (Rupee-Dollar). Inflation is likely to be higher than RBI's expectations of a moderation in 2022-23. There could be imported inflation due to depreciation of Indian rupee, spilling over of high oil prices into retail price and food inflation due to disruptions in supply of corn, wheat, and sunflower oil.

India's growth projection of 8 to 8.5 per cent for 2022-23, as given in the Union Economic survey 2021-22, looks shaky at this hour due to rising oil prices, supply chain disruptions, higher inflation, and loss of velocity in the country's consumption engine.

III. Sectoral Dynamics

1.2.13. Structural change has long been considered key factor in economic growth. Structural change is commonly understood as "the different arrangements of productive activity in the economy and different distributions of productive factors such as labour, capital among various sectors of the economy, various occupations, geographic regions, types of products, etc." (Nguyen, H. C., 2018). It is generally found that in low-income countries, productivity level of primary sector and growth is significantly lower than other sectors. Therefore, reallocation of factors of productions (labour, capital) from low productive sectors to high productive sectors should bring overall prosperity.

1.2.14. Historically, there has been a strong association between growth of dominant sectors (industry and services) with overall economic growth. As an economy grows, the share of agriculture in GDP/GSDP and total employment

declines. Structural-change models focus on the mechanism by which developing countries/states transform their economic structures from a predominantly agriculture or primary sector based to a more industrially and service sector led. This phenomenon of a relative decline in share of agriculture in the process of economic development is commonly attributed to two facts: the slower rise in the demand for food as compared with other goods and services, and the faster development in farm technologies which bring about expanding food supplies per unit of land and labour (Schultz, 1945; Kuznets, 1966; Johnson, 1973) and additionally by diversification in production structures and consumption patterns. In the context of the State economy of Odisha, agriculture's output share is declining faster than that of employment.



1.2.15. As shown in Table 1.7, Odisha has experienced movement of labour from agriculture both in rural and urban areas to industry sector. Share of industry in total employment in rural areas increased from 9 per cent in 1993-94 to 26 per cent in 2019-20. Similar increase is noticed in urban areas. Overtime, agriculture contribution to GSVa has gone down from 33 per cent in 1993-94 to 18 per cent in 2011-12 but went up to 22 per cent in 2019-20.

Odisha has seen rapid structural change with Industry and services playing important role.

Table 1.7 Structural change in Odisha (Employment and GSVa Composition)

		Employment Share (in per cent)				GSVA Share (in Current prices, in per cent)			
		1993-94	2004-05	2011-12	2019-20	1993-94	2004-05	2011-12	2019-20
Agriculture	Rural	72	69	62	55	33	23	18	22
	Urban	10	14	14	5				
Industry	Rural	9	17	23	26	17	24	44	38
	Urban	26	27	23	33				
Services	Rural	18	14	15	19	50	53	38	40
	Urban	65	60	63	62				

Source: DE&S, Odisha (2022)

1.2.16. It is noteworthy to mention that sectoral shares in GSDP remained stable especially post 2011-12. On the other hand, there was a shift in labour from agriculture to industry which is expected to improve incomes. However, as per the latest estimates, agriculture still employs 55 per cent of workforce in rural areas and 5 per cent in urban areas, on the other hand, it contributes to only 22 per cent of GSVa in 2019-20 in current prices. A balanced distribution of employment and income is critical for inclusive growth.

There is strong positive relation between per-capita Income of the State and share of Industry and services.

1.2.17. A comparison of per-capita GSDP and sectoral contribution to GSVa across states provides a clear picture. States with per-capita income higher than Odisha in 2019-20 and their sectoral shares is shown in Table 1.8. It is quite apparent that, higher share of industry and services are associated with higher per-capita income, except a few exceptions. Odisha has a relatively higher share of industry and service in overall GSVa (more details in Chapter 3). Despite that, Odisha's per capita income is lower than many other states. As of 2019-20, amongst 33 States and UTs, Odisha's rank in per capita income was 24. Only if we count 20 major states excluding North East and UTs, Odisha's rank is 15.

1.2.18. Even if Punjab and Andhra Pradesh's share in Agriculture in State GSVa is higher than Odisha, their per capita income is also higher. Therefore, what is required is to increase the productivity of the agriculture sector and make it more commercial.

1.2.19. In Industry sector, Odisha has the natural advantage in metal and minerals. However, there is immense potential for diversification in manufacturing sector in Odisha. State has taken several reforms measures to attract investment into the State across sectors. Necessary IT infrastructure is laid out to get rid of any process related inefficiency and to enhance administration productivity. Transparency in administration, use of Technology, doing it as a Teamwork in a timely manner has remained a mantra for Odisha's overall transformational journey.



Table 1.8

Per-capita GSDP and sectoral shares in GSVA (in current prices), 2019-20 (per cent, unless otherwise indicated)

State	Agriculture, forestry and fishing	Industry	Services	Per-capita GSDP (INR)
Haryana	19	30	51	272884
Telangana	18	21	62	256308
Karnataka	12	22	66	246419
Kerala	10	25	65	245323
Gujarat	16	48	36	240914
Tamil Nadu	12	34	54	236783
Maharashtra	11	28	61	229488
Uttarakhand	9	50	41	226144
Himachal Pradesh	14	42	43	222214
Andhra Pradesh	35	23	42	188069
Punjab	29	24	47	173975
Rajasthan	27	26	47	128319
Odisha	22	38	40	124817

Source: DE&S, Odisha (2022); State Income Aggregates, MOSPI

A. Agriculture sector

1.2.20. Historically, agriculture has been the dominant sector in Odisha and agricultural development is fundamental to feed people, end poverty, promote shared prosperity, increase economic growth, and achieve the sustainable development goals. It comprises crop production, livestock, forestry and logging, and fishing and aquaculture. The salience of agriculture in the State is that despite a sharp decline in its share in GSDP/GSVA, it absorbs 48.31 per cent of the State's total workers in 2019-20.



1.2.21. In most cases, agriculture in Odisha consists of the afore-stated four constituents as interdependent and mixed activities and are inter-connected. Agriculture's contribution to GSVA in the State shows a fluctuating trend hovering around 20 per cent.

Table 1.9 Share and growth in agriculture and its components, 2018-19 to 2021-22 (AE)

Sub-Sectoral Activities	Share in GVA (In per cent)				Growth (In per cent)			
	2018-19	2019-20	2020-21	2021-22 (A)	2018-19	2019-20	2020-21	2021-22 (A)
Agriculture & Allied	19.45	21.84	23.63	20.61	9.08	11.87	7.41	-3.37
Crops	11.37	13.37	14.70	12.25	9.11	17.91	11.52	-7.95
Livestock	3.16	3.42	3.53	3.26	11.05	4.7	0.04	-1.05
Forestry and Logging	2.79	2.76	2.85	2.66	7.46	0.88	1.71	4.89
Fishing and Aquaculture	2.12	2.29	2.55	2.43	8.72	9.19	3.89	7.5

Note: Share in current prices, and growth in constant prices

Source: DE&S, Odisha (2022)

1.2.22. Agriculture and allied activities constitute nearly 20.6 per cent in GVA in 2021-22 approximately one per cent increase from 2018-19. This was possible due to rapid growth during 2018-19 to 2020-21.

1.2.23. This sector is also highly dependent on monsoon, just as in other states; hence, growth of the sector is also sensitive to weather conditions. In 2021-22, due to multiple natural calamities like flood, heavy rain, and unseasonal cyclonic rain, the sector is estimated to contract by 3.37 per cent. As crop production is largest component of the sector, the sector remains vulnerable to climatic conditions in the state. Contraction in the crop sub-sector in 2021-22 is attributed to a series of natural shocks which affected crop production in the State and especially in its coastal districts.

1.2.24. The livestock sub-sector also has a negative growth rate possibly due to COVID induced demand side forces. It may be noted that 2021-22 is a bad weather year for Agriculture in Odisha. The series started with severe cyclonic storm-Yaas in May followed by flood water inundation, cyclone-Gulab, in September and JAWAAD in December, incessant rain on standing and harvested crop bundles in December 2021 and January 2022 all of which brought wide scale damage to paddy and vegetable crops in the state.

1.2.25. With varied agro-climatic conditions, abundant water bodies, 485 kilometres (301 miles) long coastline along the Bay of Bengal and command over 11 per cent of total water resources of the country spreading over 11 river basins, the State of Odisha has enormous scope for rapid and diversified agricultural growth. Heavy monsoon dependence, frequent natural calamities, a paddy-centric land utilisation pattern, slow modernization, small land holdings, weak market linkage and lack of investment have been the major constraints for achieving the potential in the State's agriculture sector.

1.2.26. Agriculture directly employs more than 48 per cent of total workforce in Odisha in 2019-20. Therefore, any development journey is not over without agriculture growth. The State Government is focused on making agriculture more remunerative and reducing the vulnerability of small and marginal farmers. Agriculture in Odisha



is characterised by dependency on monsoon, higher concentration of rice in cropping pattern and production, low input use (fertilizers, pesticides and mechanization) as compared to other states. This contributes to the fluctuations in output of the crops sector, leading to instability of livelihoods for the population dependent on agriculture.

1.2.27. Some of focus areas could be

- Increasing public investment and promoting private investment in irrigation, expansion of agri-infrastructure,
- Diversification to high value products like cash crops, floriculture, livestock, fisheries, horticulture etc.,
- Addressing low price realization and other constraints in marketing,
- Developing models of integrated farming, warehouse upgradation, focusing measures for enhancing small farm productivity,
- Increasing small farm income through integrated multi-farm production systems, and
- Creating multiple livelihood opportunities through agro-processing.

B. Industry Sector

1.2.28. The industry sector has four sub-sectors namely, mining & quarrying, manufacturing, electricity-gas-water supply & other utility services, and construction. The size and growth rate of these sub-sectors are critical for the growth of GSDP given Industry's share in overall economy.

1.2.29. In 2019-20, 26.93 per cent of total workers of the State were engaged in the industrial activities (PLFS 2019-20). The industries sector accounted for 38.39 per cent of GVA at current basic prices in 2019-20.



1.2.30. Manufacturing is the predominant activity within the broad industry sector accounting for over 40 per cent of total value added by the sector. After manufacturing, mining, and quarrying is second largest sub-sector, followed by construction. Electricity, gas, water supply and other utility services have the lowest share. However, construction has been a major employer with a 19.53 per cent employment share as in 2019-20 (PLFS 2019-20).

Table 1.10 Share and growth in industry and its components, 2018-19 to 2021-22 (AE)

Sub-Sectoral Activities	Share In GVA (in per cent)				Growth (In per cent)			
	2018-19	2019-20	2020-21	2021-22(AE)	2018-19	2019-20	2020-21	2021-22(AE)
Industry	42.47	38.39	35.62	39.51	11.96	-2.75	-10.84	14.46
Mining and Quarrying	9.24	8.50	7.31	8.29	9.96	-1.76	-23.3	18.05
Manufacturing	23.19	20.34	18.91	22.10	18.56	-4.1	-8.41	14.29
Electricity, Gas, Water Supply & Other Utility Services	2.77	2.74	2.67	2.42	-8.18	2.21	-1.7	8.03
Construction	7.28	6.81	6.73	6.70	3.88	-1.6	-3.13	13.22

Note: Share in current prices, and growth in constant prices
Source: DE&S, Odisha (2022)

1.2.31. Growth rate of the industry sector exhibits fluctuations. It was negative in 2012-13, 2014-15, 2019-20 and 2020-21; and low in 2017-18. The broad industries sector has shown steady recovery from COVID loss and registered 14.46 per cent growth in 2021-22 over 2020-21, against a negative base. Growth rates in mining and quarrying, and manufacturing have been the major drivers of industry sector growth. All the four sub-sectors experienced negative growth in 2020-21 due to the Covid- 19 and have shown good recovery in this fiscal.



1.2.32. Implementation of New Industrial Policy Resolution 2015, SEZ Policy 2015, Start-up policy, Make-in-Odisha conclaves, and business environment reform have helped to boost mining and manufacturing activity, attract FDI and the State is gradually becoming the industrial hub of the eastern region of the country. Further, expediting single-window clearance system that provides a single point of contact between investor and Government and facilitates all approvals, inducing FDI inflow, creating indigenous manufacturing capabilities, leveraging public procurement with industrial units, monitoring projects and identifying roadblocks to address them on a real time basis, developing self-sufficient clusters of manufacturing competence and IT/ITES/ESDM/MSME industries will accelerate industrialization and economic growth.

C. Services sector

1.2.33. Over the years, the service sector has become a lead sector and the new driver of growth in Odisha. It now has a major share of about 40 per cent in GSVA (DE&S, 2022 AE) and an employment share of close to 25 per cent 2019-20 (PLFS, 2019-20). Trade, repair, hotels and restaurants; transport, storage, communication and services related to broadcasting; financial services; real estate and ownership of dwelling and professional services; public administration and defence, and other services are the six sub-sectors of the services sector.

Table 1.11 Share and growth in services and its components, 2018-19 to 2021-22 (AE)

Sub Sectoral Activities	Share in GSVA (in per cent)				Growth (in per cent)			
	18-19	19-20	20-21	21-22(AE)	2018-19	19-20	20-21	21-22(AE)
Services	38.08	39.77	40.75	39.88	2.25	7.66	-1.03	7.86
<i>i. Trade, Repair, Hotels and Restaurants</i>	10.04	10.20	9.57	9.61	8.06	5.95	-7.10	6.08
a. Trade & Repair Services	9.19	9.33	9.43	9.44	7.86	5.79	0.13	5.58
b. Hotels & Restaurants	0.84	0.87	0.14	0.17	10.20	7.61	-84.32	40.67
<i>ii. Transport, Storage, Communication & Services related to Broadcasting</i>	5.89	6.10	6.13	6.04	-8.09	6.46	-10.67	9.23
a. Railways	0.93	1.00	0.99	0.91	0.48	6.96	0.00	0.00
b. Transport by means other than Railways	3.50	3.50	3.33	3.31	-12.13	3.51	-17.19	10.70
- Road transport	2.82	2.73	2.56	2.57	-13.97	0.40	-18.40	11.81
- Water transport	0.26	0.31	0.36	0.33	25.94	23.77	1.42	2.35
- Air transport	0.03	0.05	0.02	0.02	-39.01	56.17	-64.50	19.05
- Services Incidental to Transport	0.39	0.41	0.39	0.39	-12.71	7.90	-17.19	10.65
c. Storage	0.06	0.06	0.06	0.06	12.14	3.24	-1.64	-0.85
d. Communication & Services related to Broadcasting	1.41	1.54	1.75	1.76	-2.76	13.59	-2.34	12.08
<i>iii. Financial Services</i>	3.37	3.63	3.95	3.72	0.07	7.53	9.23	9.88
<i>iv. Real estate, Ownership of Dwelling & Professional Services</i>	6.66	6.60	6.60	6.45	1.56	3.30	-1.02	6.43
<i>v. Public Administration and Defence</i>	4.34	4.79	5.33	5.40	6.53	14.93	10.32	8.38
<i>vi. Other Services</i>	7.77	8.45	9.17	8.66	2.94	11.29	3.54	9.22

Note: Share in current prices, and growth in constant prices
Source: DE&S, Odisha (2022)

1.2.34. There are a few points that emerge from the analysis of service sector. First, it is a big employer next to agriculture and contributes the largest share to GSVA and GSDP. Second, the performance of this sector in terms of its contribution to the economy hinges very strongly on that of the trade, repair, hotels, and restaurants sub-sector (more particularly on the trade and repair services), and on transport, storage, communication sub-sector. Third, the financial services, and public administration & defence services sub-sectors, as also other services displayed growth over the years and demonstrated resilience even in the COVID pandemic year. Fourth, the service sector has mostly recovered from the COVID wreckage.

1.2.35. The service sector is growing at a faster rate and has remarkable growth potential. Within this sector, tourism that has played a relatively small role overall as yet can make a significant contribution. Focused attention is also needed in the case of trade, repair, hotels and restaurants. Real estate, transport, storage, and communication are the other areas which should be promoted by making the right kind of policies.

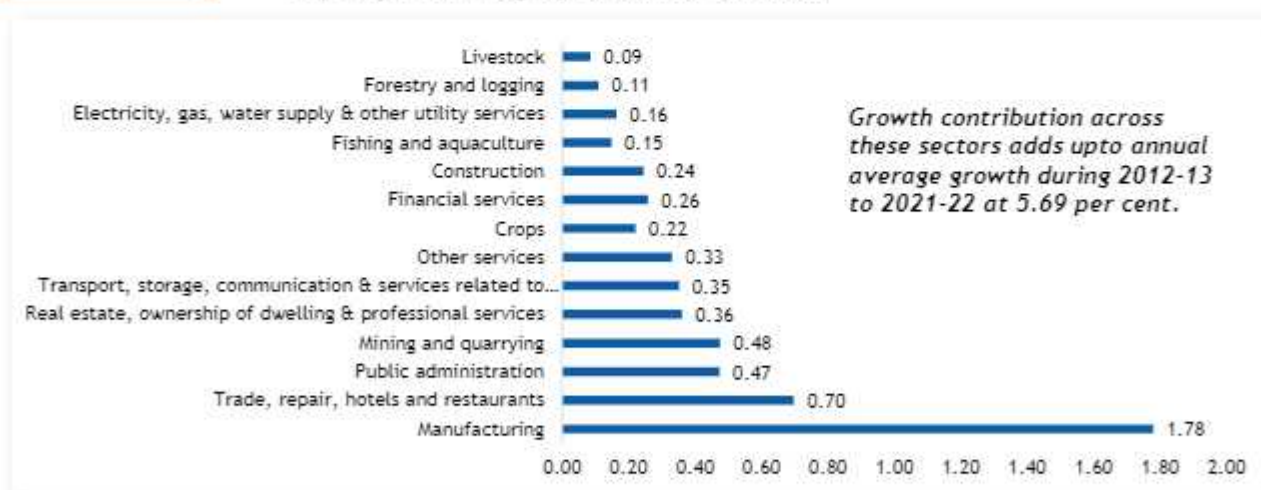
D. Inter-state comparison of contribution to growth

1.2.36. Odisha has grown at an average rate of 6.48 per cent between 2011-12 to 2021-22. Taking into consideration sector's share and its growth, contribution to growth is estimated. As shown in Figure 1.4, in Odisha, manufacturing has contributed on average 1.78 per cent over the last ten years and tops the list. This is followed by trade, repair, hotels and restaurants, public administration, mining and quarrying etc. As expected, crop has not been the biggest contributor to GSVA growth. Livestock, although has high potential could contribute only 0.1 percentage point to GSVA growth in the last 10 years.

Manufacturing fuels the growth in Odisha. Further focus on making it broad-based with diversification would make the economy grow faster and give fillip to service sector

Figure 1.4

Contribution to GSVA growth (average of 2012-13 to 2021-22) in percentage points for Odisha



Source: DE&S, Odisha (2022)

1.2.37. Table 1.12 shows sectoral contribution to growth for select high income states (top four states in terms of PCI for 2019-20 in current prices) as well as select comparable neighbouring states (Chhattisgarh and Jharkhand). The contribution is estimated using average growth during the period 2012-13 to 2020-21. The comparison with Odisha is also shown. Following points emerge from the analysis:

- Agriculture and Allied sector contributed nearly 10 per cent to State's growth. While it could be due to natural disasters, erratic monsoons, or climate shocks, from growth perspective it has relatively less impact in comparison to service and manufacturing sector.
- As Odisha is mineral rich state, mining and quarrying contributed nearly 8.4 per cent to State growth in the last decade. This is more than growth contribution of mining in similar mineral rich states such as Jharkhand, and Chhattisgarh.

Table 1.12 Growth contribution by sectors across select high income and neighbouring States*, (Average of 2012-13 to 2020-21)

Sectors	HR	KER	TL	KAR	CH	JH	OD
Agriculture and Allied Activities	10.2	-4.7	14.9	5.2	16.4	11.4	9.9
Crops	0.8	-4.8	4.1	2.4	7.9	4.6	3.9
Livestock	9.4	0	10.4	2.8	2.4	4.1	1.5
Forestry and logging	-0.3	-0.2	0	0	2.5	1.4	1.9
Fishing and aquaculture	0.3	0.3	0.5	0.1	3.6	1.3	2.6
Industry	29.9	29.3	11.8	20.5	46.1	35	46.7
Mining and quarrying	0.5	-0.3	4	0.9	0.4	3	8.4
Manufacturing	26.2	17.6	5.2	16.2	20.2	27.7	31.2
Construction	2.2	11.3	1.8	2.3	6.6	3.4	4.3
Electricity, gas, water supply & other utility services	1.1	0.8	0.8	1.1	18.9	1	2.9
Services	60	75.4	73.3	74.3	37.5	53.6	43.4
Trade, repair, hotels and restaurants	18.9	19.6	20.7	11.3	6.2	19.2	12.2
Real estate, ownership of dwelling & professional services	22.5	27.4	27.3	39.2	3.7	12.8	6.3
Transport, storage, communication & services related to broadcasting	3.1	6.1	6.5	5.9	5.7	6.2	6.2
Public administration	2.7	1.8	3.7	3.2	8.2	4.7	8.3
Other services	5.1	15.3	7	8.1	9.8	7	5.8
Financial services	7.6	5.2	8.1	6.7	3.9	3.7	4.5

Note: * - HR: Haryana, KER: Kerala, TL: Telangana, KAR: Karnataka, CH: Chhattisgarh, JH: Jharkhand, OD: Odisha; Growth is normalized to 100 to see the distribution from 100.

Source: State Income Aggregates, MOSPI

- High income states such as Haryana, Kerala, Telangana, and Karnataka show substantial contribution of services sector in States' growth journey. It is expected that as the State grows, the inter-sectoral linkages of various sectors with services sector grows. In Odisha, it is expected that Services Sector contribution too would go up and may exceed the industry sector going ahead.
- Financial services which serve as fuel to the real economy is contributing higher in high-income states. This calls for strong push to promote FINTECH, other financial services which would enable the rural economies and MSME to have better access to finance.

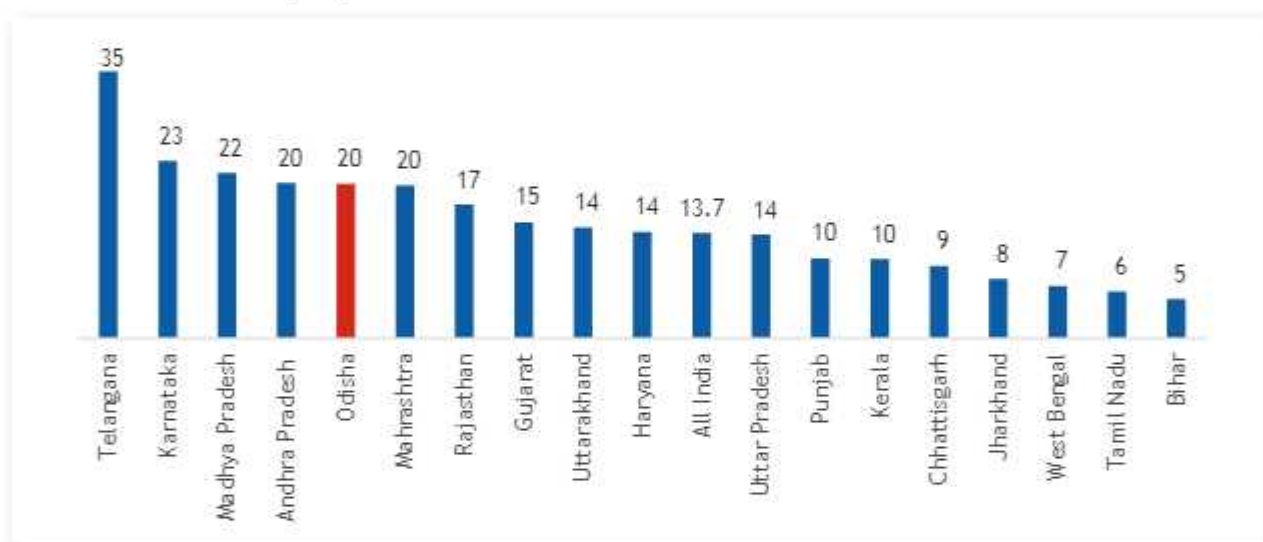
1.2.38. Active efforts could be made towards promoting financial inclusion. Digital finance could be leveraged to serve the underserved segment so that the segment has access to funds to setup business or even smoothen

consumption. The financial services industry needs to design innovative products to address the financing needs in the State of Odisha.

1.2.39. As per All India Debt and Investment Survey 2019, the average value of assets per household in Odisha is relatively low. However, approximately 40 per cent of households in rural areas and 20 per cent of households in urban areas reported having a cash loan. Average value of loan, however, is INR 30,663 in rural areas and INR 53,467 in urban areas. The average value of loan is not significant. This could be driven by relatively low average value of assets held by households in Odisha. Further, nearly 20 per cent of rural households (where higher proportion have taken loan) reported that they took loan to invest in farm business. However, many people have taken loan at high interest rate.

Figure 1.5

Percentage of rural households reporting loan for the purpose farm business



Source: All India Debt and Investment Survey, 2019, MOSPI

1.2.40. Given that value of assets held by households is not high which is also reflected in size of loan, and observed high interest paid on borrowings, it is essential that these innovative financial products could be introduced in the rural areas. Digital finance has progressed immensely in providing collateral free small size loan with good repayment success. However, households would need to be brought into the digital economy ambit so that more information is available to the financial services firms/ fintech to assess credit worthiness based on alternate data. G2P transfers via digital modes, digital financial literacy are some of the measures through which households at the bottom of the pyramid especially in rural areas can be provided access to affordable finance to build their businesses and have sustainable livelihood.

To push further financial inclusion, the financial services industry must design innovative collateral free products using alternate data.

IV. Employment

E. Broad employment trends

1.2.41. Given that per-capita income indicates economic situation of the State, disregarding distributional aspect, employment situation can provide another lens to assess the economic progress. In the pre-COVID period (2019-

20), nearly 55.3 per cent of 15+ age population in Odisha were part of the labour force (Table 1.13). This is an increase from 48.3 per cent in 2017-18. The labour force participation rate is also higher than all India average of 53.5 per cent but is close to the median of 55.5 per cent. However, there is a significant difference in the female labour participation rate compared to that of the male. Different states differ in terms of culture and societal norms. These could be reflected in high female labour force participation in hilly states.

1.2.42. As per Table 1.13, labour force participation rate in Odisha is 55.3 per cent, higher than LFPR of India which is 53.5. India stands closer to the median State in labour force participation rate. However, some of the smaller states have much higher labour force participation rate. Odisha's female labour force participation rate, though higher than India, has immense potential to grow. In terms of worker population ratio (WPR), 51.9 per cent of Odisha's working age population are working which is 100 basis points higher than India. Odisha stands as the median state. However, some of the hilly and smaller states have much higher WPR. While Odisha's overall WPR is good, there is ample scope to increase women WPR. Nevertheless, Odisha is doing better in comparison to India even in case of female WPR. Unemployment rate in Odisha is 6.2 per cent which is higher than unemployment rate of India which stands at 4.8 per cent. However, unlike female LFPR and WPR, unemployment is lower in Odisha for female vis-à-vis male.

Table 1.13 Key employment indicators (PS+SS), 15+ age

	Male	Female	Person
Labour Force Participation Rate, 2019-20 (In per cent)			
Odisha	78.3	33.1	55.3
Top	82.3 (Chhattisgarh)	65 (Himachal Pradesh)	73.2 (Himachal Pradesh)
Median	76.2 (Rajasthan)	33.8 (Karnataka)	55.5 (Karnataka)
Bottom	68.8 (Arunachal Pradesh)	9.5 (Bihar)	41.8 (Bihar)
India	76.8	30	53.5
Workforce participation rate, 2019-20 (In per cent)			
Odisha	72.7	31.8	51.9
Top	78.9 (Chhattisgarh)	63.1 (Himachal Pradesh)	70.5 (Himachal Pradesh)
Median	72.4 (Uttar Pradesh)	31.7 (Karnataka)	51.9 (Odisha)
Bottom	57.2 (Nagaland)	9.4 (Bihar)	39.7 (Bihar)
India	73	28.7	50.9
Unemployment Rate, 2019-20 (In per cent)			
Odisha	7.1	4.1	6.2
Top	2.1 (Meghalaya)	1.1 (Gujarat)	2 (Gujarat)
Median	5.6 (Bihar)	4.1 (Andhra Pradesh)	5.1 (Bihar)
Bottom	24.8 (Nagaland)	27.6 (Nagaland)	25.7 (Nagaland)
India	5.0	4.2	4.8

Source: Periodic Labour Force Survey, 2019-20

1.2.43. During COVID time, employment opportunities were heavily impacted due to various preventive measures adopted across India. Labour force participation declined to 47.5 per cent in July-September 2020 as per current weekly status in urban areas from 49.2 per cent in 2019-20³ (Table 1.14). As per the latest estimates of January-March 2021, labour force participation rate was 45.3 per cent in urban areas. Similarly, workforce participation rate was 39.1 per cent in January-March 2021 relative to 45.4 per cent in urban areas in 2019-20. It shows that all workers did not return to the workplace till March 2021. Unemployment rate increased from 7.7 per cent to 13.7 per cent in January-March 2021 in urban areas. However, there was an improvement in unemployment (with decline in unemployment rate from 16.5 per cent in July-September 2020 to 13.7 per cent in January-March 2021). This suggests that the pandemic led large-scale unemployment and its adverse employment effects in both organised and unorganised sectors is moderating gradually.

1.2.44. It is expected that since March 2021, the employment trends would have improved. However, the latest employment data do confirm that recovery is still underway and public intervention by way of infrastructure spending and active job creation should remain a priority.

Table 1.14

Current Weekly Status based Labour Parameters (urban) for Odisha and India (15 + years)

	July-Sept 2020			Oct-Dec 2020			Jan-Mar 2021		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Labour Force Participation rate (in per cent)									
Odisha	74.4	20.8	47.5	71.1	17.9	44.1	71.6	19	45.3
India	73.5	20.3	47.2	73.6	20.6	47.3	73.5	21.2	47.5
Workforce Participation rate (in per cent)									
Odisha	61.6	17.9	39.7	59.8	15.7	37.4	61.9	16.3	39.1
India	64.3	17.1	40.9	66.7	17.9	42.4	67.2	18.7	43.1
Unemployment rate (in per cent)									
Odisha	17.2	13.8	16.5	15.9	12	15.1	13.5	14.4	13.7
India	12.6	15.8	13.2	9.5	13.1	10.3	8.6	11.8	9.3

Source: Quarterly Bulletin, PLFS, January - March 2021, MoSPI

F. Sectoral employment

1.2.45. It is important to analyse in which sectors workforce is employed and whether there is a need to reorient the workforce to more productive sectors. A quick analysis suggests that agriculture and construction have negative correlation between employment share and per-capita income. As expected, richer states have lower employment share in agriculture, and construction. This could be due to mobility of workers from low-income sectors to high income sectors.

Agriculture and construction provide maximum employment in the State.

1.2.46. In case of Odisha, share of agriculture in total employment in 2019-20 was high at 48.3 per cent than average of all 28 states. Average employment share of top five high income states such as Telangana, Haryana, Karnataka, Tamil Nadu and Gujarat in agriculture is lower at 40.1 per cent. This is indicative of the need to mobilise workers from low productive sectors to high productive sector.

³ The Current Weekly Status of a person is the activity status obtained during a reference period of seven days preceding the date of the survey. As per CWS status, a person is considered as unemployed in a week if he did not work even for an hour on any day during the reference week but sought or was available for work.

Table 1.15 Distribution of work force across sectors, 2019-20 (in per cent)

Sector	Average Employment Share of 28 States*	Odisha's Employment Share	Average employment share of Top five states by Per-capita Income**
Agriculture and allied activities	44.03	48.31	40.10
Mining and quarrying	0.40	0.16	0.25
Manufacturing	9.62	6.61	15.16
Electricity and Gas	0.39	0.47	0.38
Water supply	0.34	0.16	0.33
Construction	11.13	19.53	9.79
Wholesale and retail trade	11.61	9.24	12.03
Transportation and storage	4.89	4.15	5.24
Accommodation and Food	1.94	1.85	1.89
Information and communication	0.77	0.36	1.88
Finance and insurance	0.92	0.63	1.19
Real estate	0.13	0.01	0.27
Professional, scientific and technical activities	0.71	0.34	1.03
Administrative and support service	1.48	0.74	0.92
Public administration and defence	2.73	1.16	1.72
Education	4.84	4.04	3.91
Human health and social work	1.48	0.50	1.42
Arts entertainment and recreation	0.27	0.25	0.21
Other services	2.33	1.49	2.28

Note: * - All 28 states are considered to estimate average. These include Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand, Uttar Pradesh, West Bengal. ** - Top five states by Per-capita income are Gujarat, Haryana, Karnataka, Tamil Nadu and Telangana.

Source: PLFS, 2019-20 and PCI from MOSPI

1.2.47. Construction is generally considered as an entry point for unskilled surplus labour exiting the agriculture. It is noteworthy that construction sector has significant share in total employment in Odisha which also has negative correlation with per-capita income across states. While vertical labour mobility is sticky and requires sustained effort to build skills to make the mobility possible, Odisha has rightly started focussing its effort on building skills across sectors. Promotion of MSME as well as setting up high value-added unit within the agriculture sector may bring change in the livelihood of rural people.

G. Gender gap in employment

1.2.48. Economists have long been postulated a U-shaped pattern of relationship between women's participation in labour market and economic growth. Their participation is high at initial stages of growth when female workforce is involved as unpaid workers in family farms and/or household enterprises and lowers with economic development taking momentum and the locus of production shifting out of the household and family. As growth accelerates, women's education levels rise and lucrative job opportunities expand, female labour force participation increases.

Increasing Female WPR would enhance women's agency and overall employment

1.2.49. As noted in Table 1.13, work force participation rate for females in Odisha is 31.8 per cent. The moot point is that a low WPR suggests that a small proportion of population at working age is remuneratively employed and those employed bear a large burden of sustaining the unemployed. This calls for attention to increase the employability of women and to motivate women to take up formal jobs. Skilling initiative at the grass root level may be a necessity to strengthen.

1.2.50. Agriculture remains the largest source of employment for female. At all-India level as well, female worker force participation is concentrated in agriculture sector. The State through its skill initiative actively trying to promote employment of women. Sectors where the focus could be made are hospitality industry (Hotels and tourism), Healthcare services, ICT, financial services, professional services, education etc. This would require active efforts towards building soft and technical skills needed in these sectors. It may be either directly or building partnerships with various private sector players as part of their CSR initiatives.

Table 1.16 Distribution of female work force across sectors, 2019-20 (in per cent)

Sector	All States*	Top five states**	Top five states by female participation Excluding North East States***	Odisha
Agriculture and allied activities	55.89	64.82	63.38	60.88
Mining and quarrying	0.14	0.41	0.04	0.01
Manufacturing	9.53	5.30	9.82	7.76
Electricity and Gas	0.07	0.02	0.05	0.31
Water supply	0.26	0.20	0.17	0.00
Construction	4.84	5.56	6.36	13.80
Wholesale and retail trade	8.23	5.49	6.27	5.86
Transportation and storage	0.51	0.24	0.20	0.03
Accommodation and Food	1.33	1.82	1.26	0.86
Information and communication	0.57	0.35	0.61	0.06
Finance and insurance	0.95	0.21	0.48	0.34
Real estate	0.04	0.06	0.08	0.00
Professional, scientific and technical activities	0.41	0.13	0.25	0.12
Administrative and support service	0.83	0.14	0.26	0.27
Public administration and defence	1.94	3.39	1.30	0.54

Sector	All States*	Top five states**	Top five states by female participation Excluding North East States***	Odisha
Education	8.70	6.55	5.30	6.98
Human health and social work	3.01	3.68	2.10	0.92
Arts entertainment and recreation	0.07	0.12	0.03	0.19
Other services	1.21	0.80	1.19	0.81
Activities of households	1.48	0.71	0.88	0.26

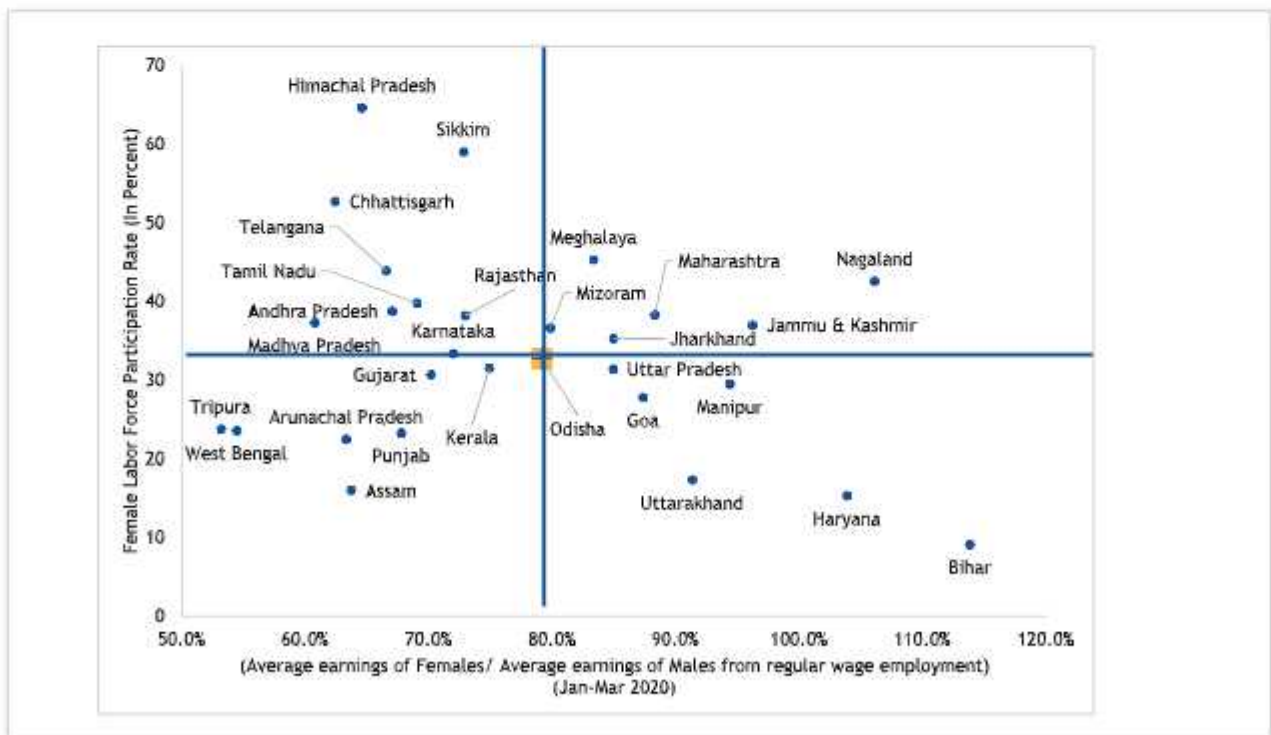
Note: * - Refer to note of Table 1.14. ** - Top five states by female participation are Chhattisgarh, Himachal Pradesh, Meghalaya, Sikkim, Telangana, ***Top five states by female participation excluding north-eastern states are Andhra Pradesh, Chhattisgarh, Himachal Pradesh, Tamil Nadu and Telangana.

Source: PLFS, 2019-20, MoSPI

1.2.51. The correlation between female work force participation and wage gap across states (female earnings/male earnings) was negative 0.24 from regular wage employment. The relationship further intensifies to negative 0.42 for casual workers. Higher female work force participation could be coming at the expense of lower earning of female. This could be since in general female are getting engaged in low paying work or the wage discrimination is still perpetuating at all India level. This is a preliminary observation to drive down the point that women should not come to the job market at a disadvantageous position than men, though this demands a deep research. Odisha, however, performs better than many other states in as shown in Figure 1.6.

Figure 1.6

Work force participation and wage gap between males and females, Jan-Mar 2020



Source: PLFS, 2019-20, MoSPI

1.2.52. Increasing Government purchases from women-led enterprises and SHGs, capacity building and skilling women in new technologies, facilitating women's access to capital, and raising public investment in infrastructure and childcare may help promote female LFPR and WPR as also lower the unemployment rate. Encouraging start-ups and promoting entrepreneurship, attracting investment in traditional manufacturing activities, and developing industrial clusters, strengthen social security measures for workers, maintaining a database of informal sector workers and out-migrants, and simulating skill development training and motivating youth to harness these opportunities can be effective for addressing the challenges posed by the COVID-19 pandemic and reducing unemployment. Mission Shakti is a step in the right direction. It was launched with the objective of empowering women through gainful activities by providing credit and market linkage. Around 70 lakh women through 6 lakh groups in all blocks and urban local bodies of the State are changing the fortune of many families and empowering the society at large.



H. Type of employment

1.2.53. An individual could be employed in different forms. PLFS 2019-20 classifies the workers in usual status (ps+ss) into three broad categories: (i) self-employed, (ii) regular wage/salaried and (iii) casual labour. The category of self-employed comprises (a) own account worker and employer (OAWE) and (b) unpaid helper in household enterprises (HHE).

1.2.54. Self-employment remains primary source of employment in Odisha like observed at the India level. Relative to male, female work disproportionately as unpaid helper in household enterprises (HHE). Nearly 50 per cent of female work as unpaid helper in rural areas. While in urban areas, it is low but still higher than of male. Regular wage employment is higher in urban areas.

Burden of unpaid family workers lies more with women. Skilling and Mission Shakti would bring the change.

Table 1.17 Percentage Distribution of Workers in Usual Status (ps+ss) by broad status in Employment for Odisha and India (15 years +), 2019-20

Worker	Self-Employed			Regular	Casual	Total	Self-Employed			Regular	Casual	Total
	OAWE	Helper in HHE	All				OAWE	Helper in HHE	All			
Odisha-Rural						India-Rural						
Male	53	8	61	12	27	100	48	10	58	14	28	100
Female	16	50	66	7	27	100	21	42	63	10	28	100
Person	41	22	63	10	27	100	40	20	60	13	28	100
Odisha-Urban						India-Urban						
Male	34	6	40	43	18	100	35	4	39	47	14	100
Female	18	10	29	47	24	100	24	11	35	54	11	100
Person	30	7	37	44	19	100	32	6	38	49	13	100

Source: PLFS 2019-20, MoSPI

I. Labour Welfare

1.2.55. In a welfare state, one of the key responsibility of the Government is to protect the interests of workers, improvement of labour welfare and provision of a reasonable level of social security for establishing harmonious labour relations and securing active participation of workers in the process of economic development through increasing productivity. The Government is making efforts to direct resources towards skill formation and improvement, exchange of information on job opportunities, monitoring of working conditions, creation of industrial harmony through an infrastructure for healthy industrial relations and insurance for the workers and their families. Measures are in place for checking unhealthy social practices like bonded labour, child labour and adverse working conditions faced by the migrant labour.

1.2.56. Government of Odisha is implementing several schemes and enforcing laws for creating an enabling work environment, ensuring harmonious industrial relations, securing social security and improving welfare of workers. It enforces more than 26 labour legislations/schemes with a view to maintaining industrial peace and harmony, regulating service conditions of workers, preventing exploitation and adoption of unfair labour practices against workers, and ensuring payment of statutory wages. The industrial relations machinery and enforcement machinery of the Labour Directorate of the State are taking effective steps for achieving the objectives.

1.2.57. In Odisha, the Industrial Relations Machinery and Enforcement Machinery have been streamlined to take preventive measures to ensure industrial peace and payment of the prescribed minimum wages to workers engaged in scheduled employments including agriculture.

J. Industrial Relations scenario

1.2.58. The industrial relations scenario during the year 2020-21 is by and large peaceful with no strike and lockout by workers and unions. The Labour Directorate has disposed of 1370 complaints and payment amounting INR 4,82,54,691/- was made to the affected workers during 2020-21.

K. Enforcement of minimum wages

1.2.59. The Government of Odisha has been giving utmost importance to effective enforcement of the Minimum Wages Act, 1948 in the State. So far 89 employments including agriculture have been scheduled under the Minimum Wages Act for the purpose of fixation/revision of minimum rates of wages for the employees employed therein. The State Government have been revising the minimum rates of wages from time to time and a special allowance in the name of VDA is payable to the Unskilled, Semi-Skilled, Skilled and Highly Skilled category of employees employed in 89 scheduled employments in the State of Odisha. Accordingly, the minimum rate of wages including V.D.A. for these categories of workers has been fixed at INR 315.00, INR 355.00, and INR 405.00 and INR 465.00 respectively per day in 2021. Under this Act, 2006 inspections were conducted, 28 prosecutions were filed and INR 2,05,609 were released and paid to workers towards short payment and non-payment of wages in 2020-21. Eleven claim cases were decided and INR 2,77,393 were paid during 2020-21.

Change in minimum wages from time to time.

L. Welfare of Inter-state Migrant Workers from Odisha

1.2.60. As per the Labour Directorate, 14 districts of the State have been identified as migration prone. To initiate interventions at the grassroots level, Government of Odisha is implementing a State Action Plan since 2020-21 to track the migrant worker at GP level, strengthen inter-state coordination and ensure linkage with livelihood initiatives and welfare schemes. The focus of State Action Plan is to ensure safety and welfare of migrant workers through

State Action Plan to ensure safety and welfare of migrant workers

- i. tracking and creating a database,
- ii. convergence of various departments to link migrant workers with Government welfare schemes for reducing distress migration,
- iii. a mechanism is in place for coordination between States to improve worksite facilities and facilitate rescue where it is needed and
- iv. creating an enabling environment for safe and informed migration through IEC and enforcement of Inter State Migrant Workmen (RE & CS) Act, 1979.

1.2.61. 304 migrant workers have been rescued from other States through Odisha Migrant Labour Help Desk in Delhi, Telangana and Andhra Pradesh and 24 emigrant Odia workers have been rescued from different countries with the help of Ministry of External Affairs, Govt of India. The Ministry of External Affairs, Government of India has approved office of Protector of Emigrants (PoE) for the State of Odisha. 2915 licenses have been issued for recruitment of 1,43,314 migrant workers under ISMW Act, 1979. The Shramik Sahayata Toll Free Helpline for migrant workers has been operational 24 x 7 and in 2020-21, 7719 calls have been attended.

1.2.62. An amount of INR 70.00 lakhs has been placed with Anti-Human Trafficking Units at district level for preventing illegal recruitment of migrant workers. Survey data of migrant workers in 90 migration prone GPs of Bolangir and Nuapada have been shared with district administration of Bolangir and Nuapada for convergence of services to reduce distress migration.

1.2.63. Under the Inter-state Migrant Workmen (RE&CS) Act 1979, 27 inspections were conducted, 19 prosecutions were filed, 77 licences and 6 registration certificates were issued during 2020-21. These relate to labourers migrating from Odisha to other States.

M. Reducing Distress Out-Migration from Odisha

1.2.64. A Special Package has been announced by Government of Odisha in January 2020 to strengthen socio-economic standards of migrant workers and gradual reduction in distress out-migration from the migration prone 477 GPs of 20 blocks in the districts of Bolangir, Bargarh, Kalahandi and Nuapada.

- i. 200 Days MGNREGA employment in a year on timely payment of minimum wages payable to unskilled workers from the INR 500 crore State Corpus Fund,
- ii. Covering one eligible youth (18 to 35 years) from every household under Placement Linked Skill Development Programme,
- iii. A Drive for all eligible construction workers for their registration under Odisha Building & Other Construction Workers' Welfare Board and issue of marriage assistance, pension, education assistance and pucca houses along with other admissible benefits,
- iv. Deployment of Shramik Mitra (Focal point for migrant workers in the GP) for all GPs, and
- v. Tracking migrant workers and ensuring linkage with welfare schemes through the District/ State level MIS are the important components of the package.

N. State Action Plan for Elimination of Child Labour

1.2.65. A State Action Plan for Elimination of Child Labour is being implemented in Odisha in a convergence mode through 9-line departments. Of the 24 National Child Labour Project (NCLP) districts, NCLP survey has been completed in 16 districts. IEC-cum-Orientation Programme on Child & Adolescent Labour (P & R) Act have been completed in 16 districts in collaboration with Odisha



State Commission for Protection of Child Rights (OSPCRC). 625 inspections were conducted, 34 child labourers were rescued, and 28 prosecutions were filed under the Child & Adolescent Labour (P&R) Act, 1986 for the year 2020-21.

O. Building & Other Construction Workers Welfare Board

1.2.66. Building & Other Construction Worker's (Regulation of Employment and Conditions of Service) Act, 1996 and Building & Other Construction Workers' Welfare Cess Act (BOCWWCA), 1996 have been specifically enacted to safeguard the interest of construction workers engaged in different building or other construction works in Odisha. The Cess Act provides for collection of cess at the rate of 1 per cent of the cost of construction incurred by an employer/ builder excluding the cost of land and any other compensation paid or payable to a worker or his kept under the Employees' Compensation Act, 1923. The cess amount is being deposited in the welfare fund of the State Building & Other Construction Worker's Welfare Board of the construction workers.

1.2.67. The Welfare Board is extending financial support to the construction workers and their families towards accident, death, funeral, major ailments, education, marriage, maternity, housing under Nirman Shramik Pucca Ghar Yojana, pension under Nirman Shramik Pension Yojana, Scheme for Financial Support for Children of BoC workers for pursuing ITI Training & Diploma Education in Government Institutions (Nirman Kusum) and construction of Rental Housing Complex (RHC) for providing temporary housing facilities to migrant construction workers in urban areas etc. In addition to this, the Board has extended Special Financial Assistance to the active construction workers in the wake of COVID-19 pandemic.

1.2.68. The Odisha Building and other Construction Workers' Welfare Board conducted 368 inspections, issued 3,07,140 identity cards, collected INR 361,95,06,190 as cess and covered 1,42,061 beneficiaries incurring an expenditure of INR 518,46,76,095 in the year 2020-21.

P. Social Security of Unorganized Workers

1.2.69. As per 2011 Census, total working population of Odisha was 1.75 crore of which about 92 per cent are unorganized workers (Labour Directorate estimates). The State Government is implementing the Unorganized Workers' Social Security Act, 2008 and has constituted the Odisha Unorganized Workers' Social Security Board in 2011 for the benefit of workers working in the unorganised sector. The Odisha Unorganised Workers Social Security Rules formulated in 2010 has been amended in 2019. So far, 1.72 lakh unorganized workers have been registered in the State. Health Assistance is provided through the OSTF. The following Social Security Schemes are in place for the registered beneficiaries and their family members:

Table 1.18 Social security schemes and benefits

Benefits	Amount (INR)
Accidental Death Benefit	2,00,000/-
Natural Death Benefit	1,00,000/-
Permanent Disability Benefit due to accident	1,50,000/-
Partial Disability Benefit for loss of both limbs	80,000/-
Partial Disability Benefit for loss of one limb	40,000/-

Source: Department of Health & Family Welfare Odisha

1.2.70. As on March 2021, INR 46 lakh has been placed with districts towards death benefits (both Natural & Accidental) for the dependents of 45 deceased beneficiaries.

Q. Odisha Labour Welfare Board

1.2.71. The Odisha Labour Welfare Board is implementing Scholarship Scheme for meritorious children of the Contributor employees to provide onetime scholarship of INR 1 Lakh, either at graduation or post-graduation level to the meritorious children of the contributor employees, who have successfully enrolled through the qualifying examinations in any of the reputed Government institutions like IIT, NIT, IIM, IISc., IISER, NISER, AIIMS and MBBS & BDS in Government Medical College across India to encourage them to pursue qualitative technical and professional courses. The benefit disbursement under this scheme has commenced in 2020-21.

R. Other welfare measures

1.2.72. Under the Odisha Shops & Commercial Establishment Act, 1956 display of Odia sign boards at prominent places by all establishments was made mandatory, and a new web portal 'Odia Phalak' made functional to monitor display of Odia sign boards by all establishments. 48673 establishments were covered, 302 inspections were conducted and two prosecutions were filed under this Act in 2020-21.



1.2.73. Under the Contract Labour (Regulation & Abolition) Act, 1970, 96 principal employers were registered, 896 licenses were issued to the contractors, 324 inspections were conducted and 6 prosecutions were filed.

1.2.74. Under the Beedi and Cigar Workers (Condition of Employment) Act, 1966, 591 establishments were covered and 14 inspections were conducted during the year, 2020-21.

1.2.75. Under the Motor Transport Workers Act, 1961, 3319 establishments were covered and 81 inspections were conducted

1.2.76. Under the payment of Wages Act, 1936, 97803 establishments were covered, 1583 inspections were conducted and 26 prosecutions were filed during 2020-21.

1.2.77. Under the payment of Bonus Act, 1965, 3319 establishments were covered and 324 inspections were conducted in the year 2020-21.

1.2.78. Under Commissioner for Employees Compensation Act 1923, 402 cases were decided and INR 14,14,29,711 /- were paid to the affected workmen and their dependents.

1.2.79. Under the payment of Gratuity Act 1972, 112 cases were decided and INR 1,03,94,087 /- were paid to workers and employees during 2020-21.

S. Labour Reforms

1.2.80. Under the Labour Reforms initiated by the Labour Directorate, 23 services under 09 Labour Acts implemented by the Directorate have been notified under the ORTPS Act for time bound service delivery.

1.2.81. The requirement of inspection prior to grant of Registration Certificate under the Orissa Shops & Commercial Establishment Act has been eliminated.

1.2.82. The Self-Certification Scheme for 'Start ups' permitting complete exemption of inspection to Start-ups in the first year of setting up has been allowed.

1.2.83. The Composite Inspection Scheme to check compliance of 19 Labour Laws in a single inspection/ visit has been made operational.

1.2.84. Six of the services relating to Labour Directorate delivered online through Single Window portal GO-SWIFT has been developed under the Industries Department, Odisha. 12 services of Labour Directorate and 10 services of Directorate of Factories & Boilers are delivered online under PARESHRAM portal of Labour & ESI Department.

V. Public Finance

1.2.85. Achieving sustained economic growth requires sound macroeconomic framework. Fiscal policy is one of the critical elements of sound macroeconomic framework. Negative effects of excessive fiscal deficit and debt on the macroeconomy is widely documented in the literature. However, there is no convergence of views in terms of how much debt is good or sustainable. In the recent times, austerity is also challenged on the ground that it can dampen aggregate demand pushing the economy into a tailspin. Similarly, recent literature of Modern Monetary Theory (MMT) argues that govt. does not face a hard budget constraint like household and if there are unutilized or idle resources, govt. can monetize the deficit while pump priming the economy. Nevertheless, MMT is unable to present a cohesive macroeconomic management framework and does not answer what would happen to money market in the short run when Government borrowing increases or large-scale monetization happens.



1.2.86. The dynamics changes further at the State level as State Governments do not borrow directly from external market hence not subject to foreign exchange risks to that extent (except in case of multilateral development bank borrowings). Secondly, individual State Government may have limited impact on overall macroeconomic situation in the country. Nevertheless, sound public finance management is critical for not just overall macroeconomic management but also on the interest cost on market borrowings as well as on various central Government transfers which are subject to limits set on various fiscal indicators by the central finance commission.

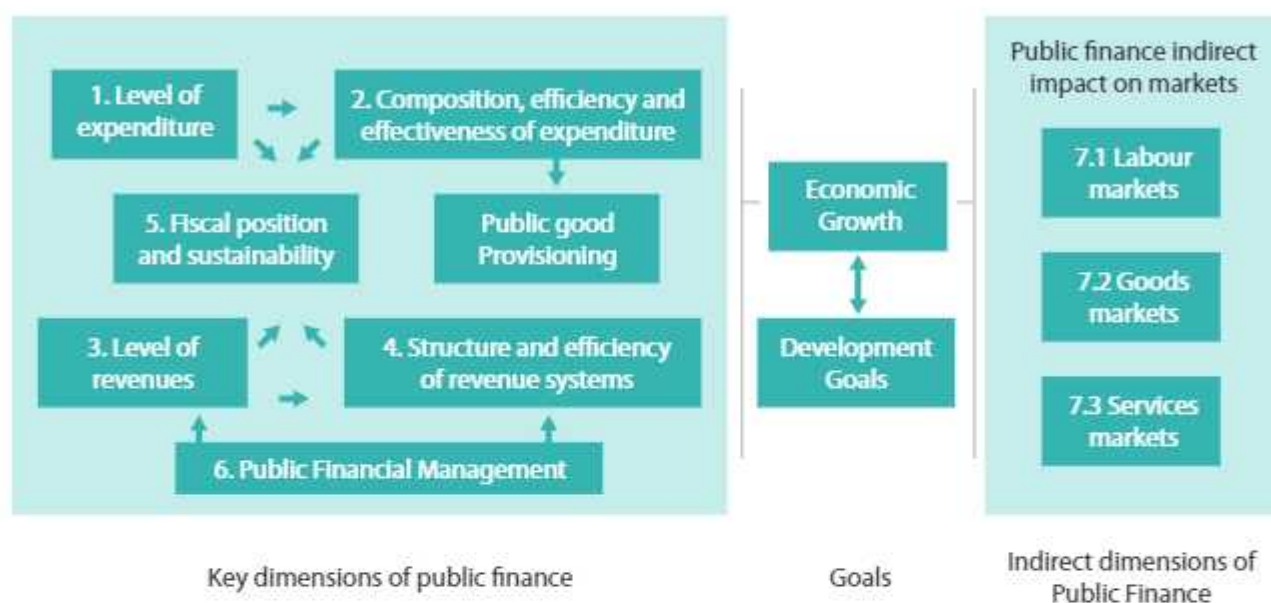
1.2.87. While financing of deficit is important from macroeconomic perspective, the composition, efficiency, and effectiveness of expenditure are also relevant in context of macroeconomy. Sound public finance policies require

- i. provision of public goods which are necessary for private sector investment to flourish,
- ii. resources are collected balancing revenue needs and distortionary effects
- iii. resources are spent to build physical and human capital, and
- iv. a system of resilience is established to be able to respond to external shocks without compromising macroeconomic stability and minimizing negative welfare effects.⁴

1.2.88. There is a wide convergence of views that not necessarily all the current expenditures are bad as it helps in maintaining the productive capacity of the infrastructure. Building a school is important. However, paying the teacher's salary on time and maintaining the schools in good conditions are equally important. Similarly, large scale capital expenditure with long gestation period can put the fiscal situation in disarray. Specifically, if the CAPEX is not properly planned, it may yield in negative return in the long run. This is specifically the reason why a 'template' framework for macroeconomic management that is good in one country may not be so good in another. Macroeconomic management, therefore, demands a careful weighing of cost and benefit. Public Financial Management (PFM) and Macroeconomic management are intrinsically connected. PFM at best could be characterized as a subset in the overall armoury of macroeconomic management. Broad framework used for assessing the linkage between PFM and Macroeconomy is shown in Figure 1.7.

⁴ World Bank (2018), Approach Paper Public Finance for Development Evaluation, <https://ieg.worldbankgroup.org/sites/default/files/Data/reports/ap-publicfinance.pdf>

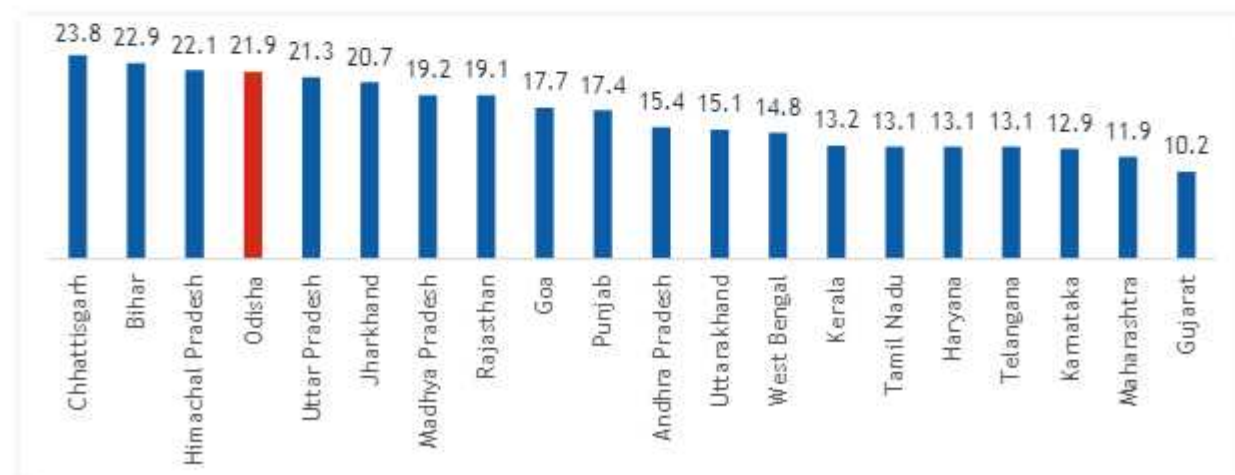
Figure 1.7 Public Finance and Economic Growth Framework



Source: Adapted and modified from 'The quality of public finance and economic growth, September 2008' https://ec.europa.eu/economy_finance/publications/pages/publication13101_en.pdf

1.2.89. Odisha is among the leading states (excluding north-eastern states) in public spending normalized by GDP. In 2019-20, the State's total expenditure (revenue expenditure plus capital outlay) was 21.9 per cent of GDP. This shows that State Government is playing a leading role in steering the economy through demand creation and building capacity.

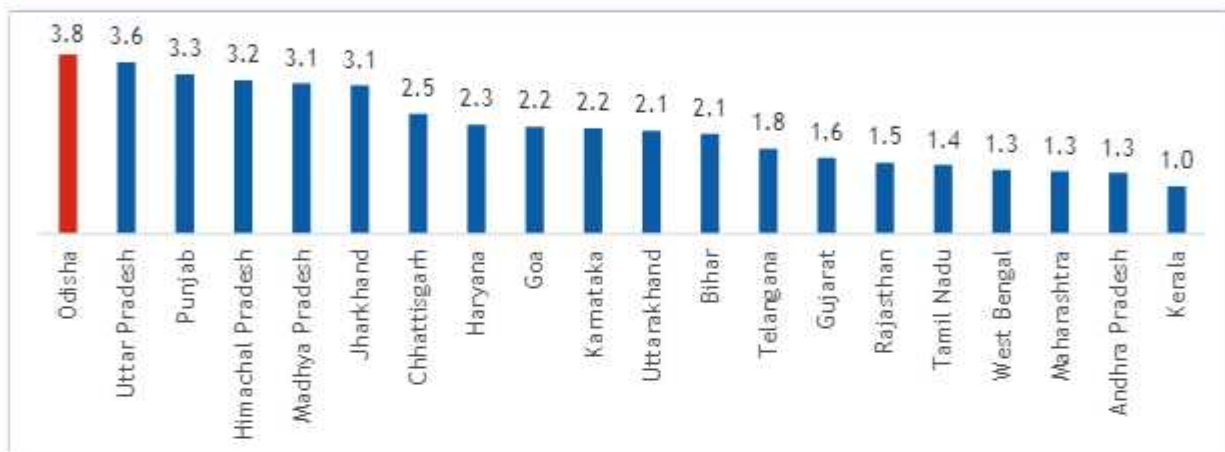
Figure 1.8 Total Expenditure as per cent of GDP in 2019-20 (in per cent)



Source: Study of State Budgets, Reserve Bank of India

1.2.90. Odisha has not just taken the leading role in creating demand in the economy but also invested heavily in building capacity for medium-term growth. The State is the highest spender on physical asset creation (measured by capital outlay to GSDP). In 2019-20, the State spent 3.8 per cent of GSDP on physical asset creation as shown in Figure 1.9.

Figure 1.9 Capital outlay as per cent of GSDP, 2019-20 (in per cent)



Source: Reserve Bank of India, A Study of State Budgets; Annual budget documents, Odisha

1.2.91. Despite being the leading spender overall as well as building capacity to sustain growth through capital outlay, Odisha has managed its finances prudently. It has consistently reported revenue surplus for several years. Average revenue deficit during the period 2016-17 to 2021-22 BE is negative 1.8 per cent (implying surplus). This is lowest among the 20 major states shown in Table 1.19. Revenue surplus also implies that State has used borrowings mostly to finance capital expenditure which adds to the growth potential of the State. Average Gross Fiscal Deficit was 2.6 per cent which was also among the lowest.

Odisha is an example of prudent fiscal management in the country.

Table 1.19 Average fiscal deficit, revenue deficit and primary deficit (2016-17 to 2021-22 BE, in per cent)

	Average for 2016-17 to 2021-22 BE		
	RD/GDP	GFD/GSDP	PD/GSDP
Odisha	-1.88	2.60	1.08
Uttar Pradesh	-1.55	3.13	1.07
Bihar	-1.28	3.65	1.68
Jharkhand	-0.83	3.32	1.32
Goa	-0.33	3.33	1.43
Himachal Pradesh	-0.13	3.68	0.95
Gujarat	0.00	1.83	0.42
Karnataka	0.13	3.03	1.73
Maharashtra	0.23	2.27	0.92
Uttarakhand	0.30	3.62	1.63

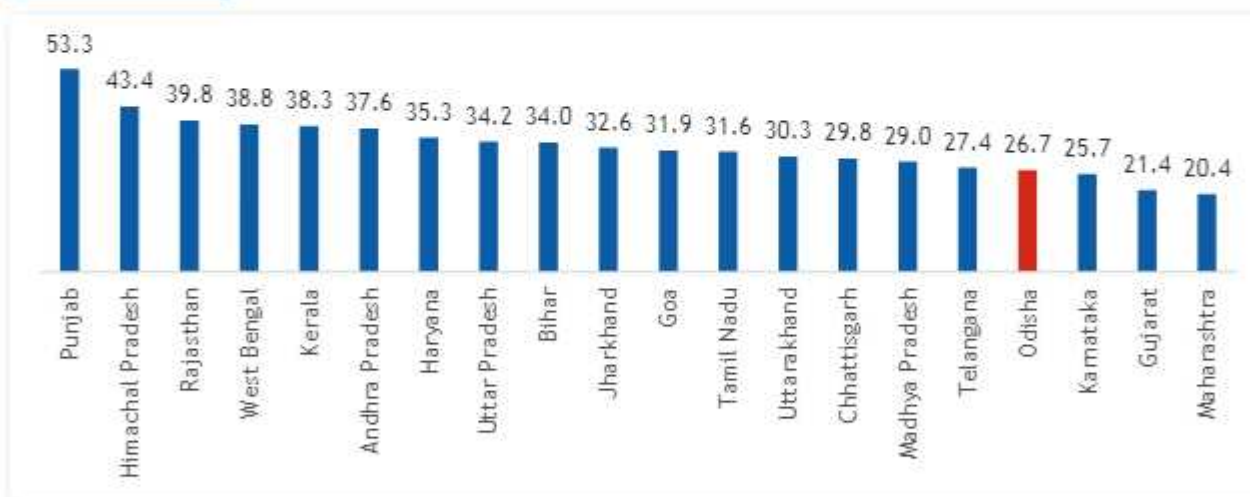
	Average for 2016-17 to 2021-22 BE		
	RD/GDP	GFD/GSDP	PD/GSDP
Telangana	0.30	3.75	2.27
Chhattisgarh	0.62	3.85	2.47
Madhya Pradesh	0.68	3.97	2.27
Tamil Nadu	1.20	3.13	1.33
West Bengal	1.37	3.35	0.85
Punjab	1.70	3.55	0.55
Kerala	1.83	3.37	1.28
Andhra Pradesh	2.13	4.28	2.38
Haryana	2.43	3.68	1.62
Rajasthan	2.83	5.50	3.03

Note: Negative (-) means surplus

Source: Reserve Bank of India, A Study of State Budgets

1.2.92. Keeping the fiscal deficit in check has helped the State to keep the total liabilities as per cent of GSDP within manageable limit during 2021-22. Comparatively, outstanding liabilities as per cent of GSDP for Odisha is substantially lower than many of the other major states as shown in Figure 1.10.

Figure 1.10 Total outstanding liabilities as percentage of GSDP 2021-22 (BE)



Source: Reserve Bank of India, A Study of State Budgets

1.2.93. It is no surprise that sound fiscal management has helped the State to keep the interest cost low. As per a Reserve Bank of India working paper⁵, during 2018-19, the yield spread for State Development Loans issued by Odisha was among the lowest, i.e., in the range of 40 basis points to 50 basis points. Yield spread is the premium paid by states over central Government dated securities interest rate. The author calculates the States' performance composite index which intends to cover all the factors that market considers in attaching risk premium. The performance composite index incorporates deficit management, own revenue effort, expenditure quality, debt sustainability, and market liquidity. Odisha is ranked 2nd on this index in 2018-19.

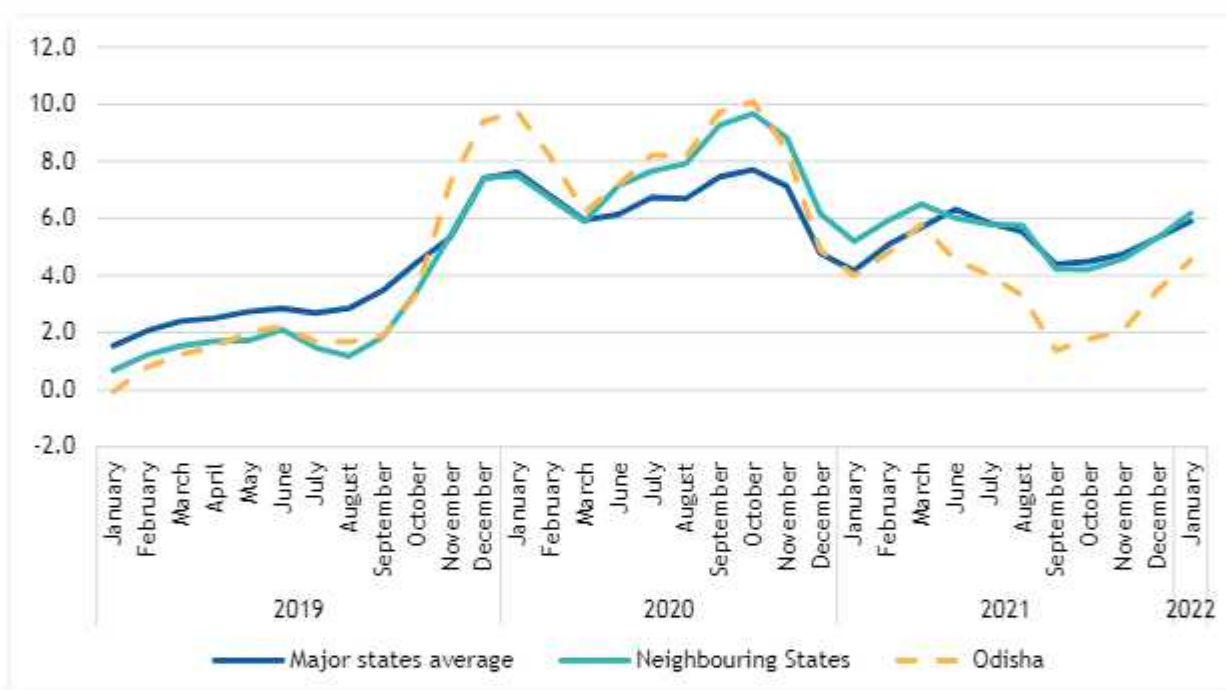
⁵ Memos, M. S. (2022). RBI Working Paper Series No. 04 States' Fiscal Performance and Yield Spreads on Market Borrowings in India Ramesh Jangili, NRVVMK Rajendra Kumar and Jai Chander.

VI. Inflation

1.2.94. The Indian economy and the states including Odisha have experienced high inflation in 2020 and 2021 largely due to Covid-19 induced supply side forces and oil price increases. As can be seen from Figure 1.11, inflation in Odisha has followed majorly trend of neighbouring states and of major states average. However, post March 2021, inflation in Odisha has been moderate relative to neighbouring states as well as major states as a group. The effective supply chain management after the 2021 lockdown have played an important role.

**Inflation environment
in the State is quite benign**

Figure 1.11 Inflation in Odisha, all major states* and neighbouring states** average, Jan 2019 to Jan 2022, (in per cent)



Note: * - Refer to footnote 1, ** - Refer to footnote 2
Source: CPI Division, MOSPI, Government of India

1.2.95. Commodity wise inflation in January 2022 over January 2021 also shows that across the board, inflation in Odisha has been lower except for few commodities such as egg, fuel and light, oil, and fats etc.

Table 1.20 Commodity wise inflation in January 2022 over January 2021 (in per cent), Combined

Row Labels	Major States* Average	Neighbouring States**	Odisha
General Index (All Groups)	6.0	6.2	4.5
Food and beverages	5.7	5.8	2.7
Cereals and products	3.2	2.2	0.2
Meat and fish	7.2	7.5	5.7
Milk and products	4.2	4.9	1.9

Row Labels	Major States* Average	Neighbouring States**	Odisha
Non-alcoholic beverages	6.8	6.5	3.1
Oils and fats	19.0	19.7	24.9
Fruits	2.5	3.3	-1.3
Pulses and products	3.6	2.7	1.9
Spices	5.0	4.2	6.0
Sugar and confectionery	4.2	5.4	3.5
Vegetables	6.6	5.4	-2.8
Egg	3.3	1.0	3.7
Prepared meals; snacks; sweets etc.	6.5	8.7	4.9
Pan; tobacco; and intoxicants	2.1	0.1	4.1
Clothing and footwear	8.6	8.3	6.1
Clothing	8.5	8.3	6.3
Footwear	9.1	8.4	4.2
Fuel and light	9.0	12.5	14.5
Miscellaneous	6.4	6.2	5.5
Household goods and services	7.3	5.5	3.3
Education	3.0	3.6	0.4
Health	7.1	7.1	5.8
Personal care and effects	4.0	4.8	4.4
Recreation and amusement	6.6	4.8	5.4
Transport and communication	8.8	8.8	9.9

Note: * - Refer to footnote 1, ** - Refer to footnote 2

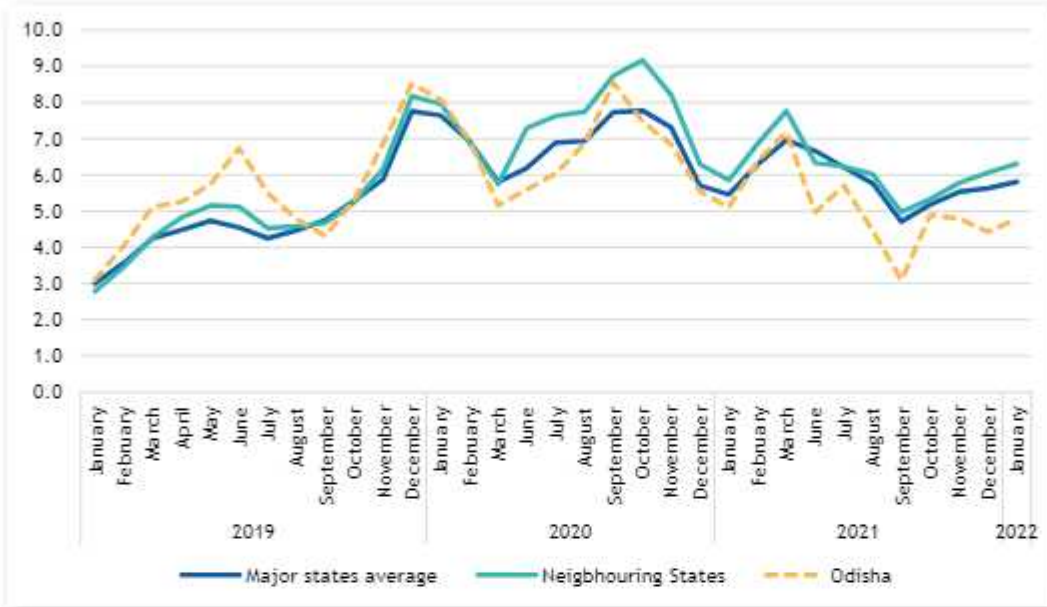
Source: CPI Division, MOSPI, Government of India

1.2.96. The distribution of food grains among people under different schemes and the mid-day meal scheme have played a crucial role in keeping food prices at a lower level.

A. Inflation in Rural and Urban Areas, and Relative Cost of Living

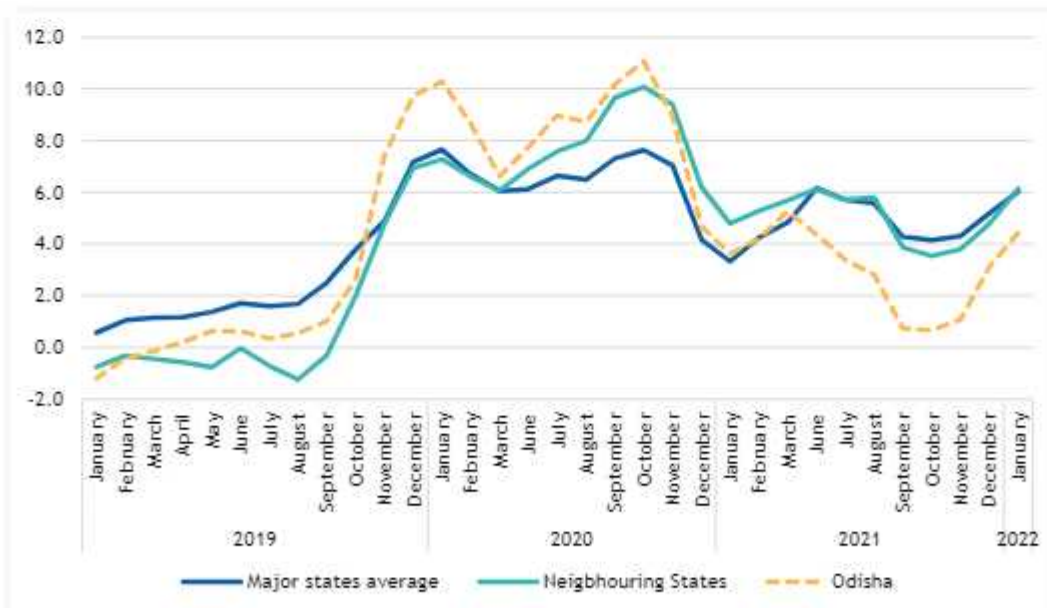
1.2.97. Relative cost of living of people in a State depends on what households do, where do households dwell, and the goods and services households consume. The location of residence (rural vs. urban), the prices households pay for the goods and the nature of work households do are the prime determinants. Looking at the price factor and the place of residence it is found that the urban-rural difference in General (all-groups) CPI inflation is lower in 2021 against 2020, with urban inflation remaining consistently above rural inflation for most of the major states including Odisha and for India. Inflation differential in Odisha has followed the trend for major states as well as neighbouring states. In the year 2019, urban inflation was significantly higher than rural inflation. The difference peaked to nearly 6 per cent in June 2019 following which it moderated significantly. By February 2020, even prior to COVID-19 hit Indian economy, inflation in rural areas in Odisha was already higher than urban areas. This further intensified throughout 2020. This could be due to large scale migration back to rural areas and consequent increase in demand in rural areas relative to urban areas. As situation got normalised, inflation in urban areas again went up. Both urban and rural inflation has moderated since the peak of September 2020, although rural inflation has moderated strongly than urban inflation.

Both rural and urban inflation came down from its covid peak

Figure 1.12**Urban Inflation in Odisha, major states* and neighbouring states** average, Jan 2019 to Jan 2022 (in per cent)**

Note: * - Refer to footnote 1 of this chapter, ** - Refer to footnote 2 of this chapter

Source: CPI Division, MOSPI, Government of India

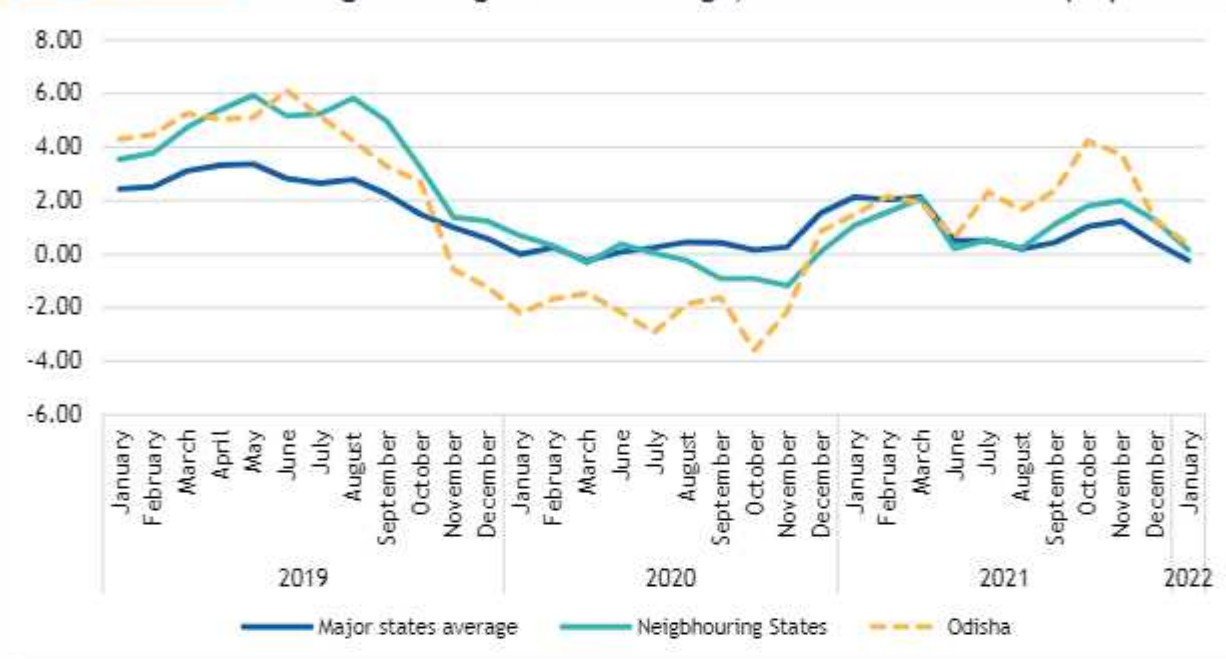
Figure 1.13**Rural Inflation in Odisha, major states* and neighbouring states** average, Jan 2019 to Jan 2022 (in per cent)**

Note: * - Refer to footnote 1 of this chapter, ** - Refer to footnote 2 of this chapter

Source: CPI Division, MOSPI, Government of India

Figure 1.14

Urban-Rural Inflation difference in Odisha, major states* and neighbouring states** average, Jan 2019 to Jan 2022 (in per cent)



Note: * - Refer to footnote 1 of this chapter, ** - Refer to footnote 2 of this chapter
Source: CPI Division, MOSPI, Government of India

1.2.98. It is interesting to note that Odisha has a lower rural as well as urban inflation than seen in neighbouring states as well as on average in major states. This might have been possible due to effective implementation of better Pandemic and supply management strategies by the Government in the state.

VII. Four Steps to quicken recovery and strengthen the State economy

1.2.99. The State has made remarkable improvement in the last two decades both in macroeconomic and socio-economic indicators over the past two decades. The Government's accomplishments on reviving growth and restoring stability have also been incredibly impressive.

1.2.100. It is imperative to reassess the potential of MSMEs (including craft enterprises) and clusters and promote them basing on local endowments and skill sets by mapping skills of workers and raw materials. This would strengthen backward and forward linkages.

1.2.101. Equally important is the crucial significance of exploring innovations in production organisation in the agriculture and allied sectors involving local communities and increasing investment in basic infrastructure including rural roads and electricity.

1.2.102. Urging enterprises to resort to value added activities in the State instead of only focusing on mineral resource procurement from the State. That would remain critical for a prosperous and inclusive regional economy during and beyond the pandemic.

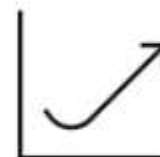
1.2.103. The finances of the State have improved remarkably. This has created fiscal space for expanding Government spending and public investments. For speedy economic recovery Government may further step-up expenditure given fiscal room available. The problems of growing deficit of good jobs and jobs for women; and the inadequacies in health and education should be addressed.

1.2.104. Above all, extra effort is necessary to strengthen and improve the statistical and documentation system in the state. There is a need to prepare District Domestic Product. There are more than fifteen states who are publishing district domestic product. Measuring economic activity at the district level would help in better planning for the district. The State may also create a 'migration database' covering Panchayat to State levels.

1.3. IN CONCLUSION

The economic fallout of the COVID-19 pandemic was serious. After a deep slump in 2020-21, economic growth has bounced back both in case of India as well as in the State. The State Government has taken numerous fiscal and general policy measures to limit the contractionary forces. Total public expenditure in 2021-22 was budgeted to grow by 25.9 per cent. Share of public administration and defence has increased even during the pandemic years. Such pump priming was necessitated to reverse the downward growth spiral.

Public expenditure played an important role in stimulating economic growth in Odisha, exemplified by the strong push for capital expenditure in the State budgets in recent years. This was made possible by following fiscal restraint for several years to keep deficits within prudent limits for several years, bringing down indebtedness and creating fiscal space for developmental expenditures. Given the natural resources endowed on the state, its mineral production has not only helped industrialisation based on these but has also provided needed resources for the government. With rising value added from industries contributing to the economic growth supported by the agriculture and allied sectors, services sector has also exhibited a growing trend and is now contributing to overall growth almost to the same extent as industries.



Unless the ongoing pandemic takes a turn for worse, the prospects for the State economy are bright. The Government initiatives have created the kind of positive sentiment in and about the State that should place the State firmly on its growth path for the foreseeable future. The evidence from the past few years have shown that natural calamities and even the pandemic have deflected Odisha from its growth path only temporarily; the State is likely to move along this path during the medium term.

The year ahead is well poised for a pick-up in investment, employment, and output growth to take State economy to pre-pandemic level and above. Government policy on strengthening the fundamentals, the supportive role of the financial system and wide scale vaccine coverage are expected to facilitate robust economic growth. Assuming normal monsoon, no furthermore damaging waves of corona virus mutations and induced economic disruption, stable oil prices, and steadily easing of supply chain, GSDP may grow in real terms by 9.0-9.5 per cent in 2022-23. However, the Russia and Ukraine conflict has brought in further uncertainty. It is likely to impact global trade and businesses with its ramifications on domestic price level, exchange rate, commodity supplies and supply chain operations.

CHAPTER

2

Agriculture, Allied Sectors and
Rural Development

Odisha has a rural population of 83.3 per cent (as per Population Census 2011) and majority of the rural workforce are engaged in agricultural activities. Despite the adverse impact of COVID-19 and other natural calamities, the agriculture and allied sectors in Odisha contributed about 20.61 per cent to GVA in 2021-22 and 23.63 per cent in 2020-21. Agriculture and allied sectors in the State in 2020-21 grew at 7.41 per cent over the previous year against the national level agricultural and allied sectors GVA growth rate of 3.32 per cent in the same year despite pandemic. However, in 2021-22, agriculture and allied sectors GVA is estimated to contract by 3.37 per cent over the previous year mainly due to sharp contraction in the crop sector which accounted 59.5 per cent of agriculture and allied sectors GVA. The combined impacts of drought, unseasonal rain, and cyclone "JAWAD" in harvesting period of kharif season contributed to this contraction. Due to the proactive steps taken by the Government and expected normal monsoon, the crop sector growth may recover in the ensuing year. The Government has taken several initiatives including providing financial assistance under KALIA, promoting sharecropping under BALARAM scheme, promotion of FPOs, diversification of agricultural activities and strengthening post-harvest management, agricultural marketing & credit facilities to boost agricultural growth and increase farmer's income.

The fishery sub-sector depicted a growth rate of 7.50 per cent in 2021-22 and appeared to have recovered from the pandemic. Implementation of several initiatives like Odisha Fishery Policy 2015, Matsya Pokhari Yojana, adoption of new technology like biofloc, cage culture and other initiatives in fishery substantially contributed towards an improvement in production, productivity, exports, availability and per capita consumption of fish. The livestock sub-sector is projected to marginally contract (-1.05) in 2021-22. The forestry sub-sector showed a growth rate of 4.89 per cent with Odisha recording the highest increase in forest cover in 2020-21 in the country.

Apart from agricultural sub-sectors, due importance was also provided in the areas of environment conservation and climate change through the promotion of organic farming and formulation of climate change budget and action plans. Odisha was recognized as a frontrunner among states based on its performance on climate action (SDG 13) by NITI Aayog as part of its SDG India Index report 2020-21.

Additionally, the State has extensively focused on rural development with an aim to reduce poverty and improve the standard of living in rural areas. To achieve this, it has implemented a plethora of schemes in the areas of rural housing, drinking water provision, sanitation and rural employment which showed encouraging progress.

The holistic approach undertaken by State right from addressing the farmers' needs at grass root level to foster environment conservation at the macro level has helped the State to garner progress despite several challenges including the Covid-19 pandemic, cyclones, drought, and erratic rainfall.

2.1. INTRODUCTION

2.1.1. About 83 per cent of the population of Odisha live in rural areas (Census 2011) and majority of the rural workforce are engaged in agricultural activities. Agriculture sector continues to be the primary source of livelihood for a majority of the population. Agriculture and allied sector in Odisha contributed about 20.61 per cent to total Gross State Value Added (GSVA) in 2021-22(AE) and 23.63 per cent in 2020-21(RE). Similarly, at the national level, agriculture and allied sectors accounted for 19.99 per cent of total GVA in 2020-21 (MOSPI).

2.1.2. Odisha has 10 agroclimatic zones, eight nutrient-rich soil types, 480 Kms long coastline (8 per cent of India's coastline), abundant water resources and wide range of minerals. The core sub-sectors of the broad agriculture sector include crop, livestock, fishery and forestry. During 2021-22, the contribution of crop sub-sector to total GSVA in Odisha was 12.25 per cent and that of livestock, fishery, and forestry were 3.26 per cent, 2.43 per cent and 2.66 per cent respectively. Besides paddy, Odisha also produces different non-paddy agricultural and horticultural crops. The State is a large producer of fish, shrimp and marine products as well as meat, egg and milk. Besides timber, honey and tamarind are important forest products with significant marketable surplus.

2.1.3. With an annual production of 1.60 lakh MT, Millets - mostly organic - are available through a network of 72 FPOs. Odisha ranks first in production of Sweet Potato contributing 25 per cent to the national basket and it is also one of the major Onion producing states in India with a production of 3.5 lakh MT per annum. Odisha is the 4th largest fish producing State in the country. The State produces 65 lakh litres of milk every day with more than 70 per cent marketable surplus. Milk products like Rasgulla produced in the State with a GI tag has niche demand across the country. It is the 6th largest producer of Goat Meat, 4th largest producer of Cashew nuts (14 per cent of India's production) and 5th largest producer of Coconuts in the country. About 660 MT of 100 per cent Arabica Coffee is produced annually in Koraput (Box 2.1). Kandhamal Turmeric and Simlipal Honey from Simlipal forest are also widely known.

2.1.4. During the last two decades there has been significant rise in productivity of all crops including food grains. However, there is scope for further increase in productivity. The State has also witnessed increasing diversification towards high value crops which has positively impacted farmers' income.

2.1.5. Formulation of State Agriculture Policy-2020 'SAMRUDHI', Odisha Fishery Policy 2015 and exclusive agriculture budget by the State Government paved the way for adoption of sustainable practices with higher investment, efficient production technology, post-harvest solutions, effective value addition and remunerative market options in the agriculture sector.

2.1.6. Rural Development depends on the growth of agriculture & allied sector and is strongly associated with poverty reduction and improved standard of living in rural areas. Besides promoting growth of agriculture, continuous efforts are being undertaken by the State to uplift the standard of people in rural areas especially those at the bottom of the pyramid through various poverty alleviation schemes and provision of suitable housing, connectivity, drinking water and sanitation among others.

2.1.7. In this chapter, a holistic review of key trends and initiatives in agriculture and allied sectors is provided along with a discussion on rural development. The chapter is structured as follows. It begins with a discussion on the performances of the agriculture sub sectors namely crop production, livestock, fishery and forestry. This is followed by a detailed discussion on the analysis of crop sub sector including analysis of production and productivity, analysis of use of inputs, Government interventions and post-harvest



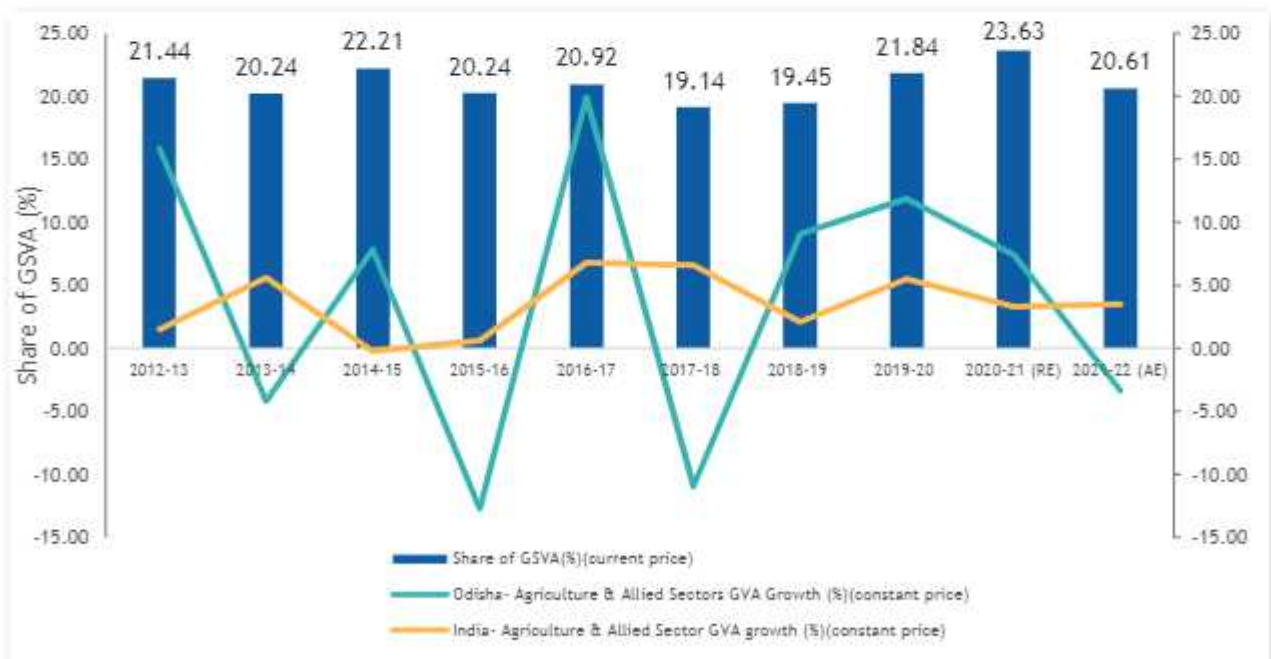
management. The next section discusses the livestock sub sector which includes analysis of milk, meat and egg production and Government initiatives to foster growth of the livestock sub-sector. This is followed by a discussion on the fishery sub sector which includes assessment of production, exports and imports, and Government initiatives. The next section focuses on forestry sub sector where forestry related schemes are reviewed along with discussion on wildlife and environmental initiatives. The chapter ends with a discussion on rural development schemes of the government.

I. Growth of Agriculture and its sub-sectors

2.1.8. As per the advance estimate, agriculture and allied sector GSVA is estimated to contract by 3.4 per cent at constant prices in 2021-22 against a high growth rate of 7.41 per cent realised in 2020-21. The contraction in agriculture sector was mainly due to sharp contraction in the crop sub-sector which accounted for 59.5 per cent of agriculture and allied sectors GSVA in 2021-22. In 2021-22, agriculture and allied sectors contributed 20.61 per cent to total GSVA at current prices (Figure 2.1) and the same was slightly higher in 2020-21 at 23.63 per cent. The share and growth of agriculture and allied sectors from 2012-13 to 2021-22 are presented in Figure 2.1. The share and growth of agriculture and allied sector in total GSVA in the State has remained around 20 per cent in the last decade. The agriculture and allied sectors growth rate in Odisha have been more volatile as compared to national level agriculture and allied sectors growth rate with contraction majorly coincided with occurrence of severe natural calamities in the State (Figure 2.1). The growth rate of agriculture and allied sectors in Odisha has been better than that of national level except for the years when State faced severe natural calamities.

Fig 2.1

Annual growth (GVA) and share (percentage) of Agriculture and allied sectors in total GSVA



Source: DE&S, Odisha

A. Crop-subsector

2.1.9. Crop sub-sector constitutes major sub-sector within agriculture in Odisha accounting for 59.5 per cent of agriculture and allied sector GSVAs and 12.25 per cent of total GSVAs in 2021-22. During 2021-22, the contribution of livestock, fishery, and forestry in agriculture and allied sector GSVAs stood at 15.8 per cent, 11.8 per cent and 12.9 per cent respectively. The share and growth of all these key sub-sectors from 2019-20 to 2021-22 are presented in Figure 2.2. The crop sub-sector

growth rate marginally decelerated to 11.52 during 2020-21 over 17.91 per cent growth rate in 2019-20. But the crop sub-sector has been severely impacted in 2021-22 and is estimated to contract by 7.95 per cent at constant prices in 2021-22. The combined impacts of drought, unseasonal rain, and cyclone "JAWAD" in harvesting

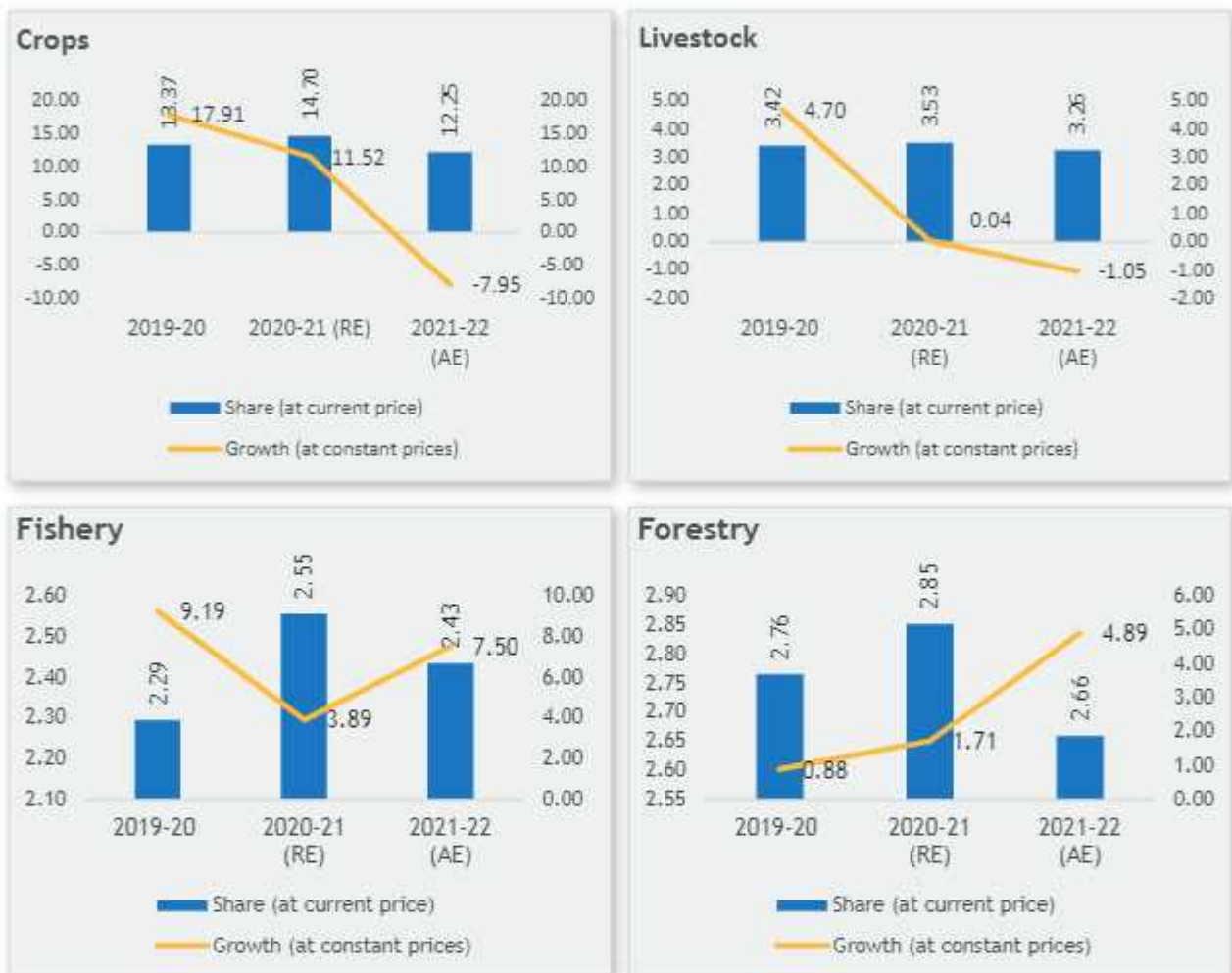


period of kharif paddy contributed to this contraction. The decline in the crop sub-sector has affected the overall growth of agriculture and allied sectors which is projected to contract by 3.37 per cent in 2021-22. However, due to several interventions implemented by the Government and expected normal monsoon, the crop sector growth may recover in the ensuing year.

B. Livestock

2.1.10. Growth of livestock sub-sector is critical for increasing income of farmers especially small and marginal farmers and for reduction of poverty. Research indicates growth of livestock sector especially dairy has huge potential for reducing poverty. Livestock sub-sector accounts for 3.26 per cent of total GSVAs and 15.83 per cent of agriculture and allied sector GSVAs in 2021-22. The livestock sub-sector growth plummeted to 0.04 per cent in 2020-21 against 4.70 per cent growth rate in 2019-20. The growth of livestock sub-sector further impacted in 2021-22 and expected to contract by 1.05 in the current fiscal on the back of COVID-19 induced impacts in the value chain and reduced economic activities. The recovery of livestock sub-sector is critical for supplementing farmers income especially of those at the bottom of the pyramid.



Fig 2.2 Annual growth and share (percentage) of sub-sectors in total GSVA

Source: DE&S, Odisha

C. Fishery

2.1.11. Fishery is an important sub-sector in the State given long coastline and abundant of water resources. Promotion of pisciculture has been the priority of the Government and for that, the State has framed Fishery Policy 2015. Fishery sub-sector constitutes 2.43 per cent of total GSVA and 11.81 per cent of agriculture and allied sector GSVA at current prices in 2021-22. The growth of fishery sector has



been encouraging over the last decade. The Fishery sub-sector grew at a CAGR of 10.14 per cent between 2011-12 and 2021-22. Due to pandemic, the growth rate plummeted to 3.89 per cent in 2020-21 from 9.19 per cent in 2019-20. The fishery sub-sector appeared to have recovered from pandemic and projected to grow at 7.50 per cent in 2021-22.

D. Forestry

2.1.12. Forestry accounted for 2.66 per cent of GSVA and 12.90 per cent of agriculture and allied sector GSVA at current prices in 2021-22. Forestry sub-sector is estimated to grow at 4.89 per cent in 2021-22 against 1.71 per cent in 2020-21. Forestry sector growth rate has been encouraging in 2021-22 as compared to other major subsectors.



Box 2.1

Koraput Coffee - A Cash Crop with High Potential in Odisha

- High altitude with cool climate and moderate rainfall of several districts of the State favours coffee plantation.
- Odisha stands 5th in coffee production in the country.
- Koraput district is the major producer of coffee. Besides, Rayagada, Kandhamal, Keonjhar, Kalahandi and Gajapati districts have potential for coffee plantation.
- 2796 ha of area is so far covered under coffee plantation in Koraput district with a production of 660 MT (Coffee beans) during 2020-21.
- Koraput Coffee is 100 per cent Arabica coffee with a unique blend.
- The coffee grown in Koraput promoted as 'Koraput Coffee' has already gained consumers' acceptability in the national market for its organic value and delicious flavour.
- A small-scale coffee processing unit has been established at Koraput by TDCCOL, Odisha.
- 3,47,760 ha of land is suitable for coffee plantation in Koraput and other districts of the state.



2.2. AGRICULTURAL PRODUCTION

A. Crop Production

2.2.1. Production of major crops in Odisha from 2014-15 to 2020-21 is presented in Table 2.1. During 2020-21, food grains contributed around 49 per cent of the total crop production of the state, with a record contribution of 130.39 lakh MT production. As shown in Table 2.1 maize production increased by about 13.5 per cent in 2020-21 over previous year whereas the same was 11.6 per cent for food grains, 12.7 per cent for cereals and 12.8 per cent for paddy. There is a marginal decrease in vegetable production, but production of spices and condiments have increased 2.7 per cent in 2020-21 over the previous year. The production of sugarcane has increased significantly by about 10 per cent in 2020-21 over the previous year.

Table 2.1 Production of major crops in Odisha (in '000 MT)

Crop	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21(PE)	Growth percentage in 2020-21 over 2019-20
Rice	9845	5875	9794	6551	7734	9755	10999	12.75
Maize	751	666	746	730	753	733	832	13.51
Other Cereals	171	153	144	126	131	155	164	5.81
Total (A) Cereals	10767	6694	10684	7407	8618	10643	11995	12.70
Mung (Green gram)	414	361	374	435	411	408	433	6.13
Biri (Black gram)	259	234	249	250	238	210	197	-6.19
Tur	124	123	120	124	147	145	151	4.14
Other Pulses	260	218	255	267	258	282	263	-6.74
Total (B) Pulses	1057	936	998	1076	1054	1045	1044	-0.10
Total Food grains (A+B)	11824	7630	11682	8483	9672	11688	13039	11.56
Groundnut	463	387	377	358	345	388	312	-19.59
Other Oilseeds	216	177	184	177	178	181	167	-7.73
Total (C) Oilseeds	679	564	561	535	523	569	479	-15.82
Cotton	316	298	382	408	455	578	551	-4.67
Other Fibers	172	129	101	118	110	94	98	4.26
Total (D) Fibers	488	427	483	526	565	672	649	-3.42
Sugarcane	2469	2107	2013	1986	1813	1366	1502	9.96
Vegetables	9403	9068	8974	8978	8892	9798	9795	-0.03
Spices & Condiments	669	652	557	557	557	1129	1160	2.75
Total (E) Other Crops	12541	11827	11544	11521	11262	12293	12457	1.33
Grand Total (A+B+C+D+E)	25532	20448	24270	21065	22022	25222	26623	5.55

Note: PE indicates provisional estimates

Source: Directorate of Agriculture and Food Production, Odisha & Directorate of Horticulture, Odisha

2.2.2. The area and production of major vegetables and spices in Odisha from 2015-16 to 2020-21 are given in Table 2.2. The production of vegetables decreased marginally from 97.98 lakh MT in 2019-20 to 97.95 lakh MT in 2020-21. Table 2.2 also shows that vegetable production declined by 0.03 per cent in 2020-21 over the previous year. Although production of potato and other vegetables increased marginally, the significant fall in the production of onion and sweet potato have led to decline in overall production of vegetables by 0.03 per cent in 2020-21 over the previous year. The production of spices has increased over the previous year as shown in Table 2.2. The increasing trend in production of spices such as coriander and ginger are indication of crop diversification and awareness among farmers about its economic benefits.

Table 2.2 Production of major Vegetables and Spices in Odisha ('000 MT)

Crop	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21(PE)	Growth percentage in 2020-21 over 2019-20
Sweet Potato	391.4	384.89	381.04	378.36	362.61	330.26	-8.92
Potato	273.83	302.22	298.06	290.14	294.95	296.82	0.63
Onion	369.45	378.67	379.34	373.22	365.43	350.12	-4.19
Other Vegetable	8032.97	7907.99	7919.75	7850.53	8775.01	8817.48	0.48
Total Vegetables	9067.65	8973.77	8978.19	8892.25	9798	9795	-0.03
Chilly*	68.57	69.28	69.37	69.39	693.46	715.47	3.17
Coriander	10.76	10.86	10.86	10.81	23.11	25.93	12.20
Garlic	-	-	47.12	47.09	38.77	39.45	1.75
Turmeric*	215.32	218	218.15	218.18	74.39	75.49	1.48
Ginger	127.78	128.01	128.02	128.08	225.04	226.84	0.80
Other Spices	229.82	130.8	83.92	83.17	74.23	76.65	3.26
Total Spices	652.25	556.95	557.44	556.72	1129	1159.83	2.73

Note: *For 2019-20 and 2020-21, production of chilli is taken for green chilli. Similarly, for this year turmeric represents dry turmeric, ginger represents raw ginger. Other spices include betel vine.

Source: Directorate of Horticulture, Odisha

2.2.3. Despite the incidence of natural calamities, there was a marginal increase in total fruit production in the State in 2020-21. Table 2.3 shows that fruit production has increased by 1.82 per cent in 2020-21 over the previous year. The growth of fruit production varies between 0.15 per cent and around 8 per cent depending on the type of fruits. The maximum rise was observed in production of lemon and banana at 7.5 per cent and 4.1 per cent respectively in 2020-21, over the previous year. Production of fruits like litchi, guava, papaya, jackfruit, mango and sapota increased marginally in 2020-21 over 2019-20.

Table 2.3 Production of fruits in Odisha ('000 MT)

Year	Total Fruits	Mango	Banana	Jack Fruit	Lemons	Guava	Papaya	Lichi	Sapota	Other fruits
2019-20	2482.0	847.3	483.2	310.0	267.8	120.1	100.1	23.7	13.5	316.4
2020-21	2527.1	847.7	502.8	312.2	288.0	121.2	100.6	24.1	13.5	317.0
Growth (per cent)	1.82	0.05	4.07	0.71	7.54	0.93	0.52	1.68	0.15	0.19

Source: Directorate of Horticulture, Odisha

2.2.4. Floriculture: Odisha has good potential in ornamental crops and floriculture. Marigold, Rose, Gladioli and Tuberose are the main flowers grown in Odisha. Table 2.4 gives a detailed picture of area and production of different flowers in the State since 2014-15. Flower production has increased in 2020-21 for all the major categories viz. marigold, rose, gladioli and tuberose over the previous year (2019-20). Further, during the past few years the increasing production of new gerbera flower has also been encouraging. During 2020-21, the production of gerbera was about 604 lakh spikes compared to 307 lakh spikes in 2019-20.

Table 2.4 Area and production of major Ornamental crops in Odisha

Year	Marigold		Rose		Gladioli		Tuberose	
	Area (in Ha.)	Production (in quintals)	Area (in Ha.)	Production (in lakh stems)	Area (in Ha.)	Production (in lakh spikes)	Area (in Ha.)	Production (in quintals.)
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
2017-18	2616	235943	1870	3607	1596	1576	514	13143
2018-19	2577	233641	1825	3504	1544	1526	464	11727
2019-20	2996	298000	1469	2915	585	593	383	10490
2020-21(PE)	3050	304000	1530	3213	610	610	400	11100
Growth percentage in 2020-21 over 2019-20	1.80	2.01	4.15	10.22	4.27	2.87	4.44	5.82

Source: Directorate of Horticulture, Odisha

B. Trends in productivity of some major crops

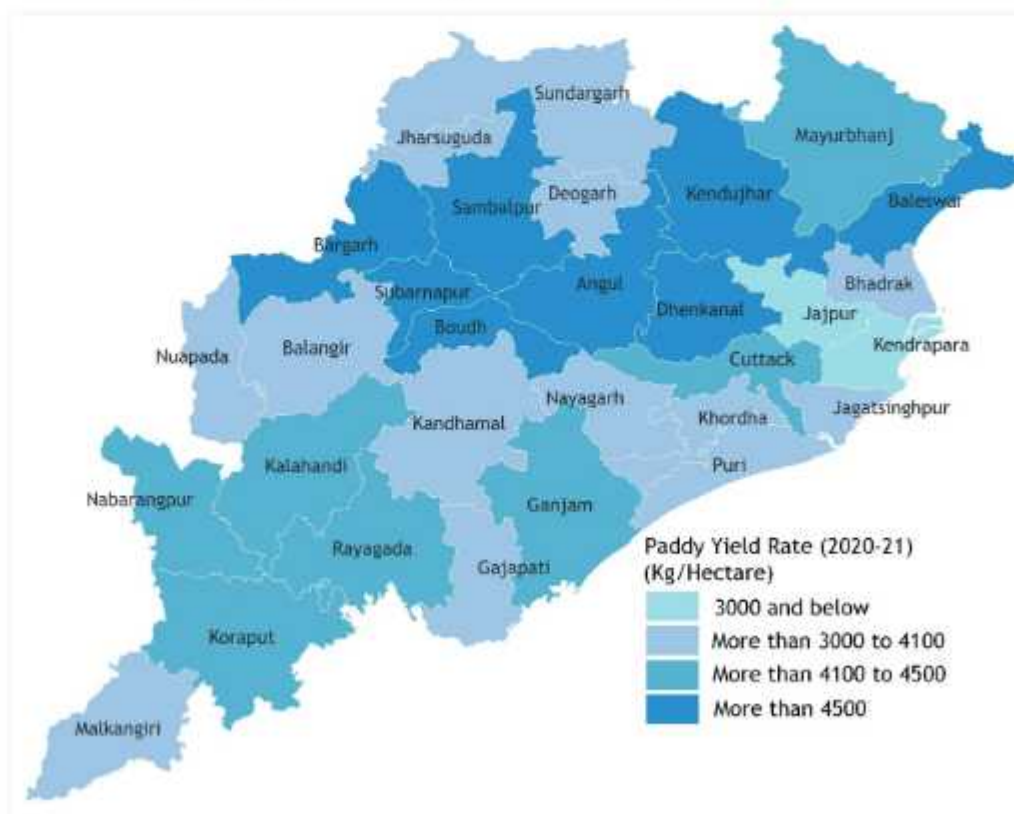
2.2.5. Agricultural productivity is driven by a host of factors such as irrigation, use of quality seeds, fertilizers and pesticides, extension services, rural infrastructure etc. There has been improvement in agricultural productivity in the State over the years. A comparative picture on changes in productivity of some important crops in Odisha between 2000-01 and 2020-21 is presented in Table 2.5. Productivity increase has been satisfactory in these two decades especially in case of crop sub-sector in the state. Food grains productivity (consisting of cereals and pulses) has increased at a CAGR of 4.30 per cent. There has been significant productivity growth in rice, maize and ragi between the same period. Rice being predominant crop in the state, its productivity has increased at a CAGR of 4.94 per cent between 2000-01 and 2020-21 which was highest among major crops.

Significant production growth in rice, maize, ragi, cereals and pulses

2.2.6. Further, there was significant variation in paddy yield among districts in Odisha with yield varying from 2741 Kg/ha in Jajpur district to 5413 kg/ha in Subarnapur district in 2020-21. Paddy yield map by districts for the year 2020-21 is given in Figure 2.3. Top 5 districts have yields more than 4600 kg/ha which include Subarnapur (5413 kg/ha), Boudh (5339 kg/ha), Bargarh (4888 kg/ha), Angul (4792 kg/ha) and Baleswar (4730 kg/ha) while bottom 5 districts have yield less than 3500 kg/ha which include Balangir (3464 kg/ha), Bhadrak (3336 kg/ha), Kandhamal (3165 kg/ha), Kendrapara (2758 kg/ha) and Jajpur (2741 kg/ha). The variations in yield could be due to variations in availability of infrastructure, input use and soil conditions among the districts.

Fig 2.3

District wise paddy yield for the year 2020-21 (Kg/Ha)



Source: Directorate of Agriculture and Food Production, Odisha

2.2.7. As can be seen from Table 2.5, pulses productivity has increased by 2.05 per cent of CAGR with the highest CAGR rise of 2.95 per cent in arhar (red gram) between 2000-01 and 2020-21. Productivity of mung and biri has also increased substantially. Oilseed's productivity has increased by compound annual average growth rate of 2.71 per cent between 2000-01 and 2020-21 while groundnut productivity grew at a CAGR of 2.76 per cent, mustard by 2.17 per cent and Til by 1.45 per cent during the same period (Table 2.5).

2.2.8. Among fibres the productivity of cotton has increased at a CAGR of 3.35 per during last two decades. Cotton yield in Odisha (580 kg/ha) was higher than that of the national average (451 kg/ha) in 2019-20. Productivity of sugarcane increased marginally (CAGR of 0.4 per cent) between 2000-01 and 2020-21 (Table 2.5).

2.2.9. The productivity of vegetables has increased at a CAGR of 2.05 per cent during last two decades. For major vegetables like potato, onion and sweet potato, the compound annual growth rate was 0.68 per cent, 1.56 per cent and 1.49 per cent respectively (Table 2.5).

Table 2.5 Trends in productivity of crops in 2000-01 and 2020-21 (kg/ha)

Major Crops	2000-01	2020-21(PE)	CAGR (per cent)
Rice	1041	2730	4.94
Maize	1235	3195	4.87
Ragi	801	1105	1.62
All Cereals	1032	2690	4.91
Arhar	652	1166	2.95
Mung	328	503	2.16
Biri	334	468	1.70
All Pulses	365	548	2.05
Total Food grains	884	2050	4.30
Groundnut	1058	1822	2.76
Til	305	407	1.45
Mustard	289	444	2.17
All Oilseeds	531	907	2.71
Cotton	283	547	3.35
Sugarcane	66951	72268	0.38
Potato	10407	11918	0.68
Onion	8570	11682	1.56
Sweet Potato	7222	9715	1.49
All Vegetables	9369	14059	2.05

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

2.2.10. Despite significant increase in productivity between 2000-01 and 2020-21, productivity of major crops in Odisha is still lower than that of national average. Comparative analysis of productivity of major crops between Odisha and National average for the year 2019-20 is given in Table 2.6. Overall, food grain productivity in Odisha (1821 kg/ha) was 28 per cent less than that of all-India level (2325 kg/ha) in 2019-20.

2.2.11. The difference in yield was highest in case of potato followed by oil seeds while the difference was least in case of sugarcane. Potato yield in Odisha was 93 per cent less than that of national average and 78 per cent less in case of oilseeds yield. Yield of pulses in Odisha was 572 kg/ha in 2019-20 which was 43 per cent lower compared to the national average of 817 kg/ha. Sugarcane yield at 72798 kg/ha in 2019-20 in Odisha was just 7 per cent less compared to the national average of 77893 kg/ha. Yield of onion in Odisha (10613 kg/ha) was 59 per cent less than that of national average (16875 kg/ha) in 2019-20.

2.2.12. The above analysis indicates that productivity for major crops in Odisha is still low as compared to national average. This suggests that there is potential for increasing agricultural productivity in the State by improving input use such as fertilizers (which is low as compared to national average) as well as through better irrigation coverage, mechanization of agriculture and adoptions of good agricultural practices.

Table 2.6 Comparison in Productivity with national average for major crops (2019-20)

Major Crops	Productivity in Odisha (kg/ha)	National Average Productivity (kg/ha)	Difference from National Average (Per cent)
Food Grains	1821	2325	28
Rice	2068	2705	31
Pulses	572	817	43
Oilseeds	693	1236	78
Sugarcane	72798	77893	07
Potato	12255	23670	93
Onion	10613	16875	59

Source: Directorate of Agriculture and Food Production and Agricultural Statistics at a Glance 2020, Government of India

C. Inputs of production

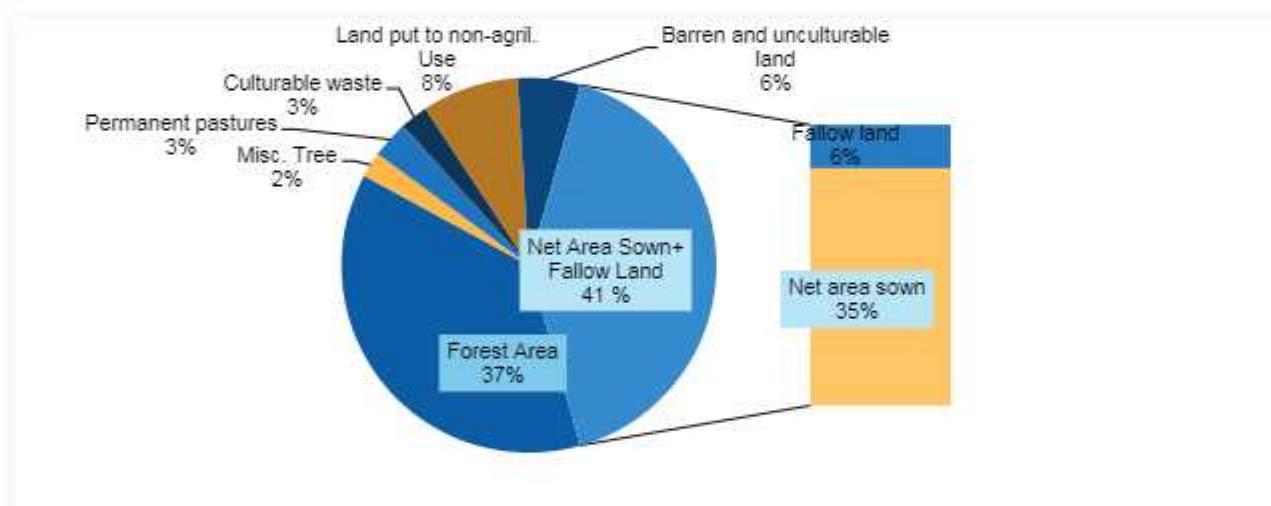
2.2.13. Better productivity in agriculture demands critical infrastructure, physical input as well as financial input to arrest the declining productivity of land. Agriculture is subject to diminishing returns to scale unless it is supported by these factors. With every passing generation, agricultural land is also subject to fragmentation. Mechanization becomes that more challenging when land holding size get smaller. Besides these, certain geographies like the case in Odisha are more prone to natural calamities. Nature brings with it such uncertainties that despite best effort of the farmer, there are crop losses in many years. This also demands better crop and livelihood insurance facilities. The following section discusses some of the infrastructure and input consumption aspect in the state.

Land

Land use

2.2.14. Land use pattern in Odisha includes: Forest area, Area under non-agriculture use, Barren and Unculturable Land, Permanent Pasture, Land under Miscellaneous Tree Crops, Culturable Waste Land, Net Sown Area and Fallow land (current and other fallow). Out of the total geographical area of 155.71 lakh hectares of the state, the largest part (37 per cent) is covered by Forests. The detailed classification of land use of the total geographical area during 2020-21 is shown in Figure 2.4. During the year 2021, the Net Sown Area was recorded at 54.15 lakh hectares constituting 35 per cent of the total geographical area whereas the same for fallow lands was about 6 per cent. Out of total fallow lands the current fallow was recorded as 7.68 lakh hectares. The Net Sown Area in 2020-21 has increased by 1.54 per cent with respect to the previous reference year 2019-20.

Fig 2.4 Land utilisation during 2020-21 (per cent)

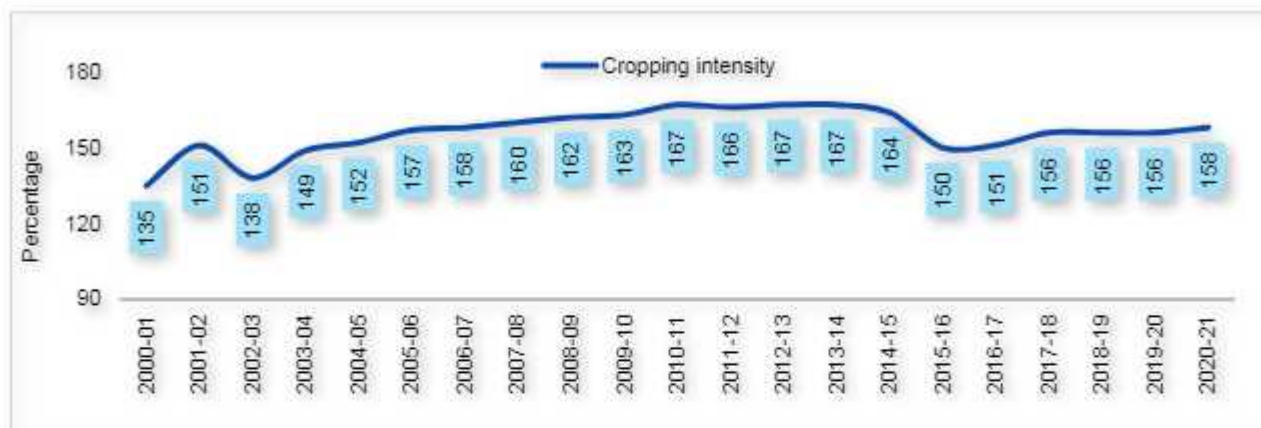


Source: Directorate of Agriculture and Food Production, Odisha

2.2.15. Gross Cropped Area represents the total area sown once and/or more than once in a particular year. In 2020-21 the gross cropped area for the State was about 85.29 lakh ha which shows a marginal increase over the previous year.

2.2.16. Cropping intensity is a measure of the number of crops being grown on a piece of land for a given agricultural year. A time-series analysis of cropping intensity of the State reveals (Figure 2.5), a marginal increase during the period 2000-01 to 2013-14, but shows decline thereafter, with sharpest drop in 2015-16. However, the declining trend reversed from 2016-17 and has increased to 158 per cent in 2020-21. The cropping intensity in Odisha is higher than that of national average. For example, in 2016-17, cropping intensity in Odisha was 151 per cent against national average of 143.6 per cent. The policy interventions such as promoting multiple sowing, crop diversification programme in rice fallow areas, provision of better irrigation facilities and innovative measures to reduce risks due to natural disasters etc. have resulted in some success in increasing cropping intensity in the state.

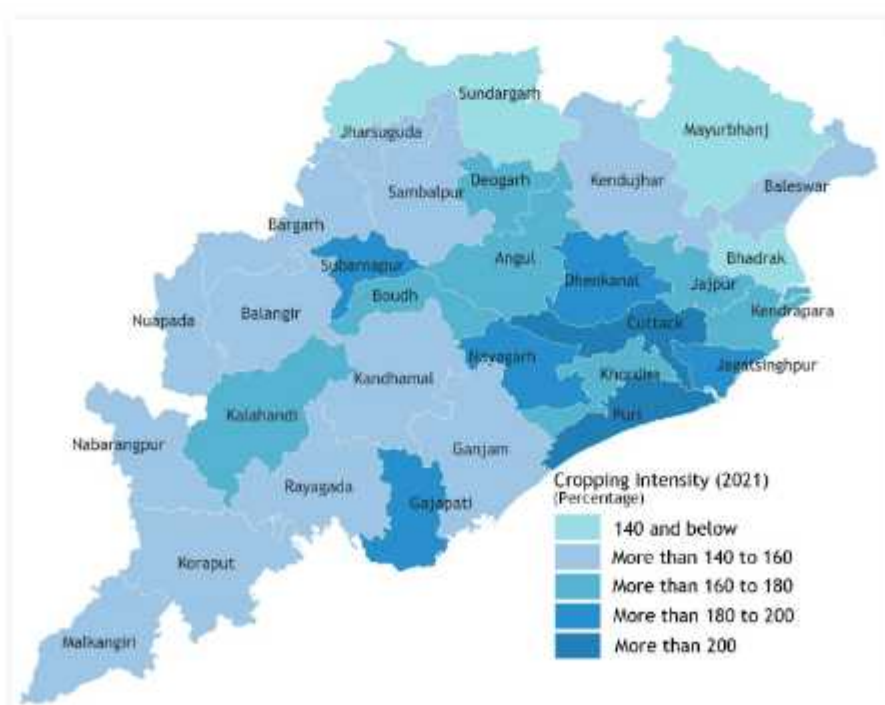
Fig 2.5 Trend of Cropping Intensity in Odisha (per cent)



Source: Directorate of Agriculture and Food Production, Odisha

2.2.17. Variability in cropping intensity has been noticed among districts. Figure 2.6 provides cropping intensity map by districts in 2020-21. Coastal districts like Cuttack, Puri, Khordha and Jagatsinghpur have higher cropping intensity which could be linked to better infrastructure. Further, with improvements in infrastructure, several inland districts also exhibit relatively high cropping intensity now. It is notable that despite high cropping intensity, production of crops in the coastal districts is now being severely affected by frequent cyclones and unseasonal rains during the harvesting period.

Fig 2.6 District wise Cropping Intensity for the year 2020-21 (per cent)



Source: Directorate of Agriculture & Food Production, Odisha

Land holding

2.2.18. According to Agriculture Census, one operational holding is defined as 'the whole land used for agricultural production and operated as single unit by one person alone or with others under the same management and having the same means of production such as labour force, machinery, animals and credit without regard to the title, legal form, size or location'. As per the last Agriculture Census 2015-16, approximately, 48.67 lakh operational holdings in Odisha were operating 46.19 lakh hectares of lands. Thus, the average size of operational land holding in the State is 0.95 ha whereas the same was 1.08 ha at the all-India level. The number of operational holdings of Odisha was about 3.22 per cent of that of India.

2.2.19. Operational land holdings are classified as marginal, small, semi-medium, medium, and large land holdings depending upon the area operated by a holder. Table 2.7 shows that about 93 per cent of operational holdings represent marginal and small holdings, with land size of less than 2 ha. However, their holdings constitute relatively a lower share (75 per cent) in the total operational area. Compared to previous estimates, number of operational holdings has been increasing over the years but the area under holdings has been declining substantially. The smallest size class land holding (marginal holdings with less than 1 hectare) is 75 per cent of the total operational holdings, but this marginal category operates only 45 per cent of total operating area.

Table 2.7 Distribution of land holding and operational area by size (in per cent)

Unit	Share in Total Holdings	Share in Total Operational Area
Large	0.08	1.87
Medium	1.05	6.15
Semi-Medium	5.89	17.06
Small	18.24	30.4
Marginal	74.74	44.53

Source: Agriculture Census 2015-16 (DES, Odisha)

2.2.20. Further, as families break into smaller units, the common piece of land continues to be fragmented, leading to rise in the number of marginal land holdings. Steps have been taken to address the problem of predominance of marginal and small farmers through improved strategy such as access to agricultural credit for enhancing land productivity and household income. But a lasting solution can only come through a reduction of the pressure of increasing number of people on limited amount of land by creating viable alternative means of livelihood.

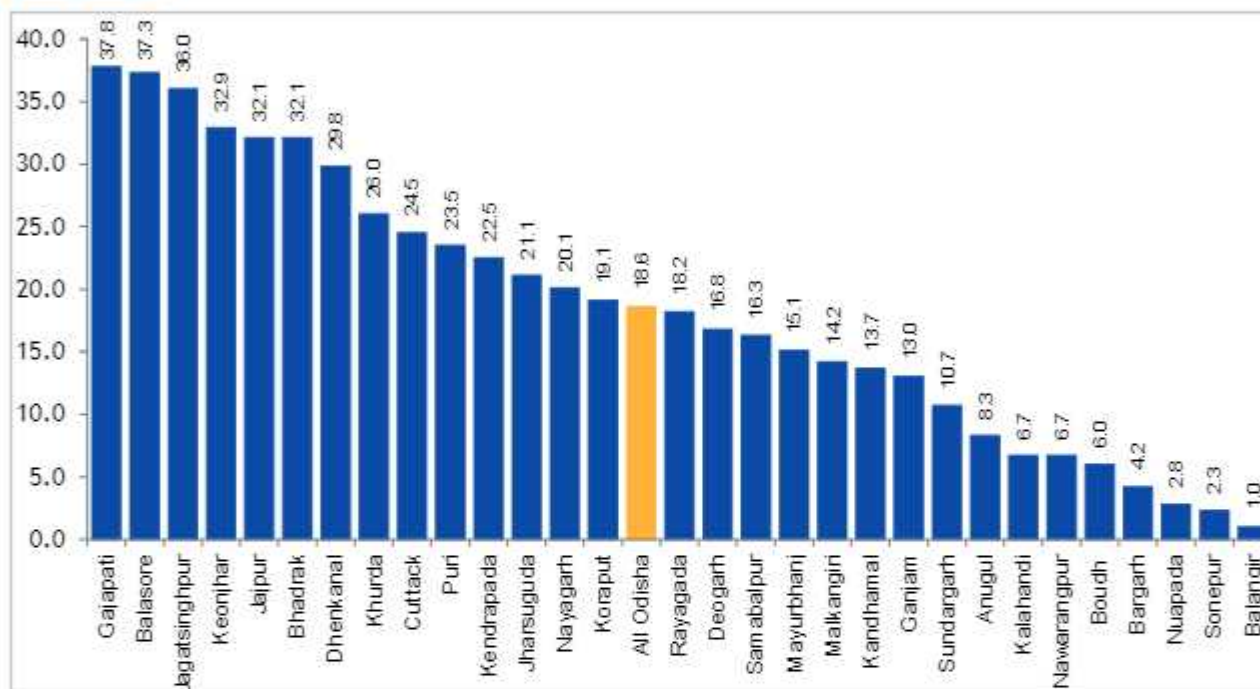
2.2.21. Leasing of land has been increasing in rural Odisha with the changes in the preference of professions. As per Agriculture Census 2015-16, about 9.05 lakh operational holdings were of "leased in" tenancy status, out of which 2.83 lakh holdings were wholly leased in and 6.22 lakh were partly leased in. About 9.14 lakh ha. operational area or about 19.8 per cent of total operational area were being operated in "leased in" tenancy. Out of the total number of leased in operational holdings, about 93.2 per cent are of marginal and small cultivators amounting to 78.5 per cent of the total leased in operational area.

**Increase
in land
leasing
in rural
Odisha**

2.2.22. The leased in tenancy ratio, i.e., the percentage of total operational holdings under leased in tenancy, in Odisha was 18.6 as per Agriculture Census 2015-16. Figure 2.7 shows the district-wise leased tenancy ratio across the state. In Gajapati, Balasore, Jagatsinghpur, Keonjhar and Bhadrak tenancy ratio was more than 30. Considering

relatively high tenancy ratio in the state, Government of Odisha has initiated a unique scheme BALARAM (Bhoomihina Agriculturist Loan and Resources Augmentation Model) in 2020 for financing sharecroppers by forming JLGs (Joint Liability Groups). This is a unique model among all states for welfare of the farmers cultivating others' land on lease basis.

Fig 2.7 District wise Leased in tenancy ratio (in per cent)

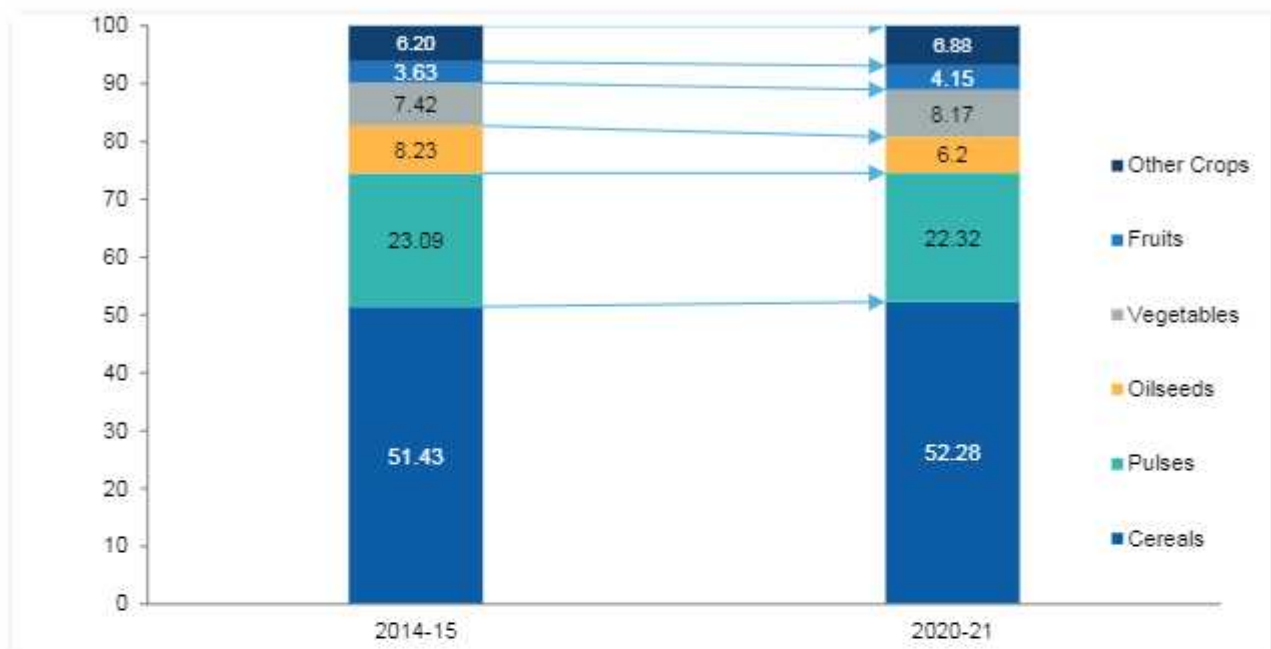


Source: Directorate of Economics and Statistics, Odisha (Agriculture Census 2015-16)

Cropping Pattern

Crop area

2.2.23. Cereals and pulses dominate the crop production in the State accounting for 52.28 per cent and 22.32 per cent of gross cropped area respectively in 2020-21 (Figure 2.8). However, there has been marginal shift towards high value crops in the State over the years. The share of area under vegetables has increased from 7.42 per cent in 2014-15 to 8.17 per cent in 2020-21 whereas the share of fruits has increased from 3.63 per cent to 4.15 per cent during the same period indicating increasing level of diversification towards high value crops. The area under pulses increased by 2 per cent during the last five years. The increasing share in area under 'other crops' like cotton, other fibres, spices and flowers also indicate diversification towards high value crops. In 2020-21, the area under spices and flowers increased to 3.09 per cent and 2.67 per cent respectively over the previous year.

Fig 2.8 Distribution of area under cereals, pulses, oilseeds, vegetables and fruits (in per cent)

Source: Directorate of Agriculture & Food Production, Directorate of Horticulture & Directorate of Economics & Statistics

2.2.24. The Government has been continuously taking initiatives for diversification of crops with emphasis on high value crops like cotton, pulses, oilseeds, vegetables, spices and fruits through various developmental schemes like National Food Security Mission (NFSM), Integrated Farming System (IFS), Intensive Agriculture Programme (IAP), Mission for Integrated Development for Horticulture (MIDH), Technology Mission on Cotton, Technology Mission on Sugarcane, and crop-oriented programme for pulses and oilseeds. These efforts have played an important role in the diversification of the crop sector in recent years. Further, as part of 5T initiatives of the Government, there has been a special focus on crop diversification by targeting fallow areas.

Capital

Seeds

2.2.25. It is pertinent to note that capital does not necessarily mean finance only. Capital has physical and financial dimension. Finance is the enabler to procure many inputs for the production process. The use of quality seeds plays a very important role in raising the production and productivity of Agriculture and Horticulture crops. Hence, due importance has been given in the State Agriculture Policy (SAMRUDHI) to increase the Seed Replacement Rate (SRR) and production of certified seeds. Quality seed multiplication programme is being organized through the agricultural farms of Agriculture and Farmers' Empowerment Department of Odisha, Odisha State Seeds Corporation (OSSC) and registered seed growers of OUAT and NRRI. 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 (OSSOPCA). Certified seeds are also produced by OSSC which is marketed through

a dealers' network. In recent years, the private players have started playing a significant role in seed production, processing and marketing. The progress in Seed Certification in terms of both Area Registered (in hectares) and Quantity Certified (in quintals) from 2016-17 to 2020-21 is presented in Table 2.8. There are 226 functional seed processing plants in the State at present with production capacity of about 666 tons per hour (Table 2.9). Due to various seed multiplication programmes of the Government the Seed Replacement Rate (SRR) in different crops has been increasing. During 2020-21 the SRR for Paddy was about 26 per cent and for the high value crops like maize, cotton, sunflower and groundnut the SRR was 60.46 per cent, 62.33 per cent, 21.74 per cent and 12.01 per cent respectively.

Table 2.8 Area registered (ha) for and quantity (quintal) produced of certified seeds during last five years in Odisha

Year	Crop	Kharif		Rabi		Total	
		Area	Quantity	Area	Quantity	Area	Quantity
2016-17	Paddy	18369.43	347021.24	2500.25	41312.36	20869.68	388333.60
	Non-paddy	5775.76	11490.76	7160.00	20056.91	12935.76	31547.67
	TOTAL	24145.19	358512.00	9660.25	61369.27	33805.44	419881.27
2017-18	Paddy	17078.59	340468.68	2887.40	43685.89	19965.99	384154.57
	Non-paddy	1287.82	3710.43	4192.89	13546.01	5480.71	17256.44
	TOTAL	18366.41	344179.11	7080.29	57231.90	25446.70	401411.01
2018-19	Paddy	21619.89	434259.15	3765.71	63047.90	25385.60	497307.05
	Non-paddy	2762.72	6189.92	5748.49	17647.52	8511.21	23837.44
	TOTAL	24382.61	440449.07	9514.20	80695.42	33896.81	521144.49
2019-20	Paddy	21508.89	460078.00	2333.66	45384.20	23842.55	505462.20
	Non-paddy	1489.30	2949.02	4434.15	20313.04	5923.45	23262.06
	TOTAL	22998.19	463027.02	6767.81	65697.24	29766.00	528724.26
2020-21	Paddy	22921.02	520385.80	1569.90	16048.00	24490.92	536433.80
	Non-paddy	1409.20	2562.66	5546.30	21815.21	6955.50	24377.87
	TOTAL	2030.22	522948.46	7116.20	37863.21	31446.42	560811.67
	GRAND TOTAL	151508.35	2877576.72	50738.10	399610.80	202246.45	3277187.56

Source: OSSOPCA

Table 2.9 Agency wise seed processing plants in Odisha

Agency	No of Seed Processing Plants (functional)	Capacity in TPH
Government	33	58.5
NSC	2	4
OSSC	66	253.1
OUAT	12	19.7
NRRI	1	2
PRIVATE	112	328.85
TOTAL	226	666.15

Source: OSSOPCA

2.2.26. Primary Agriculture Cooperative Societies (PACS) are grass root level organisations which are associated with the farmers of the State and more than 60 per cent of the crop finance of the State is made through PACS. PACS are also entrusted with responsibility for supply of quality and certified seeds to the farmers at the right time and at a subsidized rate. DBT (Direct Benefit Transfer) scheme has been implemented in distribution of seeds from the financial year 2016-17. During 2020-21, 175702.50 quintals of seeds have been supplied by the Odisha State Seeds Corporation (OSSC) to 2096 PACS and Large Area Multi- Purpose Societies (LAMPCS) for distribution to farmers of the state.

Use of Fertilizer and Pesticide

2.2.27. The contribution of fertilizers in raising agricultural production and yield cannot be overemphasized. In Odisha, fertilizer consumption is almost half at 67 kg/ha compared to the national level average of 133 kg/ha in 2019-20, implying ample scope for increasing fertilizer consumption in the state. The use of fertilizer increased to 76.21 kg/ha in 2020-21 from 58.91 kg/ha in 2014-15. The balanced use of fertilizer (NPK use ratio) is the key to better crop production and maintaining soil health. Against an ideal NPK use ratio of 4:2:1, the state's NPK use ratio was 4.7:2.4:1 in 2018-19, 4.9:2.2:1 in 2019-20, and 4.08:2.1:1 in 2020-21, which is close to the ideal NPK ratio.

Fig 2.9 Fertilizer consumption in Odisha (kg/ha)



Fig 2.10 Pesticide consumption in Odisha (gm/ha)



Source: Directorate of Agriculture and Food Production, Odisha

2.2.28. Pesticides protect crops from pests, crop diseases, and weeds, thereby helping to raise productivity. The use of pesticides in the State was 137 gmai/ha in 2014-15 and it has increased to 169 gmai/ha in 2020-21 (Figure 2.10). In addition to increased use of pesticides, there is also higher adoption of eco-friendly techniques like integrated pest management (IPM), biological control measures, seed treatment campaign to contain pest problems.

Farm Mechanization

2.2.29. Farm mechanization improves production and productivity and reduces dependency on agricultural labour and cost of production, and greatly increases farm worker productivity. The Government encourages the farmers to adopt improved farm machinery and equipment by providing financial assistance in the form of subsidies and facilitating agricultural credit. The State is implementing schemes for promoting use of agricultural implements, equipment and diesel pump sets through provision of subsidy. However, reliable supply of power and small size of land holdings are challenges for widespread adoption of farm mechanization in the state. The trend of supply/sale of farm equipment like tractors, power tillers, combined harvesters and rotavators is shown in Table 2.10.

Table 2.10 Farm implements supplied under farm mechanization (nos.)

Year	Tractor	Power Tiller	Combine Harvester (RH-axis)	Rotavator
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
2017-18	1964	9382	1207	7784
2018-19	1755	10712	949	9990
2019-20	1450	9061	934	3834
2020-21	1793	9599	1384	3965

Source: Directorate of Agriculture and Food Production, Odisha

Agricultural Credit

2.2.30. Credit has always been a crucial input for the small and marginal farmers; with increasingly capital intensive and technology driven nature of agriculture and its allied sectors, it has become an enabling factor even for others operating in all the subsectors of agriculture i.e., crop, livestock, fishery. The major component of the State agricultural credit is crop loan. It is the most important need of the farmer to increase and maintain productivity. Crop loan is a short-term advance that is given to the farmers by banks and co-operative societies and are used to purchase improved seeds, fertilizers etc. and adopt new technologies. Cheaper availability of crop loan is meant to give easy working capital to the farmers. The new scheme BALARAM of the State Govt is meant for financing crop loan to sharecroppers on short term basis.

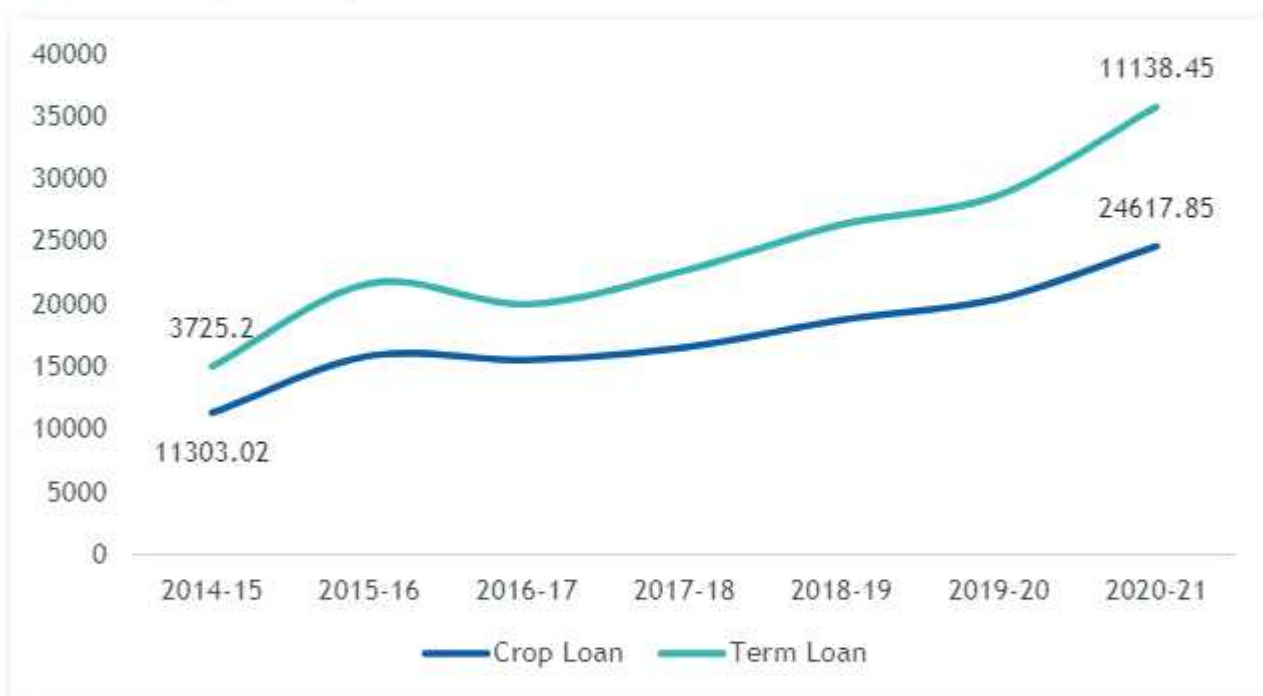
2.2.31. The term loan has a longer tenure than the crop loan. It is provided for larger agriculture-related expenditures like the purchase of machinery, pump-sets, upgrading farm facilities, installation of solar power motors etc. Term loans are provided to individual farmers, groups of farmers, SHGs, etc. engaged in other agri-related sectors like

animal husbandry, fishery, aquaculture, horticulture, plantation, silk farming, and floriculture etc. Storage facility, agri-infrastructure development also come under term loan. Mukhyamantri Krushi Udyog Yojana (MKUY) is a flagship scheme of the State Government through which term loans are being provided with normative subsidies for setting up commercial agriculture/ horticulture/ animal husbandry/ fisheries units.

2.2.32. Figure 2.11 shows the increasing trend of disbursement of crop loan and term loan during last seven years. This trend shows greater accessibility of farmers to agriculture credit through banks and cooperative societies. During 2014-15 and 2020-21, crop loan and term loan disbursement increased at a CAGR of 13.85 per cent and 20.03 per cent respectively. Considering the credit potential of the Agriculture sector, for the year 2021-22, the target of agricultural credit has been fixed at INR 46586.48 crore (crop loan-INR 32156.12 crore and term loan INR 14430.36 crore).

Increasing trend of disbursement of crop loan and term loans in the state

Fig 2.11 Disbursement of crop loan and term loan to farmers from 2014-15 to 2020-21 (INR crores)



Source: SLBC, Odisha

2.2.33. The credit delivery system in the State operates through a network of 36 commercial banks (4007 branches), 2 regional Rural Banks (985 branches), Odisha State Cooperative Bank (14 branches), 17 District Central Cooperative Banks (340 branches) and 3 small Finance Banks (118 branches). Cooperative banks have a higher share in supply of agricultural credit (45 per cent) compared to the national average of 12 per cent. It implies that there is scope for improving the performance of commercial banks in providing agricultural credit in Odisha.

Labour

2.2.34. According to the latest Periodic Labour Force Survey (PLFS) 2019-20, about 55 per cent of the total working population of rural Odisha are engaged in agriculture and allied sectors whereas the same is 61.5 per cent for rural India. Due to the frequent incidence of natural calamities and better employment opportunities in non-farm occupations, there has been a shift towards these, though agriculture still bears the burden of the majority of rural workers.

Infrastructure

Irrigation

2.2.35. Availability of adequate water in a timely manner is crucial for agriculture; vagaries of monsoon coupled with the changing cropping pattern and use of newer techniques to improve productivity requires input packages in which irrigation is a key component. As elsewhere, it has a vital role in the growth and development of agriculture in the state. However, the irrigation ratio, which is the gross irrigated area as a proportion of the gross cropped area, in Odisha has consistently remained below the all-India level. In 2014-15, the irrigation ratio in Odisha was just 38.4 compared to the all-India level of 48.6. Similar trends were also observed for individual crops. In the case of rice for example, area under irrigation in Odisha was 30.9 per cent compared to the national average of 60.6 per cent and ratios of almost 100 per cent in Punjab and Haryana, 98.5 per cent in Telangana and 96.7 per cent in Andhra Pradesh in 2016-17. The State has abundant groundwater resources and efforts are being made to develop these resources. During the year 2020-21, for kharif the total irrigation potential created (IPC) was 44.38 lakh hectares and for Rabi it was 20 lakh hectares. Table 2.11 presents the total IPC from different sources like major and medium, minor (flow and lift), mega lift and other sources (including water harvesting structures) during Kharif and Rabi for the last five years. It is notable that during Kharif, the new Mega Lift irrigation has also been exhibiting increasing trend along with major, medium, and minor irrigation from 2016-17 to 2020-21. Development of irrigation infrastructure is crucial to address the vulnerabilities posed by changes in rainfall patterns as discussed earlier in the chapter. In this context the Soura Jalanidhi scheme (solar irrigation) started in 2019 can play an important role by meeting the irrigation requirements especially in remote and drought prone areas of the State in a climate friendly way.

Soura Jalanidhi Scheme to ensure irrigation facilities in remote and drought prone areas



Box 2.2 Government initiatives towards irrigation**Completion of irrigation projects**

The Government is giving a thrust on completion of ongoing irrigation projects. Upper Indravati Lift Canal and Lower Indra Irrigation Project were commissioned and dedicated to the people of the State in 2021, providing irrigation to 25,275 hectares (approx.) in Kalahandi district and 29,900 hectares (approx) in Nuapada and Bolangir districts respectively.



Upper Indravati Lift canal



Lower Indra Irrigation Project

Instream Storage Structures

The Government has further embarked on a drive to set up Instream Storage Structures (ISS). In the 1st phase, thirty ISSs have been taken up during 2021-22. Sixteen more have been proposed for the next financial year.



ISS at Saptamatruka

Lift Canal Project with underground pipelines: Saving land, maintenance cost and elimination of seepage

In Western Odisha, Gangadhar Meher Lift Canal Project is in progress to provide irrigation to 31,350 hectares (approx) in drought prone blocks like Bijepur, Barpalli, Sohela of Bargarh & Dunguripalli block of Sonapur district, using Under Ground Pipelines (UGPL) and SCADA. Under Megalift Irrigation around INR 10,760 Cr. have been earmarked over a period of five years to provide irrigation to an additional 2.64 lakh hectares (approx) .



Gangadhar Meher Lift Canal Project (Underground pipeline for Canal Irrigation)

Table 2.11 Irrigation Potential Created (IPC) in Odisha (area in lakh hectares)

Sources	2016-17		2017-18		2018-19		2019-20		2020-21	
	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
Major and Medium	14.04	6.44	14.26	6.52	14.46	6.62	14.65	6.73	14.86	6.86
Minor (Flow)	6.63	0.86	7.04	0.9	7.18	0.91	7.3	0.92	7.36	0.93
Minor (Lift)	9.98	4.84	11.05	5.34	11.67	5.65	12.23	5.93	12.97	6.29
Mega Lift	0.7	0	0.54	0	0.95	0	1.25	0	1.55	0
Other Sources	7.52	6.54	7.59	5.93	7.64	5.92	7.64	5.93	7.64	5.93
Total	38.87	18.68	40.48	18.69	41.9	19.1	43.07	19.51	44.38	20

Source: Water Resource Department, Odisha and Directorate of Agriculture and Food Production, Odisha

2.2.36. Since there is no contribution of unutilised potential of irrigation to agricultural development, actual utilisation of irrigation potential is the main area of focus. Table 2.12 shows the trend in the actual irrigation potential utilised and its proportion in total irrigation potential created. From 2016-17 to 2020-21, the utilisation of irrigation in terms of area has been increasing; it has increased from 34.09 lakh hectares to 42.51 lakh hectares. During 2020-21, about 66 per cent of total irrigation potential created has been utilised which is comparatively low. However, there is an increasing trend in the utilization of irrigation potential.

Table 2.12 Irrigation Potential Utilized (IPU) in Odisha (area in lakh hectares)

Year	Kharif	Rabi	Total	Irrigation Potential Utilized as share of Irrigation Potential Created (per cent)
2016-17	22.83	11.26	34.09	59.24
2017-18	22.34	11.8	34.14	57.7
2018-19	24.45	11.45	35.9	58.85
2019-20	26.94	11.86	38.8	62
2020-21	28.57	13.94	42.51	66.04

Source: Directorate of Agriculture and Food Production, Odisha

Power Consumption

2.2.37. Share of agriculture in total power consumption has increased from 1.14 per cent in 2010-11 to 3.9 per cent in 2019-20 in Odisha (Table 2.13). The share in total power consumption by agriculture in 2018-19 stood at 2.9 per cent in Odisha compared to national average of 20.5 per cent, indicating the scope for increasing power consumption for higher levels of irrigation, farm mechanization etc to increase agricultural productivity. Between 2016-17 and 2019-20 power consumption in agriculture increased in absolute terms by more than 2 times, from 281.7 MU to 659.5 MU (Table 2.13). Power consumption in agriculture acts as a catalyst for other inputs, i.e., for pumping of bore wells and tube wells for irrigation, for farm mechanization etc.

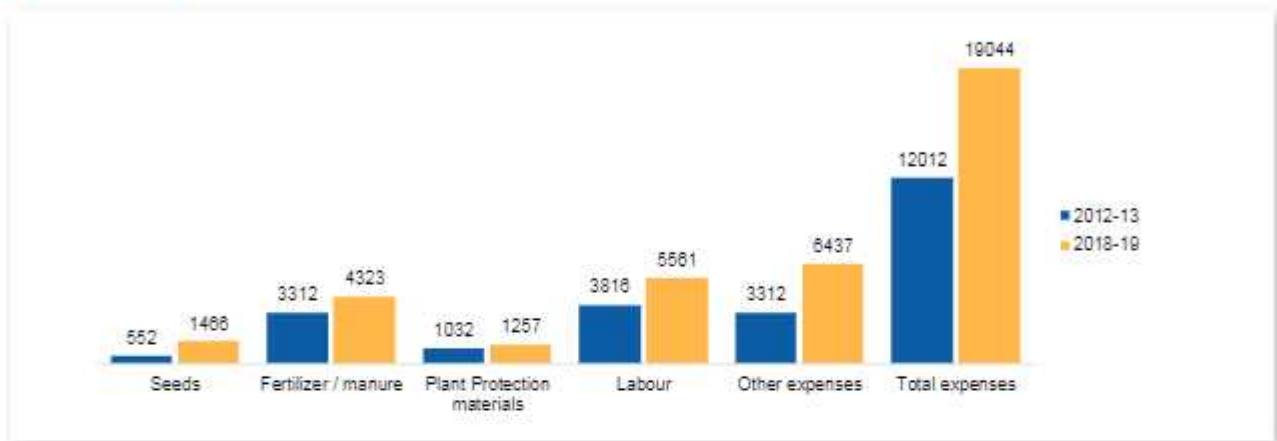
Table 2.13 Power consumption in the agriculture sector in Odisha

Year	Power consumption in agriculture	
	In MU	Share in total power consumption (per cent)
2010-11	149.98	1.14
2011-12	176.99	1.36
2012-13	154.65	1.14
2013-14	162.94	1.13
2014-15	185.10	1.20
2015-16	222.75	1.39
2016-17	281.74	1.71
2017-18	453.90	2.56
2018-19	559.15	2.90
2019-20	659.50	3.90

Source: Directorate of Agriculture and Food Production, Odisha

Expenses for crop production

2.2.38. Different Situation Assessment Surveys (SAS) have been conducted by National Statistical Office (NSO), Ministry of Statistics and Programme Implementation, Govt of India under National Sample Survey at certain intervals to assess the situation of the rural households involved in agricultural activities of the states as well as at the all-India level. The most recent survey (SAS-2019) has been conducted by NSO during 2019 for the reference period July 2018-June 2019. These surveys were undertaken in the rural sector for the whole country using multistage stratified sampling technique. The previous SAS was conducted during 2013 for the reference period July 2012-June 2013. The survey collected information on various inputs used to produce crops such as seeds, fertiliser, manure, plant protection materials, fuel, electricity, labour, irrigation etc. Figure 2.12 shows the average annual expenses of an agricultural household for different inputs of crop production. The annual average expenses of a crop producing household was about INR 19,044 during 2018-19 against INR 12,012 in 2012-13. The compound annual growth rate of the annual expenses was 8 per cent over the period from 2012-13 to 2018-19. The same is highest at about 17 per cent for seed, followed by 6.5 per cent for labour, 4.5 per cent for fertiliser, and 3.3 per cent for plant protection. Farm mechanisation has a significant share in other expenses as it is a vital part of inputs. As increasing expenses adversely impact net receipts from crop production, efforts are needed to control the growth of these expenses to raise the income of agricultural households.

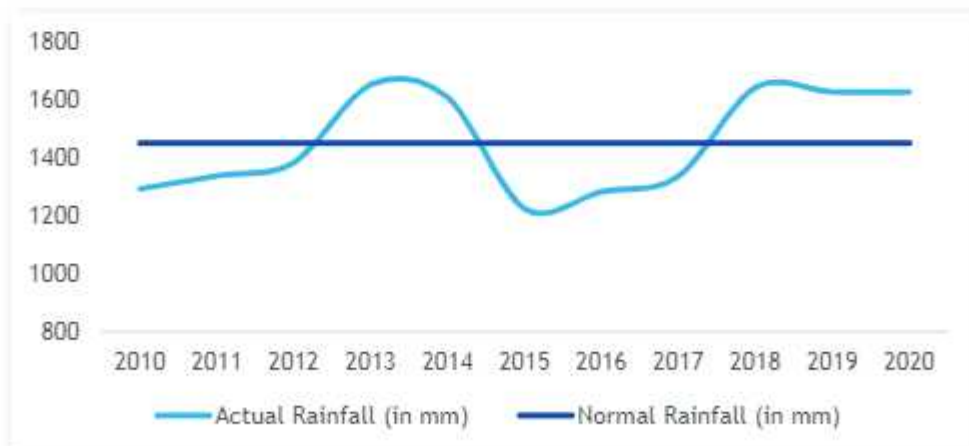
Fig 2.12 Average annual expenses of an agricultural household for crop production (in INR)

Source: SAS 2019, NSO, MoSPI, Govt of India

Rainfall and climatic Factors influencing Agricultural Production

Rainfall

2.2.39. Rainfall plays a vital role in agricultural production and productivity. The state's average annual rainfall from 1901 to 1950 was 1,503 mm which has now declined to 1,451 mm, with about 84 per cent of rainfall received between June and September. The 'normal' 120 days of monsoon rain has shrunk to 60–70 days, with frequent torrential rainfall of over 200–250 mm/day during the monsoon, which often results in floods. This change in climatic conditions has affected agricultural production especially rabi crops. During 2020, the State received 1627.38 mm of rainfall, which was 12.14 per cent surplus above the normal rainfall. Figure 2.13 shows the trend of actual rainfall of Odisha during the last decade and its deviation from the constant normal rainfall 1451.20 mm.

Fig 2.13 Trend of actual rainfall during last ten years (in mm)

Source: SRC, Odisha

2.2.40. Although Odisha is bestowed with an average annual rainfall which is sufficient for cultivation practices during Kharif, its erratic and uneven distribution results in frequent droughts and floods. Water scarcity during critical stages of crop growth hampers production and productivity affecting farmers' income. To supplement the water scarcity during critical junctures and particularly to provide life-saving irrigation during Kharif, construction of farm ponds with the slogan "Every willing Farmer to have a farm pond" has been conceptualised. Concurrently, the aim is also to popularise Integrated Farming Systems (IFS) which will smoothen a farmer's income and help counter frequent extreme weather events.

2.2.41. Basic objectives of the scheme 'Farm Pond' include - drought proofing, increasing cropping intensity, increasing productivity vis-à-vis production, Integrated Farming System to multiply farm profits, ground water recharge, mitigating adverse effect of water stress condition and creating employment.

Farm Pond Initiative addressing the water scarcity issue through drought proofing, increasing cropping intensity etc.




2.2.42. A total target of 5 lakh farm ponds in 5 years (2019-20 to 2023-24) has been fixed for this purpose and has been included under 5T initiatives. During 2019-20 and 2020-21, 9739 and 55,710 Farm Ponds were taken up respectively under MGNREGA. For 2021-22, there is a target for execution of 163802 Farm Ponds (including spillover of 2019-20 and 2020-21) with a proposed outlay of INR 1638 crore which would generate around 5.71 crore person days of employment. Out of this, 97,379 beneficiaries have so far been selected and financing of 62,551 farm ponds has been sanctioned. At the same time, 1,557 Farm Ponds have been grounded with an expenditure of INR 1.56 Crore generating 0.72 lakh person days of employment.

Climatic risk

2.2.43. Natural calamities like cyclone, drought, floods and pest attack are often witnessed in Odisha. Almost every year or in alternate year, one part or another of the State is hit by natural calamities of varying intensity and agricultural production is badly affected. For instance, cyclone Titli in 2018 damaged crops in 2.6 lakh hectares of land and killed 35000 domestic animals. The decline in agricultural growth in 2013-14 stemmed from the effects of Phailin, a severe cyclone, followed by flash floods in October 2013. Agricultural production and procurement, along with yield rates (paddy in particular) also fell sharply in 2013-14. A detailed table on the chronology of natural calamities affecting agricultural production and the economy of Odisha is given in the annexures. Timely interventions and introduction of different risk mitigation schemes of Government like PMFBY (Pradhan Mantri Fasal Bima Yojana) and other interest subvention and input subsidy schemes have reduced farmers' distress and the State has now become self-sufficient in food grains. However, the allocation of significant financial resources towards fighting natural disasters is affecting spending on other developmental priorities.

D. Government interventions in crop sub-sector

Table 2.14 Snapshot of Key Government Interventions in the Crop Sector

	<p>Post-Harvest Management</p> <p>Paddy Procurement: As of 2020-21 there are 3840 number of mandies and Paddy Procurement Centers (PPCs) operational for paddy procurement in Odisha and about 61.9 lakh MT paddy were procured in the State during Kharif Marketing Season (KMS) 2020-21.</p> <p>Non-Paddy Procurement: In 2020-21, the procured quantities of sunflowers and groundnuts have increased by 53.4 per cent and 9.7 per cent over 2019-20.</p> <p>Ragi Procurement: About 203887 Quintals of Ragi have been procured by 157 PACS/LAMPSCS during KMS 2020-21.</p> <p>Minimum Support Price (MSP): MSPs announced for all the mandated crops to protect the farmers from market volatility and against distress sell.</p>
	<p>Agricultural Marketing</p> <p>As of 2020-21, there are 66 Regulated Market Committees (RMCs) in thirty districts of Odisha to strengthen agricultural marketing mechanism.</p> <p>In 2020-21, there was about 432 per cent and 1081 per cent growth in online trading quantity of agricultural commodities and coconuts respectively with respect to the year 2019-20.</p> <p>Between 2015-16 and 2020-21, capacity of food grain godowns and fertiliser godowns increased by 32.5 per cent and 10.69 per cent respectively.</p>
	<p>Crop Production</p> <p>Government has undertaken several schemes to support farmers' and promote crop production in the state. They include provision of insurance for crops under Pradhan Mantri Fasal Bima Yojana (PMFBY), financial support for buying inputs under KALIA, providing extension services and various dedicated missions among others.</p>

Post-Harvest Management

2.2.44. Post-Harvest management is important as it reduces post-harvest losses and enhances farmers' income. Government has undertaken several initiatives to improve post-harvest management practices in the state.

2.2.45. Several post-harvest structures like mandis, regulated multi-commodities cold storage, cashew processing plants, small scale presentation unit, pack houses, low-cost onion structures, e-NAM mandies etc have been created and different post-harvest activities have been implemented in Odisha in the recent years. Some of the post-harvest management activities are discussed below.

Paddy Procurement

2.2.46. As of 2020-21 there were 3840 number of mandies and Paddy Procurement Centres (PPCs) operational for paddy procurement in Odisha. About 61.9 lakh MT paddy were procured in the State during Kharif Marketing Season (KMS) 2020-21. Table 2.13 presents the details of paddy procurement during KMS 2020-21. District wise paddy procurement during KMS 2020-21 is given in Annexures. In paddy procurement by districts, Bargarh topped the list, followed by Kalahandi and Ganjam.

Paddy Procurement Automation System (P-PAS) enabling transparent and faster payment of MSP to farmers

2.2.47. In order to make paddy procurement more transparent and to enable faster payment of MSP to farmers' bank accounts, several initiatives are being implemented by Odisha. Paddy Procurement Automation System (P-PAS) has been extended to all the paddy procuring PACS of the State since KMS 2016-17 and Direct Fund Transfer (DFT) has been implemented in the state. During last KMS 2020-21, INR 11,756.64 crore have been credited to the bank accounts of 11,92,060 farmers against Kharif procurement and INR 2695.83 crore have been credited to the bank accounts of 2,03,541 farmers against Rabi procurement through DFT/NEFT. Real-time Aadhaar authentications of farmers are being made at PPCs during purchase of paddy through iris scanner from KMS 2019-20.

Procurement of non-paddy crops

2.2.48. To ensure remunerative price for procurement of non-paddy crops such as green gram, black gram, red gram, groundnut and sunflower, the Price Support Scheme (PSS) has been introduced by Gol. Accordingly, Gol implemented Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) during 2018 to procure pulses, oilseeds, and copra at MSP notified by the Gol. In Odisha, PSS is being implemented for procurement of pulses and oilseeds since 2013-14. Further, an E-samridhi portal has been developed for the registration of farmers for procurement of pulses and oilseeds under PSS. For Rabi 2020-21 season Gol has approved to implement the PSS for purchase of a maximum quantity of 13,250 MT Green Gram (Moong), 700 MT Black Gram (Urad or Biri), 7775 MT Groundnut Pods (in-shell Groundnut) and 675 MT Sunflower seeds in Odisha to save farmers from exploitation by middlemen. The declared MSPs for the notified crops are given in the annexure. The trends in procurement of pulses and oilseeds are presented in Table 2.15. In 2020-21, quantities of sunflowers and groundnuts have increased by 53.4 per cent and 9.7 per cent over 2019-20. But procurement of green gram in 2020-21 was very low compared to 2019-20 which may be due to the limited production, high demand and lower value of MSP than the market price.

Table 2.15

Year wise procurement of pulses and oilseeds under PSS by MARKFED, Odisha (MT)

Items Procured	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Sunflower seeds	164.506	177.000	129.926	211.331	121.079	185.724
Groundnut pods		947.765	2418.783	130.760	2007.997	2203.107
Green gram (Mung)		1405.880	2668.788	6148.189	7011.381	862.350
Black gram (Biri)			4216.424	1103.000		
Red gram (Arhar)					97.180	
Total	164.506	2530.645	9433.921	7593.280	9237.637	3251.181

Source: RCS, Odisha; MARKFED, DA & FP

Ragi procurement

2.2.49. The Government of Odisha has launched a special programme for promotion of millets in tribal areas (Odisha Millet Mission) and has decided to include them in Public Distribution System (PDS), Integrated Child Development Scheme (ICDS) and Mid-day Meal (MDM) Schemes.

2.2.50. During the Kharif 2020-21 season, Tribal Development Cooperative Corporation of Odisha Limited (TDCCOL) procured Ragi from 14 identified districts namely: Bargarh, Balangir, Ganjam, Keonjhar, Sundergarh, Nabarangpur, Mayurbhanj, Malkangiri, Rayagada, Gajapati, Nuapada, Kalahandi, Kandhamal and Koraput districts. During KMS 2020-21, about 203887 quintals of Ragi have been procured by 157 PACS/LAMPCS.

2.2.51. Table 2.16 shows the trends in procurement of non-paddy crops like cotton, ragi, pulses and oilseeds and jute by different procurement agencies during 2017-18, 2018-19, 2019-20 and 2020-21.

Table 2.16

Procurement of non-paddy crops from 2017-18 to 2020-21 (quintal/ cotton in Bales)

Crop	2017-18	2018-19	2019-20	2020-21	Procuring Agency
Cotton	16.05 lakh	17.21 lakh	19.13 lakh	17.82 lakh	Cotton Corporation of India & Private Traders
Ragi		18000	94745	20388.7	TDDC Ltd.
Pulses & Oilseeds	94340	75932	92376	32512	NAFED though MARKFED
Jute	787	667	624	976.9	Jute Corporation of India

Source: DA & FP(O) and Cooperation Department, Odisha

Minimum Support Price (MSP)

2.2.52. Minimum Support Price ensures farmers the floor price and protects them against market volatility and any sharp fall in farm prices after harvest. They are announced by the Government of India at the beginning of the sowing season for certain crops based on the recommendations of the Commission for Agricultural Costs and Prices (CACP). Government announces minimum support prices (MSPs) for 22 mandated crops and Fair and Remunerative price (FRP) for sugarcane. MSPs for all mandated crops with a return of at least 50 per cent over all India weighted average cost of production for the season 2018-19 had also been announced, with an increase over the previous year. The MSPs declared for various agricultural commodities from 2015-16 to 2020-21 are given in the annexure.

E. Agricultural Marketing

Agricultural Marketing System

2.2.53. Agricultural marketing system of Odisha focuses more on promotion of private investment, contract farming and direct marketing with an accent on free play of market forces to augment the farm income. As of 2020-21, there are 66 Regulated Market Committees (RMCs) in thirty districts of Odisha to strengthen agricultural marketing mechanism and the list is provided in the annexure. They operate under Odisha State Agricultural Produce Marketing (OSAM) Board under the administrative control of Cooperation Department.

2.2.54. Out of 66 RMCs, 41 function as e-NAM (National Agriculture Market) mandies to create a unified national market for agricultural commodities across the country through

Increase in volume of trade of agricultural commodities through 41 e-NAMs in the state

e-auction process. During 2020-21 the volume of online trade on e-NAM platform was 10,09,413 quintals (for different agricultural commodities), and 38,14,928 number of coconuts. There was significant growth in online trading commodities in 2020-21 with respect to the year 2019-20.

2.2.55. Odisha has striven to reduce gap between requirement of godown space and availability for agriculture produce of farmers and fertiliser stock at PACS level to upgrade dry storages to warehouses. During last five years, food grain and fertiliser storage capacity has been increased by 32.5 per cent and 10.69 per cent respectively.

II. Government initiatives to promote crop production

2.2.56. Krushak Assistance for Livelihood and Income Augmentation (KALIA) - has been introduced in 2018 to provide financial support for cultivation to small and marginal farmers and livelihood support for landless agricultural households. KALIA scheme has been widely regarded as a game changer for the farmer community. Launched in 2019, Kalia Yojana covers 92 per cent of cultivators of the State and all needy landless cultivators. More than 56 lakh small and marginal farmers and landless agricultural households received assistance under the Scheme. KALIA scheme of the State Government is perhaps the first Universal Basic Income (UBI) scheme of the country.

Box 2.3.

Sentiment analysis of KALIA scheme using social media data

We have carried out a sentiment analysis of Kalia Yojana to understand how it is being received by the social media users of YouTube and Twitter.

The results of the analysis showed that the overall sentiments about the scheme, as expressed by the users on YouTube and Twitter are positive. There are about 2000 YouTube videos on KALIA scheme, which have garnered over 140 million views and there is a positive trend in terms of number of YouTube videos and views over the years. In addition, there is an increasing trend in 'likes to views' ratio of YouTube videos over the years. About 60 per cent of the comments in YouTube videos exhibit positive sentiment. The results reflect the positive engagement on KALIA scheme by social media users. This is despite the data limitations of extracting the social media data through public API.

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YouTube views*



*Cumulative count of views

About 4,000 likes and 5,500 retweets on Twitter*

*Based on data collected for 181 tweets from Twitter API between year 2019-2021



Over 140 million views on YouTube*

*Based on data collected for 1975 videos from YouTube API between year 2019 and 2021



Objective of analysis:

To analyze people's sentiments, attitudes and emotions towards KALIA or 'Krushak Assistance for Livelihood and Income Augmentation' scheme using social media data.

Key findings:

Over 140 million views on YouTube since 2018 and there is an increasing trend in 'likes to view' ratio of YouTube videos. It reflects a positive engagement of viewers towards the scheme. 60% of the YouTube comments exhibit positive sentiment.

*Comments and tweets with at least 20% English words were considered for sentiment analysis.

Sentiment analysis of YouTube comments



Emotion classification of YouTube comments



*Comments are subjected to more than one emotion classification. *Tweets and YouTube comments are subjected to more than one emotion classification. # of Tweets and YouTube data are limited by Twitter and YouTube data restriction. Search terms used are: #kaliaodisha; #kaliascheme; #kaliayojana; #kaliaodishachina

Word cloud of Tweets and YouTube comments



Data was collected on 26th December 2021 from YouTube and Twitter. A sentiment lexicon called SentiWordNet was used for the classification. * Posts and comments with at least 20% English words were considered. Public data extraction API limitations apply, therefore only a sample of the data can be scraped at any given time.

2.2.57. Safety net in terms of crop insurance is crucial for protecting farmers against loss of income due to crop damage in Odisha as the State is prone to several natural calamities. The State is implementing Pradhan Mantri Fasal Bima Yojana (PMFBY) as a flagship crop insurance programme since Kharif-2016, covering risks to crops from sowing to post harvest stage.

2.2.58. PMFBY covers 8 crops in Kharif and 9 crops in Rabi season. Farmers pay only 2 per cent premium in Kharif, 1.5 per cent premium in Rabi season (of scale of finance) for food grain and oil seed crops and 5 per cent premium for commercial crops. Insurance companies are selected as implementing agencies through a bidding process. All loanee-farmers and non-loanee farmers growing notified crop in the notified area are eligible for coverage under PMFBY. A new initiative, Bhulekh (computerized land records) has been integrated with PMFBY portal for smooth implementation. Achievements under PMFBY for the last three crop seasons is given in Table 2.17.

Table 2.17 Achievements under Pradhan Mantri Fasal Bima Yojna

Season	Claims settled (INR in crores)	Benefitted farmers
Kharif-2019	1099.16	9,72,765
Rabi 2019-20	98.93	43,117
Kharif-2020	550.24 (PE)	15,78,241 (PE)

Source: Registrar Co-operative Society, Odisha

2.2.59. Though sharecroppers constitute sizeable proportion of the farming community, due to lack of ownership over cultivated land often institutional finances for farm related activities are not extended to them. As a result, either they tend to invest less in farming activities leading to poor crop production or avail loan from private money lenders at a high rate of interest. Therefore, the Government of Odisha has launched a specific scheme BALARAM (Bhoomihina Agriculturist Loan and Resources Augmentation Model) in association with NABARD for financing sharecroppers during 2020.

2.2.60. The scheme envisages providing crop loan to sharecroppers in group mode (with 4-10 members) by forming Joint Liability Groups (JLGs). The target of BALARAM is to facilitate one lakh JLGs covering 5 lakhs sharecroppers. By the end of November 2021, about 22,000 JLGs have been formed and a loan amount of about INR 57 crores have been sanctioned to the sharecroppers under BALARAM.

2.2.61. Odisha has introduced a provision of interest free corpus fund for seeds to OSSC, OAIC, OSCDC during the year 2014-15 to ensure adequate availability of quality seeds and planting materials for farmers. Government has also introduced a provision of corpus funds of INR 100 crore during 2014-15 to State PSUs namely Odisha State Cooperative Marketing Federation Limited (MARKFED) and Odisha Agro Industries Corporation (OAIC) to assist farmers in purchasing fertilizers.

2.2.62. Odisha Watershed Development Mission (OWDM) was launched during the year 2000, as a dedicated agency with the mandate to plan, coordinate, streamline and supervise watershed implementation in a mission mode to prioritise the development of rainfed areas. OWDM has also been designated as the State Level Nodal Agency (SLNA) for implementation of the flagship programme. So far 7,721 micro watersheds have been created covering an area of 41.89 lakh hectares since inception.

2.2.63. One Gene Bank was established in the State in 2013-14 at State Seed Testing Laboratory, Bhubaneswar for preservation of germplasm of seeds. It has won recognition from Protection of Plant



Varieties Registration Authority (PPVRA) at national level for preserving 1069 paddy & 292 non-paddy 'Farmers' Varieties'.

2.2.64. Odisha Millets Mission (OMM) was launched in 2016-17 to provide nutritional security by encouraging millets production. Implementation of OMM was initiated in 7 districts in 30 blocks and it subsequently got extended to 84 blocks in 15 districts. During 2021, 52.8 thousand hectares have been covered by involving 1.15 lakh farmers under the programme. This initiative received accolades including the SKOCH Order-of-Merit Award at the national level and award for best Government initiative from Indian Institute of Food Processing Technology, Thanjavur in November 2018.

2.2.65. 'Ama Krushi' service was introduced in the State in 2018 to strengthen the extension system and to provide timely information to the farmers on agricultural crops, livestock, and fisheries. It is a free of cost, phone based two-way advisory service available in both Odia and Sambalpuri dialects. A Live Call Centre (LCC) service is in operation for farmers to ask their queries related to agriculture and allied services to experts via agents. Currently Ama Krushi services cover 40+ crops under its advisory with inbound query system and about 17 lakh farmers have been registered under the programme.

2.2.66. In order to recognise and promote innovative farmers in the State in the field of agriculture mechanisation, 'Mukhyamantri Abhinav Krushi Jantrapati Samman (MAKJS)' programme has been launched during 2018-19 in association with National Innovation Foundation-India (NIF). First Award Ceremony was organised in February 2019 and 11 innovators were felicitated at the State level and 90 innovative farmers were awarded at the district level. This initiative of the State Government has received the Partnership Award from NIF and SKOCH Governance Award for the year 2019.

2.2.67. A separate Agriculture Budget has been introduced since 2013-14, which led to more than 100 per cent increase in Agriculture budget outlay from INR 7,162 crore in 2013-14 to INR 20,714 crore in 2019-20.

**More than 100 per cent
increase in agriculture
budget outlay from 2013-14
to 2019-20**

2.2.68. Due to extensive data unification and verification exercises undertaken for preparation of the final beneficiary lists under KALIA, the State has been able to create an authentic database 'Krushak Odisha' of roughly 50 lakhs Small and Marginal Farmers and landless agricultural households. Further, the Department of Agriculture and Farmers' Empowerment (DA&FE), Government of Odisha has been entrusted with the task of creating a Unified Farmers' Database for the State as one of the activities outlined under the Hon'ble Chief Minister's vision of 5T – Technology, Teamwork, Transparency, Time and Transformation.

2.2.69. Odisha University of Agriculture and Technology (OUAT) has developed 65 new varieties of seeds that include 19 paddy seed varieties and 46 non-paddy varieties since 2000.

2.2.70. Jackfruit Mission is a new initiative to promote jackfruit cultivation, its processing and value addition. An expert resource and advisory committee will be constituted by the Government to create a resource and knowledge base to enhance cultivation and marketing of jackfruit.

2.2.71. A recent scheme-Farm Pond Plus has been conceptualized and under implementation pertaining to intensification, diversification and surplus generation from various farm-based livelihood (agriculture, horticulture, fisheries and livestock) activities to enhance productivity of farm ponds.

2.2.72. Directorate of Agriculture and Food Production is reorganised to strengthen the Agriculture Extension System of the state. Besides, at the Panchayat level, a fixed day visit of GP level extension personnel to GP headquarters every week has been introduced to facilitate interaction with farmers on diverse issues related to development of agriculture and allied sectors since 2019.

2.2.73. The first Agriculture Policy of 1996 has been revised twice in 2008 and 2013. This has been recently re-oriented to leverage focus on market linkages and is now known as the SAMRUDHI Agriculture Policy 2020.

2.2.74. Dedicated Agriculture Cabinet in 2016 for faster processes, sectoral growth and development has been formed. The Agriculture Department has been renamed as Department of Agriculture and Farmers' Empowerment in 2016. These steps are not mere symbolic exercises, but they rather depict the strategic orientation towards farmer centric development in the state.

2.2.75. Odisha Organic Farming Policy 2018 has been launched to promote organic farming in the State with an objective to cover 2 lakh hectares in 5 years.

Organic farming policy aims to cover 2 lakh hectares in 5 years

2.2.76. Odisha Farmer Producer Organisations (FPOs) Policy was launched during 2018, to support Farmer Producer Organisations (FPOs) in production, aggregation, storage, processing, distribution and marketing of agriculture and allied sector resources to promote sustainable development by generating large scale employment in rural and semi urban areas. Subsequently, Government of India has issued its FPO guidelines for formation and promotion of 10,000 FPOs at all India level and these guidelines are being incorporated into the existing State policy.

2.2.77. An MoU was signed in the month of February 2019 with NABKISAN Finance Limited and Directorate of Horticulture, Odisha for setting up a Credit Guarantee Fund (CGF) to provide collateral free loan facilities to Farmers' Producer Organizations (FPOs). This is the first Credit Guarantee Fund initiated by any State Government in the country in the agriculture sector. The scheme has been notified by the Government and operational guidelines have been issued during 2020.

2.2.78. A flagship scheme Mukhyamantri Krushi Udyog Yojana (MKUY) of State Government has been launched during 2018 to provide single window operation facilities for promotion of commercial agri-enterprises. Subsidies are being provided for setting up of commercial agriculture, horticulture, animal husbandry and fisheries units.

2.2.79. State Government has formed Agricultural Production Clusters (APC) in tribal regions of Odisha to double the farm income of one lakh women farmers belonging to small and marginal category. This would be achieved by formation of 650 producer groups and by building 30 APCs/producer companies in 40 backward blocks of 12 tribal dominated districts. Further, cultivation of high value crops in 20,000 hectares and grooming of 750 market-linked agri-entrepreneurs over a period of 4 years will be undertaken. One MoU was signed with Professional Assistance for Development Action (PRADAN), Odisha Livelihood Mission (OLM), and Bharat Rural Livelihood Foundation (BRLF) for implementation of the project in the state. The State received SKOCH Governance Award 2019 for implementation of the scheme.

Agricultural Production Clusters (APC) in tribal regions to boost women farmers income and groom agri-entrepreneurs

2.2.80. In recognition of the commendable efforts in water Conservation/Management, Koraput district of Odisha got the 2nd prize both in the categories of best district (East Zone) for ground water recharge and best district (East Zone) for rejuvenation/creation of water bodies respectively in February 2019.

2.2.81. To promote nutritious food through agro-forestry, a project was introduced under RKVY programme namely "Enabling smallholders in Odisha to produce and consume more nutritious food through Agro-forestry Systems". A Memorandum of Agreement was signed with World Agro-forestry Centre (ICRAF) in 2018 to mutually collaborate for this agro-forestry project. Under the programme, 38 nurseries, 1,422 hectares of plantations have been covered during 2018-19.

2.2.82. Coconut Development Board (CDB) is a part of centrally sponsored scheme MIDH associated with coconut plantation. The components aim at replanting and rejuvenation of old coconut gardens, and Coconut Palm Insurance Scheme have been approved for implementation in the State during 2020-21.

2.2.83. Kissan Credit Cards (KCC) scheme was introduced in the State through DCCBs and the PACS since 1998-99. The scheme aims at providing timely, adequate and hassle-free credit to the farmers based on their land holding, cropping pattern and scale of finance. Once the credit limits for farmers are sanctioned crop wise, it remains valid for 3 years unless modified/defaulted by the farmers. The KCC are now being converted into smart RuPay cards to provide farmers withdrawal facilities at the ATMs and PoS outlets of all the banks under the National Payment Corporation network. It is being extended to public sector banks, RRBs and private banks also. 4,17,3367 KCCs have been issued by the DCCBs/PACS as on 31.03.2021.



2.2.84. An innovative scheme Kalinga Kissan Gold Cards (KKGC) has been designed by the Odisha State Cooperative Bank and was introduced in 2001 for farmers (who are members of PACS) with a default free status for at least two years. Through KKGC, a farmer can avail facilities like lower interest educational loans and free personal accident insurance. At the end of 2019-20, KKGC were issued to 2,00,557 members and number of valid card holders as on 31.03.2020 was 1,16,817.

2.2.85. Swarozgar Credit Card aims at providing timely and instant credit - as working capital and block capital for self-employment and income generating activities targeting small artisans, handloom weavers, fishermen, self-employed persons, rickshaw owners and other micro entrepreneurs. During 2020-21, 446 Swarozgar Credit Card holders have been financed with INR 2.45 crore.

2.2.86. Quantum of total agricultural finance under seasonal agricultural operations (SAO) during 2020-21 was INR 15,189 crore provided to 34.40 lakh farmer members as against a target of INR 15500 crore. During Kharif 2021 season, the target was INR 9000 crore against which actual financing was INR 7,791.15 crore disbursed to 17.03 lakh farmer members as on 21 August 2021. The State Government has reduced the interest rate from 1 per cent to 0 per cent on crop loan finance up to INR 50,000 w.e.f. 01.04.2019.

**Total agricultural
finance of INR
15,189 crore
provided in 2020-21**

2.2.87. Interest Subvention Scheme of the State Government has been implemented to reduce the rate of interest on short term credit to farmers by NABARD and PACS from 7 per cent and 5 per cent to 4 per cent and 2 per cent respectively has been implemented. Combined with subsidised concessional rate for timely repayment and concessional interest rate provisions under KALIA scheme, promptly repaid loans up to INR 50,000 are interest-free, while for larger loans (max. INR 3 lakh) the interest rate is 2 per cent under timely repayment. During 2020-21, the State Government has provided INR 670 crore and INR 35 crores towards interest subvention for crop loans and agricultural term loans respectively.

2.2.88. Under the Central Sector Scheme of 'Financing Facility under Agri-Infrastructure Fund' INR 1,00,000 crore, Odisha has been allocated INR 2,500 crore for financing of agricultural infrastructure projects at farm-gate and the aggregation points (PACS, FPOs, Agri-Entrepreneurs etc.) from 2020-21. All loans under financing facility will have interest subvention of 3 per cent per annum up to a maximum limit of INR 2 crore. The funds will be credited to banks/financial institutions by Government of India. The banks/financial institutions will further provide the financing facilitation as loan to PACS, Marketing Co-operative Societies, Agri-Entrepreneurs, Start-ups, etc. Director Agriculture and Food Production, Odisha has been declared as the State Nodal Officer for the implementation of the scheme. The eligible State schemes and projects are being identified for convergence to avail benefit from both

schemes. By mid-December 2021, 678 beneficiaries from the State have registered in the AIF portal, out of which only 111 have been sanctioned financing at an estimated cost of around INR 58.70 crore against the target of INR 2,500 crore.

2.2.89. Odisha University of Agriculture and Technology, Bhubaneswar, contributes for the cause of agricultural development through triple mandates of academics, research and extension education activities in agriculture and allied areas through 8 Regional Research & Technology Transfer Stations, 4 Regional Research & Technology Transfer Substations, 7 Commodity Research Stations, 52 All India Coordinated Research Projects and several ad hoc projects. Technology transfer activities are done through a network of 31 Krishi Vigyan Kendras situated in 28 districts of the State and various extension projects operating at Bhubaneswar. A special brand, namely OUAT Kalinga was created for timely supply of good quality technological products at a fair price to the farmers and other stakeholders.



2.2.90. Government of Odisha has successfully organised Odisha Agri Conclave 2021 on 8th October 2021 by inviting prospective buyers from different countries, FPOs, Agri-entrepreneurs and farmers. The objective of the conclave was to establish tie-ups between farmers/farmer organizations and bulk procurers to enable marketing of agriculture & allied produce at remunerative prices and to bring out the issues impacting quality, variety, certifications and post-harvest interventions. The conclave was a successful platform to showcase the potential and varied, indigenous product range of the State to the world market and seek suggestions from corporate buyers in identifying areas for improvisation.

2.3. LIVESTOCK

I. Overview of livestock sector

2.3.1. Livestock plays a significant role in improving livelihood, enhancing farmers' income and fostering rural development in the country. Livestock rearing is an integral part of farming communities as it supplements the income of agricultural households. This has huge potential for generating self-employment in rural areas at the lowest possible investment. The ownership of livestock in the State is more evenly distributed, with landless labourers and marginal farmers owning majority of livestock.

The ownership of livestock sub sector reflects uniform distribution amongst farmers

2.3.2. For rural Odisha, the livestock sub-sector (animal husbandry) is the largest segment after the crop sub-sector. The activities under animal husbandry have been oriented towards improving health of the livestock, increasing production of milk, meat and eggs, and provision of bullock power for agricultural operations. In this regard, several schemes have been formulated in the State in pursuance with the national policies to improve the livestock production, fight protein hunger, and improve nutritional standards of the population and also provide technical support for the maintenance and improvement of livestock breeds. There are 541 veterinary hospitals/dispensaries, 314 Mobile Veterinary Units and 3,239 Livestock Aid Centres in the State that provide veterinary services.

II. Milk, Meat, and Egg production

Livestock Population

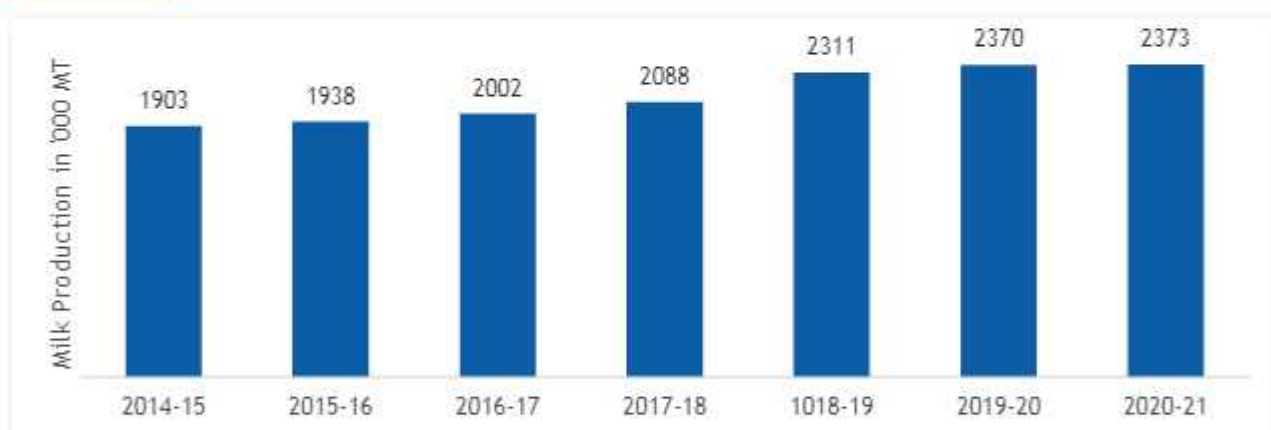
2.3.3. As per the Livestock Census 2019, Odisha has 3.39 per cent share of India's total livestock and 3.22 per cent of the total poultry. The State ranks 10th in Cattle & Poultry population and 9th in Goat and Sheep population in the

country. The total livestock population in the State stood at 182 lakhs, and that of poultry population was 274 lakhs. In Odisha, cattle form the largest share in the livestock population comprising 55 per cent of total population and accounting for 5.12 per cent of the total cattle population in the country. The percentage share of exotic/crossbred cattle in total cattle population has been on an increasing trend in the state. Crossbred female cattle population in the State rose by 36 per cent in 2019 Livestock Census compared to the 2012 Census. Share of crossbred cattle has reached 16 per cent of total cattle population. This indicates the rising share of more productive animals and the same is reflected in the rising milk production in the state.

Milk Production

2.3.4. The increasing trend of milk production in Odisha from 2014-15 to 2020-21 is depicted in Figure 2.14. It shows that milk production in Odisha has grown from 1903 thousand MT in 2014-15 to 2373 thousand MT in 2020-21, at a CAGR of 3.7 per cent. Cow milk constitutes around 87 per cent of total milk production while the share of buffalo milk is around 12 per cent. The per capita availability of milk in the state, has increased from 114 gm/day in 2012-13 to 138 gm/per day in 2020-21. This was much lower than the national average of 427 gm per person per day in 2020-21. There is a scope for increasing milk production and productivity through the adoption of good agricultural practices so as to meet nutritional requirements of the state.

Fig 2.14 Milk Production in Odisha from 2014-15 to 2020-21 (in 000, MT)

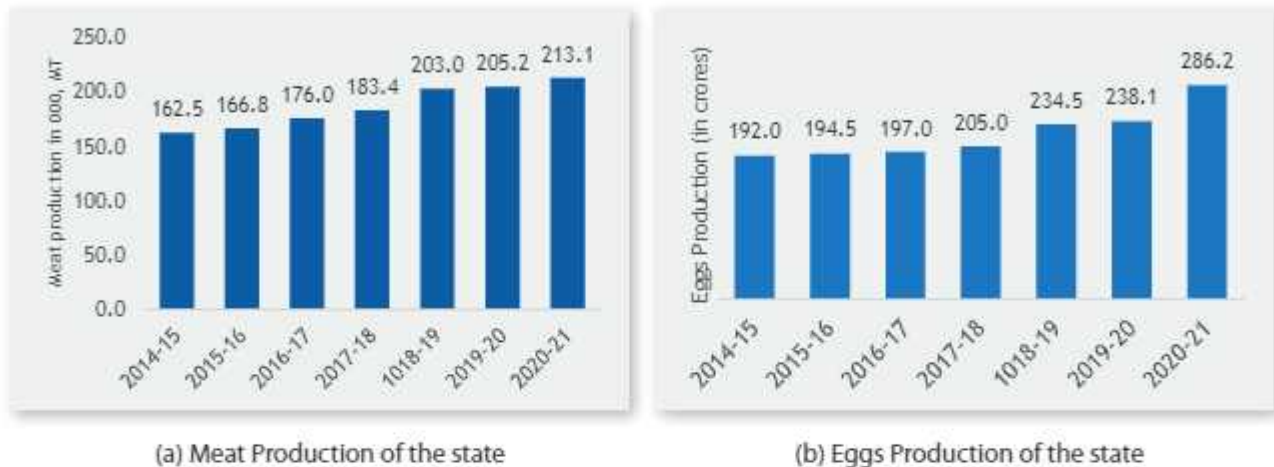


Source: F&ARD Department, Odisha

Meat and Poultry

2.3.5. Meat accounts for 52 per cent of total GVA of the Livestock sub-sector. Of the total meat produced 49 per cent is poultry meat and 51 per cent constitute goat/lamb meat. Per capita availability of meat increased from 3.66 kg/annum in 2014-15 to 4.41 kg/annum in 2020-21. There has been a consistent increase in meat production in the State from 2014-15 to 2020-21 as seen from Figure 2.15 (a).

2.3.6. Egg production in Odisha has increased significantly from 192 crore in 2014-15 to 286.16 crore in 2020-21 and the per capita availability of eggs has reached 54 per year in 2020-21 against national average of 91 eggs per year. Figure 2.15 (b) shows the trend in egg production of the State from 2014-15 to 2020-21.

Fig 2.15 Meat and Eggs Production from 2014-15 to 2020-21

Source: F&ARD Department, Odisha

2.3.7. In order to accelerate the egg production in the State, the State Government has introduced a range of schemes to encourage farmers and entrepreneurs to take up small scale, semi-commercial and commercial poultry layer units.

2.3.8. Odisha State Poultry Products Co-operative Marketing Federation Limited (OPOLFED), a Government of Odisha undertaking carries out various marketing activities related to poultry and meat through a network of 105 sales booths and chicken centres. These steps coupled with dedicated Government schemes and initiatives for the livestock sector would boost the growth of this sector.

III. Government initiatives for livestock

Crossbreeding programme

2.3.9. Crossbreeding programme was implemented in 2019-20 to create four lakh crossbred/graded female calves. The artificial insemination service was rendered through a network of 3324 departmental AI (Artificial Insemination) centres, 397 Gomitra centres, 910 OMFED centres and 285 centres operated by Bharatiya Agro Industries Foundation (BAIF). Six breeders' societies have been set up in Chilika, Kalahandi, Binjharpur, Malkangiri, Ganjam and Nuapada for breed improvement and conservation of all registered breeds of Odisha.

Key Government Initiatives of the subsector include crossbreeding, vaccination, and fodder development programmes

2.3.10. Frozen Semen Bank situated in Cuttack has produced 6.40 lakh semen straws during the year 2020-21 for artificial insemination.

Mobile Veterinary Unit (MVU)

2.3.11. The MVUs are operational in all 314 blocks and render services for 20 days in a month and organise village level animal health camps covering at least two villages per day. Doorstep veterinary services have been provided to livestock during the entire lockdown period.

Genetic Improvement of Bovine

2.3.12. The Odisha Bovine Breeding Policy 2015 is implemented in the State with a vision to promote Artificial Insemination (AI) and to provide breeding services to bovines for genetic improvement of cattle and buffalo. The Nationwide Artificial Insemination Programme (NAIP)-II was implemented in all the districts from 1st Sept 2020 to 31st July 2021 covering 15 lakh breedable bovines under organized breeding program without any interruption despite the pandemic. During 2020-21, 16.37 lakh artificial inseminations were conducted for cattle and buffalo.



Preventive Vaccination of Livestock

2.3.13. Under National Animal Disease Control program, Foot and Mouth Disease (FMD) vaccination has been taken up in mission mode to control FMD by the year 2025 in the state. During 2020-21, 90.65 lakh cattle and buffalo have been vaccinated. All the vaccinated animals have been ear tagged and data has been uploaded on the national portal (INAPH).

Mukhyamantri Krushi Udyog Yojana (MKUY)

2.3.14. MKUY was launched in 2018 to ensure efficient service delivery for agri-entrepreneurs by facilitating ease of doing agribusiness. APICOL is designated as the State Nodal Agency for implementing MKUY in collaboration with the line departments. Under MKUY, a beneficiary can apply online for minimum 10,000 bird capacity for layer farming, 4,000 bird capacity for broiler farming, 100 goats for a goat farm etc. Through this scheme, a general category farmer can avail subsidy up to 40 per cent, and women, and SC/ST farmers can avail subsidy up to 50 per cent subject to a maximum of INR 50 lakh for any project. Under this scheme, projects costing less than INR 10 lakh may be undertaken with self/own finance, but for projects costing more than INR 10 lakh a minimum of 10 per cent of the project has to be covered under bank loan.

Fodder Development activities

2.3.15. Under the State plan for 2020-21, 2,150.75 acres of land were brought under perennial fodder crop cultivation. During the period, 1,500 Crop Residue Enrichment units and 3,140 Azolla units have been established in the State exclusively for women livestock farmers. Further, under National Livestock Mission (NLM) 30 units of Silage were also grounded. During Kharif and Rabi seasons, 39,436 nos. of fodder mini kits were distributed to cover an area of 9,859 acres. Under MGNREGA, 510.5 acres of land is covered with perennial fodder in convergence with the PR Department.

2.4. FISHING AND AQUACULTURE

I. Overview of fishing sector

2.4.1. Odisha is endowed with rich potential of inland, brackish water and marine fishery resources. The State has 6.88 lakh ha of freshwater resources, 4.18 lakh ha of brackish water resources, and 480 km of coastline for fisheries development. By judiciously harnessing these resources the fish production from capture, culture and culture-based capture fisheries could be substantially augmented to cater to the domestic and export market. This would create employment and income-generating opportunities for the rural poor, women and youth, and contribute to achieve food and nutritional security in the state. The target of the Government is to double inland fish production and triple the present level of export.

II. Fish production

Fish, Crab and Shrimp Production

2.4.2. Development of hatchery and quality fry including fish spawning is critical for enhancing fish yield. The production of fish spawn and fry stood at 48,160 lakh and 11943 lakhs respectively in 2020-21 (Table 2.18), with over 72 per cent contribution of spawn and 74 per cent of fry from the private sector due to establishment of new circular hatcheries under various schemes of the Government (state plan and PMMSY) and periodical introduction of genetically improved quality brood stock.



Table 2.18

Spawn and Fry production in different Fish Farms from 2017-18 to 2020-21

Year	Government	OPDC	Private	Total
Spawn Production (in lakh)				
2017-18	3651	8376	26201	38228
2018-19	4062	7818	26996	38876
2019-20	3796	6468	24457	34721
2020-21	5220	8032	34908	48160
Fry Production (in lakh)				
2017-18	684	1767	5626	8077
2018-19	825	1852	6285	8962
2019-20	578	1518	7376	9472
2020-21	594	2502	8847	11943

Source: Directorate of Fisheries, Odisha

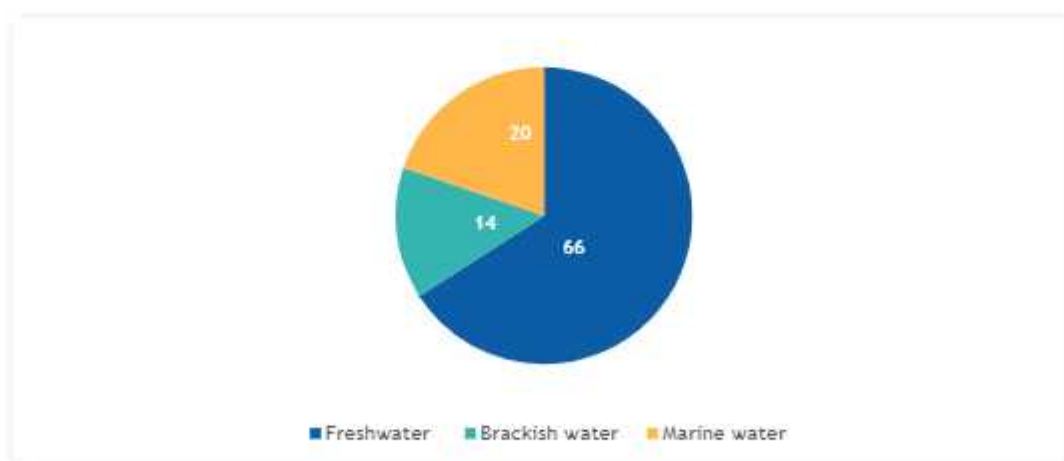
2.4.3. There has been significant rise in total fish production in Odisha in the last decade. Fish production more than doubled between 2013-14 and 2020-21 and registered a CAGR of 11.3 per cent between the same period. Table 2.19 shows the trend and growth of fish production in Odisha. The overall fish production increased from 816 thousand MT in 2019-20 to 873 thousand MT in 2020-21 registering a 6.9 per cent growth rate. Odisha has been among top fish consuming states with per capita annual consumption of 16.34 kg in 2020-21. The per-capita annual consumption of fish in the State increased from 11.06 kg in 2014-15 to 16.34 kg in 2020-21.

Table 2.19 Production of Fish in Odisha (000' MT) from 2013-14 to 2020-21

Year	Inland fish production		Marine fish	Total	Growth rate of fish production (per cent)	Per capita consumption of fish (Kg.) per year
	Fresh water	Brackish water				
2013-14	263.86	30.01	120.02	413.89	0.91	9.66
2014-15	300.96	35.37	133.21	469.54	13.45	11.06
2015-16	336.22	40.31	144.75	521.28	11.02	12.24
2016-17	393.73	61.27	153.10	608.10	16.66	13.49
2017-18	454.19	79.94	150.84	684.97	12.64	14.42
2018-19	506.61	94.03	158.32	758.96	10.80	15.38
2019-20	543.05	116.10	157.31	816.46	7.58	16.24
2020-21	574.98	125.52	172.47	872.97	6.92	16.34

Source: Directorate of Fisheries, Odisha

2.4.4. Out of the total fish production, freshwater fish constitutes 66 per cent, brackish water 14 per cent and marine fish 20 per cent for the year 2020-21 (Figure 2.16). Major source of freshwater fish is tanks/ponds followed by reservoirs, rivers/canals and swamps/lakes. The share of freshwater fish and brackish water fish have gradually increased over the last decade.

Fig 2.16 Share of different Fish Categories produced in Odisha during 2020-21 (per cent)

Source: Directorate of Fisheries, Odisha

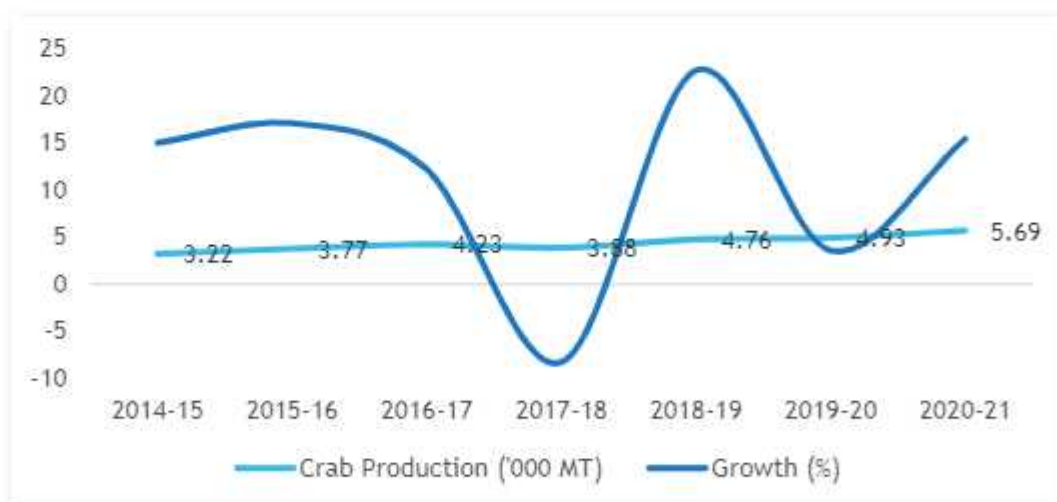
2.4.5. The major sources of freshwater fish consist of tanks/ponds followed by reservoirs, lakes/swamps/ bheels and rivers/canals. The freshwater fish production has significantly increased in the last eight financial year (between 2013-14 and 2020-21), growing at a CAGR of 11.9 per cent with the highest production in 2020-21 at 575 thousand MT. Table 2.20 shows the source-wise freshwater fish production and their share in Odisha from 2013-14 to 2020-21.

Table 2.20 Freshwater fish production from different sources ('000 MT) from 2013-14 to 2020-21

Year	Tanks /Ponds	Reservoirs	Lakes /Swamps/ Bheels	Rivers / Canals	Total
2013-14	230.43 (88)	18.57 (7)	2.41 (1)	10.51 (4)	261.9
2014-15	261.85 (87)	21.83 (7)	2.94 (1)	14.35 (5)	301.0
2015-16	289.67 (86)	22.76 (7)	4.25 (1)	19.54 (6)	336.2
2016-17	331.19 (84)	30.07 (8)	4.88 (1)	27.59 (7)	393.7
2017-18	393.61 (87)	33.99 (7)	4.93 (1)	21.66 (5)	454.2
2018-19	442.85 (87)	37.39 (7)	5.28 (1)	21.09 (4)	506.6
2019-20	472.84 (87)	41.73 (8)	6.14 (1)	22.34 (4)	543.1
2020-21	501.11 (87)	45.15 (8)	5.35 (1)	23.39 (4)	575.0

Figures in the parenthesis represents percentage share in total fish production
Source: Directorate of Fisheries, Odisha.

2.4.6. While the growth rate of crab production in Odisha has shown a varied trend in the last seven years, the overall crab production rose from 3.32 thousand MT in 2014-15 to 5.69 thousand MT in 2020-21 registering a CAGR of 10 per cent during this period. In 2020-21 the overall crab production grew by 15.4 per cent to 5.69 thousand MT, from 4.93 thousand MT in 2019-20. Figure 2.17 shows the trend and year wise growth rate of crab production in Odisha.

Fig 2.17 Crab production ('000 MT) and growth (per cent) in Odisha from 2014-15 to 2020-21

Source: Directorate of Fisheries, Odisha

2.4.7. Shrimp production increased at a CAGR of 24.21 per cent from 19.12 thousand MT in 2013-14 to 108.3 thousand MT in 2020-21. Table 2.21 shows the source wise shrimp production in Odisha from 2013-14 to 2020-21 along with their share. As can be seen, the share of shrimp production from brackish water was initially same

as Chilika lake in 2013-14. However, post 2013-14, the share of shrimp production from brackish water increased significantly, compared to Chilika lake followed by Estuaries, making brackish water the highest contributor to shrimp production.

Table 2.21 Source-wise Shrimp production in Odisha ('000 MT)

Year	Chilika Lake	Brackish water shrimp	Estuaries	Total Production
2013-14	4.93	12.61	1.58	19.12
2014-15	4.57	19.25	1.59	25.41
2015-16	5.46	23.34	1.11	29.91
2016-17	13.30	29.41	2.21	44.92
2017-18	4.71	58.11	2.35	65.17
2018-19	4.95	71.62	2.73	79.30
2019-20	4.14	90.16	6.04	100.34
2020-21(PE)	5.05	97.13	6.13	108.31

*Note: Figures in the parenthesis represents percentage share in total fish production
Source: Directorate of Fisheries, Odisha

Export and Import of Fishery Products

2.4.8. The Fishery subsector shows positive trends in exports and imports of marine/fish products as shown in Table 2.22. The total export of fish from all sources, i.e., marine fish, fresh water fish and brackish water fish increased at CAGR of 9.2 per cent between 2013-14 and 2020-21. Marine fish and brackish water fish constituted the majority share of total exports during this period. Due to COVID-19 pandemic, however, the growth rate of total export declined from 7.7 per cent in 2019-20 to 0.9 per cent in 2020-21. The import of freshwater fish also declined (by 7.0 per cent) from 46.27 thousand MT in 2019-20 to 43.01 thousand MT in 2020-21.

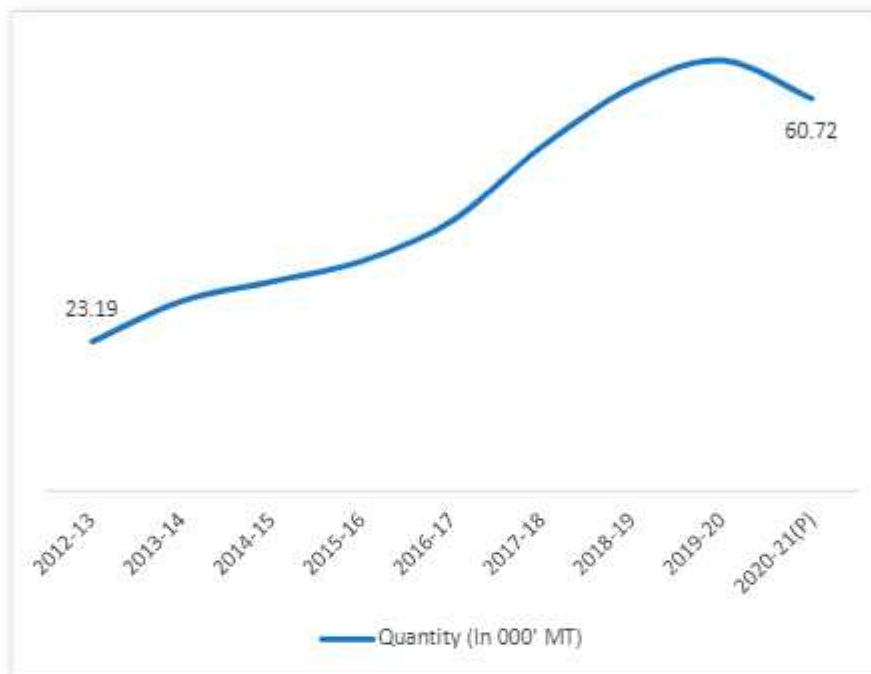
Table 2.22 Export and Import of Fish ('000 MT)

Year	Fish export to other States and Countries					Import of freshwater fish	Growth in imports (per cent)
	Marine fish	Fresh Water fish	Brackish Water fish	Total Export	Growth in exports (per cent)		
2013-14	56.65	25.94	19.92	102.50		26.50	
2014-15	65.69	24.56	25.37	115.62	12.8	38.12	43.8
2015-16	74.57	24.3	28.86	127.73	10.5	46.28	21.4
2016-17	78.91	25.35	47.41	151.67	18.7	35.16	-24.0
2017-18	87.47	43.6	61.75	192.82	27.1	40.74	15.9
2018-19	88.82	44.97	64.14	197.92	2.6	49.61	21.8
2019-20	84.95	50.38	77.85	213.18	7.7	46.27	-6.7
2020-21 (PE)	89.04	45.34	80.77	215.14	0.9	43.01	-7.0

Source: Directorate of Fisheries, Odisha

2.4.9. Exports of marine products to foreign countries increased at a CAGR of 10.9 per cent between 2013-14 and 2020-21. However, in 2020-21, the overall marine exports declined by 8.9 per cent over the previous year due to pandemic. The revival of marine exports would be essential for the future development of the Fishery sub-sector in the state.

Fig 2.18 Export of Marine Products to foreign countries ('000 MT)





Source: Marine Promotion & Export Development Agency (MPEDA), Kochi




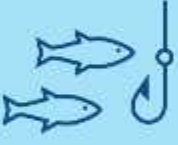
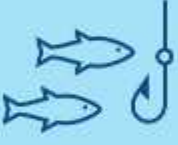


III. Government initiatives for fishery






Government initiatives under fishery section are given in Table 2.23.



Table 2.23

Government initiatives under fishery sector

	<p>Odisha Fishery Policy, 2015</p> <p>The latest issued Odisha Fishery Policy offers great opportunities for development of fresh water, brackish water and marine fisheries in the state. Under Inland sector, with technical support of "WorldFish", activities like Carp-Mola poly culture, GIFT tilapia demonstration, cage culture in reservoirs were undertaken. Use of GIS and spatial planning tools were also initiated.</p>
	<p>Matsya Pokhari Yojana, 2017-18</p> <p>This flagship scheme encourages farmers and entrepreneurs for freshwater fish production by creating new water bodies with a unit cost of INR 8.50 lakh/ha with an admissible subsidy 40 per cent for the General category and 50 per cent for SC/ ST/ Women categories of beneficiaries.</p>

	<p>Matsyajibi Unnayan Yojana</p> <p>The scheme awards meritorious children of the fishing community and provides financial assistance to fisherwomen SHGs. The children of fishermen who secure more than 50 per cent marks in HSC examination and continue higher study are provided with one time scholarship.</p>
	<p>Pradhan Mantri Surakhya Bima Yojana (PMSBY)</p> <p>Under this Centrally Sponsored Scheme, 11,50,000 fishermen of Odisha were provided insurance coverage during 2019-20. The premium amount of INR 12 per fisherman is shared by Government of India and the State Government on a ratio of 50:50. The scheme provides compensation of INR 2 lakh in case of death/full permanent disability and INR 1 lakh in case of partial permanent disability.</p>
	<p>Input to Women Self Help Groups for pisciculture in Gram Panchayat tanks</p> <p>This scheme aims to empower women by providing livelihood support through WSHGs. This is a convergence project involving Mission Shakti, Pachayati Raj and Drinking Water Department, Fisheries and Animal Resource Development Department. Under this programme, Gram Panchayat tanks are given on long term lease (3-5 years) to the identified WSHGs for pisciculture. The technical support and training are imparted to the members of WSHGs. Inputs for fish farming with project cost of INR 1.50 lakh per ha and a subsidy of 60 per cent or INR 90,000 per ha is provided to WSHGs under RKVY and State Plan schemes.</p>
	<p>Promotion of BIO-FLOC technology for intensive shrimp and fish farming</p> <p>This scheme aims to encourage farmers, entrepreneurs and unemployed youth into income generation through small scale bio-floc fish farming system. This promotes high yielding intensive fish farming in small area of bio-floc tanks size. There is provision of 40 per cent financial assistance for general category and 60 per cent for SC/ST/Women beneficiaries.</p>
	<p>Cage culture in Reservoirs</p> <p>Cage culture is an emerging technology for intensive production of fish and has a huge potential for increasing the fish production in the state. The Fisheries Department has already installed 322 rectangular cages in 26 reservoirs. Recently, F&ARD Department have approved guidelines for cage culture in reservoirs by private entrepreneurs in partnership with PFCS and SHGs. Under PMMSY scheme there is provision of assistance for taking up cage culture Over 49 entrepreneurs have been leased out water area in Hirakud Reservoir for taking up cage culture aqua culture</p>
	<p>Polylining Technology</p> <p>Polylining technology has been subsidized for boosting shrimp farming in Odisha. This scheme provides farmers with subsidy assistance for a minimum area of 0.1 Ha (1000 m²) and a maximum of 0.4 Ha (4000 m²) per beneficiary at 40 per cent of the unit cost (INR 2.10 Lakh for 1000 m² water area).</p>
	<p>Skill upgradation training</p> <p>The Fisheries Training Institute at Balugaon is equipped to impart 15 days skill up-gradation training. BWTC Paradeep provides 15 days training to brackish water farmers. Hostel facility is available in both the institutes. Farmers are trained on latest technologies in the fisheries sector.</p>

	<p>Livelihood Support to Marine Fishermen During Fishing Ban Period</p> <p>This State Scheme, launched in 2016-17, envisages providing livelihood support to the marine fishermen affected due to the fishing ban for seven months every year from 1st November to 31st May for conservation and protection of sea turtle. During 2020-21, 14178 beneficiaries of Kendrapara, Jagatsinghpur, Puri and Ganjam were covered under the scheme at INR 7500 per family.</p>
	<p>Saving-cum-Relief</p> <p>To ensure livelihood of traditional fishermen during fishing ban and lean period and to inculcate saving habit among the fishers, this Scheme aims at providing saving-cum-relief during lean period. The beneficiaries have to deposit INR 1500 in nine months. The central and State share amounting to INR 3000 (50:50 basis) along with beneficiary contribution of INR 1500 are to be disbursed to the enrolled fishers in 3 equal instalments during the lean/ban period of three months (from April to June every year). During 2020-21, 9781 beneficiaries have been covered under the scheme.</p>
	<p>Assistance for Fish Transport Infrastructure</p> <p>This scheme aims to ensure better price, reduce wastages and enhance income of fishermen by providing cold-chain solutions. This component under Blue Revolution (Now PMMSY) involves providing autorickshaw with ice box, motorcycle with ice box, refrigerated truck, and insulated vehicle to the fishermen on subsidy. The admissible subsidy as per the present funding pattern is 40 per cent for the General category and 60 per cent for SC/ST/Women beneficiaries.</p>
	<p>Pradhan Mantri Matsya Sampada Yojana- Group Accident Insurance Scheme (GAIS)</p> <p>Under this Centrally Sponsored scheme 11.5 lakh fishermen of Odisha have been provided insurance coverage during 2021-22. The scheme coverage is under two policy heads, Group Janata Personal Accident Policy (GJPA) which covers death and permanent total disability (PTD) and Special Contingency Policy (SCP) covering permanent partial disability (PPD). Insurance Premium of INR 72.44 per fisherman is shared by the Government of India and State Government on 60:40 basis. The scheme provides compensation of INR 5,00,000 in case of death /PTD and up to INR 2,50,000 for PPD, and of INR 25,000 for hospitalization.</p>
	<p>OMBADC Funded Schemes</p> <p>Under OMBADC fisheries activities are implemented for the economic upliftment of poor tribal communities in seven mineral-bearing districts, namely, all blocks in Keonjhar, Mayurbhanj, Sundargarh, Jharsuguda, Deogarh, two blocks in Jajpur and one block in Dhenkanal district.</p> <p>During 2020-21, Action Plan was prepared to take up three components namely excavation of new ponds/tanks along with input, bio-floc pisciculture, and input assistance to WSHG for pisciculture in GP tanks with a project cost of INR 8.11 crore against which INR 8.02 crore has been sanctioned by OMBADC. With the sanctioned amount there was a target to excavate 51.76 acre for new tanks along with first year input cost, providing input assistance to WSHGs for taking up pisciculture in 239.29 ha of GP tanks and developing 123 units of biofloc tanks with input assistance.</p>

	<p>Popularization of Fisheries Machineries/Equipment, 2020-21</p> <p>With an objective to sustainably increase the production and productivity of fish and shrimp as well as maximize the profit of farmers by preventing disease outbreaks, stabilizing biotic factors, achieving quick turn-around time between two crops, 50 per cent subsidy is being provided for procurement of fisheries machinery/implements. In 2020-21, 1676 beneficiaries were covered, and total expenditure incurred was INR 300 Lakh.</p>
	<p>Input assistance to farmers for taking up fish farming in farm ponds, 2021-22</p> <p>This State sector scheme aims to provide assistance for 3 sizes of farm ponds - 20 mt. X 20 mt., 15 mt. X 15 mt., and 10 mt. X 10 mt and input subsidy for feed/seed at 40 per cent to the General category and 60 per cent for SC/ST/Women category on the project cost of INR 1.50 lakh per ha water area. 10,000 farm ponds with water spread area of 400 ha. will be covered during the year 2021-22.</p>

2.5. FORESTRY AND LOGGING

I. Overview of Forestry sector

2.5.1. Forests have an important role in the economy of the state. Forestry activities not only contribute to the food security and livelihood of rural and tribal masses but also for its adjacent and urban areas. The role of this sub-sector is mainly linked to the management, conservation and protection of forest and wildlife resources, and to securing the environmental and ecological balance with creation of habitable and pollution free living spaces.

II. Production

Forest and Tree Cover

2.5.2. The State has a recorded forest area of 61,204.17 Sq. Kms. which is about 39.31 per cent of its geographical area. Out of the total recorded forest area 37443.60 sq km (61.18 per cent) is under the control of Forest, Environment & Climate Change Department, 23569.80 sq km (38.51 per cent) is under the control of Revenue & Disaster Management Department and 190.77 sq km (0.31 per cent) is under private control. The detailed component wise forest area for 2020-21 is presented in Table 2.24.

Table 2.24 Component wise recorded forest area in Odisha, 2020-21

Department	Component	Area (In sq. km.)	Share (per cent)
Forest, Environment & Climate Change Department	Reserve Forest	26873.66	43.91
	Proposed Reserve Forest	9175.15	14.99
	Protected Forest	1085.22	1.77
	Village Forest	287.51	0.47
	Un-Classified Forest	22.06	0.04
Revenue & Disaster Management Department	Demarcated Protected Forest	4179.59	6.83
	Un-Demarcated Protected Forest	4272.91	6.98
	Revenue Forest	15117.3	24.7
	Private Forest	190.77	0.31
Total		61204.17	100

Source: Forest & Environment Dept., Odisha

2.5.3. The Forest Survey of India (FSI), an organization of the Ministry of Environment, Forests & Climate Change, Government of India, undertakes an assessment of the Forest Cover of different States and Union Territories of the country by using remote sensing technology. As per the FSI assessment, in 2021 the total forest cover in Odisha was 52,156 sq. kms. (Table 2.25), which constitutes about 33.50 per cent of the geographical area of the state. It is encouraging to note that the forest cover in Odisha in 2021 increased by 537 sq. km. (1.04 per cent) over 2019 the assessment, which is the third highest increase in the country. According to this report Odisha has the 4th largest forest cover in the country.

Table 2.25 Forest cover in Odisha (Area in Sq. Km.)

Year	Geographical area	Very Dense Forest (VDF)	Moderately Dense Forest (MDF)	Open Forest	Total
2017-18	1,55,707	6,967	21,370	23,008	51,345
2018-19	1,55,707	6,970	21,552	23,097	51,619
2019-20	1,55,707	6,970	21,552	23,097	51,619
2020-21	1,55,707	7,213	20,995	23,948	52,156

Source: PCCF, Odisha and India State of Forest Report, 2019

Box 2.4. Total forest cover in Odisha as per India State of Forest Report (ISFR) 2021

As per India State of Forest Report (ISFR), 2021 in Odisha there is an increase in Total Forest Cover, Extent of Tree Outside Forest (TOF) and Mangrove Cover with respect to ISFR, 2019 as follows:

- Increase in total Forest Cover: 537 Sq. Km. (3rd in the Country); 1.04 per cent increase with respect to ISFR, 2019
- Increase in Extent of Trees Outside Forest: 1016 Sq Km. (4.33 per cent)
- Increase in Mangrove Cover: 8 Sq.KM (1st in the Country); 3.19 per cent increase with respect to ISFR, 2019.



Forest Area Diversion

2.5.4. As on March 31, 2021, about 58165.96 hectare of forest land has been diverted for developmental projects in various sectors. In 2019-20, 3008.27 ha of forest area was diverted for 22 projects while in 2020-21 about 1783.07 ha of forest land was diverted for 28 developmental projects. As shown in Table 2.26, the largest share of total forest land was diverted for mining related development activities, accounting to approximately 50 per cent of the total diverted land followed by irrigation related activities, accounting to approximately 18.31 per cent.

Table 2.26 Sector wise diversion of Forest Area as on March 31, 2021

Sector	No. of Proposals	Forest Area diverted (ha.)	Share of forest area diverted (per cent)
Irrigation	84	10,652.06	18.31
Industry	34	4,438.52	7.63
Mining	188	28,957.19	49.78
Energy	8	159.45	0.27
Road and Bridges	53	1,395.16	2.40
Railway	23	2,745.93	4.72
Defense	4	3,865.25	6.65
Human Habitation	5	366.46	0.63
Transmission	72	4,374.7	7.52
Others	52	1,211.24	2.08
Total	523	58,165.96	100

Source: Forest, Environment & Climate Change Department, Odisha

2.5.5. Ministry of Environment, Forest & Climate Change (MoEFCC) of Government of India has accorded permission for exploratory drilling of minerals in forest land under section 2 of Forest (Conservation) Act, 1980. As on 31.03.2021, permission has been accorded for exploratory drilling of different minerals for 20 nos. of Project involving 108.36 ha of forest land. As per Section 3(2) of Forest Rights Act, 2006, the Divisional Forest Officers are competent to grant permission for diversion of forest land up to 1.0 ha in each case which involves felling of trees not exceeding 75 per hectare for small public utility projects of Government Departments under thirteen categories as envisaged u/s 3 (2) of Forest Rights Act, 2006. As on 31.03.2021, about 971.970 ha of forest land have been diverted under the above Act for 1850 nos. of different developmental projects as shown in Table 2.27.

Table 2.27

Diversion of Forest Land under Section 3(2) of Forest Rights Act, 2006 (as on March 31, 2021)

Sector	No. of Proposals	Forest Area diverted (ha.)
Anganwadi	19	0.86
Transmission Line	613	314.25
Water Harvesting Structure	39	11.47
Tank & other minor water bodies	30	12.62
Drinking water supply & water pipeline	178	44.44
Irrigation	59	20.01
Road	636	437.91
School	118	67.52
Community Centre	79	22.59
Vocational Training Centre	27	18.18
Hospital	14	4.22
Telephone Line	13	2.11
Non-Conventional Energy Source	5	4.04
Others	20	11.74
TOTAL	1850	971.97

Source: Forest, Environment & Climate Change Department, Odisha

2.5.6. MoEFCC has authorized the State Government to grant General Approval under Section 2 of Forest (Conservation) Act, 1980 for diversion of forest land up to 5.00 ha. in each case (In two-laning of roads the area is not limited to 5.00 ha.) for creation of critical public utility infrastructure by Government Departments and which involves felling of trees not exceeding 50 per hectare in Left Wing Extremism (LWE) affected districts in 15 categories. As on 31.03.2021, about 82.799 ha. of forest land has been diverted under the above Act for 20 developmental projects across various sectors, the details of which are given as under (Table 2.28).

Table 2.28

Diversion of Forest land under General Approval by State Government as on 31.03.2021

Name of the Sector	No. of Proposals	Forest Area Diverted (ha.)
Road	7	53.54
Stone Quarry	1	2.99
Police Establishment	4	3.97
Drinking Water Supply	4	6.24
Power Sub-Station	1	2.83
Irrigation	1	4.8
Transmission Line	1	4.26
School	1	4.16
TOTAL	20	82.79

Source: Forest, Environment & Climate Change Department, Odisha

Afforestation Programme

2.5.7. To combat the degradation of forest area a series of afforestation programmes are being implemented in the state. As on 31.03.2021, 1,07,323 ha of land has been afforested, out of which, 12,486 ha was afforested under artificial regeneration (AR) plantation and 94,837 ha under assisted natural regeneration (ANR) with planting in gaps. Further, 4,165 running kilometres (RKM) of avenue plantation has been achieved. Other afforestation activities included planting of 3.92 crore seedlings, distribution of 4.66 crore seedlings, and plantation of 3.78 lakh saplings in the urban/ peri-urban areas of the state. Overall, the total seedlings planted and distributed under different afforestation schemes during 2020-21 as on 31st March 2021 stood at 8.58 crore. The achievements of afforestation programmes are presented in Table 2.29 below.

Table 2.29 Achievement of different Afforestation Programmes

Name of the Programme	Area covered in ha/ RKM					
	2019-20			2020-21		
	AR	ANR	Avenue in RKM	AR	ANR	Avenue in RKM
Economic Plantation	65			605	460	
Compensatory Afforestation	2000	19700		1500	39900	
National Afforestation Programme (NAP) through FDA's	293	2598		720	5550	
Odisha Forestry Sector Development Project (OFSDP)	1678	8486		1442	10416	
Industrial Plantation						
National Bamboo Mission (NBM)	52.63			405.63		
MGNREGS and other schemes	790	6498	3280	3268	25347	4061
Avenue Plantation in Running Kilometer (RKM)			3558			4165

Source: Principal Chief Conservator of Forests (PCCF), Odisha

Medicinal Plants Knowledge Centre at Patrapada

2.5.8. To enhance knowledge about medicinal plant species, a Medicinal Plant Knowledge Centre at Patrapada (Bhubaneswar) has been developed. So far 314 species of medicinal plants have been planted in 314 plots (a separate plot for each plant species).







Ekamravan at Bindusagar

2.5.9. Ekamravan with a garden of medicinal plants at Bindusagar, Bhubaneswar has been developed under the Ekamravan Medicinal Plant Garden Society since 2009-10. The objective for establishing this garden is not only to set up a site of tranquillity and harmony in a religious ambience but also to create awareness on traditional herbal medicines among urbanites. It is an example of quality work by local stone carvers and stone masons drawing inspiration from ancient structures.

III. Government initiatives for forestry

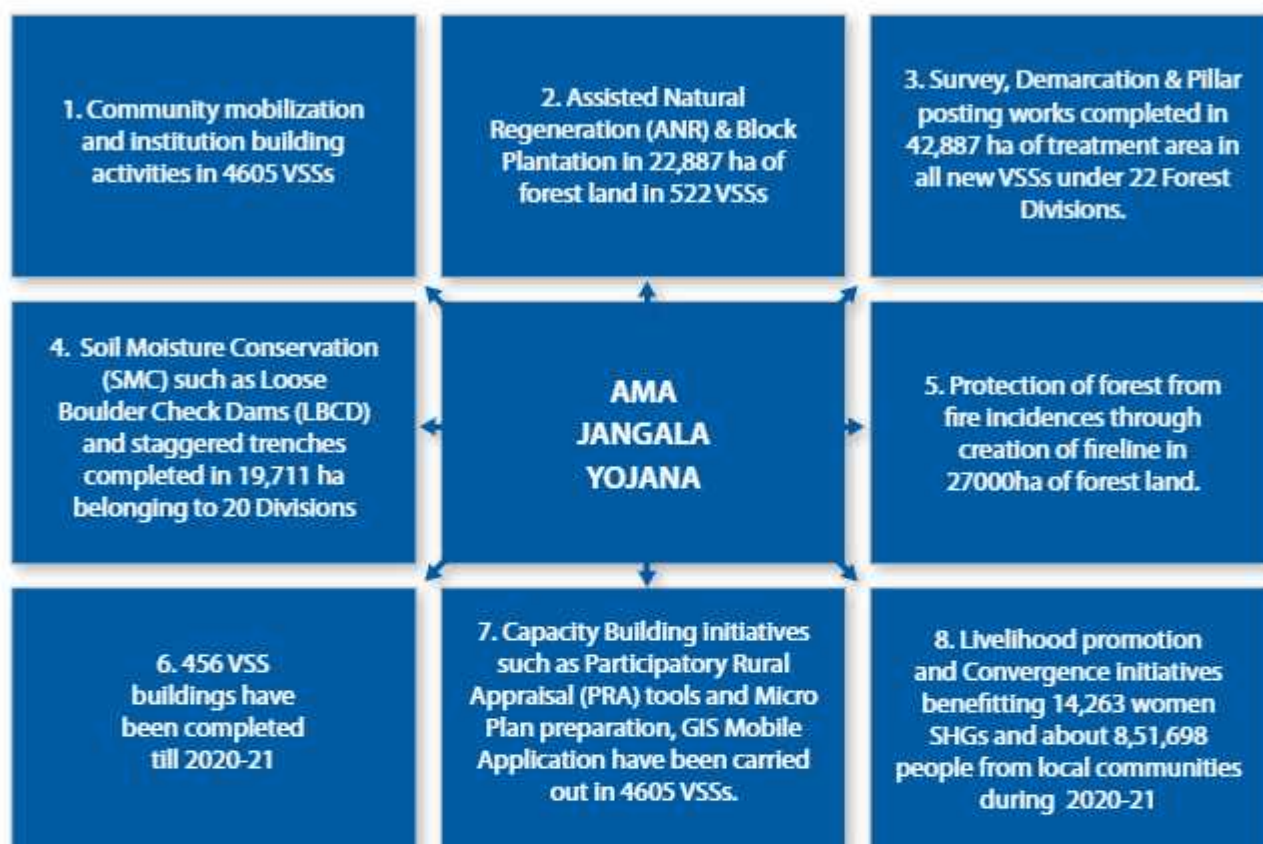
2.5.10. A snapshot of Government initiatives under forestry is given in Table 2.30.

Table 2.30 Snapshot of Government initiatives in forestry

	<p>Green Mahanadi Initiative</p> <p>A mission to protect and conserve the perennial flow of Mahanadi launched in 2018-19 for a period of five years. It involves creation of green belt of 1km width on both sides of Mahanadi, Tel and IB on all available and suitable forest land, revenue forest land, DLC area and private land through plantations. This Mission has been extended to Brahmani, Baitarani, Rushikulya and Vanshadhara and their tributaries and distributaries. In 2020-21, out of the budget provision of INR 3100 lakh, INR 3,076.94 lakh has been utilized up to 31st March 2021.</p>
	<p>Ama Jangala Yojana (AJY)</p> <p>AJY is a flagship program of the Government of Odisha being implemented through Odisha Forestry Sector Development Society (OFSDS) with the objective of promoting participatory and sustainable forest management and alternative livelihoods for the forest-fringe communities in the state. The investment in AJY and Joint Forest Management (JFM) has led to net increase of dense forest area by 243 sq kms during the last two years</p>
	<p>Forest Protection and Management</p> <p>Numerous Forest Protection Units, Vana Surakshya Samitis (VSS), Eco-development Committees (EDC) are being set up and monitored with the participation of local people for forest protection. There are about 5034 forest protection units in the State for protection of forest and wildlife.</p>
	<p>Forest Fire Prevention under CAMPA</p> <p>Recognizing the high incidence of forest fires in the state, various measures have been initiated such as deployment of 216 firefighting squads in 37 forest divisions, and 2270 rural unemployed youth with a provision of 282 vehicle for protection duty through the active participation of Forest, Environment & Climate Change Department staff and local forest fringe villagers to combat it.</p>
	<p>Compensatory Afforestation Fund Management and Planning Authority (CAMPA)</p> <p>CAMPA is fulfilling its purpose of conservation, protection, regeneration and management of existing natural forests, wildlife and their habitats and raising Site-Specific Compensatory Afforestation, Penal Compensatory Afforestation through its operations in the state. The CAMPA Annual Plan of Operation 2020-21 with financial outlay of INR 803.65 crore aims to protect and regenerate bamboo forest, increase plantation, maintenance of forest road, management of wildlife in protected areas among others.</p>
	<p>Wildlife Organization</p> <p>In the interest of minimizing man-animal conflicts, the Odisha Wildlife Organization, has implemented various initiatives for protection, conservation and management of wildlife and their habitat within and outside the protected areas of the state.</p>

Ama Jangala Yojana

2.5.11. Following activities have been carried out under this scheme between 2016-17 and 2021-22.



2.5.12. The investment in Ama Jungle Yojana (AJY) and Joint Forest Management (JFM) has led to net increase of dense forest area by 243 sq kms during the last two years. As per India State of Forest Report (ISFR)-2021, Odisha also moved to first position in the rate of increase in mangrove forest, and to third position in Forest-rich Tiger Reserve.

Odisha Forestry Sector Development Project (OFSDP), Phase-II

2.5.13. Odisha Forestry Sector Development Project, Phase-II is being funded by Japan International Cooperation Agency (JICA) and is being executed through Odisha Forestry Sector Development Society. The objective of the project is to promote sustainable forest management through community participation and implementation and promotion of sustainable livelihood improvement through inter-sectorial convergence. The project implementation period is 10 years from 2017-18 to 2026-27. The project has the mandate to organize 1200 VSSs during the project period. Out of this target, 355 VSSs in Batch-I and 422 VSSs in Batch-II have been formed. 281 VSSs in Batch-III and 142 VSSs in Batch-IV are yet to be formed. The following activities have been undertaken in OFSDP-II in the year 2020-21:

- Survey, demarcation and posting of pillars across the area assigned to VSS.
- Selection of seedlings, raising of nursery and plantation of 12.17 lakh seedlings in 1833 ha.
- Drainage Line Treatment of the micro catchment area was taken up in 403 VSSs to the tune of 753.8 ha.
- Establishment of Six Hi-tech Nurseries which can raise about 2.2 lakh poly-pot seedlings and 2.2 lakh Hyco-pot seedlings every year.
- Under livelihood component, the creation and establishment of 3 Sal leaf Product Clusters is under progress.
- Construction of 721 VSS cum IGA Facilitation Centres for community development

Wildlife Organization

2.5.14. The State Wildlife Organization, created in 1974, is committed to protection, conservation and management of wildlife and their habitat within and outside the protected areas of the state. Initiatives of the Wildlife organization are given in the following info-graph.

Conservation of Wildlife	Protection of Wildlife	Habitat Development
<ul style="list-style-type: none"> • Nineteen wildlife sanctuaries, one National Park, one proposed National Park, three elephant reserves, two tiger reserves, one proposed tiger reserve and 14 identified elephant corridors for addressing in-situ conservation of wildlife • Eleven zoos for ex-situ conservation, the State has proposed 15 eco-sensitive zones for declaration as per direction of Government of India around these protected areas. Drawing people's participation, 539 Eco-development Committees (EDC) have been formed covering an area of 43455.32 ha of protected area. 	<ul style="list-style-type: none"> • In the interest of minimising man-animal conflicts, several measures have been adopted. • Some of the initiatives include engaging 583 anti-depredation/anti-poaching squads/elephant squads and 115 trackers to prevent depredation by wild animals, adopting trench fencing over 3km. in the depredation prone localities, awareness creation with the help of VSS/EDC members, NGOs and school students, installation of 135 solar lights in the elephant affected villages of Angul, Athagarh, Khordha, Dhenkanal and Deogarh divisions, compensation to animal attack victims to the tune of INR 2,272.37 lakh in 2020-21 and setting up a 24 x 7 toll free number (18003456771) to address man-animal conflicts. 	<ul style="list-style-type: none"> • Habitat development is key in reversing the damage caused by human developmental activities and conserving wildlife. • In this regard, some of the initiatives undertaken in 2020-21 include, creation of 227 new water bodies, renovation of 211 others, plantation of 4050 fruit bearing plants and 35 ha. of fodder plantation around water bodies, 20 ha. of wildlife corridor rejuvenation, 148 ha. of mangrove plantation in the coastal districts of Puri and Kendrapada, creation of 115 salt licks and 188 ha. of meadow development to supplement the food requirements of herbivores and 409 ha. of weed eradication to boost the growth of palatable grass/shrubs/trees.

Forest-related Institutions

Kendu Leaves Organization

2.5.15. Odisha is the third largest producer of kendu leaf, and it is a source of livelihood for many in tribal communities in the state. Government has been promoting kendu leaves operation through various incentives. In 2020-21, Government provided a total incentive of around INR 47.22 crores to pluckers, binders and seasonal staff. Further, during this period various kendu leaf operations like bush butting, repairing and maintenance of Phadi, procurement of kendu leaves, drying & storage and binding etc. has been executed. Revenue from Kendu leaves operations has increased by 4.4 per cent to INR 267.86 crores in 2020 from INR 256.67 crores in 2019. Kendu leaves operation generated 60 lakhs number of person days of employment in 2020.

Odisha Bamboo Development Agency (OBDA)

2.5.16. Odisha Bamboo Development Agency is an initiative aimed at integrated development of bamboo production in Odisha based on commercial cultivation of bamboo and promotion of value addition through setting up of Bamboo based industries to ensure adequate returns to farmers. Further, it promotes sustainable livelihood for tribal and rural poor people to engage in the bamboo sector for employment, as well as women's empowerment. During 2020-21 the OBDA has undertaken the following activities:



- Establishment of 15 Bamboo Nurseries (3- hi-tech, 6- big and 6- small).
- Raising of 459 ha of bamboo plantations in farmers' land with a target of 590 ha. for 2021-22.
- Organization of trainings and workshops for farmers' and artisans' at district level.
- Establishment of bamboo bazaar at Tellipali under Subarnapur Forest Division and demonstration plot by the Silviculturist, Bhubaneswar.
- Six clusters have been formed for promotion of bamboo treatment, processing and marketing through convergence with the Director of Handicraft and Cottage Industry.
- Three Farmer Producer Organization (FPO) have been identified.
- Third party has been engaged for evaluation of Bamboo plantation.

Odisha Forest Development Corporation Limited (OFDC)

2.5.17. Odisha Forest Development Corporation Limited (OFDC) aims to exploit the state's vast forest resources scientifically, to ensure fair wage to forest labourers, to promote forest-based industries in the State and to raise non-tax revenues for the State exchequer. Presently, its main activities are in the trade of timber/firewood, trade of processed and phal kendu leaves, collection and trade of Sal seed directly or through Raw Material Procurer (RMP), regulation of the distribution of firewood, long bamboo and other small timbers to local people, monitor bamboo operation directly or through RMP; trade of cashew nut and rubber harvested through plantation and collection, processing and trade of honey and a few non-timber forest product items. In 2020-21, OFDC earned a revenue of INR 54683.26 lakh from timber trade, Kendu leaf and bamboo trade.

Environment and Climate Change

2.5.18. Environment Wing of the Forest, Environment and Climate Change Department is the Nodal Agency for environmental management and conservation in the state. Organizations such as the State Pollution Control Board, Chilika Development Authority and Regional Plant Resource Centre function under the Environment Wing.

Climate Change Action Plan

2.5.19. Odisha was the first State in the country to formulate a State Action Plan on Climate Change in 2010 and later updated and framed a comprehensive Climate Change Action Plan 2018-23. This plan is a coordinated response of eleven sectoral missions and the implementation activities are reviewed by the Monitoring and Advisory Committee of Climate Change Action plan headed by a Chief Secretary. To closely monitor and review the activities, a climate change cell has been set up. This cell mobilizes resources for implementation of different areas of the action plan in a time bound manner.

Institutional measures help aversion of climate risk in agriculture and allied sector

2.5.20. In the Indian context public expenditure and budgetary allocation on climate change have not received focus. However, Odisha has undertaken a cross sectoral analysis to formulate a Climate Budget in 2020-21 which

aims to keep track of Government expenditure incurred on climate change and supports the mitigation actions performed by the government. It also assists the Government in identification of sectors and schemes to improve climate resilience and mitigation outcomes. The budget aids the Government in re-designing and safeguarding the existing projects through the lens of climate change. Odisha is the first State in the country to identify budgetary needs and to mainstream climate change in the state's budget.

Box 2.5. Odisha's Performance in SDG 13: Climate Action

Located in eastern coast of India, Odisha is home to several climate change induced events such as tropical cyclones, floods, and water stresses. These events have the potential to derail current development and can accelerate poverty. The State has always been proactive in handling these challenges imposed by climate change through various climate change initiatives and has been successful. The SDG India 2020-21 Report, released by Niti Aayog has accorded the status of front runner to Odisha, due to its best performance in the indicators pertaining to Sustainable Development Goals 13 (Climate Change), 14 (Life below water) and 15 (Life on land).



Odisha has also outperformed India in these goals and scored way higher than that of India. A comparison of India and Odisha Index scores has been tabulated below:

SDG	Odisha Score	India Score
Goal 13- Climate Change	70	54
Goal 14- Life below water	82 (best performer among coastal states*)	N/A
Goal 15- Life on land	83	66

Note: * - Coastal states includes Andhra Pradesh, Gujarat, Goa, Karnataka, Kerala, Maharashtra, Odisha, , Karnataka, Gujarat
Source: SDG India 2020-21, NITI Aayog

The State has also performed better than India in most of the indicators belonging to Goals 13, 14 and 15. A few of them have been presented below:

Indicator	India	Odisha
Disaster Preparedness score as per disaster resilience index	19.2	22
CO2 saved from LED bulbs per 1000 population (tonnes)	28.04	120.07
Disability Adjusted Life Years (DALY) rate attributable to air pollution (per 1,00,000 population)	3469	3201
Forest cover as a percentage of total geographical area	21.67	33.15
Tree cover as a percentage of total geographical area	2.89	2.98
Percentage of area covered under afforestation schemes to the total geographical area	0.51	2.46
Percentage increase in area of desertification	1.98	-0.33

Source: SDG India 2020-21, NITI Aayog

Climate Change Initiatives by Odisha

Odisha was the first State in the country to formulate a comprehensive State Action Plan on Climate Change addressing in 2010, which was later revised for the period of 2018-23 and is currently under implementation. This plan is a coordinated response of eleven sectoral missions and the implementation activities are reviewed by the Monitoring and Advisory Committee of Climate Change Action plan headed by a Chief Secretary. To closely monitor and review the activities, a climate change cell has been set up. This cell mobilizes resources for implementation of different areas of the action plan in a time bound manner.

In the Indian context, public expenditure and budgetary allocation on climate change haven't been significantly focused upon. To overcome these challenges, Odisha has undertaken a cross sectoral analysis to formulate a Climate Budget in 2020-21 which aims to keep track of Government expenditure incurred on climate change and supports the mitigation actions performed by the government. It also assists the Government in identification of sectors and schemes to improve climate resilience and mitigation outcomes. The budget aids the Government in re-designing and safeguarding the existing projects through the lens of climate change. It comprises the budgetary components of the departments of Agriculture and Farmers' Empowerment, Revenue and Disaster Management, Energy, Fisheries and Animal Resources, Forest & Environment, Health & Family Welfare, Panchayati Raj and Drinking water, Rural development, Commerce and Transport, Housing and Urban Development. Odisha is the first State in the country to identify budgetary needs and to mainstream climate change in the state's budget.

Chilika Development Authority

2.5.21. Chilika is the largest brackish water lagoon of Asia and one of the important biodiversity hotspots. It shelters several endangered species and migratory birds. The highly productive eco-system with its rich fishery resources sustains the livelihood of more than 2 lakh fisherfolk living in and around the lagoon. For preservation of its ecology and conservation as well as to bring all-round development in and around the lake, Chilika Development Authority is carrying out the most desired and appropriate restoration measures to protect the ecosystem in the area.

Centre for Environmental Studies (CES)

2.5.22. Centre for Environmental Studies (CES) has been undertaking several activities to promote environmental education, awareness, training & research, build environment information database and disseminate environmental knowledge through posters, leaflets, newsletters, booklets, video clips and books etc.

Integrated Coastal Zone Management Project (ICZMP)

2.5.23. The Integrated Coastal Zone Management Project (ICZMP) is meant for conservation of coastal & marine ecological resources, coastal pollution management and related infrastructure upgradation, capacity building and livelihood security of coastal communities. ICZMP (Phase-I) has been implemented in two coastal stretches of Odisha covering 196 kms since September 2010 and has been completed. The preparatory activities including preparation of DPR for ICZMP Phase-II, renamed as ENCORE, Phase I with a total project cost of INR 308.00 Crores is being taken up.

Odisha Biodiversity Board

2.5.24. Odisha Biodiversity Board (OBB) has been functioning since 2009 to implement the legal provisions of Biological Diversity Act 2002 and Rule 2004. Odisha Biodiversity Board is mandated to implement the Biological Diversity Act, 2002 which envisages conservation of biodiversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resources and associated traditional knowledge.



Regional Plant Resource Centre

2.5.25. Regional Plant Resource Centre (RPRC), Bhubaneswar has undertaken various research and development activities to produce and conserve plant genetic resources such as Modern Tissue Culture Laboratory, Orchidarium, Threatened Plants (RET) Garden, Wild Edible Fruits Garden, Medicinal Plants Garden, Cacti and other Succulents, Jagannath Vatika, Fragrant Flower Garden, Morning Health Walk etc.

State Pollution Control Board (SPCB), Odisha

2.5.26. The State Pollution Control Board (SPCB), Odisha is responsible for implementing the environmental legislations, particularly the Water (Prevention and Control of Pollution) Act, 1974, the Water (Prevention and Control of Pollution) Cess Act, 1977, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986. Several rules addressing specific environmental problems like hazardous waste management, bio-medical waste management, solid waste management, e-waste management, plastic waste management, Environmental Impact Assessment etc. have been promulgated under the purview of the Environment (Protection) Act. The SPCB also executes and ensures proper implementation of the environmental policies of the Union and the State Government.

Odisha Wetland Development Authority

2.5.27. Odisha Wetlands Development Authority has been constituted to conserve and protect the eco-system of important wetlands and formulate policy guidelines for holistic management of wetlands of the state. It is monitoring the activities related to the conservation management of wetlands that are identified to be ecologically important. It also monitors the activities undertaken in the field under assistance from the State Government and the Central Government.

Odisha Environment Management Fund Trust

2.5.28. A trust named "Odisha Environment Management Fund" was constituted in the year 2006 for the purpose of taking up ameliorative steps for rehabilitation of degraded environment. During 2020-21, an amount of INR 90.45 crore has been released under this programme.

Box 2.6. Environment and its linkages with Agriculture

Agriculture has significant impacts on the environment. A key challenge for the agriculture sector is to increase production for an increasing population, while at the same time reducing the environmental impact and preserving natural resources for future generations. In recent years there have been some encouraging signs that farmers of the State have started adopting more environmentally beneficial practices, such as conservation tillage, improved manure storage, soil nutrient testing and organic farming.

The remote forested hills of Malkangiri often experience flash floods and landslides due to heavy rainfall. In this region a group of Bonda women farmers are adapting to climate change by growing indigenous climate-smart crops. The women farmers are currently cultivating native millets that are climate resilient, reduce soil erosion, and ensure food and nutritional security for their community. This initiative is assisted by the Odisha Millets Mission.



2.6. RURAL DEVELOPMENT

2.6.1. In Odisha, more than 70 per cent of the population live in villages and mainly engaged in farming activities. Rural development and improving standard of living of people in rural areas primarily depend on agricultural prosperity. Besides promoting agriculture and allied activities, the State has been implementing several rural development programmes to eradicate poverty, improve standard of living, and promote a healthy society by creating awareness about hygiene, sanitation, and eradication of illiteracy.

A. Rural Employment through MGNREGS

2.6.2. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has been playing a pivotal role in rural employment and enhancing rural livelihood in the State since 2006-07. It generates large scale employment at village/ gram panchayat level in rural areas since its operation. It covered the entire State generating 1,113.89 lakh person days of employment in 2019-20 which has risen to 2,080.81 lakh person days in 2020-21 (Table 2.31).

2.6.3. Table 2.31 displays the progress of MGNREGA between 2018-19 and 2020-21 on different parameters. It is encouraging to note that there has been a significant increase in the number of 'person days' of jobs created, and people benefited in 2020-21 and helping these large number of people to overcome effects of pandemic and jobs losses. MGNREGS provided employment to 62.15 lakh persons in 2020-21 which was 67 per cent as compared to 37.32 lakh persons provided employment in 2019-20. In terms of households, 37.49 lakh households were benefited in 2020-21 against 23.25 lakh households in 2019-20.

Table 2.31 Performance of MGNREGS

Parameter	2018-19	2019-20	2020-21
Person days (in Lakh)	829.88	1113.89	2080.81
Beneficiaries assisted (in numbers)	3366339	3731602	6214928
Wage assistance provided (INR in Crore)	1485.24	1948.17	4683.68
AWC Building completed	2232	2797	1596
No. of Tanks renovated	1972	5523	4576
Number of Households benefited (in Lakh)	21.48	23.25	37.49

Source: Panchayati Raj & Drinking Water Department, Government of Odisha

2.6.4. It is the most vulnerable groups that seek employment under MGNREGS. It has been designed to allow women equity in both access to work and in the payment of wages. The participation of women has also increased over the years. Table 2.32 shows the detailed category-wise person days generated in rural Odisha from 2015-16 to 2020-21. The participation of SC/STs in terms of person-days generated was more than 50 per cent during these years. Thus, the scheme is well targeted to reach the most disadvantaged groups.

2.6.5. **New Initiatives:** In order to address distress migration as well as to enhance income of the poor households, special package of increased wage rate of INR 303.40 per person per day in commensurate to minimum wage of the State Government including additional 200 days of work has been provided out of State Budget in 20 migration prone blocks of 04 districts namely Bargarh, Bolangir, Kalahandi and Nuapada. Such initiatives have made tremendous impact on the livelihoods of the poor generating 2.19 Crore person-days with 74,412 households completed 100 days, 12624 household completed 200 days and 199 households completed 300 days of work.

Table 2.32 Person days generated and share of Women, SC/ST under MGNREGS

Year	No of Person-days generated (in lakh)					
	SC	ST	Total	Women	Women (per cent)	SC/ST (per cent)
2015-16	141.80	372.80	892.70	339.40	38.0	57.7
2016-17	124.30	292.30	773.40	307.90	39.8	54.0
2017-18	152.90	338.70	922.10	386.00	41.9	53.3
2018-19	133.61	294.59	829.88	348.47	42.0	51.6
2019-20	171.70	397.91	1113.89	482.34	43.4	51.10
2020-21	292.65	743.83	2080.81	931.04	44.7	49.8

Source: Panchayati Raj & Drinking Water Department, Govt. of Odisha

B. Housing for the poor

2.6.6. Housing is one of the most important life components giving shelter, safety as well as providing a place to rest. A pucca house is one of the basic needs for human survival. The Government of Odisha assigns high priority to improvement of rural infrastructure and commits to provide pucca houses to all rural families that are living in kutchha houses under Rural Housing programmes. A total of 4,38,747 number of houses were completed in 2020-21, out of which 4,23,440 numbers were under Pradhan Mantri Awas Yojana (Grameen) and 15,307 numbers under State Funded Schemes such as Biju Pucca Ghar Yojana, Pucca Ghar Yojana (Mining), and Nirman Shramik Pucca Ghar Yojana. The total number of houses completed from 2014-15 to 2020-21 are given in Table 2.33.

Table 2.33

Number of houses constructed under Government schemes from 2014-15 to 2020-21

Year	PMAY/ IAY	State Funded Schemes	Total Houses Completed
2014-15	3,20,895	31,526	3,52,421
2015-16	5,02,092	1,14,726	6,16,818
2016-17	1,17,967	46,016	1,63,983
2017-18	4,58,454	73,800	5,32,254
2018-19	4,63,767	46,719	5,10,486
2019-20	3,57,914	36,298	3,94,212
2020-21	4,23,440	15,307	4,38,747

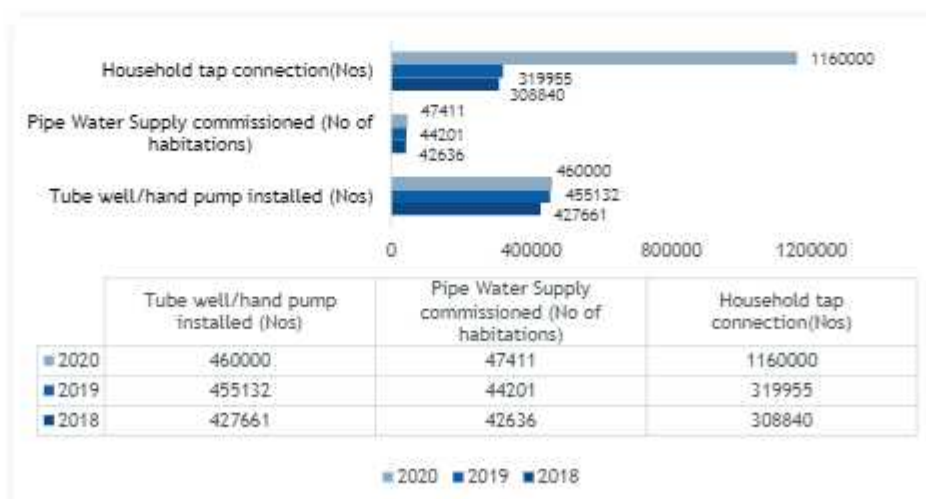
Source: Panchayati Raj & Drinking Water Department, Government of Odisha

C. Access to Drinking Water

2.6.7. Provision of safe drinking water is a basic requirement of life and hence providing safe drinking water is a priority for the State Government. The aim is to provide safe and adequate water for drinking, cooking and other domestic needs to every rural person on a sustainable basis. The Government of India through National Rural Drinking Water Programme (NRDWP) provides technical and financial assistance to the states. The NRDWP is a Centrally Sponsored Scheme (CSS) aimed at improving the coverage of adequate and safe drinking water to the rural population of the country. During the year 2020, 460000 tube wells were installed, and 47411 Piped Water Supply (PWS) schemes were commissioned (Figure 2.19).

Fig 2.19

Tube well/hand pump installed, PWS commissioned and household tap connection



Source: PR&DW Dept, Odisha

D. Access to Sanitation

2.6.8. Access to sanitation is extremely important as it ensures good health and overall wellbeing of people resulting in holistic growth and development. The State Government has performed better in Sustainable Development Goal 6 i.e., Clean Water and Sanitation for all, published by NITI Aayog. Through Swachh Bharat Mission, Odisha has constructed 66,58,440 toilets since 2014 and 92,321 toilets were built in 2019-20. Table 2.34 shows the latest status of rural sanitation in Odisha. Households having water facilities shows an increasing trend from 2017-18 to 2019-20 with a big jump in 2020-21. Similarly, the number of households having toilet within their premises saw a considerable increase over the last four years. Odisha had achieved 100 per cent ODF status in 2019 with all the 30 districts declared Open Defecation Free and thus households having no facility of toilet in 2020-21 dropped to zero. Odisha also declared 46,785 villages of the State as ODF thus moving towards effective rural development of the state.

Table 2.34 Status of Rural Sanitation

Year	Households having water facility	Households having toilet within premise	Households having no facility of toilet
2017-18	3,06,207	8,16,203	31,37,712
2018-19	3,19,955	22,03,147	9,34,566
2019-20	7,47,534	13,71,611	3,48,748
2020-21	22,94,803	2,80,662	-

Source: Rural Water Supply and Sanitation Department

E. Rural Connectivity

2.6.9. Rural Road connectivity has become one of the topmost priorities of the State as it promotes access to economic and social services, thereby generating increased agricultural as well as non-agricultural productivity and non-agricultural employment. It further helps in extending basic facilities in health care, education, drinking water and livelihood support to the people. Some of the key initiatives undertaken for improving and expanding rural connectivity in Odisha are as follows:

Rural connectivity strengthened through multiple initiatives

Pradhan Mantri Gram Sadak Yojana (PMGSY)

2.6.10. In the year 2000-2001, Government of India launched PMGSY programme to provide all weather road connectivity to eligible un-connected habitations as per 2001 population census. Under the PMGSY programme, new all-weather roads and missing link bridges are constructed to provide connectivity to the unconnected habitations. Subsequently from the year 2018-19 Gol implemented PMGSY-II, and in the year 2020-21 Gol implemented PMGSY-III for upgradation of existing roads depending on utilization and road condition.

2.6.11. In the financial year 2020-21 it is targeted to complete 2500 km. length of road under PMGSY with an expenditure of INR 1900 crore. As on end of December 2021, 347.18 km. length of road has been constructed with an expenditure of INR 909.23 crore.

Biju Setu Yojana (BSY)

2.6.12. Biju Setu Yojana (BSY) has been formulated to provide an effective all weather road network across the length and breadth of the State to effectively meet the transportation need of every sector. Since the inception of the scheme in 2011-12 till 2020-21, 1332 bridge projects on 536 RD roads and 796 important PS roads with project cost of INR 6130.51 crore have been sanctioned. Out of 1,332 projects, 994 bridges have been completed till end of December 2021 with an expenditure of INR 4101.67 crore.

Mukhya Mantri Sadak Yojana (MMSY)

2.6.13. MMSY is a State funded rural connectivity programme launched in 2014-15 to provide all weather connectivity to unconnected habitations which are not eligible under PMGSY and not covered under other schemes. Since implementation of the scheme during 2015-16 till 2018-19, 949 stretches of roads (3,841.40 kms.) have been taken up with a total cost of INR 2,286.68 crore. Out of this, 862 projects measuring 3,264.38 kms. have been completed utilising INR 1,846.11 crore by the end of December 2021. As a result, 1,088 unconnected habitations got easy access to all-weather roads.

NABARD Assisted Projects (RIDF)

2.6.14. Execution of road and bridges construction with NABARD assistance in rural areas has been started since 1995-96. A total 360 bridge projects have been sanctioned out of which 358 were completed till end of December 2021. During the year 2021-22, there is a target of 304.06 km. length for completion, out of which 86.13 km. length has been completed till December 2021 with an expenditure of INR 56.06 crore.



Improvement of existing Rural Roads

2.6.15. The prime objective of the scheme is to improve important rural roads requiring immediate improvement/upgradation. Till the year 2020-21, 200 roads with a length of 1374.41 kms. with budgets amounting to INR 570.14 crore have been completed.

2.6.16. During the year 2021-22, there is a budget provision of INR 249.93 crore for improvement of 227.47 km. (40 stretches) of road, out of which 122.74 km. (22 stretches) has been completed till end of December 2021 with an expenditure of INR 77.60 crore.

Completion of Incomplete Road & Bridges

2.6.17. The incomplete road projects which were delayed for a long time on account of various reasons have been included under this scheme. Up to 2020-21, 104 such road and bridge works have been completed with an expenditure of INR 247.90 crore. During the year 2021-22, 29 road works (192.50 km.) have been targeted to be completed out of which 18 (113.91 km.) have been completed with an expenditure of INR 55.65 crore till December 2021. The balance of 11 road works is in progress.

Connecting Unconnected Villages

2.6.18. Under this project, the State has taken up 38 stretches of roads with a length of 219.08 km. with an estimated cost of INR 120.33 crore. There is a budget provision of INR 56.00 crore for the year 2021-22 to complete these projects thereby ensuring connectivity to 38 unconnected villages. Expenditure of INR 13.08 crore has been incurred till end-November 2021, and 20 of the 38 projects have been completed.

Inter District Inter Block Connectivity

2.6.19. Despite sincere efforts to provide road connectivity in all areas of the state, it is found that there are still inter-state, inter-district, and inter-block connectivity gaps. Hence, a coordinated effort is needed to take care of the missing links between states, districts, and blocks. In this regard, out of the 668 identified connectivity gaps (52 RD,

616 PR, 19 PWD roads), priority will be accorded to tribal areas in the first phase. 52 RD roads and 19 PWD roads, identified by respective Departments, totalling to about 300 km. which will be taken up in 3 years.

2.6.20. Accordingly, RD Department has proposed to take up 56 road and bridge projects of a total length of 352 km. with an estimated cost of INR 254.34 crore. Out of the 56 projects, work on 39 projects is in progress. There is a budget provision of INR 157 crore during the current financial year. An expenditure of INR 30.15 crore has been incurred up to end-November 2021 and 4 projects have been completed.

F. Livelihood Opportunities for poor households

2.6.21. Odisha Livelihoods Mission (OLM) has been implementing Deen Dayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY NRLM), a flagship scheme of Government of India since 2011-12 for enhancing the socio-economic condition of the rural poor through sustainable livelihoods promotion. Some other programmes of the Government of India schemes like National Rural Economic Transformation Project (NRETP), Mahila Kisan Sashaktikaran Pariyojana (MKSP), Start-up Village Entrepreneur (SVEP) and Rural Self Employment Training Institute (RSETI) programmes are also being implemented by OLM. The main activities of the OLM are to promote Self Help Group (SHG) through bank linkages with marketing support, promotion of organic cluster, promotion of poultry, goaterly farming & pisciculture, promotion of non-farm livelihoods activities and capacity building of community organisations.

Odisha Livelihoods Mission promoting SHGs besides implementing several Govt. of India schemes

2.6.22. OLM has rolled out its activities viz. Social, Financial & Economic inclusion in all 314 blocks of 30 districts by the end of March 2020-21. As at end-March 2021:

- OLM is engaged with about 49 lakh households by covering 4.65 lakh SHGs across the State by forming 37,388 Cluster Level Forums (CLFs) and 4,620 Gram Panchayat Level Federation (GPLFs). For strengthening of these GPLFs 4297 (93 per cent of total GPLF formed) GPLFs have been provided with Startup and Institutional Building (IB) fund.
- Out of 37,388 formed Cluster Level Forums (CLFs) 15,689 (42 per cent) CLFs have availed Vulnerability Reduction Fund (VRF).
- 1.49 lakh SHGs have availed Community Investment Fund (CIF).
- 660 Business Correspondent (BC) points have been established.
- 8.50 lakh households (HHs) have been covered under focused livelihoods interventions.
- 1892 Common Facility Centres (CFCs) are in place to provide necessary handholding support to agriculture related livelihood activities.
- Mo Upakari Bagicha (MUB) got support from MGNREGS to expand its outreach to 314 blocks. By the end of 31st March, 5.22 lakh HHs have successfully established Nutrition Garden.
- 847 Poultry Clusters have been established by involving 73,663 HHs and 996 Goat Clusters have been established by involving 79,912 HHs.
- 201 Organic Clusters have been established by covering 10,707 HHs.
- 2428 farm & non-farm Producers Groups (PGs) were supported with IB-CB & working capital.
- 4014 HHs have been covered in Mahila Kisan Sashaktikaran Pariyojana (MKSP) -Tussar cultivation in seven blocks of three districts.
- 9,948 HHs have been covered under Medicinal Plants project in 13 blocks in the six districts Koraput, Raygada, Kandhamal, Kalahandi, Bargarh and Balangir. The intervention focuses on collection of Amla, Bahada, Harida, Dhataki and cultivation of Tulsi, Pipla, Aswagandha and Sarpangandha.
- Startup Village Entrepreneur Programme (SVEP) has promoted 10,534 enterprises.

New Initiatives - COVID-19 Assistance Package (CAP)

2.6.23. OLM has developed a special COVID-19 Assistance Package (CAP) for different sections of the population to promote rural entrepreneurship among SHG women, their households and returnee migrants. The aim is to give a boost to the rural economy in the present pandemic situation. This special package was open for six calendar months from the date of announcement. 89,920 of beneficiaries got assistance an amount of INR 213.54 crore to earn/ revive their livelihood.



2.7. IN CONCLUSION


Agriculture sector remains susceptible to vagaries of monsoon as well as other natural calamities despite remarkable improvement in infrastructure as well as agriculture extension services. Given the dependency of large section of the population on agriculture and allied sectors on employment and livelihood, the sector demands improvement in several aspects. Productivity of agricultural produce remains low in the State in comparison to all India. While there is improvement in key input use, it is still below the national average in several cases.

A combination of the pandemic impact and natural calamities have not allowed this sector to bounce back like all the other sectors of the economy after the reverses of the last two years. As such, the immediate task is to provide short run support for the majority of its citizens dependent on agriculture to tide over the transient problems as also take measures to tackle the structural issues that may be holding the sector back. The Government has implemented an array of schemes to help the sector, KALIA and BALARAM being prominent among them.

The structural issues are well known and are not unique to Odisha or even India. The fragmentation of land holdings and its effect on economic viability of agriculture as a profession is an issue faced across the world and several nations have found their own solutions (e.g., the kibbutz in Israel, farming cooperatives in Japan, and nearer home, localised sugar cooperatives in Maharashtra). Making greater use of improved modern techniques of agriculture with greater and judicious use of various agricultural inputs can raise crop productivity and agricultural incomes. Better post-harvest crop management (storage, marketing etc.) facilities while several schemes are in operation with varying degrees of success may provide income stability in agriculture sector.

Livestock rearing is a useful supplement to crop farming, and in some cases can be a viable alternative as well. This activity has a substantial element of risk because of occasional animal/bird epidemics, and hence it is important to ensure a properly functioning veterinary system and an insurance mechanism to contain the fallout of such epidemics. Fishing is thriving in Odisha with both its inland water bodies and the coastline providing ample opportunities. Ensuring mechanism to overcome the challenges such as of working capital and financing would augur well for the sector.

Rural development is a multi-pronged process of raising the quality of life in rural areas, and a function of the physical and social infrastructure. Given the fact of relatively low urbanisation in Odisha, it is a prime concern for the Government and its efforts in this area have yielded results like full rural electrification, major improvements in sanitation, better rural road connectivity etc. The continuation of these efforts is essential along with measures to raise rural incomes. The objective must be to ensure that no migration out of rural areas of Odisha is dictated by economic compulsions. Rural local bodies must continue to be partners of the State Government in formulation and implementation of development initiatives, and they need to provide valuable feedback to the State level policymakers.



CHAPTER



3

Industry and Infrastructure



Industry sector in Odisha plays an important role for Growth, development, and employment. In 2019-20, the industry sector employed more than 26.9 per cent of the workforce and contributed nearly 38.4 per cent of state GSVA. The sector bounced back strongly in 2021-22 relative to All-India level. As per the advance estimate, the Sector is expected to grow at 14.5 per cent in 2021-22.

Since 2012-13, on an average, industrial sector in Odisha have grown at 6.4 per cent relative to All-India average growth of 4.6 per cent. This shows the resilience of the industrial sector of Odisha. Odisha is a mineral rich state and has significant contribution to major minerals production at the national level. The Sector is poised to grow significantly in the years to come. This is due to enabling infrastructure and policies aided by online systems and best-in-class facilitation.

Industrial diversification remains the corner stone for new industrial policy. Food processing, chemicals, textiles are some of the sectors in which Odisha is attracting investments. These sectors not just bring more employment per unit of capital investment but also generate more value add. Government of Odisha is already promoting new age sectors that include electric vehicle production.

Odisha is a power surplus state and has improved its ranking on logistics infrastructure and services. These are expected to be advantageous for the State to attract more investments in the future. The manufacturing sector in Odisha has been characterised by capital-intensive sector. To ensure that benefits of economic growth further trickle down at the local level, promotion of very small-scale enterprises is important. MSME promotion has gained traction by various policy and facilitation support including initiatives under Start up Policy and creation of O-Hub. Financial Sector needs to design innovative collateral free products to cater to demand of MSME. Fintech has emerged as alternate option to traditional financial institutions in this lending space. Fintech can lend collateral loan free when target customer has some digital footprint. State is trying to mainstream the underserved population and MSMEs through several G2P transfers and registration.

3.1. OVERVIEW OF INDUSTRY SECTOR IN ODISHA

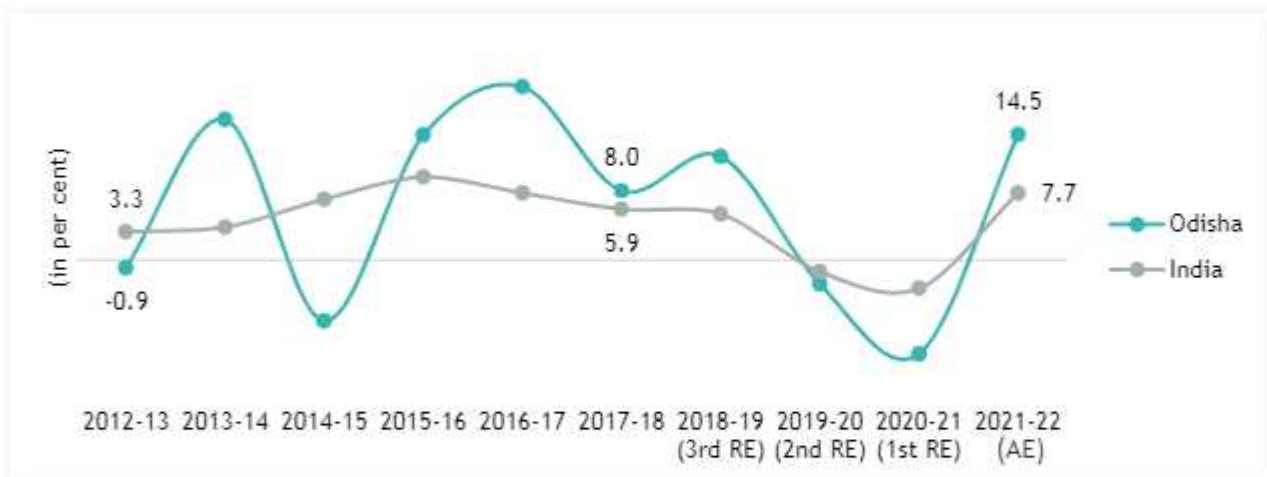
3.1.1. The primary role of the industry sector in Odisha is that of broadening the base of the economy of the state, creating value added to the products of the primary sector, and relieving the pressure of a large part of the population seeking a living from agriculture (and allied occupations) by creating additional employment. This sector has been bearing these responsibilities with some success while growing consistently in the past till the pandemic struck. After two years of growth reversal, the industrial sector has bounced back in the current year and is expected to grow at 14.5 per cent (in constant 2011-12 prices) over the relatively low base. Both the reversal in the two previous years and the recovery are more pronounced in Odisha as compared to India as a whole, with the growth of the industrial sector of the country during the current year expected to be 7.7 per cent.

**A sharp rebound
in Industry
sector (14.5 per
cent growth in
2021-22)**

3.1.2. As can be seen in Figure 3.1, COVID played a big disruptor. In 2020-21, economic impact of CoVID-19 was significant on account of the nation-wide lockdown from March 2020 till June 2020, when the phased lifting of lockdown started and continued till November 2020. Consequently, industrial sector contracted by 10.84 per cent in 2020-21 akin what has been experienced by most of the States as well as at all India level.

Figure 3.1

Annual growth of industry sector GSVa (2011-12 prices) in Odisha and India (in per cent)



Source: Directorate of Economics & Statistics (DE&S), Odisha, and National Accounts, MoSPI

3.1.3. As is well-known, the pandemic-induced restrictions affected both demand and supply, and the negative impact on each side fed into each other. The product supply chain was disrupted as well as the supply of raw materials. Since wage labourers, along with several other groups, lost their income fully or partially, demand for goods and services also contracted. Even for those who did not suffer an income loss, the recessionary trend caused uncertainties and widespread postponement of discretionary spending. Since international transportation was strongly impacted and the major export destinations were also under varying degrees of lockdown, exports also suffered.

3.1.4. Although state level lockdown started again in March 2021 during the second wave, it was less restrictive and kept operations of industrial units, MSME, handloom units etc. out of its purview with prescribed SOP, subject to

general COVID-appropriate behaviour. As a result, the industries sector bounced back in 2021-22 and is expected to grow at 14.5 per cent (in constant 2011-12 prices) over the relatively lower base. The recovery is more pronounced in Odisha as compared to India as a whole (Figure 3.1), with the growth of the industrial sector of the country during the current year expected to be 7.7 per cent.

3.1.5. Since 2012-13, in six out of 10 years, Odisha's industry sector has grown at higher rate than All-India average growth. On an average, Odisha's industry sector grew at 6.35 per cent while at All-India level, average growth since 2012-13 was nearly two per centage points lower relative to Odisha at 4.56 per cent. This could be attributed to series of investment promotion initiatives launched by Government of Odisha with real on-ground business reforms.

*Real on-ground
business
reforms driving
the Industrial
growth*

3.1.6. During COVID-19, pre-empting the impact on industries as well as industrial workers, Government of Odisha provided several relief measures. For example, assistance in the form of INR 1,500 to workers registered with Workers Board and distribution of food grains and other necessities were provided to the needy people around the periphery of the mines managed by the Odisha Mineral Corporation. While Government of India came up with an Atmanirbhar Package for resumption of activities, the State Government announced the following package amounting to INR 289.42 crore to facilitate promotion and development of MSME:

- 2 per cent to 5 per cent interest subvention to accounts assisted under ECLGS for one year.
- 5 per cent Top-up Subsidy to PMEGP sanctioned cases during 2020-21 towards Promoter's Contribution.
- Additional 15 per cent Top-up Subsidy to units under PMFME during 2020-21.
- Reimbursement net SGST to eligible units under IPR 2007 & IPR 2015 from 1 July 2017 to 31 March 2020.
- Waiver of IDCO Annual Maintenance Charges for MSMEs.
- Covid-19 Assistance Package of PR & DW Department.
- Providing interest free working capital loan to the tune of INR 25.00 crore to lead marketing organisation for procurement of handloom fabrics from weavers/ PWCSs/SHGs.
- Advance release of monthly financial assistance to the weavers above 60 years of age as social security measure.

Box 3.1 Sentiment analysis of Invest Odisha

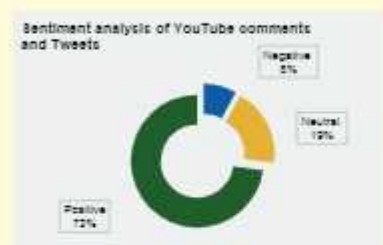
Public perception and public opinion have a greater role in shaping the policy and programme now in any part of the world. In a world of 24X7 television and access to internet, it becomes important to study and examine how people are responding or reacting to certain public policy measures. Sentiment analysis using social media data is now established as an analytical way to gauge public perception.



'Invest Odisha' is an initiative by department of Industry, Govt. of Odisha, for promoting investment and entrepreneurship in the State of Odisha. With an active and engaging official Twitter handle, @InvestInOdisha, it has been spearheading the investment promotion campaign for Odisha State.

The analysis of YouTube videos and Tweets on #InvestOdisha topic shows social media users' positive sentiment towards investment opportunities in Odisha. There are about 400 YouTube videos on #InvestOdisha which

have been watched over 16 million times. About 63 per cent of the comments on YouTube show positive sentiment. Similarly, there are about 4000 Tweets on the topic and 81 per cent of them express positive sentiment. The most frequently used words in YouTube comments and Tweets were, 'Investment', '#MakeInOdisha' and 'Industries'. This is despite the data limitations of extracting the social media data through public API.



About 82,000 likes and 100,000 retweets on Twitter*

*Based on data collected for 4000 tweets from Twitter API between year 2018 and 2022



Over 16 million views on YouTube*

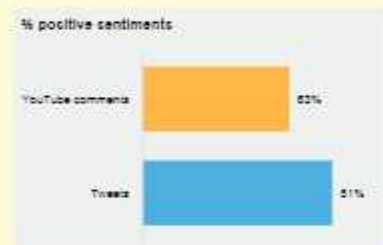
*Based on data collected for 500 videos from YouTube API between year upto Jan 2022



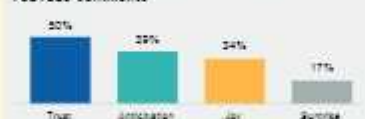
Objective of analysis:
To analyse and understand people's sentiments, attitudes and emotions towards #InvestOdisha largely from Tweets and YouTube comments.

Key findings:
Over 16 million views on YouTube and it is increasing year on year. 81% tweets and 63% of YouTube comments show positive responses/sentiments*. The most frequently used words in YouTube comments and Tweets were, 'Investment', '#MakeInOdisha' and 'Industries'.

*YouTube comments and tweets with at least 20% English words were considered for sentiment analysis.



Emotion classification of Tweets and YouTube comments*



*Tweets and YouTube comments are subjected to more than one emotion classification. If of Tweets and YouTube data are limited by Twitter and YouTube data restriction, search terms used are #InvestOdisha, #MakeInOdisha, #Investment in Odisha. Data was collected on 10th to 15th January 2022 from YouTube and Twitter. A sentiment lexicon called SentiWordNet was used for the classification. Posts and comments with at least 20% English words were considered. Public data extraction API limitations applied, thereby only a sample of the data can be scraped at any given time.

Word cloud of Tweets and YouTube comments



3.2. SECTORAL PERFORMANCE

3.2.1. Table 3.1 shows shares as well as growth in various sub-sectors of industrial sector since 2012-13. As of 2021-22 (AE), manufacturing is the largest sub-sector followed by mining and quarrying, construction, and electricity, gas, water supply & other utility services.

Table 3.1 Share and Growth of Industry Sector and its Sub-Sectors (in per cent)

Sector and Sub-Sector	Share in GSVA in 2021-22(AE)	Average growth			
		Pre CoVID		During CoVID phase	
		2012-13 to 2015-16	2016-17 to 2019-20	2020-21	2021-22(AE)
Industry	39.5	5.7	9.3	-10.8	14.5
Mining and quarrying	8.3	9.6	3.3	-23.3	18.1
Manufacturing	22.1	4.8	17.1	-8.4	14.3
Construction	6.7	1.1	4.5	-3.1	13.2
Electricity, gas, water supply & other utility services	2.4	9.8	0.04	-1.7	8.0

Source: DE&S, Odisha

3.2.2. Growth in these sub-sectors is divided into two periods, pre-COVID and during the COVID-19 phase. The pre-COVID-19 phase is further divided into two equal time-periods of four years to analyse the growth trend on a medium-term basis. As can be seen from Table 3.1, the average growth improved in case of manufacturing during 2016-17 to 2019-20 relative to preceding four years. The sub-sector reported annual average growth of 17 per cent during this period. On the other hand, mining and quarrying reported deterioration in growth in later period (2016-17 to 2019-20). Electricity, gas, water supply and other utility services experienced negative growth on an average during the later period. One of the potential reasons for negative growth in electricity sector could be growth in captive power plants. Captive power plants are those industrial units which produces power for own consumption. It has led to reduction in industrial demand for power from distribution utilities.

Industrial growth has been driven by strong manufacturing sector

3.2.3. COVID-19 induced measures to prevent disease transmission impacted contact intensive sector immensely. All the sub-sector contracted during 2020-21 but with different proportion. Electricity sub-sector was mostly exempted from the restrictions given that it falls under 'essential services' category. As expected, the sub-sector did experience contraction but to a lesser extent given that power consumption was largely affected by low industrial consumption only. Although urban domestic consumption was affected but due to migration to rural areas, the rural domestic consumption for power went up.

3.2.4. Within manufacturing, large units experienced only a small impact, while major impact was evident in the case of MSME, handloom and handicrafts. The contraction in terms of annual GSVA in construction was relatively small at 3 per cent, but the wage labourers in construction were impacted to a much greater extent because of the limited savings to draw upon during covid time.

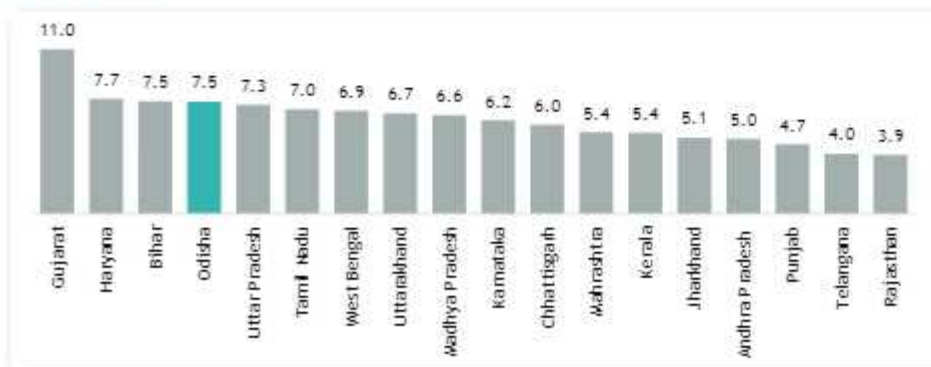
3.2.5. Mining and quarrying sector is estimated to grow at 18 per cent in 2021-22 on a lower base. However, the size of the sector in real terms is still approximately 10 per cent lower than its pre-CoVID levels of 2019-20. Construction grew significantly in 2021-22 by 13 per cent which may reflect pending projects of 2020-21. Similarly, electricity sub-sector grew at eight per cent in 2021-22 which is high relative to its historical trend. Both sub-sectors have become larger in real terms than their size in 2019-20.

Odisha has the fastest growing Industrial sector in the last decade

3.2.6. Interstate comparison of industrial growth in the pre-covid times shows that industrial sector in Odisha was among the fastest growing sector among major states¹ (Figure 3.2). The Sector grew at an average of 7.49 per cent during 2012-13 and 2019-20. Only Haryana, Gujarat and Bihar were the few states reporting higher growth in Industrial Sector than Odisha.

Fig 3.2

State Wise Average growth in Industrial GSVA at Constant Prices between 2012-13 to 2019-20 (in per cent)



Source: Ministry of Statistics and Programme Implementation, India

¹ In this chapter for interstate comparison, 18 major states are included namely, Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, and West Bengal.

3.2.7. The significant growth in the industrial sector in Odisha has been possible due to setting up of a progressive ecosystem governing the industry sector in the state. Over the years, the State Government has taken new initiatives to make Odisha a destination of choice for investors.

Progressive Industrial policy framework supported by real incentives attracted investment in Odisha



Table 3.2

Key initiatives to promote industrial development in Odisha

S.No.	Area	Description
1	Progressive Industrial Policy Framework with sector specific policies	Odisha has one of the most progressive industrial policy ecosystems in the country with the State Government providing all the necessary support to investors from concept to commissioning and beyond. While the Industrial Policy Resolution 2015 is the mother policy governing all the investments in the state, there are also specific sectoral policies designed keeping in mind the unique requirements of each sector. Sectors such as food processing, apparel, electronics, IT/ITeS and new age sectors like E-Vehicles have dedicated new policies. Also, in order to further promote investments in the sectors identified under PLI schemes, the Government of Odisha has come up with special incentive package for mega investments in new-age and strategic sectors like EV, Green Energy Equipment, Defence and Aerospace etc.

S.No.	Area	Description
2	Best-in-class incentive packages for investors	The Government of Odisha through the Industrial Policy Resolution 2015 is providing attractive capital investment subsidy, employment-based subsidy, SGST subsidy, power tariff reimbursement etc. for investment in priority sectors. These have been designed in a manner to match the best-in-class incentives being provided by state governments across the country. Keeping in mind, the dynamics of the changing scenarios and meeting the investor expectations, the IPR has seen amendments in net SGST reimbursements, incentivizing production of medical oxygen and refilling and inclusion of new age sectors for a special incentive package. Apart from the incentives under IPR, respective departments are also providing additional incentives under sectoral policies thereby making the incentive package being provided in Odisha as one of the best in the country.
3	Diversification/ Broad-basing of industries	While Odisha has been the “destination of choice” for units in the metal and mining sector, the State Government has taken up concerted measures to bring in investments across a diverse set of sectors including Textiles and Apparels, Food Processing including sea food, Electronics and IT, Chemicals and Petrochemicals, Plastics, Tourism etc. The ultimate objective is to make Odisha the manufacturing powerhouse on the eastern sea-board of India.
4	State leading the role in development of enabling infrastructure	<p>The state has invested significantly in developing and upgrading the industrial parks, regions and clusters to support industries in their growth. Dedicated manufacturing industrial zones for focus sectors like Aluminium park, Mega food park, Sea food park, Electronics manufacturing cluster, PCPIR, Plastics park, Textile park etc. have been developed with necessary infrastructure and provision of water and electricity connections at the factory doorstep.</p> <p>The state also has an extensive network of roads and railways that provide for efficient movement of goods throughout the state and to the hinterlands of the country. The Biju Expressway is a key road network that connects North-Western Odisha to Southern Odisha.</p> <p>Further, Odisha has the advantage of being strategically located with a 480 kms long coastline. Currently, the state has 3 operational large ports at Paradip, Dhamra and Gopalpur.</p>

S.No.	Area	Description
5	Effective investor facilitation through GO-SWIFT 2.0	<p>IPICOL, the investment promotion agency of Government of India leverages technology to provide 24x7 assistance to investors throughout the investment cycle from prospecting to after-care services. The GO-SWIFT single window system developed by the state received silver prize under the National award for e-Governance.</p> <p>The new GO-SWIFT 2.0 enables 52 services under 18 departments online under a single window. Some of the key features of the new system include:</p> <ul style="list-style-type: none"> • Single Common Application Form (CAF) for all pre-establishment approvals. • Introduction of a one-time payment for multiple services with trickle-feed mechanism • Edit functionality before payment • Archive facility to store and retrieve documents • Grievance Redressal Mechanism for both Non-Industry and Industry <p>The new GO-SWIFT 2.0 provides enhanced functionality and makes the entire process even more hassle-free, responsive and transparent.</p>
6	Establishment of District Investment Promotion Agencies and regular industry care meetings in districts to resolve issues at the local level	<p>A team of senior Government officials under the Chairmanship of Principal Advisor to the Honourable Chief Minister of Odisha are entrusted with the task of regularly visiting districts and meet with Industry representatives to understand urgent issues that needs to be resolved and provide aftercare services. In FY 2020-21, 12 districts were covered in the Industry care meeting where 131 issues from 63 industries were discussed and resolution was sought. And in FY 2021-22, 7 districts were covered in the Industry Care meeting where 180 issues from 63 industries were discussed and resolution was sought. The system of field/district visits has also helped in gaining investor trust.</p> <p>Another recent measure to further strengthen the district team and help achieve resolution of issues at the district level itself is the establishment of District Investment Promotion Agency (DIPA) teams under the chairpersonship of District Collectors. DIPA teams are now operational in 10 districts of the state. One of the key roles of DIPA is to ensure timely resolution of issues raised by industries and provide aftercare services. The primary role of DIPA includes</p> <ul style="list-style-type: none"> • Land bank identification and development • Facilitation & handholding of the industries • Investment promotion activities depending on the local sectoral strengths of respective districts • Advocacy for industrial infrastructure development such as roads, power supply, water supply etc. • Ensuring resolution of grievances and responding to the queries of potential investors

S.No.	Area	Description
7	Ease of Doing Business (EoDB) and Minimizing Regulatory Compliance Burden (MRCB)	<p>The State Government has undertaken major reforms including digitization of application forms to avail G2B services, online fee payment system for most of the G2B services, auto-renewal of services being provided by labour department, establishment of commercial courts in major cities like Bhubaneswar, Sambalpur and Berhampur etc. under the ease of doing business framework.</p> <p>Apart from this, over 700 regulatory compliances pertaining to G2B services have also been eliminated under the minimizing regulatory compliance burden exercise.</p>
8	Timely amendment of Mineral Laws	<p>The Mineral Laws (Amendment) Act, 2020 was enacted to amend the Coal Mines (Special Provisions) Act, 2015 [CMSP Act] and the Mines and Minerals (Development and Regulation) Act, 1957 [MMDR Act]. The amendments in the Acts enabled following.</p> <ol style="list-style-type: none"> i. Allocation of coal blocks for composite prospecting license-cum-mining lease which will help in increasing of the inventory of coal, lignite blocks for allocation. Repetitive and redundant provision requiring previous approval of Central Government in cases where the allocation or reservation of coal/ lignite block has been made by the Central Govt. itself has been done away with. ii. Provided flexibility to the Central Govt. in deciding the end use of Schedule II and III coal mines under the CMSP Act. Companies which do not possess any prior coal mining experience in India can now participate in auction of coal blocks. iii. Methodology for auction of coal and lignite mines / blocks for sale of coal / lignite on revenue sharing basis under the CMSP Act and the MMDR Act was approved by CCEA on 20.05.2020 and order was issued on 28.05.2020. Salient features of the methodology are as under: <ul style="list-style-type: none"> - Bidders would be required to bid for a percentage share of revenue which would be payable to the State Government. - Applicable to fully explored as well as partially explored coal blocks under the CMSP Act and MMDR Act. Upfront amount is based on value of estimated geological reserves.

S.No.	Area	Description
8	Timely amendment of Mineral Laws	<ul style="list-style-type: none"> - Successful bidder shall be provided incentives for early production and for gasification or liquefaction of coal. Exploitation of Coal Bed Methane (CBM) is allowed. - There shall be no restriction on the sale and/or utilisation of coal from the coal mine. - Provides for relinquishment of coal block by the successful bidder of partially explored coal mine. Directions of the Central Government were issued to the Nominated Authority for conducting auction of 38 coal mines for sale of coal under the provisions of the CMSP Act and the MMDR Act. After completion of all the necessary processes, Commercial Mining was launched on 18.06.2020.
9	Start-up Odisha: Boosting Innovation	The Odisha Start-up Policy launched on 29th August 2016, with an objective of developing a world class 'Start-up Hub' in Odisha and to create an enabling environment and supporting eco-system that facilitates at least 1,000 Start-ups and bringing the State amongst the top three start-up hubs. Till date, 1243 Start-ups have been recognised in the State, out of which over 33 per cent are led by women entrepreneurs. The state has registered 21 Incubators and 15 Nodal agencies under the Odisha Start up Policy and has sanctioned 216 financial assistance to Start ups and incubators. The State Government has also notified establishment of Odisha Start-up Hub (O-Hub) at Bhubaneswar to provide a world class incubation and co-working facility to state based Start-ups.
10	Odisha Apparel Policy – 2016: Promoting employment generation through skill development	To promote employment generation in Odisha and to encourage the return of migrant workers employed in different textile hubs across the country, special emphasis is given to encourage investors to set up Garment manufacturing units, employment incentive is being provided to the units under "Odisha Apparel Policy - 2016". One Incubation Centre is going to be functional very soon to boost the Start Ups in Apparel Sector. The Apparel Training Design Centre at Bhubaneswar with its five satellite centres are functioning at different parts of the state for conducting skill development courses for creating better employment opportunities to the unemployed youth. Further, National Institute of Fashion Technology, Bhubaneswar has been providing fashion education and platform for Research & Training in Fashion Technology and to create employment opportunities for youths/artisans for about ten years now. The efforts in this area have started bearing fruit. As a result of this, several new enterprises have come up with huge employment potential.
11	Faster access to electricity connection	Government of Odisha launched one common portal "Mo Bidyut" on 19th October 2020 for providing new connection within 48 hours covering domestic, GPS, SPP, Pumping and Agricultural category of consumers having load up to 5 Kilowatt. 340 numbers of new service connections released and 14 number of applications in process.

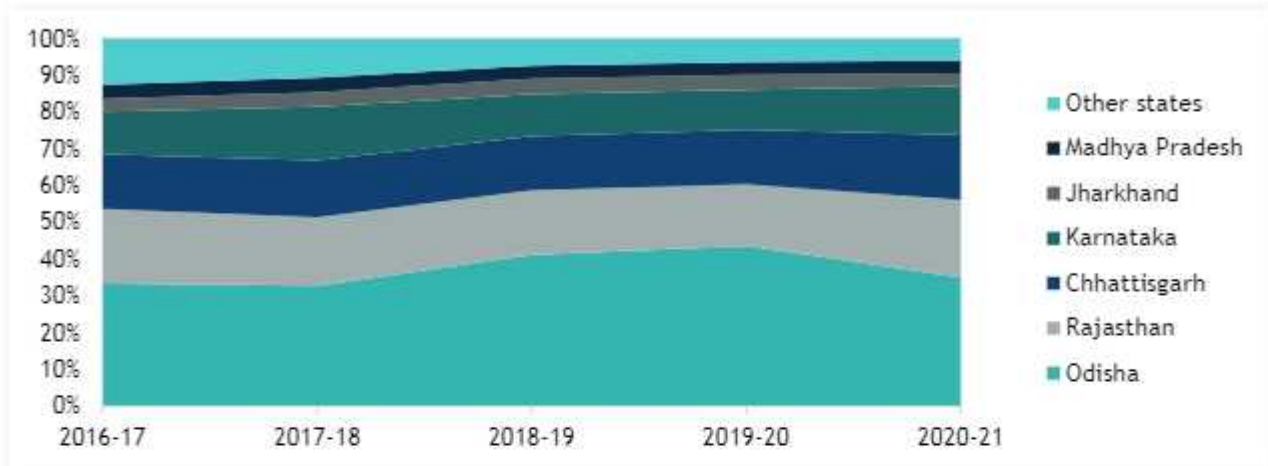
3.3. MINING SUBSECTOR IN ODISHA

3.3.1. Odisha contributes the largest value of mineral production (excluding fuel oil and atomic minerals) in the country (Figure 3.3). It is endowed with rich mineral resources with a variety of metallic and non-metallic minerals that include Chromite, Bauxite, Graphite, Iron-ore, Manganese ore and many more. The mining and quarrying sub-sector contributed 8.29 per cent of state GVA (relative to 2.26 per cent at the all-India level) as per the advance estimates (AE) for 2021-22 at current prices.

Fig 3.3 Mining Sector in Odisha



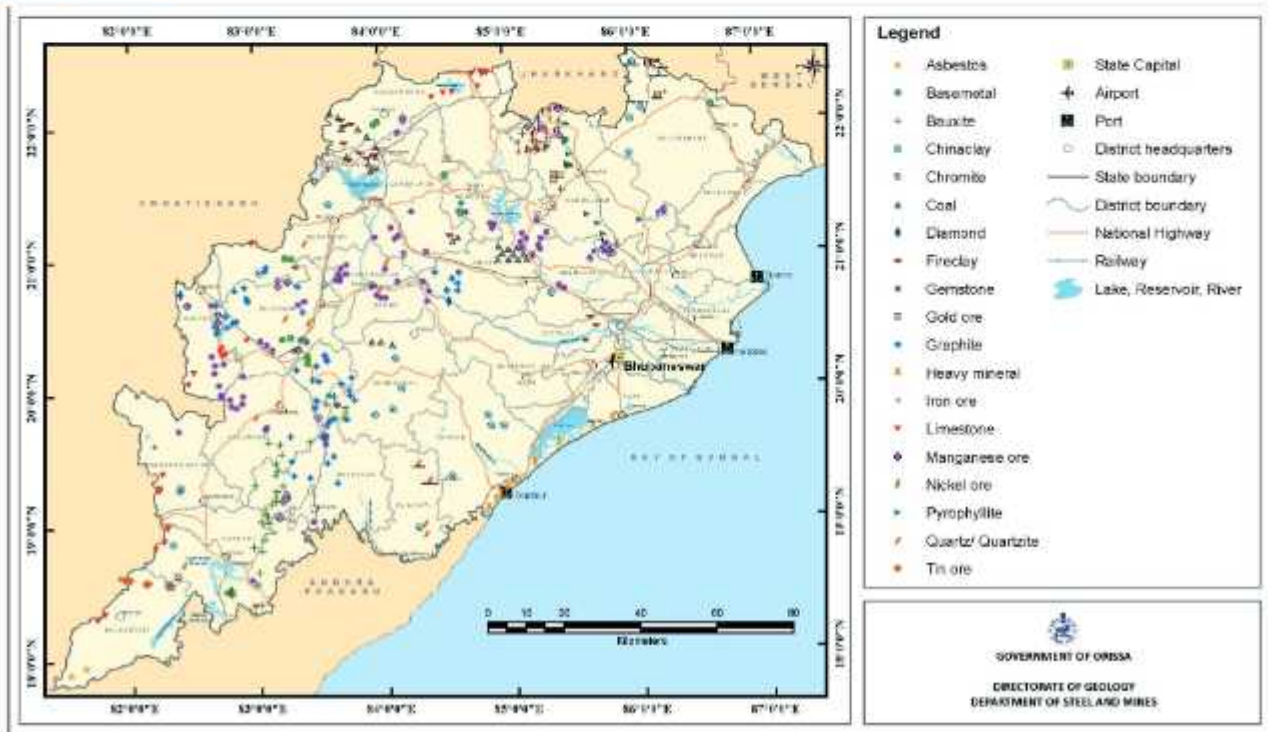
Fig 3.4 Share of selected states in value of mineral production in India



Note: Data excludes fuel oil and atomic minerals
Source: Based on data from Monthly Statistics of Mineral production, IBM Nagpur

3.3.2. In terms of reserves in India, Odisha accounts for 96 per cent of Chromite, 92 per cent of Nickel, 51 per cent of Bauxite, 33 per cent of Iron ore, 43 per cent of Manganese ore and 24 per cent of Coal reserves in the country. Figure 3.5 shows the mineral map of Odisha as of 2011.

Fig 3.5 Mineral Map of Odisha (2011)

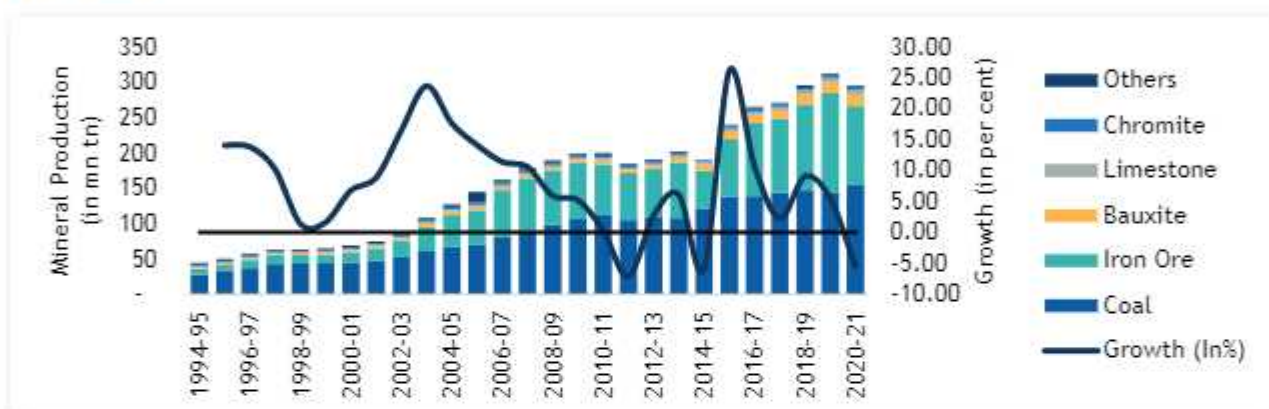


Source: Directorate of Geology, Department of Steel and Mines

I. Mineral production

3.3.3. Of the total mineral production in Odisha, Coal and Iron Ore collectively constituted over 90 per cent in 2020-21. In Figure 3.6, mineral production for Odisha since 1994-95 is presented. Until 2010-11, the mineral production continued to grow consistently year after year. Since then, for few years, the State experienced contraction in mineral production such as in 2012-13, 2014-15, and in 2020-21 due to Covid-19. On an average since 2011-12, the mineral production has grown at 4.4 per cent annually relative to 10 per cent growth in the period before that (since 1994-95).

Fig 3.6 Mineral Production in Odisha (1994-95 to 2020-21)



Source: Department of Steel and Mines, Odisha

3.3.4. Odisha is the leader in the production of several minerals such as Bauxite and is the only producer of Chromite in the country (data for 2020-21). As per Indian Bureau of Mines, the State contributed 35.07 per cent of the total mineral production in the country. Total production of different minerals and their value is provided in Table 3.3. Recently, Government of India auctioned in the month of February 2022, 10 coal mines out of which four belonged to Odisha, i.e. Bankhui, Bijahan, Meenakshi and Utkal C.

Table 3.3 Production and value of major minerals in Odisha (Production in Lakh tonnes, Value in INR Crore)

Minerals/ Ores	2017-18		2018-19		2019-20		2020-21	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
Iron ore	1049.8	19947.0	1209.7	25863.6	1424.6	25133.8	1126	25038.0
Chromite	36.5	3647.9	40.7	3934.3	39.2	1179.8	27.9	1102.0
Coal	1433.3	12899.0	1453.9	15992.9	1428.0	NA	1539.4	NA
Bauxite	113.7	1085.5	154.2	1002.1	154.8	185.6	156.8	338.0
Limestone	51.1	209.6	50.6	173.5	56.5	0.5	71.7	0.4
Graphite	0.2	1.0	0.6	17.5	0.7	1.8	0.2	3.6
Manganese ore	5.4	647.8	4.8	865.4	5.4	192.1	5.0	94.1

Source: Directorate of Mines, Odisha

II. Production of Iron and Steel

3.3.5. Odisha stands as the largest steel and stainless-steel producer in the country. As many as 35 Steel Plants (MoU route, signed) and one Pellet Plant have commenced partial/full production. At present, the installed capacity of MoU-based Steel Plants is 25.27 MTPA, an increase of around 20 per cent over the last five years. Apart from these, 39 iron ore-based steel units have come up through the non-MoU route out of which 15 (installed capacity of 7.61 MTPA) are already in production. Further, a few sponge iron units and pellet plants have been established in the state, essentially utilising the vast iron ore resources in the state for value added products; these account for annual production capacity of around 0.49 MTPA.

3.3.6. Government of Odisha has implemented the policy of Long-Term Linkage (LTL) for supply of iron ore, chrome ore, bauxite ore and other minerals to the units located in Odisha through Odisha Mining Corporation Limited. To make iron-ore available to the end user units, Government have also implemented the pre-emption policy, mandating the holders of standalone iron ore leases to sell at least 50 per cent of their production to the state-based units. The aforesaid projects have been facilitated as part of the mineral development policy of the State Government with the aim of pursuing value additions, mass employment generation and welfare-oriented revenue collection.

3.3.7. There are 50 (35 MoU based and 15 non-MoU based) steel plants with total installed capacity of around 33 MTPA in operation which is one fourth of the country's total installed capacity (Table 3.4). The State Government has taken initiatives in the area of metal manufacturing to develop downstream and ancillary units and accordingly, Industrial Promotion Resolution has been suitably modified to attract more such units to the state. Kalinga Nagar is slated to be a manufacturing hub in the state. The National Steel Policy, 2017 envisages an increase in per capita steel consumption from the present level of 72 Kg. to 158 Kg. by 2030. The State is aiming to contribute 100 million tonnes to the national target. Capacity enhancement is under process by Tata Steel (Kalinga Nagar, Duburi) from 6MTPA to 8MTPA, Jindal Steel & Power Limited from 6 MTPA to 25.20 MTPA, Bhushan Steel & Power Limited from 2.8 MTPA to 15 MTPA and Rungta Mines Limited from 2 MTPA to 8.45 MTPA.

Attracting downstream and ancillary units remain the core focus towards diversification

Table 3.4 Status of Iron-ore based Industrial units in Odisha - capacity and production (in Million Tonnes)

Company type	MOU/Approved	Installed capacity (MTPA)	Annual production 2019-20	Annual production 2020-21
Steel				
MoU	101.32	25.27	15.03	16.10
Non-MoU	43.99	07.61	4.62	4.40
Total steel	145.31	32.88	19.65	20.50
Sponge iron	-	15.29*	7.67	7.87
Pellet	41.30	29.80	22.34	22.87

Note: *Estimated capacity

Source: Department of Steel & Mines, Government of Odisha

III. Production of Aluminium

3.3.8. As an intermediate good, the traditional and ever-expanding newer uses of aluminium are wide ranging – from food packaging to aircrafts and defence equipment. Odisha is the preferred location for aluminium production because of the State's position as the largest producer in India of Bauxite, the main raw material, as also comfortable power availability. Key players in Aluminium production are operating in the State. Private sector players are taking the leading role. Unit-wise aluminium production in Odisha is given in Table 3.5.

Table 3.5 Aluminium Production in Odisha (in lakh mt.)

Name of the Company	Up to Dec 2020	Up to Dec 2021
NALCO	3.06	3.43
BALCO	4.26	4.37
HINDALCO	9.13	9.68
VEDANTA Ltd.	10.13	12.52
Total	26.58	30

Source: Monthly Summary Report, Ministry of Mines, December 2021

3.3.9. To promote downstream and ancillary industries, NALCO has committed 50,000 tonnes of hot metal to the Aluminium Park at Angul, which has been established in Joint Venture (JV) mode with IDCO. More recently, the Vedanta group has also partnered with IDCO in 2021 to set up another Aluminium Park at Jharsuguda to which it has committed to supply 3 lakh mt. of aluminium.

3.3.10. The major facilitation measure in the mining subsector, which also incorporates improved governance, is the i3MS. Steel & Mines Department has implemented the IT based mineral administration through a software application named Integrated Mines and Mineral Management System (i3MS) to bring in more transparency in the mineral transactions in the State and to ensure proper monitoring and supervision of the same. This technology intervention caters to the 'Ease of Doing Business' in mining sector and helps monitoring various activities for extraction to consumption of the minerals at the end-use industries. The system also facilitates online vehicle tracking, issues of e-permit and regular surveillance. Steps are also being taken to adopt Drone Technology, Web-casting methodology for further improving the system of i3MS. Major achievements of i3MS are:

- More than 91,777 user registrations in i3MS
- INR 59,245.81 crore worth of Mining revenue collected through the system.
- INR 325.06 crore of User fees and INR 11.66 Crore of Application fees collected.
- More than 9.04 lakh e-permits and 7.42 crore e-passes issued.
- 964 numbers of electronic weigh bridges integrated with i3MS for online mineral weighments.

IV. Employment in the mining sector

3.3.11. As per PLFS 2019-20, nearly 0.16 per cent of total workforce in Odisha were employed in mining sector. In contrast, as noted in Table 3.1, mining and quarrying constitute nearly 8 per cent of total GSVA in 2021-22. Therefore, while sector contributes significantly to value add, it does not proportionately contribute towards employment. It is due to capital intensive nature of the sector. The trend is not specific to Odisha. It is prevalent in all states in India.

3.3.12. In absolute terms, mining sector generated different categories of employment including unskilled or semi-skilled labour. By the end of 2020-21, around 61,400 workers were employed directly in major mineral activities. Coal mining directly employed nearly 21,890 workers followed by iron ore (21,670 workers), chromite (7,690 workers) and Manganese (3,900 workers).

V. Mineral Revenues

3.3.13. Mining also generates revenues for the government at both the central and state levels. For the state government, minerals generate (i) statutory revenues from royalties, rent etc, (ii) profits and interest income received from public enterprises functioning in the sector. As Odisha is a mineral rich state, it contributes substantial amount of revenues for the State government. The production, dispatch of minerals, and collection of mineral revenue in Odisha from 2016-17 to 2020-21 is presented in Table 3.6.

Table 3.6 Production and dispatch of minerals and revenue collection - 2016-17 to 2020-21

Year	Production (In million tonnes)	Dispatched (in million tonnes)	Revenue collection (INR Crore)
2016-17	264.84	285.25	4925.66
2017-18	270.84	287.67	6130.97
2018-19	295.45	310.08	10479.18
2019-20	312.60	313.16	11019.86
2020-21	294.80	320.43	13918.20

Source: Directorate of Mines, Odisha

3.3.14. In 2020-21, it is estimated that State collected INR 13,918 crore from minerals. The State's total revenue receipts in 2020-21 as per revised estimates were INR 1,07,200 crore. This makes mineral revenues 13 per cent of total revenue receipts. This reflects the importance of mineral revenues to the State Government fiscal management and the resources available for development expenditure.

3.3.15. It can be noticed from Table 3.6, that there was a substantial jump in 2018-19 in mineral revenues. This was primarily a consequence of the 2015 and 2016 amendments of the Mines and Minerals (Development and Regulation) Act which led to revision in royalties and collections for the District Mineral Fund.

3.3.16. Mineral revenues have played an important role in State and allowed fiscal space to undertake developmental intervention. Post June 2022, GST compensation cess may be discontinued. As per 2021-22 Budget Estimates,

GST compensation cess constituted nearly 10 per cent of revenue receipts. Considering expected impact on state finances, mineral revenues are one of the potential non-tax revenue sources that could mitigate the fiscal impact. As per the estimates available up to December 2021, total mineral revenues in 2021-22 was INR 32,485 crore. This is a substantial jump in mineral revenues which allows the state to direct spending in development sector. However, infrastructural capability to handle further cargo movements as well as other associated facilities may come on the way to harness the sector on a short time. Environment, inter-generational equity and non-replenishable nature of the sector are other important considerations.

VI. Mining and its impact on Forest Cover

3.3.17. Table 3.7 shows the active mining leases for various minerals from 2017-18 to 2020-21. Worldwide mining activities are considered to be key anthropogenic activities that causes forest cover loss. The deforestation can go beyond the lease boundaries such as land-use development, urban expansion, development of commodity supply chain and discharge of mine waste and spills.

3.3.18. However, as mentioned above, there are potential environmental impacts too such as forest cover loss. It would therefore be important to consider these environmental implications and built-in appropriate mitigation measures such as proportionate afforestation to neutralise the environmental impacts.

Table 3.7 Details of mining leases (operational) during 2017-18 to 2020-21

Mineral Name	2017-18	2018-19	2019-20	2020-21
Bauxite	2	4	5	8
Chromite	8	11	10	24
Coal	-	-	29	0
Chromite and pyroxenite	1	1	1	0
Dolomite	2	3	2	0
Iron and manganese	18	21	11	14
Iron Ore	31	39	29	62
Limestone	2	3	2	0
Limestone and dolomite	7	7	5	8
Manganese ore	11	13	6	18
Sand (Stowing) + Mineral sand	3	4	2	3
Iron and bauxite	2	2	2	2
China clay + Gemstone	1	1	4	0
Pyrophyllite and quartzite	1	1	9	0
Graphite	1	1	6	0
Total	90	111	121	139

Source: Department of Steel & Mines

VII. Mining and local development

3.3.19. As per National Steel Policy, 2017, India plans to increase crude steel capacity by 300 MT by 2030. Odisha would be expected to play important in supplying the key raw material, iron ore. This is expected to imply significant growth in mineral productions in the coming years. However, it is essential that increased extraction of natural resources also trickles down to the local communities.

3.3.20. District Mineral Foundation (DMF) Trusts were constituted in all 30 districts with the Collector as the Chairperson of the Trust and with other designated members, like MP and MLAs of mining areas. The objective of the DMF is to work for the interest and benefit of the person and areas affected by mining related operations. In case of all mining leases executed before 12th January 2015 (the date coming into force of the MM(DR) Amendment Act, 2015 the mining lease holders of major and minor minerals will contribute to DMF at the rate of 30 per cent of royalty payable. Where mining leases are granted after 12th January 2015 by means of auction, the rate of contribution payable is at the rate of 10 per cent of royalty.

The contribution is to be utilised for development and welfare of the areas and people affected by mining related operations in the Districts.



3.3.21. Funds of DMF Trusts are to be utilised for implementation of permissible activities, high priority activities and other priority activities-as specified in Rule 10 of the ODMF Rules. Such high priority activities include projects relating to drinking water and sanitation, health care, education, welfare of women and children, skill development and environment. Similarly, activities under other priority include projects relating to physical infrastructure like roads, irrigation and energy, watershed development and afforestation.

3.3.22. The major mineral resources districts namely- Angul, Jajpur, Jharsuguda, Keonjhar, Sundergarh, Koraput, Rayagada and Mayurbhanj have considerable amount of DMF contribution (99 per cent of the total accrual), which are used in implementation of work/ projects for the interest of persons and areas affected by mining related operations. The DMF Rules are framed by the Steel and Mines Department. The utilisation of DMF funds and project identification and recommendations to DMF Trust Boards for sanction is overseen by Planning & Convergence Department. There is a Nodal Officer in the P & C Department for co-ordination activities. There is a State Level monitoring Committee headed by Chief Secretary with Development Commissioner as Vice Chairman and Secretaries of other Line Departments as Members to issue directives or advisories to the Trust as per the rules.

3.3.23. Although INR 12513.36 crore (cumulative till end of 2020-21) has been collected in various DMFs of the state, but as of now, half only has been spent (INR 6094.46 crore). Local governments need to be capacitated on requisite skills such as budgeting, planning, financial management, procurement, investment management skills so that resources are spent with maximum impact.

VIII. Regulatory Framework

3.3.24. Mining sector has been subject to various regulatory changes. Recently, in March 2021, Government of India passed Mines and Mineral Development and Regulation Act Amendment 2021. It is expected that this would boost the mining sector. Firstly, captive miners (miners who use mineral for own consumption) were previously only allowed to use extracted mineral for own consumption. With the amendment, captive miners are now allowed to sell up to 50 per cent of their production post meeting the requirements of end-use plant and payment of additional royalty to the State government. This is expected to boost mineral production as captive miners would have more incentive to leverage the allocated mines more effectively. Secondly, a fixed additional royalty has been setup for central public sector enterprises to be paid to the State Government in case there is a need to extend the

lease period. However, it is not clear whether it would raise the mineral revenues for the State Government since re-auction could potentially raise more revenues from the same mines.

IX. Mineral exploration

3.3.25. Geological surveys and exploration activities are regularly carried out by Directorate of Geology, Odisha, and Odisha Mineral Exploration Corporation Ltd. (OMECL). The former carries out these activities for both major and minor minerals, while the latter is primarily concerned with major minerals. The Directorate has taken up twenty-six (26) investigation programmes (10 at G-2 level, 12 at G-3 and 4 at G-4 level) for minerals like Coal, Manganese, chromite, limestone, graphite, China Clay, Fire Clay, decorative stones, pyrophyllite, quartz and quartzite in the state for upscaling of resources. Major achievements of the exploration programme are provided in the annexures.



3.3.26. During 2020-21, the Directorate finalised Geological Report of 7 auctionable mineral blocks and submitted to DM(O); 3 Mineral Blocks have been identified for upgradation; its Technical Committee evaluated 3 Geological Reports of Mining leases which will be auctioned; approved 2088 mining plans of minor minerals; its Petrological laboratory completed petrographical studies of 74 samples, also undertaking grain count of 5 heavy mineral composite samples; and its Gem testing laboratory certified 185 precious stones. Highly sophisticated X-ray Diffraction and X-ray Fluorescence testing equipment have been installed in Directorate of Geology for identification of ores and minerals.

3.3.27. During 2020-21, 21 investigation reports were approved. The in-house investigation programme included: exploration for coal in Dip side of block-IV, IB valley coal field, Jharsuguda district (G 2 Level); exploration for graphite around Beheramundar, Bolangir district (G 2 Level); prospecting of Graphite around Bandhabhuin, Dhenkanal district (G 3 Level); prospecting for Decorative & Dimension stone around Garabandha, Gajapati district (G 3 Stage); prospecting for artisan grade stone & other minor minerals around Mathura, Ganjam district (G 3 Stage); investigation for Quartz & Quartzite around Kalimela, Malkangiri district (G 3 Stage); investigation of Limestone around Bimta, Sundargarh district (G -4 Level); exploration of Graphite around Faqparha, Angul district; investigation for Manganese around Malda Manganese Mines of Sundargarh & Keonjhar district; and investigation of Base metal around Bhikbahali, Balangir district. It also outsourced investigation programmes for iron ore in two blocks of Sundargarh district and one block in Keonjhar district along with exploration for graphite in one block of Rayagada district.

3.4. MANUFACTURING SUBSECTOR IN ODISHA

3.4.1. As noted above, manufacturing sub-sector is largest sub-sector in Odisha. Given that Odisha is a mineral rich state, the sub-sector also is concentrated in mineral based manufacturing such as Basic metals and Coke and refined petroleum products. Table 3.8 shows that 76 per cent of Odisha's total manufacturing output is generated by two products namely Basic metals, and Coke and refined petroleum products. When compared with other states, the concentration emerges even more distinctly.

Table 3.8

Share of various groups in Odisha's total manufacturing output, 2018-19 (in per cent)

Manufacturing group	Share in Total Manufacturing Output of the State		
	Odisha	Major states*	Major States' excl. Odisha, Chhattisgarh & Jharkhand
Basic Metals	56.20	19.73	11.43
Coke & Refined Petroleum Products	20.14	12.07	12.77
Chemicals & Chemical Products	4.89	6.07	6.75
Other Non-Metallic Mineral Products	4.67	4.53	4.25
Food Products	4.18	14.04	15.74
Electrical Equipment	2.26	3.01	3.45
Paper & Paper Products	1.30	1.39	1.55
Beverages	0.60	1.06	1.16
Fabricated Metal Products, Except Machinery & Equipment	0.40	2.19	2.31
Motor Vehicles, Trailers & Semi-Trailers	0.10	7.08	7.29
Textiles	0.08	3.81	4.56
Machinery & Equipment N.E.C.	0.14	3.58	4.15
Rubber & Plastics Products	0.35	3.27	3.84
Pharmaceuticals, Medicinal Chemical & Botanical Products	0.02	3.24	3.67
Other	4.67	14.94	17.08

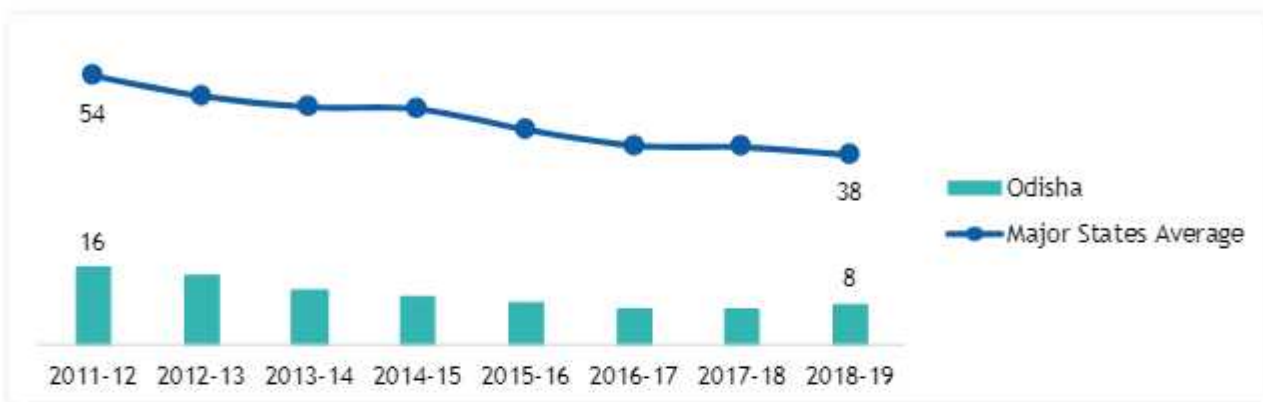
*Note: Refer to footnote 1 of this chapter

Source: Annual Survey of Industries 2018-19, Ministry of Statistics and Programme Implementation, India

3.4.2. Manufacturing sector in other non-mining-based states reflect more diversification. Commodities such as food products, motor vehicles, textiles contribute relatively more to the manufacturing output. There are benefits to diversify manufacturing to other sectors. This is majorly due to two reasons of which one is purely economic and other is social. Firstly, there are sectors which has high Gross Value Add/Output ratio but currently does not play major role in the State. For example, chemicals, pharma, tobacco. Gross Value Add is estimated by deducting all inputs from outputs. Higher is the GVA/Output ratio more efficient is the sector. Secondly, there are sectors which are more employment generating per-unit of output but remain small relative to other States. In Odisha, sectors such as basic metals, coke are disproportionately contributing to the manufacturing output but are also highly capital-intensive.

3.4.3. As shown in Figure 3.7, average number of people engaged per INR 10 crore invested capital in Odisha is lower than for other states. While it is true that there is a declining trend for other states too, diversification in other sectors can help moderate the declining trend in Odisha. This is especially critical to boost employment in the state given the pandemic and job-related scenario.

Fig 3.7 Average number of persons engaged per INR 10 crore of invested capital in Odisha and Average of 18 Major States* (2011-12 to 2018-19)

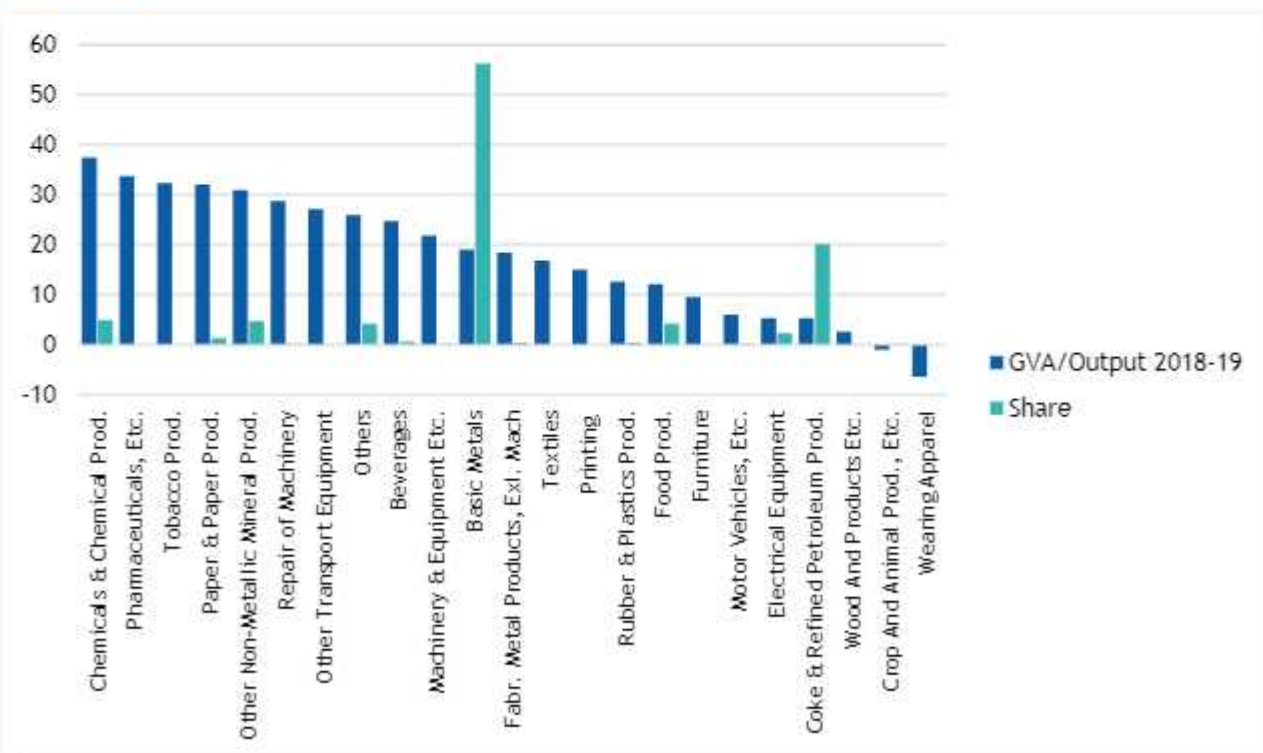


Note: * - Refer to footnote 1 of this chapter

Source: Annual Survey of Industries 2018-19, Ministry of Statistics and Programme Implementation, India

3.4.4. Based on Figure 3.1 and Figure 3.8, we can infer that sector with high GVA/Output and also sectors with high labour/capital are some of the sectors where state can promote investment and make the manufacturing sector more inclusive. It is noteworthy to mention that Odisha has taken several initiatives which has succeeded in bringing in investment in these sectors.

Fig 3.8 GVA/Output and per cent Share in total output of Manufacturing in Odisha



Source: Annual Survey of Industries 2018-19, MoSPI, India

Fig 3.9

Labour/Capital and Output Share for Manufacturing Industries in Odisha 2018-19



Source: Annual Survey of Industries 2018-19, MoSPI, India

3.4.5. Government of Odisha is giving special emphasis to encourage investors to set up Garment manufacturing units. Government is providing employment incentive to the units under "Odisha Apparel Policy – 2016". One Incubation Centre is going to be functional very soon to boost the start-ups in Apparel Sector. The Apparel Training Design Centre at Bhubaneswar with its five satellite centres are functioning at different parts of the state for conducting skill development courses for creating better employment opportunities to the unemployed youth. Further, National Institute of Fashion Technology, Bhubaneswar has been providing fashion education and platform for Research & Training in Fashion Technology and to create employment opportunities for youths/artisans for about ten years now. The efforts in this area have started bearing fruit; two major players in organized apparel manufacturing, i.e. Shahi Exports and Madura Garments have started operations in Odisha.

3.5. INDUSTRIAL DIVERSIFICATION IN ODISHA

3.5.1. Odisha is endowed with vast natural resources. It accounts for country's 96 per cent Chromite, 92 per cent of Nickel, 51 per cent of Bauxite, 33 per cent of Iron ore, 43 per cent of Manganese ore and 24 per cent of Coal. Such natural endowment provides an advantage to Odisha to build its industries based on natural resources. However, to move to the next orbit of industrialization, there is a need to move to the next level of value addition by diversification. For example, downstream industries producing auto components, electrical machinery, engineering machinery, hot and cold rolled products, precision equipment, etc. would help in generating more value in the state

besides providing employment to large number of people. Diversification would also provide a risk protection as the industry will not be concentrated in one sector or dependent on one type of input. It would also reduce the regional concentration of industries as it would be broad based and need not be in the districts which are mineral rich or closer to mineral resources.

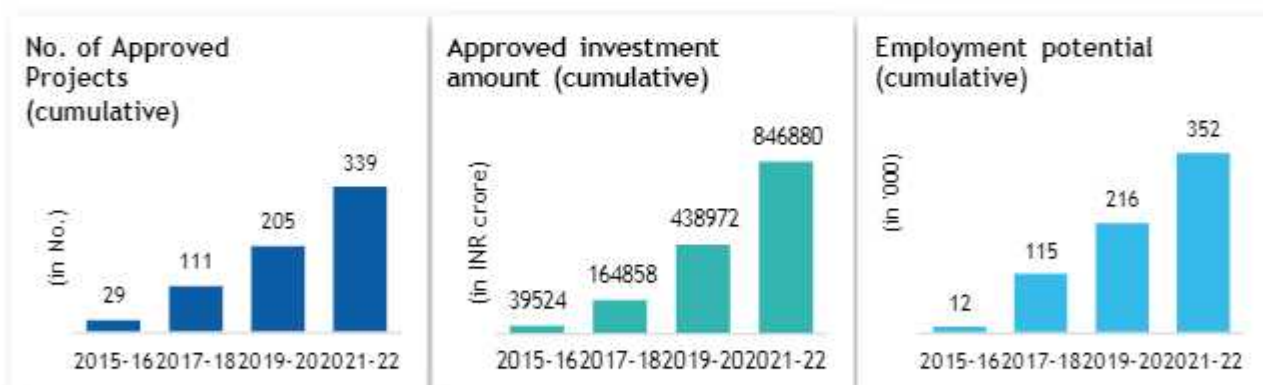
3.5.2. IPICOL is the nodal agency for the investment promotion and facilitation in the State. One of the major objectives of IPICOL is to support investors through Single window Clearance System. Odisha Government has implemented the Single Window clearance system to simplify the processes and expedite project approvals for investors.

I. Promoting diversification

3.5.3. The state has actively promoted diversification through enabling infrastructure and policies aided by online systems and best-in-class facilitation. The number of projects approved by State Level Single Window Clearance Authority (SLSWCA) increased significantly over a period. The number of projects approved in 2015-16 is 29. Total approved investment was of INR 39,524 crore with employment potential of 12,000 persons. By 2017-18, number of projects multiplied by more than three times and it reached to 111 with an investment amount of INR 1,64,858 crore. It has created an employment potential of 1.15 lakh persons. In 2019-20 the number of projected approved went up to 205. Cumulative approved investment amount was INR 4,38,972 crore and employment potential was 2.16 lakh persons.

Between 2015-16 to 2021-22 (until 4 February 2022), cumulatively 339 projects were approved, accounting for a cumulative project cost of INR 8,46,880 crore in 29 sectors. The employment potential of these 339 approved projects in 2021-22 is 3.5 lakh people.

Fig 3.10 Approved projects, investment and employment potential



Source: IPICOL, Odisha

II. Sectoral diversification: A window of opportunity

3.5.4. Sectoral diversification of the approved project shows that, over the years, a greater number of sectors are covered through the investment approval process. In 2015-16, through single window clearance, projects came in sectors such as Aluminium, Aluminium- Downstream, Cement, Coal washery, Food Processing, Infrastructure, Manufacturing, Minerals & Rare Earth, Power & Renewable Energy, Steel, Steel upstream, Textile & Apparel, etc.

Fig 3.11 Number of Sectors where investment approved



Source: IPICOL, Odisha

3.5.5. By 2021-22, there is a significant jump in the number of sectors where investments were approved. The sectors covered are: Aerospace & Defence, Agriculture & Fishing, Aluminium, Cement, Chemicals, Coke & Refined Petroleum Products, Fertilizers, Food Processing, Infrastructure, IT & ESDM, Logistics & Infrastructure, Manufacturing, Paper & Paper Products, Plastics, Power & Renewable Energy, Steel, Steel upstream, Steel Downstream, Textile & Apparel, Tourism.

3.5.6. In the intervening period between 2015-16 and 2021-22 investments were approved in a few more sectors such as Forest & Wood Base, Gems & Jewellery, Glass, IT & ESDM, Petroleum & Petrochemicals, Pharmaceutical, etc.

III. Spatial expansion: Bridging the regional gap

3.5.7. Historically, some districts in Odisha offered certain advantages over others. That has led to uneven spread of industries in the State. However, the growing infrastructure and facilities has helped the entrepreneurs to expand their geographical presence across different districts in the state.

3.5.8. Earlier most of the approved projects were concentrated in a few districts of Odisha. In 2018-19 approved projects are concentrated in 16 districts but in 2021-22 it has gone into 23 districts of Odisha.

Fig 3.12 Spatial dimension of approved investment



Source: IPICOL, Odisha

IV. Initiatives to promote downstream & ancillary industries

3.5.9. To promote downstream and ancillary industries, the following policy framework was put in place in the Industrial Policy Resolution of 2015. That was one of the critical factors in attracting more investment to the state.

Table 3.9 Policy initiatives to attract investment

Stamp Duty for Land Registration	<ul style="list-style-type: none"> Up to 100 per cent exemption for land allocated by the Government, IDCO and Industrial Parks
Interest Subsidy	<ul style="list-style-type: none"> 5 per cent per annum on term loans availed from PFIs/Banks for 5 years to a max of up to INR 1 Crore
SGST Reimbursement	<ul style="list-style-type: none"> 100 per cent SGST reimbursement for 7 years from the date of production on the net tax paid, cap of 200 per cent of cost of plant and machinery
Electricity duty	<ul style="list-style-type: none"> Exemption up to a contract demand of 500KVA/5 MVA for 5 years from commissioning for MSME/large industries
Anchor Tenant Subsidy	<ul style="list-style-type: none"> 25 per cent subsidy on cost of land and 2 years of additional SGST reimbursement
Special Incentives based investment made, location and employment generated	<ul style="list-style-type: none"> Reimbursement of Power Tariff for 5 years from the date of commissioning Training Subsidy - Reimbursement of INR 2,500 to INR 4,000 per person for new training and INR 1,750 to INR 3,000 per person for Skill Upgradation for 3 years

V. Technology for Investment Facilitation: GO SWIFT

3.5.10. The Government of Odisha has developed the online Single Window portal, GO SWIFT. This portal facilitates investors to do business with government. GO SWIFT is a key business reform undertaken by the State Government with the objective to provide all requisite information/clearances to investors in a hassle-free and paper-less manner. GO SWIFT has brought a revolution in the approval process. Now for 54 services from 18 State Government departments the process is made online, including online application submission, payment, tracking and processing of applications. The portal has undergone a revamp and some of the key features in the updated system include:

- Single Common Application Form (CAF) for all pre-establishment approvals
- Unified payment gateway with trickle feed mechanism
- Documents archive facility to store and retrieve documents
- Online Grievance Redressal Mechanism for both Non-Industry and Industry users
- Integration with the National Single Window System (NSWS)

3.5.11. The portal also serves as a repository of information as it provides updated information relating to latest rules, policy initiatives and reforms undertaken by the Government of Odisha to facilitate and handhold the investors.



3.6. INDUSTRY RELEVANT SKILL DEVELOPMENT



3.6.1. As the State economy diversify to other sectors, the demand for new kind of skills is likely to increase manifold that will be critical to cater expanding industrial base. Government of Odisha is currently taking several measures on that front. Odisha Skill Development Authority has been established to provide overall direction, guidance & implementation of skill development programs in the State by converging different sectors. The vision of the OSDA is:

- In a 3-year period, OSDA wants Corporate India to make a bee-line to Odisha, not just to hire but to “lock-in” talent. Young OSDA graduates should command a premium in the wage market.
- In a 5-year period, OSDA plans to skill around 15 lakh youth and ensure that Odisha’s young men and women across sectors become global preference. Nations of the world shall come to Odisha to hire.
- The Odisha model must be worth emulating in other parts of the world.

3.6.2. The reforms have led to 10 ITIs of the state securing place in India’s top 100 ITIs list selected by Union Ministry of Skill Development and Entrepreneurship. More than 1,70,000 graduates every year from 950+ training institutions in Odisha. Globally recognized Institutes of Higher Learning & Research including AIIMS, IIM, IIT, IIIT, CIPET, Institute of Chemical Technology (ICT) and Biju Patnaik National Steel Institute are present in Odisha. Bhubaneswar is emerging as knowledge hub in India. First-of-its kind World Skill Centre has been setup at Bhubaneswar.



I. Promotion of sunrise sectors

3.6.3. Keeping the futuristic perspective, Government of India has taken initiatives to promote sunrise sectors. Government of Odisha has set the vision and roadmap for the state to lead in areas of new economy such as blockchain, ML, AI etc. and setting up a “centre for new economy” in the state.

3.6.4. New Age Sector Industries such as Electric Vehicles, Manufacturing, Green Energy Equipment, Electronics, and Hardware manufacturing are being promoted. These industries are expected to contribute towards ancillary industries around them and thereby having a multiplier effect on employment, revenue and overall growth in the state. Special incentives have been designed to promote New Age Industries.

3.6.5. Recently, the Government of Odisha has come out with the Odisha Electric Vehicles Policy 2021. This policy coupled with Industrial Policy Resolution 2015, is aimed at promoting manufacturing and usage of EVs across vehicle segments in the state by facilitating appropriate ecosystem. The state is keen on promoting manufacturing of Electric Vehicles & its components including Batteries. The state has also put in measures to support the creation of jobs in driving, selling, financing, servicing, manufacturing, and charging of Electric Vehicles.

Odisha Electric Vehicles Policy 2021 aims to achieve adoption of 20 per cent battery electric vehicles in all vehicle registration by 2025

3.6.6. Over the last few years, there has been growing encouragement of local manufacturing of lithium-ion batteries and other EV components with policy measures such as the PLI scheme and proposals for manufacturing giga factories entering the fray. The Lithium-ion battery alone, for instance, may utilize minerals such as lithium, cobalt, aluminium, zinc, bauxite, manganese, nickel, and graphite depending on the cell chemistry employed. Odisha being one of the most mineral rich states in the country offers a great potential to EV and EV component manufacturers.

3.6.7. The primary aim of the policy is to accelerate the pace of adoption of electric vehicles in the vehicle segments especially in the category of two wheelers, three wheelers and LMVs. The policy focuses on driving rapid adoption of Battery Electric Vehicles to contribute a substantial percentage of all new vehicles in the years to come and bring about improvement in the air quality in Odisha in general and all major cities. The key objectives are:

- Promote use of Electric Vehicles across vehicle segments among public in state by facilitating appropriate ecosystem. The aim is to achieve adoption of 20 per cent battery electric vehicles in all vehicle registration by 2025
- Promote manufacture of electric vehicles and its components including battery in the state
- Promote innovation and facilitate Research and Development in the areas relating to Electric Vehicles and Battery
- Put in measures to support the creation of jobs in driving, selling, financing, servicing, manufacturing, and charging of electric vehicles.

3.6.8. Multiple incentives for manufacturing and purchase of EVs are included to develop a conducive ecosystem for the sector. Apart from this, it is also worthwhile to mention here that the EV and EV component manufacturing has been classified as a new-age industry in IPR. The Government of Odisha has recently come up with a special incentive package including attractive capital subsidy for investments over INR 300 Crores in the new age sectors including EV and EV component manufacturing. These incentives include:



- 30 per cent capital investment subsidy on investment made in Plant & Machinery, disbursed over a period of 10 years with no upper ceiling
- Reimbursement of Power Tariff of INR 2.00 per unit for all power consumed for a period of 7 years
- 100 per cent exemption from payment of electricity duty for a period of 7 years
- Reimbursement of 100 per cent of net SGST paid for a period of 7 years, overall limited to 200 per cent of the cost of plant and machinery
- 100 per cent exemption of Stamp duty and land registration charges
- 100 per cent reimbursement of ESI/EPF for 5 years, for skilled and semi-skilled workers, who are domicile of the state.

3.6.9. The process of industrialization in Odisha is back on track. Though the drawn-out battle with the pandemic is still ongoing, it has not proved to be a deterrent in recent times to new investments, additional employment, and greater income generation, unlike the situation a year ago. This is borne out by the new projects being cleared by the government and even commencement of the implementation process for some of them. For example, on January 10, 2022 inauguration of two new industrial projects and ground-breaking ceremony for 11 others (altogether entailing investment of INR 2,360 crore, with employment potential of 3200 persons) were performed by the Hon. Chief Minister of Odisha. The two projects inaugurated include a cement grinding unit at Jajpur and a bio-degradable tableware manufacturing unit at Balangir - estimated to involve an investment of INR 409 crore.

Other projects for which ground-breaking ceremony was conducted include three ethanol plants, two resorts and a logistic park.

3.6.10. Another development that may be mentioned in this context is the signing of an MoU by IPICOL and Gas Authority of India (GAIL) for cooperation in the areas of green hydrogen, green ammonia and renewable energy (solar /wind) for the production of eco-friendly fuels in Odisha.

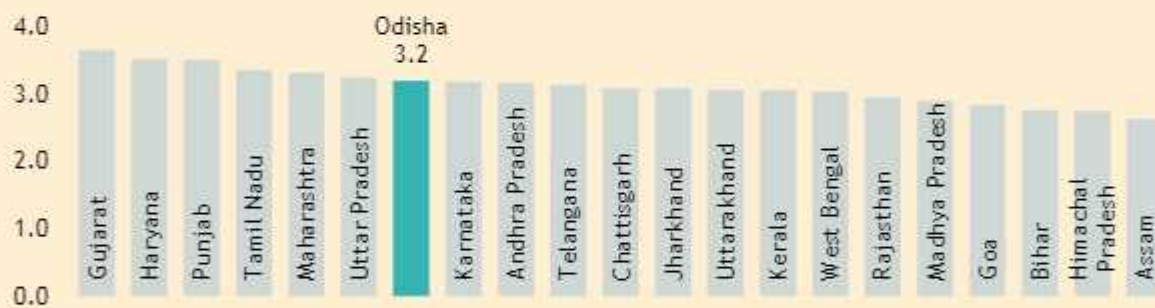
II. Efficient Logistics Infrastructure and Services in Odisha

Box. 3.2 Logistics Ease Across Odisha



Odisha stands tall in the Logistics Ease Across Different States (LEADS) index by jumping from 10th rank in 2019 to 7th rank in 2021. LEADS index, developed by Ministry of Commerce and Industry, GoI, assesses the efficiency of State's logistic ecosystem, and ranks them based on it. It's calculated considering 17 perception-based indicators across the 3 categories of Infrastructure, Services, Operating and Regulatory Environment along with 4 objective indicators.

LEADS Score (2021)



Source: LEADS 2021, Ministry of Commerce & Industry

The state recognizes the importance of efficient logistics for its growing economy and has been taking various initiatives in this regard. Such initiatives include setting up State Level Single Window Clearance Authority (SLSWCA) and District Level Single Window Clearance Authority (DLSWCA). Development of online application system GO SWIFT has further streamlined the application process associated with these authorities. Moreover, infrastructure development initiatives like Sagarmala have been gaining momentum in Odisha. With focus on port modernisation, port connectivity, port led industrialization and coastal community development, Sagarmala will not just help in improving Odisha's logistics ecosystem but also enable its emergence as India's gateway to South East Asia.

The figure below shows the 21 indicators and the corresponding scores of LEADS Index 2021 for Odisha.

Perception Parameters



- Quality of Road Infrastructure (3.28)
- Quality of Rail Infrastructure (2.97)
- Quality of Multi-Modal Terminal Infrastructure (3.28)
- Quality of Unimodal Terminal Infrastructure (2.91)
- Quality of Warehousing Infrastructure (2.81)
- Quality of Logistics Services (3.52)
- Capability of Logistics Service Providers (3.49)
- Reasonableness of Road Freight Rates (2.07)
- Reasonableness of Prices of Terminal Services (2.35)
- Timeliness of Cargo Delivery (Transportation) (3.18)
- Timeliness of Cargo Delivery (Terminal Services) (3.67)
- Availability of Mobile/ Internet Connectivity (3.62)
- Safety and Security during Transportation (3.04)
- Safety and Security at Terminals (3.51)
- Extent of Facilitation (3.17)
- Ease of Obtaining all Approvals (3.03)
- Efficiency of Regulatory Services (2.95)

Objective Parameters



- Range scaled EoDB ranks (1)
- Trade Infrastructure Export Subsidy (TIES) outlay (1)
- States' logistics enabling initiatives (2)
- Assessment of variables of logistics ease (3.67)

There are places where the State is trying to further improve its performance. The development of a State Logistics Master Plan for driving greater coordination between cross-sector implementing agencies for targeted outcomes would yield better result going ahead.

3.6.11. LEADS 2021 focussed on both international and domestic trade. The LEADS 2021 also introduced objective parameters in the index calculation relative to purely perception-based calculation in LEADS 2018 and LEADS 2019. These indicators included quality of logistics infrastructure, logistics services, operating and regulatory environment. Some of aspects covered included quality of roads, rail infrastructure, multi-modal terminal infrastructure, unimodal terminal infrastructure, warehousing infrastructure, capability of logistics service providers, reasonableness of road freight rates, reasonableness of prices of terminal services etc. Odisha has improved in ranking on LEADS Index from 10th in 2019 to 7th in 2021.

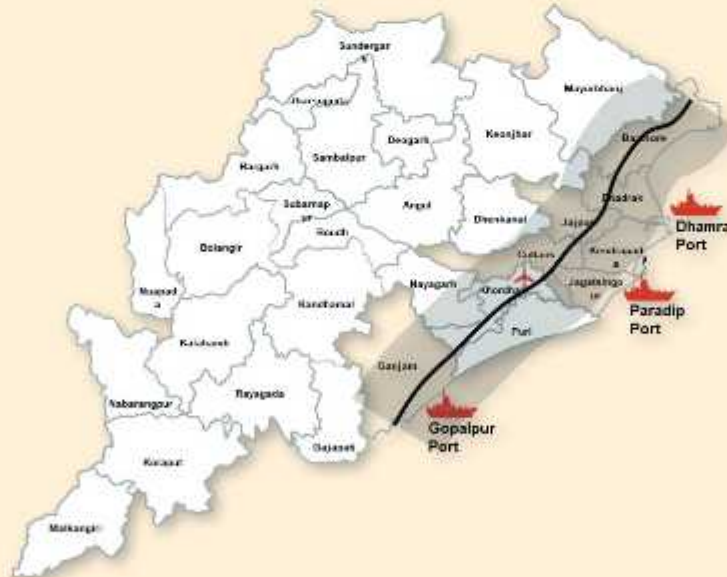
Box. 3.3 Paradip Port – Odisha’s gateway to maritime trade



Maritime trade of Odisha dates back to 800 BC or earlier. Odisha, then Kalinga, used the sea route to trade with South East Asian region, Indo China and China. Countries covered are Burma, Java, Bali, Malay peninsula, Cambodia, China and Sri Lanka. Kartik Purnima is the reminisce of that golden era.

Odisha is located in the east coast of India with a 480 kms long coastline. The state has enhanced its maritime trade and has access to East Asian and South East Asian markets. Currently, the state has 3 operational large ports at Paradip, Dhamra and Gopalpur.

Paradip is one of the major ports in the country. Despite the supply chain disruptions caused by the COVID-19 pandemic, Paradip achieved a record of handling of more than 100 million MT Cargo traffic for the last four consecutive years (2018-2021), exhibiting a growth of nearly 11 per cent.



There has been huge investment in Paradip Port infrastructure, including having deeper berths to accommodate longer and heavier ships, and completing a multipurpose berth to handle clean cargo including containers of 5 MTPA capacity. Furthermore, the port has recently concluded dredging of Mahanadi river mouth to ensure better navigability with a Least Available Depth of 3.5mtrs. Besides, to ensure contactless – just-in-time delivery, the port has installed Mobile X-ray Container Scanner system (MXCS), with a dual purpose of reducing physical examination and dwell time of containers. This has helped the port to diversify the products which now includes agro and marine products apart from the export of mineral and mineral based products.

The successful export of first non-basmati rice consignment from Paradip to Vietnam in May 2021 is a starting point that would facilitate the other states of east and north-east India in exporting agri-based products to the South and South-East Asian neighbours and beyond.

Investment in enhancing port infrastructure along with employment of skilled resources, has facilitated increased traffic volume and increase in port revenue. The Table shows the comparative performance of the major east coast ports in India. It is seen that Paradip has not only handled the highest cargo, but also has the highest average output per ship-berth-day in 2019-20.

Comparative performance of east coast ports (2019-20)

Port name	Share of Cargo Handled (In MTs)	Average Turnaround Time (In Days)	Average Output per Ship-Berth-Day (In Tonnes)
SMP (Kolkata Port)	17.3	3.17	7174
SMP (Haldia Dock Complex)	46.68	2.75	15192
Paradip	112.69	2.34	32001
Visakhapatnam	72.72	2.43	20032
Chennai	46.76	2	20340

Source: Compiled from Basic Port Statistics of India, 2019-20, Ministry of Port, Shipping & Waterways (Transport Research Wing), Government of India

The Dhamra port, run by the Adani Ports and Special Economic Zone Limited, handled 32.38 million metric tonnes of cargo in 2020-21. The Gopalpur port, run by the Shapoorji Pallonji group, has grown significantly in the past two years. It handled 7.79 million metric tonnes of cargo during the period Apr-Dec 2020, as compared with 5.55 million metric tonnes and 1.51 metric tonnes in 2019-20 and 2018-19, respectively. Dhamra and Gopalpur have significant expansion plans to boost their traffic handling capacity.

The three major ports connect to the global shipping lanes making Odisha as one of the most attractive investment destinations for exporters in the country. With the Government of Odisha's focus on port-led industrial development, the state has the potential to emerge as one of the leaders in global maritime trade.

III. Micro, Small and Medium Enterprises (MSME)

3.6.12. Micro, Small & Medium Enterprises (MSMEs) are the growth accelerators of Odisha, a major contributor to total exports and an integral part of the supply chain. MSME units are typically more labour-intensive than larger enterprises and hence key to generate employment. However, going by the number of MSMEs of Odisha registered under Udyam compared to other States of India, there is ample scope for further broad basing MSME units in the state. In recognition of these, the State Government has created adequate space for MSME development in IPR-2015 as also in MSME Policy 2016, followed by several sector-specific policy statements.



The State Government has created adequate space for MSME development in IPR-2015 as also in MSME Policy 2016, followed by several sector-specific policy statements.

3.6.13. During the year 2020-21, around 44,273 MSME units were set up with an investment of INR 1,887.79 crore, leading to employment generation for 1.19 lakh persons. This figure is lower than that for the previous year, indicating the recessionary impact of the pandemic induced slowdown. Altogether 4,93,625 MSMEs have been established in Odisha with an investment of INR 23,689.31 crore and employment of 18,11,316 persons till March 2021.

Table 3.10 MSME units set up in Odisha (up to 2020-21)

Category	Number of units set up	Investment (in crore)	Employment (persons)
Repairing and services	3,10,877 (62.8)	15,332.24 (64.7)	9,06,158 (50.0)
Food and allied	45,635 (9.2)	2,474.97 (10.4)	2,14,213 (11.8)
Misc. manufacturing	43,700 (8.9)	1,628.30 (6.9)	1,47,704 (8.2)
Engineering and metal based	19,712 (4.0)	1,416.66 (6.0)	1,24,440 (6.9)
Textiles	22,523 (4.6)	5,18.06 (1.5)	92,716 (5.1)
Forest and wood based	24,215 (4.9)	361.54 (3.5)	87,677 (4.8)
Glass and ceramics	12,056 (2.4)	834.68 (3.5)	1,53,740 (8.5)
Chemical and allied	4,855 (1.0)	373.48 (1.6)	31,104 (1.7)
Paper and paper products	4,990 (1.0)	238.51 (1.0)	24,115 (1.4)
Electrical and electronics	2,741 (0.6)	154.71 (0.7)	12,405 (0.7)
Rubber and plastics	2,326 (0.5)	337.33 (1.4)	13,582 (0.7)
Livestock and leather	785 (0.2)	18.33 (0.1)	3,462 (0.2)
Total	4,93,625 (100)	23,689.31 (100)	18,11,316 (100)

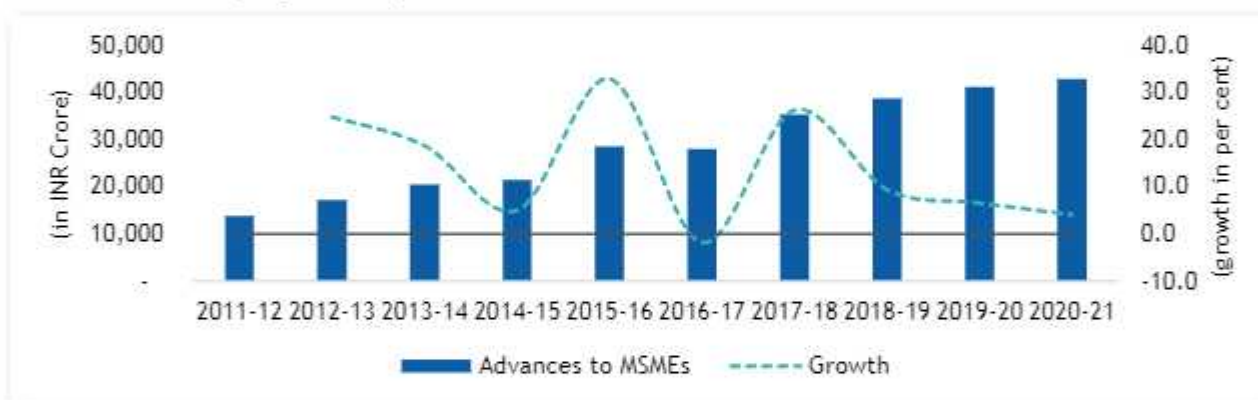
Note: Figures within parentheses are percentages to column totals

Source: Directorate of Industries, Govt. of Odisha

3.6.14. Disaggregation of the MSME units by their type of business indicates that repairing services account for the majority share in MSMEs, with almost 63 per cent share of total MSMEs set up in the State and generating 50 per cent of the total employment opportunities created through MSME units. Possible reasons for the high concentration of MSMEs in the repairing services could be the challenges related to literacy, skills, opportunities, marketing, credit facility etc. on the supply side and uncertainties regarding demand, pushing young entrepreneurs to engage themselves in repairing services units. The relative ease of entry could also be a factor.

3.6.15. In Figure 3.13, advances to MSMEs by banks in Odisha is shown. The advances to MSMEs have grown from INR 13,700 crore in 2010-11 to INR 42,800 crore in 2020-21. The advances have grown at a CAGR of 13 per cent over this period. Since 2017-18, the annual growth in advances to MSMEs has sharply reduced. As per the State Level Bankers' Committee (SLBC) Odisha meeting held on 21 September 2021, annual target for 2021-22 for lending to MSMEs has been set at INR 41,324 crores of which approximately 35 per cent is targeted to be lent to micro enterprises, 29 per cent to small enterprises and 18 per cent to medium enterprises².

Fig 3.13 Advances by banks to MSMEs in Odisha (in INR Crore) and growth (in per cent)



Source: Year wise key indicators, SLBC Odisha

3.6.16. As per a Dun and Bradstreet April 2021 study at All-India level, top three challenges that might impede MSME to scale up their business were market access (42 per cent), improving overall productivity (37 per cent) and having access to more finance (34 per cent). Nearly 59 per cent of MSMEs reported that better credit facility would be essential for their growth. While traditional banks and non-banking finance corporations remain key players to MSME lending, fintech has grown substantially in the recent past. There are more than 2,100 FinTechs in India of which 67 per cent have been setup in the last five years. The FinTech market is currently growing at CAGR of 15 per cent.

3.6.17. The Indian FinTech industry ecosystem sees a range of subsegments, including Payments, Lending, Wealth Technology (WealthTech), Personal Finance Management, Insurance Technology (InsurTech), Regulation Technology (RegTech). This growth has been driven by limitations of brick-and-mortar branches, unmet demand for financial services, technological advancement, enabling policy initiatives, access to new age capital, young population, increased internet access and large user base.

² Nearly INR 7,002 crores have been targeted to be lent to Khadi and other industries.

3.6.18. At present, FinTech ecosystem in Odisha is growing as it has significant development impact potential. Startup Odisha is pushing these technologies enabled financial support. FinTech industry not only provides financial support but also offers other value-added services such as accounting, expense management, regulatory compliance etc. Several state governments have brought in specific fintech policies (Tamil Nadu and Maharashtra) and several state governments are in process to introducing specific measures to promote fintech firms. The policies identify potential support that State Government can provide to Fintech firms. These can range across market access, talent development, capital support and policy/ regulation.



3.6.19. With the revised definition of MSME by the Government of India, more MSMEs are expected to take the benefit of MSME lending schemes. The revised definition takes both investment and annual turnover as the criteria for classification. The investment amount has been increased leading to more firms under the ambit of MSME definition. Differentiation between manufacturing and services in terms of eligibility criteria are merged.

Classification	Micro	Small	Medium
Manufacturing and Services Enterprises	Investment does not exceed INR 1 crore and Turnover does not exceed INR 5 crore	Investment does not exceed INR 10 crore and Turnover does not exceed INR 50 crore	Investment does not exceed INR 50 crore and Turnover does not exceed INR 250 crore

3.6.20. SIDBI conducted a national level study on impact of COVID-19 on MSMEs. State-wise information is not available. However, the study finds that across India, nearly 67 per cent of the respondent MSMEs were temporarily closed for up to a period of 3 months and more than 50 per cent of the respondent units witnessed a decline of more than 25 per cent in their revenues during the 2020-21. Around 66 per cent of the respondents reported a decline in profitability on account of stable fixed costs and decline in revenue. COVID-19 specifically impacted contact intensive sectors such as hospitality, travel and tourism, retail, aviation, and to some extent realty and automobiles. Government of Odisha had announced several measures for COVID-19 impacted MSMEs including interest subvention, top-up subsidy, reimbursement of state GST and waiver of annual institutional maintenance charges.

3.6.21. New MSME units in the State are provided several types of incentives and assistance starting from those relating to getting land or shed to technical knowhow. Those relating to land etc. include:

- Ground rent at the rate of 1 per cent of the land value.
- 10 per cent of the land for large projects limiting to 300 Acre shall be earmarked for Ancillary & Downstream Industrial Park.
- There are also other concessions like
 - Exemption of premium on conversion of Agriculture land for Industrial use
 - Interest subsidy
 - Exemption of stamp duty on land allotted by the Government to IDCO or Government/IDCO to Private Industrial Estate Developers.
 - Exemption on Electricity Duty.

3.6.22. Promotional measures for MSME units relating to Labour include:

- Provision of Employment Cost subsidy for employing skilled or semi-skilled workers of domicile of Odisha as regular employee.
- Employment cost subsidy for additional period of two years for industrially backward districts.

3.6.23. The MSME Department made provision for capital grant to support quality infrastructure as follows:

- Industrial Parks/ Cluster parks promoted by private sector/ Industrial Association/ User Units in cluster format: 50 per cent of the infrastructure cost up to INR 10 crore /park or cluster
- Upgradation of the existing parks/clusters provided the park/estate/ cluster is User-managed: 50 per cent of the total cost up to INR 5 crore

3.6.24. Seed Capital Assistance is available to MSMEs as a one-time grant at 10 per cent of Term Loan limited to INR 15 lakh to 1st generation Women, SC, ST differently abled entrepreneurs in Industrially Backward Districts including KBK region.

3.6.25. Assistance for technical know-how is available for new units in MSME and priority sector varying according to the source of technology. For indigenous technology assistance to the tune of 100 per cent of cost up to INR 1 lakh, and for imported technology assistance to the tune of 100 per cent of cost up to INR 5 lakh is available.

3.6.26. Youth Innovation funds scheme envisages promotion of need based, simple, cost effective and sustainable innovations through technological solutions and development of successful business models. The scheme provides financial support with:

- INR 50,000 for any new idea.
- INR 1,00,000 for any demonstrative product, patents, incubated products, or services.
- INR 3,00,000 for development of any enterprise based on eligible innovative idea or products etc. as prize money.
- Under entrepreneurship development subsidy scheme, 75 per cent of course fee limited to INR 50,000 per course to budding entrepreneurs to undergo Management Development Training in reputed national level institution.

3.6.27. Being a promotional organization, the Directorate of Export Promotion and Marketing is providing marketing assistance to the micro, small enterprises (MSEs) of the State by way of registration of Micro, Small Enterprises (MSEs), conclusion of rate contract with them after assuring the quality of the products manufactured by them.

3.6.28. State initiatives for entrepreneur development include:

- Entrepreneurship development programme (EDP) which provided training to 38,082 youths during last three years.
- District level Facilitation Cell (DLFC) have so far cleared 1397 projects with proposed investment of INR 4748 crore and employed 57,006 persons.
- During 2020-21, DLFC has cleared to 281 projects with proposed investment of INR 786.51 crore and employed 10353 persons.

3.6.29. PMEGP is a flagship programme of Government of India for generation of employment opportunities. The progress of this programme that helps small entrepreneurs, administered through four state agencies listed in the Table 3.11.

Table 3.11 Progress of PMEGP in Odisha from 2017-18 to 2020-21

Year		KVIC	KVIB	DIC	Coir Board	Total
2017-18	Units	297	699	1404	-	2400
	Margin Money released (In INR lakhs)	866.70	1636.59	3182.58	-	5685.87
	Employment (Numbers)	2379	5592	11232	-	19200
2018-19	Units	315	859	1895	-	3069
	Margin Money released (In INR lakhs)	908.28	2307.87	4639.32	-	7855.47
	Employment (Numbers)	2520	6872	15160	-	24552
2019-20	Units	240	646	1818	5	2709
	Margin Money released (In INR lakhs)	863.49	1984.92	4943.3	8.01	7799.72
	Employment (Numbers)	1920	5168	1454	40	21672
2020-21	Units	207	743	2212	6	3168
	Margin Money released (In INR lakhs)	632.24	2269.61	5817.39	25	8744.24
	Employment (Numbers)	1656	5944	17696	48	25344

Source: Directorate of Industries, Odisha

IV. Handicrafts, Handlooms, Sericulture, Textiles and other cottage industries

HANDICRAFT SECTOR

Fig 3.14 Handicrafts Map of Odisha

Source: Handlooms, Textiles & Handicrafts Department



3.6.30. Odisha has a rich cultural tradition expressed in temple architecture, art and sculpture, handlooms and handicrafts, dance, and music. The unique craftsmanship and technical perfection of its products have been appreciated over centuries, and the tradition continues. Presently, as many as 50 different crafts are practised by more than 1.50 lakh artisans, dispersed throughout the State. The Odisha Handicrafts Policy 2019 aims to leverage the unique selling proposition of the skilled workforce of Odisha. Realisation of the commercial potential of handicrafts can provide self-employment both in rural and urban areas, by essentially combining specific skills with low capital investment, use of simple technology and having ample scope for marketing with huge value addition. The State has the best craftsmanship in the country having highest number of artisans honoured with national awards including 'Padma' awards.



3.6.31. During 2020-21, 2951 handicrafts units were set up in the State. By the end of 2020-21, the cumulative number (from 2012-13) of total handicraft units was 26,580. The status of handicrafts industry in Odisha over the last six years is indicated in Table 3.12.

Table 3.12 Handicraft Industry in Odisha

Year	Number of units established during the year	Investment (in INR crore)	Employment generated (Number of persons)
2015-16	2278	8.44	3867
2016-17	2759	23.93	5571
2017-18	3320	24.05	5793
2018-19	5616	26.19	9004
2019-20	5702	26.37	9060
2020-21	2951	22.56	4897

Source: Directorate of Handicrafts and Cottage Industries, Odisha

Achievements of Handicrafts Sector

1. Training

Table 3.13 Training provided under various schemes

Scheme	Objective	Achievement (Number of artisans benefitted)
State Level Training in Various crafts	Promotion of the handicraft industry (managed by SIDAC)	141
District Level Training in Various Crafts	Promotion of the handicraft industry	156
Guru Sishya Parampara Training	Transfer of traditional skill of national/ State level awardees to new generation artisans	360
MCM Training	Impart training to handicraft artisans for self-employment with minimum capital investment	3405
Craft Village Scheme	Sustained livelihood support through skill up gradation training to artisans in SHGs along with distribution of tools and equipment.	152 SHGs covering 2280 Artisans

Source: Handlooms, Textiles & Handicrafts Department

2. Marketing

- 901 artisans were provided marketing support through participation in exhibitions (Toshali National Crafts Mela, Annual Terracotta Exhibition, Multicraft Exhibition & other State & District level exhibitions) promoting sales of 1633.58 lakhs.
- The handicraft artisans & handloom weavers of the State have been provided with marketing support by UTKALIKA through their Sales Outlets.
- During 2020-21, the procurement and sale of handicrafts & handloom items by UTKALIKA was INR 616.65 lakh and INR 1037.24 lakhs respectively.

3. Welfare And Credit Support

Scheme	Objective	Achievement (No. of beneficiaries)
Shilpi Unnati Yojana (SUY)	Financial assistance to handicraft artisans.	INR 130.00 lakh to 806 Artisans
Construction of work shed-cum housing for Handicraft Artisans	Providing hygienic working environment	193 Artisans

4. Survey and Documentation

- After 1999-2000 Survey of handicraft artisans of the State is being undertaken through a GIS-enabled Mobile App "KRUTI ODISHA" developed by ORSAC. Collection of field data has been completed in all the 30 Districts during the year 2021-22. Completion of Field Enumeration for Survey of Handicraft Artisans: Data in respect of 151505 handicraft artisans of the State has been captured. The survey data will be published after validation.
- Out of 50 approved crafts, Video documentation for 33 crafts has been completed and displayed in Kala Bhoomi-Odisha Craft Museum.

5. Infrastructure Development

- Renovation of Ekamra Haat, Bhubaneswar: After taking over the Management of Urban Haats by Handlooms, Textiles & Handicrafts Department from IDCO during October 2020, the Ekamra Haat, situated at Unit-III Bhubaneswar has been renovated with creation of additional facilities. It is now open to provide marketing assistance to handicraft artisans & weavers of the State.
- Steps taken to establish a Handicrafts & Handlooms Hub at Pokahripur, Bhubaneswar with a Project Cost of INR 24.15 Crores to provide marketing assistance to handicraft artisans & handloom weavers round the year.
- Steps have been taken to establish 2 numbers of CFCs in Brass & Bell Metal craft at Kantilo & Khalisahi

6. Recognition and Awards

- The State Institute for Development of Arts & Crafts (SIDAC) has been declared as "Centre of Excellence" by Ministry of Skill Development & Entrepreneurship, Govt. of India.
- Highest number of National level awards to Artisans in a single year: During the year 2021, 9 numbers of

handicraft artisans have been conferred with different National Level Awards (Shilpguru, National Award & National Merit Certificate), which is highest in a single year. The increase is due to awareness generation by the handicraft officers in the field.

- During the year, 3 numbers of artisans have been conferred with State Award and 8 numbers of artisans with Kala Kruti Awards

7. Other Innovative Projects

- Geographical Indication (GI) Registration of Crafts: Application has already been filed for Geographical Indication (GI) Registration of Silver Filigree (Chandi Tarakasi) of Cuttack. Steps are now taken for GI Registration of Brass & Bell Metal craft of Kantilo and Golden Grass craft of Kendrapara. Earlier GI Registrations of crafts like Pipili Applique, Odisha Pattachitra and Konark Stone Carving have already been completed.
- Development of Golden Grass craft of Kendrapara under Sankalp Project: Sankalp National Project under Ministry of Skill Development and Entrepreneurship, Govt. of India have been taken up for development of Golden Grass craft of Kendrapara District. The interventions include basic skilling, design & quality skilling, entrepreneurship skilling and hard interventions like CFC and Raw Material Banks. Around 3000 golden grass artisans of Kendrapara district mostly women will be benefitted in the Project. As part of the project, 2 numbers of CFCs in Golden Grass are under construction at Jajanga&Baro with funding of INR 60.00 lakhs from State Govt.
- MoU has been signed with Odisha Bamboo Development Agency (OBDA) for development of bamboo craft clusters in 6 locations of 5 Districts of the State and accordingly an amount of INR 7.21 Crore have been sanctioned by OBDA.
- Funds to the tune of INR 35.04 Crore have been sanctioned by Odisha Mineral Bearing Area Development Corporation (OMBADC) for development various handicrafts clusters in 5 Districts of the State.

8. New Initiatives

- During the year, UTKALIKA was sanctioned with INR 5.00 Crore as interest free working capital loan towards procurement of handicraft & handloom products from the artisans & weavers of the State during the COVID-19 pandemic to support their livelihood.
- Declaration of Odisha Artisan Grade Stone Policy, 2021: Odisha Artisan Grade Policy, 2021 was formulated and notified vide Steel & Mines Department No.10098 dated 29.11.2021 to facilitate availability of raw material to stone carving artisans of the State.
- Marketing Assistance to Women SHGs: It has been decided to earmark 5% of stalls of all Marketing Events/ Exhibitions organized by Directorate of Handicrafts in favour of Women SHGs to provide them marketing support in order to augment income of SHGs.
- A Memorandum of Understanding (MoU) has been signed with CTTC, Bhubaneswar for technological interventions in handicrafts sector.
- Steps taken for providing technology support in Brass & Bell Metal craft with IMMT, Bhubaneswar and Science & Technology Department, Govt. of Odisha
- Steps taken to tie-up with E-Commerce websites in order to enable national & international market access to handicraft artisans to showcase the hallmark handicraft products of Odisha with a focus on increasing business and trade inclusion opportunities for handicraft artisans. Accordingly, OSCHC Ltd. (UTKALIKA) has signed MoUs with Flipkart, Gocooop & Thoomi.com in order to augment sales through their online platforms.

- Odisha Crafts Museum-Kala Bhoomi is growing as an important destination for tourists and craft lovers. It has received 2059 footfalls and organises events and workshops regularly for visitors as well as school children.
- Functioning of Independent District Level Offices & Creation of separate cadre for Handicrafts Sector:
Independent District level offices for Handicrafts Sector have started functioning in all 30 Districts for implementation of Handicraft Sector schemes & programmes, which were earlier implemented by DICs/ RICs under MSME Department. Similarly, separate cadre for Handicrafts Sector officers has been created after transfer of officers to HT&H Department.
- MoU signed with IGNOU for affiliation of craft courses of SIDAC
- MoU has been signed with Odisha State Open University, Sambalpur for affiliation of Institutional Training centre of SIDAC
- Steps have been taken for NSQF alignment of crafts courses

A. Handloom Sector

3.6.32. Leaving aside agriculture, Handloom industry is one of the activities that provide large scale employment, particularly to the rural non-agricultural households, simultaneously, preserving the State's heritage and culture. The handloom products of Odisha have received national and international recognition for highly artistic design, craftsmanship and durability. Figure 3.15 depicts the handlooms map of Odisha.

Fig 3.15 Handlooms map of Odisha



Source: Handlooms, Textiles & Handicrafts Department, Odisha

3.6.33. There is a faster expansion of the handloom industry in Odisha compared to the rest of the country in terms of number of looms and workers (weavers and ancillary workers together) between 2009-10 and 2019-20 – the two years for which All-India Handloom Census was carried out by Ministry of Textiles, GoI, (third and fourth) - Odisha accounted for 65,391 of handloom households having 55,790 number of the looms and 1,22,335 number of weavers and ancillary workers in 2019-20.

3.6.34. The latest official figures for 2020-21 put the number of households (weavers and ancillary) in the handloom industry at 66,141 in Odisha having 56569 looms and 1,24,084 of weavers and ancillary workers. There has been a growth of 20.28 per cent from 2009-10 in the total number of weavers and ancillary workers, in the state.



3.6.35. By the end of 2020-21, there were 585 Primary Weavers Co-operative Societies (PWCS), of which, 585 were working PWCS while 583 were under liquidation. In the cooperative fold, between 2019-20 and 2020-21, investment increased from INR 328.29 Crore during 2019-20 to INR 328.36 Crore during 2020-21. Similarly, in the cooperative sector the number of looms also increased from 41,791 during 2019-20 to 42,149 during 2020-21.

3.6.36. Govt. of Odisha has taken several stellar measures to improve the situation from the COVID related downward movement, steps have been taken to ensure i) availability of raw material in different handloom clusters through Raw Material banks, ii) providing conversion charges against production of handloom fabrics through PWCS, iii) providing Interest Free Working capital Loan to the tune of INR 25 crore to lead Marketing Organisations for procurement of Handloom fabrics from weavers / PWCSs / SHGs, iv) procurement of finished cloths from the PWCSs / Weavers with timely release of cloth dues by the marketing organisations and v) advance release of monthly financial assistance to the weavers above 60 years of age as a social security measure under BBSY.

3.6.37. In addition, several initiatives have been taken for implementation of different activities like Technological Intervention, Capacity Building of Weavers through Skill Up-gradation Training, Exposure visit etc., Construction of Work Shed-Cum- Housing, establishment of Common Facility Centres / Office-Cum- Go-down / Sales Centre / Drum Shed, support for marketing like organization of National / State level Exhibitions, Expos, Fairs, providing financial support like 10 per cent rebate on sale of handloom cloth, Market Development Assistance, Marketing Initiatives, Organization of Eye camps with free distribution of spectacles, Design inputs and Publicity for making the sector more vibrant. 30 projects under Block Level Clusters Development programme are under implementation for holistic development of handloom clusters. E-commerce activities of State level Organization like Boyanika, Sambalpuri Bastralaya and Serifed have been strengthened to establish sustainable market linkage with the buyers of both inside the country and abroad. Retail brands like FABINDIA, Odisha Artisans & Weavers Ltd., a Community Owned Company (COC), online platforms such as Amazon, GoCoop and Flipkart are engaged in marketing activities in the state with the objective to boost the sale of Odisha hand-wovens and thus provide higher incomes to weavers.

State Agency for Development of Handloom Clusters (SADHAC)

The "State Agency for Development of Handloom Clusters (SADHAC)" is an Autonomous Organization, under H.T&H Dept., Government of Odisha is working for the promotion and development of handloom sector. The major activity of SADHAC comprises of Training to weavers, Development of New design, Product Innovation, marketing of goods in collaboration with others and welfare of weavers.

Achievements in Handloom Sector:

- SADHAC organized eye camps for handloom weavers having 50 years of age and above benefiting 4113 number of weavers with free distribution of 2840 number of spectacles.
- Baristha Bunakar Sahayata Yojana (BBSY)- To provide financial assistance on monthly basis to senior weavers as a security support and recognition to their weaving profession in handloom sector.
- Work Shed-Cum-Housing- To provide financial assistance for construction of improved work shed/housing-cum-work shed with hygienic environment through better ventilation lighting, more workspace to take up weaving process, installation of improved looms and safeguard the belongings from natural hazards like rain and fire.
- Supply of loom and Accessories- Frequent diversification of design/product as per the market need has become an essential feature of the present production system to make the Handloom Industry sustainable. As such, it is quite essential to supply looms with accessories to loom less weavers and also additional loom with accessories to a weaver family, so as to improve quality and increase productivity in order to enable the weavers to earn more.



Some important programmes taken under handloom sector during 2021-22 are as follows:

- Mukhyamantri Bayan Jyoti Yojana- To overcome problems due to low voltage / low light or failure of electricity, weavers/ allied workers are facilitated with backup light (Inverter) facility along with fan under the scheme " Mukhyamantri Bayan Jyoti Yojana" for smooth and continuous working without taking physical strain.
- Bunakar Assistance For Livelihood and Income Augmentation (BALIA)- Providing working capital loan with interest subvention to the needy weavers for their livelihood as well as to improve their socio-economic status by increasing their income under the scheme "BALIA".

1. Innovative projects

- Under an existing MoU with Fabindia for establishment of a Community Owned Company-OAWL(Odisha Artisans & Weavers Ltd.), where 3000 or more artisans are shareholders in the company and supplying finished goods to Fabindia and others, INR 30.65 crore finished goods have been procured from the weaver artisans and sold by the Community owned company.
- For sustainable market linkages as well as to link with potential buyers a MoU has been signed with NIFT, Bhubaneswar & CSB, Bangalore for development and commercialization of Innovative Handloom products.
- The project is implemented in 5 clusters of Odisha and under the project 20 new design products will be developed at the same time 20 new MCM will be created in Design development and Natural dyeing.
- The product developed under the project will be marketed through Boyanika, Utkalika, Amlan, Sambalpuri Bastralaya, Fabindia Overseas Pvt. Ltd etc. Implementing a project on "Production of handloom fabrics of Odisha in Natural colors".
- Under the project 80 numbers of skilled dyers undergone training on extraction of Natural dye and dyeing. This will encourage production of eco-friendly handloom fabrics using yarn dyed with natural dyes in order to meet the major challenges being faced by the sector are Limited shade, poor colour fastness to washing, light, rubbing and shade variation.
- For the first time in the state 500 no's ready reference Quality dyeing Manual have been prepared, containing complete guidance on dyeing process of 800 different shades on cotton, silk, bamboo & Linen. This would benefit 585 number of PWCS in the state & more than 1lakh weavers.

2. Marketing

- Under the co-operative fold, the total sale of handloom products was INR 23154.02 lakh out of which offline / outlet sale – INR 19066.25 lakh, e-commerce sale – INR 167.82 lakh, exhibition sale – INR 1221.60 lakh, and yarn / Tassar sale – INR 2698.35 lakh. In Toshali National Crafts Mela, there was a sale of handloom products of INR 391.14 lakh. National Handloom Expo was organised with total sale of handloom products worth INR 1056.00 lakh. Collaborated with 6 numbers of professional Designers for readymade and fashion wear. Sale of INR 95.32 lakhs of Designer segment in Boyanika's Designer Gallery. Besides, INR 288.35 lakh of Designer apparel sold by Sambalpuri Bastralaya. ERP solution in operation in 39 outlets of Boyanika. Social Media Management: Instagram/ Facebook/ Twitter. 10 prominent handloom products have been documented.

Table 3.14 Organisational sales (INR in Lakhs)

Sl.No.	Orgn. / PWCS	Outlet sale	Exh. Sale	e-com. Sale	Yarn/ Tassar cocoon sale	Total
1	S. Bastralaya	4,224.45	262.86	35.98	629.47	5152.76
2	Boyanika	6,979.31	235.16	120.76	1,580.87	8,916.10
3	SERIFED	159.08	84.29	11.08	488.01	742.46
4	PWCS	7,703.41	639.29	0.00	0	8,342.70
	TOTAL	19,066.25	1,221.60	167.82	2,698.35	23,154.02

Source: Handlooms, Textiles & Handicrafts Department

3. Bunakar Bazaar at Behera, Bargarh

Weekly Handloom Haat located at Behera, Bargarh is one of the biggest open air handloom markets of Asia with participation of around 1300 numbers weavers and traders. Weavers mostly come from different handloom clusters of Bargarh and other districts from Western Odisha. Traders mostly come from different districts of Odisha and outside States like Chhattisgarh, Jharkhand, West Bengal. Transaction of different types of handloom clothes, Raw Materials, Looms & Weaving Accessories. In view of this, the Behera Weekly Handloom Haat has been documented. To overcome the shortcomings and for providing an ideal place for better marketing of handloom fabrics with provision for basic amenities, the project "Establishment of Bunakar Bazar, at Behera, Bargarh" was approved for implementation under the State Plan scheme PoHI with an objective to provide pucca infrastructure with adequate space for display as well as selling of stocks, proper and better marketing channel for the handloom products in an organized manner with wide publicity to increase the customer inflow, all basic and modern marketing amenities in a single premises, pre loom and post loom accessories to meet the requirement of the weavers and to increase the income of the weavers / business of traders.

4. Weavers' welfare

630 numbers of individual weavers' household benefited under work shed cum housing scheme. 1281 numbers of weavers above 60 years of age have been benefited under Baristha Bunakar Sahayata Yojana under State Plan Scheme. Eye testing camps organized across the State. More than 4000 weavers covered and about 2500 weavers provided with Spectacles in convergence with Project Sunetra.

5. Capacity Building & Training

Skill up-gradation training provided to 260 numbers of weavers in weaving, tie & dye making and dyeing. 611 new looms, 3900 units of on-loom and pre-loom accessories have been provided to the handloom weavers to improve quality and increase productivity.

B. Sericulture sector

3.6.38. Sericulture – the production of silk is a traditional activity in Odisha. Three types of silk are produced in Odisha (Tussar, Eri and Mulberry), Odisha is predominantly a Tussar producing State. A large part of the Tussar farming is done by tribal communities in natural forest or in schematic block plantations raised under schemes like MGNREGS & RKVY. The sericulture farmers have been organized into primary Cooperative Societies to avail the benefits of the flagship Scheme like MGNREGS, RKVY etc. Under various schemes of the State Government, benefits like upgradation of seed infrastructure for production of Tussar basic seed, incentive to farmers for production of reel able Tussar cocoons, exposure visits etc. are provided to the farmers for their skill up-gradation & higher earnings from farming.



Table 3.15 Sericulture in Odisha

Activities	2018-19	2019-20	2020-21
<i>Tussar Production</i>			
Tussar Plantation (Ha)	845	1812	1231
Production of Dfls (lakh numbers)	20.43	23.13	20.31
Procurement of Dfls (lakh numbers)	5.00	5.00	5.19
Consumption of Dfls(lakh numbers)	25.43	28.13	25.50
Production of reeling cocoons (lakh numbers)	1,232.8	1303.34	1002.12
Production of Raw Silk (est. in MT)	123.28	130.33	100.50
Production of Silk Waste (est. in MT)	25	-	21
Farmers covered (numbers)	16,514	16,531	13,745
<i>Eri Production</i>			
Castor plantation (Acres)	1720	1173	1225
Consumption of Dfls (Lakh)	1.00	0.82	0.40
Production of cut cocoons (est. in MT)	6.59	6.37	1.61
Production of Raw Silk (est. in MT)	5.27	5.1	1.28
Number of farmers covered (Numbers)	3440	2780	2131
<i>Mulberry Production</i>			
Mulberry Plantation (Acre)	78	68	20
Procurement of Dfls (lakh numbers)	1.03	0.65	0.45
Consumption of Dfls (lakh numbers)	1.03	0.65	0.45
Production of reeling cocoons (lakh numbers)	24.94	14.79	4.81
Production of Raw Silk (est. in MT)	2.77	2.12	0.69
Production of Silk Waste (est. in MT)	0.28	0.28	0.05
Number of farmers covered (Numbers)	1216	833	570

Source: Directorate of Textiles, Odisha

3.6.39. Promotional activities like 'Tussar Silk Park' for empowerment of and livelihood for women is becoming popular and gaining momentum as it focuses on transforming Tussar farming to a "zero waste livelihood activity" in the state.

3.6.40. Accordingly, three tussar silk parks have been conceptualized for tussar cocoon value addition and women empowerment through livelihood generation programme.

Presently Bhagamunda Tussar silk park in Keonjhar are established to create the infrastructure for a value chain model by capitalizing on the raw materials i.e. tasar cocoons produced by the tribal farmers and unemployed women workforce of Harichandanpur block and adjoining rearers to generate livelihood for the women through post cocoon value chain activities covering tasar yarn production through reeling, yarn spinning, primary weaving, coloring, dyeing etc by using latest available technology & machineries. Apart from this, the project aims to expand the livelihood to the thousands of tribal rural families providing gainful employment and income to the farmers. More than 100 women are earning their daily livelihood in tussar value addition process.

Similarly, The Bisoi Tasar Silk Park at Mayurbhanj and Khuntgaon Tasar Silk Park in Lahunipara in Sundergarh district have been proposed with an aim to stabilize the value chain of Sericulture Industry, promote raw silk production, supporting the targeted community, through quality upgradation, productivity improvement, employment generation. The Civil Construction of the said parks are under progress. It is expected that more than 900 tribal women will be able to derive their livelihood out of these two tussar silk parks.

Achievements

- With the special initiative taken by SERIFED and DT(O) total of INR 10.57 crore tussar cocoons sold out to different wcs, master weavers, individual weavers etc. inside and outside of the state produced during 2019-20 and 2020-21.
- Tassar Peduncle registered under Trademark "DEMPHI".
- Tripartite MoU for revival of the biggest Tusser Farm of the State at Sukinda in Jajpur district with District Administration and Tata Steel Foundation.
- Tripartite MoU with Forest & Environment Department & Central Silk Board, Govt. of India for Tusser farming with Vana Surakshya Samitis.
- Establishment of two Tusser Nurseries at Banspal & Bhagamunda in Keonjhar district with DMF.



C. Textiles sector

3.6.41. Odisha's Textile Sector has transformed into an engine of inclusive growth and employment generation with infusion of professionalism into traditional skilled expertise through techno- commercial networks. In order to promote employment generation to the un-employed youth of Odisha, special emphasis is given to encourage the investors to set up Apparel manufacturing units. Employment incentive is also provided to the units under "Odisha Apparel Policy - 2016". As a result of this, M/s. Sahi Exports Pvt. Ltd. and M/s. Aditya Birla Fashion & Retail Ltd. have established their unit during 2016-17 and 2018-19 respectively. Apart from employees of the unit, during 2020-21, employment has been provided to 3446 and 1332 number of persons in M/s. Sahi Exports Pvt. Ltd. and M/s. Aditya Birla Fashion & Retail Ltd. respectively.



3.6.42. Further, M/s. Wild Lotus Fashions Pvt. Ltd. has started their commercial production since September 2021, with employment generation of more than 300 unemployed youth. One more unit i.e. Page Industries Pvt. Ltd. (Jockey) is at final stage of construction. It is planned to install 500 number of sewing machines with employment generation of minimum 1000 persons. Apart from this, one Incubation Centre is going to be functional very soon to boost the Start Ups in Apparel Sector.



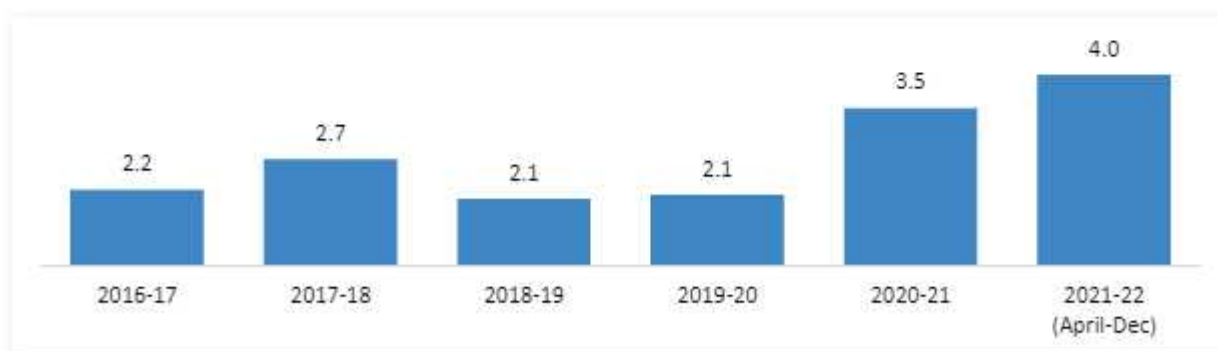
Public Services Delivery System in Handloom & Handicraft sector

3.6.43. Director of Textiles and Handloom, Odisha has developed a Web based Online Services to provide benefit under different beneficiary oriented scheme such as i) Baristha Bunakar Sahayata Yojana (BBSY), ii) Work shed-Cum-Housing, iii) Supply of loom and Accessories, iv) Concretisation of Loom Pit, v) Skill Up-gradation Training under Capacity Building, vi) Mukhyamantri Bayan Jyoti Yojana, and vii) Bunakar Assistance for Livelihood and income Augmentation to weavers of Odisha State which will be applied online. In this regard, now the online services are made go-live with the following link (www.textiles.odisha.gov.in/onlineservice). Directorate of Handicrafts has developed website and web application. The website has been hosted in the State Data Centre with the URL <http://crafts.odisha.gov.in/> and <https://craftsapp.odisha.gov.in/> respectively to provide benefits under different schemes like (i) Institutional Training, (ii) MCM Training Programme, (iii) GSP Training Programme, (iv) Craft Village Programme, (v) Silpi Unnati Yojana, (vi) Construction of Workshed-cum-Housing and (vii) Participation in Exhibitions.

3.7. EXPORT PERFORMANCE OF ODISHA

3.7.1. With active initiation and export promotion activities of the state, the export turnover of Odisha has increased from INR 47,242.28 crore in 2019-20 to INR 75,718.33 crore in 2020-21. The share of exports of the state in All-India exports has grown significantly from 2.21 per cent in 2016-17 to 4.04 per cent in 2021-22 (April-December) as seen in Figure 3.16.

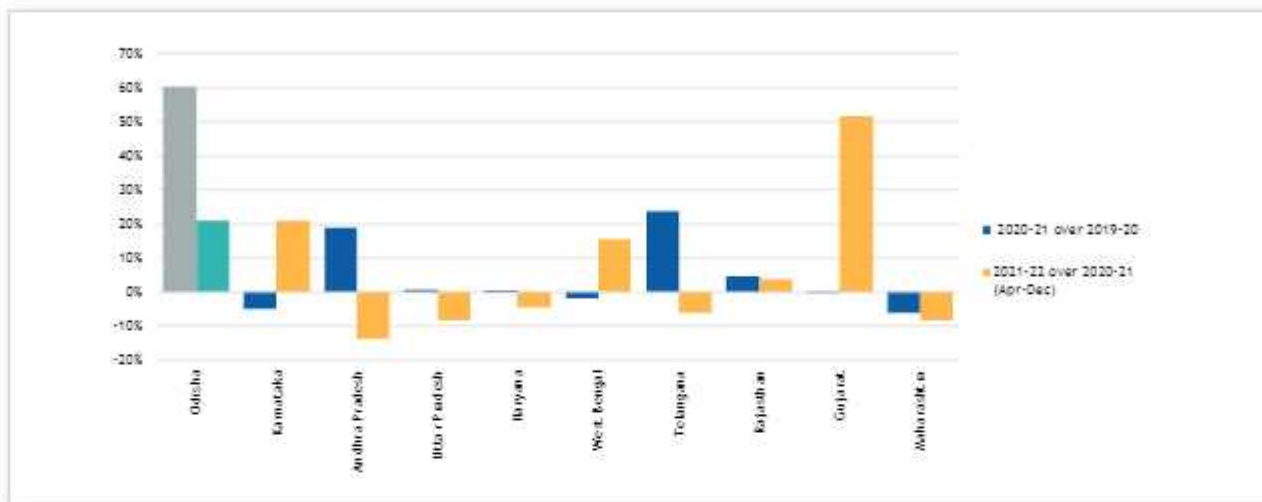
Fig 3.16 Share of Odisha in all-India Exports (in per cent)



Source: State-wise Export Data, Monitoring Dashboard, Ministry of Commerce and Industry, Govt. of India

3.7.2. The per cent change in exports from 2019-20 to 2020-21 is the highest among all major exporting Indian states. Similarly, the change in exports from 2020-21 to 2021-22 (April-December) is also significant as seen from Figure 3.16.

Fig 3.17

Change in total value of exports (Y-o-Y comparison of select states)
(in per cent)

Source: State-wise Export Data, Monitoring Dashboard, Ministry of Commerce and Industry, Govt. of India

3.7.3. Table 3.16 provides the major exported products from the State. The bulk of the exports are mineral and metal products. However, electronics and software and marine exports are gaining significance. Similarly, technical textiles and pharmaceutical exports are also gaining significance. With improved connectivity through roadways and access to three ports like Paradip port, Dhamra and Gopalpur, the export basket of the state is gradually getting diversified.

Table 3.16

Major export products from Odisha (INR Crore)

Products	2019-20	2020-21	Share In Value of Exports (per cent)
Metallurgical	24,811.40	38,122.95	47.46
Engg., Chemical and Allied	4,434.18	7,854.68	9.78
Minerals	14,627.10	26,189.58	32.61
Agriculture and Forest	187.18	177.85	0.22
Marine	3,028.88	3,114.16	3.88
Handloom	0.90	0.09	0.00
Handicraft	3.08	7.74	0.01
Textile	131.64	205.5	0.26
Pharmaceutical	6.34	8.8	0.01
Electronics and software	4,500.00	4,600.00	5.73
Others	11.62	36.97	0.05

Source: Directorate of Export Promotion and Marketing, Govt. of Odisha

3.7.4. It is seen that the exports of the state are not only increasing by volume and categories but also by the number of geographies. As seen from the Table 3.17, there is a significant rise in export destinations for traditionally exported products like metallurgical, engineering and chemical, and mineral products. Besides, agriculture, handicraft, textile, electronics and software are also some of the important export products where there is a significant rise in destination countries.

Table 3.17 Rise in export destinations from Odisha

Category	2015-16	2020-21
Metallurgical	40	92
Engineering & Chemical	79	111
Minerals	5	41
Agriculture and Forest	4	24
Marine	39	33
Handloom	13	8
Handicraft	7	19
Textile	2	17
Pharmaceutical	3	27
Electronics and software	6	40

Source: Odisha State Economic Survey (various rounds), Govt. of Odisha

3.8. ENERGY: A CORE COMPONENT OF INFRASTRUCTURE

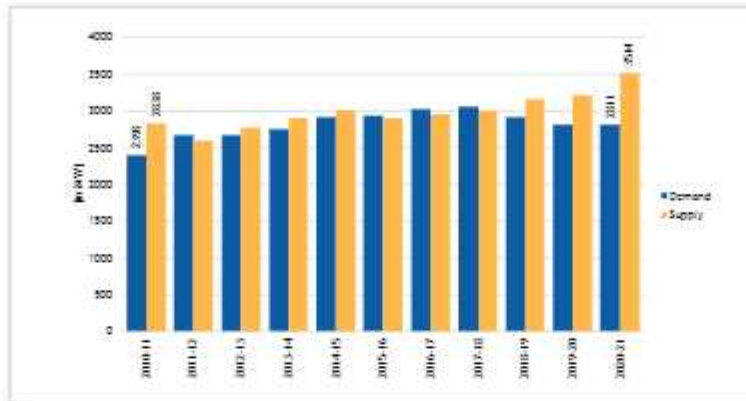
3.8.1. Energy in general, and specifically in the form of electricity, is an essential input into most modern productive activities and an integral part of quality of life. It not only acts as a vital determinant of economic growth, but also is directly or indirectly linked to several aspects of modern life as well as ecology. The power sub-sector (along with gas and water supply) contributed about 2.4 per cent of the Odisha's GSVA as per 2021-22(AE). Considering the period 2011-12 onwards, the growth of this sub-sector in Odisha has widely fluctuated from more than 20 per cent in 2015-16 to a contraction to the tune of more than 8 per cent in 2020-21. These fluctuations are generally linked to its dependence on and availability of inputs such as coal, gas or oil, as also environmental factors and natural shocks. There are three major aspects of the power industry: production or generation, transmission, and distribution. Odisha was the first state in the country to undertake structural reforms in this area involving unbundling of these three aspects several years ago; this process has undergone many changes over the years in a process of learning. At present, the first two (generation and transmission) continue to be in the public sector, while management of the four distribution utilities has been handed over to Tata Power in a joint venture mode. Odisha Electricity Regulatory Commission (OERC), a statutory body with quasi-judicial powers, oversees the operation of the power sector.

I. Demand and availability of power

3.8.2. The total installed capacity of all power projects (including share of power from central and other sources) in the State was 8018.25 MW in 2020-21 in comparison to 7423 MW in 2019-20. It registered an annual increase of 8.02 per cent against an annual increase of 23.48 per cent in the previous year. As seen from Figure 3.18, Odisha is a power surplus state with power available exceeding the demand.

Fig 3.18

Average Demand and Average Availability of Power by GRIDCO (in MW)



Note: excludes captive power plants

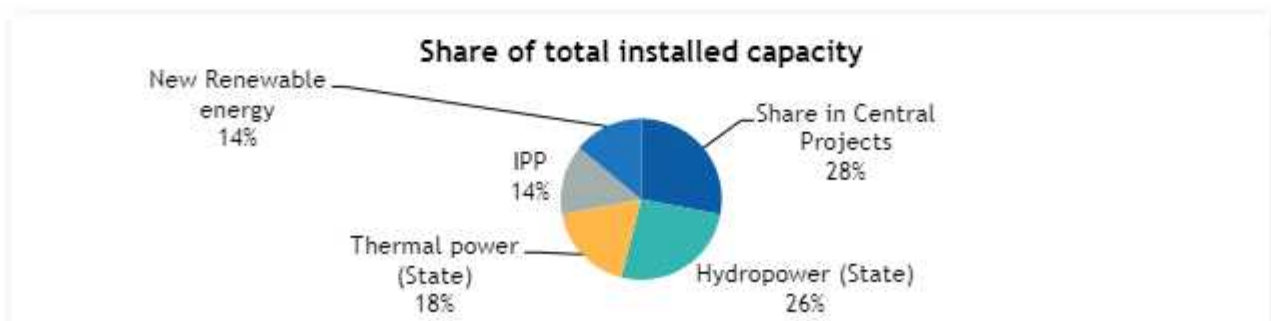
Source: GRIDCO, Odisha

3.8.3. However, the peak demand of the State was 5048 Mw and peak availability was 5712.11 Mw for FY 2020-21. In the last two years, the State has experienced falling demand possibly due to pandemic-induced slump. The most likely reason is reduced demand from industrial units, which have captive power plants with installed capacities exceeding their immediate requirements.

3.8.4. Odisha avails power from hydro, thermal and renewable energy sources like solar and bio-mass plants and wind, some of it outside Odisha (capacity shared). As of 2020-21, 11 hydro power and 14 thermal power of projects (State and Central sectors), one bio-mass project, six(6) small hydroelectric projects, 27 Solar Photo-Voltaic (SPV) projects and 5 wind energy plants procured by the GRIDCO. Power is also procured by the GRIDCO for the state through power exchanges, power banking and trading when needed.

3.8.5. Installed capacity in Odisha includes those of state-owned Hydro and Thermal power units, IPP, renewable energy sources, and share of central power projects. The share of each of these sources to total installed capacity during the year 2020-21 is given in Figure 3.19. It may be noted that the central power projects include both thermal and hydro power. Of the three sources tapped by the public sector in Odisha, hydro power accounts for the largest capacity followed by thermal and renewable energy sources. The composition of energy sources has implications for the cost, quality, and seasonality of power supply.

Fig 3.19

Share of different sources in total Installed Capacity (2020-21)
(in per cent)

Source: GRIDCO, Odisha

3.8.6. Several large and medium industrial units of the state are producing power from captive power plants (CPP) and their total capacity exceeds that available to GRIDCO. These captive units often can generate more power than they need for their own use. These are not included in the data for installed capacity given above. The details of these CPPs producing more than one MW are given in Table 3.18.

Table 3.18 Installed Capacity of Captive Power Plants (CPP) producing more than 1 MW

Year	Total Installed Capacity (MW)	Number of Industrial units
2011-12	6,018.48	59
2012-13	6,483.48	61
2013-14	7,402.98	64
2014-15	7,891.98	67
2015-16	10,542.28	64
2016-17	11,093.28	63
2017-18	11,008.78	63
2018-19	10,996.88	64
2019-20	10,997.11	65
2020-21	10,934.71	63

Note: Closed Industrial units not included.

Source: Office of EIC-cum Principal Chief Electrical Inspector

3.8.7. As a pilot project, Konark is being developed as a solar city as well as a net zero city. Under this Solar City initiative apart from complete illumination of Konark Sun Temple, the town has been provided with solar streetlights, solar drinking water, Kiosks, roof top solar power plants, Solar Power EV charging stations etc. Under the net zero initiative a ten MW Solar Power Plant is being installed to offset the grid power being supply to the town. Ecological concerns warrant the development and maximum use of alternative renewable energy sources like biomass and solar power to gradually reduce the negative impact associated with the process of thermal power generation. The Renewable Energy policy of 2016 of Odisha aims at augmenting the generation of renewable energy with relative emphasis on solar energy. As of 2020-21, installed capacity of renewable power by GRIDCO from various units was 1159.10 MW, out of which 100.15 MW is from small Hydro Electric Projects, 781.85 MW from Solar Projects, 20 MW from Bio-mass Power Projects and 275.10 MW from wind sources. There are several projects in the pipeline too; as and when these are completed and functional, further additions to the installed capacity of power from renewable sources will occur. It may even be worthwhile to look for options in this area; for example, given its coastline, the state can explore the possibility of producing power from the waves.

Konark sun temple is fully illuminated by solar power

II. Peak period management

3.8.8. One of the typical management problems of electricity supply is that the demand for it can vary substantially across seasons and even across hours of the day. As such, there are times (example: noontime during summer) when the demand is at its highest, known as the peak period. Given that electricity is a product that is not storable in large scale, this regularly fluctuating demand requires that supply not only matches demand on an average but

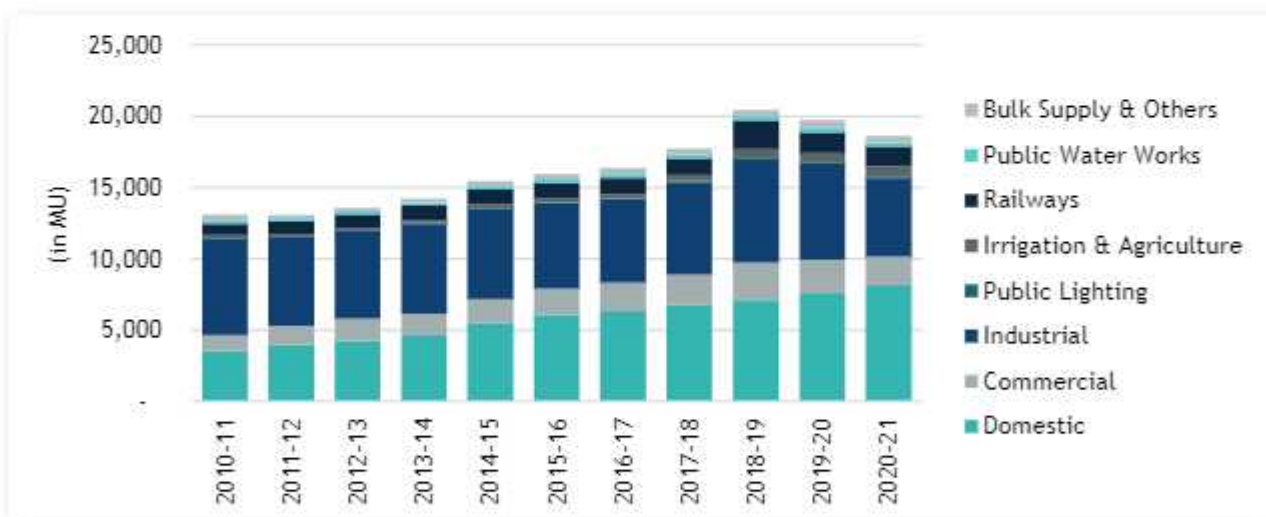
must cover the peak period demand. This implies a need for a certain amount of excess capacity during non-peak hours, and/or a mechanism to supplement normal supply during the peak periods. Meeting peak period demand for electricity is, in a way, the test of successful supply and demand management of the industry. In Odisha, the peak period occurs usually during the month of October.

III. Consumption and distribution

3.8.9. The total power consumption of Odisha was 18,606 MU in 2020-21 as against 19,728 MU in 2019-20. In 2020-21, domestic consumption constituted 44 per cent of total consumption. Industrial consumption constituted 30 per cent of total consumption. The substantial increase in the installed capacity of captive power plants over the years has reduced the demand for power from the large and medium industrial units. Next to industrial consumption was commercial consumption, railways, irrigation and agriculture, bulk supply and public works.

3.8.10. The state has a total of 92.84 lakh electricity consumers in 2020-21, which was 88.42 lakh during the previous year. About 92.36 per cent of the total number of electricity consumers belong to the domestic category (both rural and urban). Rural consumers (all categories) consist of 79.5 per cent of total consumers. The predominance of rural and domestic consumers, and a drop in industrial consumers actually hurts the financials of suppliers because it implies very little HT supply and more of LT which (a) raises the cost of supply because of greater requirement of stepdown transformers and (b) limits the possibility of cross-subsidisation of LT consumers by HT consumers.

Fig 3.20 Power Consumption in Odisha by category (Consumption in MU)



Source: GRIDCO, Odisha

3.8.11. Odisha has witnessed a massive transformation in availability of power over the last decades. Constant and dedicated efforts of the Government through different schemes to achieve the mission of "Electricity for All" is bearing fruits. All villages (47,679) of Odisha have been electrified by the end of March 2020. The State had a total of 92.84 lakh power consumers in 2020-21 with 74 lakh rural consumers and 19 lakh urban consumers. Rural electrification in Odisha is practically completed, and now only the task of ensuring the quality of the power supply remains to be carried out.

3.8.12. As mentioned earlier, the task of distribution has been handed over to joint-venture entities, with management in the hands of the private partner. With AT&C losses of 27.87 per cent, billing and collection efficiency of 75.83 per cent and 95.11 per cent respectively, parameter values of the state that can only be termed as relatively poor among the larger, non-hilly states of India, it is expected that the handover would improve these.

3.8.13. Rajeev Gandhi Grameen Vidyutikaran Yojana (RGGVY) programme of Government of India was launched in April 2005 by merging all existing schemes to provide access to electricity to villages having population of 100 or more. Its financing envisages 90 per cent capital subsidy and 10 per cent as loan component for the State.

Under RGGVY –XII Plan period, electrification of 3144 un-electrified villages and 16533 habitations, for which Government of India have sanctioned INR 3550.75 crore. During the financial year 2020-21, a plan provision of INR 311.2 crore has been made for this purpose.

3.8.14. Biju Saharanchal Vidyutikaran Yojana (BSVY) was launched in 2010-11 for providing electricity to the people living in un-electrified areas of urban local bodies. Five Municipal Corporations, 45 Municipalities and 61 NACs of the State have been covered under the Scheme. During 2020-21, a token provision of INR 3,000 has been kept in the budget under the scheme. As on date, 32706 number of BPL households in 3054 number of urban areas have been electrified under this scheme.

3.8.15. To provide electricity to all rural households, Govt. of India has launched the programme Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) in October 2018 to achieve universal household electrification. During 2020-21, a plan provision of INR 67.00 crore has been kept for this scheme.

3.8.16. Government of Odisha has adopted the concept of State Capital Region Improvement of Power System (SCRIPS) 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 2020-21, INR 200.00 crore of plan provision has been made available under the scheme.

3.8.17. Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is a Government of India scheme and subsumes the RGGVY 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 as and when needed for effective Demand side Management Scheme (DSM). Under this scheme, separation of agriculture feeder, strengthening of infrastructure and electrification of balance unelectrified households is being taken up. During 2020-21, a Plan provision of INR 194.00 crore has been made under the scheme.

3.8.18. To ensure 'Electricity for all' the State Government has launched a flagship scheme called Biju Gram Jyoti for electrification of habitations having a population of less than 100. Initially there was a target to cover 10,000



habitations during the 11th Five Year Plan which have already been achieved. The State Government has provided INR 1388.00 crore to the districts for implementation of the scheme, against which an expenditure of INR 965.66 crore has been made. During 2020-21, an amount of INR 16.59 crore has been kept in the budget under the scheme. As on date, 222565 BPL households in 182825 habitations have been electrified and 243 private L I Points have been changed under this scheme.

3.9. CONSTRUCTION

3.9.1. The construction sector forms an important sector for Odisha, contributing 6.73 per cent of the GSVA in 2020-21 and is also the second-largest employer after agriculture. The construction sector in Odisha lost its share from 9.35 per cent of the total GVA in 2011-12 to 7.28 per cent of GVA in 2018-19 and is estimated to decline to 6.70 per cent in the total GVA in 2021-22 (AE). Growth in the sector has been volatile with an annual average growth of around 2.78 per cent between the years 2012-13 and 2019-20.

3.9.2. Construction not only bears significance for its growth potential, but also embodies huge employment potential for the state. Generally, construction industry is an entry point for surplus labour from agriculture as it has very limited skill requirements. As such, it provides the avenue for large scale absorption of labour shifting out of agriculture in Odisha. Table 3.19 shows a high share of employment in construction in Odisha (19.5 per cent) which is greater than national average (11.6 per cent) in 2019-20.

Table 3.19 Distribution of workers (PS+SS) by Industry Sector and Sub Sector for Odisha and India (2019-20) (in per cent)

Industry Sections of NIC-2008	Odisha (Rural + Urban)			India (Rural + Urban)		
	Male	Female	Person	Male	Female	Person
Industry	29.24	21.88	26.93	26.41	16.61	23.67
Mining and Quarrying	0.23	0.01	0.16	0.36	0.05	0.28
Manufacturing	6.08	7.76	6.61	11.25	10.87	11.15
Electricity, Gas, Water Supply and Other Utility Services	0.79	0.31	0.63	0.75	0.25	0.61
Construction	22.14	13.80	19.53	14.05	5.44	11.63

Source: PLFS 2019-20, MoSPI

3.9.3. The State Government has undertaken various initiatives on the social and economic security of the construction workers in the State. Odisha Building and Other Construction Workers (RE&CS) Rules, 2002 and Odisha Building and Other Construction (BOC) Workers Welfare Board, constituted in 2004, continue to provide social and economic benefits to BOC workers. The Board extends benefits to BOC workers in the form of educational assistance, assistance for purchase of working tools, bi-cycle and safety equipment, marriage assistance, maternity benefit, death and funeral assistance, accident, medical expense for treatment of major ailments, assistance for Recognition of Prior Learning (RPL) and skill development.

3.9.4. New schemes like Nirman Shramik Pucca Ghar Yojana (Rural) and Nirman Shramik Pension Yojana are being implemented by the Board since 2016. Nirman Shramik Pucca Ghar Yojana (Rural) aims at extending housing

assistance to the beneficiaries completing one year of registration. Nirman Shramik Pension Yojana is implemented to extend old age, widow, and disability pension to the eligible beneficiaries.

3.9.5. A new scheme, 'Construction of Rental Housing Complex (RHC) 'Ashraya' in Urban Areas' has been undertaken by the Board for providing temporary accommodation with basic amenities at affordable rent to the migrant construction workers during 2017. Fund of INR 40 crore has already been made available for implementation of the scheme. In the first phase, 10 urban areas have been selected for grounding the RHC, which include five Municipal Corporations and five Municipalities. The construction activity is under process.

3.10. START-UP ODISHA

3.10.1. Startup Odisha, is an initiative of the MSME Department, Government of Odisha to promote ideas and innovations of budding entrepreneurs in the state and recognising them as startups. It is also working towards innovation, development and improvement of products, process and services. The Government of Odisha recognizes the fact that the seeds of entrepreneurship and the instinctive ability to innovate must be nurtured through an enabling ecosystem. By enabling ecosystem, it means

- Creation of world class physical infrastructure to support Start-up;
- Promoting the culture of innovation through academic interventions;
- Institutionalizing the culture of entrepreneurship by providing training for the requisite skills.

3.10.2. By providing a conducive ecosystem for entrepreneurs, Startup Odisha is aiming towards the scaling-up of promising ideas towards a sustainable business model which will help the state reap benefits of high employment generation and wealth creation.

I. Odisha Start-up policy

3.10.3. The Odisha Start-up Policy was launched in 2016, with an objective of developing a world class 'Start-up Hub' in Odisha and to create an enabling and supporting eco-system that facilitates at least 1,000 start-ups and bringing the State amongst the top three start-up hubs. As envisioned, over 1,200 start-ups have been created till date under the Odisha Start-up Policy and has generated employment opportunities for more than 10,000 persons.

Odisha Start-up Policy launched in 2016 has created 1,200 start-ups and generated employment for more than 10,000 persons

3.10.4. Odisha Start-up Policy was designed to partnership with 'incubators' which are essentially organisations and institutions willing to support start-up companies during the early stages. The incubators were also in return assisted by the government. Start-up Odisha is working in close collaboration with 21 Incubation Hubs like IIT Bhubaneswar, NIT Rourkela, Software Technology Park of India KITT-TBI, Utkal University and many more for promotion of Startups from ideation to monetization. Table 3.20 shows the financial assistance offered to a start-up and to incubators. It is evident that the start-up policy of Odisha not only encourages innovation and entrepreneurship passion but also strives for inclusivity by providing additional benefits to women, transgender, SC, ST led Start-ups.

Table 3.20 Support to Start-ups

Start-ups	Incubators
Monthly Allowance of INR 20,000 for one year (INR 22,000 for women/transgender/SC/ST/ SEBC/PH led Start-ups)	One-time capital grant of 50 per cent of Capital Cost up to a maximum of INR 1 Crore to set up or scale up incubation facility.
Product development and marketing/ publicity assistance up to INR 15 lakh (INR 16 lakhs for Women/ Transgender/ SC/ ST/ SEBC/ PH led Start-ups)	Unique provision of matching Grant upto a maximum of INR 5 crore for development of incubation infrastructure.
Need based assistance for equipment/raw material purchase	Performance capital grant of INR 5 lakh per successful incubate for minimum 3 months. Reimbursement of utility expenses of INR 1 lakh p.a. for three years.

Source: Odisha Start-up Policy, Govt. of Odisha

3.10.5. In addition to the financial assistance, start-ups as defined in the Odisha Start-up policy are eligible for exemption from payment of Bid Security/EMD, prior experience and prior turnover criteria while participating in open tender in case of public procurement of goods and services. As per the latest FDOM No. 14602 dated 20th May 2021, Government has exempted Local Startups from EMD and allowed concessional payment of 25 per cent of the value of performance security on being selected in the bidding process in case of procurement of works. However, this is subjected to meeting the minimum turnover, prior experience requirements, quality and technical specifications.

II. O-Hub

3.10.6. O-Hub, is a recent initiative of Government of Odisha and was set up in December, 2021 to provide a unique ecosystem for start-up formation and subsequent scale-up. This incubation hub is located in the Special Economic Zone of Patia in Bhubaneswar. It offers a 1,50,000-square feet area with state-of-the-art facility, plug-n-play infrastructure to support start-up activities. It would provide a platform for innovators and entrepreneurs to develop products or services, establish formal businesses and interact with stakeholders of the ecosystem. It has the vision to see all, the innovators, the mentors, the corporate partners, the ecosystem enablers and the facilitators to work under one roof. It would facilitate 200 start-ups every year in diverse sectors like healthcare, renewable energy, ICT, artificial intelligence, machine learning, augmented reality/virtual reality, internet of things, handlooms and handicrafts, agri-tech and many more. It will provide a platform for attracting venture capitalists, angel networks, HNIs, State and Central Government Departments or Agencies. Detailed Guidelines for onboarding Startups in the O Hub has been issued by the MSME Department.

III. Odisha Start-up growth fund

3.10.7. A fund-of-funds scheme named "Odisha Start-up Growth Fund" was notified in January 2021 with a budget provision of INR 100 crore spread over five years to strengthen the start-up ecosystem in the state by easing access to capital investment for start-ups. The scheme is expected to leverage private sector investment with at least 1:1 ratio for the start-ups registered in Odisha.

IV. Odisha Youth Innovation Fund

3.10.8. Odisha Youth Innovation Fund has been set up to support grassroots innovations, which are essentially technological solutions and development of successful business models by youths in different sectors. The fund provides INR 50,000 for any new idea, INR 1,00,000 for any demonstrative product, prototypes, patents, incubated products/services and INR 3,00,000 for development of any enterprise/ start-up based on eligible innovative idea/ products/services.

3.10.9. Odisha is already a proud home to four entrepreneurs who have set up or co-founded Start Up Unicorns (privately held startup company valued at over USD 1 billion) like OYO, FarEye, OfBusiness and Zetwerk among the 79 unicorns from India. With initiatives like the startup policy, startup growth fund and youth innovation fund, the entrepreneurial ecosystem of Odisha is going to create a new wave of Unicorns from Odisha. These upcoming startups will emerge as trailblazers and end up becoming torchbearers in the marketplace.

3.11. IN CONCLUSION

Mineral production and mineral-based industries are the backbone of the industries sector as of now. With adequate availability of power coupled with generation by captive power plants, and a very favourable business environment and public administration, the state is poised for a strong push into many other areas of industrialisation aiming for a significant degree of diversification. To ensure this, the state has implemented measures to encourage entrepreneurship and promoting skill acquisition to complement the thrust towards industrialisation. All these have started bearing fruits, and this process is likely to intensify in the near future. General economic slowdown, and the pandemic did affect the progress and caused a contraction in the value-added originating from this sector during 2019-20 and 2020-21, but the sector has resumed its growth in 2021-22.

The story is a little different for the small-scale producers, and the handloom and handicrafts industries. The pandemic disrupted their supply chains as well as revenue streams. With very little 'staying power', people in these areas of activity have been hit hard and are finding it difficult to resume operations as before the pandemic, possibly because their small working capital has been wiped out. Several government initiatives have tried to help them to tide over the difficult time, but their coverage – particularly those in terms of financing the resumption of business – can be expanded.

CHAPTER



Urbanisation and
Urban Governance

*“The city is not only the place where growth occurs . . . , but also is the engine of growth itself”
(Duranton, 2000, pp. 291–292).*

Cities are considered to be the engines of growth. Globally, urban areas account for more than 80 per cent of total GDP. Cities in India contribute significantly to GDP and provides employment to large number of people. As per 2011 Census, urban population in India constituted 31.8 per cent of total population in 2011 and expected to increase to 38.2 per cent by 2036 (MOHFW, 2020).

Odisha has experienced a stable decadal growth rate of urbanization of around 30 per cent since 1980s. As per Census 2011, urbanization in the state reached 16.7 per cent, growing from 14.9 per cent in 2001. As per the MoHFW projection for 2021, the likely urban population in Odisha is 84 lakhs which is close to 18.5 per cent of the total population of Odisha. Further, this is expected to increase as people from rural areas migrate to cities in Odisha for better life and livelihood and also because of natural growth of population in urban areas. As per MoHFW projections, urban population in Odisha is expected to increase to 104.3 lakh accounting for 21.2 per cent of total population by 2036. This shall create stress on urban infrastructure including basic services and enhance demand for suitable jobs.

The Government of Odisha has worked across many areas to create inclusive cities to provide a better quality of life in line with the SDGs. Significant efforts have been made to strengthen urban infrastructure through better urban transport, last mile connectivity and energy efficient street lighting. Clean and reliable water supply, that forms the backbone of all human settlements, has seen remarkable progress through Odisha's various schemes - Drink from Tap Mission and Water for All (BASUDHA) along with a participatory community model of Jalsathis. As a result, nearly 70 per cent of the urban population has access to piped water supply. Given the frequency of natural calamities, Odisha is enabling its cities to effectively manage environmental shocks and stresses through creation of smart resilient infrastructural facilities.

Affordable housing is a major issue in the cities. Government has been working to provide affordable housing to urban dwellers in the state under Affordable Urban Housing policy. Odisha's total slum inhabitants constitutes 3.7 per cent of its total population, this is lower than most other states in India. Odisha's award-winning JAGA Mission is steadily mainstreaming slums through a combination of land rights and creation of necessary infrastructure. With a beneficiary coverage of 1.7 million slum dwellers, Odisha runs the world's largest slum land titling and improvement program.

The success of public programs is dependent on strong urban governance. Odisha has thus adopted the '5T' initiative to bring about spectacular change in the administration and service delivery of the state and improve the financial health of local governments. The state is well poised to build inclusive and resilient cities for sustainable urban growth and development

4.1. INTRODUCTION

4.1.1. Cities and towns play a vital role in the development of a state. People, especially those working in the service and manufacturing sectors, find urban areas more suitable given the access to a large consumer base, built-up area, availability of avenues to develop skillsets, networking opportunities, marketing platforms and other infrastructural facilities. Urbanization and economic development go hand-in-hand with attaining higher economic growth. The share of urban income in national income has increased from 37.6 per cent of net domestic product in 1970-71 to around 65 per cent of GDP by 2011 (MoHUA, 2019).

4.1.2. A city offers agglomeration economies. The concentration of firms and people in close proximity brings in a lot of economic benefits. Demand for specialized labour force leads to division of labour and brings in efficiency. A city offers homogeneity as well as diversity. It expands the choice set be it in products or services. Competition amongst the factor inputs due to a high concentration in a limited physical area brings in efficiency and enhances consumer welfare as well as producers' revenue.

4.1.3. Urbanization is not simply about increasing the number of urban residents or expanding the area of cities. Urbanization can take place in different ways – through expansion of villages to small towns, small towns to larger townships and cities. Migration of people from villages to urban places in search of a better life and livelihood also increases the urban density of population. More importantly, it is about a complete transformation from an agrarian based economy to an exposure to a modern economy with its benefits and complexities.

4.1.4. This chapter shows how the state of Odisha has embraced the growing urbanization and has come up with necessary infrastructure projects and policy measures to ensure sustainable urban development. The chapter is organized under seven major sections. The second section following this introduction shows the urban profile of Odisha, both at the state and district level. The third section provides insights about the changing landscape of urban migration and urban workforce in Odisha. The fourth section shows the urban night sky map of Odisha to identify major urban clusters. The fifth section deals with the efforts and initiatives of Government of Odisha on urban infrastructure and services like housing, water supply, sanitation, public transport, health, slum development, etc. which have played a crucial role in stabilizing and improving the lives of urban residents. The subsection on resilient cities shows how Odisha is enabling its cities to effectively manage scenarios against environmental shocks and stresses by making them infrastructure and digital resilient. The sixth section on urban governance discusses the delivery of public services. It shows how a process (5T) has been established to ensure law and order, transparency, efficiency, accountability and participation of citizens.

4.2. PROFILE OF URBAN ODISHA

At the State Level

4.2.1. As per the 2011 census, out of 4.20 crore people of Odisha, 70 Lakh live in urban areas occupying about 155,707 sq.kms. There are 114 Urban Local Bodies (ULBs) in Odisha. The urbanisation rate and its growth is dependent on the strength of local governments as the Government of Odisha has devolved a majority of delivery functions to the ULBs. Table 4.1 shows the structure of ULBs in Odisha, its average population and average area coverage.

Table 4.1 Number of ULBs, Population (2011) and Average area covered in Odisha

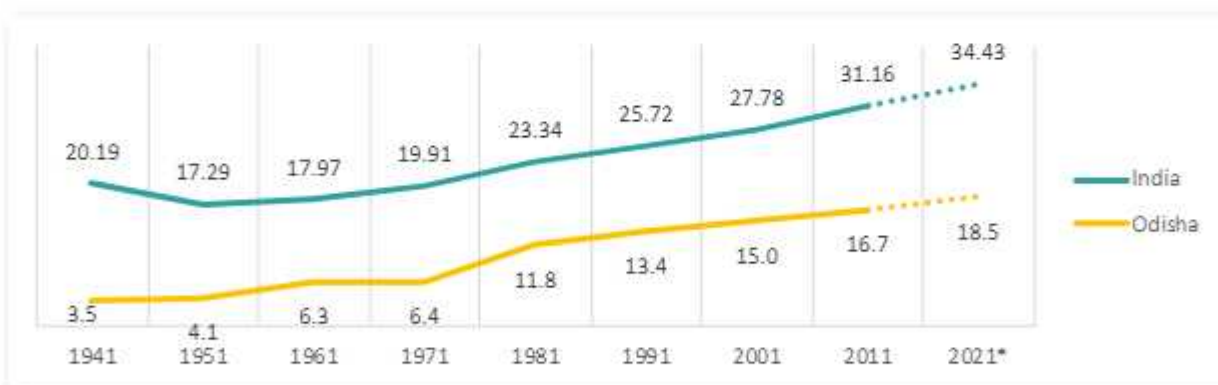
ULBs	Structure	Number	Average Population	Average Area covered in sq.km
	Municipal Corporations	5	490829	154.37
	Municipalities	48	54408	29.47
	NACs	61	16451	17.77

Source: Census, 2011

4.2.2. In 1941, only 3 per cent of the population was living in urban areas of Odisha. As per Census of India 2011, urbanization in the state reached 16.7 per cent, growing from 14.9 per cent in 2001. The average annual urban growth of population in Odisha is 2.37 per cent compared to all India level growth rate of 2.76 per cent (2001-2011 Census).

Projected urban population of Odisha is 84 lakhs which is 18.5 per cent of the total population

Odisha's economy has also experienced an economic transition over the decades. The economic activity in the state is shifting to manufacturing and services from agriculture, and urban areas continue to provide a conducive environment for the secondary and tertiary sector. As per the DES provisional estimate for 2021 (henceforth DES estimate), the likely urban population in Odisha is 84 lakhs which is close to 18.5 per cent of the total population of Odisha. Figure 4.1 shows that Odisha's urbanization rate from as early as 1940 to 2021. The urbanization rate of Odisha has been rising since 1940 like the national trend. Though the rate of urbanization for Odisha is relatively lower than India's, Odisha's urbanisation would gain momentum with the focus of the state towards developing new industrial centres.

Fig 4.1 Urbanization Rate of India and Odisha from 1940 to 2021 (in per cent)

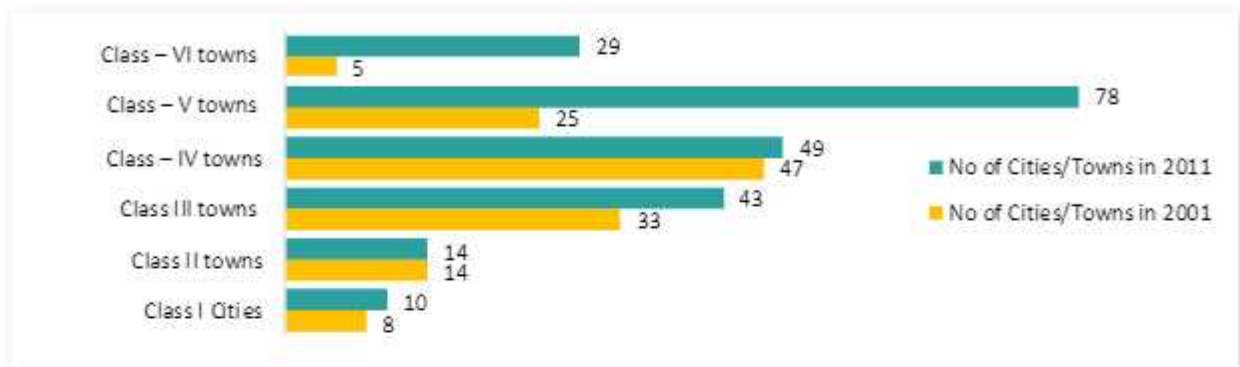
Note: Based on Projections of MoHFW

Source: SAAP, Odisha, 2017, Housing & Urban Development (H&UD) Department, Odisha

4.2.1. The number of census towns in Odisha is presented in Figure 4.2 and it shows that the number of cities with a population of more than 1 lakh had increased from 8 to 10 from 2001 to 2011. Currently, the capital city of Odisha, Bhubaneswar is a metropolitan city with one million plus population¹. It is expected that Cuttack, with a population of nearly seven lakhs, will join the metropolitan category in the near future. In 2011, the category of class-V towns, where population is between 5000-10000, forms the largest share of urban areas.

¹ DES provisional estimated population of Bhubaneswar is 1,033,816 in 2021.

Fig 4.2 Number of Cities and Towns in Odisha as per Population based Category in 2001 and 2011

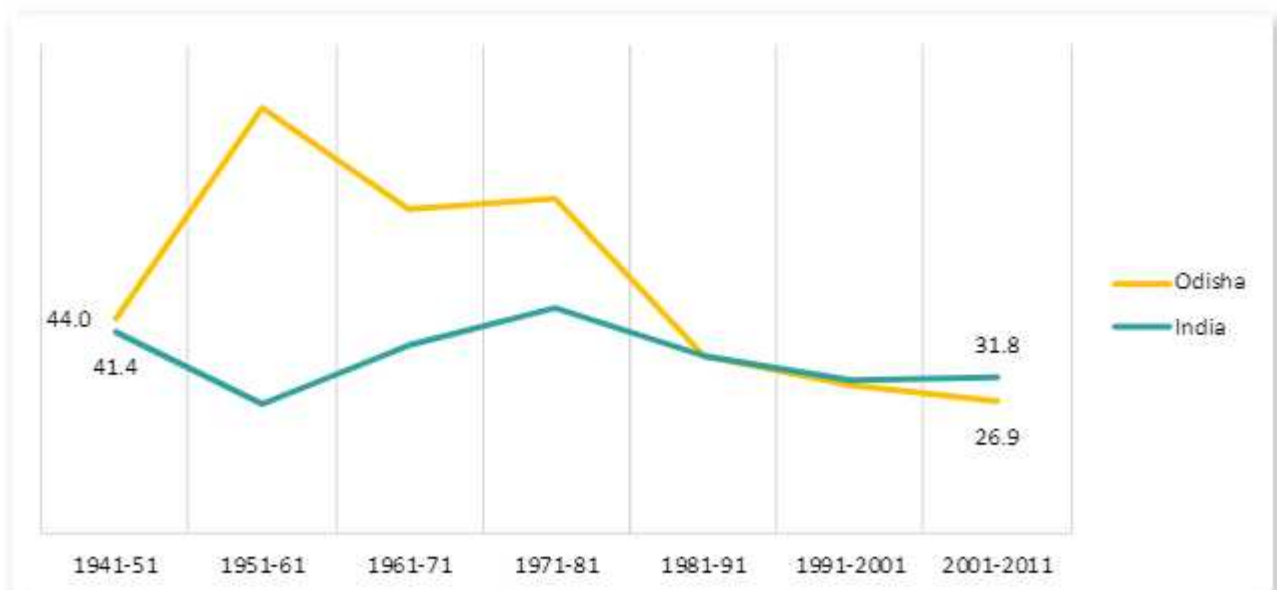


Source: Census of India, 2011

4.2.2. With respect to decadal shifting of townships, Odisha has seen 480 per cent growth in Class VI towns, which have a population less than 4999 and 212 per cent growth in Class V towns which have a population less than 9999. Only 2 cities got added to the list of Class I.

4.2.3. The decadal growth rate of urban population of Odisha and India during 1951-2001 is shown in Figure 4.3. With a low base of a mere 3.5 per cent of people living in cities in 1941, the decadal urban population growth rate was extremely high in 1951-61. Odisha witnessed rapid urbanization with the highest decadal growth of urban population of 87 per cent during that period. From 1980, the decadal growth rate of urbanization stabilised and has been in the range of 30 per cent.

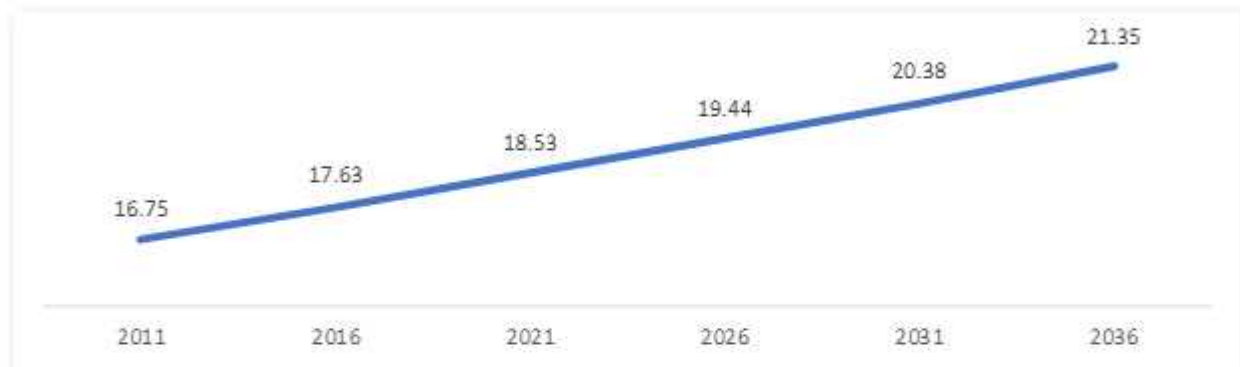
Fig 4.3 Trend of decadal growth rate of Urban Population of Odisha and India during 1941-2011 (in per cent)



Source: Census of India

4.2.4. The report of the technical group on population projections published by National Commission on Population, Ministry of Health and Family Welfare (MoHFW) shows that the expected urban population in Odisha will be around 21 per cent by 2036. The projected trend of urbanisation in Odisha is shown in Figure 4.4.

Fig 4.4 Projected Urbanization rate for period 2011 to 2036 (in per cent)

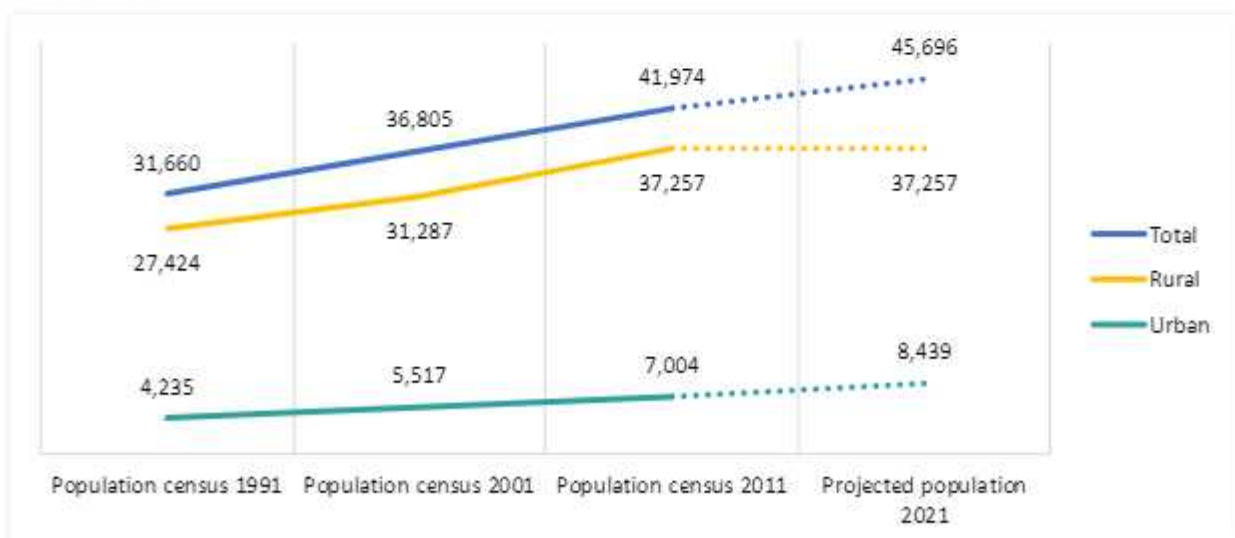


Source: Report of the technical group on population projections, MoHFW, 2020

4.2.5. As per the 2011 census, 17.18 per cent of male population in Odisha and 16.31 per cent of female live in urban areas. As per the MoHFW estimate, this gender wise urbanization rate would be 24.53 per cent and 19.13 per cent by 2036. The projection of the technical group indicate that more men will migrate to cities and town. More migration to cities would call for better urban facilities as well as a need to create more urban centres.

Figure 4.5 shows the total, urban and rural population trend for Odisha from 1991 to 2021. The graph shows that the trend line of rural population is flattening, while it is not the case for urban population in Odisha.

Fig 4.5 Rural, Urban and Total Population of Odisha in 2001, 2011 and 2021

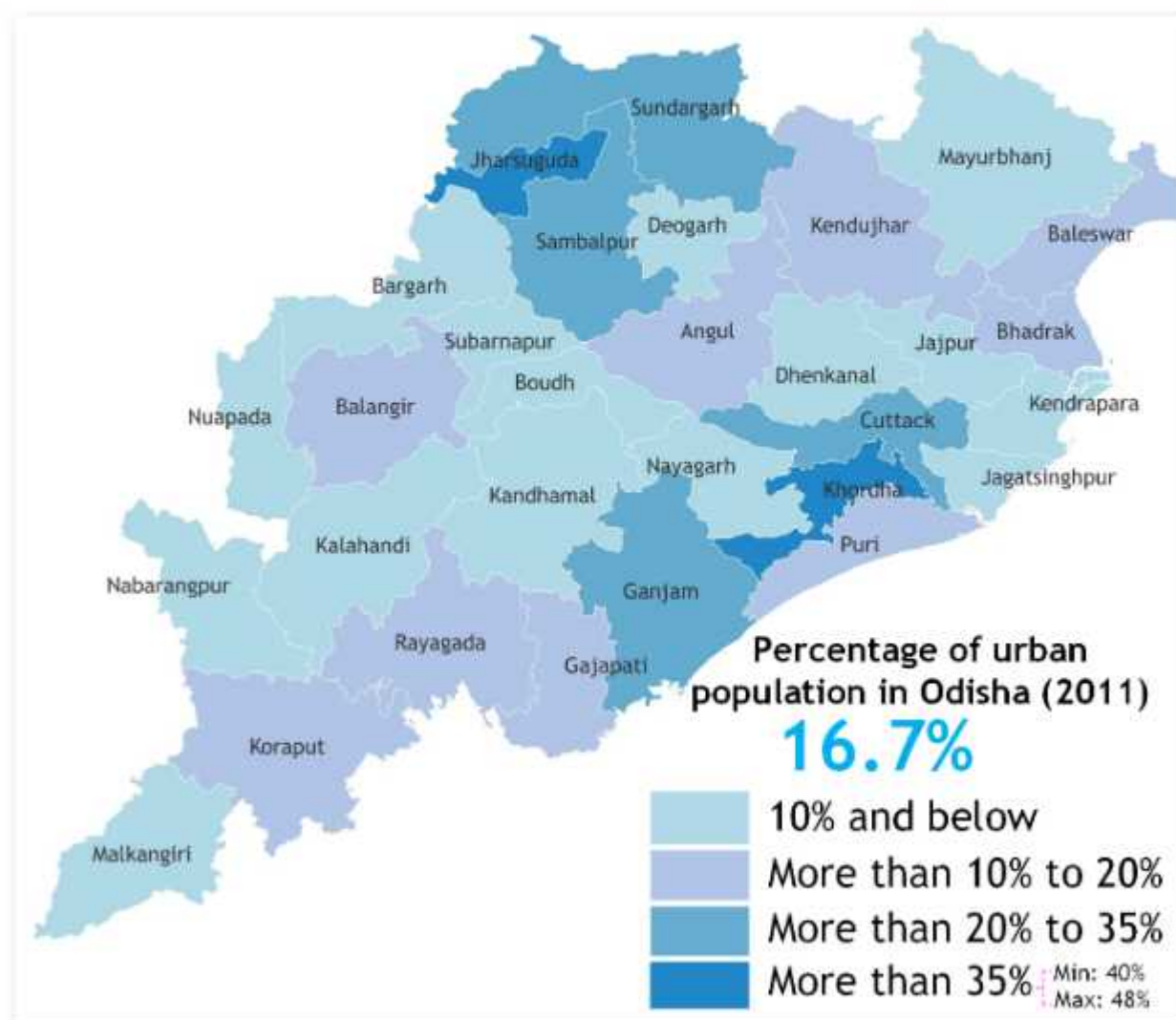


Note: Population Figures value in '000
Source: Census of India 1991, 2001, 2011, and MoHFW

At the District Level

4.2.6. Figure 4.6 shows the percentage of Urban Population as per Census 2011. The percentage of Urban Population at district level for the year 2021 is a provisional estimate by DES shown in Figure 4.7. A ratio method was employed to estimate it by considering the rural/urban data of the last three census 1991, 2001 and 2011. In both 2011 and 2021, districts like Khordha, Jharsuguda, Sundargarh, Ganjam, Sambalpur and Cuttack have a very high share of urban population. Khordha is the only district which has more than 50 per cent of its population living in urban areas largely due to the city of Bhubaneswar. Five districts have an urbanization rate ranging between 30 to 40 per cent.

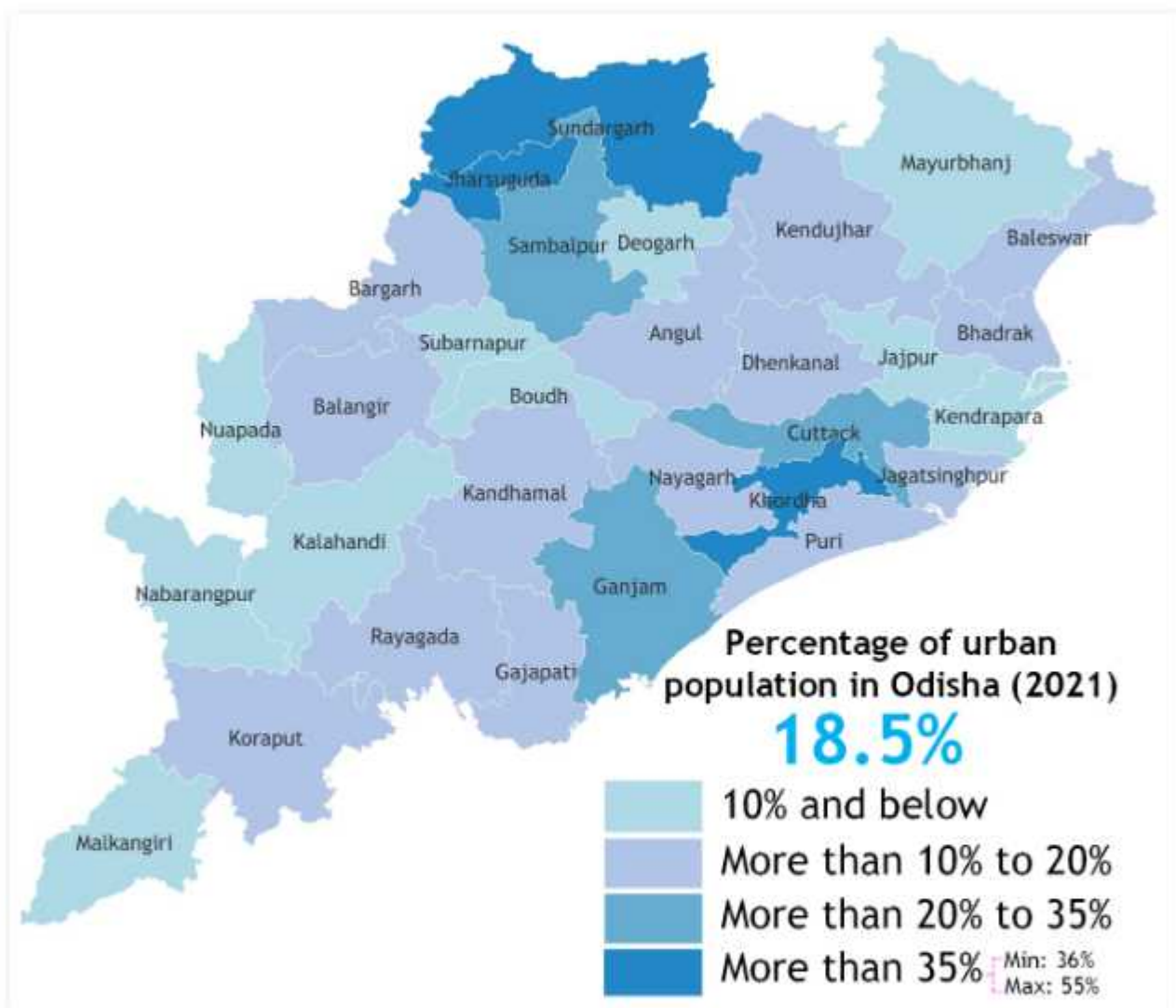
Fig 4.6 District Map of Odisha Showing the Percentage of Urban Population in 2011



Source: Census, 2011

4.2.7. Comparing both the maps, it is evident that in ten years, more districts, namely, Kandhamal, Nayagarh, and Dhenkanal, have joined the 10 per cent to 15 per cent urbanization group. A table on the estimated district wise total population and the total percentage share of urban population for Odisha as of 2021 is provided in the annexure.

Fig 4.7 District Map of Odisha Showing the Percentage of Urban Population in 2021



Source: District at a Glance 2022 by DES, Odisha and DES Provisional Estimate

4.3. URBAN MIGRATION

4.3.1. Migration is often associated with a search for a better life and livelihood. Both in-migration and out-migration deal with movement of people to a new area and help in the growth and prosperity of the region as well as people. Families back home get a better standard of living and cities get access to scarce skillsets and resources. When people arrive, they bring different skills and abilities, and knowledge spill overs help in the progress of the city. When people return to their native place, they take back with them the newly acquired knowledge and skills which in turn create scope for a new variety of goods and services in the home place. There is a downside to migration which comes in the form of forced migration when people unwillingly leave their native place as no opportunities are available for them. However, since the demand for good skillsets are increasing everywhere, forced migration is diminishing day by day.

4.3.2. Every year, lakhs of people leave their rural households and migrate to cities to enhance their living standard and to have a wider choice in life. Census 2011 highlights that in India, over 8.26 crore people moved from rural to urban areas, up from 5.3 crore in 2001, a growth of almost 55 per cent. Odisha too has witnessed migration from rural areas, recording an increase of 39 per cent in 2011. As per Census 2011, 20 lakh migrants from rural areas moved to urban areas of Odisha. This constituted 2.5 per cent of the total rural-urban migrants in the entire country.

4.3.3. Female migration forms the largest share in rural urban migration in Odisha and at the national level. As per Census 2011, out of the total migrant population, women constitute 52 per cent at the national level and 53 per cent in Odisha. While majority of the men migrate looking for employment or work, the dominant reason for female migration is marriage. Table 4.2 below shows the stark differences in the driving force for migration for women and men.

Table 4.2 Reasons for migration by gender in Odisha, 2011 (in per cent)

Reasons	Men	Women
Work/Employment	43.16	4.46
Business	11.47	0.72
Education	7.29	4.08
Marriage	1.61	51.73
Moved after birth	3.77	1.92
Moved with households	23.39	29.66
Others	9.31	7.43

Source: Census, 2011

4.3.4. In Odisha, 54.6 per cent of males migrated from rural areas to urban Odisha for economic reasons, be it employment or business. On the other hand, almost 52 per cent female migrants moved due to marital reasons.

**Need to
increase
urban LFPR**

4.3.5. This trend of migration has two implications:

- Employment generation in urban areas needs to surpass the migrant growth rate to provide a better quality of life to the migrants.
- With majority of females are migrating for non-economic reasons, perhaps it is time to create more employment opportunities for women so that migration would happen for better career prospects also.

4.3.6. The female urban Labor Force Participation rate (LFPR) for all age group in Odisha was 18.5 per cent as per the Annual Report of PLFS 2019-20. The relatively recent quarterly bulletin of PLFS Jan-Mar 2021, showed the female urban LFPR, by current weekly status (CWS) for all age group, for Odisha as 15.2 per cent. There is a strong need to promote female urban LFPR by increasing opportunities for women. Earlier job opportunities with work-from-home options were very scarce. However, the Covid-19 pandemic has changed the luxury of work from home into a necessity, and it has opened a window of opportunities to urban women. Women who were earlier reluctant to work due to the responsibility of taking care of the household, can now efficiently multi-task with work from home set up. This provides a hope that the female urban LFPR will increase in the coming future. Although the available information on migration is restricted to 2011 data, latest trends on workforce and opportunities can provide insights on the changing nature of migration.

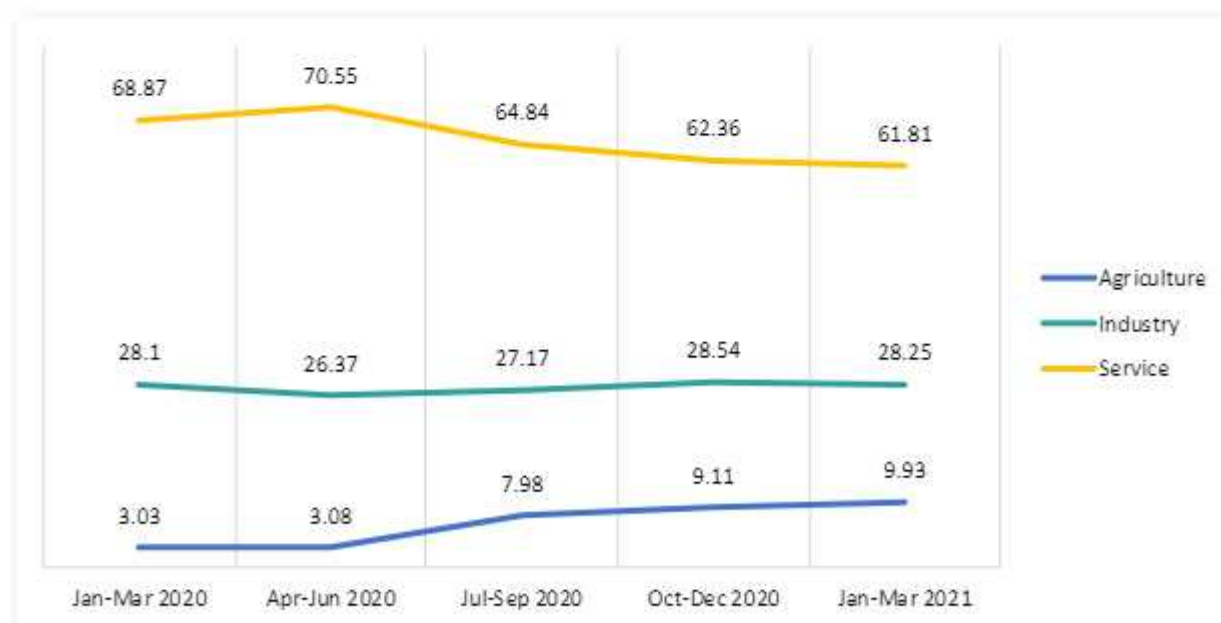
Deep diving into type of Occupation in Odisha

4.3.7. PLFS data for 2019-20 shows the percentage distribution of working persons in urban Odisha, where 5.25 per cent are employed in the Agriculture sector, 33.11 per cent in the Industry sector, and 61.64 per cent in the Services sector. The Service sector employed more than half of the workforce in urban areas.

4.3.8. Figure 4.8 shows the distribution of the workforce, by CWS, according to the PLFS quarterly survey from Jan-Mar 2020 to Jan-Mar 2021 in the broad categories of Agriculture, Industry and Services sectors. It shows that in comparison to the Apr-June quarter of 2020, the tertiary sector worker share has dropped from 70.5 per cent to 61.81 per cent. This sharp change in share of workers in the Services sector was on account of COVID-related job losses in this sector. During the same period, the share of agricultural workers increased along with the secondary sector.

Fig 4.8

Distribution of Urban Workers, age 15 years and above by broad industry group in Odisha from Jan-Mar 2020 to Jan-Mar 2021 (in per cent)



Source: Quarterly PLFS report, Jan-Mar 2021

4.3.9. While there is no information on type of migrant workers from Odisha to other parts of the country, the categorization of workforce along broad occupation reveals that there is a huge diversity in type of professionals/occupation category. The state offers a wide diversity of choice to a potential employer. Possibly such skill sets are one of the reasons why people are migrating to other places to get better wage/salary.

4.3.10. Figure 4.9 to Figure 4.11 show different occupations at two-digit level of National Classification of Occupation (NCO) and its share in workforce of the state according to the PLFS survey 2019-20.

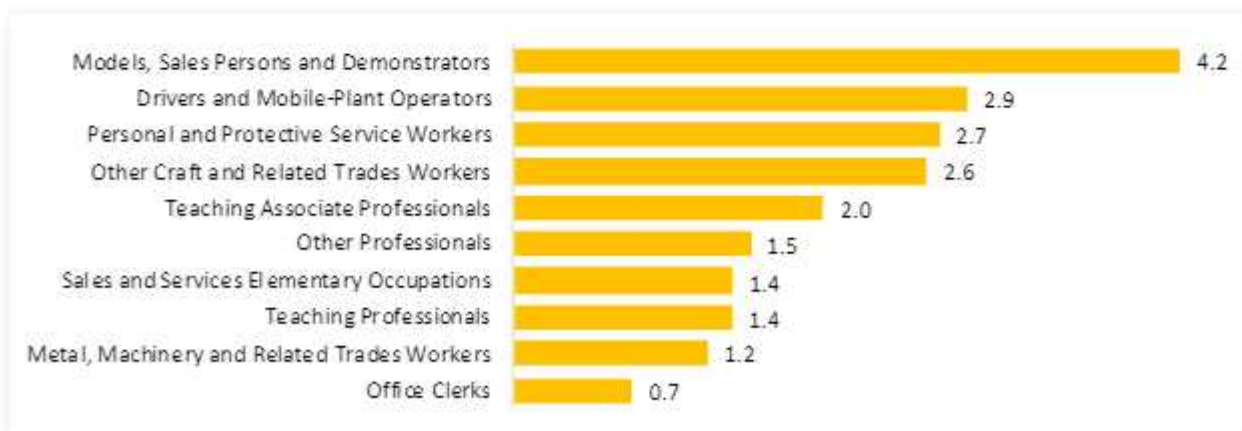
Fig 4.9 Top Five Occupations by share of Workers in Odisha as of 2019-20 (in per cent)



Source: Estimate from Unit level data of Periodic Labour Force Survey (PLFS) 2019-20, Ministry of Statistics and Programme Implementation, Government of India.

4.3.11. In 2019-20, market oriented skilled agriculture and fishery workers constitute the largest share of workforce in Odisha at 39.5 per cent. The categories of Extraction and Building Trade and Corporate Managers take up the 2nd and 3rd position with 14 per cent and 8.9 per cent, respectively. These five occupations constitute more than 2/3rd of the total workers in the state. Corporate managers emerging as the third occupation shows the progress made in the state in terms of offering better white-collar jobs.

Fig 4.10 Middle Ten Occupation by share of Workers in Odisha as of 2019-20 (in per cent)



Source: Estimate from Unit level data of Periodic Labour Force Survey (PLFS) 2019-20, Ministry of Statistics and Programme Implementation, Government of India.

4.3.12. Moreover, skilled jobs like models, teachers, salespersons, drivers, mobile-plant operators, etc. also constitute 1/4th of the total workers in the state. It is important to note that such wide range of skill sets in Odisha could be one of the reasons why people are moving to other places.

Fig 4.11 Balance Occupation by share of Workers in Odisha as of 2019-20 (in per cent)



Source: Estimate from Unit level data of Periodic Labour Force Survey (PLFS) 2019-20, Ministry of Statistics and Programme Implementation, Govt. of India.

4.3.13. While data for migrants by occupation category is not available, this analysis reveals the type of skill sets that are available in the state and why migration from the state could be due to relatively better economic prospects in other states.

4.4. URBAN NIGHT SKY AND CITY LANDSCAPE

4.4.1. It is imperative for the Government to provide adequate and uniform Energy Efficient Public Street Lighting systems in urban and peri-urban areas. Bhubaneswar became the first city in the state to introduce Retrofitting of energy efficient LED street lighting on a pilot basis in 2014 in PPP mode (saving about 80 per cent of BMCs power bill). Encouraged by the success of the pilot, the Retrofitting Project was extended to four other Municipal Corporations in 2016 along with illumination of uncovered Greenfield stretches in BMC. Subsequently in 2018, the Retrofitting project was extended to cover all 109 Municipalities and Notified Area Councils and all uncovered Greenfield stretches in 113 ULBs excluding BMC. The following projects have been undertaken to make Public Street Lighting in Odisha energy efficient through Smart LED luminaires:

- a. Smart LED street light programme: The objective of the project is to increase public safety and convenience, save energy and reduce carbon footprints as well as reduce power bills of Urban Local Bodies.

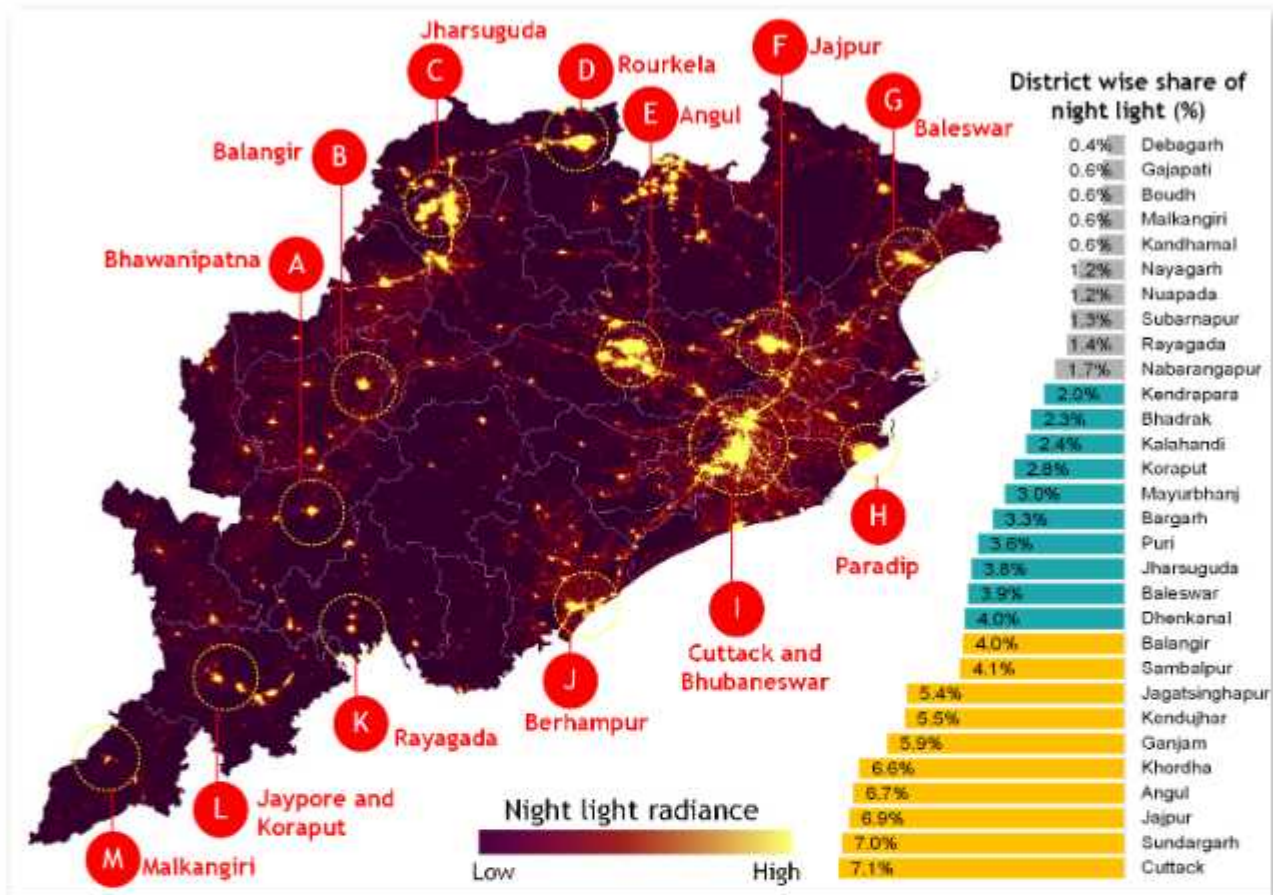
- b. Greenfield LED public street lighting projects: Greenfield LED street lighting project means designing, implementing, operating and maintaining the greenfield public street lighting system along with other infrastructure including Central Control & Monitoring System (CCMS) to the new stretches approved by the different ULBs. The project is being implemented in 113 ULBs in PPP mode through SPVs formed by the selected Bidders M/s Crompton & Greaves Consumer Electricals Ltd., M/s Surya Roshni Ltd. and Consortium of M/s Akanksha Power & Infrastructure Pvt. Ltd. and M/s e-Smart Solutions Pvt. Ltd. and already 48,711 nos. of LED luminaires have been installed and commissioned under Phase-I and installation is in progress for 14,805 nos. of LED luminaires under Phase-II.
- c. NEESL (LED light retrofitting & Greenfield project): M/S NEESL has been appointed for retrofitting LED street lighting project in five Municipal Corporations and for Greenfield LED public street lighting project in Bhubaneswar Municipal Corporation. Till date around 1,01,083 nos. of LED luminaires have been installed against the target of 1,09,435 nos.
- d. M/S EESL project (LED light Retrofitting project): The Government has specifically initiated a drive to retrofit streetlights through M/s EESL Ltd. a JV of PSUs under Ministry of Power, Govt. of India in 109 ULBs except the five Municipal Corporations. Around 2,57,716 LED Luminaires have been installed exceeding the estimated target of 2,38,882 nos.

4.4.2. Odisha Urban Infrastructure Development Fund (OUIDF) has been pioneering the execution of LED street lighting project implemented in 5 Municipal Corporations through M/s NEESL with a total project cost of INR 83.17 crore and OUIDF assistance of INR 71.95 crore. Further, OUIDF has also taken up the illumination of 113 Urban Local Bodies (ULBs) of Odisha, excluding BMC, through Greenfield LED Public Street Lighting projects with a total project outlay of INR 264.52 crore including OUIDF assistance of INR 79.36 crore.

4.4.3. All the LED Public Street Lighting Projects are on the verge of completion. Upon the completion of these on-going projects, Odisha will achieve universal coverage of Energy Efficient Smart LED Street Lighting in urban areas. With the contractual obligation of the Implementing Agencies in complete Operation & Maintenance for 7 years post-installation coupled with the modern Centralised Command & Control System being in place for all projects across the state, the Public Street Lighting in Odisha is envisaged to provide the citizens with bright safe public thoroughfares at all times along with reduced energy consumption.

4.4.4. Figure 4.12 gives a glimpse of the night light intensity for Odisha in 2020. It also shows the district wise share of night light in percentage of total night light emitted in the state. The nightlight map shows 13 major light spots (A to H) which are clusters of cities that emit high light radiance at night. Districts like Cuttack (cluster I), Jajpur (cluster F) have the highest night light intensity share in the state, close to seven per cent. The twin cities of Bhubaneswar and Cuttack (part of cluster I) which are the top two cities in population, emit large radiance of night light. Angul district (cluster E), is one of the industrial districts in the state hosting major PSUs like NALCO, NTPC and MCL, emits 6.7 per cent of Odisha's total night light. The city of Berhampur (cluster J), also known as the silk city of Odisha, attracts tourists throughout the year and is part of the Ganjam district which emits 5.9 per cent of Odisha's total night light. The port city of Paradip (cluster H) belongs to Jagatsinghpur district which emits 5.4 per cent of Odisha's total night light.








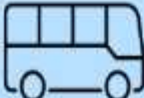
Fig 4.12 Satellite View of Odisha at Night in 2020



Source: Payne Institute for Public Policy

4.4.5. Prior research in advanced countries has established high correlation between night light data and population. The correlation between the night light data of all the districts in Odisha as of 2012 and total population of the district as of Census 2011 is 0.528. When compared with the recent night light data of 2020 and estimated population in 2021, the correlation increases to 0.691. Though most of the districts of Odisha fall in line with the hypothesis that more population leads to more night light intensity, three districts namely, Jharsuguda, Angul and Mayurbhanj are seen as outliers. Figure 4.13 plots the districts with total population in x-axis and night light data on y-axis. The 45-degree blue line indicates an exactly proportional relationship between population and night light intensity. Despite Jharsuguda and Angul having a relatively lower population emit large amounts of light night due to their high industrial activity. On the contrary, Mayurbhanj has a high population but low night light intensity. Growing industrial activity and high population density and night light in general move together.

Table 4.3 Major Schemes for Urban Development in Odisha

Quick Snapshot of Select State Supported Schemes for Urban Development	
	<p>JAGA Mission</p> <p>Aims to provide land rights to identified and eligible slum dwellers with the objective of providing security of tenure and transforming the slums into liveable habitats.</p>
	<p>AMRUT 2.0</p> <p>Aims to provide universal piped water supply with household water tap connection, universal coverage sewerage & septage management & promote circular economy of water, rejuvenation of water bodies to augment water and enhance amenity value & development of green spaces</p>
	<p>Basudha – Universal Coverage of Piped Water</p> <p>Aims to achieve 100 per cent Household Connections in 100 per cent (114 ULBs) by Dec 2022</p>
	<p>SUJAL- Drink from Tap Mission</p> <p>Aims to reach everyone with 24/7 safe drinking water from a tap on-premises in urban localities. The government-owned Water Corporation of Odisha (WATCO) is implementing the programme with technical support from UNICEF and IRC.</p>
	<p>Garima scheme</p> <p>Aims to ensure safety and dignity of core sanitation workers by introducing risk & hardship allowances, financial assistance to the families in the event of accident or injury, financial support in the form of house grants and purchase of two wheelers covering up to 90 per cent of the cost.</p>
	<p>MUKTA</p> <p>Aims to create livelihood opportunities for the urban poor and migrant workers rendered unemployed and vulnerable during the pandemic.</p>
	<p>Odisha Urban Housing Mission</p> <p>Seeks to fulfil the housing requirements through in situ Slum Redevelopment, credit link subsidy scheme, partnerships with Public and Private Sectors.</p>
	<p>Mo Bus</p> <p>Public transport with free Wi-Fi, clean and technologically advanced equipment.</p>

I. Inclusive cities

4.5.2. The economic and social vulnerabilities of the urban poor became evident during COVID. Making cities inclusive would work better for the society as a whole. Odisha has worked across many thematic areas to create inclusive cities to provide a better quality of life. The Housing and Urban Development Department (henceforth H&UD) has undertaken various initiatives for urban transformation in Odisha in line with the vision of the government for achieving the SDGs. The major programmes are land rights to slum dwellers, universal coverage of drinking water supply, Unnati Programme, efficient and smart LED street lighting, urban transport, urban livelihood, affordable urban housing, revenue enhancement of local bodies and operationalization of 5Ts initiatives.

A. Urban Infrastructure

Urban Housing

4.5.3. The Odisha Urban Housing Mission (OUHM) was launched recognizing the need for an effective and efficient institutional mechanism to achieve the objectives of "Housing for All" in urban areas. Table 4.4 reflects the status of urban housing and the extent of housing shortage in the State.



Table 4.4 Housing status in urban area in Odisha

Particulars	Population
Total urban population	70,03,656
Total urban Households	13,73,987
Housing shortage	
Housing availability households	8,71,812
Housing shortage (as per HFAPoA)	5,02,175
Slum population	
Housing shortage in slums	4,12,757
Housing shortage in Non-slums	89,418

Source: H&UD, Department. GoO

4.5.4. Based on the estimates of Housing for all plan of action (HFAPoA) prepared by OUHM, there is a shortage of housing for 5,02,175 households out of which only 89,418 households hold land titles, and the rest are landless. Pradhan Mantri Awas Yojana (PMAY)-Urban is a major programme implemented in urban areas to meet the housing shortage.

4.5.5. The mission seeks to fulfil the housing requirements of the urban poor, including slum dwellers in the following ways.

- In situ Slum Redevelopment using land as a resource.
- Affordable housing for weaker sections through credit-linked subsidy scheme.
- Affordable housing in partnership with Public and Private Sectors.
- Subsidy for Beneficiary-Led individual (BLC) house construction for Economically Weaker Sections (EWS).
- There is also a provision for constructing houses for landless EWS households under a public-private partnership (PPP) model by monetizing the land.

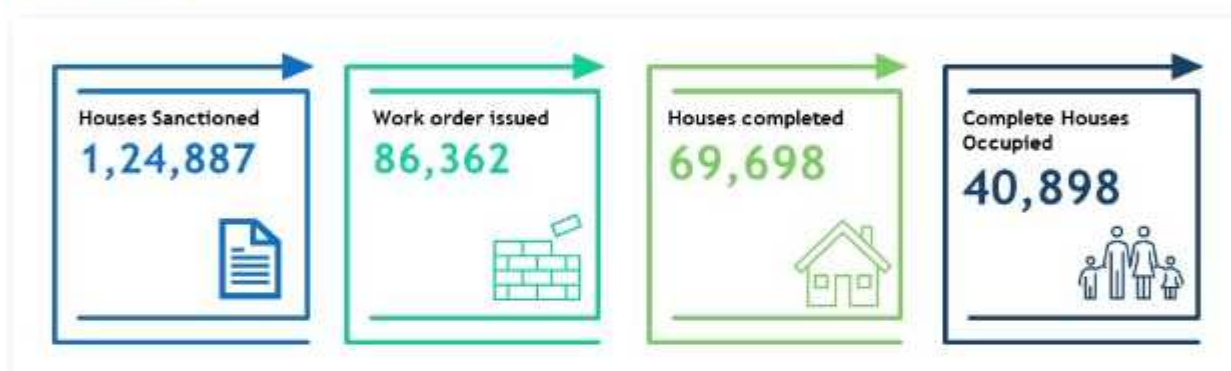
4.5.6. To assist the implementation of Odisha Urban Housing Mission (OUHM) at the District level, District Urban Housing Societies (DUHS) have been established in 30 districts along with one at Bhubaneswar Municipal Corporation.

Achievements

Beneficiary Led house construction (BLC)

4.5.7. Households having a valid land title are eligible to be covered under this vertical of PMAY (U). Figure 4.14 shows the key statistics of the Beneficiary Led House construction scheme (BLC). Till date, a total of 1,24,887 houses in 114 ULBs have been sanctioned under BLC vertical out of which 69,698 houses have been completed.

Fig 4.14 Key Statistics of Beneficiary Led house construction



Affordable housing in partnership and in situ rehabilitation

4.5.8. About 14,262 houses have been sanctioned under these two verticals out of which work has been initiated for 7,762 houses.

4.5.9. OUHM has been working hand in hand with JAGA Mission to making housing accessible to all. The convergence with Jaga Mission has helped around 10,092 households to receive land right certificates which have already been sanctioned houses under PMAY - (Urban). Table 4.5 shows coverage of JAGA Mission under BLC, Affordable Housing in Partnership (AHP) & In-Situ Slum Redevelopment (ISSR) projects for the year 2020-21.

Table 4.5 Coverage of JAGA Mission under BLC, AHP and ISSR Projects

Vertical	BLC	AHP	ISSR
No of Dwelling units planned	60,000	20,000	1,20,000
Assistance per dwelling unit	INR 2,00,000	INR 1,50,000	INR 30000
Total cost (in lakh)	INR 1,20,000	INR 1,00,000	INR 5000

Source H&UD Department, Odisha

Urban Road Transport

4.5.10. With the objective to provide safe, reliable, accessible, user-friendly and sustainable public transport to the city and further setting up a mechanism to deliver public transport that keeps up the pace with demand more bus depots are being constructed. The responsibility of the construction of the bus depots has been given to Capital Region Urban Transport (CRUT). The bus depots were constructed at Bhagwanpur and Patia with a construction cost of INR 20.76 crores and INR 20.55 crores respectively.



4.5.11. In order to ensure a complete transformation of the urban public transport scenario in the city and its hinterland through use of smart technology, service benchmarking and customer satisfaction, CRUT rolled out its new buses under the brand name of MO BUS. The service was launched on November 6, 2018 to provide reliable and safe transportation connecting neighborhoods. The focus is not only to focus on customer service, employee development and technology but also to provide the best public transportation possible and continue to improve the quality of life. At present, a fleet of 200 buses catering to around one lakh passengers in 21 routes in the twin city of Cuttack and Bhubaneswar is operated by CRUT. This network is expected to increase with the addition of 189 buses in the future. Considering the demand for these services, the Government has introduced a City Bus Service in many cities/towns- Ganjam Urban Transport Service Ltd.



(GUTSL), Western Odisha Urban Transport service Ltd (WOUTSL), Sundergarh Urban Transport Trust (SUTT), Jeypore, Koraput, Sunabeda Urban Transport Trust (JKSUTT), Balasore –Bhadrak Urban Transport Trust (BBUTT), Kalahandi Urban Transport Trust (KUTST) with a fleet of 150 buses of different categories.

4.5.12. There are various types of roads classified based on the material used to build them. For example, it could be water bound macadam (WBM) roads, Wet Mix Macadam (WMM) roads, Bituminous (BT) roads and cement concrete (CC) roads. WBM roads are laid as layers having 10 cm thickness. BT roads are prevalent roads around the world, as they are low in cost and suitable for driving conditions. CC roads require less maintenance and are suitable for high traffic areas. Table 4.6 below displays the length of different types of road in Odisha, both surfaced and unsurfaced.

Table 4.6 Length of Municipalities Roads both surfaced/unsurfaced (in Kms)

Total length	Surfaced			Total unsurfaced
	WBM/WMM	BT/CC	Total	
18162.782	2655.98	12093.40	14749.40	3413.41

Source: H&UD, Department., Odisha

Interstate bus terminals at Baramunda, Bhubaneswar (ISBT)

4.5.13. The State Government has decided to develop the Baramunda Bus Terminal, Bhubaneswar to an interstate bus terminal (ISBT) with international standard amenities. Accordingly, the responsibility of development of ISBT has been given to the Bhubaneswar Development Authority (BDA) transferring the same from the C&T (T) Department. The project is scheduled to be completed in 24 months and the period of maintenance is five years along with five years defect liability period as approved by the cabinet. The project will be financed in a 40:40:20 ratio by the state government.

Last mile connectivity

4.5.14. The new schemes and programmes of the government ensure the presence of a backbone network of transportation for people. However, some users might not be able to reach the network for many reasons. Last mile connectivity helps build a link with the backbone network and the users. The Government of Odisha has also focused its efforts to prioritize last mile connectivity for its people.

4.5.15. Financial Assistance is being provided to the ULBs to develop at least one bus terminal in each ULB with the bare minimum facilities for passengers. The construction of bus terminals at Bhanjanagar, Digapahandi, Konark, Deogarh, Nayagarh, Kuchinda Hinjilicut, Tarba, Jaipur and Balasore is under process with the financial support of the state government. Furthermore, as COVID 19 has changed the definition of normal, contactless, digital ticketing measures using QR code and tap 'n' pay, and Mo Bus Cards have been introduced. Other measures include Bus-Pathsalaa in 100 hours (5 weeks), capacity building online training for crews, grocery on wheels in containment zones, etc. Bus stops were converted to vegetable vending zones. Social media activities like Mo Bus-Mo stories, poems, paintings, thoughts and games were started to educate commuters about Mo Bus.

Last mile connectivity ensured through developing at least one bus terminal in each ULB

Water

Urban Water Supply

4.5.16. Under the requirements of the 74th Amendment Act, Water Corporation of Odisha (WATCO), a Not-For-Profit company has been established with a mandate to provide water and wastewater related services on a sustainable basis in Bhubaneswar, Khordha and Jatani municipal areas in the first phase. It will be extended to other ULBs of Odisha in due course. During 2020-21, 74 urban water supply projects were completed and commissioned.



4.5.17. A specific urban water policy, consistent with the State Water Policy was developed to address the technical, institutional, social and environmental challenges impacting the urban water supply service. The policy includes provision of universal 24X7 access to potable piped water supply at an affordable price with equitable, sustainable and eco-friendly distribution in urban areas. Figure 4.15 below displays the major water schemes of the state followed by a description of the schemes.

Fig 4.15

Major State Level Schemes for effective Water Supply



AMRUT Scheme

Under the national flagship programme of Atal Mission for Rejuvenation and Urban Transformation (AMRUT), the following progress has been made in Odisha:

- a. Out of 130 proposed projects with a total cost of INR 1522.55 Crores, 121 projects have been completed at a cost of INR 1363.84 Crores till date.
- b. 214.32 Kms of water supply distribution pipelines have been replaced /laid in nine AMRUT cities during the financial year.
- c. Out of 1,90,874 households, water supply pipeline connections have been provided to 1,73,773 households in nine AMRUT cities.
- d. Out of 48 proposed projects for parks, 40 projects have been completed.
- e. All sewerage/ septage related projects have been completed under the AMRUT Scheme.

The following infrastructure has been added during the year 2020-21

- a. Source: Four water treatment plants with a total treatment capacity of 18.80 MLD at Sambalpur, Kuchinda and Barapali have been completed & commissioned.
- b. Storage: 84 Ground level Service Reservoirs (GSRs) and 48 Elevated Service Reservoirs (ESRs) having a total storage capacity of 46.17 ML have been completed
- c. Distribution of pipe network: 616 kilometers of distribution pipe network has been added covering about 90 per cent of urban areas.
- d. Water supply house connection: 1,78,516 new house connections have been provided by December, 2020.

Drink from Tap Mission

4.5.18. The main objective of the Mission is to critically examine the risk management of continuous water supply from catchment to consumer and enable consumers to directly drink from a tap. The Mission is one of its kind and has added a new chapter to the history of the state. The Mission will systematically coordinate among water supply authorities, consumers as well as other stakeholders. It aims to achieve 24x7 water supply (including 100 per cent metering), quality surveillance and assurance of Tap water quality and community participation in water supply management. Additionally, the Drink from Tap mission will reduce the generation of plastic waste by 400 tonne per annum.

4.5.19. Commencement of projects for 24x7 water supply Drink from Tap Mission in 15 cities was funded by OMBADC/State with an investment of about INR 1000 Crore which benefits a population of 15 Lakh. The Drink from Tap Mission along with Metering installation and 24X7 water supply has been completed in six-pilot zones in Bhubaneswar, 5 pilot zones in Puri and one sub-pilot zone in Bhubaneswar.



4.5.20. Puri became the first heritage town in the country to get this facility. It has benefited from pilot implementation of the mission extensively. About 2.5 lakh residents of Puri municipal area will now get potable clean drinking water 24x7 under the new project. Over 400 water fountains have also been installed in various parts of the town as part of the SUJAL: Drink from Tap Mission which will cater to millions of tourists. The mission is now being extended to entire Puri town and another 14 ULBs of the state. Study of existing water supply infrastructure, identification of

infrastructure gap analysis and preparation of DPRs has been completed for all the 10-pilot zones and sub-pilot zone in Bhubaneswar and Puri.

4.5.21. As the mission specifically focused on the water quality, people can use water directly from the tap without using additional filtration such as R.O. filters and without use of any in house storage and daily pumping. The mission is expected to be implemented across the state for which a Memorandum of Understanding has been signed with UNICEF for technical assistance. Universal coverage of piped water supply with 100 per cent house coverage was achieved in Bhubaneswar and 26 more cities, which makes it a total of 27 cities out of 114 cities in Odisha.

Bhubaneswar has achieved Universal coverage of piped water supply

Jalsathi initiative

4.5.22. The Jalsathi initiative was launched to facilitate effective water management through participation of the community at the ward level in the form of Self Help Group (SHG) members as Jalsathis. Jalsathi community participation in drinking water supply and consumer management has been initiated in Bhubaneswar, Cuttack, Khordha, Jatni and Puri areas and it will be extended to other ULBs. Water metering in towns like Bhubaneswar, Rourkela, Puri and Berhampur which provide three lakh connections to 22 lakh people and 1,20,000 house connections is already completed.

4.5.23. Currently, there are 209 Jalsathis and an additional 328 Jalsathis have been selected to be deployed in 67 ULBs. Digital screens are also installed in prominent locations to display real-time water quality for public awareness. Besides this mission, some international best practices have been introduced which are mentioned below:

- a. Deployment of mobile laboratory (Lab on wheel) for on-the-spot water quality testing
- b. Mobilization of quick response team for immediate leakage repairs and 24x7 IVRS based customer care centre
- c. Drink from tap mission has been executed through WATCO and work in 17 pilot zones in Bhubaneswar, Puri and Cuttack has been completed
- d. The 24x7 piped water supply Drink from Tap mission project has been introduced in 14 ULBs of Mayurbhanj, Keonjhar, Jajpur and Sundergarh districts; and Detailed Project Report (DPR) preparation is under process for 1 ULB in Jajpur district
- e. Stakeholder agencies like Urban Development Agency, Housing and Urban Development Department, WATCO Government of Odisha and Area level federation at the Community level have been involved in Jalsathi initiative
- f. As of 31st January 2021, INR 12.37 Crores have been collected as water charges by the Jalsathi.

4.5.24. PHEO is entrusted with providing drinking water to over 7 million people in the urban areas of Odisha, India. However, until 2017-18, merely 40 per cent per cent urban households had access to piped water supply; this was further exacerbated with poor service delivery, a high level of illegal connections, poor asset management and a weak revenue collection system. This lack of access enhanced the risk of water contamination and faecal-oral transmission, a significant cause of death. Odisha alone reported 10.6 per cent of diarrheal deaths in India during 2012-17.

4.5.25. PHEO took up the ambitious challenge of revamping the water infrastructure, including vital policy reforms under a comprehensive development programme to connect 1.3 million households in the state with piped water connections. Today, 96 per cent of targeted households have piped water supply, and 78 out of 114 cities have achieved 100 per cent house connections with balance cities to achieve universal coverage by December 2022.

4.5.26. PHEO has deployed a unique community-led service delivery model, including women from marginalized low-income families. These women support billing & collections and act as relationship managers to help households apply for new connections, resolve grievances, regularize an illegal connection, amongst others, helping improve service delivery & citizen delight.

Awards and Recognition

- a. Asia Pacific Housing Forum Innovation Awards 2021 (Issued by Asia Pacific Housing Forum · Dec 2021): Innovation in Public Policy in recognition of Jaga Mission's Slum Upgradation programme.
- b. Medal of Honour, 5th Guangzhou International Award for Urban Innovation(Issued by 5th Guangzhou International Award for Urban Innovation): Urban Innovation for Faecal Sludge and Septage Management (FSSM) at Berhampur for promoting sustainable environment conservation and women empowerment through Faecal Sludge and Septage Management in the City.
- c. Medal of Honour, 5th Guangzhou International Award for Urban Innovation (Issued by 5th Guangzhou International Award for Urban Innovation) :The Urban Wage Employment Initiative (UWEI) implemented in all 114 Urban Local Bodies (ULBs) of Odisha for reducing vulnerabilities and enhancing resilience of the urban population in the State.
- d. Online Popular City(Issued by 5th Guangzhou International Award for Urban Innovation · Dec 2021): The Urban Wage Employment Initiative (UWEI) programme being implemented in all the 114 ULBs of Odisha voted for the Online Popular City Award.
- e. Best Faecal Sludge and Septage Management Model (Issued by India Sanitation Coalition (ISC)-FICCI): Awarded to Dhenkanal Municipality for demonstrating successful urban rural convergence in FSSM .
- f. Award of Excellence at the 2nd National Water and Sanitation Innovation Summit to WATCO (Issued by Elets Technomedia and Ministry of Jal Shakti, Government of India · Mar 2021): Awarded to WATCO For 24 X 7 Smart Water Transportation and Distribution in Puri through the Drink from Tap Mission
- g. Award of Excellence (Issued by Computer Society of India (CSI) · Feb 2021): For Smart Water Management in Puri through the Drink from Tap Mission, Odisha's programme on providing universal access to piped water supply
- h. PHEO won the National level V Ramachandra awards 2020 under the category "Best Civic Agency" for piped water supply scheme for all urban households on 12th January, 2021.
- i. PHEO won the Best Civic Agency Award at the 2nd edition of Janaagraha City Governance Awards for its efforts towards universal access to piped water supply scheme for all urban households through inter-agency coordination and decentralization on 12th January, 2021.
- j. Award of excellence from Computer Society of India (CSI) special interest group E- Governance Award 2020 for smart water management in Puri.
- k. Received Elets water Innovation Award of Excellence 2021 for 24x7 water supply to Puri town under Drink from Tap mission.

Sanitation

4.5.27. The State Government has initiated a multipronged approach to achieve the Swachh Bharat Mission. It aims to accelerate the universal sanitation consciousness to make Odisha open defecation free and improve levels of cleanness through solid and liquid waste managements.

4.5.28. In Odisha, all the 114 ULBs were declared as "Open Defecation Free" (ODF). 111 ULBs were certified as ODF, 8 ULBs have been certified as ODF ++ and the remaining 92 ULBs are in the pipeline for a third-party assessment. Construction of 1,40,702 individual Household Latrines (IHHL), 7,217 Community Toilet (CT) seats and 4782 Public Toilet (PT) seats have been undertaken under the "Swachh Odisha Susth Odisha" scheme.



4.5.29. Processing of municipal solid waste is done by adopting decentralized methods of Micro composting centres (MCCs) in order to adhere to Solid waste management rules. Work on 242 Micro Composting Centres (MCCs) were started in 2019. These MCCs along with 1833 pit composting and barrel composting facilities have enabled processing the wet waste into organic manure, branded as "Mo Khata", to gradually replace chemical fertilizers. All ULBs have also started establishing Material Recovery Facilities (MRFs) for processing recyclable dry waste. A bidding process for procuring equipment for Micro Composting Centres and Master Recovery Facilities has been done through the "Government e-market place (GEM)" portal, which is one of the brightest examples of Transparency, one of the 'Ts' of the '5T' principles. Currently, there are 210 MCCs and 176 MRFs have been established in all ULBs to maintain solid waste management.

4.5.30. In addition to GOI funds of INR 100.45 crore, the Government of Odisha released a sum of INR 467.00 core in favour of different ULBs for solid waste management. For close and effective monitoring of urban sanitation activities, a web-application, namely "Swachh Sahar Odisha" has been developed. The fabric of the sanitation value chain has been made women-centric by engaging women members of the local WSHG/ALF/CLF named as Swachh Sathi to bring a change in Solid waste Management (SWM) in Odisha. 1,976 Mission Sakti groups in 114 ULBs have been prepared to implement the scheme.

Low-cost battery-operated vehicles being used for waste collection in the state

4.5.31. Battery operated vehicles (BoV) with low cost, environment-friendly modern technology has been used for the collection of segregated waste from the doorstep. So far 708 BoVs are in operation in 93 ULBs. A door-to-door campaign in all 114 ULBs has been conducted by 1,958 Swachh Sathi and 389 supervisors.

4.5.32. Training of Trainers (TOT) on Information, Education & Communication (IEC) & Behavioural Change Communication has been conducted, who in turn imparted training to 28,606 sanitation workers and other stakeholders to strengthen quality sanitation activities. Swachh Sathis and supervisors induced behavioural changes among households through door-to-door campaigns in all the ULBs. Wall paintings, sensitization meetings, leaflet distribution and installation of large-scale hoardings on sanitation & SWM have been carried out in all the wards and places of high footfall. To facilitate scoring under "Citizen Feedback", "Swachhata App" has been developed and made functional in the Odia language.

4.5.33. Garima is a scheme for the safety and dignity of core sanitation workers. The scheme has been implemented by the government through the 114 Urban local bodies of Odisha. The use of technology as well as the demand and supply for core sanitation services are increasing exponentially, augmenting activities to safeguard the environment and provide a liveable habitat.

4.5.34. The core sanitation workers include drain cleaners, septic tank and sewer maintenance workers, toilet cleaners and FSTP/STP operators/helpers. The service benefits provided by the scheme include the introduction of risk and hardship allowances, financial assistance to the families in the event of accident or injury, financial support in the form of house grants and purchase of two wheelers covering up to 90 per cent of the cost. The survey work for the identification of core sanitation workers has been started in 6 ULBs and approximately 12,970 core sanitation workers have been identified.

Sewerage and Septage

4.5.35. About 40 per cent of house sewer connections have already been completed in Puri. The sewerage system in Cuttack city has been taken up under JICA loan assistance and is now under process. A sewage treatment plant (STP) of 33 MLD capacity is now functioning in Cuttack to treat the wastewater from drains. Work on another 48 MLD STP is under progress. There is also a provision for the construction of four STPs of capacities 56 MLD, 43.5 MLD, 28 MLD and 8.5 MLD at Meherpalli, Kochilaput, Basuaghai and Paikarapur respectively in Bhubaneswar. The sewerage system at Rourkela and Sambalpur will also be completed soon.

4.5.36. A 26 per cent rise in urbanisation in the last decade in Odisha, India, has led to an increased wastewater generation across all 114 cities. However, until 2014 there was absence of any sewer network with treatment facility across urban Odisha. ~800 MLD of untreated wastewater was indiscriminately discharged, contaminating water bodies causing severe public health hazards for 7 million people living in urban Odisha. 10.6 per cent of all diarrheal deaths in India were reported from Odisha alone.

4.5.37. Initially, the state was constructing sewerage networks in 2 cities and initiated the process in another 2 cities. However, realising the challenges in executing sewerage networks, Odisha adopted the unprecedented strategy for a statewide decentralised septage treatment system.

4.5.38. Until 2021, 11 Septage Treatment Plants (SeTPs) totaling 452 KLD treatment capacity were operationalised in the pilot phase. In 2021, the state amplified scale-up efforts, resulting in 85 SeTPs operationalised with 1597 KLD capacity across 83 cities, significantly reducing the pollutants across rivers in Odisha. By the end of 2022, 118 plants totaling 2037 KLD, will be operational across all 114 cities.

4.5.39. Furthermore, cities induct women & transgenders groups from the community to manage these SeTPs, thereby creating livelihoods, enhancing gender parity, and empowering the marginalised.

B. Urban Services

Health

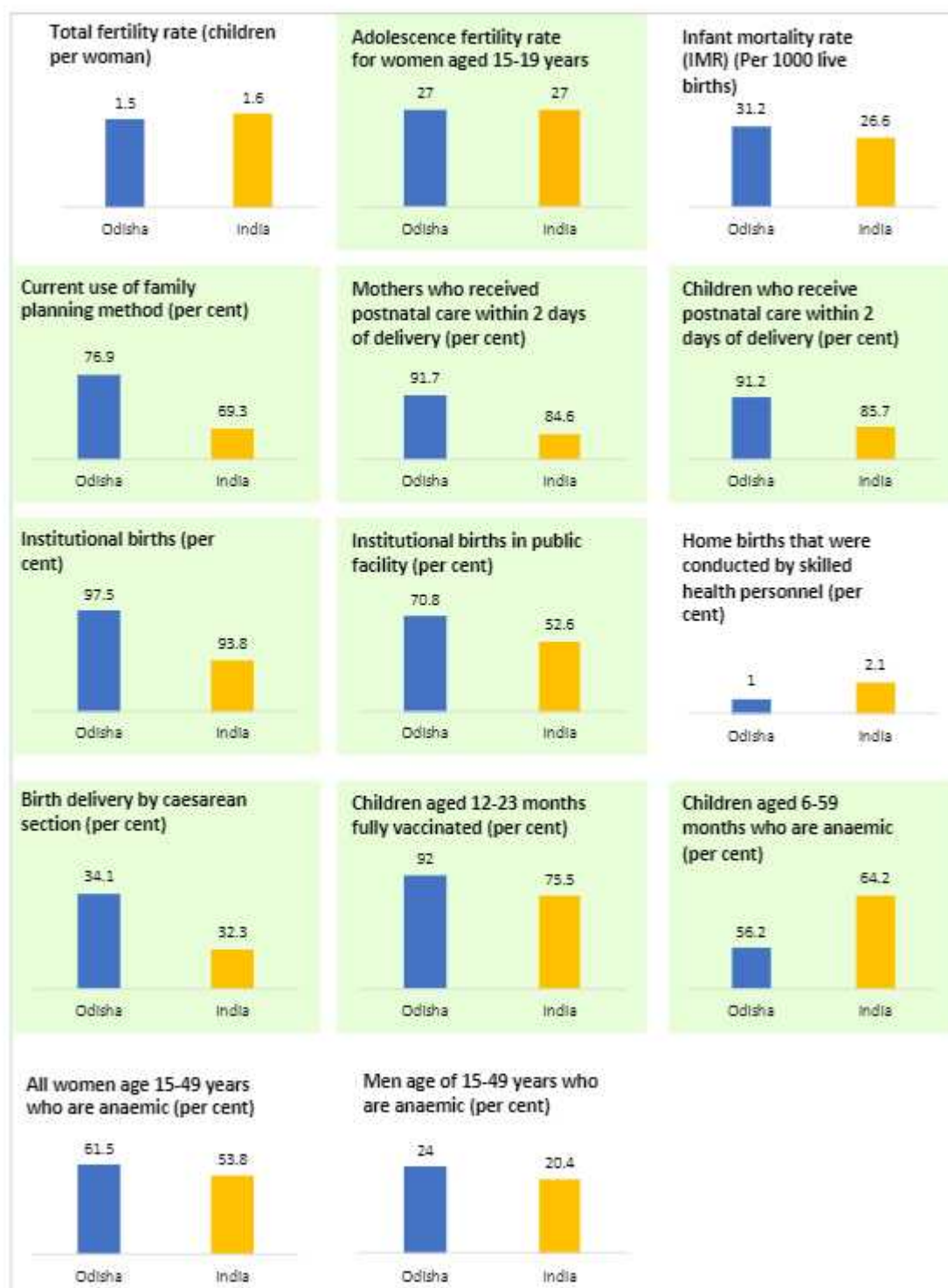
National Urban Health Mission (NUHM)

4.5.40. National Urban Health Mission was introduced to effectively address the health concerns of the urban poor population. It works towards bringing sustainable improvements in the health conditions of the urban poor by influencing policies and programmes. It is a need-based city specific urban health care system which aims to meet the diverse health care needs of the urban poor and other vulnerable sections



4.5.41. NUHM will cover all state capitals, district headquarters and other cities/towns with a population of 50,000 and above (as per census 2011) in a phased manner. Cities and towns with population below 50,000 will be covered under National Rural Health Mission (NRHM). NUHM would primarily focus on slum dwellers and other marginalized groups like rickshaw pullers, street vendors, railway and bus station coolies, homeless people, street children, and construction site workers, etc.

Figure 4.16 shows the urban health profile of Odisha in comparison with India through 14 key indicators. Among 14 select key indicators of health, Odisha occupies a better position than the national urban average with respect to 9 indicators.

Fig 4.16 Urban Health Profile of Odisha vis-à-vis India

Source: National Family Health Survey (NFHS-5), 2019-21

Access to Jobs

Odisha Urban Wage Employment Initiative (UWEI)

4.5.42. The coronavirus pandemic has devastated the lives of many people. The impoverished and poverty-stricken households were the worst affected. Daily wagers and labourers had no source of income amidst the lockdown and faced many difficulties for survival.

4.5.43. Odisha Government realised the intensity of the situation and hence started the Urban Wage Employment Initiative (UWEI) to provide employment opportunities to labour from 20th April to September 2020. The scheme was renamed as "MUKTA" on 27th April, 2021. MUKTA was launched in April, 2020 with a vision to create livelihood opportunities for the urban poor and migrant workers who were unemployed during the Covid-19 pandemic. The initiative is a first of its kind in the country. It included work such as sanitation drives, construction of roads and toilets, recovering water bodies, cleaning work, development of public parks, playgrounds, and community centres. Under the scheme 7,606 MSGs/SDAs are engaged as implementing agencies and implementing partners.

4.5.44. The regularisation of the scheme ensured continuity of the initiative with increased outlay from INR 100 crores to INR 1,000 crores to support the urban poor. Various labour-intensive projects have been taken up under "MUKTA" which includes Open Space Development, Rainwater Harvesting Structure (RWHS), Water Body Development, construction, painting and sanitation activities. During the 17 months of April, 2020 to September, 2021, more than 21,420 projects (19,560 completed and 1,860 ongoing) have been undertaken across 114 urban local bodies of the state. It includes 240 mission Shakti Gruha, 715 Parichaya and 13,611 RWHS projects.

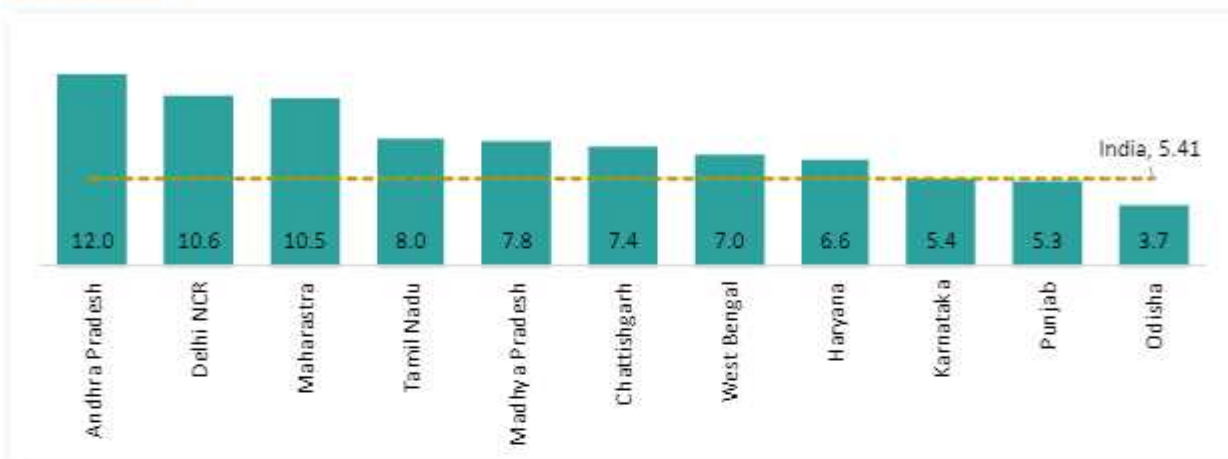
Implementation of the Urban Wage Employment Scheme

- a. Odisha Urban Wage Employment Programme has been implemented in association with the Mission Shakti Department. The Department with the respective ULBs effectively implemented the scheme all over the state.
- b. A total budget of INR 100 crores was set to cover 4.5 lakh families through the programme.
- c. The 114 Urban Local Bodies were included for the scheme benefits.
- d. Further, the payment was directly transferred to the workers' bank accounts at the end of every week. With this, the workers were secured about the finances in the house.
- e. The scheme is 100 per cent funded by the state and finances from the UNNATI and Jaga schemes are utilized. Some of the women SHGs also helped to execute the programme.

C. Slum development

4.5.45. According to the Census 2011, 137 crore households or 17.4 per cent of India's urban population live in slums. In Odisha, a total of 15.60 lakh persons live in slum areas. The slum population of the state constitutes 3.72 per cent of total population and 22 per cent of total urban population of Odisha. Odisha had a comparatively low slum population as a proportion of total population as compared to other states as shown in Figure 4.17. The highest proportion is observed in Andhra Pradesh (undivided) followed by Delhi (11 per cent) and Maharashtra (10.5 per cent).

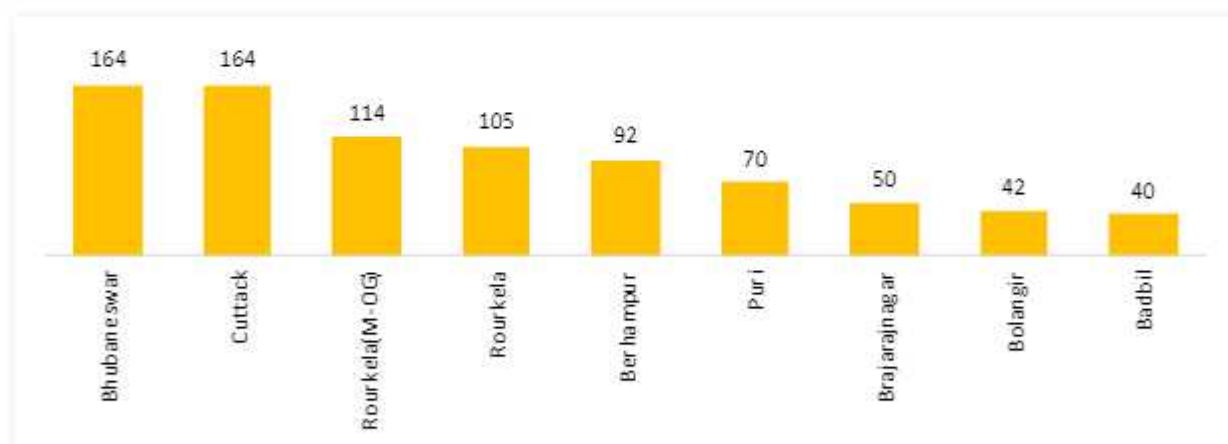
Fig 4.17 Slum Population (per cent of Total Population) in Major State in India, 2011



Source: Census of India, 2011

4.5.46. Figure 4.18 shows that among the major cities/towns in Odisha, Bhubaneswar and Cuttack have the highest slum population of 164 thousand each followed by Rourkela with a 114 thousand slum population in 2011.

Fig 4.18 Slum Population in Major Cities in Odisha, 2011 (in '000)



Source – Census of India, 2011.

4.5.47. Out of the total slum population in Odisha, 32.7 per cent live in semi-permanent or temporary houses where they face evacuation on a regular basis. 49.8 per cent of slum households use grass, wood, thatch, mental, asbestos sheets as materials for roof and 285 have mud walls. These materials are temporary and do not guard against the extremities of weather. Only 38 per cent of the houses are in good condition according to Census 2011.

4.5.48. Recognizing the crucial role played by slum dwellers in building and sustaining cities, the Government of Odisha decided to empower these impoverished residents of the cities by granting them in-situ land rights through

the landmark legislation - 'The Odisha Land Rights to Slum Dwellers Act, 2017'. Subsequently, on 7 May 2018, the government launched the JAGA Mission with the noble and ambitious aim of transforming slums to liveable habitats through a combination of land rights and a comprehensive slum improvement process. Given its sheer geographical scale covering all 2919 slums in all 114 cities and towns of Odisha and a beneficiary coverage of 1.7 million slum dwellers, JAGA Mission has become the world's largest slum land titling and improvement program.

Table 4.7 Slum households by structure of Census houses occupied

Slum households by structure of Census houses occupied, 2011 of Odisha (In No.)	
Total Nos of Households	3,50,306
Types of Census houses	
(i) Permanent	2,06,351
(ii) Semi permanent	84,281
Temporary	
(i) Serviceable	43,418
(ii) Non-Serviceable	13,760
Total	57,178
Others	2,496

Source: State of Slums of India, 2013 by NBO, GoI

4.5.49. The Mission has received international acclaim and was awarded the prestigious World Habitat Award in 2019 and the Asia Pacific Housing Forum Award 2021 for Innovation In Public Policy Category. As a first step, a Standard Operating Procedure (SOP) has been prepared in partnership with the Centre for Policy Research (CPR), Delhi to guide the urban local bodies and slum dwellers associations in the process of de-listing of slums through the creation of necessary infrastructure and bringing the slums at par with the rest of the city. This mainstreaming of slums with the rest of the city will be the foundation of a humane, just and inclusive city development paradigm in actual practice. Odisha Land Rights to Slum Dwellers Act along with JAGA Mission is unique not just in what it has embarked upon doing, but also in how it does it. Table 4.8 indicates the slum households and structure of houses occupied.

Table 4.8 Slums in Odisha and India, Profile for 2011

Sl.No.	Items (In numbers, unless specified)	Odisha	All India
1	Statutory Towns	107	4041
2	Slum reported Towns	76	2543
3	Urban population	7,00,3656	3,77,10,6125
4	Urban Households	15,17,073	7,88,65,937
5	Slum Population	15,60,303	65,49,4604
6	Slum Households	3,50,032	13,74,9424
7	Percentage in total urban population	1.86	100
8	Percentage in total slum population	2.38	100
9	Percentage of total slum population in urban population	22.28	17.42
10	Average slum Household size	4.5	4.7
11	Average Urban Household size	4.5	4.7

Source: Primary Census Abstract for slum, Census of India, 2011

JAGA MISSION: Transforming Slum to Liveable Habitat

Summary of the initiative

Jaga Mission aims to transform slums into liveable habitats by granting in-situ security of tenure to slum families and undertaking a participatory upgrading of all slums in all 114 cities of Odisha. With its pan-state coverage of over 1.7 million slum dwellers living in 2936 slums, it is one of the world's largest slum land titling and upgrading initiatives.

Recognising the critical activities performed by slum dwellers in the making & functioning of our cities, granting in-situ security of land tenure, addressing prevailing inequities in urban areas and integrating informal settlements into the mainstream city fabric are at the heart of the Mission.

The upgrading process includes providing amenities such as piped water supply, electricity, toilets to individual houses and creating public infrastructures such as stormwater drainage, street paving, street lighting, community centres & child play areas, and access to affordable housing schemes for constructing new houses.

The process is unique in that it involves the participation of slum dwellers at every stage. The upgrading process is deemed complete only when the Slum Dwellers Associations (SDA), constituted in each slum as part of the Mission, concur. Then, the local government formally declares the slum as a non-slum neighbourhood area, at par with the rest of the city.

550 slums were upgraded in seven months across the state within 7 months, with a target to make Odisha slum-free by December 2022.

Issues Or Challenges Addressed By The Initiative

Odisha's urban population has witnessed a significant growth of 27 per cent over the last decade, mainly due to the migration of low-income people from rural to urban areas searching for better livelihood opportunities.

25 per cent of the total urban population of Odisha lives in slums. While making crucial contributions to our cities' functioning, slum dwellers live in abject conditions, deprived of basic civic amenities, like piped water supply, access to proper roads, sanitation, etc., and live under the constant threat of eviction.

Experience from around the world has shown that in-situ and participatory slum upgrading, facilitated by a decentralised governance structure, is one of the most effective and sustainable approaches to improve the quality of life of slum dwellers and respond to their housing needs at scale. Odisha is applying this approach at a pan-state scale to achieve slum-free status.

Goals of the policy

While phase 1 of the Jaga Mission focused on granting land rights to slum dwellers in Odisha, the goals of phase 2 of the mission are as follows –

GOAL 1 - Comprehensive upgradation of all slums in the state, bringing them at par with the rest of the city. (Upgrading involves 9 infrastructure verticals and access to financial support to construct new houses, targeting over 1.7 million slum dwellers in the state).

GOAL 2 - Organisational and financial strengthening of slum dwellers through their active participation in all stages of the upgrading process – from planning to implementation.



(Slum Dwellers Associations (SDAs), created in each slum, are the implementation partners of the city local government in the planning and execution of the slum upgrading process.)

GOAL 3 - Achieve slum-free status in Odisha by 2022

(2974 slums to be upgraded by December 2022 to achieve statewide slum-free status in Odisha)

Impact the policy has made

Jaga Mission, the world's largest slum titling and upgrading project, directly impacts the lives of the urban poor by providing security of land tenure on an in-situ basis, access to financial assistance to build their own house and basic civic infrastructure & services. In addition, the Mission targets to formalise the rights of slum dwellers and mobilise the slum communities to participate in the decision making in the planning & execution of habitat improvement activities.

550 slums in 28 cities were upgraded and transformed into liveable habitats within seven months (October 2020 to April 2021) in the pilot phase of the slum upgrading process. Currently, the upgradation process is scaled to target all 2936 slums across 113 cities in the state.

The continued access to land and basic civic amenities create a scenario for a stable housing tenure that enables access to basic services, including schooling for children, employment opportunities, a bank account etc. The improved stability and access to basic services create a suitable environment for the urban poor to break free of the poverty trap.

Women empowerment has also been at the heart of the project, with women gaining equal rights through joint ownership of land and their active participation in the process. The Slum Dwellers Associations are encouraged to have 50 per cent women as members. In addition, giving special priority to people with disabilities, women-led families and transgender people.

Innovative Characteristics of Jaga

The implementation of the Jaga Mission involves a unique combination of state-of-the-art technology (slum mapping using drones & preparation of GIS maps), together with participatory approaches by organising the slum dwellers into associations of slum dwellers. The Slum Dwellers Associations (SDA) act as implementing partners and play an active role in the planning and execution of the infrastructure upgradation process. This combined approach makes the overall initiative transparent, accountable and enhances the speed of implementation.

The participatory slum upgrading process was guided by comprehensive standard operating procedure (SOP) duly notified, tested and improved based on the learnings from the pilot phase. Furthermore, the upgradation process is complete only when the slum dwellers vet the infrastructure development as per the approved checklist and subsequently de-listed by the city government.

D. Smart Cities

4.5.50. Bhubaneswar Smart City Limited (BSCL) was incorporated on 8th March 2016, with an aim to promote Bhubaneswar as a liveable city and make it a viable location for Indian and foreign firms. The mission works to undertake comprehensive development by promoting mixed land use and review activities like budget, implementation of projects under Smart City Proposal (SCP) and coordination with other schemes and activities.

Fig 4.19 Aerial View of the City of Bhubaneswar

4.5.51. Provision of Essentials Services to Public: During the period of COVID19, a 24X7 toll-free number (Bhubaneswar helpline: 1929) was provided for guidance, support and information to the public of Bhubaneswar. These services were related to medicines, hospital shifting, ambulance, doctor consultation, special facility for pregnant women for Covid-19 testing, special facility for vaccination & testing for 60+ age citizens, walk-in facilities for Covid-19 vaccination, drive-in vaccination, vaccination of bedridden and completely immobile citizens in Bhubaneswar, vaccination for the students having secured admission in Foreign Universities, etc.

4.5.52. For providing quick response to the citizens, the BMC area was divided into three zones: North Zone, South East Zone and South West Zone. The Rapid Response Team was also set up in these zones to provide prompt services and doorstep delivery of essential items such as medicines.

4.5.53. The helpline works 24X7 in three shifts and is being managed by the responsible officers of BSCL as well as Health Department / NUHM. All staff engaged with the helpline have been instructed to be responsive to the callers so that they do not have to face any problem during this trying time.

4.5.54. Additionally, it has been instrumental in serving as a platform to monitor the condition of people kept in quarantine at home as well as at Government provided institutional quarantine centres. Furthermore, it is currently playing a major role in answering and guiding the callers coming from different areas of the state in Bhubaneswar.

4.5.55. The multi projects undertaken within the Smart city projects are parks built with accessible and inclusive features for children with special needs (Sensory Parks), Adoptive Traffic Signal Control (ATSC) System for reduction in congestion, distribution of green phase time equitably, faster response to traffic conditions, providing timely emergency support, facilities for digital payment of government fees and taxes, utility bills, transit charges, parking (Common Payment Card System), an e-platform can be used to find ward information, information on public services, significance of different tourist sites, event calendar of Bhubaneswar city and much more (Bhubaneswar One), implementing youth- centric and youth-led integrated social interventions, promote safety and security of girls and women and increase availability and accessibility of social, health and other development programs for the vulnerable and marginalized population (Socially Smart Bhubaneswar), night shelters for beggars and the homeless, an integrated public service centre facility for the citizens having e-seva, health care centre, library, e-toilets and a crèche, 2000 bicycles have been deployed to provide a low-cost mode of transport to the citizens, multi-Level car parking, redevelopment of Janpath Road (Smart Janpath), and provide a digital platform for integrating multiple city sub-systems (ICOMC Building).

Box 4.1

Liveable Cities – Odisha at the forefront

India is experiencing fast-paced urban expansion with the urban population climbing from 27.6 per cent in 2001 to 34.92 per cent in 2020 indicating a stronger need for effective city governance and urban development interventions. Cities are not only agents of economic development, but also create opportunities for human progress, generation of new ideas and innovation. As every resident of the city has the right to live in peace, security and share equal opportunity, the efforts in making cities more liveable should be driven by investing in social infrastructure through people-centric approaches. This may be achieved when the state facilitates a dialogue between the citizens and its administration. The state of Odisha has worked in facilitating this dialogue through its recent measures to create liveable cities. Initiatives and programs like Mo Sarkar, Ama Sahara and E-gazette attempt to create an interface for interactive participation of people and create scope for better and efficient governance.



The recent performance of the capital city of Odisha, Bhubaneswar, provides an evidence of the efforts of both the state and municipal government in creating liveable cities. With its citizen-centric programs and initiatives, the city has achieved much recognition and applaud around the world.

Citizen Centric Initiatives of Bhubaneswar City

Bhubaneswar.Me: unified city portal to help citizens by providing an effective and common e-platform for quality service delivery

Building Plan Approval System: Delivers time-bound services to help people get building plan approval under civic jurisdiction in a smart and time specific manner

M-Office BMC: The app notifies officials about issues/complaints in real-time and can track them via the app until they are resolved

Bhubaneswar One: it is an online portal which integrates geo-spatial data from govt. and private agencies for providing easy and hassle-free information

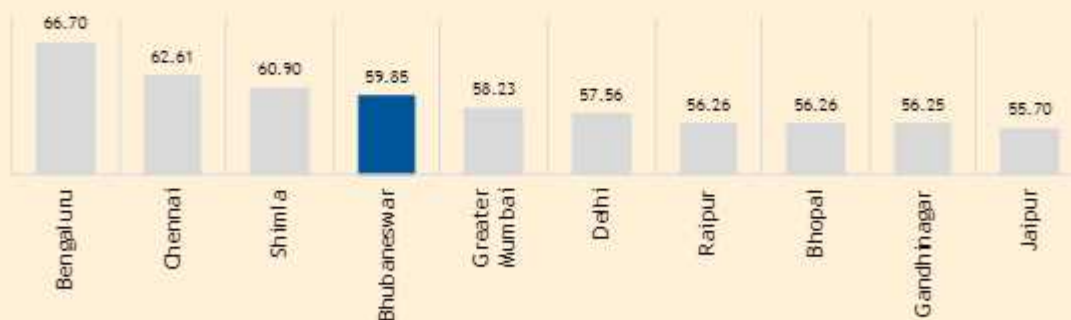
My City My Pride: the app aims to better connect citizens with the city to tackle common problems related to health, sanitation, waste management and sewerage systems etc.

E-Municipality Services- The project implements the Municipal e-governance application software system in all Odisha's ULBs and integrate it with existing software applications to improve service delivery

Source: Bhubaneswar Smart City Limited

The city was awarded SKOCH awards in two categories in November 2021. The city won the awards under the urban governance category for its unified city portal, Bhubaneswar. Me and ease of doing business award for the Building Plan Approval System for its citizen-driven service and utility. Moreover, the city was awarded the Planning Excellence Merit award in 2016 by the Canadian Institute of Planners. In 2017, the city bagged Pierre L'Enfant International Planning award by the prestigious American Planning Association (APA) for its Smart City Plan. It also featured in the top 20 global cities of the world in the Global Smart City Index in 2017 conducted by the UK based Juniper research. Another survey by Singapore based Eden Strategy institute recorded the city in the top 50 global smart cities list. Most recently, the capital city of Bhubaneswar secured the fourth rank among the top ten capital cities in India, in the ease of living index, 2021 which was released by Ministry of Housing and Urban Affairs.

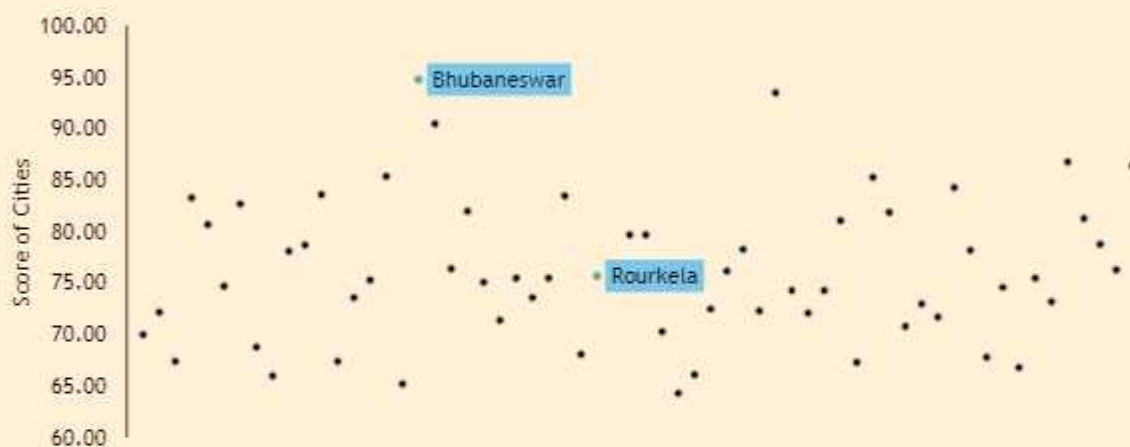
Top Ten Capital cities - Ease of Living Index 2021



Note: Value are Ease of Living Scores

Source: Ease of Living Index, 2021

The Ease of Living Index examines the four pillars of quality of life, economic ability, sustainability and Citizen Perception survey (CPS). It aims to provide a 360-degree assessment of the strengths, weakness and opportunities and threats of cities. The index is strengthened by the fourth pillar, CPS, which holds 30 per cent of the weightage in the index and obtains and incorporates views of the citizens regarding the services provided by their city administration. The city of Bhubaneswar secured the highest score in the pillar which is 23.94 per cent higher than the Indian average.



Source: Ease of Living Index, 2021

The performance of both the cities of Odisha in the Citizen perception Survey, the fourth and highest weightage pillar, depicts that the state is steadily moving towards creating liveable cities with better governance.

E. Heritage City Development

4.5.56. Urban Heritage is a social, cultural and economic asset of any state. The National Heritage City Development and Augmentation Yojana (HRIDAY) Scheme was launched by the Ministry of Urban Development (MoUD) on January 21, 2015. HRIDAY aims at preserving and revitalizing the soul and unique character of the Heritage Cities in India. It also encourages the development of an aesthetically appealing, accessible, informative and secured environment in heritage cities.

4.5.57. The focus of HRIDAY is the development of core heritage infrastructure for areas near heritage sites based on the identification and approval by the Ministry of Culture. Development of infrastructure like approach roads, drainage, footpaths, electrical wiring, landscaping, sanitation, street-lights, water supply, waste management and allied citizen services such as tourist conveniences, and security, are some of the major focus areas of the scheme. The City Mission Directorate has divided the project into three zones namely Shankh Kshetra Heritage, River Musa Environmental Heritage and Balukhanda Recreational.

Puri Heritage Corridor Project

4.5.58. The heritage cabinet aims to protect ancient monuments, temples and archaeological sites in Odisha and has taken steps to preserve the state's culture, language and literature. The Puri Heritage Corridor Project was unveiled in December 2019 to transform the holy town of Puri into an international place of heritage. The project includes redeveloping major portions of the holy town and some areas in the vicinity of the temple for visitors and tourists. The Temple Parikrama redevelopment project is being



carried out at a cost of INR 800 crores, of which INR 330 crores have been allocated for civil work and the rest for land acquisition. This is one of the biggest temple development projects in the country. The new corridor will provide many amenities and comfort to devotees.

4.5.59. A resolution for the project was passed in the state assembly unanimously by all the parties in February 2020 for the first phase of work at a cost of INR 800 crores. Following this, the Shree Jagannath Temple Administration (SJTA) approved the architectural design plan of the project at an estimated cost of INR 3,200 crores to develop Puri as a world class heritage city.

Augmentation of Basic Amenities and Development of Heritage and Architecture

4.5.60. After the initial funding of INR 800 crores from the state government's Augmentation of Basic Amenities and Development of Heritage and Architecture (ABADHA) scheme at Puri, and another INR 265 crores will be provided in the first phase.

4.5.61. An INR 200 crore package for the development of Sambalpur's Maa Samaleswari Temple was announced in February, 2021. In the 2021-22 Budget, the government announced an INR 742 crore allocation for the development of Jagannath and Lingaraj Temple (Bhubaneswar). There have also been announcements of support for temples in Mayurbhanj and Kendrapara.

The Ekamra Kshetra Heritage Project

4.5.62. The Ekamra Kshetra heritage project was announced in December, 2019. The project involves comprehensive development of the Lingaraj temple and its periphery spanning a 66-acre land area. On completion of the project, around two lakh devotees will be able to witness the Mahadeepa ritual on Maha Shivaratri. Other important monuments in Odisha are Konark Sun temple, (UNESCO World heritage), Jaganath temple, Tara Tarini temple, Udaygiri and Khandagiri cave, etc.

II. Resilient Cities

4.5.63. Cities are hubs for commercial and economic activity which attract citizens. These hubs depend on a complex web of institutions, infrastructure, and information for their functioning. However, the fast-paced growth of population and activities makes them vulnerable to shocks and stresses. Shocks include natural disasters, disease outbreaks, hazardous material accidents and terrorism, while stress can manifest in the form of economic vulnerabilities, social injustice, failing infrastructure, and shifting macroeconomic trends, etc.

4.5.64. Resilient cities can prevent, minimize, and effectively manage scenarios against such shocks and stresses. As cities in Odisha are additionally prone to disasters and natural calamities apart from the natural stresses, the Government of Odisha has worked in the direction of creating resilient infrastructure for its cities.

A. Creating Infrastructure Resilience

4.5.65. There have been significant initiatives taken by the Odisha State Disaster Management Authority (OSDMA) to provide Multipurpose cyclone (MCS) /flood shelters (MFS) with the support of the government and other agencies like the World Bank. There are around 6,891 shelters including 860 MCS/ MFS and 6,031 additional shelters for the vulnerable communities across strategic locations along the coastline of Odisha. These shelters have a cumulative capacity to accommodate nine lakh people with social distancing norms. These shelters are critical disaster resilient infrastructure and help in tackling the destructive impact of the disaster.



4.5.66. Moreover, during calamities such as cyclones, the communication routes of cell phones and telephone may be disrupted. The state has provided 22 satellite phones in around 17 districts which were used by collectors and State Disaster Response Forces and other officials during the cyclone Yaas. Along with this, Digital Mobile Radios have also been installed in 6 coastal districts to augment the channels of dissemination of information.

4.5.67. Under the Model Solar City Scheme of the Ministry of New and Renewable Energy of GoI, the capital city of Bhubaneswar is working towards the rooftop solar project to reduce the consumption of energy from conventional sources and move towards renewable sources of energy. The project is ongoing and has covered a 58.9 KW installation at the Ramadevi University. Additionally, the Odisha Renewable Energy Development Agency has developed an online portal to facilitate the submission of online applications for Solar Rooftop installation. Options like availing government subsidy and application solar net-metering to the respective distribution utility are also available on the portal.

4.5.68. In an effort to build avenues of sustainable livelihood, the Department of Housing and Development has signed an MoU with the Pune based Lighthouse Communities Foundation to skill the youth in urban Odisha. Skilling and livelihood centres will be established in a new phase of JAGA mission in Bhubaneswar, Rourkela, Dhenkanal, Paradip and Jatni with the aim to equip youth with technical and soft skills, micro-entrepreneurship focused skills and placement services as well.

B. Creating Digital Resilience

4.5.69. Resilience practices have a strong underlying foundation of adaptability. The coronavirus pandemic has made governments rethink the basic functioning of the city which emphasizes the importance of adaptive resilience that helps in preparing and responding to the cities' unique challenges. Digital transformation is a key enabler of such adaptive resilience. It can be helpful in preparing one-stop solutions for disasters and calamities and enhancing citizen participation.



4.5.70. The state of Odisha has been working to optimally utilize the new wave of digitalization. It has launched a single unified portal - covid19.odisha.gov.in. The portal displays a unified version of the datasets of multiple departments like Home, Health and Family welfare, Transport, Panchayati Raj, Labour, etc. The portal allows registrations, contact tracing of suspects, monitoring health and compliance of social distancing of quarantined patients. Further, self-administered health assessments with AI based tools are also available at the portal which also help in flagging cases of urgent medical attention.

4.5.71. There are many initiatives of the government which involve digital solutions; for instance, Go Swift is a one stop investor facilitation portal that eases the challenges in doing business. A unified portal -Student Academic Management System is used to manage admissions and student lifecycle management across many intermediate and degree colleges. The webpage of Odisha Tourism is also using a Digital Experience Management Stack which aims to provide an immersive experience to the website visitors with its advanced content, analytics and targeting tools.

4.5.72. Lastly, one of the major demonstrations of the usage of technology driven implementation has been the use of drones for JAGA Mission. The state employed the data collected through aerial drone surveys of available land and condition of civic infrastructure and planned the distribution of land titles and the augmentation of civic infrastructure accordingly. Advancing AI and space technology, the state has also developed a satellite imagery-based solution named BLUIS. This digital platform is used to safeguard government lands and prevent unauthorized urban sprawl. With these measures, the state is not only maximizing cities' potential and reinforcing urban systems, but also moving towards an improved design and management which would help it to become more responsive and quicker to adapt.

4.6. URBAN GOVERNANCE

A. Direct Feedback Mechanism – Mo Sarkar

4.6.1. In a bid to reinforce people-centric governance at the grassroots level, Odisha Government has planned to popularize Mo Sarkar initiative and its benefits across the State. This initiative attempts to bring in professionalism and behavioral change in public offices through a direct random feedback system from citizens has become a model for other States.

4.6.2. A dedicated Feedback Cell launched on 1st August 2021, in line with Mo-Sarkar with presence in all 360 institutions which includes 114 Urban Local Bodies (ULBs), 237 Public Health/ WATCO Section Offices, and 9 Development Authorities along with six call centre executives in operations. During the initial phase 6 services were included:

- a. Housing
- b. Trade License
- c. Holding Tax
- d. Building Plan Approval (5 Corporations+ 9 DAs)
- e. Water Supply Connection

As a part of scale up in the Phase 2 of the program Urban Wage Employment Initiative/MUKTA was included.

Nature of the feedbacks received:

- MUKTA: Payment related issues
- Water Supply Connection: Pipeline issues
- Awaas: Delay in payment
- Holding Tax: Assessment related issues
- Trade License: Issues relating to submission of documents
- Building Plan Approval(5 MCs & 9 DAs): Delay in approval

Actions taken to address the above feedbacks:

1. Two ULB Officials- 1 Executive Officer & 1Community Organiser were given Compulsory Retirement
2. One MUKTA Accountant was terminated

B. Municipal Financing

4.6.3. Urbanisation and its future depend on the financial health of the local governments. There are 114 ULBs in Odisha consisting of 5 municipal corporations, 48 municipalities and 61 notified area councils. Table 4.9 shows the details of transfer of CFC and SFC recommended grants to ULBs. The Government of Odisha has set up a Trust namely "Odisha Urban Infrastructure Development Fund (OUIDF)" in the Housing & Urban Development. The objective of OUIDF is to give financial and other assistance to Urban Local Bodies, Statutory Boards and Departments, Public Sector Undertakings and Private Investors or setting up infrastructure projects in the State of Odisha as per the prescribed guidelines of the Trust. . The ultimate goal of the trust is to become financially self-sustainable and facilitate debt financing of Urban Infrastructure Projects in Odisha.

Table 4.9

Transfer of CFC and SFC recommended Grants bicycle to ULBs (2016-17 to 2021-22) in INR Lakhs

Major Head	Minor Head	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 RE	2021-22 BE
2217-Urban Development	191-Asst. to Local Bodies, Corporations, Urban Development Authorities, Town Improvement Boards etc.	6674.8	11994.9	10548.7	11895.6	16315.6	47107.5	36419.6
	192-Asst. to Municipalities & Municipal Councils	6886.5	13277.2	10883.1	12529.1	17264.0	40558.7	40001.2
	193-Asst. to Nagar Panchayats, NACs or equivalent thereof	2682.6	4679.5	4452.1	4847.9	6533.9	21033.7	16534.0
Total - CFC Grant		16244.0	29951.7	25884.0	29272.7	40113.5	108700	92955

Major Head	Minor Head	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 RE	2021-22 BE
3604 - Compensation and assignment to Local Bodies and PRIs	191-Asst. to Local Bodies, Corporations, Urban Development Authorities, Town Improvement Boards etc.	34757.6	36482.0	47026.8	47428.8	56098.9	44635.0	46716.1
	192-Asst. to Municipalities & Municipal Councils	34099.7	42226.9	45322.1	49014	47255.2	48636	50836.9
	193-Asst. to Nagar Panchayats, NACs or equivalent thereof	17561.6	15968.9	19104.8	23145.5	24993.7	20037.6	20871.9
	200-Other Miscellaneous Compensation and Assignment	0	0	0	0	0	12748	13748
Total - SFC Grant		86419.1	94677.9	111453.8	119588.6	128348	126057	132173
Grand Total (CFC Grant+ SFC Grant)		102663.1	124629.7	137337.8	148861.3	168461.5	234757	225128

Source: Finance Dept, Government of Odisha

4.7. IN CONCLUSION

Projection of past trends of population increase in the absence of recent Census data puts the urban population in Odisha at around a fifth of the total population now, but the burgeoning urban centres like Bhubaneswar, Rourkela and Jharsuguda indicate that this estimate could possibly be somewhat conservative. In any case, industrialisation, growth of the services sector, and urbanisation usually go hand in hand, and the current and expected growth of these sectors could very well see the rate of urbanisation bucking the trend and increasing faster in the coming years. This demands preparedness of the urban systems including the economic and social infrastructure and the administrative machinery to meet this development.

The implementation of Jaga Mission and slum development along with the 'water for all' scheme have been an exemplary effort of the government in urban inclusiveness. These efforts must be now implemented with equal vigour across the state because the rural-urban migration starts with the nearest urban areas, and the smaller urban areas of Odisha are as much affected by the issue of slums as the larger cities. Similarly, upgradation of the urban infrastructure in these smaller urban areas also must form a part of the agenda. The urban local governments must play their part and provide the necessary administrative support in meeting these goals.

CHAPTER

5

Services Sector – Pathway to
Sustainable Growth

Performance of services sector is critical especially for growth and development of the economy as it constitutes maximum share in the GDP. In 2021-22, services sector in Odisha contributed 39.9 per cent to GSVA while the share of service sector was 53.0 per cent in GVA at national level. The share of services sector in GSVA in Odisha shall further increase with the structural transformation and growth of the state.

During 2020-21, the services sector overall contracted marginally by one per cent largely because of sharp contraction in hotel and restaurants (-84.3 per cent), road transport (-18.4 per cent) and air transport (-64.5 per cent) sub-sectors due to COVID-19 induced lockdown measures. In the same year, services sector in national level contracted significantly by 7.8 per cent.

With the resumption of economic activities and proactive steps taken by the government, this sector saw sharp turnaround in 2021-22 and estimated to grow at 7.9 per cent. All the key sub-sectors within services sector depicted buoyant growth rate in 2021-22 in Odisha despite many of them being contact intensive sectors. Trade, repair, hotels, and restaurants sub-sector which accounted for maximum share of 25.4 per cent in services sector GSVA, grew at 6.1 per cent in 2021-22. Financial services sub-sector registered the highest growth rate of 9.9 per cent while real estate, ownership of dwelling & professional services grew at 6.4 per cent in the same year. Transport, storage, communication & services related to broadcasting grew at 5.8 per cent in 2021-22.

Services sector in Odisha accounting for around 40 per cent of GSVA, employed 25 per cent of the state's workforce in 2019-20. Relative productivity of the services sector is more than three times that of agriculture. The services sector is also marginally more productive than the industries sector, reflecting the potential space for growth and employment. This may be critical to power overall growth of the state in next decade and absorbing labour force from the overcrowded agriculture sector. Further, the growth of the sector has potential for enhancing female labour force participation rate and achieving gender parity. It is critical to equip the labour force with industry need skills so that they can take benefit of the growth of the sector.

There are certain sub-sectors within services that are well-positioned for growth. These include the financial services and the communications sector that not only have high productivity but also exhibit backward and forward linkages with other sectors in the economy. This means that growth in these sectors is also likely to propel growth in other sectors in the economy. Given the state of financial and digital inclusion in Odisha now, these sectors also provide opportunities for growth. Though exhibiting relatively low productivity, transport and trade also exhibit high degree of interconnectedness within the economy. Lastly, the state has identified tourism sector as a high-potential sector and has taken several steps including promoting the state tourism in national and international platforms, improving connectivity to the tourist spots, and hosting eco-retreat (glamping event) to boost the growth of the sector.

5.1. INTRODUCTION

5.1.1. Services sector holds the promise to fetch higher economic growth. It has also the potential to offer more employment especially for women. Given the new way of life in covid times, a large part of the services sector is amendable to work from home. Female labour force participation (LFPR) in India is consistently falling from 22.5 per cent in 2011-12 to 17.8 per cent in 2017-18. It has marginally increased in 2019-20 to 22.8 per cent. As per NSS Time Use Survey (2019), women spend disproportionate time in household activities, much of which are not accounted as economic activity.

5.1.2. Growth in services sector could be the game changer as it allows women to work from home. Disappearance of good jobs from the neighbourhood is the biggest obstacle which is impacting women's participation in the job market. Services sector would possibly transcend the physical proximity barrier to a good job. Rise of service sector would make growth more inclusive.

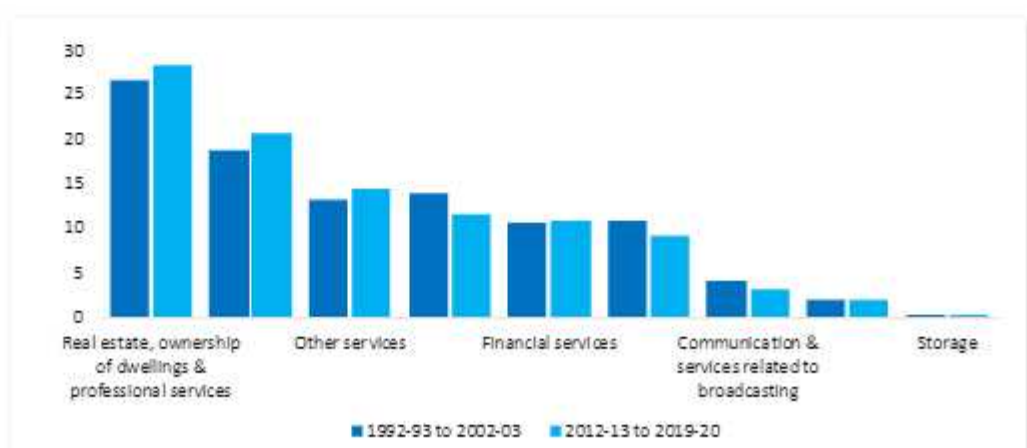
5.2. SERVICES SECTOR IN INDIA

5.2.1. At all India level, between 2012-13 and 2019-20, i.e., the pre-COVID period, services sector Gross Value Added (GVA) increased at an average rate of 7.95 per cent. In comparison, 'agriculture, forestry and fishing', and industry GVA grew at an average rate of 3.56 and 5.15 per cent respectively. This allowed the share of the services sector in nominal GVA of the country to increase from 49 per cent to 55 per cent between 2011-12 and 2019-20.

5.2.2. Over the last thirty years, the relative distribution of the services sector has been stable when looking at the broad sub-sector classification (Figure 5.1). The 'real estate, ownership of dwellings and professional services sector' has the highest contribution, followed by 'trade and repair services'. The shares of 'public administration and defence', transport services, and 'communication and services related to broadcasting' have dipped marginally since 1992-93. There has also been a continuous fall in average growth rates of the financial services, transport and communication and broadcasting services.

Figure 5.1

Sectoral share of value added in Services sector GVA (India), in current prices (in per cent)



Source: National Accounts Statistics back series, 2021, MoSPI

5.2.3. Exports have also played an important role in boosting the services sector (Table 5.1). This was quite apparent during the period of 2003-08 when the growth rate of service exports was two and a half times the average growth rate prevailing during the preceding decade. The internet revolution made this possible, as the share of communications and computer service exports in total service exports increased, and the share of traditional sectors such as transport and travel services, approximately halved. Interestingly, barring the period between 2009 and 2011, service export growth has consistently outperformed merchandise exports in the last three decades.

Table 5.1 Status of India's services exports (in per cent)

	1992-2002	2003-2008	2009-2011	2012-2019
Average growth of merchandise exports	9.98	25.83	18.57	1.23
Average growth of services exports	13.68	33.22	10.65	5.73
Share of services exports to total exports	23.21	34.09	33.83	36.17

Source: World Development Indicators, World Bank

5.2.4. This has implications for employment. As is well-known, agriculture continues to be the largest employer in the country, accounting for close to 45.6 per cent of total workers in 2019-20. However, services also increased its share from 28 per cent in 2011-12 to 30.8 per cent in 2019-20 while employment in the industrial sector largely stagnated. Moreover, more employed women work in the services sector than the industrial sector. Thus, this sector could play an important role in boosting the labour force participation of women, as larger numbers exit the agriculture sector. What would remain the key for employability is to impart the right skill up to the grassroots level.

Box 5.1 Who on earth can work from home? Some answer lies in Services Sector

The coronavirus outbreak in 2019 brought with it a major shift to the way people works. The strict implementation of 'social distancing' policies worldwide raised the question, "How many jobs can be done from home?" A study by the World Bank in July 2020 showed that, globally one in five jobs can be done from home. When observed from income levels of the country, for high-income countries, it is one in three jobs and for low-income countries it is only one in 26 jobs. This startling difference between high-income and low-income countries is due to the difference in access to the internet across countries.

Another study titled "Jobs' Amenability to Working from Home" by the World Bank in May 2020, estimated a 'WFH amenability index.' It identifies sectors that are more amenable and least amenable to (Work from Home) WFH across most of the countries. The table below shows that sectors like ICT, professional services offered by doctors, lawyers, accountants, financial services, education did perfectly amen to the new work from home set up. In contrast, jobs in hotels and restaurants, agriculture, construction, and commerce were the least amenable to WFH.



WFH amenability based on Sector

Sectors most Amenable to Work from Home	Sectors least Amenable to Work from Home
Information and Communication	Agriculture, Forestry and Fishing
Professional Services	Hotels and Restaurants
Financial and Insurance Services	Construction
Real Estate Activities	Commerce
Public Administration	Transportation
Utilities	Manufacturing
Education	Mining and Quarrying
Entertainment and Recreation	Social Work Activities

Source: Maho Hatayama, et. al, *Jobs' Amenability to Working from Home, 2020*

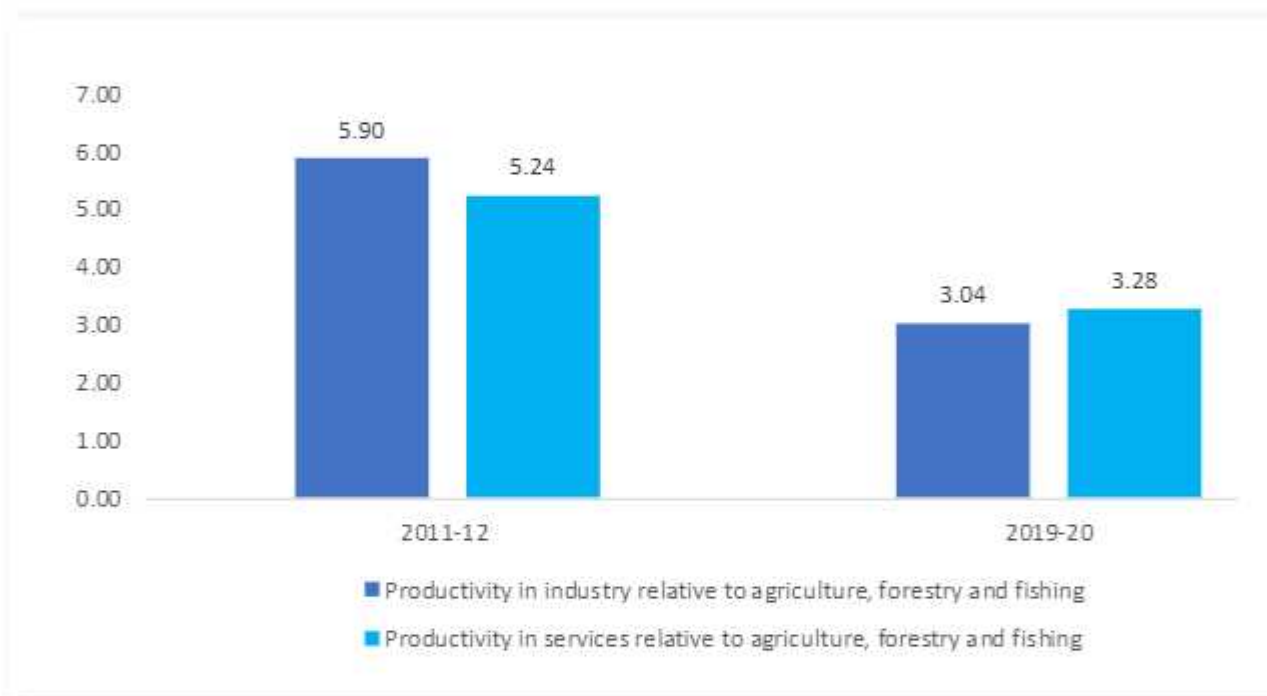
Also, it is noted that most of the sectors which are amenable to work from home are service-based sectors. ICT, Professional services, financial services, utilities found it extremely easy to migrate from physical workplace to virtual workplace and continue their operations. Whereas agriculture, mining, and manufacturing are least amenable to work from home. Hotels, restaurants, and transportation-based sectors are the exception in the service sector that weren't left with any choice of WFH and waited for the travel restrictions to be lifted off.

It is known to all that, one of the principal constraints on performing any kind of work from home is, internet access. The world bank study on 'Who on Earth can work from home?' found that globally only 33.3 per cent of all jobs can be done from home using internet. Because of the high dependency on internet for WFH, only a meagre 3.3 per cent of jobs can be performed from home without using internet. The ability to do the work from home is also dependent on the skill and knowledge required to do the job. In the above-mentioned study, it was also found that in India, an employee in the top earnings decile, which most likely be a high-skilled job, has a 19 per cent chance of having a WHF based job, whereas a worker in the bottom percentile has less than 1 per cent chance of having such a job.

The COVID-19 pandemic has caused severe labour market pain across the globe. These findings highlight how most of the service sectors jobs which are technology based and need highly skilled workforce are not proximity dependent, hence insulated from pandemic kind of situation.

5.2.5. The services sector in Odisha has high potential for further expansion. As of 2019-20, it commanded slightly less than 40 per cent of the nominal Gross State Value Added (GSVA) and employed 25 per cent of the state's workforce. At the same time, accounting for 22 per cent of the GSVA, agriculture employed 48 per cent of the workforce. Figure 5.2 represents productivity of the industry and services sector relative to that of agriculture, forestry and fisheries. While relative productivity in Odisha of these sectors has reduced from 2011-12, it is still at least three times that of agriculture. The services sector is also marginally more productive than industries, reflecting the potential space for growth and employment.

Figure 5.2 GSVA per worker in industry and services sector, relative to the agriculture, forestry and fisheries sector, Odisha



Source: Odisha DES, Employment and Unemployment Survey 2011-12 and PLFS 2019-20, MoSPI

5.2.6. This chapter will discuss the structure of the services sector in Odisha and track its growth and evolution over the last few years. It will also explore whether any specific steps can boost the sector.

5.3. SERVICES SECTOR IN ODISHA

5.3.1. The structure of the services sector in Odisha insulated it to some extent from the impact of the COVID-19 pandemic (Table 5.2). During 2020-21, the first year of the pandemic, the services sector overall contracted by 1 per cent relative to a contraction of almost 11 per cent in the industries sector. Trade, repairs, and hotels which is the largest contributor to the state GSDVA, declined by 7.1 per cent, mainly due to the hotels and restaurants sub-sector that registered a growth rate of (-) 84 per cent. The next largest sector is the residual category i.e., 'other services' slowed but still registered almost 4 per cent growth. Public administration also showed resilience, possibly due to public spending to counteract the impact of the pandemic.

5.3.2. On the other hand, 'real estate, ownership of dwelling and professional services' and 'transport, storage and communication sector', together accounting for more than 30 per cent of the services sector both contracted. The latter contracted more sharply at a rate of 10.7 per cent. The advance estimates for 2021-22 indicate that all sectors bounced back. However, hotels and restaurants and the transport, storage and communication sectors still fell short of their pre-pandemic levels in constant price terms.

Trade, repairs, and hotels - the largest contributor to the state GSDVA bounced back to 6.1 per cent growth in 2021-22

Table 5.2 Share and Growth of Services Sector and its Sub-Sectors, in per cent

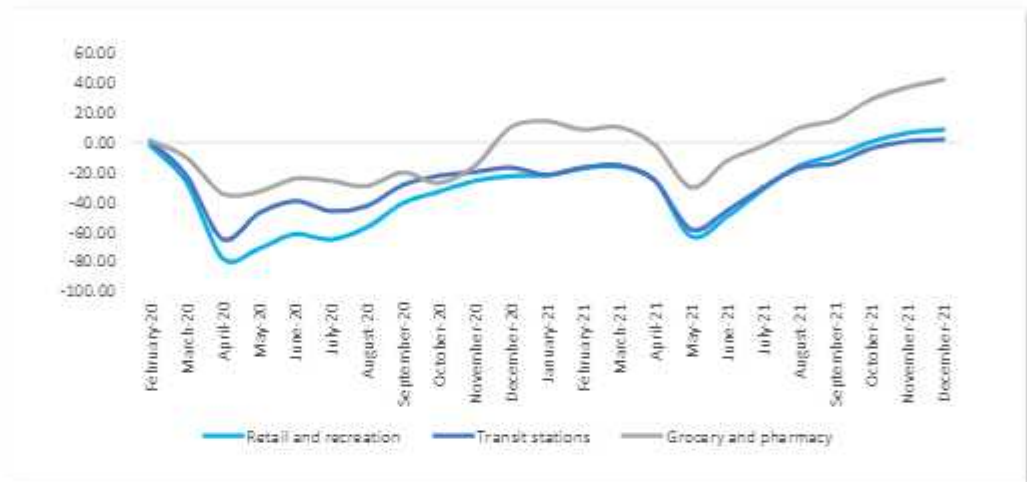
Sector and Sub-Sector	Share in GSDVA in 2021-22(AE)	Average Growth			
		Pre-COVID		During the COVID phase	
		2012-13 to 2015-16	2016-17 to 2019-20	2020-21	2021-22 (AE)
Service Sector	39.9	8.1	5.8	-1.0	7.9
Trade, repair, hotels and restaurants	9.6	10.7	6.9	-7.1	6.1
Transport, storage, communication & services related to broadcasting	6.0	10.9	2.9	-10.7	9.2
Financial services	3.7	8.4	4.5	9.2	9.9
Real estate, ownership of dwelling & professional services	6.5	6.0	4.5	-1.0	6.4
Public administration	5.4	14.1	7.0	10.3	8.4
Other services	9	1.1	8.5	3.5	9.2

Note: Shares in GSDVA calculated at current prices and average growth calculated at constant prices

Source: Directorate of Economics & Statistics (DE&S), Odisha

5.3.3. This is also reflected by Google mobility indices that track how movement around specific areas have changed since a pre-pandemic baseline (Figure 5.3). It shows that movement around retail and recreation areas – comprising places like restaurants, cafes, shopping centres, theme parks, museums, libraries, and movie theatres, and transit stations like bus and train stations, started reaching their pre-pandemic levels by Dec 2021. In comparison, movement around grocery shops and pharmacies recovered first during December 2020, dipped during the second wave, and recovered sooner by July 2021.

Figure 5.3 Google mobility index for Odisha

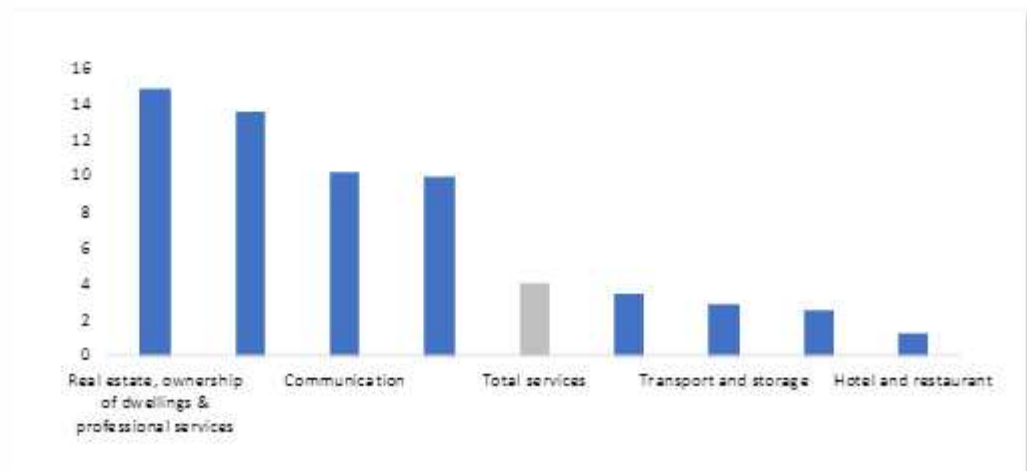


Source: Google Community Mobility Reports

Note: The mobility index measures how the movement around a designated place – retail and recreation, transit station and grocery and pharmacies have changed since the baseline day i.e., the median value from the 5-week period Jan 3 – Feb 6, 2020.

5.3.4. In terms of future growth potential, sectors of interest may be assessed through relative productivity of the sector. Sorted in decreasing order of GSPA per worker in 2019-20, sectors of interest then are real estate, ownership of dwellings & professional services, financial services, and communication (Figure 5.4).

Figure 5.4 GSPA per worker, services sector, 2019-20, in lakhs per worker



Source: DE&S, Odisha and PLFS, 2019-20, MoSPI

5.3.5. An alternative way to assess the potential is to estimate the magnitude of backward and forward linkages of the sector. Essentially, all sectors are interconnected in the economy. For instance, the transport sector uses trucks in the automobile manufacturing sector to provide transportation services. In this case, the transport sector is said to have backward linkages. In other words, if the demand for transportation services increases, the demand (and thus production) of the automobile manufacturing sector would also increase, as it provides inputs for transport services. Similarly, sectors may have forward linkages. As an example, transportation allows for smooth mining process by allowing transport of raw materials to, and extracted minerals, from the mining site. Naturally, if transport services become more easily available, the production of mining would also increase.

5.3.6. Forward and backward linkages can be estimated through Input-Output (I-O) tables that represent monetary flows across sectors at a point in time. These tables are available for Odisha for 2015-16 and allow for estimation of backward and forward linkage multipliers. 'Multipliers' refer to the idea that an initial push to a sector causes a multiplier impact in the economy. This can be understood if we extend the example from above. That is, greater availability of the transport services, allows for greater mining, which in turn can increase the output of the mineral processing industry. The processed mineral (say iron ore) may further be used in manufacturing of utensils, which could be used in homes or in restaurants to provide food services to customers. In essence, the initial increase in transport services starts a chain reaction across the economy, which means that the overall increase in output in the economy is greater than the initial increase in transport services output.

5.3.7. The size of multipliers for the services sector in Odisha is given in Table 5.3. Transportation, storage, financial services, communications, Hotels and professional services have multiplier (Backward) above 2. Similarly, transportation, storage, financial services have forward multiplier with a value above 2 along with a residual service category and rental sector. A sector with a high multiplier value has generate higher GSDP or output impact in the overall economy vis-à-vis other sectors.

Table 5.3 Size of multipliers, services sector, 2015-16

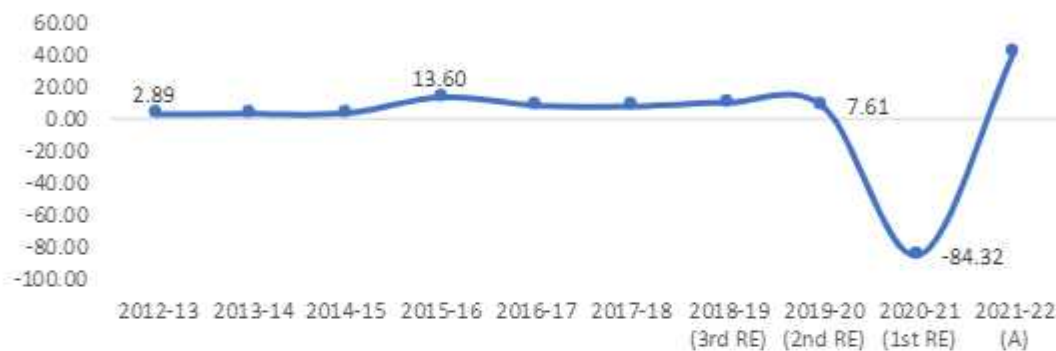
Services sector	Backward linkage	Forward linkage
Rent	1.67	14.42
Other services	1.73	3.65
Transportation	2.07	2.72
Storage	2.23	2.32
Financial Services	1.50	2.74
Trade	1.82	2.41
Communications	2.02	1.90
Hotels	2.07	1.82
Professional Services	2.09	1.21
Education	1.58	1.07
Public Administration	1.49	1.00

Source: Input-Output Transactions Table: Odisha 2015-16 by Centre for Social and Economic Progress

5.3.8. Keeping in mind, both productivity and the existence of linkages, financial services is a prime candidate of focus, when strategizing on economic development of the state. Communications similarly enjoys high productivity and relatively deep inter-sectoral linkages. Though exhibits low output per worker, transport, and trade could also be given importance as they show higher multiplier value. Lastly, the state has also identified tourism sector as a high-potential sector, and thus taken many steps to boost the sector.

5.5.2. As is to be expected, the pandemic adversely impacted the tourism sector. While state accounts statistics do not delineate the tourism sector separately, 'hotels and restaurants' form a separate sub-sector, accounting for an average 2.16 per cent of the service GSVA between 2011-12 and 2019-20.

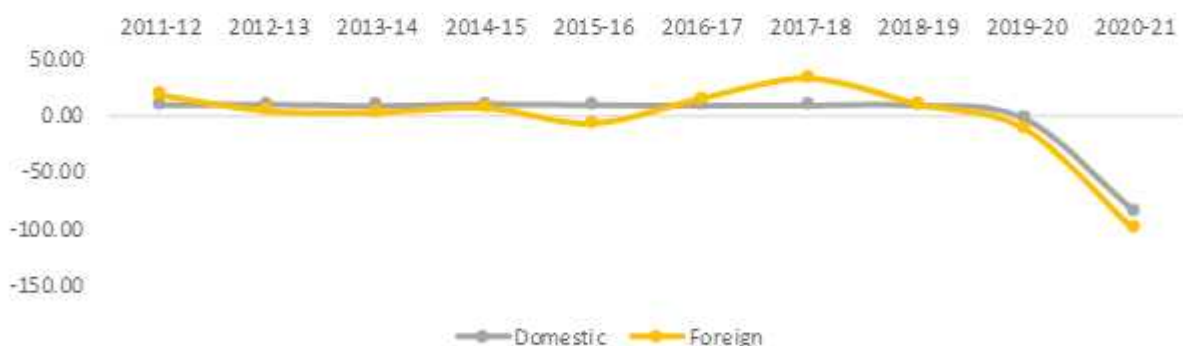
Figure 5.6 Growth rate of hotels and restaurants sector GSVA (in per cent)



Source: DE&S, Odisha

This registered a degrowth of 84 per cent in 2020-21 (Figure 5.6). Tourist arrivals similarly shrank, though a negative growth was seen in 2019-20 as well, possibly on account of cyclone Fani (Figure 5.7).

Figure 5.7 Growth of tourist arrivals, in per cent



Source: Department of Tourism, Statistical Bulletin (various years), Govt. of Odisha

5.5.3. Even before the pandemic, the tourism sector in Odisha had scope for further exploration as an avenue for growth. The growth rate of domestic tourists for the state has been relatively low between 2011 and 2019, though foreign tourist arrivals to Odisha grew at a faster rate in the 2016-19 period (Table 5.4).

Table 5.4 Growth of tourist arrivals, by origin, India and Odisha (in per cent)

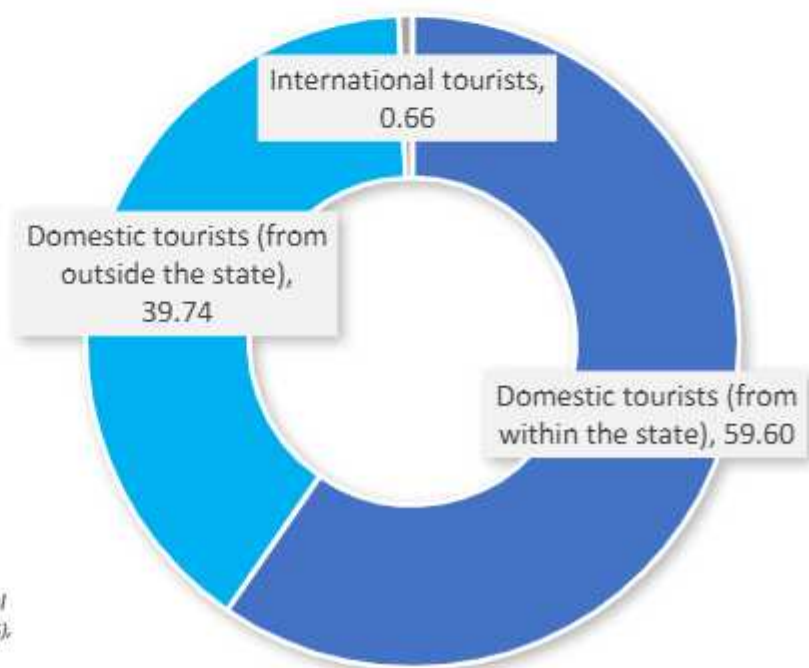
Year	India		Odisha	
	Domestic	Foreign	Domestic	Foreign
2011-15	14.0	5.6	9.2	5.1
2016-19	13.1	7.7	5.8	11.7

Note: Years refers to calendar year for India and financial year for Odisha. That is, 2011 is CY2011 for India, and FY12 (2011-12) for Odisha
Source: Tourism Statistics 2020, Ministry of Tourism, Govt. of India; Department of Tourism, Statistical Bulletin (various years), Govt. of Odisha



5.5.4. The distribution of tourists by source, offers insight on what further can be done to boost the tourism sector (Figure 5.8). Odisha has a relatively low share of foreign tourists. This is important because foreign tourists spend four times as much as domestic tourists. Second, even among domestic tourists, majority of the tourists are from within the state. The need to boost foreign and domestic tourists from outside the state points to the need for spreading greater awareness. Moreover, religious tourists spend in general less than tourists those who come for holidaying. State has already taken numerous initiatives to promote places of general tourist interest.

Figure 5.8 Distribution of tourists to Odisha, by source, 2019-20 (in per cent)



Source: Department of Tourism, Statistical Bulletin (across years), Govt. of Odisha

5.5.5. To address this, strong marketing and promotional activities have been carried out by Odisha tourism department both within and outside India. As part of rebranding exercise, Odisha Tourism changed its tag line from “Soul of incredible India” to “India’s Best Kept Secret”. The tourism department also started a quarterly newsletter publication titled “Odisha Unravelling” to inform diverse stakeholders within and outside the state about its various efforts towards developing infrastructure to provide unique best-in-class experiences to tourists. In 2020-21, creatives on new “Odishaaah!”



campaign were brought out and these were advertised on 16 different popular magazines. Electronic media campaigns were aired on 21 national and eight regional channels.

5.5.6. With a view to promoting Odisha Tourism in the national market in general and metro cities in particular, Odisha Tourism has undertaken Out of Home (OOH) branding at Mumbai, New Delhi, Kolkata, Chennai, Bangalore and Hyderabad Airports, besides branding at the Mumbai Metro. Bhubaneswar’s Biju Patnaik International Airport has also been extensively branded to showcase tourism to inbound visitors.

5.5.7. Other festivals like World Tourism Day 2020, Konark Festival-2020, International Sand Art festival-2020, 3rd National Chilika

Bird Festival-2021, Mukteswar Dance Festival-2021, Rajarani Music Festival-2021, Dhauli-Kalinga Mohotsab-2021 and Vrindaban Mahotsab-2021, and Road Shows at National Level (Virtual/Physical Mode) organised during 2020-21 through sponsorship and financial assistance, also helped popularise tourism in the state. Odisha Tourism participated in South Asia’s Travel & Tourism Exchange (SATTE) 2021 held from 24-26 March 2021 at International Expo Centre, Greater Noida and received a certificate of appreciation.

Box 5.2 The impact of tourism sector on Odisha’s economy

The share of tourism in Odisha’s GSVA was about 2.43 percentage in 2015-16 (NCAER, 2019). Tourism industry contributes significantly to the output and employment in the state through backward and forward linkages. Services like hotels/restaurants, transport, travel agencies etc. depend heavily on tourist arrival in the state for their income and earnings. A report on ‘India: Regional Tourism Satellite, 2015-16’ for the state of Odisha, by National Council of Applied Economic Research (NCAER), estimated the demand side and supply side of tourism sector which is visually shown below.



It shows the proportion of total supply of a product consumed by tourists or on account of tourism activity. Sectors like travel agencies and reservation services (86.7 per cent), air passenger transport services (81.1 per cent), accommodation services/hotel (72 per cent) have very high consumption from tourists and more than 19 sub-sectors have strong linkages with the tourism industry.

Further, the tourist spending on a sector generates revenue for other downstream and upstream sectors. This flow of income across different sectors which is triggered by tourist spending leads to what is called as "multiplier effects." The GSVA multiplier refers to the impact of one rupee increase in tourist spending on total GSVA, while the employment multiplier refers to the total jobs generated because of one additional job in the tourism sector. The value of the tourism GSVA and Employment multiplier for Odisha is estimated at 2.05 and 2.29 respectively. This measures the indirect benefits that tourism sector provides to the economy's output and employment.



*Note: This is known as Tourism Product Ratio. Tourism product ratio shows the proportion of the total supply of a product which is consumed by tourists or is on account of tourism activity.

Source: India - Regional Tourism Satellite accounts, 2015-16, Odisha

Covid-19 pandemic and the ensuing lockdown and travel restrictions impacted all economic activities. Tourism sector which is contact, and mobility intensive sector got affected due to strict restriction across the world. Given that the tourism sector has such high output and employment multiplier, revival of tourism sector would help in the speedy recovery and growth of many sectors as shown.

I. Tourism infrastructure development

5.5.9. In the year 2014-15, the Government of India, Ministry of Tourism launched a Scheme "National Mission on Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive" (PRASHAD) for development and beautification of important pilgrimage sites of the country. The aims and objectives were to tap the growth of domestic tourists driven by religious sentiments and to augment tourism infrastructure facilities at various pilgrimage sites of the country. For infrastructure development at Puri, Shree Jagannath Dham-Ramachandi-Prachi River front at Deuli under Mega Circuit, INR 50 crore was sanctioned under PRASHAD in 2014-15. The Puri Srimandir Parikrama Project aims to develop infrastructure and amenities near the Puri Jagannath temple (Box 5.3).

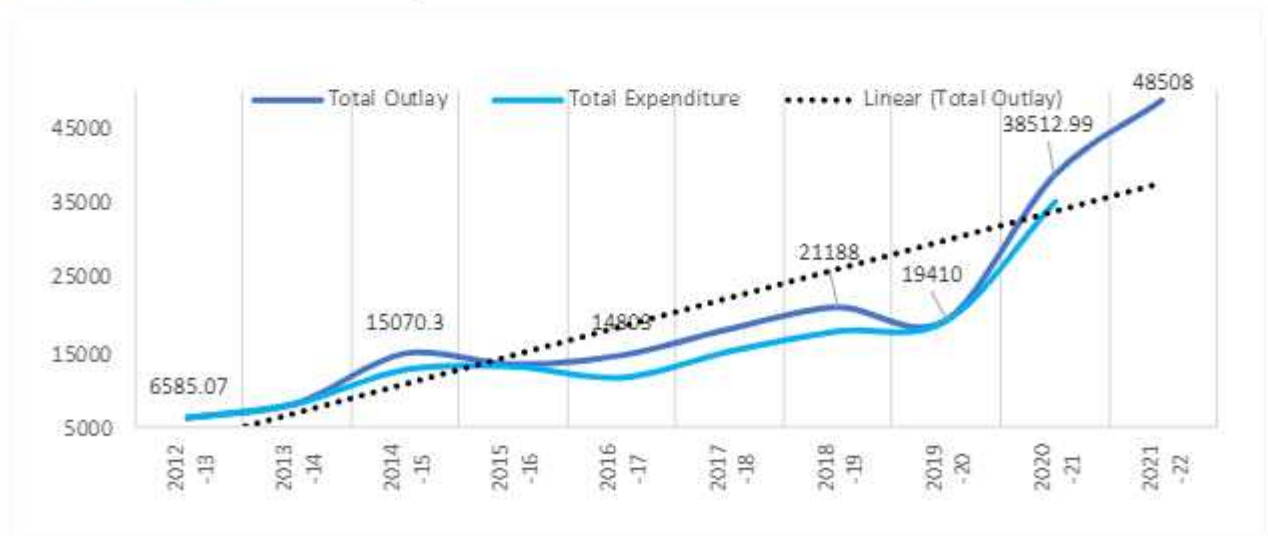


5.5.10. During 2021-22, an outlay of INR 48,508 lakh was provisioned for implementation of projects in thrust areas such as completion of ongoing projects, marketing Odisha as a tourist destination, and creating appropriate environment for attracting private sector investment in a big way.

There is an increasing trend in capital outlay and expenditure in the tourism sector

Figure 5.9

Approved outlay & expenditure by Odisha Tourism Department from 2012 to 2021 (in lakhs)



Note: Figure Total expenditure for 2021-22 are yet to be released
Source: Odisha Tourism Annual Report 2020-21, Govt. of Odisha

5.5.11. Figure 5.9 shows the details about the amount approved and spent by Odisha tourism department from 2012 to 2021. The broad headings of expenditures are tourist accommodation, tourism infrastructure development, and promotion and publicity. The department has allocated 30 per cent of funds on average towards promotion and publicity. It is evident that the tourism department has massively increased its outlay and expenditure in 2020-21 and 2021-22. The annual growth shows 98 per cent increase in outlay in 2020-21 and 26 per cent in 2021-22. The long-term trend of investment outlay and expenditure in tourism infrastructure has been positive which reflects the efforts taken by the state tourism department to revive the tourism sector.

5.5.12. The private sector also has an important role to play in augmenting government efforts, especially in creating tourist facilities, like hotels. Figure 5.10 shows that the number of hotels and restaurants in the state increased from 1328 in 2011 to 2057 in 2020. While at the end of 2020, almost half catered to Low Spending Groups (LSGs) as per hotel tariff structure and spending capacity of tourists, this was a substantial decrease from the beginning of the decade when they comprised more than 70 per cent of all hotels. As Odisha offers opportunity of growth to entrepreneurs, it would be beneficial to invest in hotels serving High Spending Groups (HSGs), and Middle Spending Groups (MSGs) to attract business tourism. At the end of 2020, the state had 43,456 rooms and 87,531 beds to accommodate its tourists.

Figure 5.10 Number of non-classified hotels in Odisha by tariff category



Source: Directorate of Tourism, Govt. of Odisha

Box 5.3 Puri Srimandir Parikrama Project - A boon of comfort

Periphery of the holy Puri Jagannath temple wore a dilapidated look, with many demolished structures. The cluttered temple periphery with many illegal construction and mutts was a constant security threat and increased the risk of stampedes.

Objective of the project: To provide more comfort and convenience to the millions of devotees and tourists visiting the holy city of Puri in Odisha and transform Puri into a World Heritage City.

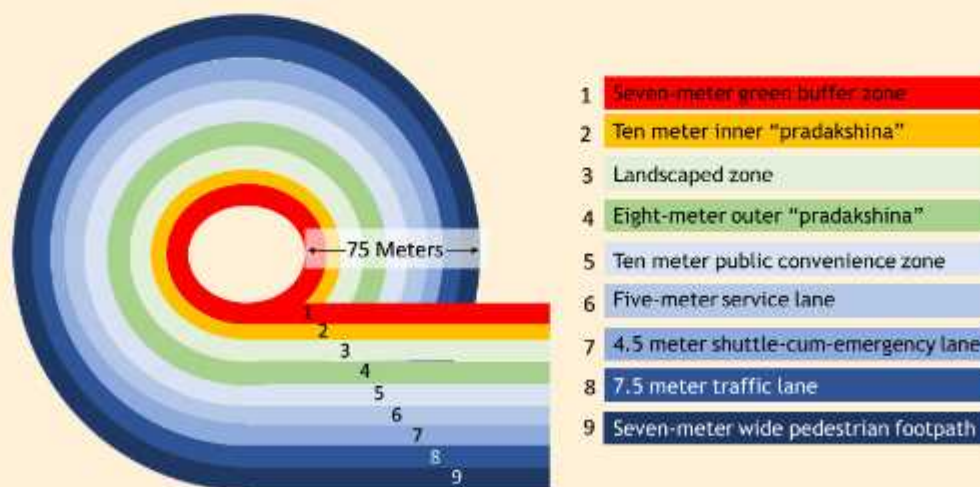
Measures and Initiatives: The Puri Heritage Corridor Project was conceived in 2016 and unveiled in December 2019. The estimated cost of its first phase is around INR 800 crore, wholly borne by the state government. The project works are to be carried out by Tata Projects.



The Facilities will include:

- Construction of a 75 meters corridor around the Jagannath Temple with amenities and infrastructure. The corridor would be divided into nine layers.
- A Modern Shree Jagannath Temple Administration building, battery-run vehicles for devotees, a reception centre ("Atithi Abhyarthana Gruha") with a capacity of 6,000 persons for queue management, a luggage scanning system, a cloakroom for belongings of up to 4,000 families, adequate drinking water and washroom facilities are included in the project.

Nine Layer Puri Srimandir Parikrama Corridor



The Puri Srimandir Parikrama Project will be a boon of comfort to all the devotees and tourists visiting Puri to enjoy its scenic beauty and to also obtain the blessing of Lord Jagannath.

II. New Initiatives

5.5.13. Eastern India's first glamorous camping festival Eco Retreat was held successfully at Konark during 15 December 2019 to 15 February 2020 comprising 50 luxury tented accommodations on the pristine Ramchandi Beach, a music festival with 12 high profile performances, a vibrant food and beverage festival and beach markets, apart from a host of water sports, adventure activities and trails to key tourist destinations.



5.5.14. Odisha Tourism redeveloped its website on the Adobe Experience Manager (AEM) platform as an integrated end-to-end planning portal with the additional scope of User Generated Content and a portal for tourism sector stakeholders such as hotels, tour operators to register and promote their packages. Key on the agenda of the Department of Tourism is the revamping of the website www.odishatourism.gov.in as a one-stop solution for tourists/ visitors.



5.5.15. The Department signed an MoU with Kerala Shipping & Inland Navigation Corporation (KSINC) to acquire technical support in planning and developing diverse water tourism and recreation products. Besides Asia's largest brackish water lagoon Chilika lake, the state boasts a 482 km coastline and eight major reservoirs besides several other pristine water bodies where surveys have ascertained the feasibility of setting up sustainable water sports & recreation and tourism products such as houseboats.

III. Sports Tourism

5.5.16. Sports events are becoming a major driver of economic development globally. It is proving as a viable pathway for generating visitor spending and promoting a destination's local attractions and outlying districts. Sports tourism is a vast international business which is attracting investment, political interest, media attention and thousands of traveling participants and spectators. Odisha is using this opportunity and has taken measures to be known as the Sports Capital of India.



5.5.17. Odisha Tourism has become a global partner of International Hockey Federation (FIH) for a period of five years. The global partner status will provide significant visibility and benefits to Odisha Tourism at the global level across different media, viz. print, electronic and digital, apart from scope for Odisha Tourism to activate a series of innovative on-turf and market-specific marketing campaigns. This collaboration with FIH heralds a virtuous relationship with the potential to further boost Odisha's brand equity globally, en-route to the Hockey World Cup 2023 to be held in Bhubaneswar's Kalinga Stadium and Rourkela's Biju Patnaik Hockey Stadium in January 2023.

5.5.18. The State Government has also substantially increased its funding toward sports and has allocated nearly INR300 crore in its annual budget in 2020-21, which is a tripling of INR100 crores allocated in 2016-17. In 2021-22, INR 400 crore was allocated to the sector. The state of Odisha believes that “Investment in sports is an investment in youth which is investment in future of the state.”

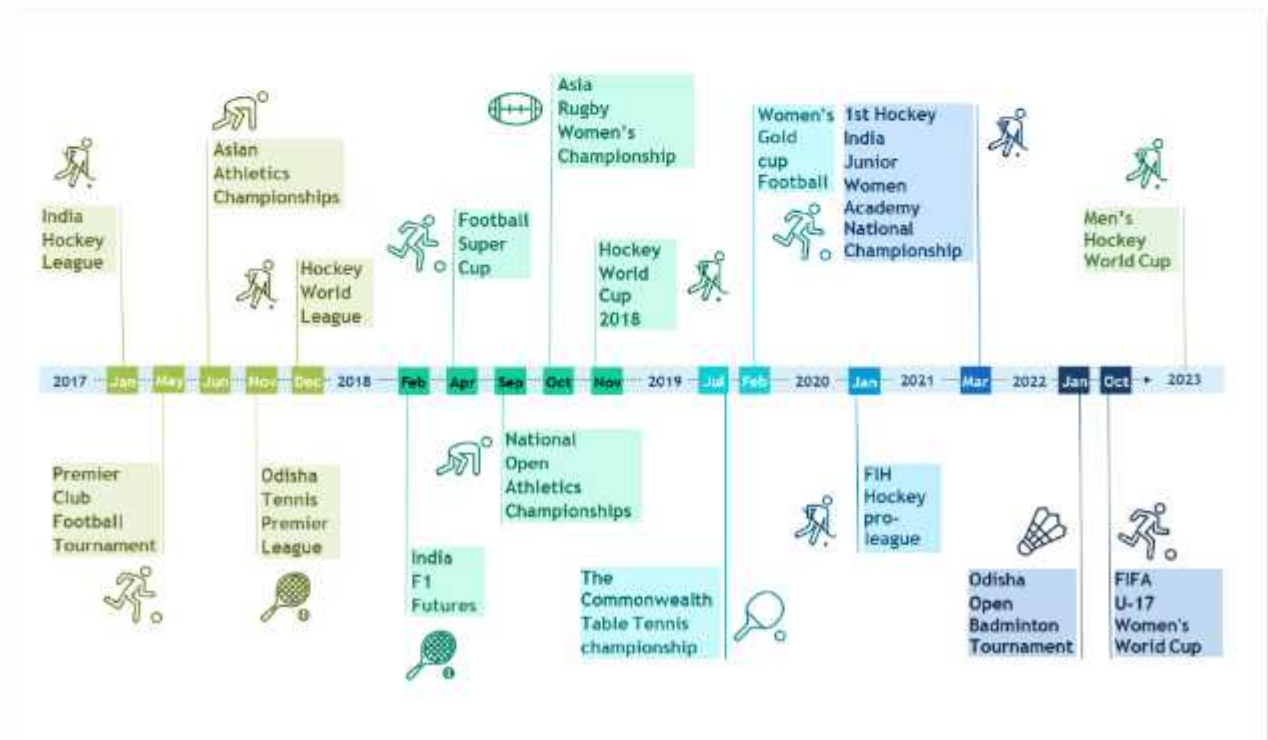
5.5.19. Odisha has played host to several national and international sports events, particularly in the past five years. In 2014, Bhubaneswar conducted the Hockey Champions Trophy. In 2015, the Indo-Japan Hockey series was organised in Bhubaneswar. Later in 2017, the final of FIH Hockey World League was conducted. The commonwealth TT championship 2019, Women’s Gold cup 2019 Football, Asian Rowing Championship 2019, and FIH Hockey pro-league 2020 were all hosted by Odisha. The sports events have depicted pictographically in Figure 5.11.

5.5.20. It is important to mention that in 2017, just three months before the 22nd Asian Athletics Championships, another State Government had withdrawn from its assurance to host the event. It was Odisha, which came forward at that time and successfully organised the mega sporting event taking it as a 90-day challenge. The state earned praise from various quarters for making the event very successful.



5.5.21. Similarly, in 2018 when previous sponsors backed out from sponsoring the Indian hockey teams, it was the Government of Odisha that stepped up to sponsor both men’s and women’s teams for a period of five years. Government of Odisha became the first State Government in India to sponsor the national Hockey teams. India’s success in Tokyo Olympics in hockey 2021 holds a special significance for Odisha, which has been at the forefront of supporting the sport. Recently, the state announced its sponsorship for both the teams for another 10 years.

Figure 5.11 Timeline of various International and National Sport Events hosted by Odisha

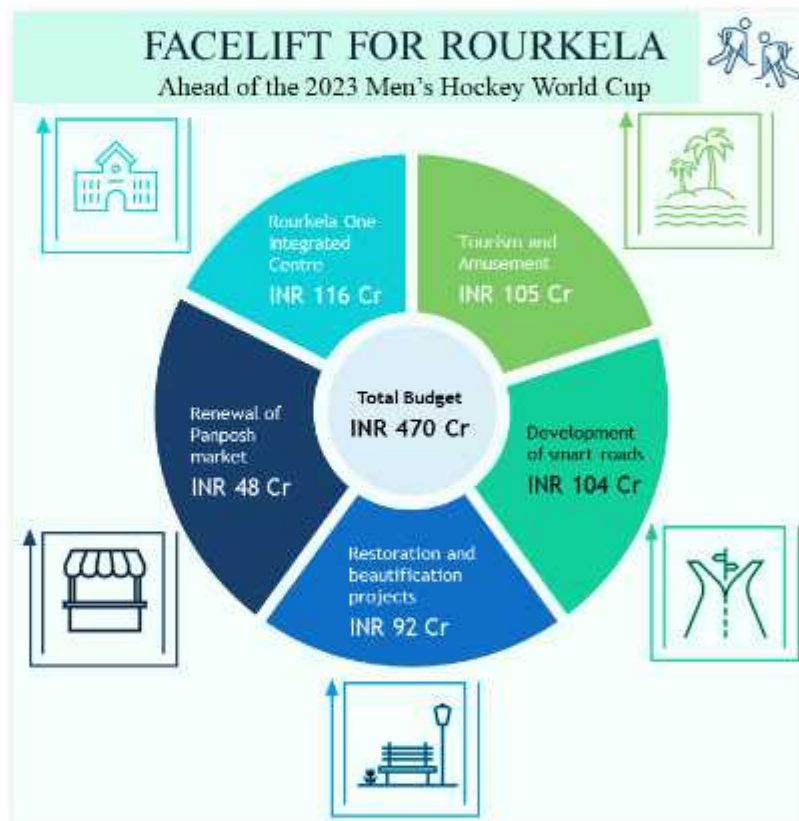


5.5.22. The largest hockey stadium in India, which is coming up at Rourkela in the Sundergarh district of Odisha is named after the famous tribal freedom fighter, Birsa Munda. Along with Bhubaneswar's Kalinga Stadium, the Birsa Munda International Hockey Stadium in Rourkela will be the second venue for the 2023 edition of the Men's Hockey World Cup. Spread across 15 acres of land, the stadium will be the sporting colosseum of India. With a 20,000-seating capacity this huge stadium is built with a budget of INR120 crore. Along with this world-class stadium, the city of Rourkela is receiving INR470 crore for transforming it into a smart city. The funds will be largely used to start quality hotels in the area and make the airports fully operational and handle traffic for the sporting event. Facts on International Hockey Stadium at Rourkela has been depicted in Figure 5.12.

Odisha is building the largest hockey stadium in India with a 20,000-seating capacity

Figure 5.12

Facts on Birsa Munda International Hockey Stadium in Rourkela

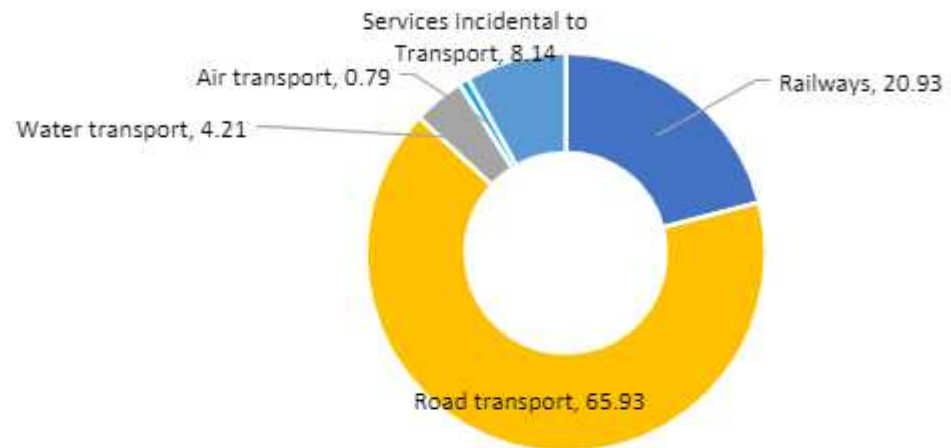


5.6. TRANSPORT

5.6.1. This sector with its multimodal channels has been supporting growth of mining and manufacturing sectors including trading. It exhibited an average annual sectoral growth rate of 6.74 per cent between 2012-13 and 2019-20. It contracted by 13.78 per cent in 2020-21 (RE) but recovered to grow at a rate of 8.24 per cent in the year 2021-22 (AE). The composition of output under transport is presented in Figure 5.13. As seen, the share of road transport is the highest at 66 per cent, followed by railways.

Figure 5.13

Distribution of transport sector GSVA, by sub-sector, average between 2012-13 and 2019-20, in per cent



Source: DE&S, Odisha

I. Road transport

In 2020-21, GSVA of the road transport sector recorded a contraction of 18.40 per cent, directly due to the imposition of lockdowns that prevented movement and on account of general slowdown in the economy that demanded these services less. Nonetheless, during the year, on road vehicle population grew by 8.6 per cent to reach a vehicle population of 78.94 lakhs in comparison to road length grew by 3.40 per cent.

5.6.3. While detailed breakdown by public-private sector is not available, the Odisha State Road Transport Corporation (OSRTC) recorded major contraction in income over the previous year. Precautionary measures such as physical distancing, frequent cleaning, masks and face shield for crew put additional financial burdens.



II. Railway

5.6.4. Railways registered a zero-growth rate in terms of GSVA in 2020-21, a trend that continued in 2021-22 (AE). Rail routes pass through twenty-five districts of the state, excluding Boudh, Deogarh, Kandhamal, Malkangiri and Nabarangapur. The density of coverage is relatively high in some regions of the state, while central Odisha remains largely untouched. A large disparity across districts exists, implying that expanding coverage could increase the sub-sector GSVA in coming years. The state has acquired land for 14 railway projects in the state. Besides, the state is involved in three new railway projects on cost sharing basis. They are (i) Khurdha road to Balangir, (ii) Jeypore to Malkangiri (iii) Jeypore to Nabarangpur.

III. Water transport

5.6.5. Since 2016-17, the water transport sector has registered double digit growth in GSVA. While the sector slowed down in 2020-21, it still registered a growth of 1.42 per cent. In 2021-22, it registered a growth rate of 2.3 per cent. Water transport GSVA comprises income to inland water transport companies, international shipping companies and ports.

A. Ports

5.6.6. Odisha's coastal line provides it with a strategic advantage in terms of ease of access of trade via ports. Paradip Port, declared as the eighth major port of India, is the only major port in the state. It is the largest port in India in terms of average output per ship-berth-day. A total of 112.69 MMT and 114.55 MMT of cargo were handled during 2019-20 and 2020-21 respectively with a growth of 1.65 per cent. In the past five years, while the volume of imports and coastal trade via the port has been significantly higher than the volume of exports, total cargo handled has increased steadily (Figure 5.14). Similarly, cargo handled under coastal category increased from 29 MMT in 2015-16 to 35 MMT 2019-20. Coastal trade of India includes carriage by sea of passengers or goods from any port or place in India to any other port or place in India. The government is undertaking capacity addition projects in the port, viz. southern oil jetty, multipurpose clean cargo berth, deep drought coal berth and deep drought iron ore berth on Build-Operate-Transfer (BOT) basis. This is expected to increase cargo handling capacity and volume of exports-imports-coastal handled by the port.

5.6.7. The turnaround time of ships is a key indicator of efficiency of the ports sector. Table 5.5 shows that Paradip port of Odisha has shown the biggest improvement in reducing average turnaround time of ships from over seven days in 2014-15 to less than 2.76 days in 2020-21 (April-September). Paradip port has introduced single window clearances which are ICT integrated leading to the decline of lead time spent by the ships at port.

The modernisation of Paradip port has helped to accommodate more cargo with lesser turnaround time

Table 5.5 Average Ships' Turnaround Time at Major Indian Ports (in days)

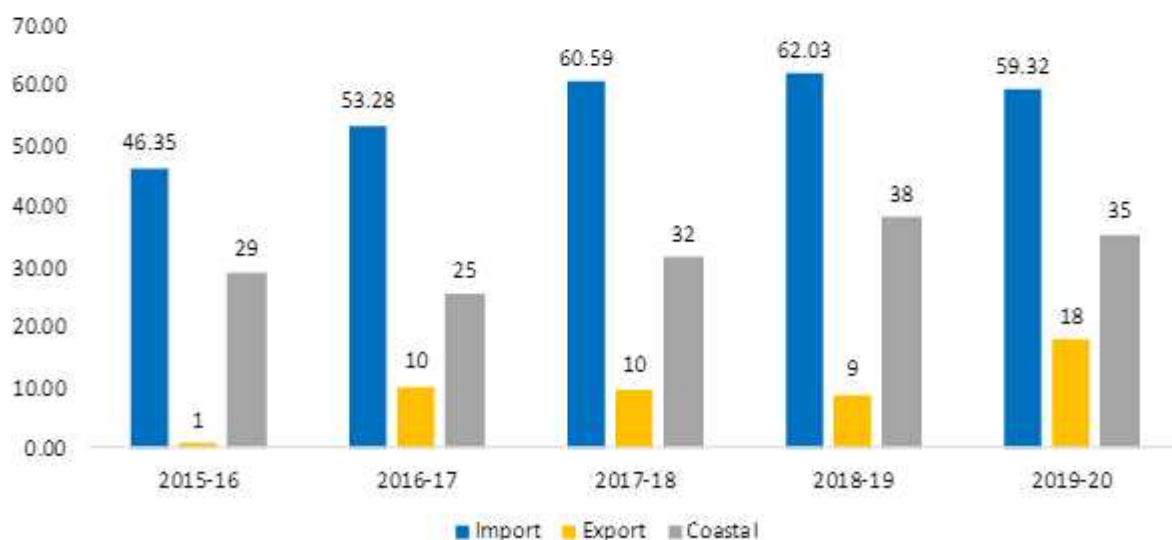
PORT	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Diff in 7 years
Paradip	7.01	4.5	4.99	3.31	2.51	2.98	2.76	4.25
Visakhapatnam	5.67	3.84	3.75	2.58	2.51	2.48	2.67	3
Kamarajar	4.32	6.53	2.7	2.2	1.97	1.85	1.9	2.42
Mumbai	5.28	4.61	3.27	3.72	2.52	2.56	2.96	2.32
Deendayal	5.38	4.66	4.4	2.51	3.01	2.94	3.27	2.11
V.O.	3.55	3.73	4.4	2.69	1.96	2.01	2.14	1.41
Kolkata	4.18	3.98	4.73	4.11	3.84	4.21	3.09	1.09
New MPT (New Mangalore Port Trust)	2.46	2.63	2.35	2.04	1.93	1.91	2.05	0.41
Chennai	2.54	2.53	2.51	2.21	1.98	2	2.22	0.32
Haldia	3.37	3.27	3.45	3.76	3.04	3.62	3.07	0.3
Mormugao	4.15	3.65	4.51	2.63	2.63	2.69	3.94	0.21
JNPT	2.24	2.44	2.01	2.24	2.13	2	2.12	0.12
Cochin	1.69	2.18	1.99	1.54	1.47	1.51	1.66	0.03
All India	4	3.64	3.43	2.68	2.48	2.59	2.62	1.38

Source: Ministry of Ports, Shipping and Waterways

5.6.8. With 480 kms of coastline, Odisha has 14 potential sites for development of non- major ports development. These minor ports are located at Gopalpur, Bahuda Muhan and Palur in Ganjam district; Baliarchandi and Astaranga in Puri district; Jatadhar Muhan in Jagatsinghpur district; Inchuri, Chandipur, Bahabalpur, Subarnarekha and Bichitrapur in Balasore district and Dhamra and Chudamani in Bhadrak district and Riverine Port in Kendrapara district on river Mahanadi. Out of these 14 sites, two non-major ports of Dhamara and Gopalpur have been made operational. Three other major ports, i.e., Subarnarekha mouth (Choumukh), Astaranga and Riverine ports on Mahanadi are in the pipeline through the Public Private Partnership (PPP) mode. All other non-major ports are to be developed by PPP mode.



Figure 5.14 Cargo handled by Paradip Port in Odisha (in MMT)



Source: Paradip Port Trust, Odisha

5.6.9. The traffic handled in two non-major ports of Gopalpur and Dhamara from 2016-17 to 2020-21 is presented in Table 5.6. The total traffic handled in these two non-major ports during 2020-21 was 43.03 MMT. The traffic handled under export was more than import in all the years except in 2017-18 and 2018-19 in Gopalpur port. The growth of total traffic handled was 22 per cent over the previous year.

Table 5.6 Traffic handled in two non-major ports of Gopalpur and Dhamara

Name of Port	Finance year	Traffic handled (In MMT)			
		Import	Export	Coastal Shipping	Total
Dhamara	2016-17	14.36	3.61	3.44	21.41
	2017-18	14.38	3.21	3.86	21.45
	2018-19	12.75	3.94	3.98	20.67
	2019-20	18.45	7.91	3.35	29.71
	2020-21	20.87	8.30	3.21	32.38
Gopalpur	2016-17	0.28	0.74	0.03	1.05
	2017-18	0.66	0.44	0.04	1.14
	2018-19	1.01	0.40	0.10	1.51
	2019-20	2.34	2.89	0.32	5.55
	2020-21	3.10	7.17	0.38	10.65

Source: Commerce & Transport Deptt

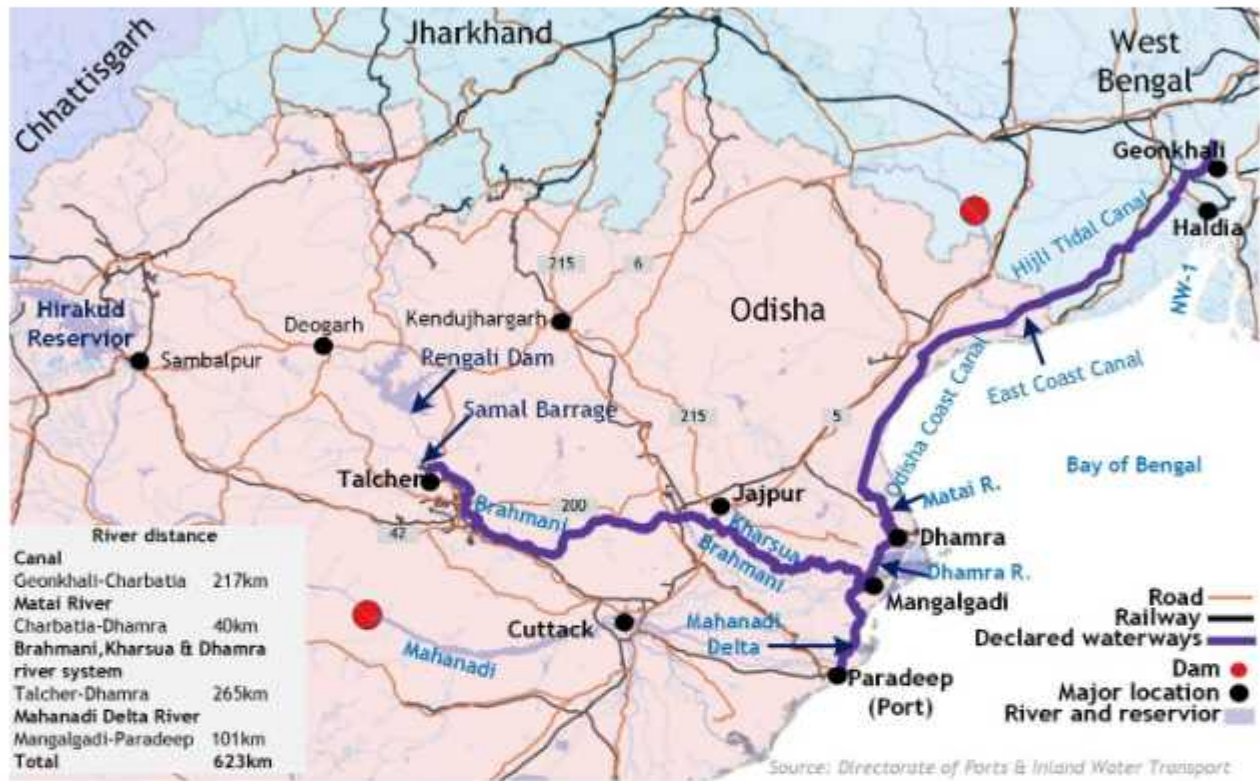
B. Inland Water Transport (IWT)

5.6.10. IWT has vast potential and can extend passenger and freight services to people in the absence of road transport and railway services in some areas. The state of Odisha is a maritime state having a vast coastline of 480 kms approximately with suitable number of potential sites for development and up-gradation of minor ports, fishing harbours and other coastal transportation infrastructure facilities in the coastal region of Odisha.

5.6.11. Passenger motor launch services are operative in six different water routes in two sectors, i.e., Chandbali and Balugaon sectors. Chandbali sector provides four launch services to Aradi (18kms), to Dhamara-Talachua (35 kms) and to Bhitarkanika (for tourist purposes), while Balugaon sector provides seven launch services to Kalijai (15 kms) and to Krusnaprasadgada (18 kms) and Nuagarah (Astaranga–Kaliakana-Gandakul (20 kms). Jetties and waiting rooms are constructed in the water routes. It has been proposed to develop IWT service in the state by enhancing passenger capacity, identification of new water ways as well as modernisation of Jetty facilities. During 2020-21, total of 89,946 passengers moved by IWT and INR 14.98 lakh revenue was collected from fares.

Figure 5.15

National Waterway 5 - East coast canal integrated with Brahmani and Mahanadi delta river system



Source: Directorate of Ports and Inland Water Transport

5.6.12. The National Waterway No. 5 comprises of Talcher- Dhamra stretch of river Brahmani, Geonkhali- Charbatia stretch of East Coast Canal, Charbatia- Dhamra stretch of Matai river and Mangalgadi-Paradip stretch of Mahanadi delta rivers (NW-5, 623 km). For developing the NW-5, a 332 km stretch is being developed in 2 phases- the first one (211 KM), between Talcher & Paradip/Dhamra, is under progress. The remaining stretch between Talcher and Pankapal and East Coast Canal (Dhamra - Charabtia - Geonkhali) will be taken up in the second Phase.

Table 5.7

Total and navigable length of waterways in different states -2019-20, in kms

State	Total Length of the Rivers/ Canals/ Lakes in State (Km.)	Navigable Length (Km.)	Percentage of Navigable Length to Total Length
Nagaland	276.00	276.00	100.00
West Bengal	4741.00	4593.00	96.88
Goa	274.00	249.00	90.88
Maharashtra	631.00	461.50	73.14
Odisha	2425.00	1555.00	64.12

State	Total Length of the Rivers/ Canals/ Lakes in State (Km.)	Navigable Length (Km.)	Percentage of Navigable Length to Total Length
Kerala	2988.61	1613.24	53.98
Karnataka	2902.00	1215.00	41.87
Assam	4716.00	1938.00	41.09
Bihar	3763.00	1391.00	36.97
Andhra Pradesh	3762.00	1160.00	30.83
Mizoram	790.00	155.00	19.62
Tamil Nadu	211.10	14.00	6.63
Uttar Pradesh	6444.00	425.00	6.60
Total	33923.71	15045.74	44.35

Source: Statistics of Inland Water Transport 2019-20

IV. Civil Aviation

5.6.13. The air transport sector registered the largest negative growth rate of (-)64.5 per cent in 2020-21, among the transport sub-sectors. The outbreak of COVID-19 led to the freezing of both domestic and international flights. Passenger travel for leisure also shrank, even after the restrictions were lifted. Nevertheless, the sector is expected to grow at 19 per cent in 2021-22.

5.6.14. There is scope for further development of the sector in Odisha, which currently accounts for less than 1 per cent of the transport sector GSDVA. Biju Patnaik Airport is the only international airport in the state. At present, this airport provides connectivity to New Delhi, Mumbai, Chennai, Kolkata, Bengaluru, Hyderabad, Vizag, Ranchi, Kuala Lumpur and Bangkok. There are 19 airstrips across the districts of which 12 are owned by the Government of Odisha. There are 16 helipads in Odisha. Steps have been taken for construction of a new airstrip in Malkangiri. During 2019-20, INR 1999.99 lakh has been allotted for development and expansion of runways up to 5000 ft in four airstrips i.e Jeypore, Rangeilunda, Sativata (In Baragarh district) and Amarda Road (in Mayurbhanj district) on priority basis.

5.6.15. Besides, steps are being taken for the revival of abandoned airport at Khandapara in the district of Nayagarh. There is also a plan for expansion of Flying Training and to develop a satellite training base in the state at Birasal air strip in Dhenkanal district.

5.6.16. As per Government of India approved National Civil Aviation policy 2016 (NACP-2016) to stimulate regional aviation growth under Regional Connectivity Scheme (RCS), Govt of Odisha has taken proactive steps for improvement of Rourkela Airport in Sundergarh district, Utkela Airport in Kalahandi district and Jeypore Airport in Koraput district. Besides, Jharsuguda Airport has been developed into a full-fledged commercial airport. At present, there are eight domestic flights from Jharsuguda to different major cities.



The state has 2 airports, 16 helipads and 19 airstrips. Development and expansion of more runways are underway

5.7. COMMUNICATIONS AND SERVICES RELATED TO BROADCASTING

5.7.1. The “communications and services related to broadcasting” sub-sector’s contribution to services GVA stood at 4.29 per cent in 2020-21. It registered a growth of (-) 2.34 per cent in 2020-21 but rebounded strongly in 2021-22.

5.7.2. The communications sector is still at a developing stage in the state as inferred by the tele-density and internet subscriber base, relative to the national achievement (Table 5.8). The overall tele-density of Odisha, i.e., the number of phones per 100 of population is 78.46, while the national average is 88.17. However, when estimated separately for rural and urban areas, Odisha’s tele-density is better than India. The relatively high rural population in Odisha, is making the difference. It is also important to note the rural-urban disparity.

5.7.3. On internet access, subscribers per 100 population of the state is 49.09 in comparison to the national average of 60.73. However, in this case, while rural Odisha does better than rural India on average, urban Odisha has less widespread access relative to national average.

5.7.4. A survey was conducted by the Department of Telecommunication, Government of India involving Block Level Officers during 2016-17 for assessing the number of villages having no connectivity. It was found that out of total 51,311 villages of the state, about 11,000 villages did not have mobile connectivity. Out of this, 10,000 villages were Left Wing Extremism (LWE) affected areas. Special funding is required to set up a greater number of mobile towers in these uncovered areas for improving tele-density in the state.

Table 5.8 Figures on connectivity, Odisha and India (as of March 31, 2021)

Indicator	Odisha			India		
	Total	Rural	Urban	Total	Rural	Urban
Wireless Tele-density (%)	77.98	62.64	145.43	86.68	60.08	137.08
Wireline Tele-density (%)	0.48	0.09	2.19	1.49	0.19	3.95
Overall Tele-density (%)	78.46	62.74	147.63	88.17	60.27	141.03
Total subscribers (in millions)	34.56	22.51	12.04	1201.20	537.42	663.77
Wireless subscribers (in millions)	34.34	22.48	11.86	1180.96	535.75	645.20
Wireline subscribers (in millions)	0.21	0.03	0.18	20.24	1.67	18.57
Total Internet subscribers (millions)	21.60	13.94	7.66	825.30	322.77	502.53
Broadband subscribers (millions)	20.47	13.08	7.39	788.09	299.48	478.61
Narrowband subscribers (millions)	1.13	0.85	0.28	47.21	23.29	23.92
Internet subscribers per 100 population	49.09	38.85	94.29	60.73	36.24	107.30

Source: TRAI, Govt of India

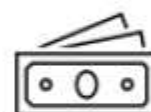
5.7.5. Government of Odisha has notified the Odisha Mobile Towers, Optical Fibre Cable and Related Telecom Infrastructure Policy, 2017 to assist the Telecom Service Providers/Infrastructure Providers for obtaining Right of Way (RoW) permission in a given time frame. Telecom Service Providers/Infrastructure Providers are yet to come forward to install telecom infrastructure in villages of Gajapati, Kalahandi, Kandhamal, Malkangiri, Koraput and Rayagada districts of the state.

5.7.6. The matter of low mobile penetration in Odisha has been raised consistently in various forums such as Eastern Zonal Council and with Department of Telecommunications, Govt. of India. Similarly, to increase the internet penetration in Odisha, a coordinated effort is required by the various stakeholders involved in the Bharat Net project.

5.7.7. UnderLWE Phase-II, on 23 May 2018, the Union Cabinet approved the establishment of 483 mobile connectivity-based towers (Voice-2G +data-4G) in LWE affected 18 districts of Odisha. The projects are under progress.

5.8. FINANCIAL SERVICES

5.8.1. Financial services, viz. banking (savings, deposit and credit), insurance etc. play the role of catalyst in the growth of the economy through provision of avenues for investment and risk management. As the economy grows, with increasing per capita income and wealth, the demand for financial services increases as well. In Odisha, financial services accounted for a share of around 9.33 per cent in 2021-22 (AE). The sector was unaffected by the pandemic, registering a GSVA growth of 9.23 per cent in 2020-21. As per advance estimates, growth in 2021-22 is expected to be 9.88 per cent. The extent of availability of financial services depends on the infrastructure of financial institutions present in the state. Banks are the most pivotal component of institutional finance mechanism. Banking network not only promotes financial inclusion, but also enables diversification of economic activities and productive investment. It shoulders the responsibility for mobilizing public savings.

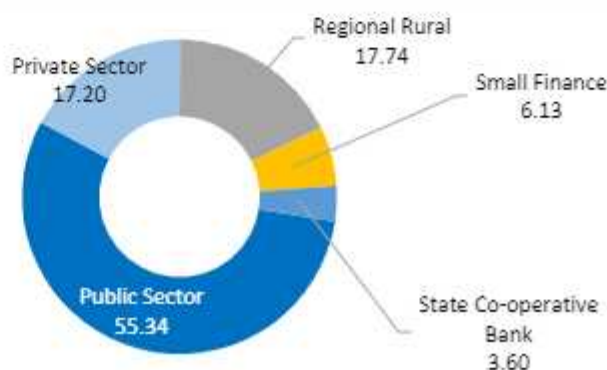


I. Banking network in the state

5.8.2. Odisha has 12 public sector banks, 19 private sector banks, two rural banks, five 'Jana' small finance banks and one state cooperative bank spanning 5,548 branches as of March 2021. Public sector bank branches constitute 55 per cent of total branches (Figure 5.16). The average population served by a bank branch is 8,355. Further, about 52 per cent of total bank branches are located in rural areas of the state (Figure 5.17). Bank branch distribution is rather skewed as 52 per cent of bank branches serve about 82 per cent of total population living in rural areas while 48 per cent of bank branches serve only 18 per cent urban population. During 2020-21, 140 new branches of banks (14 in public sector, 65 in private sector and 61 in Jana small finance bank sector) were opened in the state.

Figure 5.16

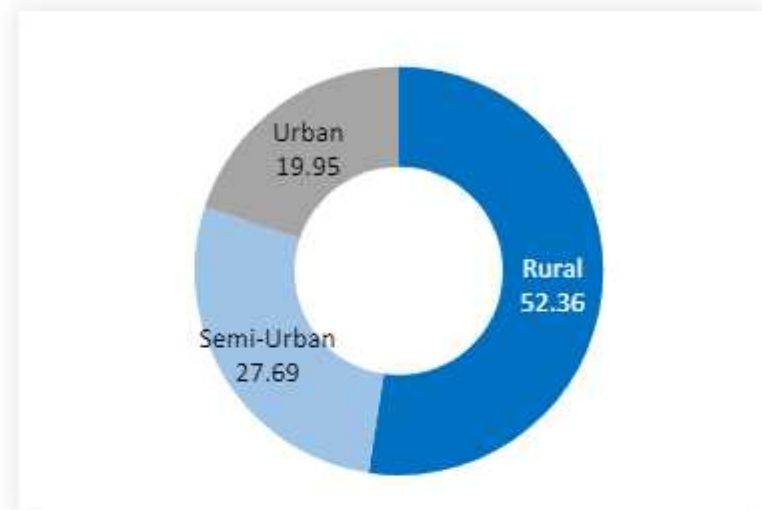
Distribution of banks by region and category in Odisha as on 31.03.2021 (in per cent)



Source: SLBC (163rd Issue), March 2021

Figure 5.17

Distribution of bank branches by rural and urban areas as of March, 2021 (in per cent)



Source: SLBC (163rd Issue), March 2021

II. Bank deposits, advances and credit deposit ratio

5.8.3. Growth in bank deposits and advances is an indication of flow of credit in the economy and consumer demand. Total deposits of all banks in Odisha grew by 9.12 per cent in 2020-21 over 2019-20. Advances sanctioned and utilised grew by a higher rate of 9.31 per cent, indicative of higher demand for credit in the economy. More than 96 per cent of total bank deposits were with commercial banks.

Financial services look promising as the bank priority sector lending increases

5.8.4. Agriculture, MSME, Weaker sections and Housing are the leading sub-sectors in terms of growth of bank advances in 2020-21. Growth rate of priority sub-sectors such as Agriculture (7.11 per cent), MSME (4.10 per cent), Weaker sections (20.64 per cent), Housing (5.20 per cent) was higher than that of total advances. Out of total advances by banks in the state, 95.34 per cent was sanctioned and utilised within the state. Priority sector advances were 60.24 per cent of the total advances, above the minimum benchmark rate of 40 per cent. This indicates the compliance of banks with priority sector lending norms, as well as demand from the agriculture and MSME sector, education, and housing loans for credit. Advances to minority community (-15.58 per cent) and education (-15.26 per cent) showed negative growth over the last year while advance to the women registered significant growth of 70.02 per cent over the last year. The details are in Table 5.9.

5.8.5. Priority sector lending in the state was well above their respective benchmark rates (Figure 5.18). For inclusive development of the economy, it is essential that credit flow and investment be disbursed uniformly and not be concentrated in areas of high returns only. To ensure the same, the Reserve Bank of India requires banks in the country to advance at least 40 per cent of their loans under priority sector lending which comprises of advances to agriculture, MSME, education, housing and weaker sections of the society. Credit-Deposit (CD) ratio is the proportion of loan created by banks from deposits it receives. 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 per cent. In Odisha, the CD ratio (excluding advance sanctioned in other states and utilised in our state) for 2020-21 was 53.76 per cent, reflecting the need for financial sector deepening.

Table 5.9 Major banking indicators in Odisha

Indicators	2019-20	2020-21	Growth In per cent
Total deposit	3,48,975.92	380799.48	9.12
Total advance utilised in the state	2,10,827.84	214949.19	1.95
Total advance sanctioned and utilised in the state	1,87,474.66	204932.27	9.31
Priority sector advance	1,11,248.52	123460.77	10.98
Agriculture advance	58,944.03	63134.21	7.11
MSME advance	41165.76	42854.67	4.10
Education loan	1661.85	1847.38	11.16
Housing loan	15,448.31	16251.28	5.20
Advance to minority community	4,011.34	3386.55	-15.58
Advance to weaker section	33,952.40	40958.53	20.64
Advance to Women	16702.53	28397.30	70.02

Source: SLBC (163rd issue), March 2021

Figure 5.18 Priority sector lending and credit-deposit ratio of banks in Odisha, 2020-21 (in per cent)

Note: 1) Figures for priority sector and agriculture sector are as percentage of total advances, 2) Figure for advances to weaker sections is as percentage of priority sector advances

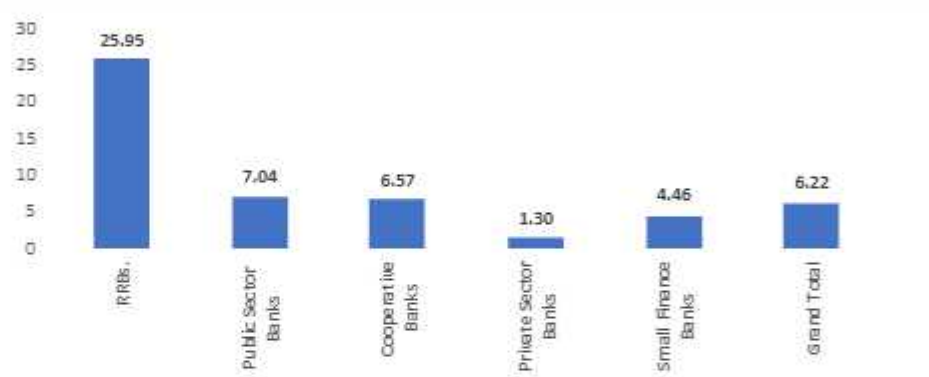
Source: SLBC (163rd issue), March 2021

5.8.6. Public sector banks play a pivotal role in the banking sector in the state, accounting for the larger proportion of bank branches (55.34 per cent) as well as majority share (72.46 per cent) of total deposits and majority share (50.13 per cent) of total advances. Between commercial banks and cooperative banks, share of the latter in total deposit is very small (3.43 per cent). This indicates the increasingly important role of commercial banks in credit flow in the state.

III. Non-Performing Asset (NPA)

5.8.7. Public sector banks in Odisha have higher NPA levels than private sector banks, similar to the trend seen at all-India level. An asset, including a leased asset, becomes non-performing when it ceases to generate income for the banks. Share of non-performing assets in total assets in Odisha, as of March 2021, is given in Figure 5.19.

Figure 5.19 Share of non-performing assets in total assets of banks, by type (in per cent)



Source: SLBC (163rd issue), March 2021

5.8.8. During, 2020-21, the overall gross NPA was 6.22 per cent, remaining high, despite the improvement over previous years. RRBs had the highest NPA percentage of 25.95. By sector, loans to agriculture allied sectors and for education loan had the highest NPAs (Table 5.10). NPAs ranging between 3.30 per cent to 14.45 per cent and overdue loans ranging between 13 per cent to 56 per cent for all major sectors is a matter of concern since these adversely affect the productive recycling of funds.

Table 5.10 Sector wise non-performing assets and overdue

Sectors	NPA as on March 2021 (per cent)	Overdue as of March 2020 (per cent)
Short term crop loan	10.64	21.57
Agricultural term loan	14.45	44.91
Agriculture & allied	6.66	48.24
Total agriculture	9.99	25.26
MSME sector	8.96	29.47
Education loan	11.02	55.09
Housing loan	3.39	13.25
Total priority sector	8.75	25.38
Total advance	6.22	24.14

Note: Updated data on overdue is as of Mar 2020. Data up to Mar 2021 is not available in the latest SLBC report

Source: SLBC (163rd issue) March, 2021

IV. Co-operatives

5.8.9. Odisha has a well-structured cooperative sector comprising of three-tier institutional networks, namely short-term cooperative credit, long-term co-operative credit and non-agricultural credit cooperatives which play a pivotal role in the dispensation of farm and non-farm credit in the state.

V. Short-term agricultural credit

5.8.10. The Short-Term Cooperative Credit (STCC) sector provides financial credit support for agricultural operations including purchase of agricultural inputs like certified high yielding varieties of seeds, fertilisers, pesticides, and agricultural implements. The STCC Units also deals in storage and marketing of agricultural produce and helps members to get remunerative prices for their produce. The State has 2,710 Primary Agriculture Cooperative Societies (PACS) including 215 Large sized Adivasi Multi-Purpose Cooperative Societies (LAMPCS) and 6 Farmers' Service Cooperative Societies (FSCS) at grass roots level, 17 District Central Cooperative Banks in the middle-tier as with 335 agricultural financing branches with the Odisha State Cooperative Bank (OSCB) at the State level. The network of PACS, LAMPCS and FSCS covers almost all the GPs of the State for providing easy access of credit to small and marginal farmers along with marginalised sections of the society.

Short term agricultural credit is supporting the farming sector through capital investment, asset creation, land improvement, farm mechanisation, plantations, horticulture and other non-farm activities

5.8.11. Market share of Cooperatives in short-term agricultural credit sector is about 62 per cent, with Commercial Banks and RRBs, accounting for the smaller share of 38 per cent. Short term crop loan in 2020-21 was INR 15189.00 crore financed to 34.40 lakh members with growth rate of 16.20 per cent over 2019-20. The per capita crop loan increased from about INR 17,000 in 2010-11 to INR 44,000 in 2020-21.

VI. Agricultural Term Loan

5.8.12. The Co-operative Credit Sector provides term loans, also called investment credit, for agricultural and allied purposes including, capital investment, and asset creation in agriculture land improvement, farm mechanisation, plantations, horticulture and other non-farm activities. During 2020-21, a sum of INR 223.95 crore has been provided as agricultural term loan to 16,959 members.

VII. Kisan Credit Cards (KCC)

5.8.13. The Kisan Credit Card Scheme has been introduced in the State through District Co-operative Central Bank (DCCB) and Primary Agricultural Credit Societies (PACS) since 1998-99. The scheme aims at providing timely, adequate and hassle-free credit to farmers, based on their land holding, cropping pattern & scale of finance. Under the Scheme, once the credit limit for farmers is sanctioned crop-wise which the scheme remains valid, for five years. The farmer members are supplied with Passbook and Cheque Books to avail credit through Branches of DCCBs. The KCCs are being converted into smart Rupay Cards to provide the farmers withdrawal facilities in ATMs and PoS outlets. 41,73,367 KCCs have been issued by the DCCBs/PACs as on 31 March 2021.

5.9. FINANCIAL INCLUSION

5.9.1. The essence of financial inclusion is to ensure delivery of financial services, which include bank account for savings and transaction purposes, low cost credit for productive, personal and other purposes, financial advisory services, insurance facilities (life and non-life), etc. Financial inclusion plays an important role in the overall development at the grass root level in the state. Financial inclusion broadens the resource base of the financial system by developing a culture of savings among a large segment of rural population and plays its own role in the process of economic development. Further, by bringing low-income groups within the ambit of formal banking sector, financial inclusion protects their financial wealth and other resources in exigent/demanding circumstances, in addition to providing different financial services.

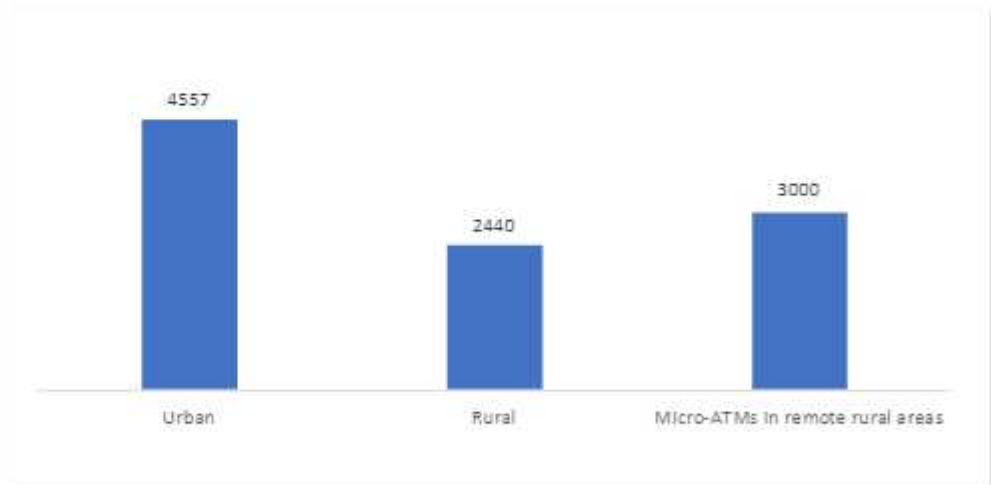


This section presents details of progress of schemes targeted towards increasing access to financial services in the state.

I. Access to banking services

5.9.2. As per Census 2011, only 45 per cent of households in Odisha availed banking services, as compared to 58.7 per cent at the national level. The push towards financial inclusion in the form of Jan Dhan Yojana has led to significant progress. As of March 2021, more than 1.73 crore bank accounts have been opened under the Jan Dhan Yojana in Odisha with total deposit of INR 6641.51 cr. These were primarily concentrated in rural areas (135.75 lakh accounts as compared to around 37.41 lakh accounts in urban areas).

Figure 5.20 ATMs by urban-rural location (as on March 31, 2021)



Source: SLBC, 163rd Issue, March 2021 Co-operation Deptt.

5.9.3. Even though 52 per cent of bank branches are in rural areas, the availability of ATMs is skewed towards urban/semi-urban areas. In all, 4557 ATMs are present in urban centres in the state as compared to 2440 in rural areas. The present status of branch and ATM opening in the state indicates that banks are yet to give due importance for installation of ATM at rural branches. Besides, under the financial assistance from NABARD, 3,000 micro-ATMs were procured by DCCB to be installed in PACS and LAMPCS to provide basic banking services to the account holders of DCCBs in remote localities where banking services are not available.

5.9.4. 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 services in unbanked areas. In terms of revised guidelines on Branch Authorisation policy, 78 unbanked rural centres having population of more than 5,000 and without a bank branch of a Scheduled Commercial Bank (SCB) were to be covered by banking outlets. As on 31 March 2021, there were 12,385 BC outlets operating in the state with 30 outlets per one lakh population considering the population of Odisha at 419.47 lakh as per 2011 census.



5.9.5. Table 5.11 shows status on various financial inclusion indicators in Odisha. As compared with the performance in 2020, the accessibility of formal financial services has improved marginally on indicators like number of ATMs per lakh population, number of bank branches per lakh population etc. The extent of credit given by SCBs per person has marginally declined from INR 44,762 in 2020 to INR 43,053 in 2021.

Table 5.11 Key indicators of financial inclusion as on 31.03.21

Indicators	Odisha	
	2020	2021
Number of ATMs per lakh population	20.74	21
Number of bank branches per lakh population	11.57	11.67
Proportion of credit financed by banks to SHGs (in per cent)	1	2
Number of Post offices per lakh population	17.52	17.35
Total Credit by SCBs per person (in INR)	44,762	43,053
Total deposits in RRBs per person (in INR)	4063	4407
Advance to weaker sections per person (in INR)	7,209	8,605

Source: RBI, IRDA, UBI, SLBC (163rd Issue, March, 2021)

5.9.6. Govt. of Odisha has decided to provide space in Bharat Nirman Rajiv Gandhi Seva Kendra (BNRGSK) Buildings/ GP Offices to open brick and mortar bank branches /HTA/BC in GP headquarters for public sector banks/ RRBs/ Private sector banks free of cost for the next five years and continue the existing banking operations in BNRGSK Buildings / GP offices in the GPs having no banks / post offices.

5.9.7. To promote financial inclusion, the Department of Post, GoI, has opened Indian Post & Promotion Bank (IPPB) in each district headquarter. Further, as of March 2021, a total of 10754 new Postal Life Insurances Policies and 25,668 new policies under Rural Postal Life Insurance (RPLI) have been opened in the state.

5.9.8. Digital connectivity is necessary to ensure financial inclusion. As on 18 May 2020, 3610 GPs/BHQs were connected through Optical Fibre Cable under Bharat Net Phase-I covering 18 districts.

5.9.9. The Ministry of Finance, GoI, has mapped 45,036 villages on the Jan Dhan Darshak GIS App. Out of these, 376 villages do not have a bank branch/ IPPB/BC. The concerned banks have been requested to open banking outlets in these 376 villages.

5.9.10. Odisha received the National Award for outstanding performance in Financial Inclusion under DAY- NRULM in 2018. Further, Gajapati District received cash award from NITI Aayog for best performance in Financial Inclusion among Aspirational Districts of India.

5.9.11. NABARD has provided fund to banks under FIF for financial inclusion and banking technology schemes for banking services in rural areas. Banks have been instructed to prepare financial inclusion plan. As on 31 March 2021, NABARD has extended financial grant of INR 8.81 crore for creating awareness on financial inclusion. On the supply side, NABARD has been providing financial support to SCBs, RRBs and DCCBs for connectivity infrastructure like V-SAT, mobile booster and solar power supply to ensure uninterrupted financial services and banking technology infrastructure like micro-ATM, POS/m-POS, on-boarding BHIM UPI, activation of RuPay Cards at micro ATMs etc. to improve digital transactions in rural areas. On the demand side, financial support has been provided to banks for Mobile Demonstration Van for conducting Financial and Digital literacy camps in rural areas to create awareness about financial and digital literacy among people.

C. Pradhan Mantri Fasal Bima Yojana (PMFBY)

5.9.12. The scheme was launched nationwide in 2016-17 in place of earlier scheme viz. Modified National Agricultural Insurance Scheme (MNAIS), Weather-based Crop Insurance scheme and the National Agriculture Insurance Scheme (NAIS). This crop insurance scheme aims at providing insurance to farmers in case of crop loss in notified crops during stages of premature sowing, standing crop, mid-season adversity, localised calamities, post-harvest losses and pest affects etc, which are non-preventive natural risk.



The Notified crops are (1) Paddy,(2) Groundnut (3) Cotton (4) Ginger (5) Turmeric (6) Maize (7) Red Gram (8) Ragi in Kharif season & (1) Paddy (2) Groundnut (3) Mustard (4) Potato (5) Blackgram (6) Greengram (7) Onion (8) Sugarcane (9) Sunflower in Rabi season.

5.9.13. The GPs/ULBs is unit of insurance for Paddy and blocks for other notified minor crops. All loanee and non-loanee farmers including share cropping tenant farmers are eligible for coverage under the scheme. The maximum premium payable by farmers is 2.0 per cent for kharif and 1.5 per cent for rabi season. During rabi season of 2019-20, 43,117 farmers benefitted with claims settled worth INR 98.93 crore and during Kharif 2020, 15,78,241 applicant count benefitted with claims settled worth INR 550.24 crore. Under the scheme, Remote Sensing Technology and Smart Phones are being used for selection of plots for crop cutting experiments and recording the results of the exercise. Further, it has been proposed to use drone for expedite crop loss estimation. As a new initiative, BHULEKH is integrated with PMFBY for smooth implementation of the scheme.

A brief about the progress on other insurance schemes is given below.

Table 5.12 Government policies on Insurance Sector

Initiative	Objective	Progress In brief
Pradhan Mantri Surakhya Bima Yojana (PMSBY)	Covers accidental insurance of INR 2 Lakhs for death/full disability for 18 to 70 years with a yearly premium of INR 12	By the end of March 2021, 79.34 lakh accounts were enrolled in this scheme
Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)	A life insurance scheme for the age group of 18 to 50 years, with yearly premium of INR 330 for coverage of INR 2 lakhs	By the end of March 2021, 27.12 lakh accounts were enrolled in the scheme.

Initiative	Objective	Progress In brief
Atal Pension Yojana (APY)	A pension benefit to the people of unorganised sector between the age group of 18 to 40 years after attaining the age of 60	By the end of March 2021, 3.16 lakh accounts were enrolled in the scheme.
Pradhan Mantri Fasal Bima Yojana (PMFBY)	Covers loanee farmers on a compulsory and non-loanee farmers on a voluntary basis for loss of crops due to non-preventable natural risk. From Kharif 2020 the scheme is optional both for loanee and non-loanee farmers	During Rabi 2019-20, 38518 farmers benefitted with claims settled worth INR 95.72 crore and during Kharif 2020, 7.86 lakh farmers benefitted with claims settled worth INR 513.65 crore.

D. Increasing access to finance through Self Help Groups

5.9.14. Odisha became the first state in the country to adopt Self Help Groups (SHG) based model for financial inclusion to extend banking services in the unbanked areas. The SHGs formed under the Odisha Livelihood Mission (OLM) will provide banking services. OLM has entered into an agreement with SBI, Odisha Gramya Bank (OGB), Utkal Gramya Bank (UGB) and other banks for financial inclusion. The agreements assume significance as around 70 per cent of the Gram Panchayats (GP) in the state do not have brick and mortar bank branches. As per the agreements, OLM will function as corporate agent and around 3 lakh SHGs operating under it will be the banking correspondent. In the first phase, SHGs will be engaged as Business Correspondents in around 1,000 remote GPs in scheduled areas having no banking facilities. Gradually in subsequent phases, it will be extended to 4,000 unbanked GPs and entire state will be covered under the financial inclusion plan.

5.9.15. Government is also providing interest subventions to Women-SHG (WSHG) in the state (under OLM / NULM / NRLM/Mission Shakti). Known as the "Mission Shakti Loan" it provides interest free loans i.e., at zero per cent per annum for WSHGs for loan amount upto INR 3 lakh, effective from 1st April 2019. During 2020-21, 2,41,339 WSHGs have been credit linked with banks, availing a total credit of INR 4190.44 Cr with average loan size of INR 1.74 lakh per SHG.

5.9.16. It has been decided that Bank Mitras will be posted and Bank Linkage and Recovery Committee (BLRC) will be set up at all bank branches engaged in WSHG bank linkage. In all, 3471 Bank branches are involved in financing SHGs and only 1065 BLRCs have been formed for facilitating bank linkage and recovery of NPA. By the end of March 2020, 1511 Bank Mitras have been positioned in all branches in intensive blocks to facilitate SHG financing.

5.9.17. : As per Gol announcement, one woman in every SHG will be made eligible for a loan upto 1.00 lakh under MUDRA scheme. NRLM has allotted a target to our state for linking 68,000 SHG members under MUDRA for 2019-20.

5.9.18. DAY-NRLM, has advised a roll out plan, called "Mission one GP one BC Sakhi" for positioning of WSHG members as BC Agents. All banks have been advised to deploy WSHG members as BC in Sub Service Area. It has been decided to implement DIGI pay services like AEPS withdrawal and Fund transfer through Android Mobile. OLM is in the process to engage WSHG members as DIGI pay Sakhi who may subsequently be engaged as BC Agent in Sub service Area.

5.9.19. The highly acclaimed "SHG-Bank-Linkage programme" is a major initiative of NABARD in the field of micro-credit. NABARD has been providing financial assistance to various institution and agencies to conduct training and capacity building programme for the stakeholders. During 2020-21, NABARD, Odisha has facilitated credit linkage of 1,89,412 SHGs and 76,721 Joint Liability Group (JLGs) with formal financial institutions. 5.9.20. Under the NABARD

project "e-Shakti", as on 31.03.2021, a total of 1.57 lakh SHGs have been digitised in 15 districts of Odisha. The aim of this project is as follows:

- i. Improving the quality of interface between SHG members and banks for efficient and hassle free delivery of banking services.
- ii. Integrating SHG members with the national financial inclusion agenda
- iii. Facilitate convergence of delivery system with SHGs using Aadhaar linked identity

5.9.21. Engaging WSHG as BCA under BC model- Banks are to engage SHG members as BCA to provide different banking services to the people in unbanked & underbanked areas across the state. This will not only provide a sustainable livelihood option to WSHG members but will also extend banking service to public at large in GPs deprived of brick and mortar bank branches. During 2020-21, 582 SHG members have been engaged by banks to act as BCA. During the current financial year, it is targeted to engage one thousand WSHGs/Federation member to act as BCA.

BCAs are playing an important role to support financial inclusion through several initiatives including SHG-Bank Linkage programme

National Strategy for Financial Inclusion- It was launched in Jan, 2020 to deepen the FI efforts throughout the country. The major initiative as given below in time bound manner in Odisha.

- i. Universal access to financial services- Every village have access to formal financial service provider within an area of 5 kms to provide hassle-free digitization process
- ii. Village-wise banking data- There should have data on availability of banking services in each village
- iii. Providing basic bouquet of financial Services- Every adult who is willing and eligible to be provided with basis bouquet of financial services.
- iv. Access to Livelihood and Skill Development Programme - A new entrant to the financial system if eligible and willing to undergo any livelihood/skill development programme may be given access to the relevant programme
- v. Financial Literacy and Education- Target specific financial literacy and education should be provided to the people to avail facility under financial inclusion.

5.10. IN CONCLUSION

The services sector has been growing in line with the a priori expectation that with industrialisation and rising incomes, services sector tends to grow fast and account for a progressively larger slice of the national income. For India, services are already the largest sector in terms of the contribution to GDP/GVA, accounting for more than half of it. In Odisha, the share of services in GVA is just below 40 per cent, on par with the industry sector. Generally, the subsectors within the broad sub-sector are more labour intensive than the industry sector, and large and medium industries. Typically, it also employs more women than the other sectors; its growth therefore implies higher work participation by women in the state.

The COVID-19 impact on the constituent subsectors of this sector was quite varied. While financial services did not suffer any major setback, the transport, tourism, and the hospitality businesses almost came to a halt during 2020-21. During 2021-22, all the subsectors recovered substantially. The expectations are that with the overall economy recovering, services sector will resume its growth, although subsectors like tourism may require a little more time to recover fully.

The nature of the subsectors and their need for public intervention also varies. The largest one at present, trading and repair services does not really depend on government facilitation; one possible assistance to this subsector would be to provide concessional credit as working capital to them. The transport services, on the other hand, require substantial public intervention. Road transportation of goods need good quality roads that are well maintained. Road transportation for passengers is largely in private sector in Odisha, but the government has a major role in regulating it. Railway services are relatively deficient in the state, and the government must try to augment it, primarily in the backward areas that are still unconnected by rail. The state has already taken steps in this direction with a few cost-sharing projects even though railways is a central responsibility. These efforts must continue. A similar situation obtains with respect to telecommunications, which is again a central responsibility. Penetration of wireless telephony is relatively low in the state, and this can create major hurdles in providing ITES to the citizens of the state, including online education, as has been felt in the last two years. This needs to be urgently taken care of. Tourism is an industry that was expanding fast before the pandemic struck; it is now getting back to normalcy. The state has several tourist attractions outside the Bhubaneswar-Puri-Konark circuit, these need to be developed by providing necessary tourist facilities, ensuring good transport services, and publicity.

CHAPTER



Social Infrastructure, Protection
and Empowerment

Human development as a concept encompasses much more than just the economic growth of a nation. It refers to the holistic development of individuals through an equitable access to opportunities that enhances their capabilities to lead a quality life. Social sector of any economy includes several such components that contributes to a quality living. Odisha has been actively progressing towards a reformed social sector where quality health, education, water supply and sanitation, welfare of the marginalized sections are given a priority. The state spending on social welfare has increased substantially over a period. It is the first state in the country to have a separate SDG Budget for 2021. On the health front, Odisha has integrated schemes and initiatives which aims to provide quality, affordable, accessible, and equitable healthcare for all. The state performs better than many states and the national average in the areas of child immunization, institutional deliveries, and other key health indicators. Odisha is performing well in providing quality education with an increasing gross enrolment ratio at the elementary level over the past five years. Pupil Teacher Ratio at the elementary level remains better than the national average as per latest estimates. The dropout rates at the elementary level and the secondary level are declining as well. School Infrastructures across the state has seen an improvement reflecting state's commitment to provide quality and accessible education to all. The state has made significant efforts to promote vocational and technical education and upskilling the youth.

Water supply and Sanitation initiatives in the state has resulted in improved access to piped water supply and sanitation facilities. This has also led to Odisha outperforming national average on SDG 6 i.e., Clean Water and Sanitation. Welfare of Women, Children, Elderly, Person with Disabilities, SC/ST and other vulnerable communities of the state has been given high priority. Key schemes and initiatives ranging from availability of care homes, pensions, healthcare, education etc. for these communities have been put in place. Mission Shakti, SAHAY, SWEKRUTI are few of the many schemes that are eliminating hardships of such communities to enable a quality life for them. The social sector of the state, thus, is effectively progressing towards creating a sustainable, inclusive society for all through imbibing the pledge of "Leave No One Behind"; the central promise of the Sustainable Development Goals 2030.

6.1. INTRODUCTION

6.1.1. Progress of a state could be measured through the changes it brought in the lives of people. Quality of life is a multidimensional concept which includes among others, the health of people, their level of education and skillset attainment, access to water and sanitation facilities, standard of living, employment opportunities and inclusive development of the society. Each of these factors is a key driver in creating a better society, productive economy, and human development. Therefore, the quality of life needs to be tackled through a coherent and comprehensive policy strategy.

6.1.2. This chapter provides a holistic view of some of the key pillars that impacts the quality of life. It first discusses about the health, education, skilling, and Research and Development. Education of certain backward section of the society along with govt. initiatives to promote education is discussed in the subsequent section. A discussion on poverty, keeping Multidimensional poverty Index (MPI) in the perspective is undertaken. It is followed by an analysis of sectors of Water supply and sanitation, welfare of women and children as well as other disadvantaged sections.

6.1.3. Sustainable Development Goals 2030 are seventeen global goals to achieve growth, peace and prosperity in the world while balancing social, economic, and environmental sustainability. The role of subnational/State Governments in achieving these goals are paramount. Odisha as a state has taken some concrete steps towards realising SDGs. It became the first state in India to release an SDG Budget Statement 2021 that mainstreams the SDGs into the state's policy processes at every level.

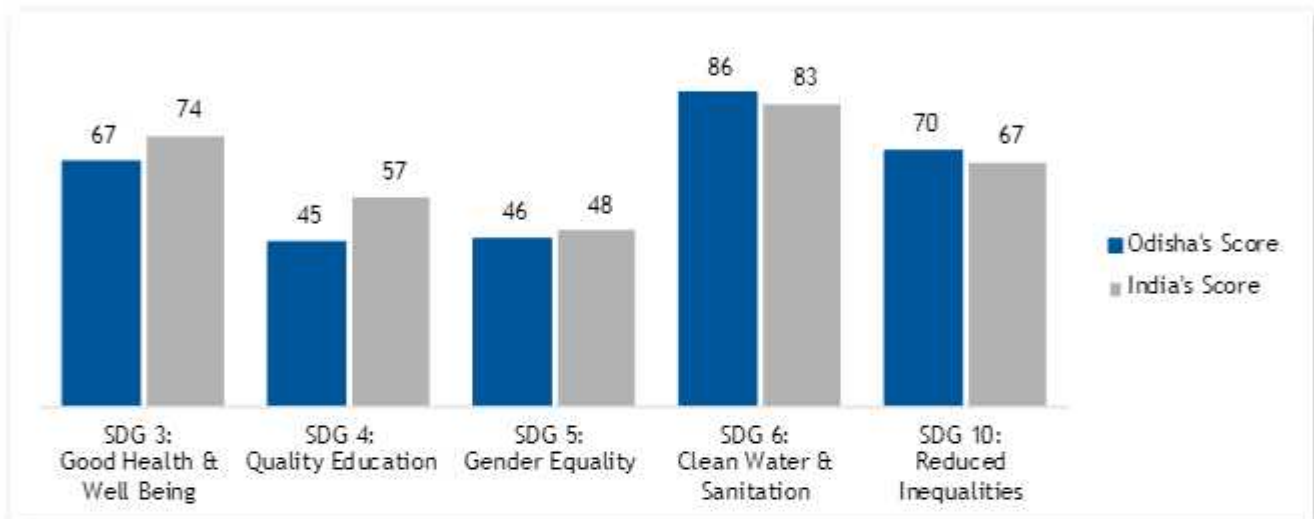
6.1.4. As per the recent report on 'SDG India Index 2020-21' published by NITI Aayog, Odisha has been categorized as one of the "performer" states with overall score 61, having an improvement of 3 points over the score for the year 2019-20. Out of 17 SDGs, Odisha is a front runner and performer in 9 SDGs.



Source: SDG India Index Report 2020-21, NITI Aayog

6.1.5. Odisha's performance in SDGs when compared with the national level score also reflects that in some of the important goals that relates to social well-being, such as SDG 6 i.e., Clean Water and Sanitation and SDG 10 i.e., Reduced Inequalities, Odisha scores more than India as a whole. Odisha is almost at par with the national score in SDG 5 which is Gender Equality as can be seen in Figure 6.1.

Figure 6.1 Odisha's Performance in various SDGs (2020-21)



Source: SDG India Index Report 2020-21, NITI Aayog

6.1.6. The Social sector expenditure comprises of spending on education, health, housing, urban and rural development, welfare of SC/STs, among others. This share is over 40 per cent in overall revenue expenditure of the state for the last four years (Source: RBI DBIE). As per 2021-22 Budget Estimates (BE), the government of Odisha has earmarked 43.1 per cent of total revenue expenditure for social sector against the 40.1 per cent of 2020-21 (RE).

6.1.7. In the total social sector expenditure, education and related expenditure constitute around one third of the total social sector expenditure. Under health and family welfare, more than 12 per cent of social sector spending is consistently incurred by the Government of Odisha during 2017-18 to 2020-21. Table 6.1 shows the social sector expenditure by major components.

Table 6.1 Social Sector Expenditure by Major Components (INR in lakh)

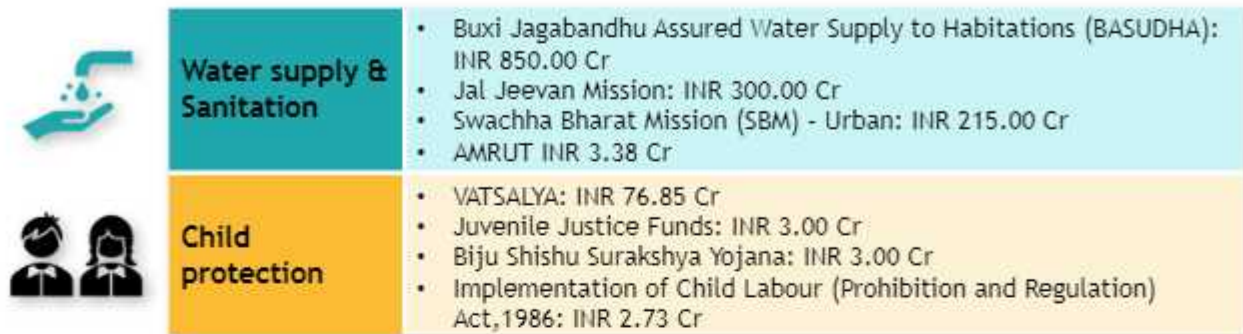
Year	Education, Sports, Arts and Culture	Health and Family Welfare	Water supply and sanitation	Other Social Services	Total Social Sector
2017-18	1453392	492712	333669	1096006	3375779
2018-19	1701963	570330	509632	1315248	4097163
2019-20	1798678	618532	710039	1750798	4878047
2020-21	1855856	877627	567022	1462978	4763483
2021-22 (BE)	2159086	933997	1068601	1691542	5853226

Source: State budget, Government of Odisha

6.1.8. 2021-22 has provided focus to some of the major social sector schemes related to health, education, water supply and sanitation and welfare of women, children and other vulnerable groups which are shown in Figure 6.2.

Figure 6.2 Snapshot of 2021-22 budget allocations across major social sector schemes

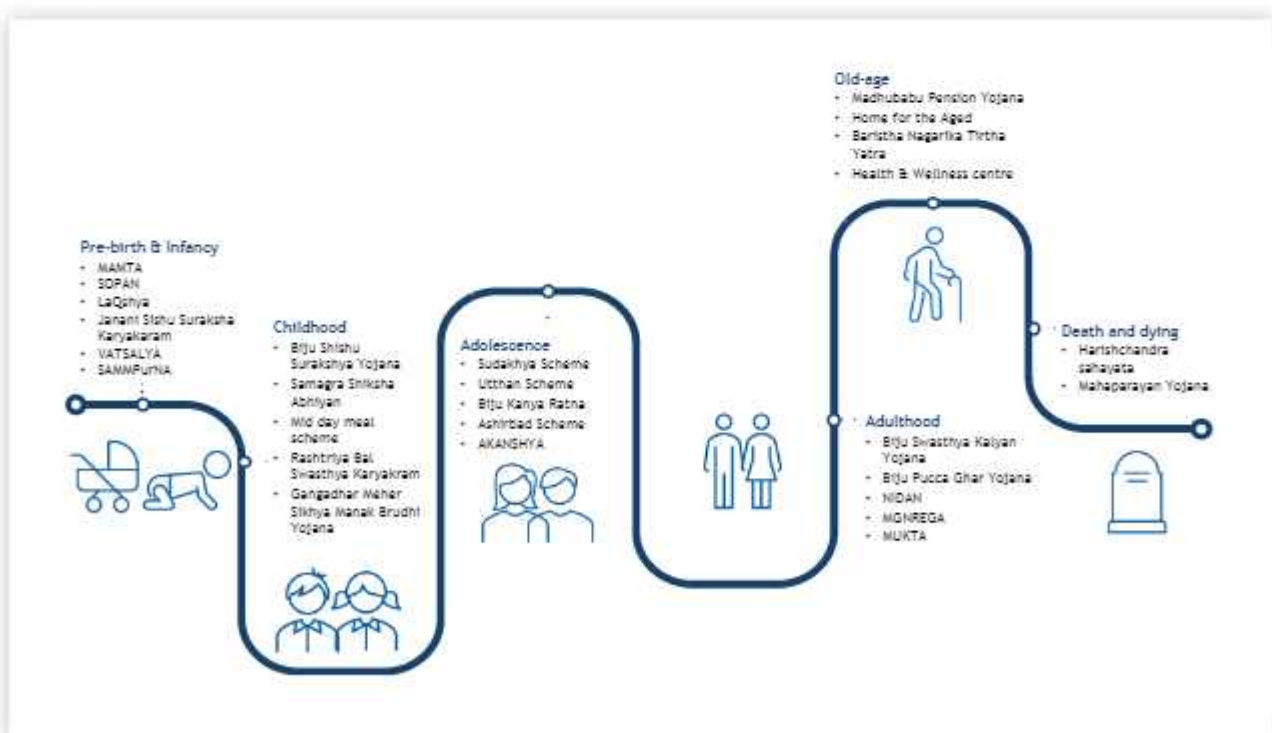
	Health	<ul style="list-style-type: none"> National Rural Health Mission: INR 1720.40 Cr Biju Swasthya Kalyan Yojana (BSKY): INR 1352.59 Cr MAMATA INR: 278.91 Cr Janani Suraksha Yojana: INR 102.12 Cr
	Disadvantaged Communities	<ul style="list-style-type: none"> AKANKSHYA: INR 2700 Cr Madhubabu Pension Yojana: INR 1509.08 Cr Indira Gandhi National Widow Pension Scheme: INR 246.45 Cr Home for the Aged: INR 114.00 Cr
	Education	<ul style="list-style-type: none"> Samagra Shiksha: INR 3062.06 Cr Mid day meal scheme: INR 957.00 Cr Mo School Abhiyan: INR 253.00 Cr Gangadhar Meher Sikshya Manakbrudhi Yojana: INR 153.72 Cr
	Women empowerment	<ul style="list-style-type: none"> Mission SHAKTI: INR 315.84 Cr Working Women's Hostel: INR 7.00 Cr Biju Kanya Ratna: INR 1.00 Cr



Source: State Budget 2021-22, Govt. of Odisha

6.1.9. Odisha has implemented schemes that impacts every stages of a human life cycle. The spectrum of schemes ranges from pre-infancy to birth, moving through adolescence towards adulthood, old age till the final stage of life. The cross-cutting coverage of all schemes has led to the improvement in quality of life in the state. The life cycle stages (from "Cradle to grave") are mapped to some of the major schemes as given in Figure 6.3.

Figure 6.3 From Cradle to Grave: Mapping of schemes across life cycle stages*



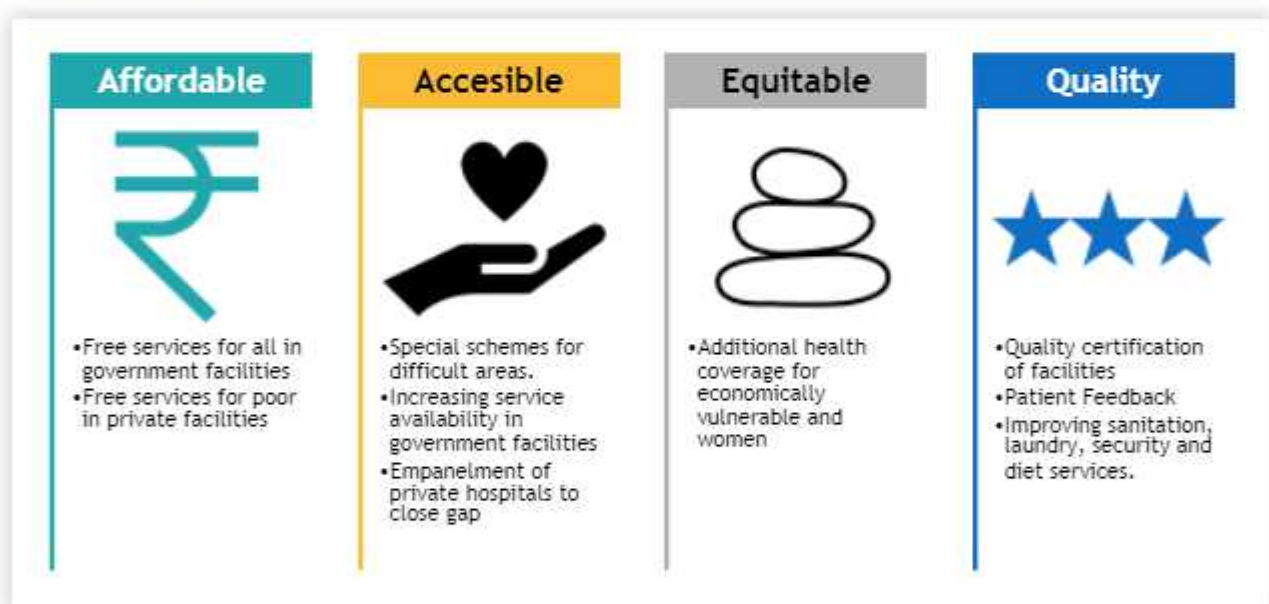
Note: * both CSS and State Sector Schemes

6.2. QUALITY HEALTH

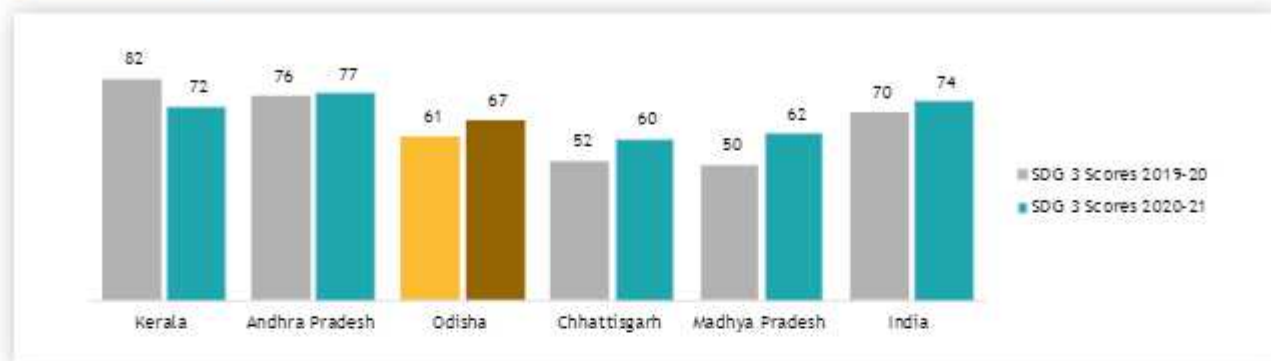
6.2.1. Public healthcare in Odisha focuses on Accessible, equitable, affordable, and quality healthcare services for all. During the last decade Government has undertaken many initiatives in the state through outcome based participatory bottom-up planning process with additional resource allocation.

6.2.2. Strengthening and improving healthcare services in the state has been accorded top priority since many years in Odisha. The share of health budget as percentage of GSDP has increased from 1.19 per cent in 2019-20 to 1.59 per cent in 2021-22 (People's guide, Annual Budget, Odisha 2021-22). One of the major thrust areas of the 2021-22 State budget was Transformative Health Facilities under the aspiration for "New Odisha – Empowered Odisha".

Figure 6.4 Health Sector Priorities



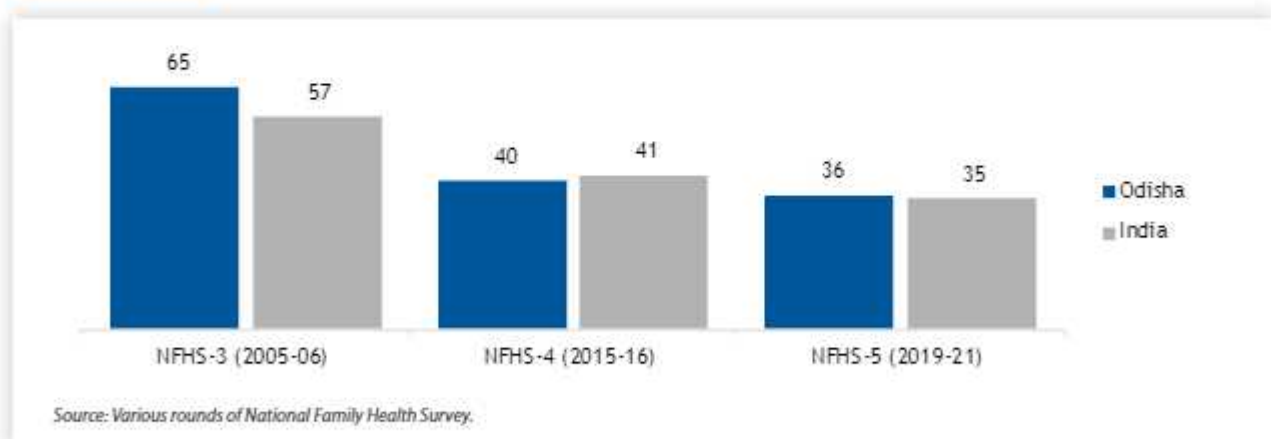
6.2.3. Government of Odisha has taken several reform measures for strengthening delivery of healthcare services in lines with Sustainable Development Goals. This has resulted in Odisha being a 'front runner' in SDG 3 i.e., Good Health & Well Being with a score of 67 in the SDG India Index 2021. Figure 6.5 shows Odisha's six-point improvement in the SDG 3 score from 61 in 2019-20 to 67 in 2020-21.

Figure 6.5 Odisha's Performance in SDG 3 vis-à-vis other key states

Source: SDG India Index 2019-20 and 2020-21, NITI Aayog

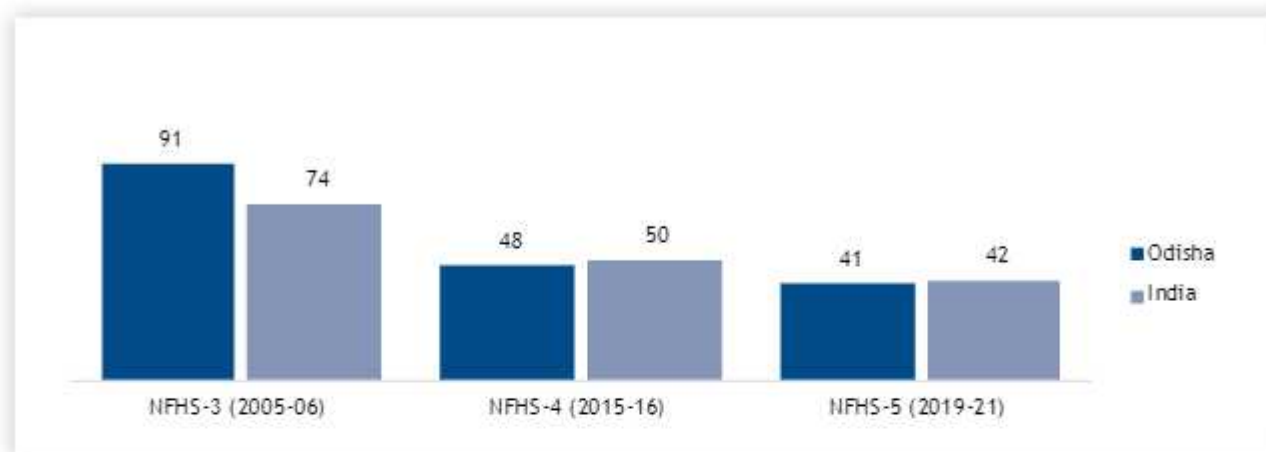
6.2.4. Life Expectancy in Odisha is comparable at the national level. Life expectancy at birth in Odisha is consistently increasing. As per the Sample Registration System (SRS), there is a significant improvement in life expectancy at birth from 64.8 years to 69.3 years between 2013-17 and 2014-18 comparable to India life expectancy (69.4 years). Female life expectancy (70.8) is higher than male (68), in line with national level. Life expectancy of Odisha is better than many other states such as Madhya Pradesh (66.5), Uttar Pradesh (65.3), Jharkhand (69.1) and Chhattisgarh (65.2) during 2014-18.

6.2.5. The Neonatal Mortality Rate (NNMR), Infant Mortality Rate (IMR) and Under-5 Mortality Rate (U5MR) are continuously declining which indicates the improved health outcome in the State (Figure 6.6 and Figure 6.7). As per NFHS-5 (2019-21) the NNMR, IMR and U5MR per 1000 live birth stood at 27, 36.3 and 41.1 respectively that declined from 28, 40 and 48 (NFHS-4, 2015-16) respectively.

Figure 6.6 Decreasing trend of Infant Mortality Rate (per 1000 live births)

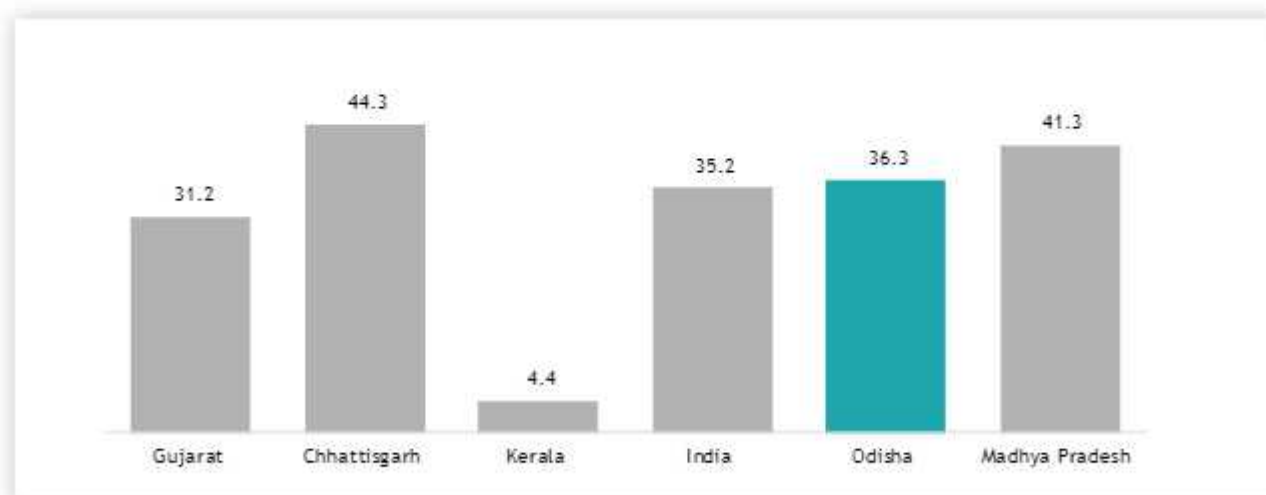
Source: Various rounds of National Family Health Survey.

6.2.6. The NNMR, IMR and U5MR is also comparable with all India average. Several health initiatives and remedial plans taken by the State like IMR Mission in the year 2001, followed by Nabajyoti scheme in 2004 and recent initiatives such as New-born Care Corners, Newborn Stabilization units, Sick new-born Care Units, Nutrition Rehabilitation Centres etc. accelerated the progress.

Figure 6.7 U5MR is better than all-India Level (per 1000 live births)

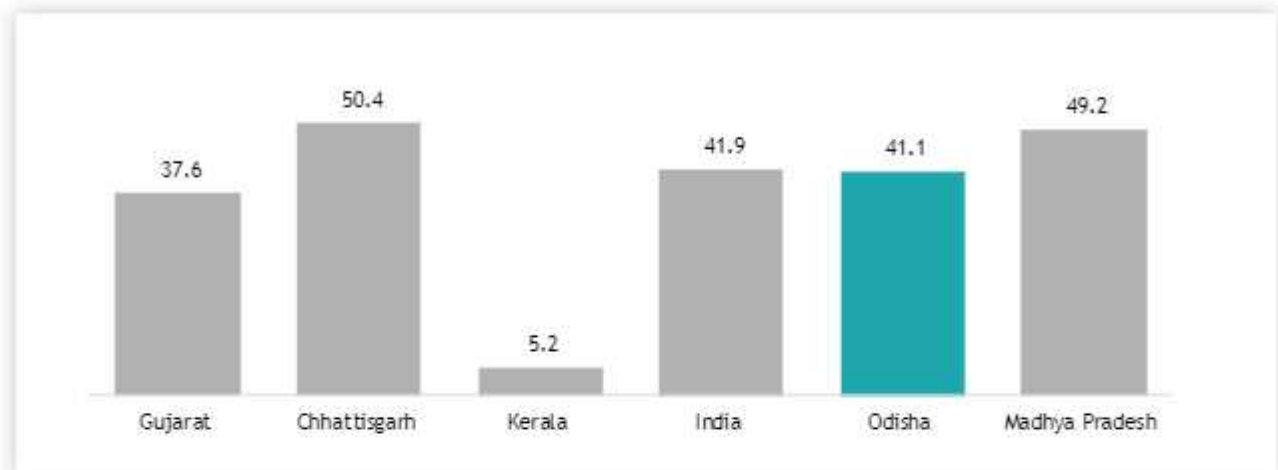
Source: Various Rounds of National Family Health Survey

6.2.7. Interstate comparison of child health care indicators. Odisha's performance in decreasing IMR and U5MR compares favourably with key front runners and performer states as per SDG number 3. Odisha comes right after Gujarat in both declining IMR and is performing almost at par with the all-India as illustrated in Figure 6.8.

Figure 6.8 Interstate Comparison of IMR (per 1000 live births in 2019-21)

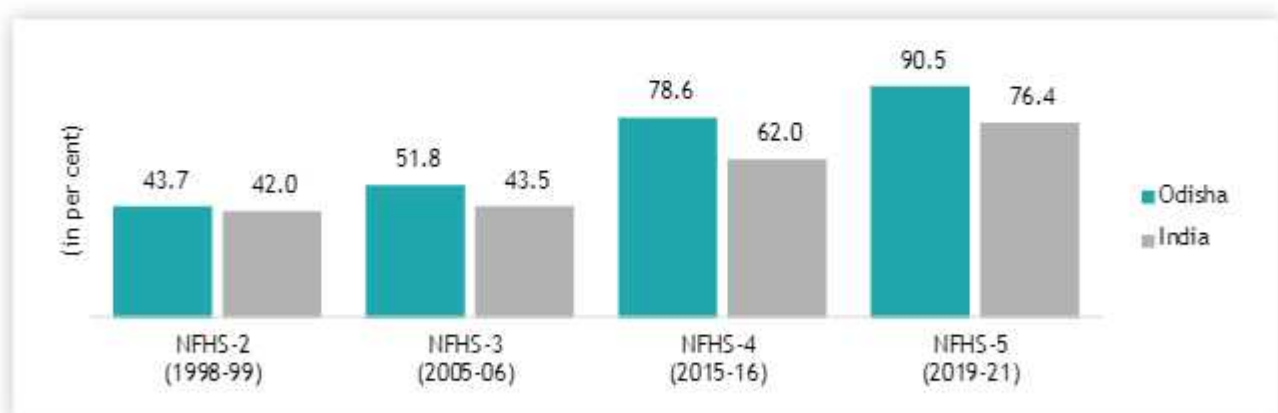
Source: National Family Health Survey-5 (2019-21)

Similarly, as seen from the Figure 6.9 in case of U5MR, Odisha's U5MR is close to all India figures. It fares better than some other states such as Chhattisgarh and Madhya Pradesh.

Figure 6.9 Interstate Comparison of U5MR (per 1000 live births in 2019-21)

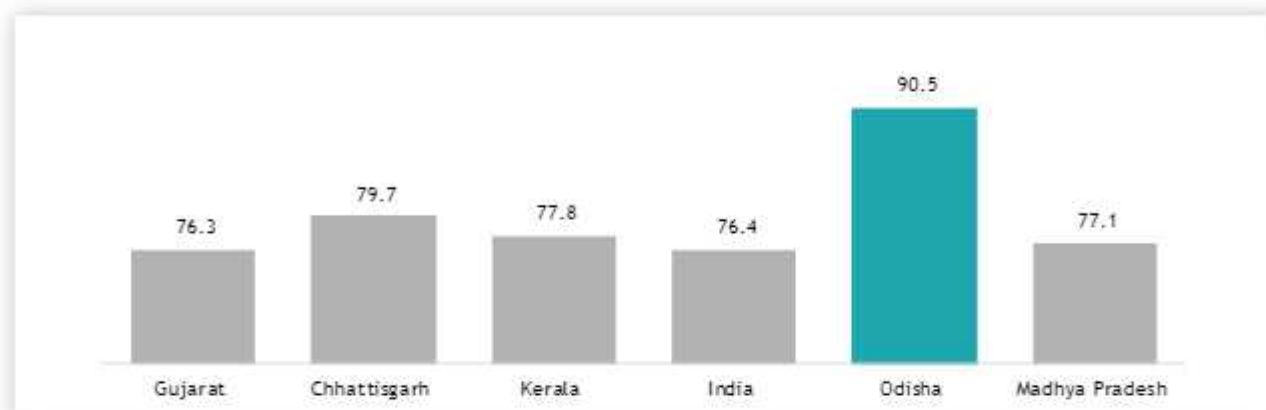
Source: National Family Health Survey-5 (2019-21)

6.2.8. Odisha has taken several steps towards full immunization. Immunizations are the best way to prevent infectious disease. A successful immunization program depends on the effective government intervention and cooperation of all the stakeholders. For full immunization, several initiatives are being taken by the health department to cover 100 per cent children of the State. As per NFHS-5 report, 90.5 per cent children with age between 12-23 months are immunized in 2020-21. So, there is substantial increase in immunization coverage among children aged 12-23 months. It was 43.7 per cent in 1999 (NFHS-2) and increased to 78.6 per cent in 2015-16 (NFHS-4) and 90.5 in 2019-21 (NFHS-5).

Figure 6.10 Children 12-23 months fully immunized (per cent) Point increase

Source: Various rounds of National Family Health Survey

6.2.9. In terms of interstate comparison, Odisha's performance in this area is notable as can be seen in Figure 6.11. Odisha's performance is the highest in the country amongst all major states.

Figure 6.11 Children 12-23 months fully immunized (in per cent): Interstate Comparison

Source: National Family Health Survey-5 (2019-21)

6.2.10. There is an increase in accessibility and utilisation of antenatal, neonatal and post-natal care facilities in the state. It is a heartening fact that the maternity health care facilities of the government have increased the accessibility and utilisation of antenatal, neonatal and post-natal care facilities to a substantial level in the state. As per NFHS-5 (2019-21) survey, mothers having antenatal check-up during their first trimester has increased to 76.9 per cent from 64 per cent during 2015-16 in Odisha and it is well ahead of the all-India number. Similarly, a substantial increase in neonatal care check-up and postnatal cares have been observed during this period (Table 6.2). The increasing utilisation of the maternal care and postnatal care facilities is possible due to various government interventions in this regard.

Table 6.2 Maternal and Child Health care Indicators: Odisha and India (in per cent)

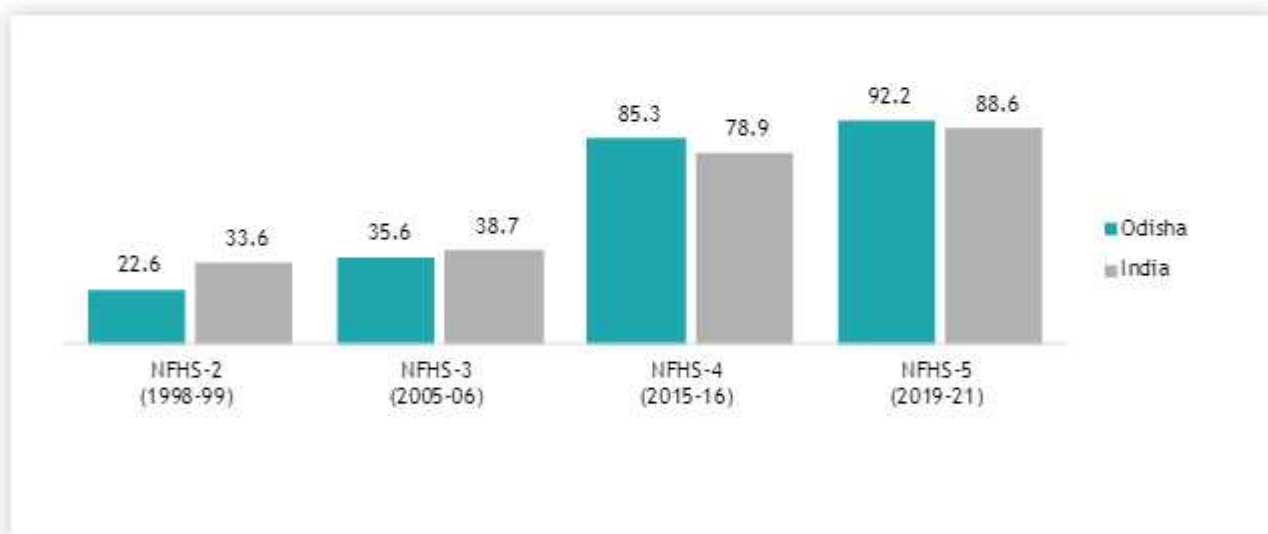
Indicators	Odisha (NFHS-4: 2015-16)*	Odisha (NFHS-5:2019-21)*
Mothers who had antenatal check up in the first trimester	64 (41)	76.9 (70)
Mother who had at least four full antenatal care	61.9 (51.2)	78.1 (58.1)
Registered Pregnancies for MCP card	97.2 (89.3)	99.4 (95.9)
Children born at home taken to health check up with in 24 hrs of birth	6.9 (2.5)	10.5 (4.2)

Note: * Number in the parenthesis is India figure
Source: Various Rounds of National Family Health Survey

6.2.11. In the state, supportive delivery cares resulted in high rates of Institutional Delivery. Institutional delivery ensures safety of mother and the new-born. It significantly reduces MMR and IMR by ensuring prevention, detection, and management of birth complications. Due to a better supportive delivery care system along with spread of education, awareness, and extension of healthcare facilities to the remote areas in the state, the institutional delivery in the state has significantly increased from 35.6 per cent in 2005-06 (NFHS-3) to 92.2 per cent in 2019-21 (NFHS-5) which is ahead of the national level of 88.6 per cent (NFHS-5).

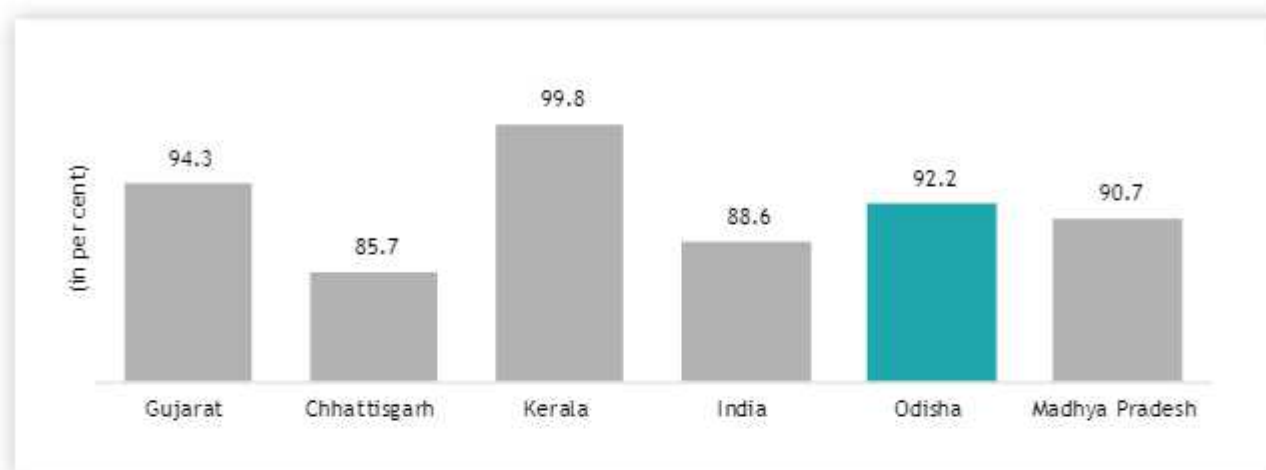
6.2.12. One of the remarkable features of the institutional delivery in the state is that both in Urban and Rural areas, the institutional delivery is well ahead than the national numbers. In both urban and rural areas, the state is moving towards full institutional delivery as it stands at 97.5 per cent and 91.3 per cent, respectively, in 2019-21 (NFHS-5). Further, rural area institutional delivery in public health facilities is more (80 per cent) as compared to urban areas (70 per cent). The high rate of institutional delivery in the State could be possible due to Government policy measures and effective implementation of Janani Suraksha Yojana, Janani Shishu Surakshya Karyakram, Niramaya, Nidaan, Sammpurna, BSKY, 108/102 ambulance services and establishment of Maa Gruha. Use of bike ambulance in the inaccessible areas is a step forward to supplement the transportation system to the delivery points.

Figure 6.12 Institutional Deliveries: Odisha & India (in per cent)



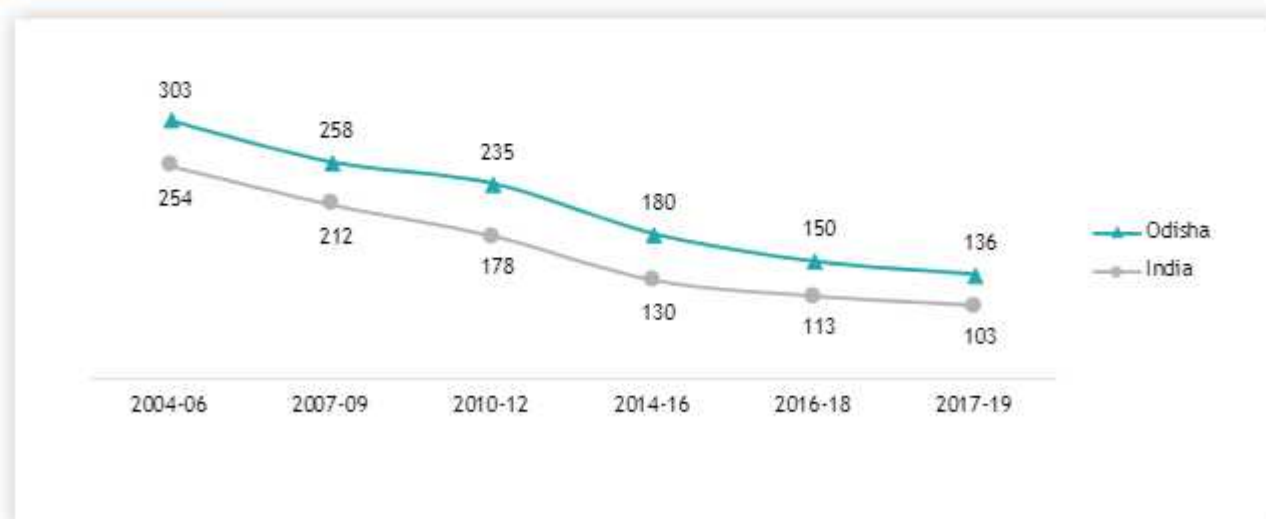
Source: Various Rounds of National Family Health Survey

6.2.13. In terms of Interstate comparison of institutional deliveries, currently at 92.2 per cent, Odisha is steadily moving towards a universal institutional delivery in the state. It is an outcome of various schemes and initiatives of the government which focuses solely on women and their maternal health and wellbeing. Figure 6.13 shows an interstate view of the institutional deliveries across states.

Figure 6.13 Interstate comparison of institutional deliveries (in per cent)

Source: National Family Health Survey-5 (2019-21)

6.2.14. There is a significant improvement in reproductive and maternal health care in the state. The state is continuously improving in reproductive and maternal health care parameters which is evident from the declining Maternal Mortality Ratio (MMR)¹ over the years (Figure 6.14). During 2004-06, the MMR was 303 (SRS 2004-06) and it has declined to 136 during 2017-19 (SRS 2017-19). During 2017-19, the MMR for all India was 103. The declining MMR is a result of many interventions such as Janani Surakshya Yojana, JSSK, Sammpurna, 108/102 ambulance services, establishment of Maa Gruha etc.

Figure 6.14 Comparative trend of MMR between India and Odisha (in numbers)

Source: SRS, Office of the Registrar General, India

¹ Note : Maternal Mortality Ratio (MMR) is derived as the proportion of maternal deaths per 1,00,000 live births, reported under the SRS.

6.2.15. Besides declining MMR, the improved reproductive and maternal health care in the state is also visible from the increase in ante-natal and post-natal care over the years. Mothers whose last birth was protected against neonatal tetanus, registered pregnancies for which the mother received a mother and child protection (MCP) card, mothers who consumed iron folic acid for 100 and 180 days or more when they were pregnant, and mothers who received postnatal care from a doctor/nurse/LHV/ANM/ midwife /other health personnel within 2 days of delivery have increased over the years as is evident from the Table 6.3

Table 6.3 Maternity Care in Odisha (in per cent)

Maternity Care	NFHS-5 (2020-21)	NFHS-4 (2015-16)
Mothers who had an antenatal check-up in the first trimester (per cent)	76.9	64
Mothers who had at least 4 antenatal care visits (per cent)	78.1	61.9
Mothers whose last birth was protected against neonatal tetanus (per cent)	95.2	94.3
Mothers who consumed iron folic acid for 100 days or more when they were pregnant (per cent)	60.8	36.5
Mothers who consumed iron folic acid for 180 days or more when they were pregnant (per cent)	34.4	4.2
Registered pregnancies for which the mother received a mother and Child Protection (MCP) card (per cent)	99.4	97.2
Mothers who received postnatal care from a doctor/nurse/LHV/ ANM / midwife /other health personnel within 2 days of delivery (per cent)	88.4	73.2
Children who received postnatal care from a doctor/nurse/LHV/ ANM/ midwife/other health personnel within 2 days of delivery (per cent)	88.1	NA

Source: National Family Health Survey-5 (2019-21)

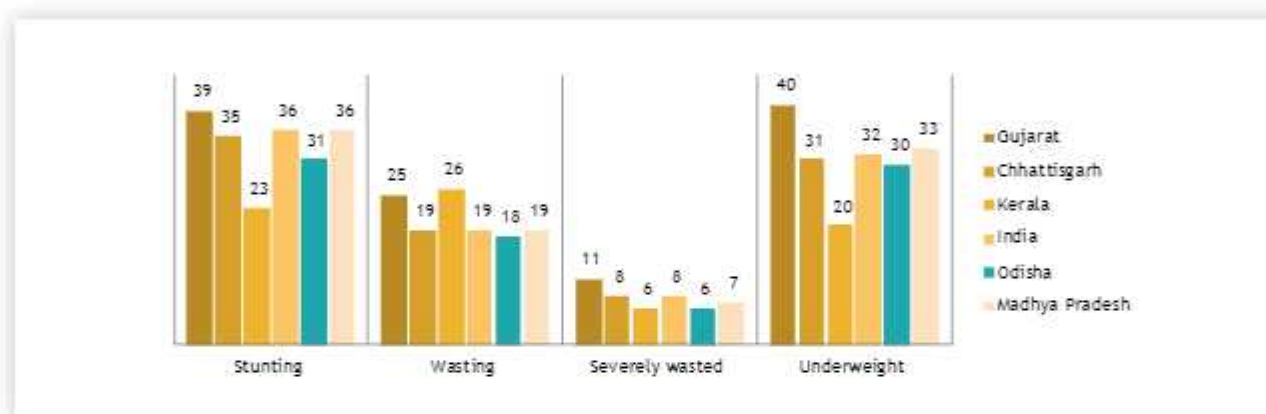
The State has shown significant achievement in ensuring menstrual hygiene amongst adolescent girls, by providing free sanitary napkins under Khushi Scheme. The percentage of women in 15-24 years age-group using hygienic method of protection during their menstrual period has increased from 47.4 per cent in 2015-16 (NFHS-4) to 81.5 per cent in 2019-21 (NFHS-5), which is higher than the National average of 77.3 per cent (NFHS-5).

6.2.16. The nutritional status of women has direct bearing on the nutritional standard of children. Maternal and child nutrition includes preconception, antenatal, and postnatal maternal nutrition, women's nutrition throughout their reproductive years, as well as foetal, neonatal, and child nutrition. Implementation of supplementary nutrition programme, universalisation of Anganwadi services, pre-school education programme, and improved infrastructure has contributed to the achievements seen in the nutrition indicators for Odisha.

6.2.17. Significant progress on nutritional indicators of children. Reductions in stunted, wasted, severely wasted and underweight children under 5 years of age reflect Odisha's fight against hunger. Adequate nutrition promotes good health, supports normal physical growth and reduce risk of stunting (height-for-age), wasting (weight-for-height) and underweight (weight-for-age) among children. Thus, nutritional outcome of the state has progressively increased, and the nutritional status of the state is better than the national average on various parameters as can be seen in Figure 6.15.

Odisha performs better than many leading states and the national average in nutritional indicators.

Figure 6.15 Comparative analysis of Child Nutritional Indicators (per cent)



Source: National Family Health Surveys – 5 (2019-21)

Table 6.4 Budget for nutrition schemes in Odisha (In INR Crore)

Year	Budget for ICDS	Budget for supplementary nutrition	Per cent supplementary Nutrition to ICDS budget
2019-20	2316.28	1035.88	44.72
2020-21	2492.79	1161.25	46.58
2021-22 (BE)	1311.31	1161.25	46.58

Source: W&CD and MS, Odisha

6.2.18. The committed intervention of government of Odisha towards improvement of nutrition levels of population especially women and children through implementation of supplementary nutrition programme, universalisation of Anganwadi services, pre-school education programme, and improved infrastructure along with appropriate budget allocations (Table 6.4) has resulted in overall improvement of nutritional status.

6.2.19. During 2020-21 out of 22.13 lakh children (0-3 years) in the state, 91.95 per cent were normal, 7.61 per cent were moderately undernourished, 0.51 per cent were severely undernourished and 8.12 per cent were underweight as per WHO standard. The rates for the children within the age group of 3-6 years are 91.34 per cent, 8.26 per cent, 0.47 per cent and 8.73 per cent respectively.

6.2.20. The status of the health care infrastructure is an important parameter of the progress of the state in the social sector in general and health sub-sector in particular. The State Government has focused on building health infrastructure to provide inclusive healthcare facilities to the people of Odisha by establishing more Medical Colleges either by Government or through PPP mode or even encouraging the private sector to come forward with such projects. At present there are 7 Government Medical Colleges and one Government Dental College operating in the state. It is to be noted that the State Government has made provision of incentives for the doctors and paramedical staff working in the Medical Colleges of the KBK regions for providing continuous and better medical facilities in remote areas by mobilizing human resources to the newly established Medical Colleges. This incentive system was also extended to the faculties of VIIMSAR Burla to mobilize super specialists to the western Odisha. Besides, three Ayurvedic Colleges and four Homeopathic Colleges are running under the government sector and 32 District Hospitals, 33 Sub-Divisional Hospitals, 384 CHCs, 1,379 PHCs, 6,688 Subcentres, 620 Ayurvedic Dispensaries and 561 Homeopathic Dispensaries constitute the core structure of the State's medical facilities.

State of art health Infrastructure, Inclusive healthcare facilities and use of alternative medicines have enabled accessible, equitable, affordable, and quality healthcare.

6.2.21. There is an increase in the intake capacity of students for medical, pharmacy and nursing education. Besides physical health infrastructure, adequate number of medical staff is the key to have better healthcare outcomes. In order to maintain adequacy in available medical personnel, besides the government institutions, the responsibility of augmenting their supply now rests with the private and PPP mode institutions. During 2019-20, the intake capacity of private and PPP mode medical colleges was 500 and it increased to 700 during 2020-2021 whereas the intake capacity of the government medical colleges during the period remains fixed at 1150. Similarly, the pharmacy college intake capacity of private and PPP mode institutions increased from 2260 to 3780 during 2019-20 and 2020-21 whereas the intake capacity of the government pharmacy colleges increased from 60 to 100 during the same period. Similarly, the nursing college and nursing school intake capacities have also increased substantially during 2020-21.

6.2.22. There is also provisioning of alternative health care system in the state resulting in increasing use of alternative medicines. To provide effective alternative health care facilities in the state, at present 4 Homeopathic and 3 Ayurvedic medical colleges are functioning in the State. As many as 561 Homeopathic and 620 Ayurvedic dispensaries are working under the State sector. During 2020, 36.43 lakh and 31.88 lakh patients were treated by homeopathic and ayurvedic institutions having 409 and 520 doctors respectively.

6.2.23. There is an effective and successful family welfare programme in the State. To maintain stable population and avoid the incidence of population explosion in the country, family planning measures renamed as family welfare programmes. With the aim of stabilising population growth, the government has effectively and successfully

implemented the programme strategy 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. The cumulative value of the age specific fertility rates at the end of the childbearing ages gives a measure of fertility known as Total Fertility Rate (TFR). TFR indicates the average number of children expected to be born per woman during her entire span of reproductive period assuming that the age specific fertility rates, to which she is exposed to, continue to be the same and that there is no mortality.

6.2.24. Odisha through a concerted effort of Health & Family Welfare Department has been able to reduce the Total Fertility rate (TFR) to 1.8 (NFHS-5) from a TFR of 2.2 (AHS 2012-13) whereas the TFR for the country is 2.0 (NFHS-5) as given in Table 6.5. General Fertility Rate (GFR) is defined as the number of live births per thousand women in the reproductive age group 15-49 years, and is a useful tool for measuring fertility. Odisha has been able to achieve this by a multipronged strategy of capacity building of service providers and simultaneous community level activities to increase understanding and awareness about family planning.

Table 6.5 Comparative figures of GFR and TFR

Year	TFR* (average no. of children per woman)	GFR* (no. of live births per thousand women)
2017	1.9 (2.2)	64.3 (72.4)
2018	1.9 (2.2)	63.4 (70.4)
2020	1.8 (2.0)	-

Note: * numbers in parenthesis are India figures

Source: SRS Bulletin and National Family Health Survey of Various Rounds.

6.2.25. Recent Healthcare Schemes and Initiatives of the State.

In the following section, we discuss some of the flagship scheme in the health and nutrition sector.

Table 6.6 Snapshot of major healthcare schemes

	<p>MAMATA Financial aid to the pregnant women and lactating mothers to alleviate the prevailing conditions of maternal and infant undernutrition</p>
	<p>Biju Swasthya Kalyan Yojana (BSKY) It is a universal health coverage program by the state with special emphasis on the health protection of economically vulnerable families</p>
	<p>SAMMPURNA A state specific scheme for accelerated reduction of IMR and MMR in the State.</p>
	<p>KHUSHI To address the issue of menstrual hygiene among women, both post-partum and post-MTP (Medical Termination of Pregnancy) and adolescent girls, this scheme provides sanitary napkins free of cost to women.</p>
	<p>SOPAN To improve the nutritional and health status of children below the age of 6 years.</p>
	<p>Maternity Waiting Homes (Maa Gruha) The Maa Gruha are established near to delivery points to accommodate the expected delivery cases from difficult geographical pockets at least before 7-10 days of expected date of delivery for having safe institutional delivery.</p>
	<p>Janani Suraksha Yojana Cash incentives for pregnant women for institutional deliveries</p>
	<p>Janani Shishu Suraksha Yojana Free healthcare services during ante-natal, delivery and post-natal period for pregnant women and sick infants</p>
	<p>Pradhan Mantri Surakshit Matritva Abhiyan Programme focused on screening of antenatal cases by doctor, preferably O&G specialist, at least once during 2nd or 3rd trimester.</p>
	<p>National Health Mission Overarching healthcare initiatives for maternal and child health, disease control and health system strengthening.</p>

6.2.26. 5T and Mo Sarkar Initiatives of MAMATA. MAMATA is a flagship conditional cash transfer maternity benefit scheme of the state launched in September 2011. The scheme targets to motivate pregnant and lactating women to seek maternal and child health services and adopt optimal nutrition behaviours and practice. As a 5T initiative under e-Governance to ensure transparency and to make MAMATA scheme more citizen centric, hassle and paper free, an App based MIS integrated with a Mobile application is operational in all districts of the state from 1 August 2020. The scheme is using 181 Helpline no. for grievance management related to MAMATA scheme. Provision of message in Odia language, online funds transfer through IFMS gateway are the key features of the mobile application.

6.2.27. The Hon'ble Chief Minister announced the inclusion of the MAMATA Scheme under 'Mo Sarkar' programme on 17 December 2019. More than 4,533 feedback calls were already completed by this Department by 31 March 2021. Almost all feedback received from MAMATA beneficiaries was positive and satisfied with the services of AWWs/AWHs at the grass root level.

6.2.28. Biju Swasthya Kalyan Yojana (BSKY). It is a universal health coverage program by the state with special emphasis on the health protection of economically vulnerable families. Free healthcare in all State Government health care facilities and empaneled private hospitals provided under BSKY. Beneficiaries are availing entitlements under BSKY on production of New BSKY card or NFSA/SFSS card (if New BSKY Card not provided for some reasons).



6.2.29. Highlights of Major Health System strengthening Interventions

- **BSKY:** Free health services for all (irrespective of income, status or residence) in all State Government health care facilities. All treatment is cashless, and no document is required to be produced. Additionally, for economically vulnerable families, Free healthcare is provided in empaneled private hospitals (340 nos.), through annual health coverage of INR 5 lakh per annum (INR 5 lakh additional for women members) per family per annum. From 1 September 2021, the BSKY benefit in private hospitals extends to 3.5 crore persons of 96.5 lakh NFSA/ SFSS card holder families in Odisha.
- **Nidaan Scheme:** Free Diagnostic Services at identified Public Health Facilities both through own system and PPP mode are implemented. More than 1.20 crore test done for patients attended public health facilities from April to September 2021.
- **Sahay Scheme:** Free dialysis services provided to all patients at 29 District Head Quarter Hospitals and CHC, Narshingpur, and SDH Bhanjanagara through PPP mode Annually about 50 thousand patients are benefitted.
- **ANMOL:** ANM Online is an android based application, developed to facilitate seamless work of ANMs as well as ensuring collection of good quality data and its digitization at its source. It has been implemented in all 30 districts. NCD App application is also loaded in the tablet for recording and screening details by ANMs.
- **SAMMPurNA Scheme:** For accelerated reduction of IMR and MMR in the State, a state specific scheme – 'SAMMPurNA' has been implemented in the State since 2015-16. Major interventions include identification,



referral and treatment /management of high risk pregnant women and children, provisioning of mother and baby kit, reimbursement of transport cost at the rate of INR 1,000 for institutional delivery of Pregnant women in notified difficult villages, establishment of High Dependency Units (HDU) for management of critical obstetric cases, establishment of Paediatric Intensive Care Units (PICUs) for management of critical paediatrics cases at District Headquarter Hospitals.

- Cancer Care-cum-Chemo Units at DHH:** Under this scheme, Day Care Chemotherapy units have been established at District Headquarter Hospitals. One dedicated Cancer Wing will be established at Capital Hospital, Bhubaneswar and four Mammography Machines are going to be set up at four new MCHs at Balasore, Bolangir, Mayurbhanj and Koraput. Besides seven Cancer Radiotherapy Units will be set up in six locations of the State; one at Capital Hospital, one each at DHH Jharsuguda, Angul, Nabarangpur and Keonjhar and two at AHRCC, Cuttack. There are 45,527 patients enrolled at Day Care Chemotherapy Centres till October 2021.
- Sunetra:** This is a Universal Eye Health Programme for five years from 2018-19 to 2022-23 to address all the eye related barriers so that percentage of preventable blindness in Odisha is expected to be brought down to zero through comprehensive Eye care Services in both rural and tribal areas of the state. This scheme aims at Zero backlog of Cataract cases for operation by 2023. Annually more than 3 Lakh patients with Cataract are being benefitted. Free spectacles are being provided to more than 1.00 Lakh school children with refractive error.
- Nikshay Poshan Yojana:** More than 47,052 Tuberculosis Patients received Cash incentive under Nikshay Poshan Yojana through DBT, in 2021.
- Ama Clinic:** To reduce out of pocket expenditure of the urban population and slum dwellers in particular, the Govt. of Odisha has launched 'Ama Clinic' to provide weekly specialist services in the Urban Primary Health Centres and Urban Community Health Centres. The specialist services include Obstetrics and Gynaecology (O&G), Paediatric, Nutritionist, Medicine and Geriatric, Adolescent services, Psychiatric services, Ophthalmology services and Physiotherapy services.
- Khushi:** To address the issue of menstrual hygiene among women, both post-partum and post-MTP (Medical Termination of Pregnancy) and adolescent girls, the State Government has introduced 'Khushi sanitary napkins, which are provided free of cost to women during post-delivery and post-MTP at all public health facilities (6 packets per woman, each packet having 6 napkins). In addition, Government has introduced social marketing of 'Khushi sanitary napkins in the rural community, through ASHAs, at the subsidized rate of INR 6 per packet of 6 napkins. The Government of Odisha also made provisions for supply of free sanitary napkins to all school-going girls, from classes 6-12, in all Government and Government-aided schools.
- Free Ambulance Services (National Ambulance Services):** Citizens can seek emergency ambulance services to avail treatment at public health facilities by dialling '108' Toll Free Number. 630 Ambulances are operational under fleet of '108' service. Likewise, under '102' Ambulance services 500 ambulances are operational for providing transport services to all pregnant women during ante-natal, delivery and post-natal period up to 42 days from home to institution, institution to institution for higher services and drop back. Besides, free transport/ambulance services are provided to sick infants up to 1 year for seeking treatment at public health facilities under '102' Ambulance service. 6



Boat Ambulances are operational in Kendrapara (2), Koraput(1), Malkangiri(2) and Kalahandi(1) districts. More than 3.62 Lakh beneficiaries availed the services under '108' services and more than 2.57 lakhs beneficiaries availed the services under '102' services during April-Sept,2021.

84 new Basic Life Services (BLS) ambulances and 28 Advanced Life Support (ALS) ambulances have been introduced during 2021 to boost the reach and scale of emergency medical ambulance care in the state. In all, 624 Emergency Medical Ambulance Services (EMAS) ambulances are operational by the end of April 2021. Of these, Capital cost of all 596 Ambulances and Operational cost of 176 Ambulances have been borne by the State.



Average response time of EMAS ambulances has improved from 33.24 minutes in 2019-20 to 26.27 Minutes in 2020-21 (Target-30 Min). 6,22,661 patients have availed the EMAS Ambulance Services in 2021 during covid pandemic whereas 5,54,650 availed the EMAS Ambulance Services during 2019-20. So far, more than 33 lakh people have been benefited from the ambulance service.

Under 'Free Referral Transport Service (Janani Express)', 5,31,273 beneficiaries have availed the service in 2020-21 whereas 4,54,860 beneficiaries have availed the service in 2019-20. This shows despite Covid pandemic people relied on Govt facilities and transportation for non-Covid health care services like delivery services.

Table 6.7 Other key schemes and interventions in Health

Maternal Health

1. Cash incentives for pregnant women for institutional deliveries under *Janani Suraksha Yojana* since 2006-07. A total of 75,63,006 beneficiaries benefitted under JSY (from 2005-06 till second quarter of 2021-22); and during 2021-22(Apr-Sept 2021) around 1,88,897 beneficiaries benefitted under JSY. Due to JSY, the institutional delivery has increased from 28.8 per cent in 2005-06 to 92.2 per cent in 2019-21 as per NFHS-5.
2. Cashless medical Services under *Biju Swasthya Kalyan Yojana (BSKY)*.
3. LaQshya: Under this programme the Labour Rooms & Maternal OT are being standardized for providing quality care services. The target is set to standardize all Medical Colleges and FRUs as prospective target.
4. Village Health and Nutrition Day: Fixed day health and Nutrition day (VHND) is being organized every Tuesday/ Friday at village Anganwadi Centers. In 2021-22 (Apr-Sept 2021) 2,68,276 sessions held out of 288365 planned sessions.
5. Maternity Waiting Homes (MWH/*Maa Gruha*): The *Maa Gruha* are established near to delivery points to accommodate the expected delivery cases from difficult geographical pockets at least before 7-10 days of expected date of delivery for having safe institutional delivery. Till September 2021, 91 MWHs got operationalized.

6. *Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)*: This programme was started in November, 2016 which focused on screening of antenatal cases by doctor, preferably O&G specialist, at least once during 2nd or 3rd trimester. This activity is implemented on 9th of every month on fixed day basis in CHC and above facilities. The prime objective of the programme is to screen for high risk pregnancies and initiate its management as appropriate. During 2021-22 (Apr-Sept 2021), 42,111 anti-natal cases have been screened and 3,301 high risk pregnancies got detected.

Child Health

1. Free healthcare services during ante-natal, delivery and post-natal period for pregnant women and sick infants under *Janani Shishu Surakshya Karyakram (JSSK)*. In last five years (since 2013-14) 25,34,365 number of pregnant woman and 4,27,674 sick children have been benefitted. 27,27,105 pregnant women and sick infants have availed free referral transport services through 102/108 during 2021-22 (up to September 2021),
2. Sick New-born Care Units (SNCU) and New-born Stabilization Units (NBSU): For treatment of sick and low birth weight new-borns, 44 Sick New-born Care Units (Target: 45) and 43 New-born Stabilization Units are operational. During 2021-22 till November 2021, about 41,773 children were admitted in SNCU and 31,956 new-borns were discharged after due treatment.
3. Kangaroo Mother Care (KMC) Units: KMC units have been established in all 44 SNCUs adjoining the SNCU for providing Kangaroo Mother Care to low birth weight and sick new-borns.
4. *Rashtriya Bal Swasthya Karyakram (RBSK)*: It is a National Flagship Programme under NHM rolled out in Odisha since March 2014 which aims to cover 1.07 crore children from Birth till 18 years under its domain. The Programme targets at identification and treatment of 38 health conditions through '4D' approach which includes Defect at Birth, Deficiencies, Childhood Disease and Developmental Delay and Disabilities. Under 4D approach during 2021-22 (up to September 2021) total 30,57,795 number of identified children have been treated under RBSK at Primary, Secondary and tertiary facilities.
5. Home based new-born care (HBNC): Training is provided to all ASHAs for early identification and referral of new-borns with danger signs and counselling care givers on home based new-born care. During 2021-22 till Sept,21, about 21681 of LBW babies were reported during HBNC visits and 6437 New-born were diagnosed for danger sign and out of this 5837 new-born referred to Hospital for treatment.
6. Intensified Diarrhoea Control Fortnight (IDCF): An intensified diarrhoea control fortnight is held every year from 2015 during the monsoons, where prophylactic ORS packet is distributed by ASHA to each household for prevention and control of diarrhoea in both adults and children. During Integrated Campaign 2021, around 59000 under five children were found with diarrhoea and all of them were treated with ORS and Zinc.

General Health care Scheme

1. Family Planning Initiatives: Newer contraceptives (*Antara* and *Chhaya*) have already been rolled out till block level and currently there is a consumption of over 45,000 doses of *Antara* and 30,000 strips of *Chhaya*.
2. Special initiatives have been taken in Urban areas with conduction of capacity building of urban ASHAs and facility level workshops in UCHCs and UPHCs for young couples and *Mahila Arogya Samiti* members which has resulted in increased uptake of Newer Contraceptives in the urban areas. Family Planning Counselling corners were established in urban health facilities and Health Wellness clinics.
3. Free Blood Services: Under strengthening of blood services, provision has been made to ensure quality blood to all patients requiring blood at public health facilities. More than 2.28 lakhs patients receive free blood during April-September 2021.
4. Dental Clinics established at all DHHs, SDHs and 353 CHCs (out of 388) with regular Dentist, Dental chairs and consumables (SCB Dental College — Nodal Centre for monitoring and mentoring).
5. Corpus Fund: Non-availability of Doctors at inaccessible remote location has been a cause of concern to the Department. To address this issue, the government has initiated a number of measures to provide necessary flexibility to the district administration; a corpus fund of INR 1 Crore each has been provided to 16 backward districts of the state to improve delivery of health care services.
6. Free Mental Health Care. Mental Health programme is implemented across 30 districts of Odisha with provision of screening, counselling, treatment and free psychotropic drugs through capacity building of service providers and ASHAs, establishment of District Crisis Centre (DCCS) or Help Desk, Life Skill Education (LSE), mass awareness through multi-media approach.

Covid-19 and Health Sector Initiatives of the State

6.2.30. Odisha is a State well known for its rapid and effective response to disasters and this experience stood the State well in combating the Covid-19 pandemic. In a matter of weeks, the State had set up fully equipped dedicated Covid hospitals and testing laboratories, which were expanded to a capacity of over 30,000 general beds, 8,000 oxygen supported beds and 1600 ICU beds.

Starting with only one Covid testing laboratory in the State, Odisha soon had a network of about 30 RT-PCR laboratories, apart from Rapid Antigen, CBNAAT and TrueNAT testing with a daily testing level of over 70,000 tests. The state also maintained healthier outcomes than the national average for testing rates, positivity rates and Covid recovery rates. The state has a robust IT platform for registration and tracking, devolution of District Collector powers to the Sarpanches and an efficient system for quarantine and health monitoring of all incoming persons at the village level to keep the spread of the pandemic in check.

Odisha was among the first states to establish the biggest 1000-bed dedicated Covid hospitals in a record time of just two weeks.



6.2.31. As per the report from the Health and Family Welfare Department, over 90.73 Lakhs tests for Covid-19 were done from April 2020 till March 2021. As a result, test per Million for the State had reached 2,07,260 which was better than National average of 1,82,523. The rate of recovery of the State also reached 98.7 per cent which



is 4th highest in the country and better than national average of 93.9 per cent and case fatality rate of the State was only 0.56 compared to National average of 1.3.

- Covid Vaccination: The State has conducted a successful vaccination drive, with over 95% of eligible population receiving first dose and 91% being covered with two doses.

- Among several initiatives during COVID-19 which helped Odisha to tackle the crisis better was 104 Health Helpline. Since previous year's Covid-19 situation of the state, 104

Health Helpline has been functioning as the designated State level Health Helpline for COVID-19 to address all public queries, grievances and to disseminate the required information and to provide counselling support services relating to Covid -19.

Box 6.1 Towards a Healthy Lifestyle: NCD Parks in Urban Odisha



Non-Communicable Diseases (NCD) are often referred to as predominantly urban disease due to the sedentary lifestyle and unhealthy food practices in urban areas which leads to these issues. There was an unmet need for NCD park in the urban areas of Odisha. With the above background and with an objective to promote health and wellness, State of Odisha decided to establish NCD Parks in Urban Health Institutions from 2020-21. Keeping in view the patient Load and availability of space, NCD parks

have been operationalized within the campus of 12 urban PHCs in the cities/towns to provide an option for the NCD patients and people nearby to use the facility for a healthy lifestyle. The Health Wellness Centre-Urban Primary Health Centre (UPHC)s on an average caters to 1,500 NCD cases per month. A whole range of services are being offered to people visiting these centres such as Physiotherapy, Psychological counselling, nutritional consultation services, yoga sessions and others. Such services are provided for both geriatric patients as well as all potentially vulnerable populations for NCD.

The targeted population of these NCD parks are people detected with NCD, Geriatric Patients who are socially vulnerable and persons referred by the doctors. NCD park is open twice daily from morning 6 am to 9 am and from 4 pm to 6 pm. People from nearby areas throng to UPHC for doing their daily exercises, aerobics, yoga and fitness regime. People who are visiting for exercise, Yoga, meditation, wellness activities perform their daily activities through trained and skilled personnel. Daily user list is prepared, and their progress is monitored by the concerned HWC-UPHC. The In-charge of the park submits the daily progress report of NCD

Patients to MO (I/C) of UPHC. Further, the RKS/JAS is monitoring the progress and performance of the park.

Outcome of the Initiative

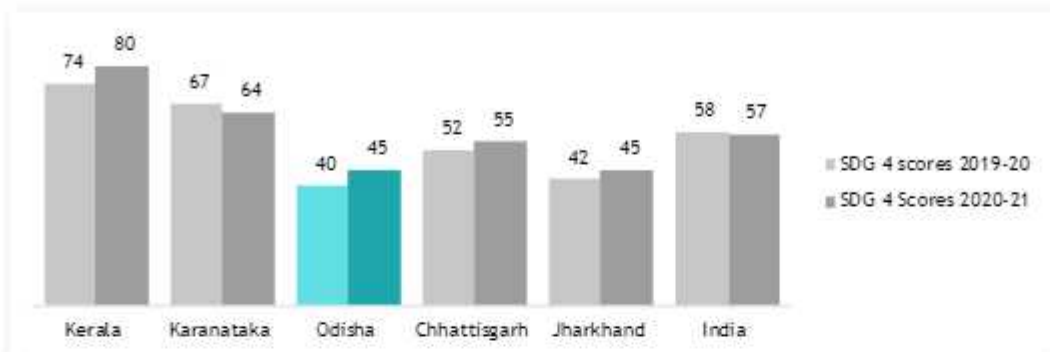
On an average 25-35 persons per day are visiting these facilities. They also receive physiotherapy services, yoga, medicines, counselling, and a space to do their exercises in one campus free of cost. The initiative is expected to reduce the out-of-pocket expenditure of these users on such services. It is being estimated that on an average each individual who visits NCD parks can save INR 5000-6000 per month. Besides this, there are also indirect savings on pain killers, antacids, neuro-vitamins etc.

It is also expected that, establishment of NCD Parks must have also reduced the burden on OPD caseload of the hospital especially in the departments like medicine, orthopaedics and others. NCD Parks are complementing the ongoing efforts of the existing health system by promoting healthy lifestyle and prevention of onset of NCDs. With increasing footfall in the NCD parks, the case load of NCD cases in the OPD/IPD is expected to decrease eventually.

6.3. EDUCATION

6.3.1. Education being one of the most important components of human capital, leads to human welfare and sustained economic development. Empirical evidence shows that education significantly contributes to enhance skill, efficiency and higher earnings by increasing quality of labour and productivity. Higher educational attainment generates positive externalities and other indirect effects on health, mortality, earnings, job prospects, and employment. Therefore, education is a necessity in the society for individual empowerment and capacity enhancement for individual and collective prosperity. It is essential component of the wellbeing and living standard of individuals and is the way towards better human development. Recognising the importance of education, United Nations have included education as a major Sustainable Development Goal (SDG) to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

6.3.2. Odisha is committed to achieve SDG-4 that is to 'Ensure inclusive and quality education for all and promote lifelong learning' by 2030. This includes universal primary and secondary education, early childhood development and universal pre-primary education, equal success to technical/ vocational and higher education, relevant skills for decent work, gender equality and inclusion and universal access to a quality higher education. To achieve the above state objectives, a well-defined mechanism is in place that emphasise on promotion of effective learning environment, provision of scholarships, engagement of adequate teachers and educators and creation of adequate infrastructure. The enactment of Right to Education Act, 2009 (RTE) by the Government of India, the National Education Policy and the Odisha Right of Children to Free and Compulsory Education Rules, 2010 and Right to Education Cell with the support from UNICEF are the major policy interventions to achieve SDG-4. The state is putting substantial effort to rapidly move towards achieving SDG-4 as the current index score has scope for improvement in comparison to peer performing states (Figure 6.16).

Figure 6.16 Odisha's performance in SDG 4

Source: SDG India Index 2019-20 and 2020-21, NITI Aayog



6.3.3. Odisha has shown considerable improvement in Performance Grading Index (PGI). The Department of School Education and Literacy (DoSEL), Government of India has designed the Performance Grading Index (PGI) to measure qualitative transformational change in the field of school education. The PGI report 2019-2020 shows that Odisha has improved considerably in PGI due to significant progress in educational infrastructure and higher enrolment. Enrolment rates, completion rates and other physical infrastructure like construction of school buildings/classrooms, smart classrooms,

science camp, laboratories, library, drinking water facilities, toilet facilities and appointment of teachers are major thrust area where improvement are observed. Nearly 98 per cent of primary and upper primary schools of the State have separate toilets for girls in 2021. The concept of model classroom is also a step forward in this direction.

6.3.4. Odisha has made effective policy intervention to promote and ensure inclusive and equitable quality education, which is visible through remarkable progress in educational attainment rates. Higher educational attainments was made possible due to development of school, college and university infrastructure. *Mo School* and *Mo College Abhijan* have been rolled out with the aim of collecting funds from the alumni for development of schools and colleges in the State.

6.3.5. The *Mo School* initiative of State Government was created with a vision to educate its school children to be successful citizens. *Mo School* is a first-of-its-kind initiative in the country – a citizen-government partnership in which the former leads in designing the programme, defining its goals and directing its implementation. The government provides operational and financial support to the programme while the *Mo School* Executive Body runs the everyday affairs supported by a Governing Council and a Board of Advisors, both of which comprise, among others, thought leaders, eminent educationists, social scientists, and notable people from the relevant fields.

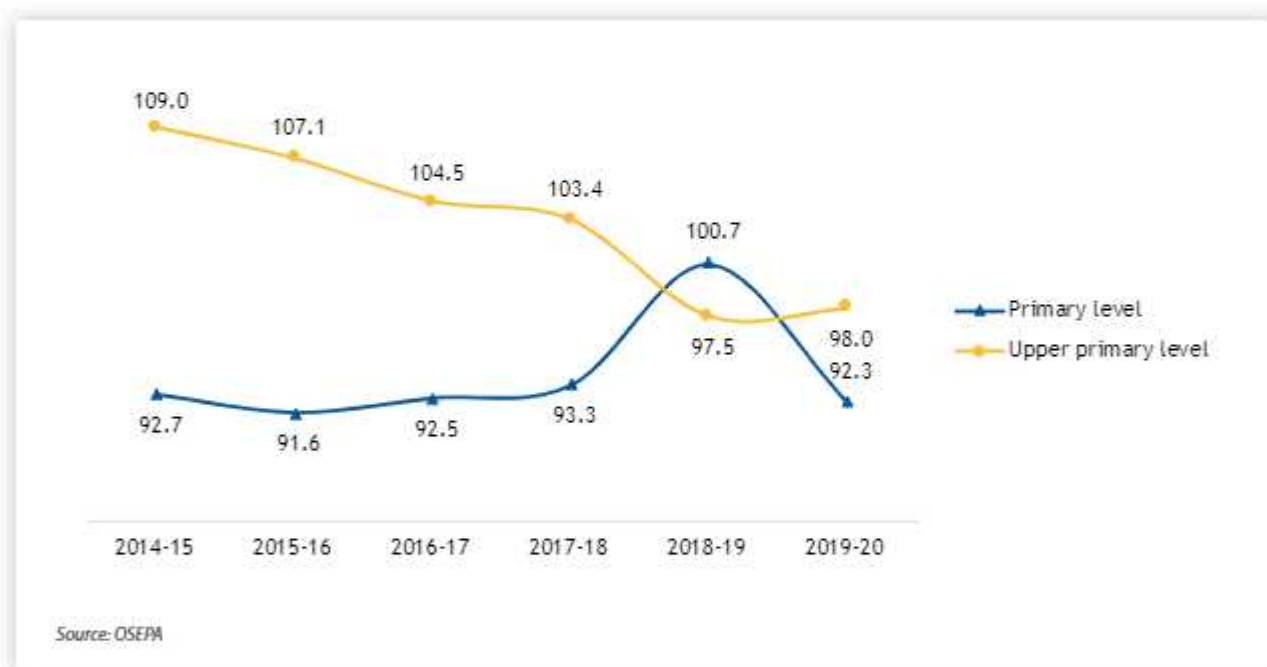


6.3.6. Similarly, under 5T Action plan, *Mo College* initiative drives transformation in the higher education with the intended outcome of productive technological intervention, integrated team effort and transparent processes. This is possible with digitisation of college facilities, creating academia-industry connect, effective course delivery and skill enhancement.

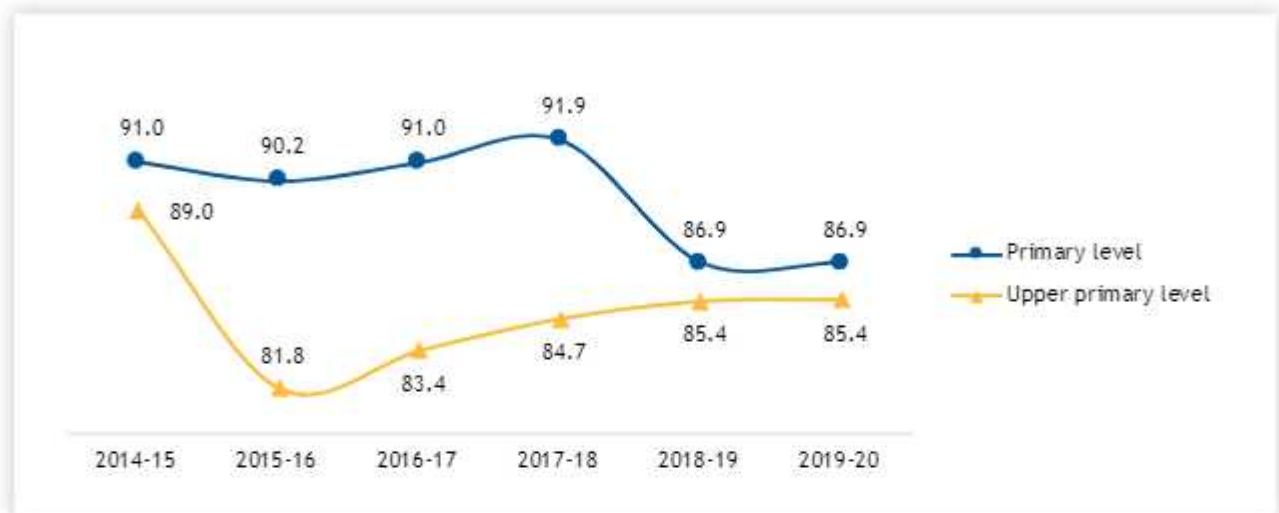


6.3.7. Gross and net enrolment ratios are used as the yardsticks to assess the achievements of universalisation of education. Gross enrolment ratio (GER) is defined as the percentage of total student enrolment at a particular level of education as a ratio of the population in the relevant age group, while Net Enrolment Ratio (NER) considers the same ratio with enrolment of only students in the official age group (6-11 years for primary and 11-14 years for upper primary level).

Figure 6.17 Gross Enrolment Ratios at the elementary level

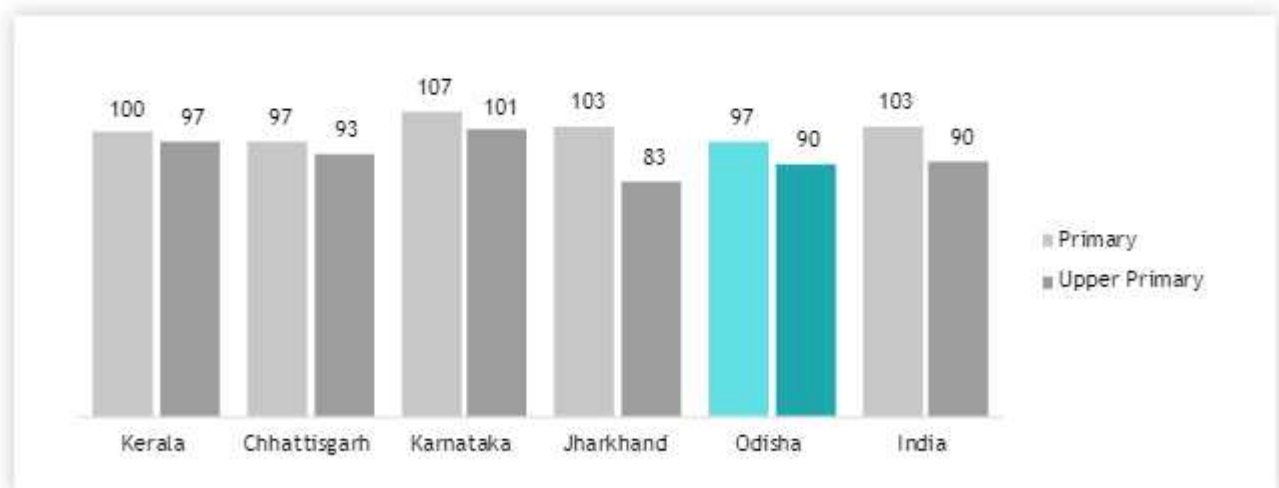


The GER and NER at primary level is reflected in Figure 6.17 and Figure 6.18.

Figure 6.18 Net Enrolment Ratios at the elementary level

Source: OSEPA

6.3.8. Figure 6.19 depicts the elementary gross enrolment ratio across major performer states of SDG 4. Odisha does perform well in the enrolment ratio.

Figure 6.19 Comparative analysis of Elementary GER across states

Source: UDSE+ Dashboard 2019-20

6.3.9. Dropout rates is the proportion of students failing to complete a particular level of education or not enrolling for the next level, highlighting the deficiency and gap in the education system. In the State, though the dropout rates at primary and upper primary level are varying over the years, the average dropout rate during 2020-2021 was found to be zero as given in Table 6.8.

Table 6.8 Dropout rates at primary and upper primary level of education

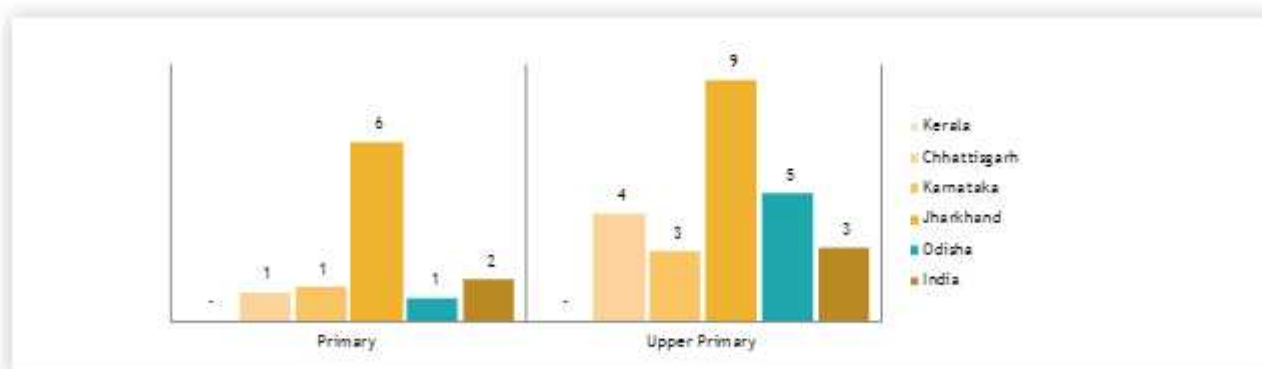
Level/ Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21*
Primary	1.63	2.82	4.20	5.81	5.42	1.55	0
Upper Primary	4.21	3.87	5.15	5.45	6.93	4.56	0

Note: *Due to COVID-19, there was zero drop out.

Source: Directorate of Elementary Education and Director, OSEPA

6.3.10. Interstate comparison for dropout rates. The dropout rates for Odisha at the primary stands at 0.8 which is better than states such as Karnataka (1.2), Jharkhand (6.3), Chhattisgarh (1) and the national average of 1.5 as given in the Figure 6.20. Odisha's performance at the upper primary level requires attention although it still fares better than some of the states.

Figure 6.20 Comparative analysis of dropout rates at primary and upper primary levels

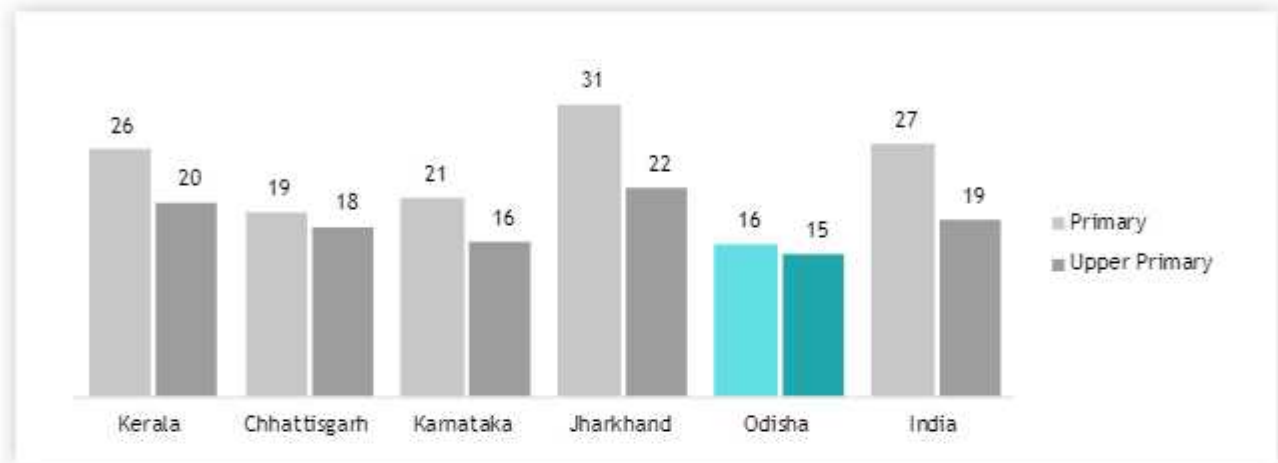


Source: UDISE+ Dashboard 2019-20

6.3.11. Maintaining prescribed norm of Pupil-Teacher ratio. The PTR (Pupil Teacher Ratio) is an indicator that reflects the efficacy in managing the school curriculum. It is defined as the average number of pupils per teacher in a school each year. The RTE Act prescribes that the PTR should be 30:1 and 35:1, at the primary and upper primary level, respectively. Odisha's PTR stands out when compared with other states at the primary and upper primary

level. It is much lower than the prescribed ratio by RTE. Odisha's PTR is better than states such as Kerala, Karnataka, Chhattisgarh and well above the national average as can be seen in Figure 6.21.

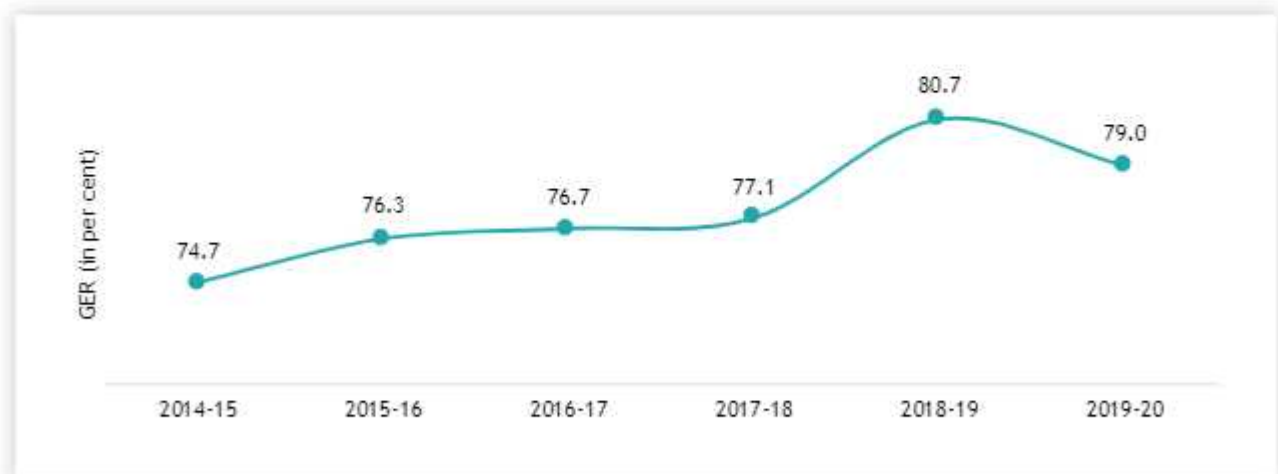
Figure 6.21 Pupil-Teacher Ratio at primary and upper primary level



Source: UDISE+ 2019-20 Dashboard

6.3.12. Enrolment rates at the secondary level of education in the state has also seen an increase over the last few years as can be seen in Figure 6.22. However, there remains a scope of improvement at this level when seen in comparison with the elementary level.

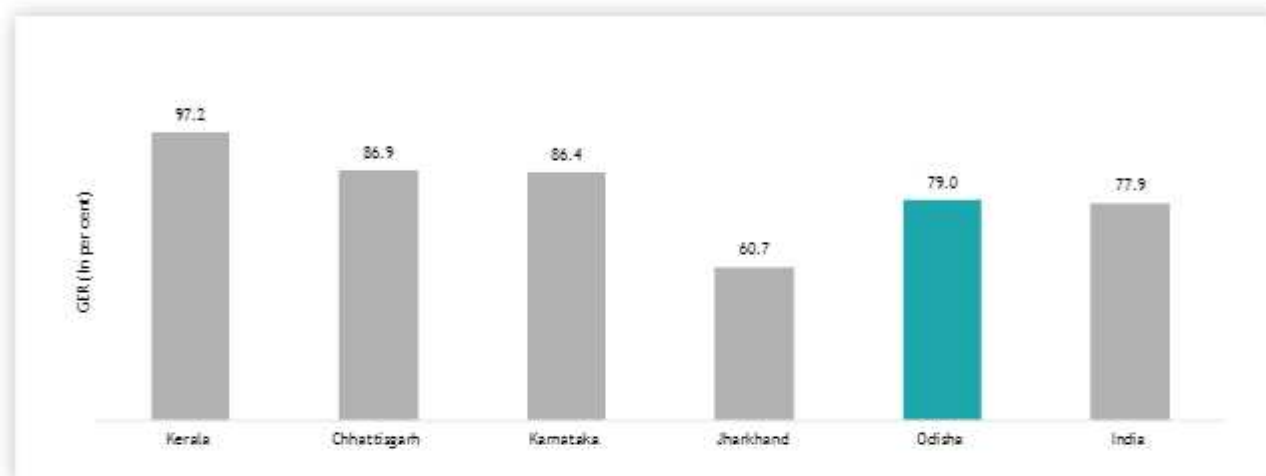
Figure 6.22 Gross Enrolment Ratio at the Secondary Level



Source: UDISE+ Dashboard

6.2.13. The secondary level gross enrolment ratios for the year 2019-20 when seen across key states and India reveals that Odisha performs better than India. However, it could improve further to reach to the levels of other states as can be seen in Figure 6.23. The GER at higher secondary level is 39.0 as against the all India GER which is at 42.9.

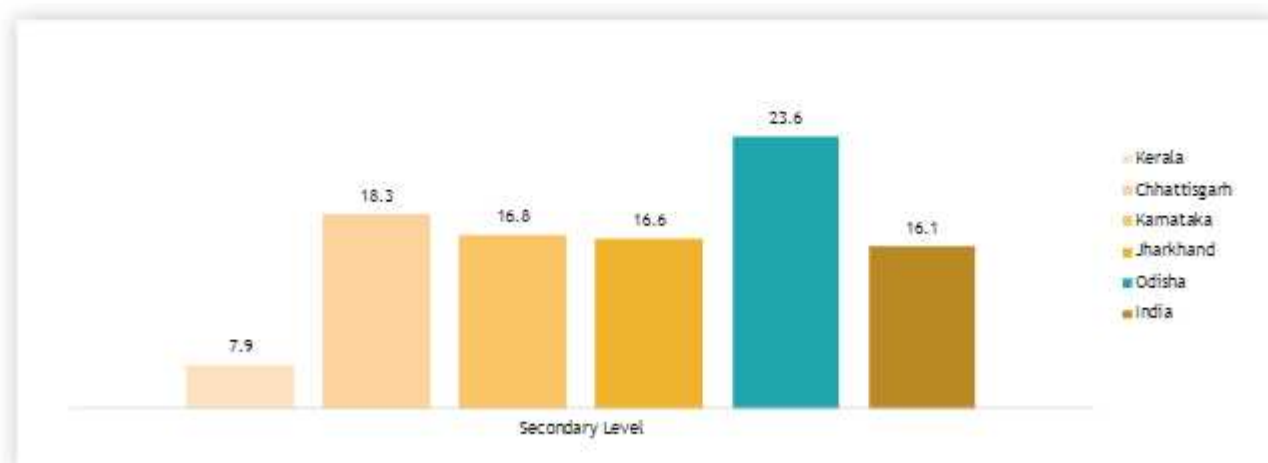
Figure 6.23 Gross Enrolment Ratio at Secondary Level across key states



Source: UDISE+ Dashboard 2019-20

6.3.14. Dropout rates at the secondary level remains a concern for Odisha as it has a high dropout rate when compared with other key states as can be seen in Figure 6.24. The state, however, has been working continuously to reduce the same through schemes such as Kasturba Gandhi Balika Vidyalaya, residential schools for deprived children in various districts of the state.

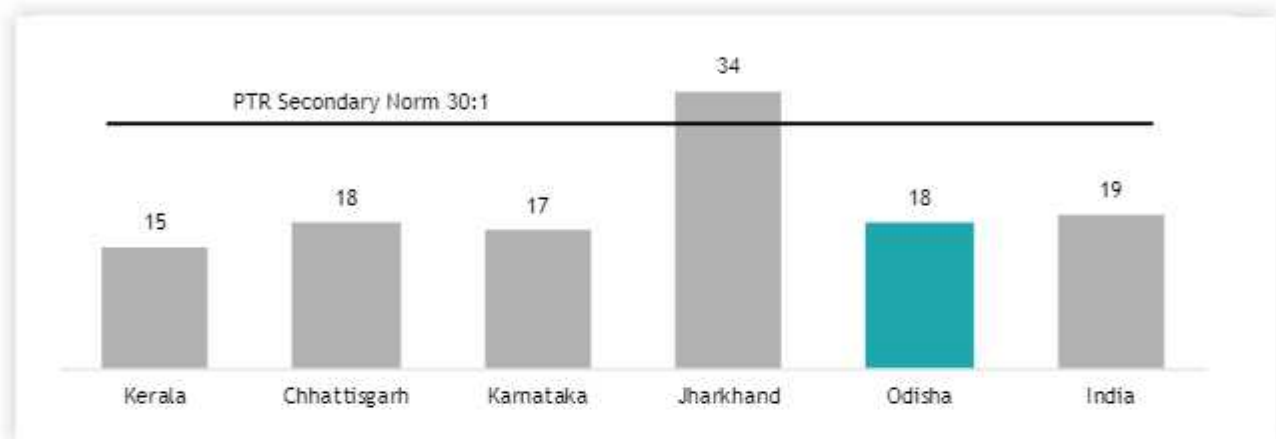
Figure 6.24 Dropout Rates at Secondary Level (in per cent)



Source: UDISE+ Dashboard 2019-20

6.3.15. Pupil Teacher Ratio (PTR) at the secondary level in Odisha stands at 18:1 which is lower than the prescribed norm of 30:1 by Rashtriya Madhyamik Shiksha Abhiyan (RMSA) framework. This indicates the state's dedication towards providing quality education consistently through all levels of education. The interstate comparison of PTR at the secondary level given in Figure 6.25, shows that Odisha performs better than India and state of Jharkhand.

Figure 6.25 Pupil Teacher Ratio at the Secondary Level: An Interstate Comparison



Source: UDISE+ Dashboard 2019-20

6.3.16. The progress of elementary and secondary education depends on outcomes of universal primary and secondary education, early childhood development, universal pre-primary education, promotion of effective learning environment, provision of scholarships, engagement of adequate teachers and educators and creation of adequate infrastructure.

I. Learning Outcomes

6.3.17. The right of children to free and compulsory education through RTE Act have resulted significant improvement in accessibility of school education along with marked improvement in quality of education. The department of School Education and Literacy (DoSEL), Govt of India publishing Performance Grading Index (PGI) for states and union territories which capture transformational change in the field of school education in terms quality. The PGI shows the education outcome of the States and UT's and pinpoint the gaps and accordingly prioritize areas for intervention to ensure that the school education system is robust at every level. As per PGI 2019-2020, the State of Odisha has shown a remarkable progress in the grade as it moved from Level V and Grade III with score of 749 to Level IV and Grade I with a score of 838. The PGI 2019-2020 of the state is as good as that of the states like Andhra Pradesh, West Bengal, Himachal Pradesh, Karnataka, Tripura, and Uttar Pradesh. The progress in PGI of Odisha is attributed to the marked improvements in the infrastructure domain between 2019-20 and 2018-19 as the index value under infrastructure has gone up to 109 in 2019-20 from 72 in 2018-19.

6.3.18. As per the NITI Aayog report on SDGs 2020-21, 71.9 per cent of students in class 8 in the state is achieving a minimum proficiency level in nationally defined learning outcomes to be attended by pupil and this is at par with the national average.

II. School Education infrastructure

6.3.19. Provisioning of adequate infrastructure is the key to success of school education. Adequacy of teachers, infrastructure surrounding the school and provision of mid-day meals are known to impact learning performance of students. Odisha performs relatively well in comparison to other major States in terms of most school infrastructure indicators. More than 90 per cent of schools were approachable by all-weather roads.



6.3.20. The objective of Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is now integrated with Samagra Shiksha to make quality education available, accessible and affordable to the target population in the age group of 14-18 years. It will develop capacity in life skills, use of ICT, organization and leadership as well as community services. The State Government provides access to secondary education within a reasonable distance of any habitation (5kms for secondary and 7-10 kms for higher secondary schools). Special reference is given to economically weaker sections of the society, the educationally backward, the girls and the disabled children residing in rural areas and other marginalised categories like SC, ST, OBC and Educationally Backward Minorities (EBM).

6.3.21. For the accessibility and provide inclusive education to all especially to the girls' education, the State Government of Odisha has focused on adequate infrastructural provision. During 2020, all most all primary and upper primary schools have separate toilets for girls and drinking water facilities. Besides a good number schools have electricity and school building with playgrounds (Table 6.9). These infrastructural facilities are instrumental for girls' students enrolment and retention.

Table 6.9 Infrastructure Facilities in Schools (Number of Schools with the given facilities)

Facility	Primary		Upper Primary	
	Total	Separate toilet for Girls	Total	Separate toilet for Girls
Toilet	27,610	27,512	16,514	16,494
Drinking water		27,714		16,536
Electricity		16,051		12,933
Computer		70		1,897
Playground		14,056		9,884
Building		27,585		16,585

Source: Odisha Primary Education Programme Authority

III. Higher Education

6.3.22. Recognizing the importance of higher education, the State Government of Odisha is increasing the number of state universities by establishing new universities and converting well performing colleges into universities. During 2020 and 2021, the government of Odisha converted three autonomous colleges into universities namely Kalahandi University at Bhawanipatna, Rajendra University at Bolangir and Madhusudan Law University at Cuttack taking the total number of state universities to 31 during 2020-2021.

6.3.23. To meet the rising demand for higher education, a variety of HEIs are in operation in Odisha. To meet the post-graduation level of education, 21 State Government and 9 private universities are in place. There are also some colleges offering post-graduation courses. There are 67 government colleges, 644 aided colleges and 325 unaided colleges operating in the state to meet the higher education requirements.

6.3.24. Odisha fares well in college density and pupil teacher ratio. As per the All-India Survey on Higher Education (Higher Education Profile 2019-20), colleges per lakh population (18-23 years) have increased to 24 during 2019-20 from 23 during 2018-19. During the same period the all-India average was 30 during 2019-20 and 28 during 2018-19. Density of colleges in Odisha though lower than all India average, still it fares well in comparison to states like Assam, Bihar, Chandigarh, Jharkhand, and West Bengal.

6.3.25. It is observed that the higher education enrolment of male and female across all categories is increasing in the state. During 2013-14 the total enrolment in HEIs were 7.68 lakhs (Male 4.20 and Female 3.48) which increased to 9.95 lakhs (Male 5.29 and female 4.66) during 2019-20. Similar trends have also been observed for SC and ST groups as the GER ratio is increasing across all social groups but still the GER ratio of SC and ST categories are less than the state average. A brief profile of the higher education in the state as per AISHE is given in the Table 6.10.

Table 6.10 Odisha Higher Education Statistics at a Glance

Particulars	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Total Enrolment in Higher Education	768185	826820	914675	972285	1015777	1019192	994929
Enrolment of Female (per cent)	45	45	46	45	46	45	47
GER all Categories	16.4	17.7	19.6	21	22	22.1	21.7
GER Male	18.0	19.6	21.5	23.0	23.8	24.2	23.0
GER Female	14.8	15.9	17.8	18.9	20.1	20.0	20.3
GER SC	10.5	12.2	14.7	17.4	18.8	20	19.7
GER ST	6.7	7.9	9.4	11.3	12.5	12.8	13.5
Gender Parity Index	0.82	0.81	0.83	0.82	0.85	0.82	0.88
Pupil Teacher Ratio	19	20	21	26	28	27	25

Source: AISHE 2019-20

6.3.26. Odisha's GER in higher education has been increasing during the last one decade. In 2010-11, the GER was 16.10 which increased to 22.10 in 2018-19 but decreased to 21.7 during 2019-20 as can be seen in Figure 6.26.

Figure 6.26 Gross Enrolment Ratio at Higher Level



Source: UDISE+ Dashboard 2019-20

6.3.27. During 2019-20, the GER in case of male was 23.0 and 20.3 for the females. The GER for SC and ST for this period were 19.7 and 13.50 respectively. In both the cases, the national averages are ahead of the State average. Disparity in access to education is seen in terms of lower GER for females and SC/ST social groups. The same trend also appears at all India level.

6.3.28. An interstate glance at higher education statistics. When compared with other states in higher education statistics, Odisha performs well in the area of Pupil Teacher Ratio with a PTR of 25 (Table 6.11).

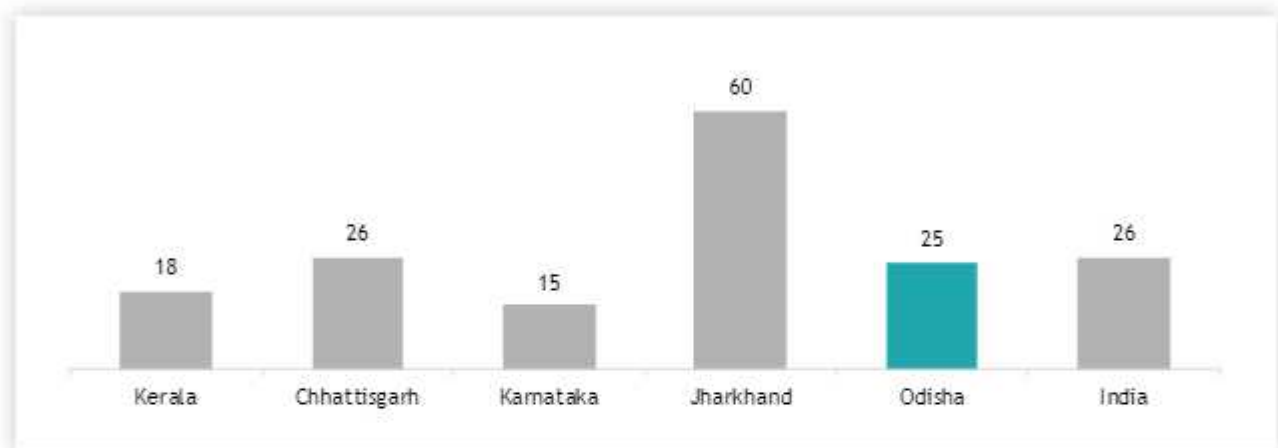
Table 6.11 Comparative analysis of Higher Education Statistics (2019-20)

Indicators	Kerala	Chhattisgarh	Karnataka	Jharkhand	Odisha
Total Enrolment in Higher Education	1137853	586395	2187892	817560	994929
GER	38.8	18.5	32	20.9	21.7
Gender Parity Index	1.36	1.13	1.05	1	0.88
Pupil Teacher Ratio	18	26	15	60	25

Source: Odisha Primary Education Programme Authority

6.3.29. During 2019-2020, the pupil-teacher ratio was 25:1 against all-India average 26:1. Odisha fares well in comparison to many large states like West Bengal (33:1), Madhya Pradesh (34:1), Bihar (59:1), Jharkhand (60:1), Uttar Pradesh (40:1), and Rajasthan (29:1) in pupil-teacher ratio and is comparable to India as a whole and state such as Chhattisgarh as can be seen in Figure 6.27.

Figure 6.27 Pupil Teacher Ratio at Higher Education Level in Key States



Source: UDISE+ Dashboard 2019-20

6.3.30. Increasing Gender Parity Index in the State. Higher education must be inclusive in nature for social cohesion which includes all the Genders and Communities of the Societies. The female population constitutes all most 50 per cent of the total population and that required equal participation in higher education. The Gender Parity Index (GPI) reflects the types representation of male and female in higher education. In Odisha, GPI has increased to 0.88 during 2019-20 from 0.82 in 2018-19.

EMPOWERMENT THROUGH EDUCATION

Women attending domestic duties by age group and level of education in Odisha (in per cent)

Education level	Age group		
	15-29	30-59	15-59
Up to Middle class including Illiterate	25.7	42.4	35.7
Secondary & Higher secondary	16.4	9.8	12.4
Graduate and above	4.5	3.5	3.9
Total	46.6	55.7	52.1

Note: Graduate and above include diploma/certificate course

Source: Periodic Labour Force Survey 2019-20



6.3.31. The next section discusses some of the major schemes related to the education, the snapshot of which is given in Table 6.12.

Table 6.12 Snapshot of major education schemes

	<p>Odisha Girls Incentive Programme An add-on cash incentive programme aimed at facilitating increased participation of ST and SC girl students in the Secondary Education</p>
	<p>Mo School Abhlyan Has been rolled out with the aim of collecting funds from the alumni for development of schools and colleges in the State.</p>
	<p>Gangadhar Meher Sikshya Manakbrudhi Yojana A state specific scheme for accelerated reduction of IMR and MMR in the State. To provide school bags to all children from Class-I to V, free textbooks and school uniform including shoes to all children from Class-I to VIII and free bicycles to all students in Class-IX of Government and fully aided schools including OAVs</p>
	<p>Samagra Shiksha An overarching programme for the school education sector extending from pre-school to class-XII with the broader goal of improving school effectiveness and equitable learning outcomes.</p>
	<p>Mid-day meal scheme Mid-day meals to school going children to better the nutritional standing of school-age children.</p>

IV. Education for ST, SC and OBC

6.3.32. The State Government is committed to improve the educational status of SC and ST communities by implementing various interventions like free education, award of scholarships, boarding facilities, free textbooks and reading and writing materials etc. Their welfare and development, through special focus on increasing access to education, will lead to overall growth of the State as well, given their large population in the State.

A. Expanding Access to Education for the ST and SC children

6.3.33. Odisha is one of the leading States in providing residential schooling facility to tribal students. There are 1,734 residential schools and about 6,700 hostels for ST and SC students in the State providing primary to senior secondary education to more than 4.50 lakh ST/SC students. The residential facilities greatly address access-related difficulties faced by tribal children of remote region and reduce burden of the disadvantaged tribal families by taking care of all expenses towards their children's education.

Box 6.2 School Sanjog Program: Learning on wheels for Tribal Communities

An innovative initiative of mobile schools in a van for young children from Particularly Vulnerable Tribal Group (PVTG) communities of the state was launched in Bhubaneswar on 27th Oct 2021. The initiative called as 'School Sanjog Program' is a collaboration between Bharat Gyan Vigyan Samiti, Siksha Sandhan in partnership with UNICEF and SC ST Development Department, Odisha.

It focuses on continued learning among children in PVTG (Poor and Vulnerable Tribal Groups) areas, as an alternative to address the disruption in education, among children of classes I — V, during the phase of school closures due to COVID-19. The pandemic induced the shift of classroom learning to online learning. This, however, denied education to many children in the PVTG areas, due to lack of access to smart phones or internet connection. The Mobile School Initiative reached out to children in PVTG communities to help in maintaining a continuity in learning and also prevention of school dropout. The School Sanjog Program has a customized "Mobile School in a Van" which is designed to be visually appealing and are equipped with child friendly learning materials such as audio-visual equipment, books for children from Classes I - V, science kits, sports kits, and hygiene education kits. This would ensure children's engagement in joyful and memorable learning activities being run in the presence of trained volunteers in an open space, following all State Government specified Covid safety protocols and guidelines. Each such sessions would last for two hours.

School Sanjog Program "MOBILE SCHOOL IN A VAN" is targeted to reach out to approximately 40,000 children, of Classes I — V, of PVTG communities in ten districts of Odisha (Keonjhar, Jajpur, Mayurbhanj, Angul, Gajapati, Rayagada, Kalahandi, Malkangiri, Kandhamal and Ganjam) and around 1000 villages.

B. Hostel Facilities for the ST and SC students

6.3.34. To increase the enrolment rate of the educationally backward communities like SC and ST, the State Government has worked towards creation of hostels to enable tribal students from remote regions overcome the challenges of spatial isolation and for facilitating easy access to educational facilities. This also registered the substantial increase in the female literacy among the ST population.



6.3.35. In 2020-21, around 6,700 hostels are providing accommodation facility for education purposes to more than 4.50 lakh ST and SC students, of which around 2.75 lakh are girls. To cater the needs, some special educational institutions like 27 Ekalavya Model Residential Schools, 62 Higher Secondary Schools, 186 Girls high schools and 720 Ashram Schools are operating in the state under the SSD department. The hostel facilities have been provided to students and that have greatly influenced the enrolment and retention position of tribal students and significantly contribute to continued education and completion of schooling by the disadvantaged ST and SC students. These facilities also reduced the dropout rate amongst the tribal population.

C. Scholarships

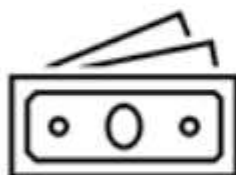
6.3.36. Scholarship is another major scheme of State Government for incentivizing the educational attainment among the tribal students, catering to more than 13.28 lakh ST and SC students at pre-matric level and about 3.35 lakh at post-matric level during this year 2020-21. Scholarship is a great source of financial support to disadvantaged students for their continued education. The State Government spends more than INR 1088.51 crores annually on various Scholarship schemes, of which about 50per cent comes from the State's own resources.



6.3.37. A special Financial Assistance Scheme to ST students have been initiated during 2014-15 wherein the entire cost of education for ST students pursuing their studies in National Level Institutions is borne by the State Government. The State Government, over and above their usual Scholarship entitlement, is providing students of Standard IX and X further, additional cash incentive to ST and SC girls.

6.3.38. In order to steer the monitoring activities in the schools and hostels and to make the monitoring officials at different levels accountable, school and Hostel Monitoring Cell has been introduced with central helpline facilities in 1000 residential school. This facility has enabled girl boarders to report directly to the department issues relating to sexual harassment and abuse, management of mess activities, health issues etc.

6.3.39. OGIP is an add-on cash incentive programme aimed at facilitating increased participation of ST and SC girl students in the Secondary Education. Under Odisha Girls Incentive Programme (OGIP) 1,43,083 students have been benefitted during 2020-21 with financial assistance of INR 13.59 Cr. The girl's students of Class IX and X are provided with a cash incentive of INR 950 per annum.



6.3.40. Pre-Matric Scholarship (OBC): In the year 2020-21, total expenditure of INR 19.35 crore has been made towards Pre-Matric Scholarship for disbursement to 136661 nos.

OBC/SEBC students. Out of INR 19.35 crore, Centre share is 8.25 crore (43per cent) and State share is INR 11.10 crore (57per cent).

6.3.41. Post Matric Scholarship (OBC): During the year 2020-21, total expenditure of INR 55.71 crore has been made for disbursement of Post-Matric Scholarship to 107925 nos. OBC/SEBC students. Out of INR 55.71 crore, Centre share is 32.27 crore (58 per cent), and State of Odisha share is INR 23.44 crore (42 per cent).

6.3.42. Dr. Ambedkar Post-Matric Scholarship (EBC): This scheme is Centrally Sponsored Scheme with 100 per cent Central Assistance During the year 2020-21, allotment of funds of INR 275.43 lakh has been released for disbursement of Dr. Ambedkar Post-Matric Scholarship to 3702 nos. Economically Backward Classes (EBC) students.

6.3.43. In order to create interest and to imbibe scientific temper among ST/SC students in the field of science, school level, zonal level science exhibition and State level competitions are being conducted among the students at High Schools, Girls High Schools/EMRSs from the year 2010-11 by way of conducting SishuUtsab "SARGIFUL". This festival provides a platform for students reading in SSD schools to showcase their skills, talents and support in enhancing the holistic development through different workshops and to get opportunity in participating various competitions for their grooming.

D. Major initiatives for ST/ SC education

Table 6.13 Schemes, policies and programmes in education sector for SC/ST communities

Initiative	Objective	Progress in brief
ANWESHA	To provide quality education to SC and ST students –State Government in Partnership with urban educational institutions	ANWESHA provides quality education to ST/SC students in 178 best private schools in 17 districts. Under this scheme, over 21, 682 ST and SC students are getting free quality education in the best private schools in these districts. Free Lodging and boarding facility are being provided to students, including school fees, uniforms, study material, tutors etc.
AKANKSHA	To provide hostel facility in Urban areas for ST/ SC students for higher education studying in post-matric level courses.	Urban Hostel programme 'AKANKSHA' is implemented for providing free boarding and lodging facilities to ST/SC students pursuing Post-matric levels of Education like Professional, Technical, Degree and Plus Two courses in Bhubaneswar. Hostels in Bhubaneswar accommodates 550 students. The programme has been expanded to Berhampur, Sambalpur and Rourkela. Proposal for another 6 hostels is in the pipeline.
Odisha State Scholarship Portal	Post Matric scholarship to eligible SC /ST students through Direct Benefit Transfer (DBT) mode	1.67 lakh ST and 1.68 lakh SC students have been benefitted through Odisha State Scholarship Portal during 2020-21 amounting to INR 548.68 cr. Out of the beneficiaries 52per cent are boys and 48per cent are girls.
Mission SUVIDYA	To spread the joy of literacy and numeracy to tribal children in Odisha	The ST& SC Development, Minorities and Backward Classes Welfare Department, Odisha has signed a MoU with Akshara Foundation for Mission SUVIDYA in December 2019. More than 4.6 lakh ST/ SC students receive education from primary to senior secondary levels in Department run educational institutions. Presently, 6700 hostels are functional providing accommodation facility to more than 5.7 lakh students both in S& ME & SSD Departments. The residential mode of schooling has helped in ensuring continuity and completion of education of ST/SC students.

Source: AISHE 2019-20

6.4. SPECIAL DEVELOPMENT COUNCILS

6.4.1. In order to ensure tribal development to be more effective, inclusive and participatory, the State Government felt the necessity to involve tribal community extensively at all stages of the development process, starting from identification of deficit areas, plan formulation, implementation and monitoring. Keeping the above objectives in view, Government have set up "Special Development Council (SDC)" in 9 Districts of the State having the highest concentration of tribal population, such as Mayurbhanj, Keonjhar, Sundergarh, Kandhamal, Gajapati, Koraput, Rayagada, Nabarangpur and Malkangiri covering 117 blocks, 2,022 Gram Panchayats, 18,687 villages, about 14 lakhs ST households and 63.43 lakhs ST population. These Councils focus on preservation promotion and protection of tribal culture and traditions, heritage and unique identity of each tribe. The Special Development Councils have representation from each tribe residing in the district.

6.4.2. The following projects have been completed by 9 SDCs as on 31 March 2021:

- 4231 sacred groves have been completed out of 4342 projected.
- 772 tribal weekly markets have been completed out of 811 identified.
- Total numbers of 344 Block level cultural festival have been organized in 117 blocks. Out of the 9 District Level Cultural Festivals targeted to be held, 6 have been completed.
- As many as 1582 Tribal cultural clubs have been identified out of which 1316 have been completed.
- As regards, providing Musicals Instruments are concerned, as against 1554 originally targeted, 1604 clubs have been provided with Musical Instruments.
- 716 Dance Troupes have been identified and empanelled and provided with dance Costumes.
- About 10724 Tribal delegates have undertaken Exposure visit out of 10864 delegates targeted as a confidence building measure.
- Artisan Identity Cards have been issued to 32704 Tribal artisans.
- Printing of 21 Tribal Bilingual Dictionaries and 21 Tribal Trilingual Proficiency Modules has been completed and distribution of these books has been done in all 30 districts.
- 42 Tribal Resource centres have been constructed in Sundergarh district out of 49 decided to be taken up.
- Land has been identified for construction of Tribal Museum in all the 9 SDC districts and boundary wall construction started in 3 districts namely Gajapati, Nabarangpur, and Sundargarh and 80 per cent construction completed in respect of Tribal museum in Keonjhar.

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 shortly known as (FRA, 2006) :

- The State Government has been implementing the Scheduled Tribes and Other Traditional Forest Dweller (Recognition of Forest Rights Act, 2006). As on 31st March 2021, 6,26,790 Individual Forest Rights, 9099 Community Rights, 5974 Community Forest Resource Rights claims have been received. Similarly, 4,45,105 Individual Forest Rights, 3857 Community Rights, 3020 Community Forest Resource Rights titles have been distributed. Out of 4,45,105 Individual Forest Rights vested with the claimants, 2,66,073 title holders have been benefited with convergence of various schemes of the Government and 2,20,636 titles have been made correction of 12 nos. of Forest Villages/ Un-surveyed villages/Habitations etc. have been converted into Revenue Villages through Notification of the Director, Land Record and Survey's, Cuttack.

I. Skilling - Vocational and Technical Education

6.4.3. The vocational and technical education builds the technical know-how. The next phase of growth, all over the world, came from skilling and innovation. In a rapidly changing world of technology, the vocational and technical education that focus on skill development holds a great promise for faster economic development in Odisha.



The expanding demand for skilled manpower in recent years in the State requires skill development of the youth to realize their full potential.

6.4.4. Projected increase in skilled manpower in the State. It is projected that by 2026, there will be a demand for 22.58 lakh highly skilled and 62.11 lakh semi-skilled professionals (Skill Gap Assessment report for Odisha, 2012) in the state. To meet the rising demand for skilled professionals, Odisha has made concerted efforts towards skill development with its 'Skilled in Odisha' initiative. Four organisations such as Directorate of Technical Education and Training, Directorate of Employment and Odisha Skill Development Authority, Technological Universities, Government Engineering Colleges and State Council for Technical Education and Vocational Training are working to materialize the objectives of 'Skilled in Odisha'.

6.4.5. Achievements under ITI and Polytechnic Sectors in the state. As per the Skill Development and Technical Education Department report 2020-21, the effective upgradation of skills are clearly visible from development of innovative products like the Personal Protective Equipment (PPE), Foot operated Hand Sanitizer, Automatic Hand Sanitizers and Face Shields, Incubation Shield, Magnetic Stand for COVID 19 sample test, Auto Sanitizer Dispenser, Protected Shield, Aerosol Boxes, Thermal Sensor, automatic sanitizer dispenser, Multi Station Hand Sanitizer System, UVC based Shoe Sole Sanitizer Device, and Robotic Sanitizer Device.

6.4.6. The Products of Government ITI, Berhampur and Cuttack have found place in PM's Innovation Gallery. ITI Berhampur has joined the Patent Institute Club of the country for preparing and applying for Patent in 3 innovative products namely Mobile Swab Collection Kiosk, UVC Sole Sanitizer and UVC Robo Warrior. To have industry linkages, MoUs have been signed with 13 Industries to setup Centres of Excellences at various Government ITIs and Polytechnics. Setting up of sponsored labs with high-end machines, Train the Trainers for their skill and knowledge development and hands-on-finishing skill training for ITI trainees and Polytechnic students for improving employability are being carried out through all such CoEs. There are nine States including which have total number of 11.53 lakh students in Polytechnics which accounts for 81.2per

6 Government ITIs and 4 Private ITIs of Odisha have found place in top 100 out of 12,260 ITIs graded in the country.



cent of the total students enrolled in India in Polytechnics (AISHE 2019-20). All 49 NCVT affiliated Government ITIs of the State have participated in 5 point scale of all India grading system conducted by Directorate General of Training (DGT), New Delhi and self-graded 06 Government ITIs and 04 Private ITIs of Odisha have found place in top 100 out of 12,260 ITIs graded in the Country as declared by DGT, New Delhi.

6.4.7. The first Skill Museum has been established at ITI, Cuttack to drawn attention of school children, teachers, public and intelligentsia for orientation towards skilling ecosystem /Technical Vocational Education and Training sector in the State. ITI, Cuttack has housed 27 Industries through MoUs inside the campus to provide add-on skills to the trainees for a win-win situation both for industries and ITI graduates for improved employability and productivity. While ITI, Berhampur stands at All India Rank in 14th position, ITI, Cuttack stands at 35th position out of 12,260 ITIs graded in the country.



6.4.8. Operation of Higher technical education institution. To the meet demand for higher technical education, besides centrally government funded institutions, two State Government Technical Universities such as Biju Patnaik University of Technology (BPUT), Rourkela and Veer Surendra Sai University of Technology (VSSUT), Burla and five Govt. Engineering Colleges functioning in the State. Technical courses offered by different Govt./Private technical/professional institutes along with the intake capacity are given in the Table 6.14.

Table 6.14 Comparative analysis of Higher Education Statistics (2019-20)

Course name	Number of colleges	Intake capacity
Engineering	88	31932
MBA	82	8316
MCA	38	2112
M. Pharm.	19	1565
B. Pharm.	17	718
M. Tech.	42	2670
B. Arch	4	160

Source: Skill Development and Technical Education Department (Activity Report 2020-2021)

6.4.9. In order to provide employable skill training, government of Odisha has launched an inclusive skill development strategy in the name of Chief Minister's Employment Generation Programme in 2014-15 under which 14,42,258 youth have been imparted skill training over a period of seven years (2014-15 to 2020-21).

Figure 6.28 Achievement of skill development under the programme for the period 2014-15 to 2020-21



Source: Directorate of Employment and Odisha Skill Development Authority

6.4.10. There is also a target of skilling 15 lakhs youth in the next 5 years (2019-20 to 2023-24) at the rate of 3 lakhs per annum, under which 4,03,957 youth have been trained till 31 March 2021, In 2019-20, under this programme 3,27,815 youth have been trained. In 2020-21, because of COVID-19 Pandemic, all training activities were suspended between April 2020 to October 2020. Training activities commenced only from the month of November 2020. Despite that, 76,142 youth have been trained under the programme during 2020-21. Figure 6.28 shows the achievement of skill development under the programme for the period 2014-15 to 2020-21.

6.4.11. OSDA is conducting Placement Linked Training Programme through private/government Project Implementing Agencies (PIAs) since 2011-12. As of 2020-2021, a total of 98,051 youths are trained and 27,611 youths are placed under the programme. No. of PIAs and youths trained since 2011-12 are given in Table 6.15.

Table 6.15 Year wise achievements of Placement Linked Training Programme

Year	No. of PIAs	No. of youth trained
2011-12	3	637
2012-13	23	5,952
2013-14	21	23,421
2014-15	25	10,601
2015-16	30	13,181
2016-17	13	8,662
2017-18	22	14,178
2018-19	17	9,048
2019-20	19	9,256
2020-21	21	3,115
Total		98,051

Source: Directorate of Employment and Odisha Skill Development Authority

6.4.12. Skill Development Centres (SDCs)/Skill Development Extension Centres (SDECs): At district level, there are 30 Skill Development Centres, one in each district and four additional SDCs at Begunia in Khurda, Pallhara in Angul, Gaisilet and Barpali in Bargarh Districts and 38 Skill Development Extension Centres in the campus. ITIs and Polytechnics with one-time capital support of INR 75 lakhs per centre for providing infrastructure support to the Project Implementing Agencies for conducting skill training have been set up.

6.4.13. The World Skill Centre has been established at Mancheswar, Bhubaneswar under Odisha Skill Development Project (OSDP) assisted by Asian Development Bank (ADB) in collaboration with ITEES, Singapore. The centre will provide advance skill training to students and serve as a finishing school to make the graduates from ITIs, Polytechnics and Engineering Colleges ready for global placements. 60 per cent of the



Trainers of the WSC are deployed from in-house ITIs and Polytechnics who have been trained at ITEES, Singapore and remaining 40 per cent from open market.

6.4.14. Under the ambitious 5T Programme of Government of Odisha, Skill Development and Technical Education Department have unleashed a series of initiatives for incentivizing and giving a boost to Skill Training and Technical Education in the State. The over-arching aim is to enhance the quality of technical education and augment the employability quotient of the youths and thereby transforming the demography of the state into a formidable workforce having national and global recognition.



6.4.15. Odisha Skill Development Authority under the 5T initiative of Government of Odisha has launched DIGITAL programme with an aim to impart digital skilling to professional, students and youth of State. OSDA has partnered with leading organizations like CISSO NetAcad, SAP, COURSERA etc. to provide access to Digital Skilling. Under the CISCO NetAcad Programme, more than 20,000 students from Engineering, ITI and Polytechnic have been skilled to enhance their employability. More than 180 faculties also enriched through Training of Trainer programme. In partnership with SAP Education and Times Pro, 2000 students of MBA/MCA/Engineering from Government Institutes have been up-skilled to further their employability and 60 faculties have been enriched through Training of Trainer programme in 5 modules of SAP. A Centre of Excellence in the field of AI&ML has been established in partnership with Tech Mahindra to create a talent pool in the new age technology space. It aims to build skills through immersive learning using Industry use cases. Few more Centres of Excellence in Digital Engineering, Cyber Security, Cloud computing etc. are in advanced stage of establishment. OSDA also partnered with COURSERA to provide free access to citizens of Odisha to 4000+courses during COVID crisis. It saw more than 7,500 professionals, youth and students enrol in the programme. The programme was concluded in December 2020.



6.4.16. Odisha Skill Development Authority (OSDA) also partnered with Global Leader in ERP, SAP Education and its partner TimesPro to impart SAP ERP skilling programme for further enhancing the skills and employability of students of MBA, MCA and Engineering courses from the State. Various SAP courses like Financial Accounting, Human Capital Management, Advance Programming, Material Management and Sales and Distribution are part of this programme. In the first phase, 2000 students trained under the SAP Training program and provided completion certificate of which around 1075 students got global SAP certification.

6.4.17. GoSkill Portal. The objective of Go Skill Portal is to automate the entire short-term skilling as well as bring all departments on a single platform for providing skill development in the state. In addition to this, a job portal is also to be created which will connect job seekers with potential employers. A Common Database portal (URL: <https://skillshub.skillodisha.gov.in>) has already been launched for short-term skill development program for capturing the complete value chain. Creation of a Job portal is also underway which will connect youths of Odisha with prospective

employers and at the same time integrating various Government portals including Employment exchanges for efficient collaboration. The Job Portal is expected to go live by February 2022.

6.4.18. Increased participation of Women in Skill sector. Government of Odisha is encouraging greater participation of women in vocational and technical education. A special scheme 'SUDAKHYA' has been launched by the State Government to encourage increased enrolment of girls into ITIs, hitherto an uncharted. As a result of this, the girl's enrolment in Government ITIs has been increased from 6 per cent during 2016-17 to 21 per cent during 2021-22. Efforts have been made for augmenting capacity of girls' hostels to 30 per cent of total student's strength in respective Government ITIs and Polytechnics with financial support of ST&SC Development Department, DMF, OMBADC and State Plan resources from existing 10 per cent. In partnership with NGO *Navigurukul*, the State Government aims to providing free skill development in Digital space. The program offers exclusive girl child to get trained for a period of one year before being offered placement assistance in leading IT organizations. The pilot program saw more than 1000 girl students applied for this program out of which more than 100 girl students qualified for the program.



Girls' Enrolment in Government ITIs has increased to 21 per cent in 2021-22 from 6 per cent in 2016-17.

II. Research and Development

6.4.19. The Science & Technology Department is the Nodal Department for the promotion of Science & Technology in the State which has taken the following initiatives in the state to foster research and development in the higher education field.

The state is facilitating research and development in STEM through state sponsored research scholarships

6.4.20. Institute of Mathematics & Application (IMA) is the Nodal Agency for promotion of mathematics teaching and research in the State. The main aims and objectives are to pursue research in Mathematics and to offer specialized courses.

- The institute offers one B.Sc. (Hons) in "Mathematics and Computing" and two M.Sc. courses in (1) "Computational Finance" and (2) "Mathematics with Data Science". Besides, the institute conducts five programs every year, namely 1. Teacher's Training Camp, (for school and college teachers) 2. Interactive Math Camp, 3. Summer Camp, 4. Indian National Mathematics Olympiad Camp, and 5. Sunday Math Classes for school students to compete at Indian National Mathematics Olympiad for earning fellowships for entire study career.
- Conducts research in advanced areas like Stochastic Process, Mathematical Finance, Operator Theory, Computational Fluid Dynamics, Complex Analysis, and Cellular Automata Theory, etc. Thirteen nos. of Research Papers have already been published in International journals.

6.4.21. Bio-Technology Cell in Science & Technology Department is the Nodal Agency for the promotion of Education and Research in Biotechnology.

- It is giving 'Biju Patnaik Research Fellowship' to pursue Ph. D in Biotechnology.

- It gives financial support to 'R&D Projects in Biotechnology'.
- It is implementing the 'Skill Vigyan Programme' to impart hands-on training in various tools and techniques to Biotechnology students of the State and enable them to take up the jobs as well as exposure of entrepreneurship for self-employment. Four partnering institutes i.e., NRRI, Cuttack, ICMR-RMRC, Bhubaneswar, Institute of Life Sciences, Bhubaneswar, OUAT, Bhubaneswar except Sambalpur University have successfully completed faculty/technician/students training under Skill Vigyan Training Programmes
- The Govt of Odisha has adopted a Comprehensive "Bio-Technology Policy, 2018" under which five guidelines have been adopted namely; 1. Establishment of Bio-Tech Finishing Schools (BFS), 2. Immersion Fellowship; 3. Bio-Innovation Grant (BInG); 4. Establishment of Bio-Technology Incubation Centre; and 5. Centre of Excellence in Bio-Technology (CoEB).
- It is also establishing a 'Bio-Technology Park' at Andharua in Bhubaneswar with an initial investment of 330 crores rupees in 1st phase.

6.4.22. The State Council on Science & Technology functions for the development of Science and Technology and oversees the implementation of the programs undertaken in the field of Science and Technology in the State. Various programmes implemented by State Council on S&T for 2020-21 are given below:

- It gives 'Scholarship at Post-Graduate Level on Basic Science' to promote and encourage the meritorious students to pursue their Post-Graduate studies in Basic Science and is providing financial assistance at the rate of INR 2000 per month for two years.
- In order to attract students for pursuing full-time Ph.D. work, the State Council is providing 'Biju Patnaik Research Fellowship (BPRF) in Basic and Applied Science' for a maximum of three (03) years at INR 12,000 per month for 2 years and INR 14,000 per month for 3rd year along with INR 25,000/- towards contingency per year. Besides, INR 10,000 is also paid to mentoring Institute for departmental assistance per year.
- Financial Assistance is provided to Government Universities, Colleges, State Funded Research Institutes of Odisha, and Research Institute of Government of India functioning in Odisha to encourage the scientists/ academicians for Research and Development projects in Basic and Applied Science. INR 10,00,000 maximum is paid for 3 years Project Period.
- Financial support is provided to Government Colleges/Autonomous Colleges and State Universities of Odisha for organizing State, National and international level Seminars/ Symposia/ Conference/ Workshop. The ceiling of financial assistance by the S&T Department is INR 80,000 for State Level, INR 1,00,000 for National Level and INR 1,50,000 for International Level.
- The State Council on S&T, S&T Department has initiated a training programme for Science and Math teachers at High Schools/Colleges/Universities of this State through the Talent Development Centre (TDC), Indian Institute of Science (IISc), Bangalore.
- District Science Centres are being established in Ganjam (Gopalpur), Koraput (Jeypore), Keonjhar (Ghatagaon), Bolangir, Bhadrak, Jagatsinghpur, Sundargarh, Nayagarh, Mayurbhanj, and Puri.
- Patent Information Centre (PIC) is functioning under the State Council on S&T with financial assistance from the Government of India.

6.5. POVERTY AND MULTIDIMENSIONAL POVERTY INDEX: WHAT DO THEY TELL US?

6.5.1. The last official estimate of poverty was prepared by the Planning Commission using Tendulkar methodology for the year 2011-12. India's poverty headcount came down from 37.2 per cent in 2004-05 to 21.9 per cent in 2011-12 with an annual average decline of 2.18 per cent. Despite the spectacular decline in poverty, 269.7 million poor were below the poverty line. Odisha was having home to 5 per cent.

6.5.2. Odisha's tryst with poverty goes with the paradox of plenty. Being endowed with such vast natural resources, a capable citizenry, coastal advantage and a large tract of plain land, high incidence of poverty in the state was disappointing. However, with the onset of the new millennium, the fortune of the state has started rapidly changing. Not only there was significant reduction in poverty rate between 2004-05 and 2011-12, but the economic opportunity within the state has started expanding. It transformed from an agrarian state to a state with economic opportunities in industry and service sector in the last two decades.



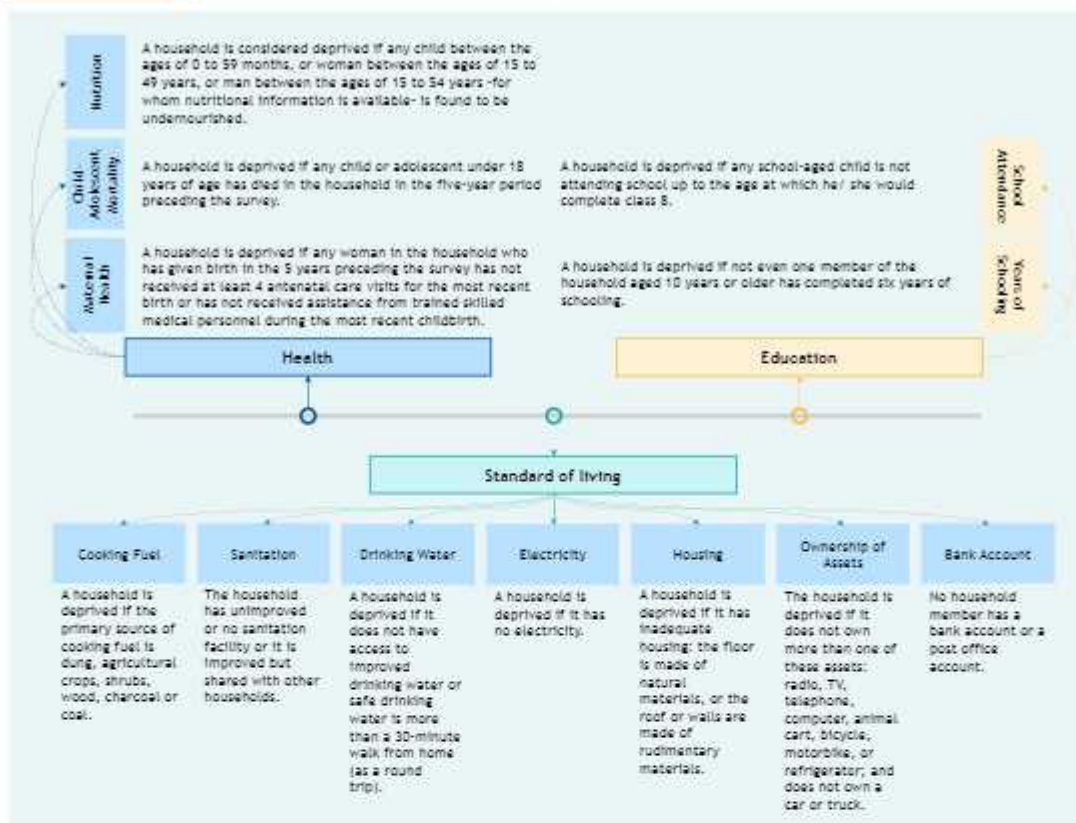
NITI Aayog's recently released National Multidimensional Poverty Index has opened a new chapter in India's poverty discourse .

6.5.3. It is important to understand that Who is poor and what is poverty. From Dadabhai Naroji's 'Poverty and the Un-British Rule in India' (1901) up until Tendulkar Committee (2009), nutritional requirements or consumption basket formed the backbone of poverty line. Tendulkar committee made the maiden attempt when poverty consideration went beyond minimum calorie consumption to an array of goods and services required for a basic living. Private expenditure on health and education were for the first time taken into consideration while calculating the poverty line.

6.5.4. Income or expenditure approach does not consider many of the basic deprivations. For example, increasing purchasing power of a person may not automatically result in a good health or better sanitation or education for kids if such public goods are non-existent. Private markets may be out of the reach for many even if their income level is higher than the poverty line.

6.5.5. UNDP in 2010 replaced its Human Poverty Index by a Multidimensional poverty Index (MPI) following Alkire-Foster approach. MPI considers three dimensions – Health, education, and standard of living – like in case of Human development index. MPI shows both the incidence as well as intensity. Incidence counts how many are poor. For example – as per the NITI Aayog's baseline report –there are 25.01 per cent of the population who are multidimensionally poor. It is the headcount ratio. However, the intensity is 47.13 per cent which measures the breadth of deprivation- how poor are the poor. This is the summation of the deprivation scores of the poor divided by the total number of poor individuals. MPI score is the multiplication of incidence or headcount ratio with the intensity. India's MPI score is 0.118. Figure 6.29 shows the indicators that are considered by NITI Aayog in its MPI.

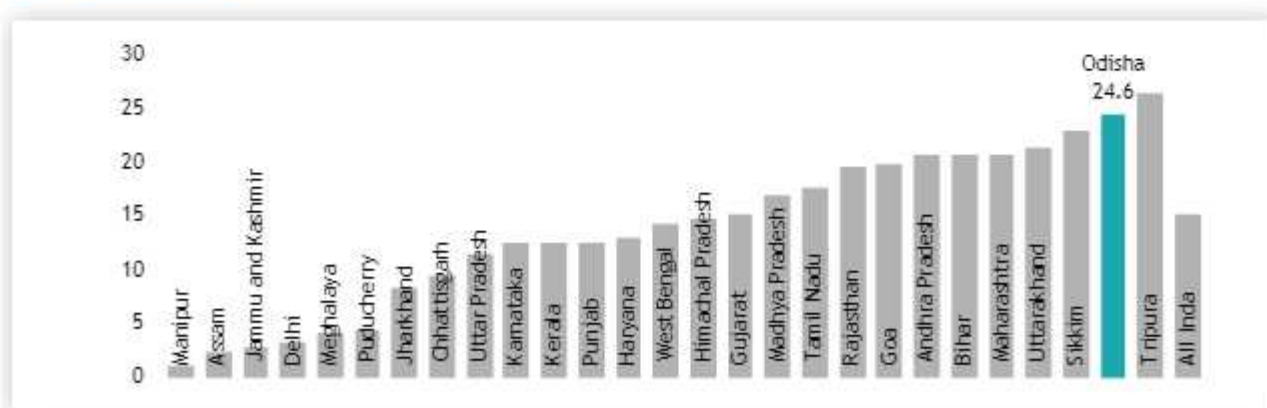
Figure 6.29 MPI Indicators of NITI Aayog



Source: National Multidimensional Poverty Index Baseline Report, 2021

6.5.6. Odisha has made a long stride in poverty reduction. Between 2004-05 and 2011-12, the state reduced poverty rate from 57.2 per cent to 32.6 per cent - a massive reduction by any standard by any major state in the country (Figure 6.30). The reduction was 900 basis points more than the all-India poverty reduction.

Figure 6.30 Poverty reduction - 2011-12 over 2004-05 (in per cent)



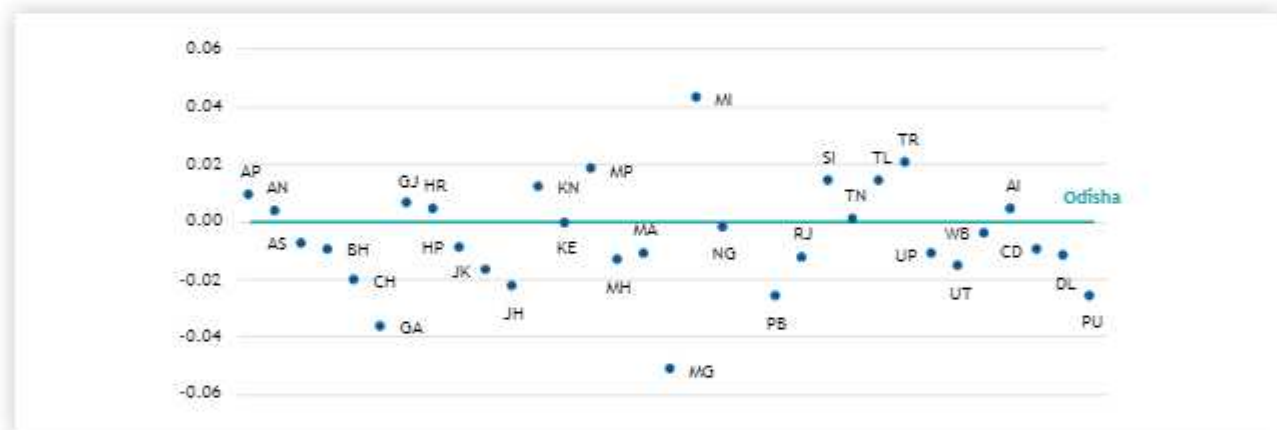
Source: National Multidimensional Poverty Index, 2021, NITI Aayog

6.5.7. Since 2011, there is no official measurement of poverty through a large-scale household survey, inferences can be drawn based on income growth that is witnessed at the aggregate level. There is sufficient empirical literature which suggests that higher economic growth does help in increasing the living standard of people¹.

6.5.8. From 2011-12, Odisha's per capita GSDP in the current price has grown at a CAGR of 10.8 per cent. Per capita GSDP has increased from INR 54,855 in 2011-12 to INR 124,817 in 2019-20 multiplying it by 2.3 times. Such spectacular growth is likely to take many people out of the clutches of abject poverty. Out of 33 States and Union Territories for which such comparable data is available, 20 states/UTs had per capita GSDP growth (CAGR) less than Odisha (Figure 6.31). In the figure, Odisha's per capita GSDP growth has been taken as the baseline and taken the deviation of other state's per capita income from the baseline. This means that if a State has a higher growth rate than Odisha, it will appear in the positive axis else it would show in the negative axis. As one could see, there are more states/UTs below the horizontal axis indicating Odisha's better performance in comparison to other states.

Figure 6.31

**Per Capita GSDP Growth Difference of other states from Odisha
[CAGR, 2011-12 to 2019-20]**



Source: MOSPI – GSDP Statistics

NITI Aayog's MPI

6.5.9. NITI Aayog's MPI baseline report is in alignment with Alkire-Foster approach. It considers overlapping deprivations in health, education and living standards. Notwithstanding the criticism that MPI faces like clubbing together a set of indicators and arriving at an aggregate score which may be difficult to interpret on its own and the choice of weights for such an indicator, it does reflect certain critical deprivations.

6.5.10. To quote from the baseline report (2021) – "The MPI serves as a complementary measure to the more traditional measures that are based on income or consumption. The rationale for multidimensional measurement of poverty is that wellbeing can be adversely impacted in many forms that may only be indirectly related to an individual's

¹Adams, Richard H., Jr. 2003. *Economic Growth, Inequality, and Poverty: Findings from a New Data Set*. Policy Research Working Paper, No. 2972. World Bank

income or level of consumption. Deprivations can include an overlap related to poor health, undernourishment, and inadequate access to clean cooking fuel, electricity, water, sanitation, and housing. Importantly, the MPI also reflects some of our national priorities articulated through focused interventions on housing, clean water, sanitation, cooking fuel, electricity along with our universal education goals, improved nutrition and good health for all".

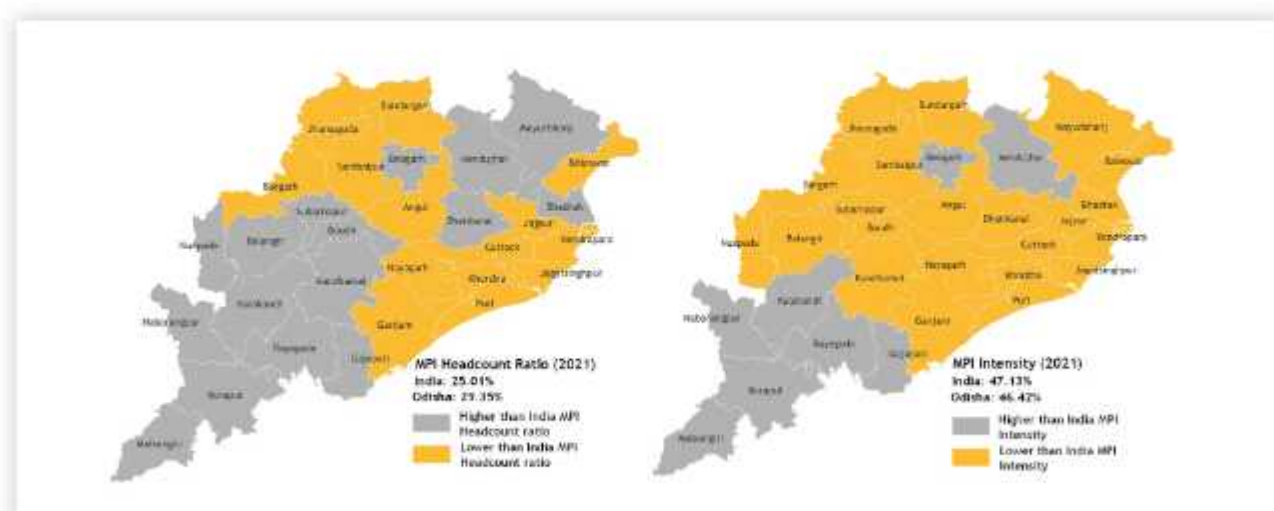
Hence, it is important to note that MPI is not an income poverty or consumption poverty. It maybe indirectly related to income or consumption. Lower income may lead towards some of the deprivations. But having a better income does not automatically translate into higher MPI.

6.5.11. Odisha's MPI score is 0.136 against India's MPI score of 0.118. In terms of headcount ratio, there are 29.35 per cent of the population who are identified as multidimensionally poor in Odisha.

However, Odisha's MPI score as well as headcount ratio reflect quite a bit of heterogeneity. The top three districts like Puri, Jagatsinghpur and Cuttack have an MPI headcount ratio of less than 15per cent. Khorda and Jharsuguda have MPI headcount ratio of less than 20per cent. There are another nine districts where the MPI headcount ratio is less than 25per cent. In the bottom there are districts like Malkangiri, Nabarangpur and Koraput where the MPI headcount ratio is greater than 50per cent.

As seen in Figure 6.32, the Headcount Ratio values for 14 districts are better than India. However, while looking at the intensity there are 20 districts whose MPI intensity is faring better than all India MPI intensity.

Figure 6.32 District-wise MPI Headcount Ratio and MPI Intensity of Odisha



Source: Map based on National Multidimensional Poverty Index, 2021, NITI Aayog

Out of 30 districts, approximately 50 per cent districts in Odisha have MPI headcount ratio better than India headcount ratio of 25.01 per cent. Nearly two-thirds of Odisha's district wise MPI intensity is better than India's intensity of 47.13per cent. What does it mean? It simply means that in terms of MPI indicator, while people in MPI poor districts face deprivation in some or other indicators, the depth of deprivation is not so acute in majority of the districts in Odisha with reference to India.

6.5.12. Looking at the indicator contribution to MPI, health has the maximum contribution to MPI deprivation score. At all India level, its contribution is close to 40per cent. Health has three elements – nutrition, child and adolescent mortality, maternal health. In Odisha, contribution of Health to MPI is 36.14per cent. While at India level, nutrition contributes 28.14per cent, child and adolescent mortality contributes 1.33per cent and maternal health contributes 10.4per cent, the respective numbers for Odisha is 27.41per cent, 0.92per cent and 7.81per cent. In school attendance, Odisha fares better than many other states. However, in case of standard of living indicators, Odisha has scope for further improvement. Be it sanitation, drinking water, electricity, housing, assets etc, the state has put in considerable amount of effort to improve the quality of life of people. Current MPI is based on the NFHS-4 data of 2015-16. In comparison to NFHS-4, in NFHS-5, Odisha has performed much better across host of indicators. Odisha's continuous effort to change the quality of life is evidenced through its numerous programme and policy interventions.

Major Initiatives for Poverty Alleviation

6.5.13. The State and Central Government have made concerted efforts in implementing a series of poverty alleviation programmes to reduce the dimension, deprivation and inequality in poverty in Odisha. These programmes have direct bearing on social security, living standard, livelihood, human development and economic wellbeing of the poor, vulnerable and weaker sections of the society in the long run. Some of the key interventions for poverty reduction are mentioned here.

Housing Schemes

- a. Pradhan Mantri Aawas Yojana (Grameen): The houseless poor families and those living in less than two kutcha rooms as per SECC 2011 survey are eligible for availing housing assistance to construct minimum of a 25 sq.mtr. house. During 2020-21, 4,23,440 number of houses were constructed in the state.
- b. Biju Pucca Ghar Yojana: Biju Pucca Ghar Yojana is a State plan scheme and is designed to provide new houses to the deserving and genuinely poor rural households not having any pucca house. The objective of the scheme is to convert all kutcha houses into pucca house in rural areas of the state in a fixed time frame in a mission mode approach. During 2020-21, 15,307 number of houses completed in the state.
- c. Other Housing Schemes: In the line of PMAY and BPGY, the State Government has been taking up Nirman Shramik Pucca Ghar Yojana for the registered nirman shramiks otherwise eligible for houses, Pucca Ghar Yojana (Mining) for the mines affected villages and BPGY(Titili) for Titili (cyclone) affected people of Raygada and Gajapati districts . The number of houses completed during 2020-21 under those schemes are 4496, 247 and 3586 respectively.

Employment Generation Schemes

- a. **MGNREGS:** The basic objective of MGNREGS is to enhance livelihood security in rural areas by providing at least 100 days of guaranteed employment in a financial year to every rural household whose adult members are willing to do unskilled manual work and creation of sustainable assets both for individual and community. As many as 1113.89 Lakh person days have been generated under the scheme during the year 2019-20. During 2020-21, 2080.81 lakh person days created and 62.15 lakh workers of 37.50 lakh households engaged. Special focus was laid on engaging the migrant laborers during Covid-19 with an enhanced wage rate of INR 303.40 per person per day in 20 migration prone blocks and 06 DMF Districts i.e., Sundargarh, Angul, Jharsugarh, Keonjhar, Jajpur and 03 blocks of Mayurbhanj.

In order to strengthen livelihoods of the poor and vulnerable, effective convergence with line Departments has been made generating 3.68 Crore person-days with an expenditure of INR 1049.45 Crore.

- b. **Odisha Livelihoods Mission (OLM):** It is on the lines of National Rural Livelihoods Mission (NRLM) to bring down rural poverty by promoting diversified and gainful self-employment to the rural poor has been implemented in the state. Odisha Livelihoods Mission (OLM) has an 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 Forums (CLFs) and GP level Federation (GPLF). Youths are trained under the Placement Linked Skill Development Programme. Households are covered under livelihood intervention producer group that include agriculture/horticulture, livestock and non-farm sectors etc. SHGs are credit-linked to improve access to finance. Rural Self Employment Institutes (RSETIs) are setup in all 30 districts of the State to promote rural entrepreneurship and self-employment.

By the end of March 2021, OLM has been working with 49 lakh households through 4.65 lakh SHGs across the state by forming 37,388 CLFs and 4620 GPLFs. The GPLFs have been provided with startup and Institutional Building Funds. During 2020-21, 940 GPLFs received Startup funds and 19,321 SHGs received Revolving Funds.

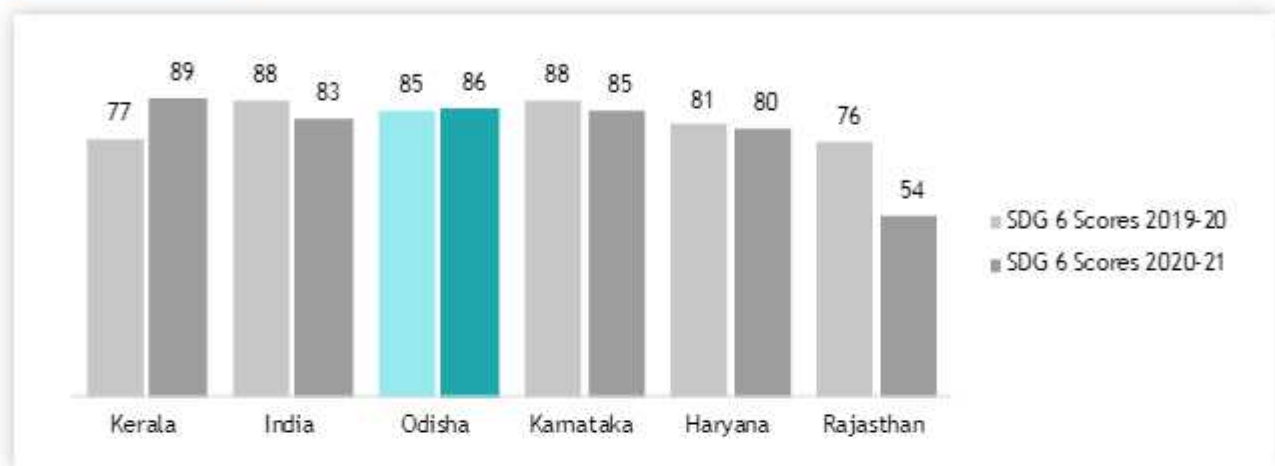
6.6. DRINKING WATER AND SANITATION

I. Water Supply

6.6.1. Ensuring availability and sustainable management of water and sanitation facilities for all is an important goal under SDG which is interrelated to other goals like health and no poverty. Odisha's efforts in ensuring water and sanitation facilities goes hand in hand with central sector schemes such as NRDWP (National Rural Drinking Water Supply Programme), Swachh Bharat Mission and urban reforms like AMRUT, etc.

6.6.2. Odisha is a front runner in SDG 6 on Clean Water & Sanitation with a score of 86. It performs better than India as a whole and in comparison, to many of the peer states as given in Figure 6.33.

Figure 6.33 Odisha's Performance in SDG 6



Source: SDG India Index 2020-21, NITI Aayog

6.6.3. Table 6.16 gives the status of population and habitations having piped water supply under NRDWP, Department of Drinking Water & Sanitation, Ministry of Jal Shakti as of April 2021. As per the report of NRDWP, 64.83 per cent of habitations in Odisha have Piped Water Supply (PWS), 64.11 per cent of total habitations are fully covered and 0.72 per cent of inhabitants are partially covered or quality affected. In total, 66.12 per cent of population have access to piped water supply as compared to 69.38 per cent of population at all India level.

Table 6.16 Status of Piped Water Supply in Odisha (as on 1.4.2021)

	per cent of Habitation			per cent of Population		
	Total	Fully covered	Partially covered + quality affected	Total	Fully covered	Partially covered + quality affected
Odisha	64.83	64.11	0.72	66.12	75.92	0.84
India	65.63	51.27	14.37	69.38	62.56	15.29

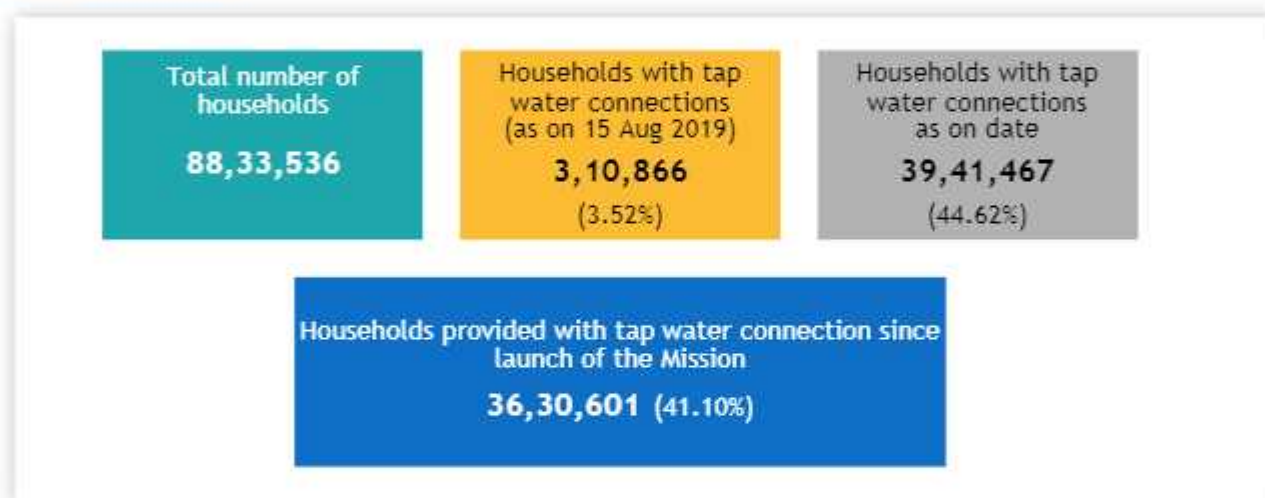
Source: NRDWP, Department of Drinking Water & Sanitation, Ministry of Jal Shakti

6.6.4. By 2020-21, 13087 number of rural pipe water supply schemes were commissioned in the state and 4,74,629 number of spot sources installed. As many as 62,262 rural schools covered with installation of spot sources. New schemes of 483 under JJM, 489 under BASUDHA and 57 under Rural Infrastructure Development Fund were implemented by 2020-21.

6.6.5. The State Government is committed to provide equitable, affordable, sustainable safe and sufficient water supply to all urban population including urban poor in a time bound manner and to achieve 100 per cent coverage of urban households by covering 2025 wards in 114 ULBs of Odisha.

6.6.6. During 2020-21, 1235.96 km of pipelines were laid to supply safe drinking water to urban habitations. The cumulative coverage of 89.7 per cent habitations and 69.87 per cent of urban population was achieved during the year. Under the state's flagship programme BASUDHA, 509 projects are taken up along with other schemes like UIDSSMT, AMRUT, DMF and OMBADC during 2020-21 to ensure water through universal coverage of piped water supply and provision of 100per cent household connections for all areas in all the 114 ULBs. Out of the 509 projects, 110 numbers completed, and the rest are in completion stage. As of 20 March 2022, about 45% of rural households have been provided with a tap water connection. Since the launch of the Jal Jeevan mission in August 2019, around 41% more households have been provided with tap water connection Figure 6.34

Figure 6.34 Status of tap water supply in rural homes (as of 20 March 2022)



Source: Har Ghar Jal, Jal Jeevan Mission, Department of Drinking water and sanitation, Ministry of Jal Shakti (20 March 2022)

6.6.7. Under 5T programme "Drink from Tap" mission along with 24x7 water supply has been taken up through WATCO and so far, 17 pilot projects have been taken up and completed in Bhubaneswar, Puri and Cuttack.

6.6.8. In order to strengthen the community participation in the urban water supply management and effective generation and collection of revenue from water charges, "Jalasathis" from local SHGs are being engaged under 5T programme. So far 202 Jalasathis have been trained and deployed in Bhubaneswar, Puri, Khurdha and Jatni.



6.6.9. Apart from the appreciation of Hon'ble CM, Odisha for "Achieving Universal coverage of Piped Water Supply with 100 per cent house connection in Bhubaneswar WATCO bagged two other awards in water management. Award of Excellence from Computer Society of India (CSI) special interest Group e-Governance Award 2020 for Smart water management in Puri and Elets Water Innovation Award of Excellence 2021 for 24x7 water supply to Puri town under Drink from tap mission are the commendable recognition to WATCO.

II. Sanitation

6.6.10. Sanitation, defined as the safe management of solid and liquid wastes, is vital to the health of communities and their surrounding environment. As per the World Health Organization (WHO), the absence of safe sanitation leads to a heightened risk of diseases such as diarrhoea, typhoid and soil transmitted helminthic infections, as well as broader adverse outcomes like under nutrition, stunting, and loss of productivity. Together with the practice of hygiene, including menstrual hygiene, sanitation contributes to decreased infant and maternal mortality rates, improved nutrition and education outcomes, increased productivity, and an enhanced quality of life. Given the criticality of sanitation to the physical and mental wellbeing of an individual, as well as, the environment, the Sustainable Development Goal (SDG) 6 urges nations to strive for clean water and sanitation for all. Nationally, the Swachh Bharat Mission, since its inception in 2014, has mainstreamed this vision and set out the sanitation agenda across the country. Responding to this national and international thrust, the state of Odisha has been one of the first states in India to come out with a comprehensive state level Odisha Urban Sanitation Policy, accompanied by the Odisha Urban Sanitation Strategy, 2017, for its 114 urban local bodies.



6.6.11. As per Census 2011, out of total 81.4 lakh rural households in the State, 85.9 per cent households did not own any latrine facilities. The push for construction of toilets under the Swachh Bharat Mission Grameen (SBMG) has led to a rapid increase in coverage of household latrines, and their usage. The State has been declared Open Defecation Free (ODF), with an Individual Household Latrine (IHHL) count of 84.1 lakh in rural Odisha. Out of these, 71.5 lakh IHHLs have been facilitated through the SBMG program during the FY 2014-15 to FY 2019-20 period. About 2.8 lakh households are having toilet within premises and the rest have access to common or community toilets. As part of the 2nd phase of the SBMG program, Solid and Liquid Waste Management (SLWM) is being implemented in the villages since FY 2020-21. The target is to make rural Odisha ODF plus, with focus on Sanitation Sustainability and SLWM, covering all villages by 2024-25.

The State Government is poised to provide piped water supply to all rural households by 2024-25.





6.6.12. The State Government has given more emphasis for construction of new "Septage Treatment Plants" in all the ULBs of Odisha to develop sanitation programme and pollution free environment in urban areas. At present 53 STPs are completed and made operational.

6.6.13. The PHEO under H&UD Department has received National Level V Ramachandra award 2020 under the category of "Best Civic Agency" for "Piped Water Supply schemes for urban households".

Major initiatives for increasing access to water supply and sanitation

6.6.14. The RWS & S Organisation has been successful in providing safe sources of drinking water in all rural habitations. Shifting from spot sources to Pipe Water Schemes in the state is a major initiative. During 2020-21(ending 31st Dec, 2020), 978 PWS and 1200 Spot Sources have been completed through all sources of funding including NRDWP. Till the end of 2020 out of 1,57,089 rural habitations as many as 1,53,558 numbers are fully covered and 36 are partly covered. Similarly, out of 83,06,194 rural households, 15,25,395 households were covered with Functional Household Tap Connection (FHTC) by the end of 2020. Some of the major schemes related to WSS are listed in Table 6.17.

Table 6.17 A snapshot of major WSS schemes

	Swachh Bharat Mission (SBM) - Urban Aims at making urban India free from open defecation and achieving 100% scientific management of municipal solid waste in 4,041 statutory towns in the country.
	Buxi Jagabandhu Assured Water Supply to Habitations (BASUDHA) The scheme aims to provide adequate safe water to all habitations for drinking and domestic purposes on a sustainable basis
	Jal Jeevan Mission To provide safe and adequate drinking water through individual household tap connections by 2024 to all households
	AMRUT Providing basic services (e.g. water supply, sewerage, urban transport) to households and build amenities in cities which will improve the quality of life for all

6.6.15. To ensure universal sanitation access and to sustain the ODF status, more than 747 community Sanitary Complexes have been constructed in the state. The Odisha Rural Sanitation Policy, a holistic framework for structured sanitation intervention has also been released by the State Government. The ODF plus status shall be achieved in all the villages in a mission mode by 2024-25 by leveraging three funds-SBM(G), CFC/SFC and MGNREGA. To initiate the faecal sludge management in rural areas of the state, all the Gram Panchayats which are up to 20 kms from Urban Local Bodies (ULBs) are being tagged to ULBs for collection and transportation of Faecal Sludge to the urban FSTPs. Convergence with HUD Department has also been initiated for treatment of plastic waste from rural areas by tagging them to nearby ULBs. During 2020-21, despite the lock-down restrictions due to COVID-19 pandemic and consequent scarcity of labour, 1236 km of pipeline have been laid and about 2.21 lakh new household water supply connections have been provided benefitting about 13 lakh population.

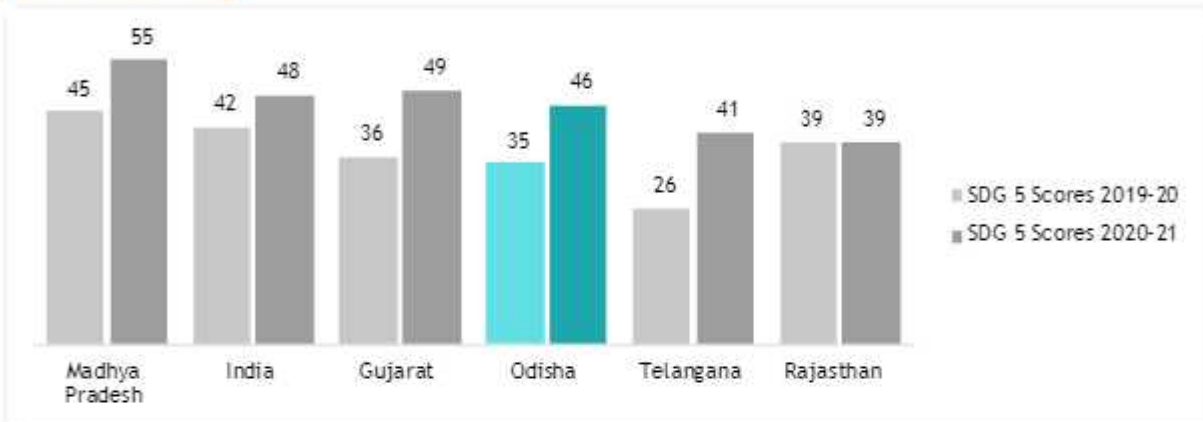
6.7. WELFARE OF WOMEN AND CHILDREN, ELDERLY, DISABLED AND SC/ST COMMUNITIES

I. Development and Empowerment of Women

6.7.1. Gender equality is paramount for the development of any society. The Indian constitution embeds the principles of gender equality and the nation has been making progress towards achieving the objectives of gender equality and justice through various legislations, policies, programmes and initiatives. Gender related issues are multidimensional and complex in nature which requires dedicated efforts in solving all such issues. Sustainable Development Goal 5 aims to solve the issue of gender inequality through concerted policy actions that addresses the problem at multiple levels.

6.7.2. Figure 6.35 shows that, Odisha has been making steady progress in achieving SDG 5 goal of gender equality. The state saw a rise of 11 points in its SDG 5 score from 2019-20 to 2020-21 as per SDG India Index 2020-21. Odisha compares favourably with other states under SDG 5 such as Telangana and Rajasthan with a higher score in the recent year.

Figure 6.35 Odisha's Performance in SDG 5



Source: SDG India Index Report 2020-21 and 2019-20, NITI Aayog

6.7.3. The status of women in the society and economy can be gauged through numerous demographics, sector specific and economic indicators mapped from birth to death. In the following sections, an analytical framework to better understand women's empowerment status in the state of Odisha has been devised. An interstate analysis based on the analytical framework has also been carried out to bring a fair and better picture of various states on these selected indicators. The data used to analyse these indicators across the states have been taken from National Family Health Survey 5 2019-21 and Periodic Labour Force Survey 2019-20.

Figure 6.36 Women Empowerment Analytical Framework



6.7.4. Literacy and Educational Attainment. One of the most important indicators for women empowerment is the status of educational attainment and the continued access to the same. As per the Table 6.18, Odisha performs reasonably well in the indicator of percentage of women who are literate with nearly 70 per cent of women falling under this category. Only the state of Gujarat performs better than Odisha with a total of 76 per cent of women being literate in the state. Odisha's performance is quite close to the national average of 71 per cent. However, Odisha has room for improvement as only 1/3rd of women in Odisha are having 10 or more years of schooling.

Table 6.18 Literacy and Educational Attainment of Women

State		Women who are literate (per cent)	Women with 10 or more years of schooling (per cent)
Gujarat	Urban	84.2	47.9
	Rural	65.8	23.6
	Total	73.5	33.8
Madhya Pradesh	Urban	81.5	49.1
	Rural	59.2	21.7
	Total	65.4	29.3
Odisha	Urban	81.9	47.9
	Rural	66.7	29.6
	Total	69.5	33
Telangana	Urban	78.6	60.9
	Rural	56.6	36.3
	Total	64.8	45.5
Rajasthan	Urban	80.1	51.2
	Rural	59.9	27.8
	Total	64.7	33.4
India	Urban	83	56.3
	Rural	65.9	33.7
	Total	71.5	41

Source: National Family Health Survey-5, 2019-21

6.7.5. Employment status. Table 6.19 shows that the female Labour Force Participation Rate of Odisha is 33 per cent which is more than the national average of 30 per cent. However in an interstate comparison, state such as Telangana, Rajasthan and Madhya Pradesh perform better than Odisha. The urban rural divide in female LFPR reveals a pattern as more females in the rural areas participate in the work force than the urban area. This could be attributed to regional disparity in attainment of higher education levels, since urban areas have more and better opportunities for education, more women might be opting for higher education and delaying the entry in the labour force market.

Table 6.19 Female Labour Force Participation Rate (15+ years) in 2019-20

State		Labour Force Participation Rate (per cent)	State		Labour Force Participation Rate (per cent)
Gujarat	Urban	20.4	Telangana	Urban	29.2
	Rural	39.4		Rural	53.6
	Total	31.1		Total	44.3
Madhya Pradesh	Urban	23.3	Rajasthan	Urban	18.8
	Rural	43.2		Rural	45.4
	Total	37.7		Total	38.6
Odisha	Urban	23.5	India	Urban	23.3
	Rural	34.8		Rural	33.0
	Total	33.1		Total	30.0

Source: Periodic Labour Force Survey, 2019-20, MoSPI

6.7.6. Financial and Digital Inclusion. Having a bank account, mobile phone and access to the internet for women depicts the status of financial as well as digital inclusivity of the female population. These indicators give a sense of agency and ownership available to women and can be a testament to their personal growth. Around 87 per cent of Odisha's women have a bank or savings account that they themselves use and half of the female population possess a mobile phone of their own.



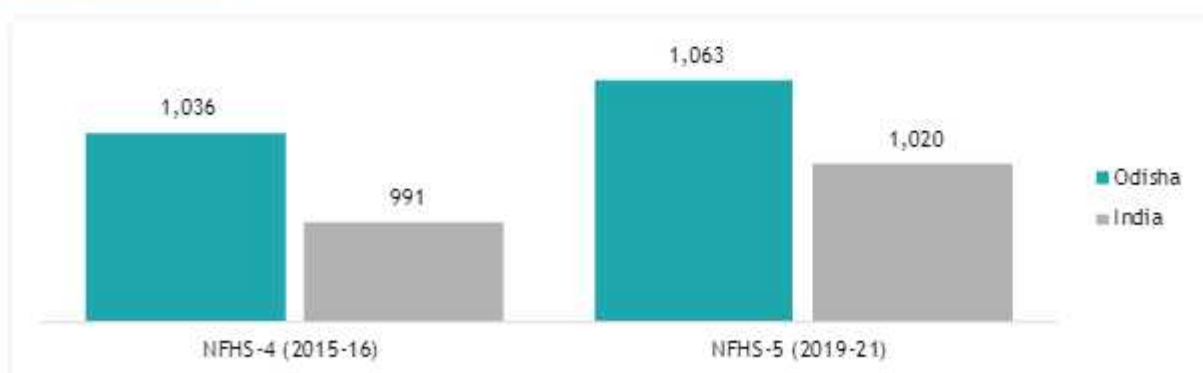
6.7.7. Women owning a bank account is higher in rural Odisha than urban areas demonstrating the successful financial inclusion initiatives irrespective of the place of living. However, only 21 per cent of women have ever used internet in the state with a lower share belonging to the rural areas (21.3 per cent). The interstate comparison on the bank account reflect that Odisha performs better than Gujarat, Madhya Pradesh, Rajasthan and also the national average. However, in the indicators of digital inclusion of having mobile phone and internet, Odisha needs to improve its performance as given in the Table 6.20.

Table 6.20 Financial & Digital Inclusion for Females

State	URT	Women having a bank or savings account that they themselves use (per cent)	Women having a mobile phone that they themselves use (per cent)	Women who have ever used the internet (per cent)
Gujarat	Urban	73.5	66	48.9
	Rural	67.5	36.2	17.5
	Total	70	48.8	30.8
Madhya Pradesh	Urban	78.5	58.8	46.5
	Rural	73.3	31.4	20.1
	Total	74.7	38.5	26.9
Odisha	Urban	82.8	58.8	39.7
	Rural	87.4	48	21.3
	Total	86.5	50.1	24.9
Telangana	Urban	83	75.2	43.9
	Rural	85.2	50.6	15.8
	Total	84.4	60	26.5
Rajasthan	Urban	81.7	65.5	56.1
	Rural	79	45.3	30.8
	Total	79.6	50.2	36.9
India	Urban	80.9	69.4	51.8
	Rural	77.4	46.6	24.6
	Total	78.6	54	33.3

Source: National Family Health Survey-5, 2019-21

6.7.8. The sex ratio in Odisha compares favourably with the national average. As per NFHS-5, there are 1063 females for every 1,000 males in Odisha. Similarly, in rural Odisha, the sex ratio is higher (1074) in comparison to Urban Odisha (1,010). India's sex ratio is 1020. Odisha is in fact ranked in the top five of major States in terms of sex ratio. However, the sex ratio at birth for children born in the last five years is 894 females per 1,000 males as per NFHS-5.

Figure 6.37 Sex Ratio of India and Odisha


Source: National Family Health Survey 4 (2015-16) and National Family Health Survey 5 (2019-20)

6.7.9. Gender budgeting is an important tool to mainstream gender in the design, implementation, and evaluation of financial allocations. It ensures gender specific needs and demands being addressed through appropriate budgetary allocation. Govt of Odisha has always been committed to advancing gender equality and thus, has adopted Gender Budgeting since 2012-13. On the path to strengthen Gender Responsive Budgeting, the total outlay on gender related schemes of the state has increased from INR 2643.66 Crore during 2018-19 to INR 2684.49 Crore in 2021-22(BE). Entirely women centred schemes of the state constitute of 1.94% of Odisha's total expenditure which stands at 0.73% of the total expenditure at the national level. There are 77 schemes which are 100 per cent women specific schemes and 434 schemes with greater than 30 per cent women related schemes in the Gender Budget 2021-22. Schemes being run by Women & Child Development Department (32) along with Health & Family Welfare Department (16), together constitute about 81.62% of the total gender budget outlay for 100% women specific schemes.

II. Initiatives taken for Women Empowerment

6.7.10. Some of the important schemes related to women welfare are listed in Table 6.21.

Table 6.21 A snapshot of major women empowerment schemes

	<p>Working Women's Hostel</p> <p>Safe and conveniently located accommodation for working women in urban and semi-urban areas</p>
	<p>Mission SHAKTI</p> <p>It is the self-help mission for empowering women through promotion of Women Self Help Groups (WSHGs) to take up various socio-economic activities</p>

6.7.11. The State Government has implemented the Biju Kanya Ratna Yojana (AmariJhia AmariShakti) scheme, with the objective of creating an enabling environment for the birth, survival and development of the girl child along with ensuring enrolment and retention of girls in educational institutions. The focus is on creating mass awareness about discrimination against girls, improved status of nutrition, health, education, sex ratio at birth and child sex ratio. Launched in September 2016 in the districts of Angul, Dhenkanal and Ganjam, which have low child sex ratio, the programme aims to sensitise the community as well as all stakeholders on the importance of the girl child.

6.7.12. Further, the Odisha State Policy for Girls and Women adopted in 2014, has the mission of creating an enabling environment for girls and women that promotes equal opportunities, eliminates discrimination, ensures holistic development and empowerment.

6.7.13. With the objectives of improving the quality of life of women especially vulnerable women, Government had launched several schemes and provisions to support women in distress. These schemes not only provide immediate support to the aggrieved girls/women but also helps to develop their skills to enable them to improve their livelihood opportunities. Some of these are listed below:

Schemes for Vulnerable/Distressed Women

- a. **Swadhar Greh:** Swadhar Greh Scheme caters to primary needs of women in difficult circumstances Swadhar Greh envisions a supportive institutional framework for women victims of difficult circumstances so that they could lead their life with all dignity. The objective is to cater to the primary need of shelter, food, clothing, medical treatment and care of the women in distress and who are without any social and economic support. There are 54 Swadhar Greh in Odisha in 2020-21.
- b. **Ujjawala Scheme:** Comprehensive scheme for prevention of Trafficking for Rescue, Rehabilitation and Reintegration of victims of Trafficking for Commercial Sexual Exploitation with an objective to prevent trafficking of women and children for commercial sexual exploitation through social mobilization and involvement of local communities, awareness generation programmes, generate public discourse through workshop, seminars and such events and any other innovative activity. Out of 19 projects of 2020-21, 11 Ujjawala Homes are running in the State.
- c. **One Stop Centre:** SAKHI is a One Stop Centre is a hospital-based centre to provide integrated support and assistance to women affected by violence and to facilitate immediate, emergency and non-emergency access to an integrated range of services including medical, legal psychological and counselling support. There are 30 One Stop Centres operational in 30 Districts of the State. As many as 4187 number of cases received during 2020-21 out of which 2230 number of domestic violence and 465 missing/kidnaping cases .
- d. **181 Women Helpline Number:** The 24 hours toll free service provides support to women affected by violence seeking support and information. The centre facilitates crisis and non-crisis intervention through referral to the appropriate agencies; provides information about the appropriate support services, government schemes and programmes. As many as 8020 number of tickets raised during 2020-21 out of which 1545 number of domestic violence cases and 2187 cases of violence against women other than domestic violence.
- e. **Working Women's Hostels:** With the objective of providing safe and affordable hostel accommodation for working women, single, divorcees and separated women Govt. of Odisha has constructed 4 Working Women's Hostel in the district of Khordha, Jajpur, Sundargarh and Jharsuguda. The 100 bedded hostels also have provisions of day care centre for children of working women. Four more hostels are in process of construction in the district of Sambalpur, Ganjam, Dhenkanal and Rayagada.

Institutional and Legal Measures for Women

- a. **State Commission for Women:** The Commission has organized District level Camp court to deliver justice at their doorsteps. Besides, legal awareness, has also been organised at District level to create awareness among the women folk, regarding legislation and different Govt schemes and programme for safeguarding the interest of women in Odisha. During 2020-21, 2129 cases disposed of by the Commission benefiting 2114 women.
- b. **Odisha State Social Welfare Board:** It holds regular welfare activities, seminar to generate awareness among the community about women's problem and service grants from the Central and State Governments for the purpose of some welfare programme.
- c. **Protection of Women from Domestic Violence:** Protection Officers have been appointed at district level to address the issues of Domestic Violence under protection of Women from Domestic violence Act 2005(PWDV Act 2005). All the Swadhar Homes, Ujjawala Homes, Short Stay Homes & Family Counselling Centres are declared as Service Provider.
- d. **Anti-Human Trafficking Measures:** To facilitate integrated approach towards Crime against women and children, 537 Mahila Shishu Desks have been set up in every police station in convergence with Home Department. 37 IAHTU (Integrated Anti-Human trafficking unit) are functioning in all 30 Districts.
- e. **Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013:** The Act is to provide protection against Sexual Harassment of women at workplace and for prevention, redressal of complaints of sexual harassment. Local Complaints Committee (LCC) is formed and notified in all 30 districts. Internal Complaints Committee (ICC) formed at Department/ Directorates/Corporations. Trainings provided to the members of ICCs & LCCs. IEC activities are undertaken such as FAQs, booklet & leaflet in English & Odia.

Economic empowerment of women through Mission SHAKTI

6.7.14. The State has undertaken multiple initiatives to encourage women entrepreneurship. The Odisha rural development and Marketing Society (ORMAS) has widened the scope of marketing of products of Women Self Help Groups (WSHGs) through "Pallishree Melas" and "Sisir Saras". The Mahila Vikas Samabay Nigam (MVSN) provides funds for training of the poor and needy women in traditional occupations to upgrade their skills and sell their products. Mukhya Mantri Mahila Sashakti Karana Yojana (MMMSY) aims at socio-economic empowerment of WSHGs under Mission Shakti through formation of new WSHGs, training and capacity building, livelihood and skill development of all WSHGs in the state and linkages with financial institutions.

Mission Shakti: Towards Women empowerment

6.7.15. Mission Shakti was launched on 8th March 2001 by Hon'ble Chief Minister of Odisha to empower women by organizing them into Self Help Groups. The scheme has now turned into a Silent Revolution transforming the lives of women, their families and the spaces they inhabit. Mission Shakti was formed in 2001 under Women & Child Development Department with an objective of forming two lakh

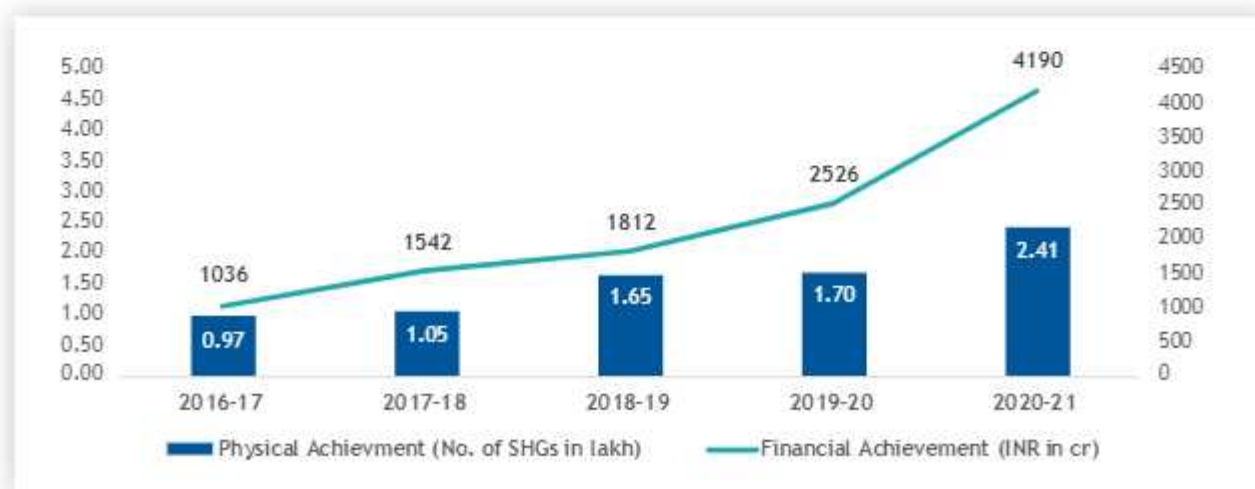
groups in two years. As on 31 March 2021, there are 6.02 lakh SHGs in Odisha having 70 lakh women as members across rural and urban areas of the state. "Mission Shakti" is the State's self-help mission for empowering women through promotion of Women Self Help Groups (WSHGs) to take up various socio-economic activities.

6.7.16. During 2020-21, 2.41 lakh SHGs were bank linked and provided with loan amounting to INR 4190 crore with average loan amount being INR 1.74 lakh.



Mission SHAKTI is a Silent Revolution transforming the lives of women and enabling economic empowerment.

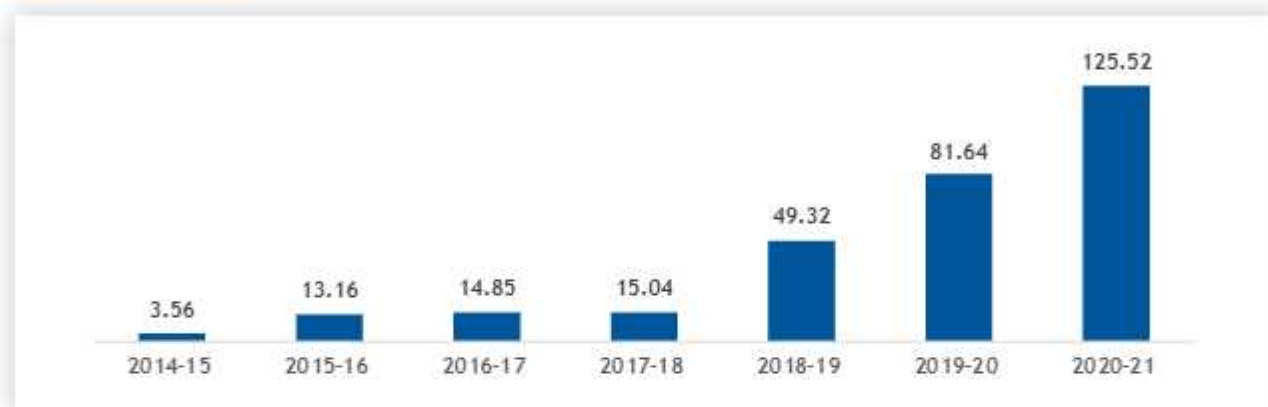
Figure 6.38 Year-wise SHG Bank-Linkage through Mission SHAKTI



Source: Department of Mission Shakti, Odisha

6.7.17. To reduce the interest burden and encourage SHGs to invest more capital in livelihood activities, loan up to INR 3 Lakh are provided to SHGs under the "Mission Shakti Loan" at 0 per cent annual rate of interest on prompt and regular payment. Interest subvention claims amounting to INR 125.52 cr. have been settled under "Mission Shakti Loan"-State Interest Subvention Scheme during 2020-21 benefitting 185764 eligible SHGs.

Figure 6.39 Year-wise loan settlement in INR (crore)



Source: Department of Mission Shakti, Odisha

6.7.18. To ensure last mile delivery of banking services in unbanked and under banked Gram Panchayats, Odisha Government made a historic decision of engaging WSHGs and Federation Members as Business Correspondent Agents (BCAs). This has furthered the financial inclusion efforts for SHGs in Odisha

Under Mission SHAKTI, 2.41 lakh SHGs were bank linked and provided with loan of INR 4,190 crore in 2020-21.

using ICT based Business Correspondence (BC) Model through community institutions. It further increases the outreach of banking services such as savings, deposit, withdrawal, remittances, insurance and so on, integrating group-based transactions with the ICT based Micro ATM operated by BCAs. This continues to improve the quality and effectiveness of the financial services in rural areas and provides a sustainable livelihood to women within the group. A total of 1252 BCAs are currently operating. The SBI, OGB, UGB, ICICI and Yes Bank have 293, 236, 131, 94 and 498 no. of BCAs respectively. During the financial year 2021-22, 984 additional SHG members will be engaged as BCAs in collaboration with banks.

6.7.19. For wider access of Mission Shakti and its initiatives towards women empowerment, the Directorate has developed its own website with the support of NIC, Bhubaneswar. The website will act as a one stop information hub for all the activities and intervention undertaken by Mission Shakti. There is a section dedicated to best practices adopted and success stories of our women SHGs. This has an archive of information in terms of books, posters, videos etc. Apart from this, there is a dedicated district section having detail information on district implementation structure, community institutions and district specific initiatives towards women empowerment.



Mission Shakti Online MIS

6.7.20. Realizing the need of an evidence-based mechanism to monitor the pace and progress of programme implementation, a comprehensive MIS solution has also been developed with the support of NIC. This will further strengthen the review and monitoring mechanism at every level of project implementation to ensure efficiency and efficacy in Mission Shakti activity implementation. This application has the scope of profiling all community institutions; recording financial assistance to these institutions; income generating activities taken up by those institutions. So far data of 5 lakh SHGs have been digitized with member information.

Mission Shakti Innovations

6.7.21. In keeping with the mission's goals and vision, Mission Shakti inculcates pioneering initiatives following novel approaches in the form of innovative projects. The objective of these projects is to provide strategic solutions to emerging challenges in the realm of women empowerment and demonstrate an approach that is likely to have wide implications for sustaining the SHG Movement with secured physical and financial wellbeing of SHG members across the state. Such catalytic action overcoming gender stereotypes, geographical remoteness and limited access to technology & digital space contribute towards further strengthening the SHG Movement in the state.

BLIS (Bank Linkage & Interest Subvention) Portal

6.7.22. The SHG Bank Linkage Programme is a major Financial Inclusion initiative by Mission Shakti, aiming at ensuring access to institutional credit by women SHGs. Directorate of Mission Shakti has also been designated as the Nodal Agency for the interest subvention programme and acting as the SHG Bank Linkage Interface for both rural and urban SHGs since August 2018.

6.7.23. To address the State Government mandate for 5T, which includes usage of technology and transparency to bring about transformation in the lives of people, Mission Shakti has set up a dedicated SHG Bank Credit Linkage and Interest Subvention (BLIS) online portal for monitoring SHG wise bank loan, repayment & interest subvention activities. This innovation integrates online digital solutions to bolster the 'Mission Shakti Loan' implementation process. For data sharing with banks through a state-of-the-art Management Information System (MIS), Mission Shakti has signed MoU with banks.



6.7.24. BLIS portal caters to the online monitoring of bank Linkage Loan Details tagged to SHGs, credit flow, repayments, interest subvention & Non-Performing Assets by automating the calculation of interest subvention for eligible SHGs, online transfer of interest subvention to the SHG Savings account through Nodal Bank on eFMS platform. This portal also provides the provision of Online SHG Loan application submission and approval process flow along with generation of customised auto MIS reports.

Mission Shakti Activities in Odisha's Fight against Covid- 19 Pandemic

6.7.25. Supporting Government's crucial initiatives in responding to the global pandemic of Corona virus, COVID-19, are women Self Help



Groups (SHGs) of Mission Shakti. 70 lakh women under 6 lakh women SHGs across rural and urban areas of the state of Odisha, have shouldered several vital responsibilities during this period.

6.7.26. During Covid-19 Pandemic, 17283 Mission Shakti SHGs have been engaged in agriculture & allied livelihood activities generating a turnover INR 109.85 crore.

Table 6.22 Livelihood Activities undertaken by SHGs (2020-21) – Agriculture & Allied

Activity	SHGs Involved	Turnover (INR in lakh)	Profit/ Commission (INR in lakh)
Vegetable, Ration Shops & Mobile Vans	752	304.9	76.86
Marketing of Surplus Vegetables of Farmers	500	32.48	8.5
Vegetable Cultivation	2049	1738.89	521.66
Mushroom Cultivation	1071	874.71	283.94
Fish Farming in GP Tanks	4319	6227.09	3113.54
Dairy Farming	3170	1025.5	328.16
Goat Rearing	5422	780.93	312.37
	17283	10984.5	4645.03

Source: Mission Shakti, Govt. of Odisha

6.7.27. The non-agricultural livelihood activities undertaken by SHGs during COVID-19 is given below in Table 6.23. There are 33,921 SHGs who have undertaken non-agricultural livelihood activities with a turnover of INR 797.08 cr. Provision for purchase of masks from women SHGs functioning under Mission Shakti for providing to the floor people in the state for combating Covid-19 pandemic' has also been covered as a project under the MLA LAD funds. Thousands of SHGs and Producer Groups having existing units have taken up cotton mask production across the state generating income and contributing significantly for a noble social cause.



Table 6.23 Other Livelihood Activities undertaken (2020-21): Non-Agricultural

Activity	SHGs involved (in number)	Turnover (INR in lakh)	Profit/ Commission (INR in lakh)
Mask making	1341	1101.9	440.76
Free Kitchen Management	8448		430.87
Preparation and Supply of Take Home Ration	556	26859.82	
Fair Price Shops under PDS	2538		1989.56
Aahar Kendra Management	157		399.00
Hospital Diet Supply	23	171.54	13.36
Paddy Procurement	Kharif 2019:199 Rabi 2020: 114 Kharif 2020: 320	44579.14	761.36
Farm Pond Supervisors	9019		363.49
Temporary Medical Camp (TMC)	1932		287.28
Urban Wage Employment Initiative (UWEI)	6937	6996	352.35
Jala Sathi (Members)	197	780.32	51.53
Swachh Sathi (SHG Members)	2453		1177.93
	33921	79708.4	6267.49

Source: Mission Shakti, Govt. of Odisha

6.7.28. Enabling environment, favourable policies and supportive governance have acted as key catalysts for women entrepreneurship initiatives in the state. The 5T mandate has further facilitated timely decision-making process, teamwork on convergence mode, adoption of transparency measures and integration of technology, paving way for transformative change in women empowerment in Odisha. Women SHGs as torchbearers of a new socioeconomic revolution in Odisha are no longer a distant dream because of a dedicated approach of the State Government committed for women empowerment in the state.

6.7.29. Provisioning of GP tanks for Pisciculture by women SHGs has led to one of the most successful livelihood interventions by Mission Shakti.

6.7.30. As per Government notification by PR & DW Department, in case of GP tanks (minimum one GP tank per GP found suitable for pisciculture by Fisheries & ARD Department), only women SHGs may be allowed to participate in the auction process and in case, there is only one eligible women SHG, the tank may be leased out to that SHG. Long term community tank leasing may be considered ensuring sustainability.



Maa Beherapatra Prathamika Mahila Maschya Unnayana Samabal Samitti, a fish producers' group from Sanakhemundi in Ganjam district, has been awarded the 'Best Fish Producer Group of Odisha' on National Fish Farmers' Day In 2019. Formed in 2011, this Producer Group harvests around 1200 quintals of fish annually with an average annual turnover of INR 93 lakhs.

Table 6.24 Fish Farming by Women SHGs in GP Tanks

Year	SHGs that stocked fingerlings	No. of SHGs harvested fish	No. of tanks harvested	Quantity of fish harvested (in Quintal)	Value of harvesting (INR In cr)	Subsidy released (INR In cr)
2019-20	2342	2342	2374	25866	37.98	13.68
2020-21	1961	1961	1995	44354	63.53	12.37
Total	4303	4303	4369	70220	101.51	26.05

Source: Mission Shakti, Govt. of Odisha

III. Child Welfare: Ensuring Child Protection

6.7.31. To ensure the best interest of every child in the State, the Juvenile Justice (Care & Protection of Children) Act, 2015 and Odisha Juvenile Justice (Care and Protection of Children) Rules, 2018 are implemented by the Department of Women and Child Development and Mission Shakti. Some of the important schemes related to child protection are listed in Table 6.25.

Table 6.25 A snapshot of major childcare schemes

	<p>Biju Kanya Ratna</p> <p>Creating an enabling environment for the birth, survival, and development of the girl child along with ensuring enrolment and retention of girls in educational institutions.</p>
	<p>Child Protection Services (Mission VATSALYA)</p> <p>To build a protective environment for children in difficult circumstances and to ensure protection of children at family & community level by creating a safety net at all level and rehabilitation of children in vulnerable situation.</p>
	<p>Biju Shishu Surakshya Yojana</p> <p>To support children in vulnerable condition for their all-round development and to protect their rights by making them self-radiant to live life with dignity.</p>

6.7.32. All matters pertaining to apprehension, detention, prosecution, penalty, rehabilitation and social reintegration in respect of children in conflict with law and rehabilitation, adoption, reintegration and restoration of children in need of care and protection have been taken care of for promoting the cause of children by implementing "Child Protection Services" "Beti Bachao Beti Padhao" and two State Sector Schemes namely "Biju Kanya Ratna Yojana" and BSSY.

6.7.33. Child Protection Services: Earlier known as Integrated Child Protection Scheme (ICPS), a centrally sponsored scheme with sharing ratio 60:40 (Central: State). The Scheme is working closely with all stakeholders including government departments, the voluntary sector, community groups, academia and, most importantly, families and children to create protective environment for children in the State. Statutory bodies like Juvenile Justice Board, Child Welfare Committees and Service delivery structures like State Child Protection Society, State Adoption Resource Agency, District Child Protection Unit, Special Juvenile Police Units are in place as per the scheme. As on

31st March 2021 189 Children home,30 Specialised Adoption Agency,12 Open Shelter,4 Observation homes and 4 Special Homes were functional.

6.7.34. The Government of Odisha has taken the following new policies decisions and initiatives to improve child protection by creating an environment of safety & security for vulnerable children in the State.

- Revised state specific guidelines on Biju Shishu Surakshya Yojana (BSSY), Juvenile Justice Funds, GIA Guidelines and new after care Guidelines have been issued which are more inclusive and reaching to a greater number of children in the state.
- To minimise risks and impacts of COVID-19, all children residing in CCIs are protected and supported with psycho-social counselling and other required support to fight back the pandemic.
- 31 Children from CCIs have been enrolled in Odisha Adarsha Vidyalaya after amendment of Guidelines in consultation with S&ME Department.
- Odisha State Level Care Leavers Convention was held to discuss the challenges, priorities and needs of care leavers in the process of their transitioning to independent living.
- Memorandum of Understanding was signed with UNICEF to strengthen family based alternative care in the state through capacity building and MIS report.
- A partnership has been established with smart education programme which has already been piloted in 30 CCIs in the state to enable children to access quality and smart education.
- One place of safety has been established in Rourkela besides one Observation Home and Special Home was inaugurated at Bhawanipatna in Kalahandi district.
- As many as 185 children are placed permanently in families through adoption out of which 169 are in-country adoption and 16 children are placed inter-country adoption.
- As many as 481 and 583 vulnerable children are provided with preventive and rehabilitative sponsorship respectively to ensure the education wellbeing of such children in their families and communities.
- Under Biju Kanya Ratna Yojana and Beti Bachao Beti Padhao, 6752 numbers of Gaon Kalyan Samitis (GKS) are supported to generate mass awareness at village level on the issues of girl child.
- "MO-SISHU" portal is an online Child Protection management institutionalized and launched by Hon'ble CM, Odisha. This is an online process or complete automation of the entire activities coming under the Juvenile Justice Act.
- As a part of 5T initiative a state-wide survey of Orphans was conducted with the help of Aanganwadi workers, CDPOs and DCPOs in order to get an exact number of orphan children and to bring them to the protective network of the society through intervention wherever required.

6.7.35. New Initiatives under 5T for transforming the lives of Children and mothers

- Transformation of the Malnutrition Scenario in the state : Cabinet approval received for "Strategy for Odisha's Pathway to Accelerated Nutrition (SOPAN)" and implementation started for transformation of nutrition scenario in 125 identified blocks of 22 districts in the state. A nutri-hub set up in the department with a dedicated team for implementation and monitoring of SOPAN.
- Early Childhood Development: "Vatsalya"- a campaign on stimulation of children under three has been launched to sensitise the parents and facilitators to work towards optimal development of a child through care and stimulation in the early years in order to build the foundation for productive adulthood. Components of Vatsalya include parental

VATSALYA - a campaign for care and stimulation is aimed at stimulation and psycho-social wellbeing of children under 3 years of age.

outreach; capacity building of facilitators & parents, preparation and use of low cost material by the parents for use by the children in the community ;messaging through easy to comprehend IEC/SBCC materials & protagonist Tiki Mausi; involving men in the child rearing through mainstreaming; Kuni calendar , a calendar of activities with focus on psycho-social, physical& motor, language ,creative & aesthetic aspects of ECD and having a multilingual approach for effective reach.

- Streamlining Take Home Ration: 'Mo Chhatua' MIS/App introduced to streamline supply chain management of Take Home Ration and to track end to end transaction, right from the stage of indenting to payment in real time. "Mo Chhatua" has received the prestigious SKOTCH Gold Award under transformation category in 78th SKOTCH Summit 2021. MoUs have been signed with CSIR-CFTRI, Mysore for improvement of Take Home Ration, menu diversification, mentoring of SHGs, spot testing of quality of THR at SHG level, upgrading regional laboratories for basic nutritional and quality control analysis of THR including skilling. There is also collaboration with UNWFP for fortification of mechanised THR units, Social Behavioural Change Communication (SBCC) on Infant and Young Child Feeding (IYCF).
- Setting up Community based Creches (Kalika): 240 operationalised ,SOP for Kalika approved and circulated, e-Kalika app developed for effective monitoring of the activities of creches.
- Engagement of Professional agency annual nutrition survey : MoU signed with ICMR-RMRC and budgetary provision of INR 300.00 lakh made in FY 2021-22.
- e-Sishusuchana: e-Shisusurakhya has been launched to provide the multiple stakeholders under the Child Protection Service (CPS) in the state for managing the data pertaining to the 'children in need of care and protection' and 'children in conflict with law' and other relevant data pertaining to the juvenile justice system in the state.
- e-Sikhya: E-Learning system through e-Sikhya has been introduced in Utkal Balashramas at Balasore, Cuttack and Nabarangpur which facilitates, apart from effective learning ,system based monitoring of improvement of a child in different subjects.
- e-Prashikhyan: e-Prashikhyan is a web-based training MIS to record and manage training related information of all the training institutes across the state. It facilitates availability of training materials by trainers and trainees.

COVID-19 Management for Women and Children

6.7.36. The year 2020-21 was a difficult year living under the shadow of COVID-19. Despite the looming threat, W&CD Department went ahead with its activities. COVID-19 has had a severe impact on the economy of the state, like the rest of the world, and a major redirecting of funds was required to address the health and financial crisis resulting from it. Despite these challenges, Government of Odisha has ensured that the total allocation under the Gender Budget has increased from last year. The total budgeted amount for Gender Budget statement has significantly gone up from INR 44,760.86 crores in 2020-21 to INR 49,145.93 crores in 2021-22 and is about 35.49 per cent of the total expenditure of the state and 8.38 per cent of the total GSDP of Odisha. The total outlay on 100 per cent Gender Specific Schemes has also increased from INR 2,357.42 crores in 2020-21 to INR 2,684.49 crores in BE 2021-22. Odisha government has been making concerted efforts in sensitising and implementing various schemes and programmes for its women. These schemes and programmes have a direct and indirect bearing on the welfare and development of women in the state especially in the sphere of health, protection, employment and education etc. These schemes include state sector schemes, central sector schemes, centrally sponsored schemes, EOM and SDRF.



6.7.37. Some of the significant achievements of the department during the year are listed below.

Nutrition & Convergent Services during COVID:



- Provision of Supplementary Nutrition Programme was done by delivery of dry ration, ladoos, eggs etc. at doorsteps of 41.27 lakh children (6 months-3years) and pregnant & nursing women in lieu of hot cooked meals as Anganwadi Centres (AWCs) were closed.
- Key advisories were issued on closure of AWCs, continuance of IYCF practices, conduct of Village Health Sanitation Nutrition Day(VHSND); adoption of Severely Acute Malnourished(SAM)/Moderately Acute Malnourished(MAM)/ Severely under Weight (SUM)children and establishing Mo Upakari Bagicha at AWCs.
- As fields were restricted, telemonitoring was done to ensure availability of nutrition and ECCE services
- Early Childhood Care & Education (ECCE) during COVID:
- 'Ghare Arunima' a calendar guided home based preschool activities for 16.14 lakh children in the age group of 0-3 years was initiated to make up for missed preschool education.
- 'Vatsalya'- A campaign for care and stimulation of 17.94 lakh under three children aimed at their stimulation and psycho-social wellbeing was initiated. 'Kuni' calendars were made for stimulation of under threes.
- 'Mo Pratibha', an online platform was initiated for expression of sentiments by children through paintings, poetry etc.





Special Provisions for Women during COVID:

- Special WhatsApp number 7205006039 was introduced for reporting cases of domestic violence.
- All precautionary measures were taken for safety of inmates in Swadhar Grehs and Ujjawala homes and regular follow ups ensured. Inmates of Swadhar Grehs were provided with personal hygiene kits.
- Psycho-social training for six months was imparted to One Stop Centres, Women Helpline, Shelter Homes and Family Counselling Centres .
- 'ADVIKA'-Every girl is unique campaign was launched for adolescent girls to address health, nutrition, social and behavioural issues.

The next section discusses some of the major schemes related to elderly, persons with disability, transgenders and other disadvantaged communities. A snapshot is presented in Table 6.26.

Table 6.26 A snapshot of major schemes for vulnerable communities

	<p>Madhubabu Pension Yojana Introduced in the state of Odisha w.e.f. 01/01/08 by merging two pension schemes. i.e., Old Age Pension and Odisha Disability Pension schemes</p> <p>Home for the Aged The State Government have been extending financial assistance in the shape of grant-in-aid and INR 500 for persons up to 79 years and INR 700 for persons upto 80 years is provided.</p>
	<p>Indira Gandhi National Disable Pension Scheme Persons with severe or multiple Disability between 18-79 years and belong to household below the poverty line will be eligible to get pension at INR 700 (INR 300 (GOI)+INR 400 (State Govt) per month in the above scheme.</p>

	<p>Indira Gandhi National Widow Pension Scheme</p> <p>Widows who are between 40-79 years and belong to household below the poverty line will be eligible to get pension at INR 500 per month in the scheme (INR 300 (GOI) + INR 200 (State Govt)).</p>
	<p>AKANSHYA</p> <p>Construction of hostels for ST girls and urban hostel complexes.</p>
	<p>Bhima Bhol Bhinnakhyama Samarthya Abhiyan</p> <p>The aim of the scheme is identification, certification and distribution of Aids/Appliances to the PwDs by conducting single window camps in each Block of the State</p>
	<p>SAHAY</p> <p>To address the problems of beggars and destitute in the State and to facilitate their rehabilitation process.</p> <p>SWEEKRUTI</p> <p>For rehabilitation and welfare of Transgender Persons in Odisha</p>

IV. Support to the Elderly

6.7.38. As the demographic structure of the State is expected to change in the next few decades, the proportion of elderly is expected to increase. According to National Statistical Office (NSO)'s Elderly in India 2021 report "silver generation" is going to be 15.8 per cent by 2031 in the state. In old age, the requirements for financial support and access to health care increase manifold; and majority of the support is expected to come from the State with the gradual disintegration of the joint family system. Hence, it is imperative to understand the economic conditions of the old-aged, to prepare an appropriate policy response for them in terms of pension requirements and health care infrastructure.

6.7.39. Being the first State in the country to launch the "National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease And Stroke" and the "National Programme For Health Care For Elderly" in 2010-11, Odisha has been proactive in its efforts to support the elderly population. Apart from this, medical care financed through Odisha Treatment Fund, Old Age Homes with financial support from the government and Emergency Feeding Programme in the KBK region are other State schemes for elderly in Odisha. The State Government has launched awards namely "BAYOJYESTHA SAMMAN" for senior citizens and institutions that support their health and wellbeing.

6.7.40. The achievements under different pension schemes are narrated below.

Pension Schemes for the Elderly

- **Madhu Babu Pension Yojana:** Madhu Babu Pension Yojana (MBPY) was introduced in the state of Odisha w.e.f. 01/01/08 by merging two pension schemes. i.e., Old Age Pension and Odisha Disability Pension schemes. 28,33,704 beneficiaries are covered under the scheme with budget provision of INR 152469.95 Lakh. The rate of pension has been revised to INR 500 per beneficiary per month up to the age of 79 years and INR 700 for 80 years and above and INR 900 for beneficiaries having 60per cent disability and 80 years above age.

- **Indira Gandhi National Old Age Pension (IGNOAP):** This is one of the components of the 'National Social Assistance Programme (NSAP) introduced by the Govt. of India, Ministry of Rural Development w.e.f. 15.08.1995 as a Central Plan scheme and converted to states plan scheme since 2002-03. At present, 14,18,631 beneficiaries are covered under the scheme. For the year 2021-22, an amount of INR 59725.00 Lakh has been provisioned under the Programme.

Institutional Home & Care Initiatives

- **Home for the Aged:** To provide care and protection to elderly persons, the State Government have been extending financial assistance in the shape of grant-in-aid through four voluntary Organizations at Nimapara, Jagatsinghpur & Cuttack and a Day Care Centre at Ganjam. This is a continuing Scheme. 100 older persons (25 each of the three Homes for Aged) irrespective of sex, caste, creed, colour and religion are provided free food and clothing, medical treatment, and recreation facilities in these institutions. For the year 2021-22 provision of INR 11400.00 Lakh has been made under this programme.
- **Integrated Infrastructure Complex (IIC):** Further, Social Security Integrated Infrastructure Complex (IIC) are being taken up at the District Headquarters of all 30 Districts in phased manner. In the first phase, IIC has been programmed to be taken up in 10 districts. Work is in completion stage in 5 districts i.e., Khurda, Puri, Ganjam, Kandhamal and Sambalpur and in 5 districts work is in progress.
- **Programme & Activities for Senior Citizens:** Government of Odisha has decided to provide adequate facilities for welfare of Senior Citizens in the state. A Scheme i.e., "ABADANA" has been launched by the State Government with. For the year 2021-22 there is budget provision of INR 250.00 Lakh for implementation of different welfare programmes for senior citizens in the State. Also, the BAYOJYESTHA SAMMAN Award has been introduced in the year 2017-18 to recognize outstanding contribution of individuals and institutions in the field of senior citizens. 5 Geriatric Rehabilitation centres provided at Bhubaneswar, Baripada, Sambalpur, Kandhamal and Ganjam.

V. Welfare of Persons with Disability

6.7.41. As per 2011 Census, there were 12.44 lakh disabled persons in Odisha. Several welfare schemes are being implemented in the State with exclusive financial support of State Government and support from the Government of India to bring the differently abled into the mainstream of the society.



6.7.42. Some of these are listed below:

1. Indira Gandhi National Disability Pension Scheme (IGNDP)

Govt. of India has launched this scheme during February-2009. Persons with severe or multiple Disability between 18-79 years and belong to household below the poverty line will be eligible to get pension at the rate of INR 500 (INR 300 from Gol and INR 200 from State Govt) per month in the above scheme. At present, 82,130 beneficiaries have been covered under this Scheme. For the year 2021-22, INR 4003.06 Lakh has been provisioned under Programme.

2. Bhima Bhol Bhinnakhyama Samarthya Abhiyan (BBSA)

This is a new scheme implemented from the year 2016-17. The aim of the scheme is identification, certification, and distribution of Aids/Appliances to the PwDs by conducting single window camps in each Block of the State. For the purpose, an amount of INR 2300.00 Lakh has been provided for the year 2021-22.

3. Accessible India Campaign

Government of India is providing assistance to State for construction of barrier free environment under the Accessible India Campaign for Persons with Disabilities. Out of 50 buildings 26 Government buildings have been made accessible under Accessible India Campaign (Government of India) under the State Scheme 117 buildings have been retrofitted and made accessible. 253 websites have also been identified by Government of India and are being made accessible through an agency (ERNET) selected by Government of India.

4. Scholarship & Stipend to Students with Disabilities

The State Government introduced the scheme during the year 1978-79 to award scholarships to the day scholars among disabled students studying in schools and colleges with a view to encourage them to continue their studies and to bring them into the mainstream of the society. The State Government grants scholarships to the students from Primary school level up to the University level at prescribed rates through DSSOs. This is a continuing scheme.

Besides, the trainees of the National Career Service Centre for Differently Abled (NCSCDA), Bhubaneswar are also getting stipend from this Department out of the Budget provision made under the Head "Scholarship & Stipend to Disabled Children." For 2021-22, provision of INR 800.00 Lakh has been made under the scheme.

6.7.43. For 2021-22, provision of INR 800.00 Lakh has been made under the scheme.

1. Rehabilitation of Physically & Mentally Challenged, Socially Disadvantaged Persons.

The scheme was introduced during 2008-09 for rehabilitating the Physically & Mentally Challenged, Socially Disadvantaged Persons. This scheme is demand driven and for the year 2021-22, provision of INR 1200.00 Lakh has been made. 63 NGOs have been empanelled to provide services to 3,688 disabled persons.

2. Campaign, Seminar & Sports

This scheme is for organizing State Level workshops, seminars, etc. on International Women's Day, Children's Day, World Disability Day, etc. For the year 2021-22 an amount of INR 500.00 Lakh has been provisioned.

3. Incentive for Marriage Between PwDs & Non-PwDs

Government have introduced a new scheme "Award of Incentive for marriage between persons with Disabilities and other persons" during 2013-14. The aim of the scheme is to encourage marriage of non-PwDs persons with PwD persons and to enable them to lead a dignified life in the society. The incentive is INR 2,50,000 for each case. For the year 2021-22, INR 1000.00 Lakh has been provisioned under this Scheme.

4. School Uniform for Special School Children

Government have introduced a new scheme "Uniform to the students at the special schools". The aim of the scheme is to provide free two uniforms annually to the students of existing 103 such schools under grant-in-aid fold. An amount of INR 80.00 lakh has been provisioned for the year 2021-22 for the year 2021-22 for 6,815 children with disabilities.

5. Special ITI for PwDs

A special ITI for Persons with Disabilities in the State is functioning at Jatni of Khordha District to provide Skill Development in different trades like Electrical, Fitter, Welder, Plumber, Dress Making, Computer Operator cum Programming Assistant, COPA-VI, Beautician etc. for their employment/self-employment.

6. Care & Protection of Intellectual Disability & Spastic Children

The State Government have introduced the scheme for Persons with Intellectual Disability and Care and Protection of Spastic Children with an objective of creating awareness among the public as well as the parents of spastic children and to provide training and education to them with cerebral palsy to make them self-sufficient. Financial assistance is being provided to Voluntary Organisations for the purpose. Under the scheme a provision of INR 0.01 lakh has been made.



7. Free Laptops for Visually Impaired Students

Government of Odisha have decided to provide free laptops & voice recorders to the visually impaired students pursuing higher education. For the year 2021-22, there has been a provision of INR 200.00 Lakh under the scheme.

8. State Commission for Persons with Disability

The Rights of Persons with Disabilities Act, 2016 is a Central Act and is being implemented in the State. Section 79 of the Act provides for appointment of a Commissioner for Persons with Disabilities in the State. At present, the office of the Disabilities Commissioner is functioning in Government accommodation at Bhubaneswar. For the year 2021-22, an amount of INR 144.00 Lakh has been provided.

9. Rehabilitation of Cured Leprosy Patients

To provide social security and financial assistance to the persons cured of leprosy, State Government have adopted a Rehabilitation Programme since 1985-86 and grant-in-aid is being sanctioned in favour of the Hind Kusth Nivaran Sangh, Odisha State Branch, Bhubaneswar and Dayashram, Cuttack for imparting vocational training to cured leprosy patients in different trades. Besides, financial assistance is also provided for maintenance of Trainees with food, clothing, etc. for maintenance of 152 beneficiaries rehabilitated in the Centres at Paralakhemundi, Balasore, Sambalpur and Cuttack. For the year 2020-21, INR 100.00 Lakh has been provisioned under the scheme.

10. Hostel for Women with Disabilities

To meet the special accommodation needs of outstation women with disabilities either undergoing education or employed, the Department there are hostels with infrastructure. Currently one working women's hostel within the campus of Nibedita Working Women Hostel and two student hostels are functioning in Rama Devi and Sailabala College for women with Disabilities. For the year 2021-22, INR 100.00 Lakh has been provisioned under the scheme.

11. Rehabilitation Centres including SIDR/ DDRCs/ARC/SIEP

Under National Programme for Rehabilitation of Persons with Disabilities (NPRPD) presently, there is a SIDR and 8 DDRCs functioning in the State. The SIDR is in the State Headquarters and the DDRCs are in Khorda, Kalahandi, Sambalpur, Phulabani, Mayurbhanj, Koraput, Ganjam and Nawarangpur. Funds are provided towards salary of the staff and maintenance of the SIDR and DDRCs. State Institute of Disability Rehabilitation (SIDR) Bhubaneswar and 8 District Disability Rehabilitation Centres are set up and functioning under the Department to take up the rehabilitation activities for the PwDs by rehabilitation professionals. Department

has taken steps for setting up of two specialized units i.e., SIEP and two Advanced Rehabilitation Centres at Bhubaneswar and Sundargarh respectively. For the year 2021-22 SIEP has been provided INR 500.00 Lakh and for ARC INR 600.00 Lakh.

12. Computerized Braille Press

A high-speed computerised Braille Press has been established in Berhampur for supply of Braille Books to the Visually Impaired students. State Govt. is providing support it for production of Braille Books and for remuneration of the staff engaged there. The computerized braille press is functioning under the Department at Berhampur for production of Braille Books and materials for visually impaired persons. The upgradation work of the press is on-going. For the year 2021-22 INR 10.00 lakhs have been provided.



13. Skill Upgradation Training and Rehabilitation

The Department is supporting for skill upgradation training and economic rehabilitation of PwDs. For this purpose, PwDs are being placed under different vocational training and also assisted for production activities for the year 2021-22 INR 200.00 lakh have been provided.

14. Training of Teachers

The Department is supporting training centres for special teachers including SISER functioning under this Department. For the year 2021-22 INR 55.19 lakhs have been provided.

VI. Welfare of Scheduled Castes and Scheduled Tribes

6.7.44. Odisha occupies a unique position among the Indian States and Union Territories for having a rich and colourful tribal scenario. The scheduled tribes (ST) and scheduled castes (SC) constitute about 40 per cent of the State's total population (ST-22.85 per cent and SC-17.13 per cent as per 2011 census). About 44.7 per cent area of Odisha has been notified as scheduled area. It extends over 119 blocks in thirteen districts, which covers ST population (about 68 per cent) of the total tribal population of the State. 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.

6.7.45. Development of ST and SC communities, elimination of all forms of exploitation and improvement of their quality of life has been the prime objective 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.

Protection of Civil Rights of SC and ST

Legal Aid Assistance

6.7.46. 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 has opened 390 legal aid cells in 314 block headquarters by engaging 697 legal retainers (30 in district headquarters, 46 in sub-divisional headquarters and in 314 blocks of the State). The retainers have been trained to provide 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

6.7.47. Cash incentives of INR 2.50 lakh is being provided for inter-caste marriages between SCs and other castes in Hindu communities for social integration and removal of untouchability.

Table 6.27

Centrally Sponsored Scheme for implementation of Protection of Civil Rights Act, 1955 and the Scheduled Castes and Scheduled tribes (Prevention of Atrocities) Act, 1989

Scheme	Achievement	Target	Achievement till March 2021	
		Amount (INR)	No. of Beneficiary	
Monetary Relief	100 per cent	295375436	2828	100 per cent
Inter-Caste	100 per cent	367152000	1847	100 per cent

Source: ST & SC Development Department

Odisha PVTG Empowerment and Livelihood Improvement Programme (OPELIP)

6.7.48. OPELIP has been 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 of 20 blocks through 17 micro projects for duration years from 2016-17 to 2023-24 having financial outlay of INR 795.42 crore for 62,356 targeted households. Its objectives are to improve the food and nutrition security, reduction of poverty, livelihood opportunities adopted by tribal communities and build the capacity of the targeted households, improve their agricultural practices, promote income generating micro-enterprises and ensure access to education, health and other services and improve communities' infrastructure. During 2020-21, funds to the tune of 93.35 crore released and INR 80.47 crore utilized. 37,047 beneficiaries benefitted under the scheme.

Mission Jeevika

- State Government has started Mission Jeevika with the purposes of ensuring sustainable livelihoods of ST families through land and non-land based livelihood activities in clusters and developing suitable infrastructures so as to improve the standard of living and facilitate incremental results in their livelihoods.
- Mission Jeevika is being implementing in all 119 Tribal Sub Plan blocks through the 22 ITDAs operational in the State. 1,59,657 tribal beneficiaries were supported to take up various area specific farm and off-farm production clusters. Different farm and off-farm clusters were promoted through provisioning of quality inputs, introduction of better production practices, irrigation sources and timely marketing linkage.
- Mission Jeevika has entered into a partnership with Agriculture Production Clusters (APCs) of Department of Agriculture and Farmers' Empowerment, Odisha to enhance the income of small and marginal tribal farmers of 28 tribal dominated blocks in 7 districts by facilitating them to practice market-linked production clusters.

Alternate Learning and Mentorship Programme (ALMP)

- In response to the prevailing extraordinary situation of COVID-19 pandemic, ST & SC Development

Department rolled out Alternate Learning and Mentorship (ALMP) from 15th May 2020 to keep ST/ SC students connected with learning process.

- The ALMP consisted of both online and offline mode of teaching and learning.
- e-content that maps to the curriculum of Std.-II to X has been collated and created by State Resource Group (SRG) and transmitted to District Resource Group (DRG) for onward transmission to school and students through WhatsApp, e-mail with a dedicated YouTube channel (e-suvidya).
- A teacher mentorship activity was rolled out subsequently and around 4700 SSD Department teachers visited allotted villages to establish learning focused dialogue with students and parents with contextual themes about COVID appropriate behaviour and with support of UNICEF, UNFPA and SCSTRTI virtual trainings were organised on key life skill subjects like child marriage, teenage pregnancy, sexual abuse etc. to make learning interesting for students.

VII. Welfare of widows, transgenders, beggars and other destitute

1. **Indira Gandhi National Widow Pension Scheme (IGNWP)**

Govt. of India has launched this scheme during February-2009. Widows who are between 40-79 years and belong to household below the poverty line will be eligible to get pension at INR 500 per month in the scheme (Rs300 (GOI)+Rs200 (State Govt)). At present, 5,28,571 beneficiaries have been covered under this scheme. For Annual Budget 2021-22 an amount of INR 24645.20 Lakh has been provisioned.

2. **National Family Benefit Scheme (NFBS)**

The scheme is one of the components of the "National Social Assistance Programme" which is being implemented in the State w.e.f. 15.08.95. Under this scheme, financial assistance is provided to the BPL family on the death of the primary breadwinner of the family within the age group 18-59 years w.e.f. 18.10.12. A one-time grant of INR 20,000 is being provided to the bereaved families in each eligible case, the total of which is borne by the GOI. At present, 16960 beneficiaries have been benefited under the scheme. Provision of INR 3939.00 Lakh has been made under the Annual Budget 2021-22.

3. **SAHAY**

The scheme i.e. "SAHAYA" has been launched by the State Government in the year 2017-18 to address the problems of beggars and destitute in the State and to facilitate their rehabilitation process. For the year 2021-22 there is a budget provision of INR 1200.00 Lakh. All Districts have conducted the survey of beggars and have their plan for rehabilitation of Beggars following the above guideline. 25 Rehabilitation Centres with intake capacity of 1,875 inmates are set up.

4. **De-Addiction (Non-Clinical) – Preventive Campaign**

This scheme is being implemented from the year 2016-17. The aim of the scheme is to conduct Information, Education and Communication Campaign. For the purpose, an amount of INR 200.00 Lakh has been provisioned for the year 2021-22. Under the scheme funds have been provided to NGOs to motivate the alcoholics and addicts to avoid alcohol and drugs. Two De-addiction Centres also provided under the scheme.

5. **SWEEKRUTI**

For rehabilitation and welfare of transgender persons of the state, the State Government has launched a Scheme i.e., "SWEEKRUTI". For the year 2021-22 there is a budget provision of INR 250 Lakh for implementation of the Scheme.

Digitalization of social security pension schemes

The process of online application of social security pension has been streamlined in the State with more beneficiaries who are otherwise ineligible and not able to visit Block office for this purpose, can now apply for pension through online at any place by visiting www.ssepd.gov.in.

The Department has operationalized a Senior Citizen Helpline No. 14567 equipped with technically sound manpower to provide necessary support to the senior citizens at the time pension application. The above Helpline ensures sanction of pension through online right from application level to sanction level by pursuing the matter at different level. The Helpline also provides multiple support to the Senior Citizens.

MBPY scheme was expanded to include widows and orphaned children of COVID affected families. Two new categories of beneficiaries such as MBPOC (COVID) and MBPWP (COVID) were included under MBPY to grant social security pensions.

DBT is being implemented under NSAP pension schemes to cover 5 lakh beneficiaries with verified bank account details in the pensioners' database. The new concept of SNA was adopted under both NSAP and MBPY for smooth flow of funds and effective cash management.

As per the announcement of Hon'ble Chief Minister, social security pension for 3 months i.e., from June to August-2021 was disbursed in advance among the existing beneficiaries under Madhu Babu Pension Yojana (MBPY) and National Social Assistance Programme (NSAP) in the month of June. In view of the prevailing situation of COVID-19 pandemic, all existing eligible pensioners were paid advance pension at their doorstep.

The Department of SSEPD is also providing the following 11 online services to the citizens through the portal www.ssepd.gov.in.

- Online Application for MBPY Pension Scheme
- Online Application for NSAP Pension Scheme
- Online Application for free laptop to VI students
- Online Application and sanction of Marriage Incentives
- Online Application for Special School registration
- Admission of Disabled students in Special School
- Online Registration for BBSA Camp
- Online Application and Issuance of PwD ID Cards
- Online Registration for NGOs
- Online Grievance lodge system
- Online transgender identification certification



6.8. IN CONCLUSION

Odisha has made considerable progress in terms of reducing poverty (conventional method of measurement) and improving human development indicators. The multidimensional poverty indicator (MPI) is a relatively new method of measurement in India and hence even medium-term comparisons are not possible. However, in comparison to all-India figures, Odisha has greater percentage of poor in the total but the intensity of poverty is less. Almost all the indices showing progress in terms of health and educational outcomes show improvements over time, in Odisha. Many of these indices, however, have finite maxima or minima (100 per cent or zero), and as we move from very bad to average to better than average and finally to the vicinity of the maxima/minima, progressively more effort is required to achieve even small doses of improvement. Odisha has reached the average or better than average stage in many health and education indicators starting from very low levels (it had the worst infant mortality and maternal mortality rates among all states in India three decades ago), and it follows that now on, more intensive efforts will be needed to bring about any noticeable improvement.

Because of various reasons including resource constraint, the State Government has adopted the policy of a mix of private and public supply for health and education. Marginal additions are gradually shifting to the private sector, but this policy needs to be applied with caution to ensure that the poor are not priced out of the market. This is particularly important for higher/technical education. Sanitation is almost entirely in public hands, but with appropriate rules, private and public sanitation infrastructure can be distinguished, and onus of private sanitation infrastructure of specified type and design can be kept on the private sector. It is well-known that health status of a community is intimately linked to water supply and sanitation, and policies should consider the three together irrespective of organisational divisions. Welfare of specified groups is by definition a part of the welfare activities of the government and will continue to be so, with support at the margin by private charitable organisations. In this context, a new type of vacuum that appears to be emerging is that of lack of care for the older senior citizens arising from various factors including higher life expectations, breakup of the joint family system, and migration of the younger generation. The government may have to step in much more significantly than hitherto to provide geriatric care and old age homes, not necessarily free in all cases.

CHAPTER

7

Governance Reform –
Empowering Citizens

"Good governance is, among other things, participatory, transparent and accountable. It is also effective and equitable. And it promotes the rule of law. Good governance ensures that political, social and economic priorities are based on broad consensus in society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of development resources."

Source: The 1997 UNDP Report on Governance for Sustainable Development

Effective and transparent governance leads to overall economic and social well-being of the citizens. Promoting good governance requires concerted efforts that reinforces the idea of being responsive to the requirements of the citizens. The Government of Odisha's 5T governance framework (5Ts being Technology, Teamwork, Transparency & Time leading to Transformation) lies at the core of the good governance initiative. The State has ensured time bound and transparent delivery of public services through the legal framework of Odisha Right to Public Services Act (ORTPSA) which enables the citizens to demand public services as a right. Odisha has been maintaining law & order and other vigilance related activities through a robust technological ecosystem such as Crime and Criminal Tracking Network and Systems, mobile applications such as "SAHAYTA", "ARAKHI" for easier investigation of crimes.

Odisha has seamlessly adapted, and integrated ICT based systems for wide variety of public services. Achievement of Sustainable Development Goals by the State is being monitored by a dynamic mapping matrix ensuring convergence and coordination at all levels of governance. From recruitment management systems to litigation management systems, the State is consistently making headway towards a more transparent governance model. The State has leveraged IT to deliver seamless services between Government and Government (G2G), Government and Citizens (G2C), and Government and Business (G2B). Beginning with the block level computerization in 2003—04, the State Government has rolled out a suite of e-governance applications with a citizen centric focus. It also has a one stop portal for accessing all public services needed across an individual's life cycle. Apart from delivery of public services, Odisha also has infrastructures of cyber security, grievance redressal, Artificial Intelligence (AI) for maintaining good governance. The focus of the Government on empowering the industrial and business sectors by using technology-based services has resulted in improved growth of the state. Odisha has managed to mitigate the impact of natural disasters through technology-based governance solutions.

The 5T model of governance, thus, has truly transformed the landscape of governance in Odisha through enabling an ICT-based environment for holistically addressing the needs and demands of its citizens.

7.1. INTRODUCTION

7.1.1. Governance is a process by which all governmental, as well as non-governmental organizations, civil societies, private sectors, are involved in the process of policymaking and in the process of implementation of those policies. In 1992 report titled "Governance and Development", the World Bank defined Good Governance as "the manner in which power is exercised in the management of a country's economic and social resources for development." Good governance has eight major characteristics. It is participatory, consensus-oriented, accountable, transparent, responsive, effective, and efficient, equitable and inclusive and follows the rule of law. It assures that corruption is minimized, the views of minorities are considered and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society. The 8 Principles of Good Governance by United Nations are depicted in Figure 7.1.

7.1.2. Good governance includes building competency, aligning strategies with goals, being accountable, having a high-level of ethics and integrity, defining roles and responsibilities. The exemplary initiatives of the State Government including Mo Sarkar, E-Governance approach, Implementations of Bharatnet-II, disaster management mechanisms, Inclusive online common services have proved to be the Best Practiced Models for Good Governance.

Figure 7.1 Attributes of Good Governance



7.1.3. In the Good Governance Index (GGI) 2020-21 brought out by the Department of Administrative Reforms and Public Grievances, Government of India, Odisha has topped in two sectors, Human Resource Development and Economic Governance in the category of group B States. Further, the State has improved its GGI score from 4.44 in 2019 to 4.58 in 2020-21, and the improved sectors include agriculture & allied sector, human resource development, public infrastructure and utilities, social welfare and development, and judiciary and public safety.

7.1.4. This Chapter discusses the various elements of Good Governance in the context of Odisha. The rest of the chapter is structured under ten sections - delivery of public services, tracking progress on SDGs, law & order, tackling corruption, transparency, results monitoring, e-governance, natural disasters – impact and management, and improved governance through 5T and Mo Sarkar.

7.2. DELIVERY OF PUBLIC SERVICES

7.2.1. Odisha's Right to Public Services Act (ORTPSA), 2012 initiative by the State Government provides public service within the stipulated time frame and aims to cover various benefits under a single umbrella at the State level. The law enables the citizens to demand public services as a right. It includes a provision for penal action against officials failing to provide the services within the stipulated time. The idea is to generate demand for services and provide citizens with a platform for getting their grievances redressed in a time-bound and transparent manner. This is in sync with the State Government's 5T governance framework.

*Rights-based
service delivery
ensured
through Odisha
Right to Public
Services Act*

7.2.2. The Odisha Right to Public Services Act (ORTPSA) online module (www.central.ortpsa.in) is a dynamic dashboard for monitoring delivery of notified public services, including integrating online services with a central monitoring system. In accordance with Odisha Right to Public Service Act, 411 services have been included in 31 departments.

7.3. TRACKING PROGRESS ON SUSTAINABLE DEVELOPMENT GOALS (SDGs)

7.3.1. State Government Departments led by the Planning and Convergence Department have developed a dynamic and strategic mapping matrix for focusing the schemes/initiatives and the implementing departments/agencies on SDGs and associated targets. This mapping helped to identify prospects for further convergence and co-implementation of schemes and programme at district, sub-district levels thereby enabling charting of responsibilities across departments and agencies for programme implementation and monitoring of progress. This facilitates collaboration across departmental and sectoral boundaries for pursuing of SDG-driven initiatives.

7.3.2. The State Government has developed the Odisha State Indicator Framework (OSIF) to track and measure progress on the SDGs and associated targets in a context-specific manner. In October 2021, it has inducted a multi-disciplinary Project Management Unit (PMU) to extend technical and management support in implementation of various initiatives towards achievement of SDGs and associated targets in the State.

7.3.3. With NITI Aayog's publication of SDG India Index on an annual basis, a healthy cycle of inter-state competition to accelerate progress has been unleashed. Odisha intends to take it further to local levels by launching the process of ranking of districts on SDG progress. This process will whet up the district planning and implementation system and also stimulate the local development process involving the Panchayati Raj Institutions and urban local bodies.

7.3.4. SDGs do comprehensively encompass most aspects of development, such as, poverty, health, education, security, environment, governance, economic development, etc. in strategic ways. Therefore, linking SDGs to a State's budget is important to appropriately inform resource allocations and orient implementation and delivery on the ground to the SDGs.

7.3.5. The Government of Odisha has brought out the SDG Budget Statement from 2021-22, to streamline financial allocation for effective achievement of the goals. The Government is looking forward to proactively working with the

private sector, civil society and philanthropies to bridge resource gaps in achieving various SDG targets, particularly those requiring higher spends, costly technology or managerial innovations. In this direction, the Government will evolve policies, and consult and partner with relevant stakeholders.

7.3.6. The 2030 Agenda explicitly recognises the role of monitoring and underlines the need for revolutionising the monitoring and data system. On the one hand, it will involve strengthening the system and processes for data capture, validation, storage/warehousing, retrieval and visualisation. On the other, systematic analyses will be used by relevant duty-bearers for tracking progress and improving performance. Online dashboards on SDGs will provide effective interfaces at block, district, and State levels for monitoring of progress as well as encouraging public accountability.

7.4. LAW AND ORDER

7.4.1. 'Police' and 'Public Order' are State subjects under the Seventh Schedule to the Constitution of India and therefore, it is the primary duty of the State Governments to prevent, detect, register, and investigate crime and prosecute the criminals. Government of Odisha is committed towards maintenance of the law and order in the State. The law and order and overall crime situation in the State has remained under control. Sporadic law and order situation and law and order during Covid-19 pandemic have been handled effectively with tact and forbearance. Protection of women, children and weaker section is among the top-most priorities of the state. All sensitive and important cases are being treated as red flag cases for better monitoring of investigation. According to the National Crime Records Bureau (NCRB) the total number of crimes under IPC and state/local laws was 134230 in Odisha in 2020, compared to 6601285 for India. This implies that Odisha accounted for 2 per cent of the country's crimes under IPC and state/local laws. Further, the rate of cognizable crimes (IPC and state/local laws) in the State was 295.2 in 2020 compared to 487.8 for India. The charge sheeting rate was 75.9 per cent for Odisha while the same was 82.5 per cent for India (Crime in India 2020, Volume 1, National Crime Records Bureau, Ministry of Home Affairs, Government of India).



7.4.2. To enable citizens to track the progress of cases filed with the police, Odisha Police has implemented Crime and Criminal Tracking Network and Systems (CCTNS). It aims at creating a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing through adopting the principle of e-Governance and creation of a nationwide networking infrastructure. CCTNS is intended to ensure that Police maintains all Crime and Criminals data through online system.

7.4.3. Under CCTNS Project, all police stations (PS) and Higher Police Offices in the State have been computerized and networked. CCTNS covers 626 PS, 113 ACP/SDPO office, 3 Addl. SP, 36 SP office, 9 Ranges including Railway and CP office, 12 other Higher office like, BPSPA, SP HDQRS, CID CB, HRPC, SAP, Communication, SFSL, Intelligence and Operation in Odisha. Using this IT infrastructure all FIR, Arrest Memo, Seizure Memo, FF/Charge sheet etc can be uploaded through the system to leverage the data which is uploaded by CCTNS.

7.4.4. Odisha is a frontrunner in implementation of CCTNS project and has been recognized by NCRB for its best practices and innovation. At present 18 services are being provided to citizens through CCTNS by Odisha Police. To provide better and quick services to citizen, Odisha Police has launched

Odisha Police's "Citizen Portal" enables citizens to register their complaints and track the status of their complaints/service requests online

“Citizen Portal” under the CCTNS Project through internet, which enables citizens to register their complaints and seek services from the Police Department without visiting the police station/ higher offices. It also enables them to track the status of their complaints/service requests online.

7.4.5. Odisha Police has also developed Mobile App namely “SAHAYATA” for citizens and “ARAKHI” App to help the Investigating Officers for investigation on the spot. VAHAN & SARATHI Service of Transport Department has been integrated with Core Application Software of CCTNS. Accident Investigation Module has also been developed to capture data required for analysis and complying requirements of Ministry of Road Transport, Government of India. The module will generate an analytical report which will help in policy formulation for reducing fatalities in road accidents and in making roads safer. For quicker delivery of services to accident victims, Roads Accident Case Document Module (a web-based application aimed at facilitating uploading of accident-related documents by Police and easy downloading by insurance companies as well as victims) has also been implemented.

7.4.6. Besides, for qualitative and quicker delivery of services under Criminal Justice System, Medico- Legal Opinion System (a web-based Application aimed to avoid delay in getting legal opinion in all important and sensitive cases) has also been integrated with CCTNS Core Application Software database. It enables Investigating Officers of Odisha Police to directly send requisition to Medical Officers who can upload examination reports against requisition. Virtual Police Station, an online mechanism has also been established to facilitate online registration of FIR (e-FIR) in unknown motor vehicle theft cases and theft at public places. If a case remains undetected for 21 days, final form shall be auto generated at CCTNS. Other important modules are FSL Module which automates the entire work of State Forensic Science Laboratory to maintain transparency, efficiency and to reduce the workload.

7.4.7. Extremist Management Module: Extremist Management Module has been developed to assist the police personnel posted to Maoist affected districts of the State for creating a database of Maoist organisations and cadre, looted, and recovered arms and ammunition etc. and for monitoring Maoist activities.

7.4.8. State Government has also introduced ‘Emergency Response Support System’ (ERSS) in the State. Under this system, all emergency services like Police, Fire, Ambulance, Women helpline etc. such as 100, 101, 102, 104, 108, 181, 1098 will be integrated in to single Dial number “112” to respond to people in distress including women and children in an efficient and coordinated manner in the shortest possible time. Police, Fire and Health services have already been integrated with the single Dial number (‘112’).

7.5. TACKLING CORRUPTION: VIGILANCE

Registration of cases

7.5.1. This section provides update for the financial year 2021-22 until the month of October 2021. State Vigilance has registered 160 criminal cases against 335 persons including 34 Class-I officers, 30 Class-II officers, 143 Class-III employees, 3 Class-IV employees, 9 other public servants and 116 private persons. Out of 160 cases registered, 55 cases were instituted for acquisition of disproportionate assets against 64 public servants and 32 private persons. The total disproportionate assets in all the 55 cases have been calculated as INR 64.13 Crore. Similarly, 77 trap cases were instituted during the period against 83 public servants and 6 private persons for demand and acceptance of bribe amounting to INR 16.32 Lakh.

Misappropriation cases

7.5.2. During the above period 28 misappropriation cases relating to misappropriation of public money against 148 persons, including 72 public servants and 76 private persons, amounting to about INR 3.95 crore have been registered. Misappropriation cases have been registered against 16 Class-I officers, 8 Class-II officers, 44 Class-III employees, 01 Class-IV employee, 3 other public servants and 76 private persons.

Enquiries

7.5.3. During the above period 158 enquiries have been initiated against 20 Class-I officers, 27 Class-II officers, 136 Class-III employees, 5 Class-IV employees, 27 other public servants and 11 private persons on their alleged involvement in various acts of corruption / malpractice. 170 enquiries have been disposed of, out of which 45 enquiries were referred to respective departments for initiation of departmental action and 67 enquiries were converted to criminal cases.

Submission of Charge Sheet

7.5.4. During the above period 131 cases were disposed of after investigation, out of which, charge sheets were registered in 125 cases (95.41 per cent) against 277 persons including 38 Class-I officers, 42 Class-II officers, 80 Class-III employees, 3 Class-IV employees, 3 other public servants and 111 private persons.

Arrest

7.5.5. During the above period 133 persons were arrested which include 20 Class-I officers, 20 Class-II officers, 76 Class-III employees, 01 Class-IV employee, 01 other public servant and 15 private persons.

**Conviction in Court**

7.5.6. During the above period 26 cases ended in conviction against 01 Class-II officer, 28 Class-III employees, 04 Class-IV employees and 3 private persons. Thus, altogether, 36 accused persons were convicted during the period. The percentage of conviction in respect of the cases disposed of after trial by the Courts comes to 45 per cent.

Dismissal from service

7.5.7. During the above period 6 Public Servants were dismissed from service following their conviction in Vigilance cases, which include 6 Class-III employees.

Stoppage of pension

7.5.8. During the above period the pension of 3 retired public servants have been stopped, consequent upon their conviction in Vigilance cases, which included 01 Class-II Officer and 02 Class-III employees.

Forest Wing

7.5.9. The Forest Wing of Vigilance conducted 65 joint raids with the help of local forest officials. Timber, machineries, and vehicles worth INR3.06 crore (Approx.) were seized. In this connection, forest offence cases were initiated against 25 persons.

7.6. TRANSPARENCY

7.6.1. Integrated Recruitment Management System (IRMS)

IRMS is a software application for end-to-end automation of the recruitment process. This application has already been implemented in the Odisha Public Service Commission, Odisha Staff Selection Commission and Odisha Sub-ordinate Staff Selection Commission to ensure transparency and time bound completion of recruitment.

The State is ensuring transparency through digitization of HR services and litigation management facility

7.6.2. Human Resources Management System (HRMS)

HRMS has been implemented to simplify Service-related works relating to Government employees. The Annual Establishment Review Module and Training Module have been implemented in HRMS. The Schedules of all Long-Term Advances are being sent to Accountant General Odisha online through HRMS. Features of Pay Roll System, Performance Appraisal Report (PAR) of Group- A Group- B and Group-C employees, online Leave, Loan and Advance, Leave Travel Concession, Increment, Review of Performance Appraisal Report (PAR) and Departmental Promotion Committee (DPC), e-Service Book, auto generation of Last Pay Certificate (LPC), Superannuation Projection Report, Transfer, Promotion and Deputation Modules have been developed and implemented in HRMS.

7.6.3. Litigation Management System (LMS)

LMS is implemented to ensure better management of Court cases of the Hon'ble High Court of Odisha. Court Cases of various Departments in the Hon'ble High Court of Orissa are being scanned to facilitate implementation of Litigation Management System. Now the interim orders, final judgments and contempt cases from the Hon'ble High Court are being received digitally to LMS to improve the efficiency of the system in timely compliance to the orders of the Hon'ble High Court. The benefits of LMS include:

- Seamless management of communication
- Scheduling of tasks
- Centralised access to data, and
- Quick access to legal research library

Box 7.1 Data as a tool for governance

"...statistics is an applied science and . . . its chief object is to help in solving practical problems. Poverty is the most basic problem of the country, and statistics must help in solving this problem" (Mahalanobis 1963)

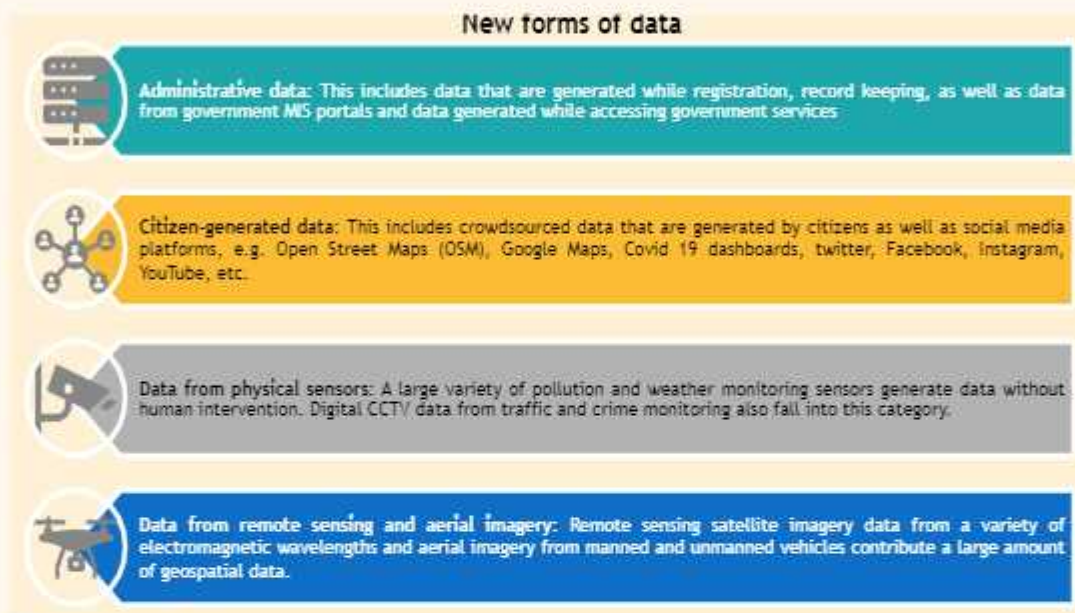
"Alongside capital, land, and labour, data are also an input to the development objectives . . . But, unlike capital, land, and labour, using data once does not diminish its value." (World Bank, 2021)

The role of data as a tool for governance for solving the developmental problems is age old. The last two decades, in particular, have seen a veritable 'data revolution' shaping our society in ways unforeseen in the past. Data is no longer a passive aid for academic research drawn from statistical abstracts. Aided by advances in processing capacity, storage methods and a variety

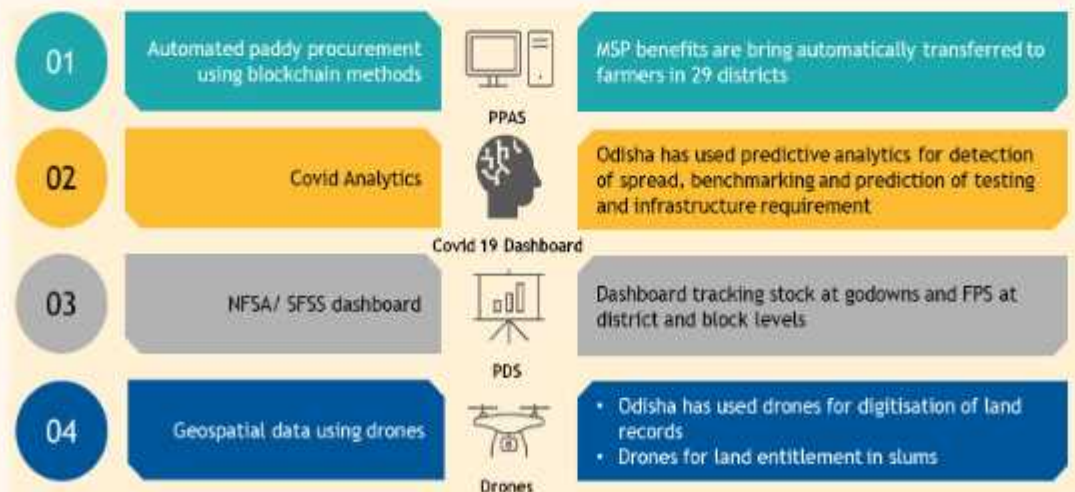


of smart hand-held devices, data generation, processing and consumption has become instantaneous. Data is shaping all aspects of governance –from planning, execution and monitoring to instantaneous course correction.

New data ecosystem: The traditional data ecosystem consisted of data from census and surveys. However, the perimeter of data ecosystem is greatly expanded these days through newer and high frequency data sources.



Odisha has been at the forefront of the data revolution. A few examples are given in the figure below:



7.7. RESULTS MONITORING

7.7.1. Strong monitoring and evaluation (M&E) systems are the bedrock of development effectiveness – aiding in tracking of utilisation of funds as well as checking whether implementation of programmes is as per the plan. However, the last two decades have seen a transition from this implementation focussed M&E to one that is ‘results focussed’. This is underscored by the emphasis on credible evidence backed policy making backed by a robust M&E system.

7.7.2. Traditional monitoring and evaluation (M&E) has had an ‘implementation centric’ approach with a focus on answering the question, ‘did the implementation happen?’. However, over the years, there has been a paradigm shift to a more results focussed M&E system, which aims to link Government spending and implementation to achievement of intended outcomes and results.



7.7.3. The key aspects of an integrated results-based M&E system are:

- **Linking planning with theory-based thinking:** In designing results-based M&E systems, the key aspect is linking policies with a theory of change, which explicitly lays down how the policy and programmes will eventually achieve the intended outcomes and results. Theories of change are in turn informed by evidence from various evaluations and synthetic reviews.
- **Moving from outputs to outcomes and impacts monitoring:** The second step is creating a monitoring system that is focussed on results (outcomes and impacts) rather than stopping at funds utilisation (inputs) or physical progress (outputs). This is typically achieved by leveraging a variety of new data sources.

Figure 7.2

Result monitoring and development effectiveness pathways



7.7.4. Results monitoring helps answer a key policy question, whether the development priorities of a State are met because of the schemes/policies or not. Additionally, it helps in deciding whether to scale up/down a given programme, assess efficiency (e.g. impact per Rupee spent); fosters transparency and accountability by disseminating results, inclusive development by taking onboard citizen voices and participatory evaluation, to name a few.

7.7.5. Results monitoring (Figure 7.2) has become increasingly more accessible with advances in data science and use of newer high frequency data from non-traditional sources and evaluation methodologies.

- With increased financial inclusion, diffusion of smartphones and digitisation of Government services, Governments have access to huge amounts of transactional and administrative data from users. This can be leveraged in newer ways to assess key developmental parameters like income and poverty status (from a variety of payments and tax databases), consumption of services, etc.
- Increased penetration of smartphones has made high frequency and targeted surveys easier through crowdsourced data gathering. This has the potential to revolutionise evaluations by enabling a variety of nimble evaluation methodologies.
- Advances in data science and availability of remote sensing and aerial imagery data (through drones and other means), is being increasingly used for a variety of outcome monitoring like land use, forest cover, yield of crops, land entitlement, assessment of property taxes, to name a few. Nightlight data from satellites can be used as a proxy for assessing intensity of economic activity.
- Social media platforms like twitter, Facebook, YouTube, etc. can be used in a variety of ways to assess effectiveness of a programme through tools like sentiment analysis, social media poll results, etc.
- Sensors and digital cameras deployed at key locations are being used to track environmental outcomes like pollution, climate change information, crime, etc.

7.7.6. The backbone of a results-based M&E is stakeholder interest to institutionalise such a mechanism and ensuring institutional structures that allow for smooth data flow and inter-departmental coordination. Planning & Convergence Department is a nodal department for Sustainable Development Goal (SDG) tracking and can therefore play a key role in this. A result monitoring cell could be set up with a dedicated mandate to monitor, measure, evaluate and report any social sector intervention.

Box 7.2:

Poverty and Human Development Monitoring Agency (PHDMA) – An example of M&E in the new age



Government of Odisha has set up Poverty and Human Development Monitoring Agency (PHDMA) with a vision to with strengthen monitoring and strengthening human development and poverty indicators in Odisha. The envisioned goal of formation of PHDMA has been to build capacity of State Government in tracking the progress of Poverty and Human Development Indicators within the State on a regular basis and providing an ACTIVE monitoring system and collecting national and international best practices with regard to poverty reduction and improved life quality and adapt them to local conditions and disseminate the same to different stakeholders. Here ACTIVE monitoring indicates Accurate, Compact, Transparent, Informative, Visible and Effective monitoring of the initiatives. In its 2.0 version, PHDMA has covered all 314 blocks of the state, touching lives of hundreds of beneficiary-protagonist directly while looking at impact of 40+ schemes.

The agency has a non-linear organisational structure which believes in creating an ecosystem way of change making. Its vast network of Panchayat level officers, functionaries and volunteers, known as Voice of PHDMA (VoP) are its 'ears and eyes' in the monitoring process. There are more than 6500 VoPs across the state. The new approach of PHDMA of making the monitoring and evaluation narrative-based and people-

centric is to make them participate in the process since it's about people and about their lives.

With the aim of conducting wider research and availing the stories and visuals collected from across the State to a larger audience, PHDMA has set up of three labs:

- Prambha: This suite of tools focus on narrative-based evaluation;
- Frame Tells: This suite focus on visual anthropology;
- Sankhya: This will focus on newer data sensing methodologies like using remote sensing, aerial imagery and other active/passive sensors

7.7.7. Apart from this, Odisha is already on the digitalisation path with a strong IT sector and a plethora of Government services being provided through digital means through Odisha Chief Minister's 5T governance model. This augurs well for a robust monitoring and evaluation system that is able to track results throughout the project life cycle.

Box 7.3 DMEO Best Practices Case Study - Odisha SNP systems strengthening



Government of Odisha implemented Supplementary Nutrition Programme (SNP) of the Integrated Child Development Services (ICDS) programme, has been included in DMEO's best practices compendium. Through the programme, nearly five million beneficiaries are being provided with SNP in the State.

The M&E framework has made a number of innovations which were recognized by the DMEO:

- The M&E system updates of records at the AWC regularly
- There is community oversight, which has led to greater transparency
- Use of ICTs in monitoring has led to greater accountability and transparency at all levels.
- Dashboard monitoring and Management Information Systems (MIS) feedback has led to greater ownership in the districts.

7.7.8. In a testament to the strong results management systems in the state, the Development Monitoring and Evaluation Office (DMEO), NITI Aayog has included a number of projects from Odisha in its compendium of best practices.

7.8. e-GOVERNANCE



7.8.1. ICT interventions in e-governance are setting a new paradigm for how Government provides citizens with essential services. In today's world, ICT forms the foundation for effective governance. The outbreak of Covid -19 Pandemic has hastened the transition to a borderless workspace and digitalisation of services and automation of processes. There is a rise in the expectation level of the public to avail of public services at their doorstep. Even many businesses re-engineered their processes to provide goods and services using digital platforms giving a boost to the gig economy. In keeping with these trends and to meet public expectations provision of a numbers of public services by the State Government shifted

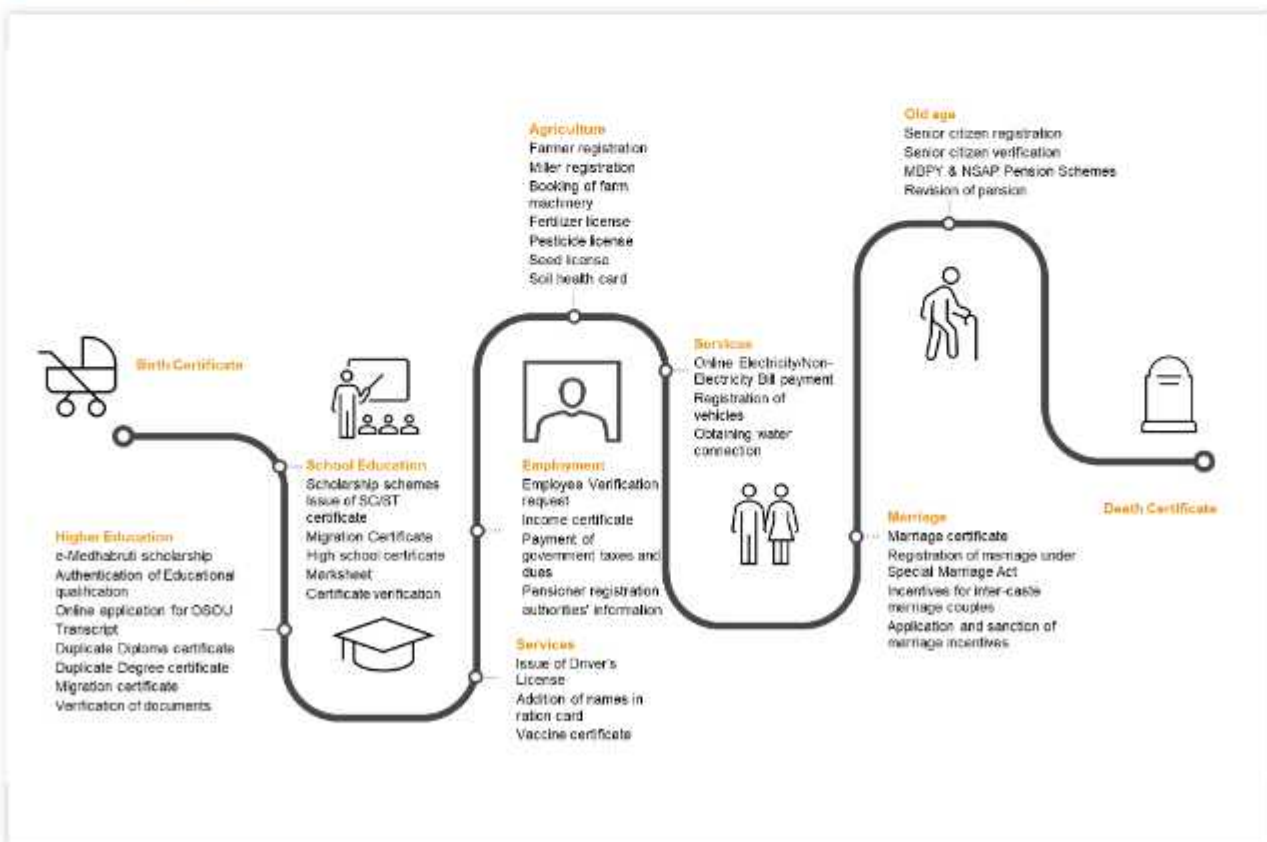
to a digital platform through adoption of appropriate IT applications for Government to Business and Government to Citizens.

7.8.2. Historically, Odisha has worked hard to be a model State when it comes to leveraging IT to deliver seamless services between Government and Government (G2G), Government and Citizens (G2C), and Government and Business (G2B). Beginning with the block level computerization in 2003—04, the State Government has rolled out a suite of e-governance applications with a citizen centric focus. Further, AADHAR enrolment share of the State is about 97.4 per cent of the population, compared to 92.2 per cent for the country, as on 30 September 2021 (Unique Identification Authority of India, Government of India).

I. Odisha One Portal: The One-Stop Access to Public Services

7.8.3. The State Electronics & IT Department has developed this common front-end interface to make it convenient for citizens to access G2C services. It is an integrated service delivery framework for G2C services through self-mode or Common Service Centres (CSCs). Key G2C services like birth certificates, death certificates, payment of water and electricity bills and booking tickets of OSRTC buses have already been integrated with the portal. MSK, Service Management, transaction, and financial management modules are also being designed for the portal. A snapshot of the e-governance facilities available at different stages of the life cycle is shown in Figure 7.3

Figure 7.3 A snapshot of e-governance through lifecycle



7.8.4. The State Government has set up a massive network of more than 3000 Mo Seva Kendras. Plans are afoot to set up more than 7000 such centres across the state, with at least one in each gram panchayat. People can visit these kendras to pay electricity and water bills, receive necessary certificates, pay taxes, and avail various other public services. The objective is to provide a seamless and hassle-free citizen interface in availing all key Government services. Implemented across 36 departments, the Odisha One portal has registered over two lakh users, offering 519 services.

7.8.5. Electronic Benefit Transfer: This scheme ensured electronic disbursement of all social sector benefits, including the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). In addition to EBT, other applications, such as e-Dak, which provides transparency in Government communications, and the Sanjog Helpline, the Integrated Grievance Redressal System, have consolidated the State Government's efforts in digital citizen interface.

7.8.6. 'e-Shishu' is implemented by Odisha Primary Education Programme Authority (OPEPA). It is the first-of-its-kind in the country. The project has two components: Child Tracking System (CTS) and Intervention, Monitoring & Information System (IMIS). CTS is a comprehensive database of all children below 14 years. It includes their socio-economic as well as demographic details. Project e-Shishu aims to track each child in school or out of school by demographic attributes, education status, financial status, and many such details. The e-Shishu project aims to optimize the use of resources by targeting those who need them instead of uniform/division among stakeholders or administrative units. It works as a decision support system for planners and administrators.

7.8.7. Odisha developed its state-wide infrastructure with the Odisha State-wide Area Network (OSWAN) scheme. This scheme serves as a backbone for data, video, and voice communications across the State under the National e-Government Plan (NeGP). Govt. has earmarked INR 350 crore to upgrade OSWAN and include GPs over next 5 years. As another core infrastructure project, the State Data Centre (SDC) has been created for hosting a myriad of Government applications. State has budgeted approximately INR 200 crore for a new State of the art SDC with Disaster Recovery Sites and Cloud Services. Additionally, the State Government has rolled out Mo Seba Kendras at GP level across the State to provide cost-effective and quality services to citizens at the doorstep, promote rural entrepreneurship, and encourage community participation.



7.8.8. To secure the ICT infrastructure and e-governance applications the Government of Odisha has set up a next Generation Cyber Security Operation Centre (CSOC). CSOC is fully owned and operated by the Government. The key features of the CSOC includes Bug Bounty, a setup through which ethical hackers/researchers will be given access to the applications in staging environment for finding out security bugs and for providing solutions to fix such bugs. This will enhance the safety of the applications, and ensure real time threat hunting, threat awareness & analytics. This centre operates round the clock and every day of the year. SDC, SWAN, Secretariat Network and applications hosted in these infrastructures are now being monitored. The CSOC services will be extended to other infrastructure in the future.

7.8.9. The Odisha State Workflow Automation System (OSWAS) envisaged digital processing of files and correspondence for efficient and effective management of governance. The application using an open-source technology stack has been successfully implemented across all Departments and now extended to all Directorates, District collectors, many SPSUs and Corporations, RDC Offices and Office of IGR leading to a significant reduction in the lifecycle of a file.

7.8.10. Odisha Registration Information System (ORIS) is being used for computerized registration of Deeds, endorsement of documents and issuance of Encumbrance Certificates. The Registration Department wing of the Revenue Department of the State provides both G2C and G2G services online using the software. The website offers services like valuation reports of all kinds of land, benchmark valuation of lands, stamp duty, registration fees, encumbrance certificate and My Document.

7.8.11. 'JanaSunani' is a Centralized Public Grievances Redressal and Monitoring System of Odisha. It is an omnichannel mode of grievance sourcing and redressal that enables citizens to file grievances, lodge reminders or clarifications and access near real-time view of the status of their complaints.

7.8.12. The e-District initiative has been identified by the Department of Electronics & Information Technology (Deity), the Ministry of Communication & Information Technology (MCIT), and the Government of India. The project aims at providing support to the basic administrative unit- 'District Administration' to enable content development of G2C services. This would leverage the three IT infrastructure pillars, the State-wide Area Network (SWAN) for connectivity, State Data Centre (SDC) for secure and safe data storage, and Mo Seba Kendra as the primary front-end for service delivery to citizens at their doorstep. E-District portal involves integrated and seamless delivery of citizen services by district administration through automation of workflow, back-end digitization, integration, and process redesign across participating sections/departments for providing services in the most efficient way.

E-district portal provides G2C services leveraging IT infrastructure of the state

7.8.13. The ICT-enabled Integrated Legal Monitoring System monitoring system records a legal case and tracks different phases of a case. It includes a mail messaging system with a workflow model for effective communication among Government officials and Government advocates. The system has helped to bring down the pending litigations in Government by generating near real-time alerts.

7.8.14. The use of analytics and Artificial Intelligence (AI) tools in the revamped Odisha Tourism Portal has helped to create a seamless online ecosystem for all players in the tourism value chain. Apart from the democratization of opportunities for all stakeholders in the tourism value chain the unified portal has bolstered online traffic leading to more inbound tourist arrivals.

Student Academic Management System and Scholarship Portal is transforming the education space

7.8.15. The online Student Academic Management System (SAMS) unifies the admission process, bringing all colleges under the Higher Education department under one platform. This has significantly helped to manage the admission process for the students.

7.8.16. This unified State Scholarship Portal includes all scholarships offered by multiple departments. By generating a unique ID for each student, the system checks duplication. It ensures that only the meritorious and deserving are awarded the scholarships.

7.8.17. The Chief Minister Social Media Grievance Cell is an application used for addressing public grievances in the State using social media. Citizens air their grievances on social media platforms like Facebook and Twitter and get responses from the concerned officials within 24 hours.

7.8.18. The State dashboard is a ground-breaking initiative by the Government of Odisha to leverage the power of Big Data & Analytics for driving vital administrative decisions. Enhanced by cutting-edge technologies like Big Data, Advanced Analytics and the ease of visualization, the dashboard serves as a ready reckoner for decision-makers and administrative officials. By offering a consolidated view of flagship schemes, initiatives, key projects and all major touchpoints in governance, the dashboard promises to set a new paradigm in decision making strengthened by data.



7.8.19. Odisha leveraged the Covid Portal to monitor the movement of COVID cases and contact tracing. Identification of containment zones was done through GIS. Further, dedicated call centres were established to address public queries. While the State COVID dashboard displayed real-time information on COVID-19 data, a health facility portal was created to monitor COVID hospitals' performance. This intuitive dashboard with drill down capabilities combines the power of data and analytics to help combat the pandemic better with information on rising caseload, testing facilities and status of health infrastructure.

7.8.20. Go-SWIFT (Government of Odisha's Single Window Investor Facilitation and Tracking), a one-stop portal is one of the monumental reforms undertaken to transform the G2B ecosystem. This seamless, single-window platform has integrated all applications of the industries department like GO PLUS, GO SMILE, GO CARE, Automated Post Allotment Application (APPA) and State Project Monitoring Group (PMG). GO SWIFT facilitates the online approval of 34 services from 15 State departments.

7.8.21. The GoIPASS provides hassle-free post allotment services to industrial units with timely approval and transparency. The services covered are payment of annual and monthly dues, change in name and style, change of activity, change of constitution, reconstitution of directors or partners, mortgage permission, transfer of leasehold interest, revocation of cancellation, surrender of plot and sub-letting.

7.8.22. e-Registration portal for Registration of documents and certificates has been integrated with DigiLocker for sharing of copy of Registered deed, Marriage Certificate under Special Marriage Act, Certificate of Partnership Firm, Certificate of State Level and District level Society with citizens through DigiLocker. Citizens can use/store these documents in DigiLocker as original documents and can also share with Requiring Agencies anytime and anywhere.

7.8.23. Delivery of land records services in online mode: Land Records Services for change of Record of Rights (RoR) through mutation proceedings, change of land use/Conversion of land u/s 8(A) of OLR Act, Partition of land on mutual agreement u/s 19(1) (c) of OLR Act and Demarcation of land(for industries) have been made online with effect from 1st October, 2020.

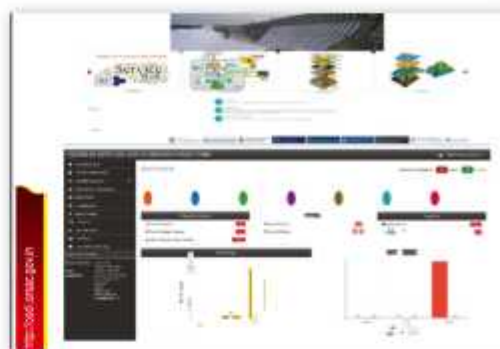
7.8.24. Under Postal delivery of RoR: After disposal of mutation case, new RoR is sent in the address of the buyer/ claimant as mentioned in sale Transaction report through speed post.

7.8.25. Facility for Online preparation and submission of Sale Immovable deed by registrant public for taking prior appointment from Registering Officer for presentation and registration of document has been made available in the IGR, Odisha Portal(<https://www.igrodisha.gov.in/>).

7.8.26. Rajaswa Ratha is a citizen centric initiative of Revenue and Disaster Management Department which aims at providing doorstep delivery of various revenue services during the pandemic period of COVID-19 and beyond.

The State Government has rolled out eight more technology driven solutions under the 5T initiative are given in Table 7.1.

7.8.28. Since 2020-21 the OSDI Geo portal is being used by many Departments like Forest & Environment, Rural Development, Panchayati Raj & Drinking Water, Water Resources, Housing & Urban, Home Dept. etc. for OGC services to integrate the layers like Administrative, thematic, infrastructure etc. at their end.



BLUIS (Bhubaneswar Land use Intelligence System)

7.8.29. BLUIS is developed for Safeguarding Government Lands in Bhubaneswar city by leveraging Space Application and Geo-informatics by GA & PG Department of Government of Odisha.

The Bhubaneswar Land Use Intelligence System (BLUIS) is developed to prevent Government land encroachments in Bhubaneswar city. The application uses frequently updated Geo-referenced cadastral map with geo-coded Govt plots and monitored through AI/Deep learning-based changed detection modules using monthly acquired high-definition satellite images. The alerts created are disseminated through mobile application for use by the field officials to validate the alerts that were identified by executing the machine learning modules.



7.8.30. BLUIS Portal and App is developed by using Space Technology, AI / Deep Learning based Image Processing, Geo-ICT and Web Technology as per the requirement of GA Department, BDA and BMC. Citizens can download the 'BLUIS' app from Play store and App store. BLUIS Portal is web hosted as www.bluis.odisha.gov.in

7.8.31. For proper monitoring and effective implementation of the project, SOP has been formulated indicating the role of different officials of GA&PG Department, BDA, and BMC. Timeline has been provided to the concerned officials at different stages starting from receipt of SMS alert up to removal of encroachment of Government lands. A cell has been constituted in BDA comprising officials of GA,

BDA, BMC & ORSAC for monitoring and implementation of the project. Escalation mechanism to track any delay at the stage of upload of evidence or follow up is embedded in the system.

7.8.32. In total 790 (613 by satellite, 130 by citizen and 47 by Ward Officers) Alerts were generated between March 2020 and November 2021, and out of 790 alerts actions were initiated in 484 cases as per SOP of GA Department. Maximum encroachments (344) are observed in south west zone of the city.



Odisha 4k GEO Web-Portal

7.8.33. Odisha 4k Geo portal provides data sharing framework, ensures integrity of standardized, Geo-spatial data integrity, and provides Geo-coordinated location-based data and GIS-based Maps for effective Decision Support to State Departments. Under Odisha 4K Geo Land Use Database of entire State was created at 1:4000 scale using geo referenced Revenue Cadastral maps of the State.

7.8.34. During 2020-21, the Odisha 4k Geo Services were extended to following projects of State Department:

- GOPLUS/Odisha Land Bank Development – Plot level land information for land bank to IDCO and Industry information of IPICOL (Dept. of Industry)

- Odisha Agri GIS – Plot level information for visualizing crop acreage (DA&FE)
- ODIIS – Plot level Cadastral information for all ayacuts of DoWR.
- Forest Diversion Proposal – Plot level Cadastral information of Forest Diversion/ Compensatory Afforestation project area (S&M Dept)
- COAST – Plot level information to prepare aquaculture database of the State (FARD)
- OFMS – Plot level administrative information to OFMS portal of Forest & Environment Department
- Mo Jungle and Odisha KYFL-Revenue and Administrative information services for Mobile based info access.
- OPAMS – Odisha Public Asset Management System of Finance Department



Odisha KYL (Know Your Location) Service

7.8.35. ODISHAKYL (KnowYourLocation) is a locational Intelligence App based service developed by utilizing the "Odisha4KGeo" and Revenue NRLMP project outputs. The App is user-friendly and on opening the App (the person holding the Mobile on any location inside the State of Odisha) it gives the following locational information: District Name, Block Name, GP Name, Village Name & Code, Thana Name& Code, Legislative Assembly Constituency Name, Parliamentary Constituency Name, Forest Name, Khatian Number, Plot Number, Latitude, Longitude and Option to take ground images.

7.8.36. During 2020-21 Odisha KYL service was utilized for KRUTI project of Handicraft Department, Geo tagging of Check Dams for DoWR, KYFL application of Forest & Environment Department, KL Asset Mapper project of PCCF (KL), Elephant Tracker App for PCCF (WL), Fisheries & Animal Resources Asset data collection under OFARIS and Odisha Asset data collection for OPAMS project of the Finance Department. The App is developed under ST initiatives of the Government of Odisha.

Odisha Land Bank Web services through GOPLUS

7.8.37. Odisha Industrial Policy Resolution 2015 of the Industries Department focuses on providing quality industrial infrastructure and creation of a large Land Bank. Considering the requirements of the Government, a GIS based web-portal was developed by the centre for providing Land Bank and associated utility and developed infrastructure information to potential investors and entrepreneurs. Geo-ICT, Space Technology inputs and Geospatial Data modelling was used to create the Web-GIS based Land Bank portal.

7.8.38. The web Portal for Land Use and Services is <http://gis.investodisha.gov.in>. Land Bank map, data and Land schedule for 1,31,852 lakh acres are made available in public domain. GIS database of 113 Industrial Estates, industry location maps and database of sector specific cluster development are available here. The system provides detailed information pertaining to land regarding availability for industrial purposes, plots under Land Bank cluster, and location specific attributes in terms of connectivity, linkages and availability of other utilities, amenities, and services.



7.8.39. Through the system a prospective investor gets information not only on land availability, but also key attributes of existing developed and operational infrastructure required for industrial activities. It also provides information on zoning of the Industrial Land in terms of environmental

The GOPLUS portal provides comprehensive information on Industrial land status in the state.

categories i.e., Green, Orange, and Red to enable an investor to decide on suitable location for investment based on the proposed business activities. The unit cost of the land as per IPR 2015 has also been provided for easy assessment by the user.

7.8.40. During 2020-21, 1692 acres of Land Bank for industrial purposes were provided to IDCO and integrated in GOPLUS web portal for the public and entrepreneurs. Time to time industrial plot allotment by IDCO & IPICOL in 106 Industrial Estates are updated. The GOPLUS new version for Mobile view was also released by the Hon'ble Chief Minister of Odisha under the 5T initiative.

Odisha Mineral Vehicle Tracking System (OMVTS)

7.8.41. Government of Odisha has implemented IT based mineral administration through a software application named Integrated Mines and Mineral Management System and it was also decided by the Government of Odisha to monitor and manage the mineral carrying trucks through a Global Position System (GPS) based IoT device installed in the trucks from source to destination to bring transparency in the mineral delivery process.

7.8.42. The OMVTS has a web portal (www.vts.orissaminerals.gov.in) and an Android based Mobile App available in Google Play store as OMVTS_ORISAC. The Mobile App is freely accessed by all the stake holders to know about the current location of the vehicles, working conditions of Vehicle Tracking Units (VTUs), SIM validity and Electronic

Transit Pass issued against the vehicle. The web portal is accessed by the stake holders with proper login authentications. The VTS App is used by 85000 truck owners of the state. The system is operated with technical collaboration of SDC for server facility to provide 24X7 monitoring of vehicles.

Integrated Kendu Leaf Management System (IKLMS)

7.8.43. IKLMS is created to create a web-based unified dashboard under IKLMS for all KL operations i.e., Bush cutting, Plucking, Accounting, Seasonal staff HRMS and Payment, KL Assets and KLPSIS (Kendu Leaves Procurement, Storage Information System).

7.8.44. Integrated Kendu Leaf Management System (IKLMS) portal with Mobile App was implemented by PCCF (KL) for following the purposes:

- Integration of all KL applications viz. KLPSIS (KL Procurement & Storage Information System), KL Accounting, KL Seasonal Staff HRMS, Welfare Trust Applications for Seasonal staff and Puckers and Binders.
- Single Portal for all operative KL activities and single Sign-in for all the KL Applications.
- The Portal and App is used for payments to Bush Cutters, Pluckers and Binders (more than 9000 persons) engaged by PCCF (KL) with transparency and accountability in all KL Operations at Range, Circle and Division levels.



Mo Jungle and Odisha KYFL

7.8.45. "Mo Jungle: My Odisha Forest" Mobile App is developed for monitoring all kinds of afforestation programmes of the Forest Department and to provide public access to all afforestation information and obtain feedback from public under a mobile enabled crowd sourcing mode.

7.8.46. This App is developed under 5T and "Mo Sarkar" initiatives of Forest & Environment Department, Government of Odisha. The App "Mo Jungle: My Odisha Forest" can be downloaded from Google Play Store and Apple App Store.

7.8.47. KYFL, Odisha (Know Your Forest Location) Mobile App and its associated Web-GIS Portal is developed by utilizing its Enterprise Class Geo-Informatics Services and Odisha Forest Management System (OFMS). The App is primarily designed to provide preliminary forest land information on mobile for developmental planning involving forest land.

7.8.48. Any user from any where can access Forest Land and Forest Administrative information of any Point of Interest (POI) in the State of Odisha. The App also provides the additional Land Revenue Information of District, Tehsil, CD Block, GP, Village, Khata number, Revenue Plot number, Owner's Name, Land Type and Area, Police Station Details (Thana Name & Code and Distance of Thana) etc with respect to POI.



ANUKAMPA

7.8.49. "ANUKAMPA" is an IT initiative of the Government of Odisha to facilitate compassionate payment in a transparent and time bound manner to citizens who are victims of wildlife depredation. The portal can be accessed at www.odwlanukampa.in.

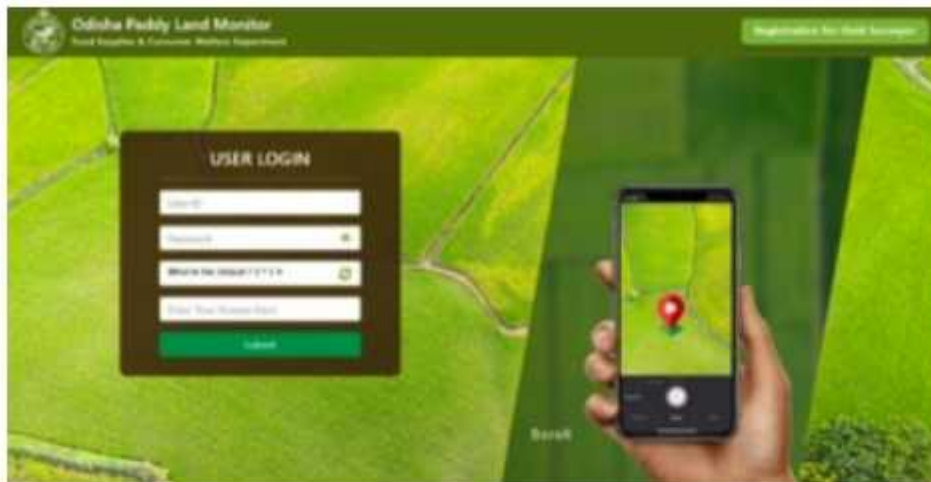
7.8.50. "Anukampa" is a user-friendly software developed and launched by PCCF (Wildlife) & Chief Wildlife Warden, Odisha, State Wildlife Organization, Department of Forest & Environment, Government of Odisha in association with Technical Partner, Odisha Space Application Centre (ORSAC), Bhubaneswar. The portal is to be used for claiming Compassionate Payment towards human deaths/injuries, cattle deaths, crop, and house damages by wild animals as per Chapter-VAA, Wildlife (Protection) (Odisha) Rules, 1974.

Plot Level Validation of Paddy Crop Using Satellite Remote Sensing and GIS

7.8.51. To bring in more transparency during the procurement cycle, the Food Supply & Consumer Welfare Department (FS & CW) has implemented "Village wise Plot Level Analysis of Paddy Crop growing Areas for Kharif 2021-22" in seven Districts i.e., Baragarh, Bolangir, Kalahandi, Koraput, Nuapada, Sambalpur and Subarnapur districts through Odisha Space Application Centre (ORSAC). The work



entails GIS mapping of cadastral information at plot level, interpretation, and analysis of High-Resolution Satellite Image (Optical and Microwave (SAR)) including development of appropriate models for generation of decision



support maps in a time bound manner. The outputs are integrated with existing enterprise applications of the Food Supply and Consumer Welfare Department. The benefits of the project include:

- Ensuring that the Minimum Support Price (MSP) is received by the genuine farmer
- Bringing more transparency during farmer registration
- Validation of land reported by Farmer vs. GIS verified area at cadastral level
- GIS based visualization and reporting for better decision making

7.8.52. Successful implementation of this project will facilitate to roll over the model to 17 districts of for Rabi Crop validation and to 30 districts of for Kharif rice validation in the year 2022-23. This will ensure the use of technology to bring out transparency and accountability in paddy procurement process.

EDUSAT Network In Odisha

7.8.53. During 2020-21, when schools and colleges were closed due to the COVID pandemic, ORSAC in close association with School & Mass Education Department has produced 222 programmes for Class-IX and X students and 121 programmes for standard XI and XII students of the state. To increase the Edusat reach, these programmes are aired through Doordarshan Kendra, Bhubaneswar, with intimation to students by S & ME Department. These programmes are also available through YouTube and Diksha App for reaching a larger audience.

The following section discusses about the natural disasters that have affected Odisha, and how the State



has undertaken several governance initiatives to manage their impact. It discusses the level of preparedness and different programming strategies by key Departments to increase the resilience of the State and the communities.

7.9. NATURAL DISASTERS: THEIR IMPACT AND MANAGEMENT

7.9.1. Odisha is most vulnerable to natural disasters causing immeasurable and heart-breaking loss of lives and properties. Among the natural disasters which strike and ravage the state, occurrences of flood, drought, cyclones, and heat waves are almost a regular feature, befalling more than once in some years, and those of hailstorm, whirlwind, tornado, and landslide are occasional. During the period from 1891 to 2021, Odisha has been lashed with

over 100 tropical cyclones, and in two decades (a span of 22 years to be precise), the State confronted 10 cyclones, and the frequency is on the rise, the highest among the states on the coast of India. In terms of the Disaster Risk Index (DRI), a quantitative measure developed by the 15th Finance Commission for assessing disaster risks on the basis of scores assigned to the probability of hazards striking states and the extent of vulnerability, Odisha has been ranked number one with the highest score of 90 out of 100 in DRI among the vulnerable states. According to Das, (2016) , Odisha is an intriguing case of regular and multiple disasters and economic backwardness and may be an example of natural disaster led underdevelopment. However, going against the odd, the State has achieved significant progress and has become an example in the country for effective disaster management.

Odisha serves as a model for effective disaster management in the country.

7.9.2. Kumar et al (2021) of the National Institute of Disaster Management, have studied the post-disaster response of the State in the wake of the 1999 super cyclone as well as the 2019 Fani cyclone, remarked very correctly that in matters of disaster management 'Odisha has come a long way in the last two decades, has been able to protect its people and that's the most important part of its achievements .

Box 7.4 The Third Pillar

How Odisha has forged partnership with Community to build resilience?

Located in the east coast of the Indian subcontinent, the State of Odisha is not unknown to natural calamities and disasters. In May 2020, Odisha was hit by cyclone Amphan, which was magnified by the ongoing battle with COVID 19. Having performed well over the years with community-based disaster management model, the State was able to demonstrate resilience amidst these twin challenges as well. According to an article by WHO (2020), the State recorded an impressive recovery rate of 69.4 per cent, and mortality rate of just 0.29 per cent by the end of June 2020, which was one of the best in the country.



During the cyclone Amphan, evacuation of people had become more challenging as adequate norms of social distancing and hygienic environment were to be adhered to. Prior preparedness helped the State to shift people to the multipurpose cyclone shelters along its 480 km long coastline, equipped with community kitchens, announcement vehicles and lifesaving equipment. This displays the swiftness of the State action and ability of community to mobilise themselves to avert any major losses. To ensure local ownership and

address local needs, Odisha has focused on the involvement of community since 2002 with the Community Based Disaster Preparedness (CBDP) programme. Odisha has an efficient community outreach mechanism to reach the citizenry in the shortest possible time which strengthens its ability to withstand any major natural disaster. As of 2021, Odisha has a network of 860 Multipurpose Cyclone/Flood Shelters managed by maintenance committees which provides trainings to the local youth for search and rescue, first aid medical attention, and for providing cyclone warnings. A news article published by World Bank in 2019 states that by involving the entire community through a network of committees and trainings, it has become easier to spread timely warnings and move people into safe cyclone shelters. Often, cyclonic winds disrupt communication channels and reduce the ability of transmitting information through pre-determined routes. During cyclone Yaas in May 2021 community radio networks ensured the task of disseminating information about the dos and don'ts to people and covered at least 5,000 habitations in its broadcast. Coordinated efforts were made between district administration and IMD officials and through community radio real-time information was made available to the people.

#WhatDoTheySay - Headlines from Newsclips

UN praises Odisha CM Naveen Patnaik again for saving lives during Cyclone Yaas	Odisha bags award for using IT in disaster management
Lessons the country can learn from Odisha	Again, Odisha's disaster management model has received global acclaim
How Odisha's model of disaster preparedness came into being	#DisasterRoadsOdisha
What states can learn from Odisha in disaster preparedness and mitigation	UN WFP lauds Odisha govt's efforts on poverty alleviation and disaster management



Evacuation of people during Amphan
Source: WHO, 2020



Multipurpose Cyclone Shelter
Source: OSDMA

Having already invested in the ability of community for disaster preparedness in its previous disaster mitigation strategies, the State of Odisha brought together local communities for its Covid response strategy too and seized the opportunity to successfully tackle one of the worst emergencies of all times. The figure below shows some of the instances where State and local community worked together to fight the pandemic.

Gram Panchayats	Ward Committees	Self-Help Groups
<ul style="list-style-type: none"> • These units of self-governance in rural areas were associated with the role of managing institutional quarantine facilities and engaged in developing community awareness about the physical distancing norms (Niti Aayog, 2021) • All the 6,798-Gram Panchayats were equipped with COVID-19 Care Homes (CCH) • The Government also established COVID care committee at all gram panchayats to take care of the overall operation of Temporary Medical Camps (TMCs) and COVID Care Homes (CCHs) (Niti Aayog, 2021) • The supervision of tasks like delivery of food materials at the doorstep of migrants and disbursement of INR 15,000 cash incentive to migrants on the completion of self-quarantine was made easier with the delegation of the authority to the Sarpanch, the elected representative 	<ul style="list-style-type: none"> • In order to decentralize its COVID-19 management, the State Government announced the setting up of ward level committees in both urban and rural areas • The ward level COVID-19 management committees in rural areas included ward members, Auxiliary Nurse Midwives (ANM) and Accredited Social Health Activist (ASHA) workers, and members of local women's self-help group (Niti Aayog, 2021) • In order to facilitate quick communication and response the village welfare committees were assigned to oversee the functioning of the COVID-19 management committees • The management of ward committees in the urban areas was given to ward officers, local people and volunteers as members to track 	<ul style="list-style-type: none"> • The self-help groups (SHGs) under the Mission Shakti led awareness campaigns to reinforce the messages on social distancing norms and helped in educating 15.3 million people so as to break the chain of contact (Niti Aayog, 2021) • 1339 Women from Mission Shakti SHGs with the experience in stitching garments undertook the production of masks and produced 6.5 million masks for the frontline workers which were sold at nominal prices (CDRI 2021) • The restriction of movement caused a struggle to obtain vegetables and rations. 598 women SHGs were engaged in setting up dry ration, vegetable and fruit shops with the help of district administrations and succeeded in providing services to 0.4 million households • With the support of the district administration and the District Horticulture Office 171 tons surplus vegetables were procured from 1500 farmers and supplied to free kitchens managed by SHGs (CDRI 2021)

AMPHAN

7.9.3. The Cyclone "Amphan" over Bay of Bengal made landfall on 20 May 2020 in Sundarbans. It affected 10 districts in Odisha namely Balasore, Bhadrak, Cuttack, Jagatsinghpur, Jajpur, Kendujhar, Kendrapara, Khordha, Mayurbhanj and Puri causing massive damage to private and public properties. 'Amphan' made its landfall at the time Covid-19 was moving to its peak. Although the cyclone made a mild attack, it inflicted untold miseries on the State as the hardships were compounded by the COVID-injected affliction.

7.9.4. ODRAF, NDRF and Fire Service Teams were prepositioned in the districts for search & rescue operation. About 2 lakh people were evacuated from vulnerable areas and shifted to shelter camps and provided with dry food, drinking water and free kitchen by ODRAF, NDRF and Fire Service Teams that were prepositioned in the districts. About 45.26 lakh people in 97 Blocks, 22 Urban Local Bodies and 9838 villages of ten Districts were affected. 10.72 thousand hectares of cropped area have been affected. 4889 houses & 393 cattle sheds have been damaged due to this cyclone. An amount of INR 500.00 crore has been received from NDRMF, Government of India.

7.9.5. The State Government released INR 177.34 Crore from the State Disaster Response Fund (SDRF) to districts and concerned departments towards relief and repair/restoration of private and public properties.

Heavy Rain & Flood

7.9.6. The State suffered flood and heavy rain during July-August 2020 which affected all districts except Gajapati, Ganjam and Rayagada. 38.90 lakh people in 208 Blocks, 30 Urban Local Bodies and 10350 villages of the 27 districts were affected, 2.35 lakh hectares of cropped area have sustained crop loss to the extent of 33 per cent and 78137 houses have been damaged. Immediate steps towards rescue, relief, health and sanitation, animal care and restoration measures were taken; 1.73 lakh people were evacuated to safe shelters and provided with dry/ cooked food. In all, 980 relief camps were opened for 4.84 lakh people. The gratuitous relief of 50 kg rice & INR 500/- per family was provided in the areas severely affected by flood. The State Government has declared INR 300 crore special livelihood package for the affected farmers.

7.9.7. An amount of INR 273.62 crore has been released from the State Disaster Response Fund (SDRF) to districts towards relief and restoration of private properties and INR 393.02 crore has been released to different departments towards immediate repair of public utilities damaged due to floods.

7.9.8. A summary picture of cyclones and floods in Odisha during 2019-20 and 2020-21 is presented in Table 7.2.

Table 7.2 Disaster/ Natural Calamities in Odisha (in 2019-20 and 2020-21)

Year	Major Natural Calamities	Affected (No. of People)	Lives lost	Crop area affected/ damaged (ha)	Estimated damage (in INR Crore)
2019-20	Cyclone FANI	159.94 Lakh	64	1,81,711	9336.27
	Cyclone Bulbul	38.09 Lakh	0	2,22,496	224.43
	Flood & Heavy Rain	11.1 Lakh	13	45,425	408.39
2020-21	Cyclone Amphan	45.26 Lakh	0	10,726	254.26
	Flood & Heavy Rain	13.87 Lakh	38	3,13,651	1509.33

Source: Revenue and Disaster Management Department, Government of Odisha

YAAS

7.9.9. The Very Severe Cyclonic Storm Yaas was a strong and very damaging tropical cyclone that made landfall in Odisha during late May 2021. Yaas was formed from a tropical disturbance in the North Indian Ocean. The Indian Meteorological Department first monitored it on May 23. It became a deep depression later on 23 May, before intensifying into a cyclonic storm on 24 May and was named Yaas. As it turned to the northeast and intensified further, it became a severe cyclonic storm on May 24 but the wind shear remained moderate. As it moved north-eastwards, it strengthened to a Category 1-equivalent tropical cyclone and to a very severe cyclonic storm on May 25. Yaas crossed the northern Odisha coast around 20 km south of Balasore at its peak intensity as a very severe cyclonic storm on May 26.

7.9.10. Yaas caused heavy rains in Odisha, but as most of the potentially threatened residents had been evacuated by the Government administration to safe locations, few people felt its fury. However, 120 village settlements were

flooded and heavily damaged by the rains. Two persons died- a boy in a pond in Mayurbhanj district and an aged man in Keonjhar district (as a tree fell on him) as a result of the disaster. The estimated damage from Yaas was about 610 crore, mostly constituting Government properties, as stated by the Government on 2 June 2021.

7.9.11. With advance preparedness and effective action proceeding, during and after Yaas, Odisha, once again proved its numero uno status in natural disaster management in the country and received accolades from all quarters including international organisations.

JAWAD

7.9.12. Beginning 5 December 2021 and with weakening of the cyclonic storm into a deep depression in the Bay of Bengal, heavy rains lashed Odisha coast submerging thousands of hectares of harvest-ready paddy cropland in its Ganjam, Puri, Khordha, Cuttack, Jagatsinghpur, Kendrapada, Jajpur, Bhadrak, Balasore and Mayurbhanj districts. The rains and swirling waters, the first in any December during the last 100 years as the elderly people say, didn't allow even breathing time to shift bundles of harvested paddy crop to the thrashing place and instead swept away them. Thereby it shattered the hopes of lakhs of farmers and sharecroppers for whom agriculture still remains the main source of livelihood.

Heat wave

7.9.13. During the year 2020, as many as 12 persons lost their lives due to heat-stroke. Steps were taken to provide ex-gratia assistance at the rate INR 50,000 out of the SDRF to each of the bereaved families.

Lightning and Fire Accident

7.9.14. During 2020-21, a total of 274 persons died due to lightning and another 28 people died due to fire accident. Ex-Gratia assistance at the rate INR 4,00,000 has been provided to the next of kin in each case of death both due to lightening and fire accident from SDRF. House building assistance has been provided as per norms to the fire affected families for repair/ restoration of affected houses.

Snake Bite/ Drowning/ Boat capsized

7.9.15. During the year 2020-21, 964 persons died in the State due to snakebite, 1116 persons met death due to drowning and 05 persons due to boat capsized. Ex-gratia assistance at the rate INR 4,00,000 to the next of kin of the deceased in each case has been provided from SDRF.

Disaster Management

7.9.16. Odisha and its supreme disaster management institution 'The Odisha State Disaster Management Authority (OSDMA), have been working relentlessly for reducing disaster risk, increasing safety and improving well-being of the people in the state. The State has put tremendous effort on preparedness, capacity building, risk assessments, risk informed programming strategies, coordination and convergence, supportive policies and laws, Early Warning Systems, contingency plans, and information sharing, all of which enabled it to successfully manage all disasters following the 1999 Super Cyclone to minimize the loss of life and property in the affected areas so as to increase the disaster resilience of the State and set their own benchmark and model in disaster response in the country. So much so, Odisha has recurrently received international laurels and been in the news in the last two decades for its unique and exemplary disaster management practices. Preventing new, reducing existing and managing residual disaster risk have been the three cornerstones of disaster management in Odisha.

Ex-gratia Assistance and DAMPS

7.9.17. A web-based software and mobile application named 'Disaster Assistance Payment and Monitoring System' (DAMPS) has been developed by NIC for processing, sanction, payment and monitoring of ex-gratia for death or injury caused due to any disaster. With the implementation of DAMPS the payment of ex-gratia assistance has become smooth, direct, prompt, and transparent. Disbursement of ex-gratia assistance in 1,817 cases has been successfully done within a period of 8 - 9 month.

The CoVID-19 Pandemic

7.9.18. Ever since the reporting of the first case of the COVID-19 pandemic in Odisha on 16 March 2020, the State has 10,53,166 confirmed cases, including 1,622 active cases, 10,43,045 recoveries, and 8,446 COVID deaths as at 9:41 AM on 21 December 2021 and these constituted 3.07 per cent, 1.06 per cent active cases, 3.1 per cent of recoveries and 1.8 per cent of India cases respectively. The Government of Odisha has responded promptly and effectively to the COVID-19 pandemic with large-scale economic relief and social measures which include, among other things, containment strategy, public health strategy, immediate NGO relief, public awareness campaigns and the like. Funds amounting to INR 773.780 crore have been released out of State Disaster Response Fund (SDRF) to the District Collectors and concerned departments for management of COVID-19 up to 31 December 2020. The State Government has made elaborate arrangements for vaccination against COVID-19. Funds amounting to INR 773.780 crore have been released out of State Disaster Response Fund (SDRF) to the District Collectors and concerned departments for management of COVID-19 as up to 31 December 2020.

7.9.19. The Covid-19 pandemic had devastating impacts on all sectors of the economy during 2020-21. The 2nd stage and the 3rd cycle of the Pandemic in 2021-22 has not been that fatal in the State in comparison to many other states and the country and all the three sectors are reviving in comparison to 2020-21. Covid-19 still has sizable impact on the State economy during 2021-22 since its economic growth engines remained under partial restriction for few months. But it appears as if the impact of Covid-19 is coming to clutch, and the economy of the State will bounce back.

7.10. IMPROVED GOVERNANCE THROUGH 5T AND MO SARKAR

7.10.1. The Odisha Government has implemented the '5T' framework as a citizen centric Governance model for transparent administration. The Philosophy behind the 5T framework is that through the 'Transparent' use of 'Technology' & 'Teamwork' Transformational change can be brought in the State in a Timely manner instead of incremental makeovers. Under the 5T framework, the entire State machinery works as a team to transform the overall governance. The State is spearheading sweeping interventions in digital governance to cement the Government's 5T vision. Ever since the 5T charter of governance was unveiled, relentless efforts have been made to make available all citizen services in a transparent and time bound manner by leveraging technology.

7.10.2. As an overarching governance paradigm, the 5T initiative is having transformative impact on education (Mo School & Mo College), water supply to urban households (Drink from Tap Mission), availing transport related citizen services (Paperless RTOs), essential online services for MSMEs, tracking changes in use of Government land (BLUIS application), E-licensing of agri-inputs, streamlining the KALIA database, Mobile based grievance Monitoring system of Water Resources Department etc. The Odisha State Dashboard

5T ushers a new era of people-centric, engaging, and responsive administration in the state

has been piloted with five flagship interventions- COVID, National Food Security Act (NFSA)/State Food Security Scheme (SFSS), Odisha School Education Programme Authority (OSEPA), KALIA and 5T. The 5T dashboard facilitates monitoring of the performance of all departments to take stock of their progress in complying with the 5T charter and its components. Through efficient data mining and the confluence of technologies this dashboard marks a new era in people-centric, engaging, and responsive administration. Onboarding of emerging technologies is a huge enabler in enhancing the quality of citizen centric administration and aligning better with our 5T governance framework.

Box 7.5

People Centric Governance - Achieving outcome through behavioural intervention



Change can be very daunting for many people, which is perhaps why many tend to prefer that things simply stay the way they are. In psychology, this tendency is known as the 'status quo bias', a type of cognitive bias in which people tend to show tremendous inertia to drift from default practices and habits. Along with providing facilities and infrastructure, it becomes an arduous task for the Government to make people adopt the new way of life which, involves change. However, behavioural strategies and interventions have come into active use in policymaking and have steered humans into making 'welfare-improving' decisions by tapping into their behavioural biases, while restoring liberty. Going forward, behavioural interventions will widen the policy toolkit to tackle societal problems more effectively. There are many evidence of application of behavioural science in policymaking in Odisha, and one such example is detailed below.

Inadequate Postnatal care in the State of Odisha was leading to poor health of young mothers and new-born children. NFHS-4 report 2015 stated that only 36 mothers out of 100 consumed iron-folic acid for 100 days, and as low as 4.2% of mothers consumed folic acid for 180 days. A study on Neonatal care practices in Odisha showed that decisions of family members and traditional beliefs played a crucial role in shaping neonatal care practice in communities. Adding to this woe was people's lack of trust and unwillingness to seek modern medical assistance (Pati, et al. 2014).

Odisha MAMATA Yojana

Behavioural Intervention: The MAMATA Yojana in the State was initiated in 2011 to support postnatal care for mothers but had a low adoption rate. It then took the path of Incentivizing and started direct cash transfer (CT) to the eligible women and mothers.



As part of its Direct Benefits Transfer (DBT) agenda, Govt. in Odisha leveraged the JAM platform (Jan Dhan Bank Accounts, Aadhaar ID, Mobile) to deliver benefits directly. Low procedural friction was ensured by minimal document submission (Aadhar and Bank details only) and easy registration. It made it easy for rural women to avail the programme benefits.



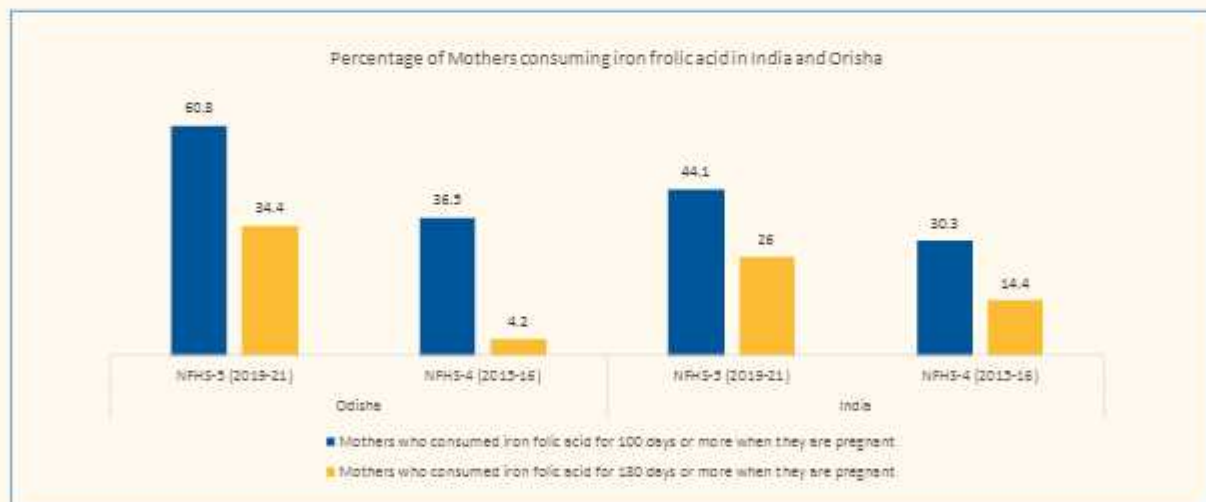
As part of the 5Ts initiative under e-Governance to ensure transparency and make the MAMATA scheme more citizen-centric, hassle and paper-free, a Mobile application has been developed and made operational in all districts from 1st August 2020. A district-wise toll-free number is provided for quick assistance.

Most importantly, the program followed Conditional Incentivizing, also called as conditional cash transfer (CCT), wherein the ladies provided the conditional transfer after fulfilling a set of conditions. Conditions like

availing at least one ante-natal check-up (of three), receiving IFA tablets, receiving at least one TT injection, attending at least one counselling session with the Frontline workers were kept in place.

Results:

The figure below shows empirical evidence of the success of MAMATA Yojna. The recent NFHS-5 report in 2019-20 showed that from a meagre 4.2% of women consuming iron-folic acid for 180 days in Odisha, the adoption rate has increased to 34.4% greater than the national average. Similarly, for women consuming iron-folic acid for 100 days, the adoption rate almost doubled, as it grew from 36.5% to 60%. A study by Abdul Latif Jameel Poverty Action Lab (J-PAL) on the design and implementation of CT programs in India considered MAMATA program in Odisha as one of best programs implemented for effectively improve health and economic wellbeing (Mittal 2018). The MAMATA program of Odisha has joined the list of one of the most effective CCT programs implemented globally, along with Mexico's national CCT program ("PROGRESA") and PETI of Brazil. Initial monetary benefits motivated the beneficiaries, and when results were evident, people developed trust over the medical care. Odisha was successful in developing health-seeking behaviour of community using the right behavioural intervention. With a forward vision, the Government of Odisha is keen to come up with solutions that can make Government schemes and initiatives more impactful and beneficial to the people of Odisha.



Notes: Values in Percentages

Source: National Family Health Survey (NFHS) 2015-16 and 2019-21

Mo Sarkar

7.10.3. The State Government has rolled out 'Mo Sarkar' (My Government) initiative for strengthening the objective of responsive and people centric administration. It is based on 5T Model of Governance. "Mo Sarkar is a randomized, unbiased and direct feedback taking platform that aims to ensure professional and human behaviour of Government functionaries at citizen contact points. The larger objective is to improve institutional behaviour and bring in transparency in Government business processes.



Under this system the phone numbers of citizens are randomly collected, and they are requested to share feedback on the behaviour and professionalism of Government officers with a view to improve the governance system. Within 24 hours of visit a complainant gets an SMS stating that the complaint has been received. This mechanism has improved the monitoring mechanism for ensuring accountability.

7.10.4. Twenty seven (27) State Government Departments have already been covered under Mo Sarkar. Every month on an average more than one lakh calls are handled by the outbound call centres and over 8,000 calls are made directly to citizens by Senior Government Officials and Ministers. The 5T good governance is given in Figure 7.5.

Figure 7.5 Good Governance through 5T and Mo Sarkar



7.10.5. The main objectives of Mo Sarkar are:

- Recording direct and real time feedback from citizens
- Improve institutional behaviour
- Bring transparency and accountability in Government offices
- Gap analysis in service delivery
- Tagging to concerned authorities for remedial action
- Performance evaluation of the Department, Officials and other functionaries are based on the quality of citizen feedback
- Promoting and encouraging citizen participation for good governance

7.10.6. The implementation of Mo Sarkar Status as on 30 November 2021 is presented below:

- Randomized feedback is being collected from citizens on 225 services offered by 27 Departments.
- Senior Government functionaries such as Hon'ble Chief Minister, Hon'ble Ministers, CMO, CS, DGP, Department officials and Collectors etc. are seeking random feedback on a weekly basis - 1,84,065 feedbacks have been collected.
- 12,075 Government offices and 72,586 AWCs have been configured from where citizen data are collected with phone number and purpose of visit.
- In two years of Mo Sarkar 2,16,49,053 citizen data have been stored in the database with attributes like location, purpose of visit, gender, age-group etc.

Municipal Premiere League (MPL)

7.10.7. Government of Odisha in association with Janaagraha has launched the Municipal Premiere League (MPL), an annual competition for tax officials to collect Municipal taxes and user fees on the ground. The first and second version of the league has focused on driving reforms in property tax billing and collections. MPL 1.0 was launched in January 2020 across 9 Atal Mission for Rejuvenation and Urban Transformation (AMRUT) cities. It is seen that there was a 37 per cent increase in Property tax collections compared to the previous fiscal year, with 43 per cent collections recorded digitally during the two months of MPL 1.0. Given the impact that MPL 1.0 could generate on the ground, MPL 2.0 was then extended to all 114 ULBs in Odisha. MPL 2.0 was launched in February 2021. From the overall property tax collections for 2020-21, over 50 per cent of the collections happened during the two months of MPL 2.0, and 93 per cent of the collection amount during MPL 2.0 was recorded digitally. Across the two years of the league, we are now having 850+ Mobile Point of sale (MPOS) devices deployed across Odisha and a cadre of 650+ tax officials who are well versed with functional usage. The introduction of MPOS devices was a significant intervention that led to an increase in digital collections across the state.

Ama Sahara

7.10.8. Ama Sahara is a Solid Waste Management (SWM) programme launched by the Odisha Government on August 31, 2020. It includes a mobile application and a web admin portal and dashboard. The mobile application has 2 modules: Government and citizen. The Government module allows all stakeholders associated with the functioning of MCCs and MRFs to record and monitor data on waste collection, segregation, processing, sale, and disposal. The app and the web dashboard capture metrics used by ULB Commissioners and senior H&UDD officials for performance reviews. The citizen module enables posting of SWM complaints and requests, as well as payment of SWM user fees. Citizens can track the status of their complaint using the app itself, and any delay in complaint resolution will be automatically escalated to senior Government officials.

7.10.9. The web dashboard collates all key project metrics and other project management information from the SWM service chain across all 114 ULBs in the state. As of April 2021, 74 ULBs can 'add user' features on the web portal and access the mobile application. But 55 ULBs are using the application, of which 19 ULBs are making entries for MCC/MRF and User fee, whereas 36 ULBs are only collecting user fee. As of March 2021, INR 2.7 lakh has been collected as user fee via Ama Sahara application.

Ama Sahara app and dashboard tackling solid waste management issue in the state.

7.10.10. PAReshram Portal has been developed for completely online service delivery as a part of Ease of Doing Business which will facilitate the investors for doing business and thereby attract industrial/business investment for the State. This portal has been developed for capturing a comprehensive database for registration of all kinds of unorganized workers. The task of development and implementation of PAReshram Portal has been assigned to OCAC. In the First phase of PARESHRAM 22 services under 5 Acts have been made GO-live by Hon'ble Chief Minister on 17.12.2020 and in the Second Phase 30 Services under 15 Acts have been made GO-live by Hon'ble Minister Labour & ES, Odisha on 21.12.2021.

Decentralisation: Empowering Panchayati Raj Institutions

7.10.11. Odisha is among the few states in India which enacted the Panchayati Raj (PR) system in 1948 through the Orissa Panchayati Raj Act of 1948. Prior to this Act the Panchayati Raj system existed in the State through different legal provisions. For the past 70 years the Panchayats in Odisha have become the pillars of rural development addressing rural poverty while delivering equity and justice to the socio-economically backward people such as the Tribal, SC and OBC groups.

7.10.12. The three tier PR institutions have emerged as the model of self-Government by promoting participation in local democracy and implementing a socio-economic development programme. Odisha has witnessed extensive formulation of decentralised district plans since the year 2008 in which the Panchayati Raj Institutions (PRIs) and other stakeholders including citizens have played a key role. The process of plan formulation was carried out in a consultative and participatory manner in which the Gram Sabhas and Gram Panchayats in rural areas, and Urban Local Bodies (ULBs) in the urban areas play a significant role. With higher flow of funds and the recommendation of FCA, the planning process became more efficient, and people driven as per the guidelines of Gram Panchayat Development Plan (GPDP) since 2014-15.

Box 7.6 Women Representation in PRIs

The Odisha Government has taken numerous initiatives to proactively promote gender empowerment. The testimony to this is the recently concluded Panchayati Raj Election of 2022. The Odisha Government has reserved 50 per cent of the seats for women from Ward to Zilla Parishad level. General Elections of PRIs-2022 were conducted in 6793 GPs, 314 PS and 30 Zilla parishads. It underlines the sincere efforts of the State Government in bridging the gender gap in all spheres of public life, especially electoral politics. Though the reservation was 50 per cent, women represented 70 per cent as President, Zilla Parishad, 66 per cent as Chairperson, Panchayat Samiti and 56 per cent as Sarpanch of Gram Panchayats. Representation of a higher percentage of women in the PRIs will herald a new era of efficient self-governance in the State.



7.10.13. The following are the major achievements of the Decentralized Planning process for the 3-tier Panchayati Raj Institutions:

- i. The formulation of the Annual Plans as well as Sectoral Plans for the different Central Sponsored Schemes (CSS), including the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Rashtriya Krishi Vikash Yojana (RKVY) and National Rural Health Mission (NRHM), National Rural Livelihood Mission (NRLM), Swachh Bharat Mission (SBM), Drinking Water (DW) and many more schemes have become a regular affair among the 3-tier PRIs in the state. As a result, the Gram Panchayat Development Plan (GPDP), the Block Panchayat Development Plan (BPDP) and the District Panchayat Development Plan (DPDP) are being prepared and vetted each year at the respective level before being submitted to the State Government for integration and financial approval. Further, for the planning purposes of schemes like SBM/DW/DDU-GKY, the Panchayati Raj Institutions, Villagers, CBOs, Community Cadre, WSHG and Grassroots level officials are involved to ensure last mile participation.
- ii. The State Government has taken proactive measures to strengthen the institutions of Local Government over time. State specific acts have been amended keeping in view the 73rd Amendment Act and the provisions of the PESA Act. Regular elections of the rural Local Government (1992, 1997, 2002, 2007, 2012 & 2017) and the functional and financial devolutions have been taken up proactively. Further, the convergence strategy for developing the rural eco system through Panchayati Raj Institutions is given priority by the State Government.
- iii. The State Government has devolved the functions of Twenty-one Subjects of Eleven Departments to the PRIs in order to strengthen their functioning and the district planning process. Allocation of funds to the PRIs under the State Plan Funds has been increased over time. Funds under MGNREGS, Rural Housing (PMAY-G), Old Age Pension (OAP), Finance

PRIs empowered to prepare annual plans, sectoral plans and engage in district planning enabling decentralized local governance.

Commission Grants (National level), State Finance Commission Grants (devolution funds) etc. have been enhanced and provided to the Local Government. Further, rural infrastructure assets like Primary and Secondary Schools, Anganwadi Centres, Odisha Adarsha Vidyalayas, Children's Parks, Gymnasiums, Play Fields etc. are being supported with the help of State Finance Commission Grants and converging funds from different State and Union flagship programmes.

- iv. District sector schemes are included under a separate budget head. Special funds have been earmarked for the targeted districts to accelerate the development process for the eradication of poverty.
- v. The State Government has also taken several steps for strengthening the implementation of the PESA Act in the state. Powers have been vested with the Gram Sabhas and Gram Panchayats for the preparation of plans, management of natural resources, and implementation of development programs. Further, State subject laws pertaining to forests, mines, and excise have also been amended.
- vi. District Planning Committees (DPCs) have been constituted in all the districts in accordance with the mandates of the Odisha District Planning Committee Act, 1998, and the Odisha District Planning Committee Rule, 2000. The President of Zilla Parishad is made Vice-Chairman of the DPC to ensure higher flow of funds and better planning.

7.10.14. Decentralisation and community driven management have acquired special importance in the context of Decentralized Governance led by 3-tier Panchayati Raj Institutions. Further, the 73rd Constitutional Amendment Act which established 3-tier Panchayati Raj Institutions helped the Local Government institutions to become vehicles for social transformation by meeting the needs of the community, especially women and marginalised groups.

7.10.15. The year 2020-21 and 2021-22 are unusual as the COVID pandemic continues to impact all aspects of our lives. The outbreak of COVID-19 has hastened the process of digitalization of the services provided by the Government to its citizens and to the business and industry worldwide. The Government of Odisha has not lagged in this sphere and it has come up as a warrior State armed with a strong governance model, based on the optimal use of technology. The range of available services under this model cover all walks of life like online classes for students, online admission through SAMS Portal, renewal of various licenses, issue of certificates, e-Abhijog portal for redressal of grievances, work from home through OSWAS platform, online disbursement of pension and scholarships and so on. Odisha has come a long way in using advanced technology not only to monitor the ongoing COVID-19 crisis but also to simplify people's lives by rendering digital services for better governance. The State has rolled out citizen services under the 5T programme, made investments in research and development, improved governance and built a digital infrastructure for secure and seamless communication. Thus, Odisha has adopted a transformational approach in governance keeping people at the forefront.

7.10.16. Odisha is perennially affected by cyclone, flood, heat wave and other natural disasters over the years. The experience over the past years made Odisha one the best State in successfully managing these natural disasters with minimal loss of life and property. The people centric governance is reflected in the management of natural disasters in Odisha through bottom-up governance initiatives discussed in the next section.

Box 7.7

Regional Conference on Good Governance Practices



State Government jointly with the Department of Administrative Reforms and Public Grievances (DARPG) organized a two-day Regional Conference on the theme “Replication of Good Governance Practices” in Bhubaneswar, on 3rd -4th December, 2021. The objective of the conference was to understand and replicate best practices and innovation in governance and most importantly make it sustainable.”

The replication of Good Governance Practices across Centre, State, Districts and Panchayat would help in realizing the citizen centric administration with ideal of Maximum Governance with Minimum Government. In pursuance of the mandate of the Department of Administrative Reforms & Public Grievances, Government of India, the State Government is documenting and disseminating good governance initiatives for replication and implementation.

7.11. IN CONCLUSION

Under the overall umbrella of the 5T mantra, the improvement in governance, often using IT and ITES, has been an ongoing process, clearly to be continued. The pursuit of efficiency, transparency, honesty and citizen-friendliness in public administration and governance is never-ending and requires a constant stream of innovations. The Government has been focusing on reducing face-to-face Government-to-Citizen (G2C) as well as Government-to-Business (G2B) interactions to make the entire system more user-friendly, efficient, and transparent while reducing the scope for corruption. This focus has been complemented by a grievance redressal system as well. People's participation has also been an objective, as exemplified by the public inputs into the process of budget making.

The wider use of IT and ITES has now enabled the generation of several streams of real-time data. This, along with available new technologies like use of drones and satellite pictures, now makes it possible to validate these data and use them to form appropriate policies – what is known as evidence-based policy. Government documents like those on land records, mappings, and use (including forests) can be verified and updated. All this, however, is not going to obviate the need for ground level contact of the administrative machinery with the citizens at large. Village level workers, health workers, teachers, agricultural extension officials – all such persons are the face of the Government for ordinary citizens and are also conversant with ground realities. Their feedback is given due importance and a system is developed to enrich public policies with their inputs.

The State is poised at preventing new and reducing existing risks from disasters which would contribute to building resilience, a progressive step towards sustainable development. Odisha has undertaken practices integrating restoration of physical infrastructure and societal systems that would help to revitalise livelihood and combat disaster through effective recovery, rehabilitation and reconstruction phases. The State has set its own benchmark in disaster response in the country and has embarked from a reactive culture to a preventive culture through effective governance initiatives to achieve resilience.

CHAPTER



Fiscal Development and Management

Public finance relates to the collection of taxes by the Government from taxable entities under the jurisdiction of the state and the use of those tax funds towards production and distribution of public goods and services. Resource generation, resource allocation and expenditure management (resource utilization) are the essential components of a public financial management system.

The state has taken several steps to strengthen appropriate institutional measures for efficient management of public finances. Developmental challenges like healthy housing conditions, safe water supply, and waste management are best understood at the ground level. For this purpose, various developmental functions are devolved to local bodies to take care of region-specific developmental needs. However, with low revenue mobilization capacity, local bodies are heavily dependent on transfers from the State Government to fund their various needs. Government of Odisha is committed to providing for the developmental needs of the state.

Further, the COVID-19 pandemic in 2020-21 and 2021-22 has put a huge challenge on the fiscal front. There is shortfall in fiscal targets and associated receipts owing to the frequent interruption in economic activities owing to the pandemic. There is demand for additional expenditure because of the operation of the scissor effects - loss of revenues consequent to demand slowdown, and higher expenditure associated with the pandemic. However, the government has initiated a comprehensive programme of action for sustainable and inclusive growth and development through an integrated strategy encompassing growth, development, equity, welfare, and good governance. The developmental revenue expenditure of the state has more than tripled in 2021-22 BE, from its level in 2011-12.

Fiscal performance of Odisha continued to be satisfactory during 2020-21 and it is expected to continue this trend in 2021-22. The state has consistently reported a revenue surplus and has maintained gross fiscal deficit within the threshold limit set by the FRBM Act.

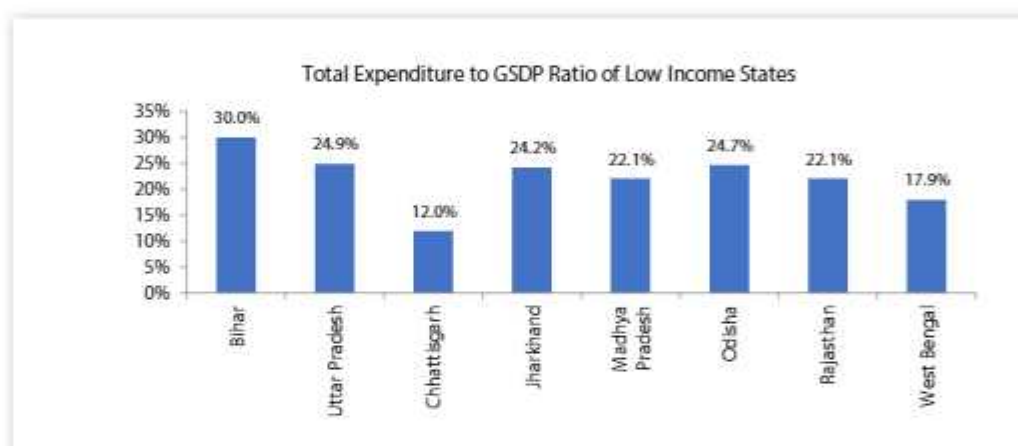
VAT and State Excise are the largest contributors to the state's own tax revenue, while the industry sector drives the own non-tax revenues of the state. Post the introduction of GST, the revenue from SGST is also a significant contributor to the state's own tax revenues. The state has great potential to increase its non-tax revenues from forestry and tourism. The cost recovery rates in Odisha are lower than the median for non-special category states. On the expenditure side, the state's expenditure has been witnessing double-digit growth during the last few years. Both revenue expenditure and capital outlay have been focused on the developmental sector, with expenditure on committed expenditure much lower than in other states. Education and rural development receive the largest share of revenue expenditure, while majority of capital outlay is focused on irrigation and transport. Focus on these sectors is in line with the state's developmental needs.

Debt stock to GSDP ratio in the state has been maintained below the 25% threshold consistently for 14 years. The current debt position of the state puts it at low risk relating to both debt repayment and interest burden. Odisha is one of the only two low-income states with low risk on both these parameters. The maturity profile of outstanding government securities is comfortable for the state when compared with other states.

8.1. INTRODUCTION

8.1.1 Government resources play an important role in the growth of an economy. Expenditure on physical and human capital formation is a prerequisite for sustained development. Historical and geographical disadvantages related to high poverty and frequent natural disasters have restricted the development of Odisha. Despite these, the state has been orienting its limited fiscal resources on developmental needs of the economy. On an average, between 2015-16 and 2021-22, Odisha's total expenditure to GSDP ratio stood at around 24.7 per cent (Figure 8.1). Further, nearly 70.7 per cent of this expenditure or 17.5 per cent of GSDP was allocated towards developmental purposes, with focus on education, healthcare, rural development, irrigation, and transportation.

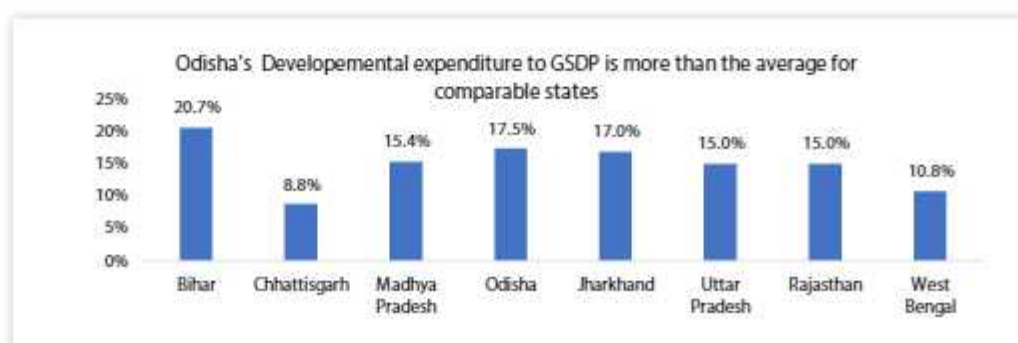
Figure 8.1 Total expenditure as percentage of GSDP (average of 2015-16 to 2021-22 BE)



Source: State Finances: A Study of State Budgets, RBI

The state has the second highest proportion of total expenditure among comparable states allocated towards developmental heads as shown in Figure 8.1 A, indicative of its commitment towards the state's socio-economic development, despite the historical challenges it has faced.

Figure 8.1A Development expenditure to GSDP (average for 2015-16 to 2021 -22 BE) (in per cent)



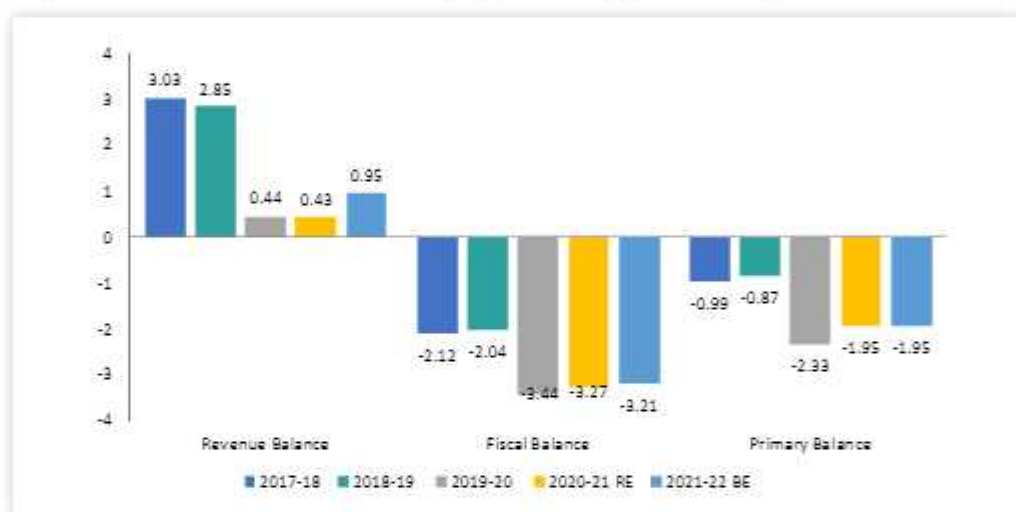
Source: State Finances: A Study of State Budgets, RBI and Annual Budget documents, Odisha

8.2. MAJOR FISCAL INDICATORS

8.2.1. Odisha's performance on the fiscal front continued to be satisfactory in 2020-21 as has been the trend in the past. The state has been taking prudent measures to keep the fiscal indicators stable. Since 2005-06, stringent efforts have been put in to ensure a revenue surplus and the state has been successful in maintaining it.

Odisha has maintained a revenue surplus since 2005-06

Figure 8.2. Key fiscal indicators for Odisha (as percentage of GSDP)

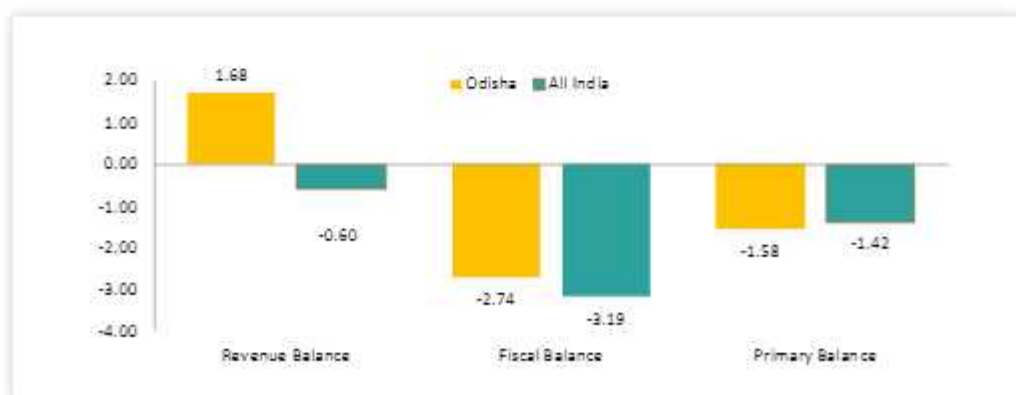


Note: +ve values indicate surplus and -ve values indicate deficit

Source: Annual Budget documents, Odisha

8.2.2. Odisha has been successful in complying with the Odisha Fiscal Responsibility and Budget Management Act to maintain fiscal deficit under 3.5 per cent of its GSDP, though a rising trend has been observed. The zero fiscal deficit position in 2012-13 has moved to 3.27 per cent and 3.21 per cent of GSDP as estimated for 2020-21 RE and 2021-22 BE respectively.

Figure 8.3. Key fiscal indicators as a percentage of GSDP (Average for 2016-17 to 2021-22 BE) (in per cent)

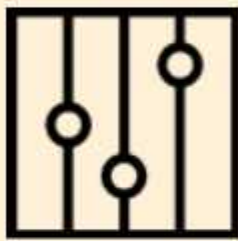


Note: +ve values indicate surplus and -ve values indicate deficit

Source: State Finances: A Study of State Budgets, RBI

8.2.3. Odisha's performance in comparison to other states has been much stronger. The state has successfully managed to maintain an average revenue surplus (as a percentage of GSDP) during the last 6 years (2016-17 to 2021-22 BE), while the average for the all the states shows a deficit. The state's average revenue surplus (2016-17 to 2021-22 BE) stood at 1.68 per cent against the all-states average of -0.60 per cent. The fiscal deficit of Odisha on an average is lower than the average of the states, as highlighted in Figure 8.3. The average primary deficit is, however, higher in the state.

Box 8.1 Success in maintaining fiscal discipline



Fiscal discipline is an important determinant of the sustainability of the fiscal and macro-position of an economy. It improves the decision-making capacity of the governments by prioritising the developmental needs and helps to cut down operational expenses. State governments are accountable for multiple functional responsibilities that span social and economic sectors. Thus, they are faced with the key question of prioritising the fiscal resources across the various developmental needs. Lack of fiscal stability may endanger the choices in terms of policy objectives and resource availability.

Fiscal Responsibility and Budget Management Act was implemented across the states between 2005 and 2006. The Act aimed to create fiscal discipline and improve the management of public funds. The intended outcome was to reduce deficit and stabilise debt burden, control the growth of expenditure, and improve tax performance. Odisha is amongst the few states that have successfully complied with the targets set by the Act every year.

The major concern about this success is that it has been achieved by containing public spending. The relatively low per-capita income of the state, historically high poverty ratio, and high concentration of backward classes are some of the factors that have constrained the revenue generating capacity of the state. Thus, the state has resorted to expenditure tightening to achieve the targets of the FRBM Act. However, the developmental needs of the State continue to be large, for the same reasons as mentioned above. Committing to the Act may have limited the resources for the state's developmental needs.

Nonetheless, the state has started to expand its expenditures in the recent years. The developmental revenue expenditure of the state has grown more than 3.5 times in a span of 10 years.

8.3. REVENUE RECEIPTS OF THE STATE

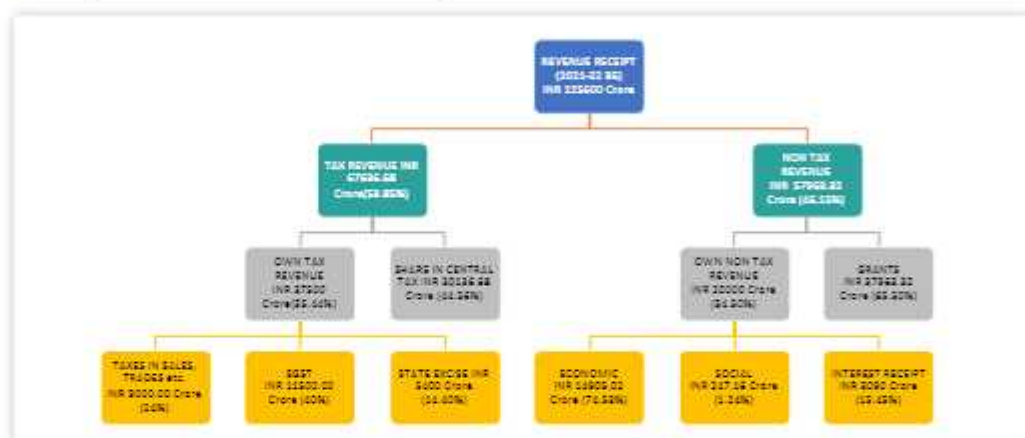
8.3.1. Revenue receipt of Odisha has been maintained at over 17 per cent of the GSDP since 2011-12, and it was 19.7 per cent in 2021-22 BE. Revenue receipt for 2021-22 BE is more than 3 times that in 2011-12, growing at an average rate of 12.2 per cent annually. Growth of revenue receipts had shrunk to 2 per cent and 5.5 per cent during 2019-20 and 2020-21 RE owing to slow growth of all tax collection during the general recession and then following the unprecedented crisis of COVID-19. Revenue receipt was estimated at INR 1,07,200 crores in 2020-21 RE. Outlook for revenue receipt indicates continuation of this upward growth with revenue crossing INR 1,25,600 crore which would be 19.7% of GSDP in 2021-22 and representing a growth of 17.2% over the previous year.

Revenue receipts have grown to more than 3 times in 10 years

I. Composition of revenue receipts

8.3.2. Tax revenues account for more than half of the state's revenue receipts. Additionally, their share has been growing over the years, owing to the growth in own tax and its share in central taxes. Tax revenues for 2021-22 BE were INR 67636.68 crores. This represented a share of 53.85 per cent in total revenue receipts. Tax revenues constitute the state's own tax revenue and transfers from the divisible pool of taxes at the national level. Over the years, the composition of tax revenues has undergone a transition. From 2020-21, the contribution of share in central taxes has declined due to decline in relative horizontal share of Odisha.

Figure 8.4. Composition of Revenue Receipts



Source: Annual Budget documents, Odisha

8.3.3. Non-tax revenues and grants from the centre contribute around 46.15 per cent of the state's revenue receipts (2021-22 BE). Having grown on an average at 15.2 per cent annually since 2011-12, non-tax revenues reached INR 57963.32 crores in 2021-22 BE. The composition of non-tax revenues has undergone a transition during the last 10 years, with growth in state's own non-tax revenues witnessing a fluctuating trend ranging from as low as 2.6% to 70% traceable largely to revenue from minerals.

II. State's Own Revenue

8.3.4. State's own revenue (SOR) as a proportion of GSDP shows a fluctuating trend contributed by variation in both, tax, and non-tax revenues, but with own tax revenues showing smaller variations and having a much larger share in SOR, the variations in SOR are considerably smaller than in own non-tax revenues. SOR shows a fluctuating trend in between 7.9 per cent and 9.9 per cent of GSDP during the period 2012-13 to 2020-21 RE. In the estimates for 2021-22, SOR as a proportion of GSDP is likely to attain the level of 9 per cent.

A. State's own tax revenue

8.3.5. The share of state's own tax revenue in tax revenues has marginally declined up to 2018-19 and in the recent years it shows an upward trend. From a share of 52.4 per cent in 2011-12, the share is estimated to increase to 55.4 per cent in 2021-22 BE. Own tax revenues for 2021-22 BE were INR 37,500 crore or 5.9 per cent of the GSDP. Growth in own tax revenues has been fluctuating with an average growth rate of 11 per cent annually. Post a slowdown in growth to 1.4 per cent in 2016-17 (traceable to a stagnancy in VAT collections and a significant drop in stamp duty collections), own tax revenues grew at 22.1 per cent in 2018-19, the highest in last ten years. Budget Estimates for 2021-22 indicate increase in their growth to 15.4 per cent over 2020-21 RE.

Table 8.1 State's own tax revenues as a proportion of GSDP in Odisha (in per cent)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21(RE)	2021-22(BE)
State's Own Tax	5.7	5.7	6.3	6.9	5.8	6.3	6.1	5.9	6.0	5.9
SGST	NA	NA	NA	NA	NA	1.5 (23.7)	2.4 (39.4)	2.4 (40.9)	2.4 (40.0)	2.3 (40.0)
Sales Tax (VAT)	3.7 (64.4)	3.6 (63.5)	3.8 (59.6)	4.0 (58.1)	3.4 (58.6)	2.6 (41.3)	1.5 (24.1)	1.4 (23.1)	1.3 (22.2)	1.4 (24.0)
State Excise	0.6 (10.0)	0.6 (10.5)	0.6 (10.3)	0.8 (11.3)	0.7 (12.2)	0.7 (11.5)	0.8 (12.9)	0.8 (13.9)	0.7 (11.7)	0.8 (14.4)
Stamp duty registration fees	0.2 (3.6)	0.2 (3.6)	0.3 (4.0)	0.7 (9.6)	0.3 (6.0)	0.2 (3.7)	0.2 (4.1)	0.3 (4.4)	0.5 (8.5)	0.3 (4.8)
Motor Vehicle Tax	0.3 (5.0)	0.3 (5.1)	0.3 (4.6)	0.3 (4.6)	0.3 (5.3)	0.3 (5.5)	0.4 (5.8)	0.3 (5.7)	0.3 (4.6)	0.3 (5.6)
Electricity duty	0.2 (3.9)	0.2 (4.0)	0.5 (8.7)	0.4 (5.4)	0.4 (7.2)	0.4 (7.1)	0.7 (10.7)	0.5 (8.7)	0.6 (9.8)	0.5 (8.8)
Land Revenue	0.2 (2.8)	0.1 (2.6)	0.2 (3.3)	0.2 (2.6)	0.1 (2.0)	0.1 (1.9)	0.1 (1.7)	0.1 (2.2)	0.1 (2.0)	0.1 (1.6)

Note: Figures in parenthesis indicate share in State's own tax revenue
Source: Annual Budget documents, Odisha

8.3.6. The state's own taxes as a proportion of GSDP are presented in Table 8.1. SGST, sales tax and state excise are the major contributors to the state's own tax revenues with a combined share of over 78 per cent and a strong growth, particularly in the case of state excise, each year. Post the introduction of GST, the share and growth of sales tax (primarily VAT on motor fuel and liquor in the post-GST scenario) has witnessed a decline, with majority of taxes being subsumed under GST. The contribution of SGST to own tax revenues was 40 per cent in 2020-21 RE and 2021-22 BE. On the other hand, with 15.5 per cent annual average growth between 2012-13 and 2021-22 BE, the share of revenues from the state excise under own tax revenue has witnessed a growing trend up to 2019-20 but it declined in 2020-21 RE. But in 2021-22 BE it showed an upward trend. Revenues from electricity duty are also witnessing a growing trend. Estimates for 2021-22 indicate that SGST, VAT, and state excise will continue to be the lead contributors.

B. State's own non-tax revenue

8.3.7. Industries, primarily the minerals sub-sector of industries, with a share of 68.5 per cent are the driver of the state's revenue from non-tax sources. The high volatility in prices for minerals, has led to fluctuations in revenues earned from non-tax sources. Further, income from interest and dividends, which are significant contributors to the non-tax revenues, has been fluctuating adding to the volatility in the state's own non-tax revenues.

8.3.8. State's revenue from own non-tax sources stood at INR 20,000 crores in 2021-22 BE, equivalent to 3.1 per cent of GSDP. Post a contraction of 7.7 per cent in 2016-17, revenues from this source have grown by 70 per cent in 2018-19 over 2017-18. There is substantial growth of 43.4 per cent in 2020-21 RE over 2019-20 contributed by mostly in interest and industries.

Box 8.2 Growing non-tax revenue base

Odisha's own non-tax revenues have been witnessing a fluctuating trend in the recent years. The industries sector is the major contributor to the non-tax revenues for the State. However, the sector's revenues are highly susceptible to fluctuations in prices of minerals, which are passed onto the non-tax revenues of the State. Odisha can diversify to other revenue sources to increase revenues from these sources.

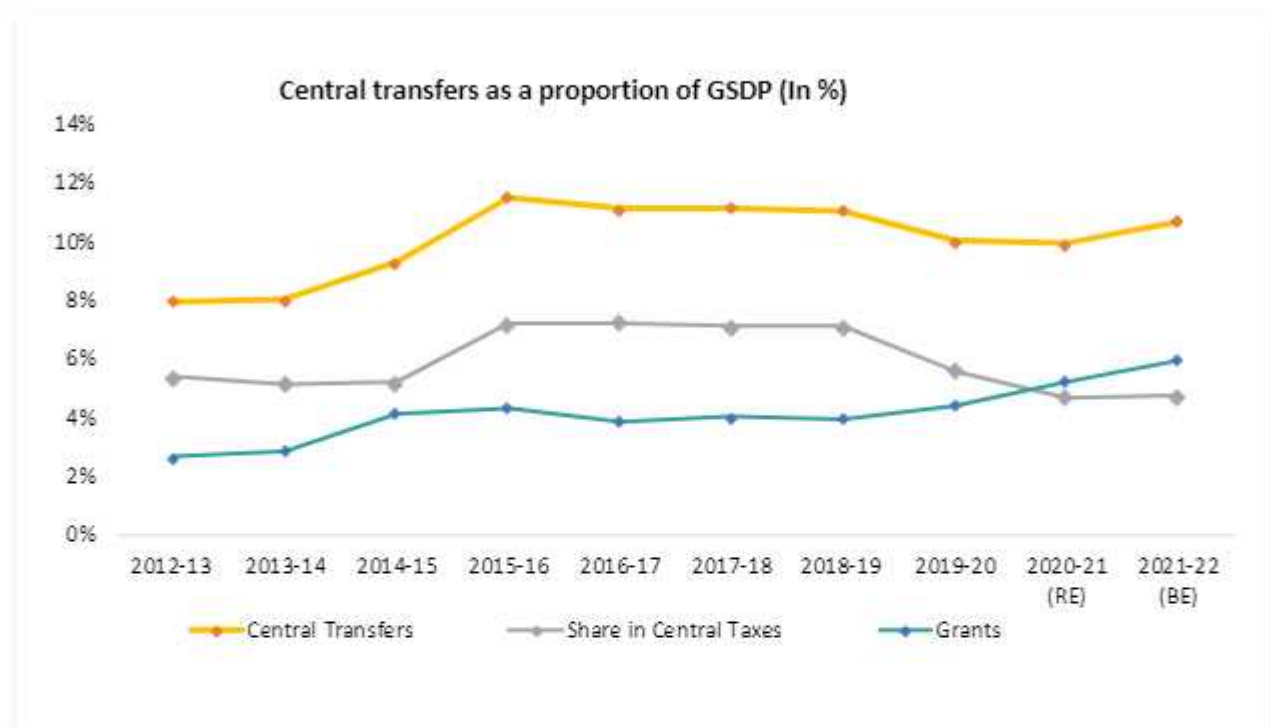
Recovery rates, defined as the ratio of revenue receipts to revenue expenditure for various sectors, were analysed for non-special category states for the period 2019-20 to 2021-22 (BE). Odisha's recovery rates for various sectors are presented below, along with the median recovery rate. Odisha, being the mineral hub, of the country has the highest recovery rate, out of all the Non-Special Category (NSC) states for industries. However, Odisha has great scope to increase its revenues from forests and tourism. The recovery rates in these sectors are lower than the median value and thus, user charge in these sectors can be increased. Further, with the fourth largest share of national forest area and various tourism opportunities, revenues from these sectors can be enhanced.

Odisha's recovery rates for various sectors (In per cent)

Sectors	Odisha	Best Performing State		Median Value
Education	0.16	Madya Pradesh	5.80	0.86
Healthcare	1.00	Tamil Nadu	12.23	3.18
Housing	7.38	Telangana	55.02	5.33
Water Supply and sanitation	1.62	Goa	24.06	1.44
Crop Husbandry	0.38	Jharkhand	15.43	0.33
Forests & wildlife	4.23	Madhya Pradesh	68.48	15.44
Major & medium irrigation	110.12	Goa	347.88	15.95
Minor irrigation	1.08	Chhattisgarh	355.62	3.41
Industries	4586.18	Odisha	4586.18	441.94
Tourism	1.40	Gujarat	165.96	2.13

III. Central transfers

8.3.9. The contribution of central transfers has grown from 50.6 per cent of revenue receipts (8.8 per cent of GSDP) in 2011-12 to 53.8 per cent (10 per cent of GSDP) in 2019-20 due to increased devolution in the 14th FC period. But with decline in the share for Odisha in 15th Finance Commission recommendation, the revised estimates for 2020-21 indicate share of central transfer has declined to 50 per cent. Central transfers include both share of central taxes and grants from the Centre. Figure 8.5 presents the proportion of each of these transfers as a proportion of the GSDP.

Figure 8.5. Central transfers as a proportion of GSDP (in per cent)

Source: State Finances: A Study of State Budgets, RBI and Annual Budget documents, Odisha

8.3.10. Direct taxes, i.e., corporation and income taxes are the major contributors to the share in central taxes received by the state. Together, these contribute over 27.5 per cent of the share in central transfers in 2020-21 RE. Consistent double-digit growth in income tax and high growth in corporation tax continued up to 2018-19. Subsequently, there was negative growth in 2019-20 and 2020-21RE. The share of direct taxes in central taxes stood at INR 14,750.45 crores in 2020-21 RE, and it is estimated to grow further to INR 17678.32 crore in 2021-22 BE. Grants, on the other hand, stood at INR 28,240.37 crores and INR 37963.32 crore in 2020-21RE and 2021-22 BE respectively. Grants for Centrally Sponsored Schemes (CSSs) and statutory grants are the major contributors to this component.

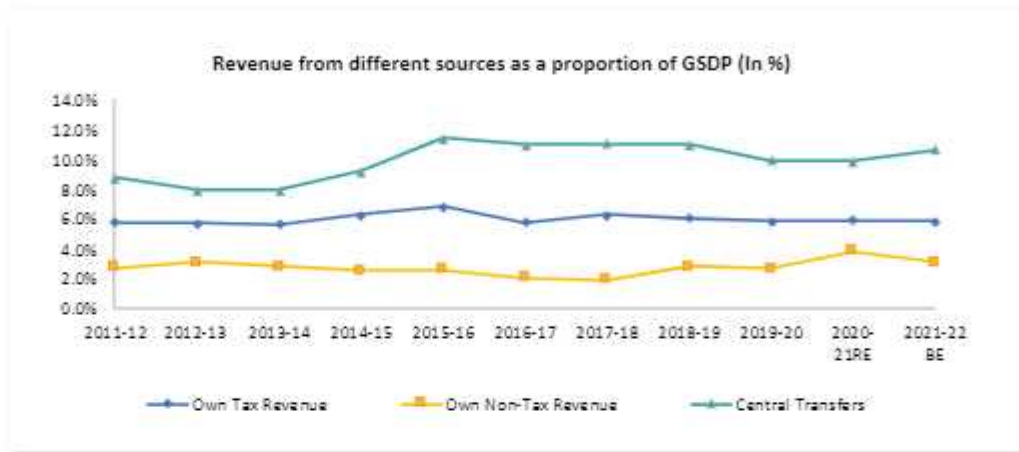
IV. Key revenue indicators

8.3.11. Key revenue indicators are a measure of a state's tax base, the efficiency of its tax collection, and its scope to increase tax collections. They present a picture of the state's dependence on the centre to fund its expenditure needs.

A. Revenue sources as a proportion of GSDP

8.3.12. The state's dependence on own sources to mobilise revenues has been stable. Own tax revenues as proportion of GSDP have grown from 5.7 per cent in 2012-13 to 6 per cent in 2020-21 RE, after witnessing a peak of 6.9 per cent in 2015-16. But own non-tax revenues have been witnessing a decline consistently since 2012-13, reaching its lowest of 1.9 per cent of GSDP in 2017-18. However, revenue from this source was raised to 3.9 per cent in 2020-21 RE. Central transfers, which form the largest share of revenue receipts, have been growing. A sharp jump in their proportion to GSDP has been witnessed from 2015-16 as reflected in Figure 8.6.

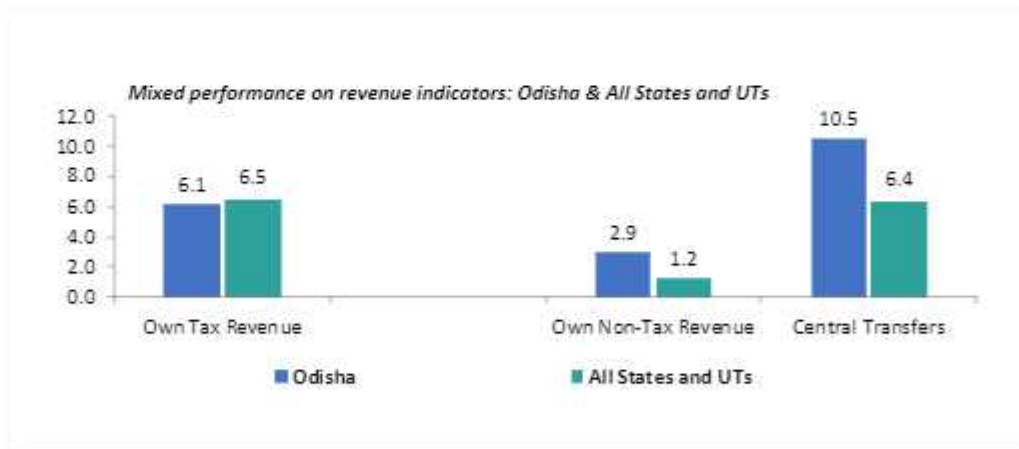
Figure 8.6. Revenue from different sources as a proportion of GSDP (in per cent)



Source: State Finances: A Study of State Budgets, RBI and Annual Budget documents, Odisha

8.3.13. Odisha's performance on revenue indicators in comparison to other states shows mixed trends. The state's own tax revenue as a proportion of GSDP during the five-year period (2017-18 to 2021-22 BE) has been at par with the average for all states. The average for own non-tax revenues as a proportion of GSDP for Odisha during 2017-18 to 2021-22 BE is more than double the average for all states in the same period. However, the state's share of central transfers to GSDP is 10.5 per cent against the all States & UTs average of 6.4 per cent.

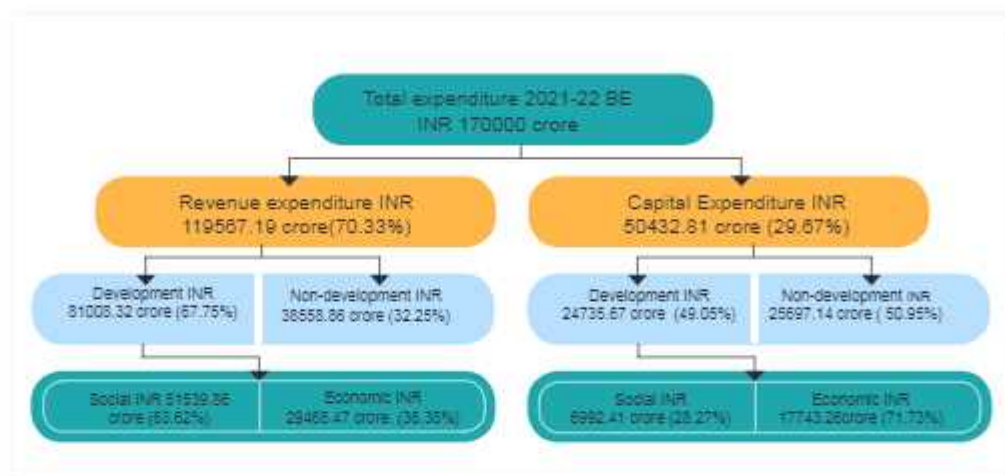
Figure 8.7. Revenue from different sources as a proportion of GSDP vis-a-vis other states (2017-18 to 2021-22 BE) (in per cent)



Source: State Finances: A Study of State Budgets, RBI

8.4. EXPENDITURE OF THE STATE

8.4.1. Odisha's expenditure has been witnessing consistent double-digit growth over the years (2012-13 to 2018-19) and slowed down to 7.86 per cent in 2020-21 RE and witnessed an upward trend of 25.9 per cent in 2021-22 BE. Growing at an average rate of 15.1 per cent annually since 2012-13, the total expenditure stood at INR 1,70,000 crore in 2021-22 BE.

Figure 8.8. Composition of state expenditure

Source: Annual Budget documents, Odisha

8.4.2. Revenue expenditure is the largest component of total expenditure by the state and continue to be so in 2021-22 BE with a share of 70.33 per cent. It stood at INR 104863.91 crores in 2020-21 RE, growing 5.78 per cent over 2019-20 which is the lowest annual growth in the last ten years. But it revived in 2021-22 BE, growing at 14 per cent over 2020-21 RE and stood at INR 119567.19 crore. The share of revenue expenditure has witnessed a decline in its share in the total over the years, from 82.3 per cent in 2011-12 to 74.9 per cent in 2018-19. But the share increased to 79.2 per cent in 2019-20, declining again subsequently. With the focus of the government on building infrastructure to ensure sustainable growth, the share of capital outlay has increased 4.3 times in ten years. Capital outlay stood at INR 19298.17 crores in 2020-21 RE and continues to grow, at an estimated growth rate of 33.63 per cent in 2021-22 BE over 2020-21 RE, to ensure continuation of economic activities after the breakout of the Covid-19 crisis.

I. Revenue expenditures

8.4.3. Revenue expenditure can be classified under three heads: developmental (which includes social sector and economic sectors), non-developmental, and grants assigned to local bodies and program-related investments (PRIs). With a focus on development and growth of the economy, developmental expenditure has the highest share of revenue expenditures. Developmental expenditure stood at INR 81,008.32 crores in 2021-22 BE, accounting for 67.8 per cent of revenue expenditure. Non-developmental expenditure accounted for 32.25 per cent. Sector wise, education (17 per cent), rural development (9.1 per cent), water supply & sanitation (6.6 per cent) and medical & public health (6.1 per cent) receive the highest allocation out of total revenue expenditures. Given the literacy levels of the state and concentration of population in rural areas, focus of expenditure on these sectors is in harmony with the developmental needs of the state.

8.4.4. Social sector accounts for the majority share of developmental expenditure and spent 63.6 per cent of it in 2021-22 BE. Within the social sector, education, health, and water supply and sanitation are the sectors with higher allocations. Given the high concentration of tribal population in the state, expenditure on welfare of these social groups also forms an important component of social expenditure. Outlook for expenditure in social sector, indicates that the share of these sectors continue to get stable allocations in 2021-22 (BE).

Social sector spending accounts for major chunk of developmental expenditure in 2021-22

8.4.5. On the other hand, rural development, agriculture, irrigation, and roads and bridges are the lead claimants to the economic sector expenditure, underlining the State's commitment to developing the infrastructure and rural sector of the economy. The committed expenditures on interest payments and pension form most of the non-developmental expenditure. The fiscal prudence of the state has kept the share of these components limited to 21 per cent in 2020-21 RE (Table 8.2).

Table 8.2 Composition of revenue expenditure (in per cent)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (RE)	2021-22 (BE)
Developmental exp.	65.8	68.0	70.0	72.8	72.7	70.0	70.2	69.7	69.0	67.8
Social services	39.2	41.0	41.0	41.9	42.4	41.1	42.7	43.9	40.2	43.1
Education	19.0	18.2	19.2	18.8	18.2	19.2	19.0	17.4	16.9	17.0
Medical	3.8	3.6	4.9	5.1	5.7	5.3	5.5	5.3	7.0	6.1
Water supply and sanitation	1.6	1.6	2.1	3.4	3.6	2.4	3.5	4.0	3.0	6.6
Economic services	26.7	27.0	29.0	30.9	30.3	28.9	27.5	25.8	28.9	24.6
Agriculture and allied services	10.7	10.3	11.0	9.9	10.0	8.1	9.2	11.1	10.0	8.7
Rural development	5.7	6.5	8.7	12.6	12.3	12.6	11.6	9.8	12.6	9.1
Irrigation and flood control	2.7	3.1	2.7	3.1	2.9	2.7	2.0	1.3	1.7	2.2
Roads and bridges	4.0	3.7	3.7	3.1	3.0	3.1	2.2	1.9	2.2	2.3
Non-developmental exp.	32.5	30.0	28.4	25.6	25.7	28.2	28.2	28.8	29.6	31.0
Interest payments	7.3	6.3	5.5	5.7	6.2	6.9	6.8	6.1	6.8	6.7
Pensions	14.1	13.0	12.5	10.8	10.5	12.1	12.3	14.4	13.3	14.4
Grants to ULBs and PRIs	1.7	2.0	1.6	1.6	1.6	1.8	1.6	1.4	1.4	1.3

Source: State Finances: A Study of State Budgets, RBI and Annual Budget documents, Odisha

8.4.6. Revenue expenditure has witnessed consistent double-digit growth during the last ten years growing at an annual average rate of 13.2 per cent. This high growth is expected to continue in the coming years as well. Revenue expenditure is estimated to grow at 14 per cent in 2021-22 (BE) over 2020-21 RE. The developmental sector, with its high share and annual average growth rate of 13.5 per cent is the driver of growth in the revenue expenditures. However, growth in various components of revenue expenditure has been volatile.

II. Capital Expenditure

8.4.7. Capital outlay of the state has been witnessing high growth, in harmony with the state's focus on improving the social and economic infrastructure of Odisha. The capital outlay in 2021-22 BE was INR 25787.80 crores, almost 5.7 times of its value in 2011-12. Capital outlay has witnessed high double-digit growth almost every year (except

Increasing capital outlay with focus on Improvement of social and economic Infrastructure of the state

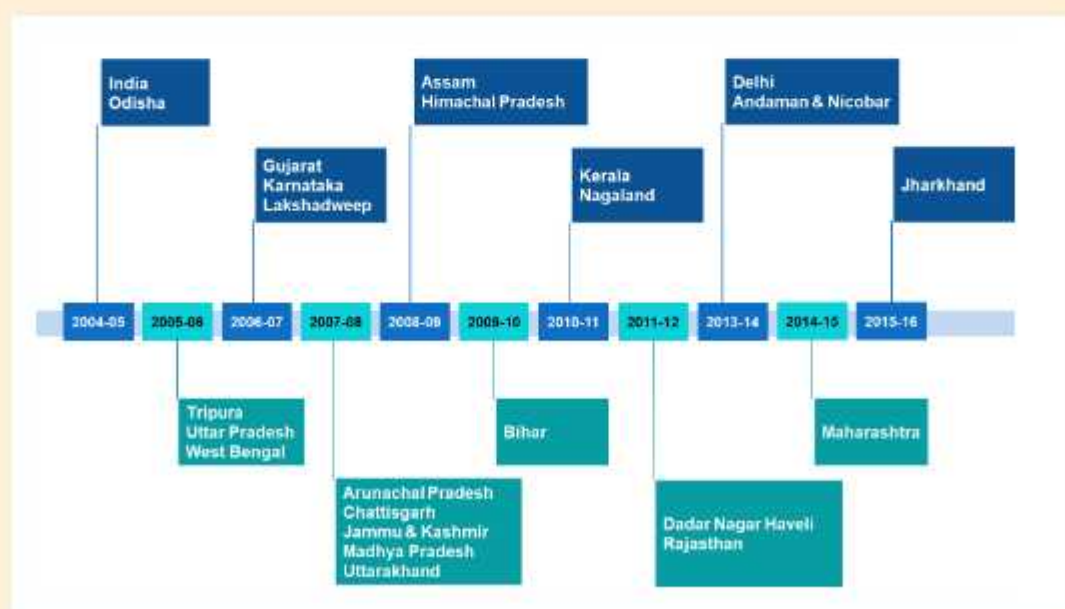
for 2016-17) till 2018-19. But in 2019-20 and 2020-21 RE there was contraction in capital outlay. However, capital outlay is likely to increase by 33.6 per cent as per the estimate of 2021-22. The majority share of these expenditures is allocated to economic activities. In 2021-22 BE, 68.8 per cent of capital outlay was directed towards economic services, while social services were allocated 27.1 per cent of the total capital outlay. The remaining was for non-developmental purposes (Table 8.3). Economic services drive the growth in capital outlay. But the COVID-19 pandemic forced a resort to lockdown that had a sudden and intense impact on the economic activity and financial market. It affected the growth of economic services negatively. As such, on an average, economic services have grown at 15.8 per cent annually between 2012-13 and 2021-22 BE, while social services grew at 28 per cent.

Box 8.3 Mainstreaming gender through Budget



Odisha became the first state in the country to adopt the practice of gender budgeting in 2004-05. Initially, the gender budgeting involved only the Women Component Plan (WCP) in its annual budget, with the mandate that at least 30 per cent of the funds should flow to women. In subsequent years, WCP evolved into Gender Budget Statement (GBS), constituting two parts: one reflecting women-specific schemes having 100% allocation for women, and the other concerned with pro-women schemes, where at least 30% of the fund allocation is for women.

State wise Adoption of Gender Budgeting in India



Source: Annual Report 2019-20, Ministry of women and Child Development, Govt. of India.

Odisha started presenting Gender Budget Statement as a part of State Budget from 2016-17. As evident from the table below Odisha has consistently been translating gender commitments into budgetary commitments.

Odisha's Gender Budget over the years

Year	Part A 100% Gender Specific Schemes (In crores)	Part B Pro-Gender Schemes (In crores)	Total Gender Bud- get (In crores)	Share of Total Expenditure (In %)
2016-17	1301.13	20835.64	22136.77	23.67
2017-18	1703.79	30907.32	32611.11	28.52
2018-19	2643.66	40294.67	42938.33	37.68
2019-20	2653.67	44927.88	47581.55	41.58
2020-21(RE)	2377.41	42403.43	44780.84	37.77
2021-22(BE)	2684.49	46461.44	49145.93	35.49

Source: Odisha Budget at Glance, various years, Odisha; Gender Budget, 2020-21, 2021-22, Odisha.

Gender responsive budgeting has proven instrumental in mainstreaming gender in the design, implementation, and evaluation of financial allocations, across all levels of government. As a result, it has emerged as one of the fundamental pathways towards achieving and mainstreaming gender equality, women empowerment, development, and inclusive growth. States with gender budgeting efforts have made relatively higher progress in gender equality than those without. This is quite visible in the case of Odisha when it comes to progress made in reduction of maternal mortality ratio in the health sector or increased Gross Enrolment Ratio for females in the education sector.

Over the past years, Odisha has made admirable strides in empowering women and mainstreaming them into the system. Even during the pandemic, women have been at the frontline of the response, be it as health professionals, frontline workers, Women Self Help Groups, ASHA workers, ANMs, Anganwadi Workers, caregivers at home, community leaders, police, teachers, scientists or more. From rolling out Mission Shakti for women empowerment in 2001 to reserving 33% for women in parliament in 2019, as an attempt to address the underrepresentation of women in the political space, Odisha government has continually been putting efforts to make Odisha a land of equal opportunities.

8.4.8. Capital outlay has been responsive to the developmental needs of the state. Consistently during the last 10 years, and on an average 63 per cent of total outlay has been allocated for major and medium irrigation, flood control, and transport infrastructure. Odisha continues to be highly dependent on agriculture for livelihood purposes. With high susceptibility to droughts, the earning capacity of almost half the population is volatile and linked to weather conditions. Hence, the state has been focusing on providing a sustainable irrigation network. On an average, 29 per cent of capital outlay has been directed towards major and medium irrigation and flood control in the last ten years. In 2021-22 BE, INR 5726.80 crore was spent on such projects, which accounted for 22.2 per cent of the capital outlay. Another focus area of the government is the upgradation of the transport system. The state still has one of the lowest rail connectivity amongst all non-hilly states. In 2021-22 BE, 35.7 per cent of capital outlay was allocated for transport infrastructure and services.

8.4.9. In capital outlay on social services, the bulk is spent on the welfare of SC/STs. These marginalised groups constitute close to 40 per cent of Odisha's population and thus, their welfare has been a priority for the state. Education, medical welfare, and housing also receive significant share of social services' capital outlay

Table 8.3 Composition of capital outlay (in per cent)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (RE)	2021-22 (BE)
General Services	6.2	6.1	3.5	2.5	2.0	2.2	3.1	4.0	5.0	4.1
Social services	21.5	22.2	20.7	17.1	16.2	19.9	19.4	26.0	28.6	27.1
Education	0.7	2.0	3.3	2.9	1.9	3.5	3.5	3.9	4.3	4.7
Medical & public Health	1.5	1.9	3.7	3.1	3.6	3.7	2.6	2.5	4.9	6.3
Housing	3.1	2.0	2.0	1.8	1.7	1.4	1.5	1.7	1.6	1.9
Water supply and Sanitation	3.2	7.3	4.8	4.0	4.9	7.5	9.1	15.4	12.9	10.8
Welfare of SC/ST	8.4	5.4	3.9	3.3	2.5	2.5	1.6	1.8	2.2	1.8
Economic services	72.3	71.7	75.8	80.4	81.7	77.9	77.5	70.1	66.3	68.8
Major & Medium Irrigation and flood control	35.7	28.5	25.7	24.4	31.4	32.4	24.3	23.4	18.9	22.2
Transport	27.5	28.4	41.2	44.2	36.6	33.9	38.2	31.9	33.1	35.7

Source: State Finances: A Study of State Budgets, RBI and Annual Budget documents, Odisha

8.5. QUALITY OF EXPENDITURE

8.5.1. Odisha's performance on various indicators of quality of expenditure fares well in comparison to all-states averages. Figure 8.9 compares the performance of Odisha vis-à-vis all states, on average during 2018-19 to 2021-22(BE).

8.5.2. It is evident that Odisha has allocated expenditure more efficiently in comparison to other states. Odisha has the second highest allocation of aggregate disbursement towards developmental purposes, which is much higher than the average for other states. Further, allocation of expenses towards committed expenditure like interest payments, pensions, salaries, and wages has been considerably lower than the average for other states. Pension expenditure as a proportion of total revenue expenditure, however, is marginally higher in Odisha.

III. Per Capita Expenditure

8.5.3. Odisha's expenditure has been focused on developmental purposes, as highlighted in the previous section. The state has one of the highest developmental expenditure to aggregate disbursement ratio. On an average, the Government of Odisha has annually spent INR 20086 per capita for developmental purposes between 2016-17 and 2021-22 BE.

8.5.4. The average per capita spending during the period 2016-17 to 2021-22 (RE) on health, education and irrigation of Odisha and adjoining/ nearby states i.e., Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Telangana and West Bengal has been derived taking into consideration the data published by RBI in the "State Finances – A Study of Budgets" in 2017-18, 2018-19, 2019-20, 2020-21, and 2021-22 issue and projected population for states in Report on Population Projection-2019 (2011-2036) published by MOSPI, Government of India on per capita GSDP.

Figure 8.9. Quality of expenditure (2018-19 to 2021-22 BE) (in per cent)

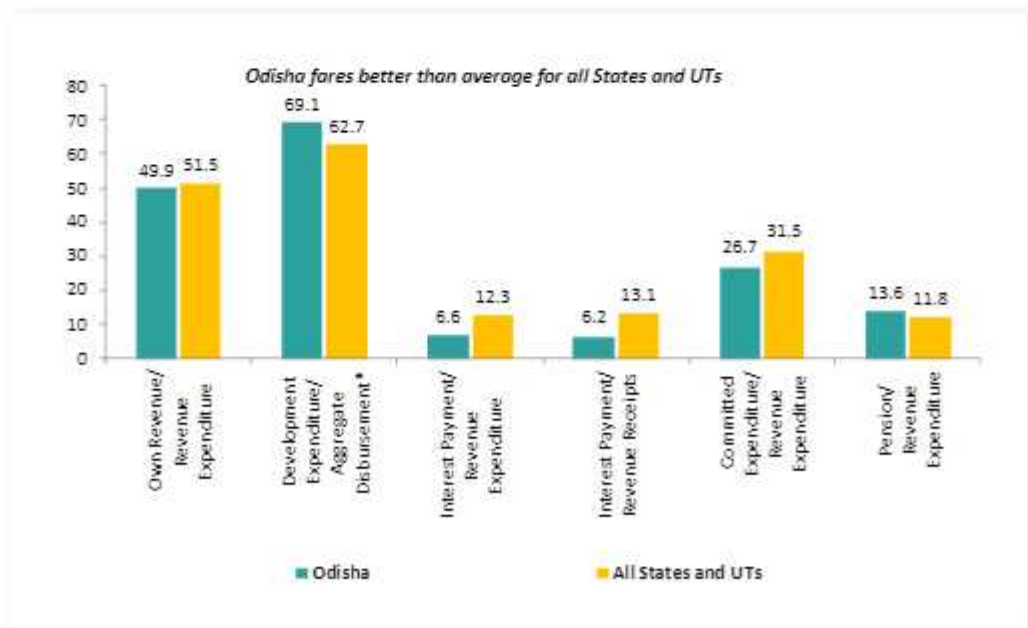
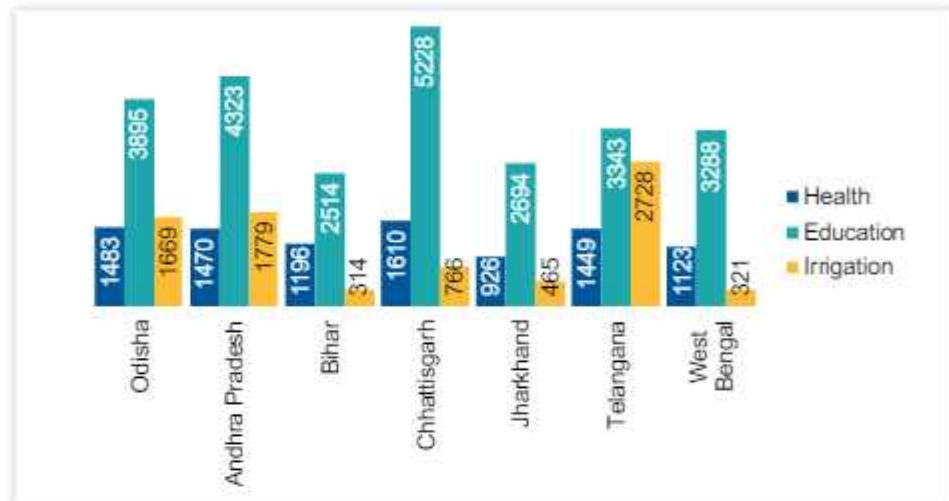


Figure 8.10.

Average Per Capita Expenditure on Health, Education and Irrigation (in INR)



Source: State Finances: A Study of State Budgets, RBI

8.5.5. Figure 8.10 reflects the average per capita spending on health, education and irrigation of Odisha, Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Telangana, and West Bengal. On comparison, it is revealed that the average per capita spending in Odisha on Irrigation is third highest i.e., INR 1669 and third highest in respect of per capita spending on Health & Education amounting to INR 1483 and INR 3895 among the seven states included for comparison. The state has been successful in providing for the developmental needs across most sectors along with maintaining fiscal discipline.

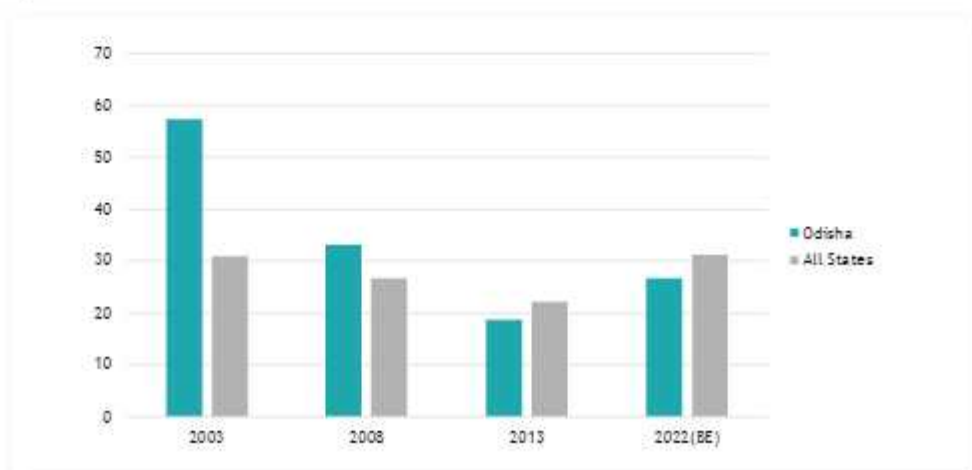
8.6. STATE'S LIABILITIES

I. Outstanding liabilities

8.6.1. Outstanding liabilities of Odisha have witnessed a sharp decline, owing to prudent measures that are undertaken to stabilise the fiscal position of the state. Odisha had the fourth highest total outstanding liabilities-to-GSDP ratio at 57 per cent as on 31st March 2003, against the all-states' average of 31 per cent. The consistent efforts of the State Government have brought down the liabilities by a significant proportion (Figure 8.11). The total outstanding liabilities of the state stood at INR 1,67,205.8 crore as per the budget estimate for 2021-22. While it was budgeted to be around 26.7 per cent of the GSDP, due to more than expected growth in state GSDP, the ratio now stands at 23 per cent for the year 2021-22.

Figure 8.11.

Outstanding liabilities to GSDP in Odisha and all state average (in per cent)

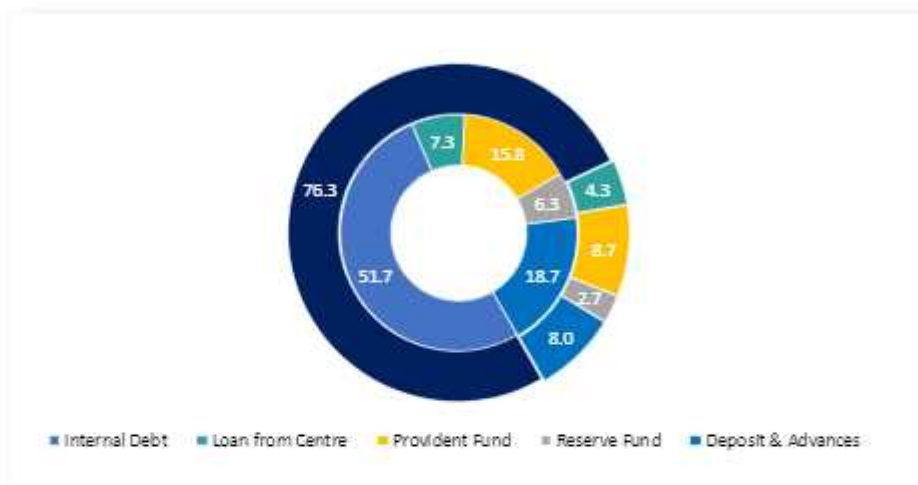


Source: State Finances: A Study of State Budgets, RBI

8.6.2. Internal debt, the stock of unpaid loans and accumulated interest thereon at a point of time, includes debt owed towards market borrowings, borrowings from commercial banks and other financial institutions, and excludes those from the Government of India. Most of these are medium- to long-term borrowings. This forms the largest share (51.7 per cent) of outstanding liabilities for Odisha as against the all-states & UTs average of 76.3 per cent (Figure 8.12). The inner ring represents Odisha while the outer represents all states and UTs together.

Figure 8.12.

Composition of total outstanding liabilities (in per cent) Odisha vis-à-vis India (end-March 2022, Budget estimates)



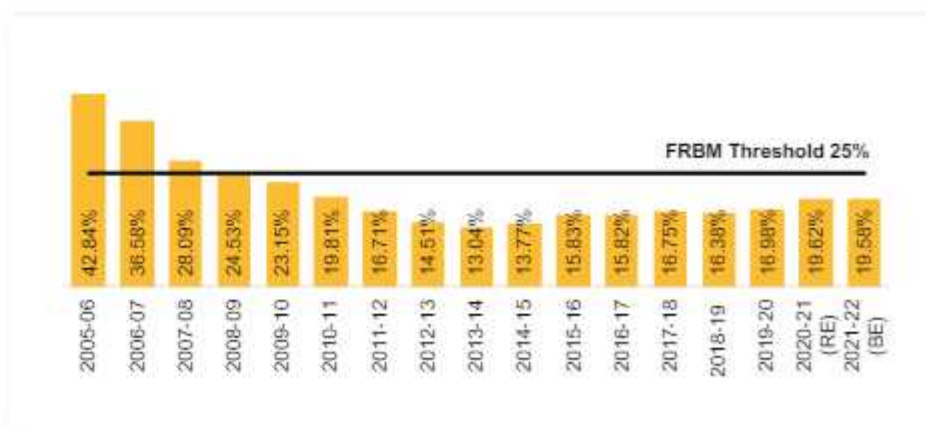
State Finances: A Study of State Budgets, RBI

8.7. DEBT STOCK

8.7.1. Debt stock that forms the largest component of outstanding liabilities has also witnessed a decline over the years. Debt stock as a proportion of GSDP stood at 42.8 per cent in 2005-06, much higher than the limit of 25 per cent set under the Fiscal Responsibility and Budget Management Act, 2005. The state had resolved to commit to the thresholds prescribed by the Act and it took strict measures in this context. The state has been able to contain debt-GSDP ratio below the threshold limit since 2008-09, as presented in Figure 8.13. However, with rising developmental needs, the debt to GSDP ratio has been witnessing a rising trend since 2014-15. The total debt to GSDP ratio is estimated to be at 19.6 per cent in 2021-22 BE, after declining to 13 per cent in 2013-14.

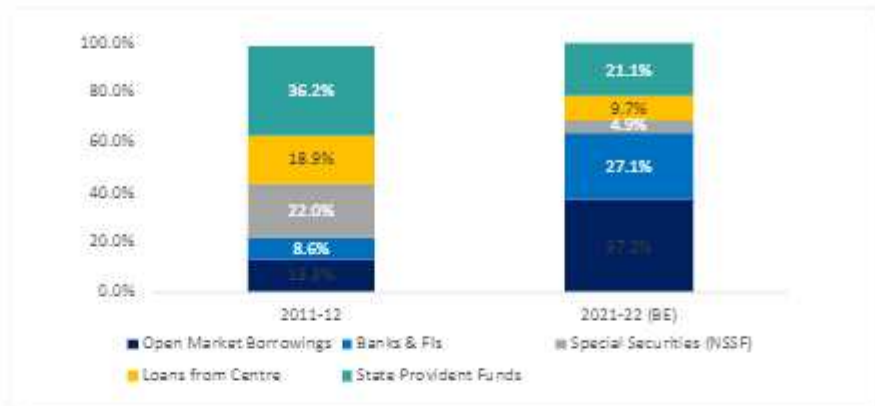
Figure 8.13.

Debt stock to GSDP (in per cent)



Source: Annual Budget documents, Odisha

Figure 8.14.
Composition of debt stock (in per cent)



Source: Annual Budget documents, Odisha

8.7.2. Composition of debt stock in the state has also witnessed a transition as the state has moved towards open market borrowings and borrowings from banks and other financial institutions (Figure 8.14). State provident funds and special securities (NSSF) were the largest contributors to the debt stock in 2011-12, contributing 36 per cent and 22 per cent respectively. With reduced dependence on state provident fund, the share of open market borrowings and bank/FI loans has increased to 64.3 per cent.

8.7.3. Higher growth rate in GDP compared to growth in debt stock, coupled with low cost of borrowing, has made the fiscal policy of the state more sustainable. FRBM legislation as a fiscal policy rule has helped to achieve stability in state finances and efficiency in expenditure allocation. With a more stable fiscal position, the focus of the state is on improving the quality of expenditure, regular expenditure review, expanding the coverage of public services, and investing in social and physical infrastructure. These are critical to achieve higher inclusive growth on a sustainable basis. The state now has the fiscal space to opt for higher capital receipts to fund capital outlay in developmental sectors to fulfil this objective.

8.8. DEBT SUSTAINABILITY

8.8.1. The efforts of the state have allowed the debt position of the state to be relatively stable. The debt ceilings in the original FRBM Acts were linked to three indicators, viz., GDP, revenue receipts and receipts in the consolidated fund of the state. The debt-GDP ratio of a state represents the final outcome of all the budgetary transactions and is an important indicator of fiscal correction initiatives undertaken during the year. Consistent with the lower debt-GDP ratio, an improvement has been noted in the debt sustainability. The consolidated outstanding debt of the state Government as a proportion of GDP declined steadily from 2005-06 (42.8 per cent) to 2021-22 BE (19.6 per cent), reflecting the impact of the debt relief mechanism that incentivised the states' adherence to a rule-based fiscal regime.

Figure 8.15.
Debt Sustainability (in per cent)



Source: Annual Budget documents, Odisha

8.8.2. The State Government could successfully contain its interest payments to revenue receipts ratio (IP-RR), which decreased from 26.3 per cent in 2005-06 to 5.8 per cent in 2019-20 RE (within 15 per cent). The consolidated debt-GSDP ratio of the State Government declined from 42.84 per cent in 2005-06 to 19.6 per cent in 2021-22 (BE), which is much lower than the target of 25 per cent stipulated by the 15th FC.

II. Maturity profile of outstanding State Government securities' liabilities

8.8.3. The maturity profile of Odisha highlights near term redemption, reaching INR 6000 crore in 2022-23. About 50 per cent of total amount outstanding is expected to be repaid/refinanced in the next five years (as per the status on end March 2020). In comparison to other states, the maturity profile of Odisha is much less worrying (Figure 8.16). With low borrowing, the state has much less debt obligations.

Figure 8.16. Maturity profile of Odisha vis-a-vis other states (in INR crore)



Source: State Finances: A Study of State Budgets, RBI

8.9. IMPACT OF GOODS AND SERVICES TAX

8.9.1. GST was introduced with effect from 1st July 2017 across the country. 17 taxes/ surcharges levied by Centre and states have been subsumed in GST. As per the provisions made in the Constitution (One Hundred and First Amendment) Act, 2016, the states will be compensated for any loss on account of introduction of GST for five years. To determine the compensation, collection of the taxes subsumed in GST in the year 2015-16 has been taken as the base year collection and 14 per cent has been taken as the annual growth rate. Growth rate of 14 per cent is applied annually to the base year's collection to determine the projected collection in a year.

I. GST collection and compensation

8.9.2. Goods and Services Tax collection in Odisha has remained below the protected revenue every year since implementation mainly because of structural issues – tax base that could not be taxed any more or had to be taxed at low rates was considerably bigger than the tax base gained through the widening of the tax base. The revenue

loss sustained on account of lower- and zero-rated GST items like food items and minerals could not be made good from the items covered under service tax. The compensation on account of the loss is being received from the compensation pool though with a time lag. Further, the compensation amount is now being received as a facilitated market borrowing rather than a transfer from GoI. The compensation scheme is scheduled to be terminated during the next financial year (2022-23) at the completion of five years. The compensation claim position since inception of GST is presented in Table 8.4. The state will need to adjust its overall fiscal stance to manage the revenue loss arising from the cessation of the compensation flow.

Table 8.4 Claim of Compensation Position 2017-18 to December 2021 (in INR Crore)

<i>Base Year Revenue (2015-16): 11049.34</i>						
Sl. No	Description	2017-18 (From July-March)	2018-19	2019-20	2020-21	2021-22 (Up to Dec 2021)
1	Protected Revenue	10769.00	16370.08	18661.89	21274.56	18189.75
2	Actual Revenue collected as per Section 7 of GST Compensation Act	8421.00	12129.00	13329.96	13209.14	11891.52
3	Compensation claimed	2348.00	4241.08	5331.92	8065.42	6298.23
4	Compensation received	2348.00	4241.08	5331.92	2314.96	0.00
	Balance to be received	0.00	0.00	0.00	5750.46	6298.23

Source: Commercial Tax Department, Government of India

8.10. COVID AND ITS IMPACT ON STATE FINANCES

8.10.1. Due to imposition of nationwide lockdown during 2020 and 2021, there were minimal economic activities in certain sectors of the economy. Manufacturing sector, services such as tourism, hospitality, hotels & restaurants, transportation etc. were badly affected by the lockdown. The economic growth of Odisha contracted to 5.3 per cent during 2020-21. The contraction in the economy resulted in lower revenue realisation. There was negative growth in own tax, own non-tax revenues, share in central taxes during 2020-21. However, the economy has bounced back in 2021-22. The State Economy is estimated to register more than 10 per cent growth during the 2021-22. The revenue position of the State has also improved in comparison to the previous year.

I. Responses of the State Government to Covid-19 Pandemic

8.10.2. The State Government has taken several steps to manage finances of the State during the Covid-19 pandemic. The innovative steps in public finance management and administrative acumen shown by the State Government

in the Covid management have been applauded at the national level. In fact, Odisha is one of the few States in the country who have managed the State Finances very well without resorting to high-cost borrowing during the pandemic. The State Government has managed to keep the fiscal parameters within the FRBM limit even during the pandemic.



8.11. REFORMS IN THE BUDGET-MAKING PROCESS

8.11.1. The State Government has been laying emphasis on bringing reforms in the budget making process in the areas of accessibility, understanding and participation by the ordinary citizens in the budget-making process and improving budget credibility. Recognizing the outcomes of the reform efforts, Odisha has been ranked third among all states in India in the recently published Second report of the Transparency International on "Transparency in Budget process". With the objective of further improving our budget credibility, the State Government has introduced 'Strategic Budget making process' in preparation of the budget for the ensuing year.

8.11.2. A Medium-Term Fiscal Framework (MTFF) has been introduced to provide a three-year outlook for the fiscal deficit, revenue, and a spending ceiling consistent with the deficit. This framework will significantly enhance the credibility of fiscal policy, allow for improved planning, and give a better signal to stakeholders on what to expect from future budgets. The annual budget making process is anchored on the medium-term projection made through this framework.

8.11.3. Communication of budget ceilings in advance to all the administrative departments has been started since the budget for 2021-22. This top-down budget practice is consistent with the global best practices and is based on realistic resource allocations. This approach also introduces a budget discussion focused on how available funds will be spent, rather than one based on unrealistic wishes of spending departments. This top-down approach has resulted in substantial reduction in the gap between budget proposal, budget allocation and actual expenditure. This in turn has enhanced the credibility of the budget making process and the estimates of receipts and expenditures in the annual budget.

8.11.4. Fiscal Strategy Report (FSR) has been published along with the annual budget 2021-22. The Fiscal Strategy Paper is based on the MTFF developed. The objective of the FSR is to publish it as a pre-budget disclosure document for information of all the stakeholders about the fiscal planning of the State Government in the coming budget as well as in medium term.

8.11.5. Fiscal Risk Management and reporting exercise has been taken up by Odisha based upon international best practices with Technical Assistance from the IMF SARTTAC. A fiscal risk register has been developed comprising of all kinds of risk including calamities, debt, guarantees, PSU risk and PPPs. and is updated on a continuous basis. A comprehensive Fiscal Risk Statement has been brought out along with the Annual Budget, 2021-22. Reserve Bank of India has highlighted 'Fiscal Risk Management practice in Odisha' as a best practice in their publication "State Finances: A Study of Budget, 2020-21" at p-34-35 as a box item. It will be published annually along with the budget documents.

8.11.6. **Status Paper on Public Debt:** A status paper on public debt has been published along with the annual budget 2021-22. The paper intends to inform public, and all concerned about the current debt position of the State Government. It also highlights the different sources of public borrowing and the steps taken by the State Govern-

ment to move away from high-cost borrowing sources to low cost borrowing sources. Further, it analyses the debt sustainability and debt outlook of the State Government in medium term.

I. New Initiatives

8.11.7. E-Budget Presentation: As a green initiative, the annual budget for 2021-22 was presented in complete electronic form through the National e-Vidhan Application (NeVA). Odisha is one of the first States in the country to use the NeVA platform for e-budget presentation. The printing of bulky budget documents has been done away with. Further, to make the budget documents and information about the State Budget available and accessible to all, a Mobile App for Odisha Budget has been made available both in Android and IOS versions.

*New Initiatives
under public finance
management driven by IT
and AI based solutions*

8.11.8. Participatory Budget Initiative (PBI): The State Government sought public opinion on the annual budget through a pre-budget consultation process on social media platforms such as Facebook, Twitter, WhatsApp and through SMS & Electronic Mails. Valuable inputs have been taken into consideration while formulating the annual budget. It has made the annual budget making process participatory and inclusive in nature.



8.11.9. Artificial Intelligence (AI) based video identification: The pensioners/ family pensioners can submit their life certificate through their mobile phone / computer /Laptop etc. to the Pension Disbursing Authority (PDA) through the Artificial Intelligence (AI) based online verification of identity and proof of life (Video-KYC) without having to visit the Pension Disbursing Authority concerned physically. This facility can also be used for the identification of the pensioner for disbursement of first pension. This facility will help the old age pensioners to dispense with physical visits to the PDA for submission of life certificate during the pandemic. Further, this will

ensure timely disbursement of their first pension and other retirement benefits.

8.11.10. Implementation of e-Voucher: To ensure end-to-end digital transaction between Treasuries, DDOs and A.G for various kinds of transactions relating to Government payments, e-Voucher is being implemented. The pilot stage of implementation of e-Voucher is over. Soon it will be rolled out across all the Treasuries in the state.



8.11.11. Availability of additional modes of payment like UPI and Wallet etc. for the citizens: With introduction of new digital payment modes like UPI, Wallet, Net Banking, Debit and Credit Card, citizens can now pay government dues without physically visiting any government office. Adherence to online challans helped to reduce use of physical papers, greater accountability and transparency, and provided a better tracking mechanism.

8.11.12. Online Processing of Pension Application through IFMS: It makes the entire process of pension application hassle free, transparent and efficient. The entire pension application process starting from submission of the pension application by the pensioner or family pensioner to issue of pension payment order by the Pension Issuing Authority has been made digital. The pensioners can track their pension application online.

8.11.13. Electronic Disbursement: Electronic disbursement through IFMS facilitates transfer of various entitlements directly to beneficiary's accounts using the e-Kuber platform of RBI through NEFT. To enhance the service delivery, a new facility i.e., Bulk Disbursement has been introduced. This facility is beneficial for those departments where the number of beneficiaries is very large such as disbursement of scholarship, ex-Gratia payments, etc. It helps in facilitating Scheme Based Direct Benefit Transfer.

8.11.14. Electronic Receipt: The e-Receipt system of IFMS provides a platform to the citizens and the taxpayers to deposit State Government dues and taxes in an online mode without physically visiting any government office or bank. The e-Receipt system is integrated with 13 public and private sector banks and one payment gateway. Different payment modes like Debit and Credit card, Internet Banking and UPI are available in this platform. At present 27 departments of the State Government are using this platform to collect taxes and dues. Approximately 95 per cent of State Government receipt is received through the e-Receipt system of IFMS.

8.11.15. Scheme-wise Bank Account Management System (SBMS): An IT facility is being developed in IFMS to track scheme funds that are drawn out of the government accounts and parked in different bank accounts. This ensures better utilization and timely release of government money to various scheme implementing agencies.

8.11.16. Aadhaar Based Account Verification: Under various schemes, State Government disburses payments/benefits to the beneficiaries enrolled under the schemes. The Aadhaar based account verification facility is being put in place to verify bank account details of the beneficiaries to check the correctness of bank account number and Indian Financial System Code (IFSC) of beneficiaries. The purpose of this verification is to ensure that the account details of the beneficiaries is correct before the State Government initiates a debit or credit transaction to the account in the nature of payments, collection or refund under the schemes.

8.12. IN CONCLUSION

Odisha has put its finances in order since it committed to the FRBM norms, initially by rationalising expenditures which brought down the deficits and along with it the need to borrow. As debt burden started to decrease, interest payments also started falling, opening up opportunities of a careful stepping up of developmental expenditures, without risking an increase in deficits. This strategy has allowed the state to reach a stage where it can step up capital expenditures, maintain a reasonably high level of developmental expenditures and yet remain within the FRBM limits on indebtedness and deficits. The outlook appears to be a comfortable fiscal scenario in the medium term, even after the negative impact of the general slowdown in 2019-20 and the pandemic shock in 2020-21.

However, there are two possible risks. First, since the introduction of GST, the state has been assured of a 14 per cent growth in GST revenue every year, supported by the statutory compensation scheme. This compensation scheme was, however, for five years only and the state must look for ways to adjust its fiscal stance to meet the cessation of compensation payments in the next financial year. It will not be easy to raise the SGST revenue because the introduction of GST along with the loss of autonomy in setting the tax rates has meant that the state lost a substantial part of its sales tax revenue raised from food grains and minerals. The addition to the tax base – services – being relatively small is not likely to cover the loss in the medium term. However, higher non-tax revenues from minerals should help to offset the loss of tax revenue to some extent.

The second risk lies in the state's dependence on central transfers – share in central taxes and grants. This dependence was above 50 per cent in not-so-distant past, and still more than 45 per cent. The entire central transfers are either discretionary (depending on the relevant central policies) or contingent upon the subsequent Finance Commissions. In fact, a reduction in the horizontal share of the state for tax devolution as awarded by the 15th Finance Commission has dampened growth of revenue receipts. As Odisha inches up the ranking of states on per capita income with consistent growth, its share in future is likely to contract, impacting the tax devolutions and central transfers. These risks point to an imperative to step up its own tax revenue collection in the medium term and further reduce its dependence on central transfers without affecting the expenditure side.



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ANNEXURES

Table A.1.1 : Key aggregates of state domestic product at current prices

(INR in lakh)

Sl. No.	Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (AE)
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Gross State Value Added at basic prices	22023169	24916295	28044263	29520164	30450599	35497589	39145677	44783042	47420145	47584784	55495281
2.	Taxes on Products	2031089	2340292	2715614	3082180	3529971	4920611	6124238	6313039	8567411	8106737	9673614
3.	Less Subsidies on Products	955550	1086627	1112340	1177349	1125620	1137833	1172436	1238425	1346203	1402561	1334662
4.	Gross State Domestic Product (1+2-3)	23098708	26169960	29647538	31424995	32854950	39280367	44097479	49857656	54641353	54288959	63834232
5.	Consumption of Fixed Capital	2676113	2838712	3549800	3932653	4457048	5047197	5287839	5896251	6451107	6343540	7648117
6.	Net State Value Added at basic prices (1-5)	19347056	22077583	24494463	25587511	25993551	30450392	33857838	38886792	40969038	41241243	47847163
7.	Net State Domestic Product (4-5)	20422595	23331248	26097737	27492342	28397902	34233170	38809640	43961406	48190246	47945419	56186114
8.	Population (Lakh)	421.09	423.40	425.70	428.01	430.32	432.34	434.15	435.96	437.77	439.58	441.08
9.	Per Capita Gross State Domestic Product (INR)	54855	61809	69644	73421	76350	90855	101572	114363	124817	123502	144723
10.	Per Capita Net State Domestic Product (INR)	48499	55105	61305	64233	65993	79181	89392	100838	110081	109071	127383

Source: Directorate of Economics & Statistics, Odisha

Table A.1.2 : Key aggregates of state domestic product at constant (2011-12) prices

(INR in lakh)

Sl. No.	Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (AE)
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Gross State Value Added at basic prices	22023169	23191892	25256176	25584002	27464169	31097941	32789369	35306189	36435074	34883265	37955495
2.	Taxes on Products	2031089	2136425	2257786	2398864	2582087	3430016	4175807	4196987	5446876	4775821	5572565
3.	Less Subsidies on Products	955550	991969	924810	916332	823363	793151	799425	823320	855871	826274	768843
4.	Gross State Domestic Product (1+2-3)	23098708	24336348	26589153	27066534	29222893	33734806	36165751	38679856	41026078	38832813	42759217
5.	Consumption of Fixed Capital	2676113	2706241	3276966	3473460	3903726	4399981	4492479	4839345	5228000	4937812	5420279
6.	Net State Value Added at basic prices (1-5)	19347056	20485651	21979211	22110541	23560444	26697959	28296889	30466844	31207074	29945454	32535216
7.	Net State Domestic Product (4-5)	20422595	21630107	23312187	23593074	25319167	29334825	31673271	33840511	35798078	33895001	37338938
8.	Population (Lakh)	421.09	423.4	425.7	428.01	430.32	432.34	434.15	435.96	437.77	439.58	441.08
9.	Per Capita Gross State Domestic Product (INR)	54855	57478	62460	63238	67910	78028	83302	88723	93716	88341	96942
10.	Per Capita Net State Domestic Product (INR)	48499	51087	54762	55123	58838	67851	72955	77623	81774	77108	84653
Growth over previous year (in per cent)												
1.	Gross State Value Added at basic prices		5.31	8.90	1.30	7.35	13.23	5.44	7.68	3.20	-4.26	8.81
2.	Gross State Domestic Product		5.36	9.26	1.80	7.97	15.44	7.21	6.95	6.07	-5.35	10.11
3.	Consumption of Fixed Capital		1.13	21.09	6.00	12.39	12.71	2.10	7.72	8.03	-5.55	9.77
4.	Net State Value Added at basic prices		5.89	7.29	0.60	6.56	13.32	5.99	7.67	2.43	-4.04	8.65
5.	Net State Domestic Product		5.91	7.78	1.20	7.32	15.86	7.97	6.84	5.78	-5.32	10.16
6.	Per Capita Gross State Domestic Product (INR)		4.78	8.67	1.25	7.39	14.90	6.76	6.51	5.63	-5.74	9.74
7.	Per Capita Net State Domestic Product (INR)		5.33	7.19	0.66	6.74	15.32	7.52	6.40	5.35	-5.71	9.79

Source: Directorate of Economics & Statistics, Odisha

Table A.1.3 : Gross State Value Added by economic activity at current basic prices

Sl. No.	Economic Activity	(INR in lakh)										
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (AD)
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Agriculture, Forestry and Fishing	3934537	5342867	5674967	6556959	6163541	7425208	7494152	8709726	10357558	11243838	11435420
1.1	Crops	2555039	3750538	3802014	4436266	3765010	4707586	4427627	5093549	6337952	6993564	6798635
1.2	Livestock	538911	637320	729849	803496	880542	909690	1188323	1417177	1621238	1678296	1810747
1.3	Forestry and Logging	572223	619884	784937	864086	957598	1108049	1022004	1249957	1310864	1356323	1475688
1.4	Fishing and Aquaculture	268365	335124	358168	453110	560391	699883	856198	949042	1087503	1215655	1350349
2.	Mining and Quarrying	2648738	2666989	2868392	2703161	2862080	3292604	3467115	4138922	4030253	3479696	4600617
	Primary	6583276	8009855	8543359	9260120	9025621	10717812	10961268	12848647	14387810	14723535	16036037
3.	Manufacturing	4116404	4212453	5168498	4724215	4654610	6741508	8000596	10383997	9644822	8997301	12263105
4.	Electricity, Gas, Water Supply & Other Utility Services	775701	937278	1044477	1008706	1218871	1318939	1313855	1238322	1298633	1270596	1344689
5.	Construction	2059629	2074164	2314669	2393041	2370792	2609537	2975353	3259287	3231310	3200580	3718300
	Secondary	6951734	7223895	8527644	8125962	8244272	10669984	12289804	14881606	14174765	13468477	17326094
6.	Trade, Repair, Hotels and Restaurants	2035854	2436044	2769620	3030218	3352591	3538166	3995610	4495695	4835623	4553431	5333487
6.1	Trade & Repair Services	1838866	2218946	2533465	2782577	3082291	3240394	3665665	4117299	4422504	4486135	5237970
6.2	Hotels & Restaurants	196989	217098	236155	247641	270300	297771	329945	378396	413119	67296	95518
7.	Transport, Storage, Communication & Services related to Broadcasting	1347538	1560857	1771254	2048455	2257036	2502715	2740901	2639909	2893294	2919078	3351742
7.1	Railways	179466	233719	266785	343229	395310	371338	404929	414673	474304	473362	507391
7.2	Transport by means other than Railways	819369	940402	1039368	1149260	1223740	1469071	1687454	1568450	1657816	1586157	1838106
7.2.1	Road transport	693450	802859	892415	972267	1036673	1239514	1387446	1262515	1294389	1220336	1423657
7.2.2	Water transport	41962	42597	42862	47988	44899	72289	86993	115888	146464	171622	183275
7.2.3	Air transport	3421	7232	5311	8947	17220	19573	23801	15354	24486	10042	12473
7.2.4	Services incidental to Transport	80536	87715	98780	120058	124947	137695	189214	174693	192477	184157	218701
7.3	Storage	13967	15384	18233	18781	20245	22462	23279	27217	28568	28353	31053
7.4	Communication & Services related to Broadcasting	334737	371354	446868	537185	617741	639843	625238	629568	732606	831205	975192
8.	Financial Services	796303	910354	962328	1065147	1184299	1148781	1395989	1511178	1719558	1878260	2063800
9.	Real estate, Ownership of Dwelling & Professional Services	1707147	1901721	2146627	2321999	2439614	2671043	2816271	2981687	3131144	3140105	3581710
10.	Public Administration and Defence	863077	980808	1390657	1517496	1573618	1609037	1752524	1945082	2273160	2536421	2994727
11.	Other Services	1738239	1892760	1932774	2150766	2373548	2640051	3193310	3479238	4004791	4365478	4807682
	Tertiary	8488159	9682545	10973261	12134082	13180706	14109793	15894606	17052789	18857571	19392772	22133150
12	TOTAL GVA at Basic Prices	22023169	24916295	28044263	29520164	30450599	35497589	39145677	44783042	47420145	47584784	55495281
13	Gross State Domestic Product	23098708	26169960	29647538	31424995	32854950	39280367	44097479	49857656	54641353	54288959	63834232
14	Per capita GDP (Rupees)	54855	61809	69644	73421	76350	90855	101572	114363	124817	123502	144723

Table A.1.4 : Percentage distribution of Gross State Value Added by economic activity at current basic prices

(in per cent)

Sl. No.	Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (A)
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Agriculture, Forestry and Fishing	17.87	21.44	20.24	22.21	20.24	20.92	19.14	19.45	21.84	23.63	20.61
1.1	Crops	11.60	15.05	13.56	15.03	12.36	13.26	11.31	11.37	13.37	14.70	12.25
1.2	Livestock	2.45	2.56	2.60	2.72	2.89	2.56	3.04	3.16	3.42	3.53	3.26
1.3	Forestry and Logging	2.60	2.49	2.80	2.93	3.14	3.12	2.61	2.79	2.76	2.85	2.66
1.4	Fishing and Aquaculture	1.22	1.34	1.28	1.53	1.84	1.97	2.19	2.12	2.29	2.55	2.43
2.	Mining and Quarrying	12.03	10.70	10.23	9.16	9.40	9.28	8.86	9.24	8.50	7.31	8.29
	Primary	29.89	32.15	30.46	31.37	29.64	30.19	28.00	28.69	30.34	30.94	28.90
3.	Manufacturing	18.69	16.91	18.43	16.00	15.29	18.99	20.44	23.19	20.34	18.91	22.10
4.	Electricity, Gas, Water Supply & Other Utility Services	3.52	3.76	3.72	3.42	4.00	3.72	3.36	2.77	2.74	2.67	2.42
5.	Construction	9.35	8.32	8.25	8.11	7.79	7.35	7.60	7.28	6.81	6.73	6.70
	Secondary	31.57	28.99	30.41	27.53	27.07	30.06	31.40	33.23	29.89	28.30	31.22
6.	Trade, Repair, Hotels and Restaurants	9.24	9.78	9.88	10.26	11.01	9.97	10.21	10.04	10.20	9.57	9.61
6.1	Trade & Repair Services	8.35	8.91	9.03	9.43	10.12	9.13	9.36	9.19	9.33	9.43	9.44
6.2	Hotels & Restaurants	0.89	0.87	0.84	0.84	0.89	0.84	0.84	0.84	0.87	0.14	0.17
7.	Transport, Storage, Communication & Services related to Broadcasting	6.12	6.26	6.32	6.94	7.41	7.05	7.00	5.89	6.10	6.13	6.04
7.1	Railways	0.81	0.94	0.95	1.16	1.30	1.05	1.03	0.93	1.00	0.99	0.91
7.2	Transport by means other than Railways	3.72	3.77	3.71	3.89	4.02	4.14	4.31	3.50	3.50	3.33	3.31
7.2.1	Road transport	3.15	3.22	3.18	3.29	3.40	3.49	3.54	2.82	2.73	2.56	2.57
7.2.2	Water transport	0.19	0.17	0.15	0.16	0.15	0.20	0.22	0.26	0.31	0.36	0.33
7.2.3	Air transport	0.02	0.03	0.02	0.03	0.06	0.06	0.06	0.03	0.05	0.02	0.02
7.2.4	Services Incidental to Transport	0.37	0.35	0.35	0.41	0.41	0.39	0.48	0.39	0.41	0.39	0.39
7.3	Storage	0.06	0.06	0.07	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06
7.4	Communication & Services related to Broadcasting	1.52	1.49	1.59	1.82	2.03	1.80	1.60	1.41	1.54	1.75	1.76
8.	Financial Services	3.62	3.65	3.43	3.61	3.89	3.24	3.57	3.37	3.63	3.95	3.72
9.	Real estate, Ownership of Dwelling & Professional Services	7.75	7.63	7.65	7.87	8.01	7.52	7.19	6.66	6.60	6.60	6.45
10.	Public Administration and Defence	3.92	3.94	4.96	5.14	5.17	4.53	4.48	4.34	4.79	5.33	5.40
11.	Other Services	7.89	7.60	6.89	7.29	7.79	7.44	8.16	7.77	8.45	9.17	8.66
	Tertiary	38.54	38.86	39.13	41.10	43.29	39.75	40.60	38.08	39.77	40.75	39.88
12.	TOTAL GSDVA at Basic Prices	100	100	100	100	100	100	100	100	100	100	100

Source: Directorate of Economics & Statistics, Odisha

Table A.1.5 : Gross State Value Added by economic activity at constant (2011-12) basic prices

(INR in lakh)

Sl. No.	Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (A)
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Agriculture, Forestry and Fishing	3934537	4558109	4368529	4711024	4111533	4930742	4389513	4787873	5356068	5753116	5559301
1.1	Crops	2555039	3153542	2864360	3154054	2454137	3025226	2417149	2637269	3109553	3467657	3192088
1.2	Livestock	538911	550337	603389	581686	609794	628974	681784	757102	792668	792980	784679
1.3	Forestry and Logging	572223	552477	604105	638507	675204	822447	758933	815521	822732	836840	877742
1.4	Fishing and Aquaculture	268365	301753	296675	336777	372398	454096	531646	577982	631116	655638	704793
2.	Mining and Quarrying	2648738	2596740	3097752	2851914	3674187	4179914	3805346	4184409	4110796	3153055	3722273
	Primary	6583276	7154850	7466281	7562938	7785720	9110657	8194858	8972282	9466864	8906171	9281574
3.	Manufacturing	4116404	3985120	4830204	4374503	4840719	6449059	7773873	9216959	8838739	8095318	9252186
4.	Electricity, Gas, Water Supply & Other Utility Services	775701	924884	987637	919544	1105926	1189992	1172431	1076530	1100316	1081647	1168464
5.	Construction	2059629	2009633	2144855	2138636	2146416	2300759	2493035	2589790	2548360	2468682	2795161

S. No.	Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (2nd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (A)
	Secondary	6951734	6919638	7962695	7432683	8093061	9939810	11439339	12883279	12487415	11645647	13215811
6.	Trade, Repair, Hotels and Restaurants	2035854	2274231	2454254	2652360	3052006	3165618	3475494	3755496	3978844	3696496	3921423
6.1	Trade & Repair Services	1838866	2071553	2245248	2435870	2806083	2899397	3188573	3439295	3638588	3643142	3846370
6.2	Hotels & Restaurants	196989	202677	209006	216490	245923	266221	286921	316200	340256	53354	75053
7.	Transport, Storage, Communication & Services related to Broadcasting	1347538	1509441	1639446	1841387	2037154	2168882	2316623	2129126	2266773	2024797	2211637
7.1	Railways	179466	222896	247615	297269	336282	285709	305253	306728	328090	328090	328090
7.2	Transport by means other than Railways	819369	914347	966706	1045914	1123670	1302119	1457009	1280335	1325297	1097524	1214959
7.21	Road transport	693450	780615	830026	884837	951901	1098650	1197971	1030598	1034765	844398	944148
7.22	Water transport	41962	41416	39866	43673	41228	64074	75113	94600	117087	118752	121545
7.23	Air transport	3421	7031	4939	8143	15811	17349	20550	12534	19575	6948	8272
7.24	Services incidental to Transport	80536	85284	91875	109262	114730	122047	163374	142603	153871	127426	140993
7.3	Storage	13967	14039	14304	13838	15730	19924	20259	22719	23456	23070	22875
7.4	Communication & Services related to Broadcasting	334737	358160	410822	484366	561472	561130	534101	519343	589931	576113	645713
8.	Financial Services	796303	898381	929172	1018384	1097064	1065757	1206326	1207167	1298036	1417835	1557893
9.	Real estate, Ownership of Dwelling & Professional Services	1707147	1770647	1889542	2002383	2154941	2310192	2450903	2489159	2571388	2545197	2708890
10.	Public Administration and Defence	863077	923056	1249332	1340689	1434156	1445570	1529026	1628944	1872108	2065323	2238497
11.	Other Services	1738239	1741648	1665455	1733178	1810066	1891454	2176801	2240736	2493645	2581800	2819771
	Tertiary	8488159	9117405	9827201	10588881	11585388	12047474	13155172	13450628	14480795	14331447	15458110
12	TOTAL GSV@ at Basic Prices	22023169	23191882	25256176	2584002	27464169	31037941	32789369	35306189	36435074	34883265	37955495
13	Gross State Domestic Product	2308708	2436348	2688153	2706634	2922883	3374806	36165751	38679856	41026078	38832813	42759217
14	Per capita GSDP (INR)	54855	57478	62460	63238	67910	78028	83302	88723	93716	88341	96942

Source: Directorate of Economics & Statistics, Odisha

Table A.1.6 : Growth rate of Gross State Value Added by economic activity at constant (2011-12) basic prices

(in per cent)

Sl. No.	Economic Activity	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (A)
1	2	3	4	5	6	7	8	9	10	11	12
1.	Agriculture, Forestry and Fishing	15.85	-4.16	7.84	-12.73	19.92	-10.98	9.08	11.87	7.41	-3.37
1.1	Crops	23.42	-9.17	10.11	-22.19	23.27	-20.10	9.11	17.91	11.52	-7.95
1.2	Livestock	2.12	9.64	-3.60	4.83	3.15	8.40	11.05	4.70	0.04	-1.05
1.3	Forestry and Logging	-3.45	9.34	5.69	5.75	21.81	-7.72	7.46	0.88	1.71	4.89
1.4	Fishing and Aquaculture	12.44	-1.68	13.52	10.58	21.94	17.08	8.72	9.19	3.89	7.50
2.	Mining and Quarrying	-1.96	19.29	-7.94	28.83	13.76	-8.96	9.96	-1.76	-23.30	18.05
	Primary	8.68	4.35	1.29	2.95	17.02	-10.05	9.49	5.51	-5.92	4.22
3.	Manufacturing	-3.19	21.21	-9.43	10.66	33.23	20.54	18.56	-4.10	-8.41	14.29
4.	Electricity, Gas, Water Supply & Other Utility Services	19.23	6.78	-6.89	20.27	7.60	-1.48	-8.18	2.21	-1.70	8.03
5.	Construction	-2.43	6.73	-0.29	0.36	7.19	8.36	3.88	-1.60	-3.13	13.22
	Secondary	-0.46	15.07	-6.66	8.88	22.82	15.09	12.62	-3.07	-6.74	13.48
6.	Trade, Repair, Hotels and Restaurants	11.71	7.92	8.07	15.07	3.72	9.79	8.06	5.95	-7.10	6.08
6.1	Trade & Repair Services	12.65	8.38	8.49	15.20	3.33	9.97	7.86	5.79	0.13	5.58
6.2	Hotels & Restaurants	2.89	3.12	3.58	13.60	8.25	7.78	10.20	7.61	-84.32	40.67
7.	Transport, Storage, Communication & Services related to Broadcasting	12.01	8.61	12.32	10.63	6.47	6.81	-8.09	6.46	-10.67	9.23

Sl. No.	Economic Activity	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (3rd RE)	2019-20 (2nd RE)	2020-21 (1st RE)	2021-22 (A)
7.1	Railways	24.20	11.09	20.05	13.12	-15.04	6.84	0.48	6.96	0.00	0.00
7.2	Transport by means other than Railways	11.59	5.73	8.19	7.43	15.88	11.90	-12.13	3.51	-17.19	10.70
721	Road transport	12.57	6.33	6.60	7.58	15.42	9.04	-13.97	0.40	-18.40	11.81
722	Water transport	-1.30	-3.74	9.55	-5.60	55.41	17.23	25.94	23.77	1.42	2.35
723	Air transport	105.53	-29.75	64.86	94.18	9.72	18.46	-39.01	56.17	-64.50	19.05
724	Services Incidental to Transport	5.90	7.73	18.92	5.00	6.38	33.86	-12.71	7.90	-17.19	10.65
7.3	Storage	0.51	1.89	-3.25	13.67	26.66	1.68	12.14	3.24	-1.64	-0.85
7.4	Communication & Services related to Broadcasting	7.00	14.70	17.90	15.92	-0.06	-4.82	-2.76	13.59	-2.34	12.08
8.	Financial Services	12.82	3.43	9.60	7.73	-2.85	13.19	0.07	7.53	9.23	9.88
9.	Real estate, Ownership of Dwelling & Professional Services	3.72	6.71	5.97	7.62	7.20	6.09	1.56	3.30	-1.02	6.43
10.	Public Administration and Defence	6.95	35.35	7.31	6.97	0.80	5.77	6.53	14.93	10.32	8.38
11.	Other Services	0.20	-4.37	4.07	4.44	4.50	15.09	2.94	11.29	3.54	9.22
	Tertiary	7.41	7.79	7.75	9.42	3.99	9.19	2.25	7.66	-1.03	7.86
12	TOTAL GSVA at Basic Prices	5.31	8.90	1.30	7.35	13.23	5.44	7.68	3.20	-4.26	8.81
13	Gross State Domestic Product	5.36	9.26	1.80	7.97	15.44	7.21	6.95	6.07	-5.35	10.11
14	Per capita GDP	4.78	8.67	1.25	7.39	14.90	6.76	6.51	5.63	-5.74	9.74

Source: Directorate of Economics & Statistics, Odisha

Table A.2.1 : Land Utilization Pattern in Odisha

(Area in '000 ha)

Year	Geographical Area	Forest Area	Misc. Tree	Permanent pastures	Culturable waste	Land put to non-agri. use	Barren and unculturable land	Current fallow	Other fallow	Net area sown
1	2	3	4	5	6	7	8	9	10	11
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	15571	5813	342	494	375	1298	840	528	229	5652
2017-18	15571	5813	342	494	375	1298	840	824	229	5356
2018-19	15571	5813	342	494	375	1298	840	818	229	5362
2019-20	15571	5813	342	494	375	1298	840	850	229	5330
2020-21	15571	5813	342	494	375	1298	840	768	229	5412

Source: Directorate of Agriculture and Food Production, Odisha

Table A.2.2 : Cropping Pattern in Odisha

(Area in 000 ha)

Crops	2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(A) Cereals														
Rice	4166	73.92	3942	75.31	3963	60.55	3766.39	52.90	3706.95	53.15	3940.71	54.77	4040.93	55.88
Wheat	1	0.02	0.3	0.01	0.06	0.00	2.90	0.04	2.20	0.03	2.40	0.03	2.16	0.03
Maize	92	1.63	55	1.05	72	1.10	247.61	3.48	251.43	3.61	254.14	3.53	260.41	3.60
Ragi	51	0.90	46	0.88	47	0.72	114.35	1.61	117.88	1.69	116.85	1.62	124.47	1.72
Others	30	0.53	34	0.65	35	0.53	36.56	0.51	42.13	0.60	40.55	0.56	42.02	0.58
Total (A) Cereals	4340	77.00	4077	77.90	4117	62.90	4167.81	58.54	4120.59	59.08	4354.65	60.52	4469.99	61.81
(B) Pulses														
Gram	47	0.83	39	0.75	40	0.61	32.94	0.46	30.57	0.44	27.82	0.39	29.19	0.40

Crops	2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total	Area	percent to Total
Arhar	138	2.45	138	2.64	136	2.08	137.89	1.94	144.06	2.07	128.63	1.79	129.69	1.79
Other pulses	641	11.37	598	11.42	1811	27.67	1876.52	26.36	1776.82	25.48	1765.79	25.36	1744.38	24.12
Total (B) Pulses	826	14.66	775	14.81	1987	30.36	2047.35	28.76	1951.45	27.99	1922.24	27.54	1903.26	26.32
Total Food grains (A+B)	5166	91.66	4852	92.70	6104	93.26	6215.16	87.30	6072.04	87.07	6276.89	88.06	6373.25	88.93
(C) Oilseeds														
Groundnut	49	0.87	51	0.97	45	0.69	198.01	2.78	192.08	2.75	204.82	2.85	171.27	2.37
Sesamum	26	0.46	20	0.38	16	0.24	203.72	2.86	202.99	2.91	200.43	2.79	170.16	2.35
Nizer and mustard (Rape seed & Mustard)	10	0.18	7	0.13	25	0.38	109.57	1.54	106.30	1.52	109.98	1.53	107.92	1.49
Caster seeds	11	0.20	11	0.21	9	0.14	7.77	0.11	7.24	0.10	6.79	0.09	6.52	0.09
Others	116	2.06	48	0.92	98	1.50	84.30	1.18	81.48	1.17	80.07	1.11	72.54	1.00
Total (C) Oil seeds	212	3.76	137	2.62	193	2.95	603.37	8.47	590.09	8.45	602.09	8.37	528.41	7.31
(D) Fibres														
Cotton	127	2.25	125	2.39	136	2.07	144.57	2.03	157.88	2.26	169.56	2.36	171.24	2.37
Jute	1	0.02	1	0.02	1.00	0.01	4.37	0.06	3.99	0.06	3.66	0.05	3.96	0.05
Other fibres	17	0.30	14	0.27	11	0.17	11.23	0.16	11.85	0.17	9.57	0.13	9.58	0.13
Total (D) Fibres	145	2.57	140	2.67	147	2.25	160.17	2.25	173.72	2.49	182.79	2.54	184.78	2.56
(E) Other crops														
Sugarcane	10	0.18	9	0.17	5	0.08	27.00	0.38	24.80	0.36	18.76	0.26	20.78	0.29
Tobacco	2	0.04	1	0.02	1	0.02	0.31	0.01	0.19	0.00	0.13	0.00	0.07	0.00
Potato	8	0.14	6	0.11	6	0.09	25.09	0.35	25.03	0.36	24.71	0.34	39.39	0.54
Chillies	76	1.35	72	1.38	72	1.10	71.72	1.01	71.70	1.03	72.12	20.52	60.00	0.83
Ginger	17	0.30	17	0.32	17	0.26	16.58	0.23	16.58	0.24	17.53	0.24	25.00	0.35
Total (E) other crops	113	2.00	105	2.01	101	1.54	140.70	1.98	138.30	1.99	133.25	1.85	145.237	2.00
Grand Total (A+B+C+D+E)	5636	100	5234.3	100	6545	100	7119.40	100.0	6974.15	100.0	7195.02	100.00	7231.7	100.00

Source: Directorate of A & F P, Odisha/ Directorate of Horticulture, Odisha/ Directorate of E & S, Odisha

Table A.2.3 : District Wise Area, Production & Yield Rate of Paddy Crops Grown During 2020-21

Area in '000 Ha.; Yield rate in Kg/Ha; Production in '000 MTs./Bales

Sl. No.	District	Autumn Paddy					Winter Paddy				
		AREA	YIELD RATE		PRODUCTION		AREA	YIELD RATE		PRODUCTION	
			PADDY	RICE	PADDY	RICE		PADDY	RICE	PADDY	RICE
1	2	3	4	5	6	7	8	9	10	11	12
1	Angul	0.40	3235	2150	1.3	0.86	60.57	4803	3170	290.91	192.00
2	Balasore					0.00	183.51	4620	3049	847.79	559.54
3	Bargarh	49.43	2493	1645	123.23	81.33	185.16	4548	3002	842.11	555.79
4	Bhadrak		3250		0.01	0.01	148	3312	2186	490.11	323.47
5	Bolangir	49.19	2555	1686	125.66	82.94	109.38	3805	2512	416.22	274.71
6	Boudh	2.96	4203	2770	12.43	8.20	63.29	5407	3568	342.18	225.84
7	Cuttack	0.76	3133	2079	2.39	1.58	100.54	4377	2889	440.04	290.43
8	Deogarh	11.16	3239	2139	36.16	23.87	35.71	3696	2439	131.99	87.11
9	Dhenkanal	0.20	2535	1700	0.52	0.34	83.95	4548	3001	381.76	251.96
10	Gajapati					0.00	33.05	3766	2486	124.49	82.16
11	Ganjam					0.00	274.79	4334	2860	1190.88	785.98
12	Jagatsinghpur	0.35	2989	2000	1.06	0.70	82.01	3686	2433	302.25	199.49
13	Jajpur	14.13	1047	691	14.79	9.76	113.94	2927	1932	333.55	220.14
14	Jharsuguda	21.44	3328	2196	71.34	47.08	24.25	4546	3000	110.24	72.76
15	Kalahandi	27.46	2273	1500	62.42	41.20	168.28	4115	2716	692.48	457.04
16	Kandhamal	4.57	2316	1530	10.6	6.99	41.39	3252	2146	134.61	88.84
17	Kendrapara	1.24	2843	1871	3.52	2.32	127.87	2742	1810	350.65	231.43
18	Keonjhar	29.92	4023	2654	120.32	79.41	139.11	4625	3052	643.36	424.62
19	Khordha	0.01	2800	1000	0.01	0.01	86.77	3720	2455	322.78	213.03
20	Koraput	13.09	3702	2443	48.45	31.98	93.85	4536	2994	425.66	280.94

Sl. No.	District	Autumn Paddy					Winter Paddy				
		AREA	YIELD RATE		PRODUCTION		AREA	YIELD RATE		PRODUCTION	
			PADDY	RICE	PADDY	RICE		PADDY	RICE	PADDY	RICE
21	Malkangiri	14.27	2184	1441	31.16	20.57	78.14	3983	2629	311.25	205.43
22	Mayurbhanj	10.66	3128	2065	33.35	22.01	311.70	4187	2763	1305.02	861.31
23	Nabarangpur	18.39	3914	2582	71.96	47.49	116.81	4527	2988	528.80	349.01
24	Nayagarh	0.01	3340	1000	0.02	0.01	90.62	3577	2361	324.10	213.91
25	Nuapada	33.45	2913	1923	97.46	64.32	54.17	4227	2790	228.98	151.13
26	Puri					0.00	100.49	3237	2136	325.28	214.68
27	Rayagada	0.91	2940	1956	2.70	1.78	48.45	4376	2888	212.02	139.93
28	Sambalpur	39.42	3694	2438	145.63	96.12	80.30	4548	3002	365.19	241.03
29	Subarnapur	20.21	3870	2554	78.20	51.61	96.16	5330	3518	512.56	338.29
30	Sundargarh	68.76	3146	2076	216.33	142.78	125.49	3702	2443	464.52	306.58
	Odisha	432.39	3032	2001	1311.02	865.27	3257.75	4111	2713	13391.78	8838.58

Sl. No.	District	Total Kharif Paddy					Summer Paddy					Total Paddy				
		AREA	YIELD RATE		PRODUCTION		AREA	YIELD RATE		PRODUCTION		AREA	YIELD RATE		PRODUCTION	
			PADDY	RICE	PADDY	RICE		PADDY	RICE	PADDY	RICE		PADDY	RICE		
1	2	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Angul	60.97	4793	3163	292.21	192.86	0.48	4666	3039	2.23	1.47	61.45	4792	3162	294.44	194.33
2	Balasore	183.51	4620	3049	847.79	559.54	39.18	5246	3300	205.51	135.64	222.69	4730	3122	1053.30	695.18
3	Bargarh	234.59	4115	2716	965.34	637.12	90.10	6900	3630	621.71	410.33	324.69	4888	3226	1587.05	1047.45
4	Bhadrak	148.00	3312	2186	490.12	323.48	3.70	4317	1922	15.97	10.54	151.70	3336	2202	506.09	334.02
5	Bolangir	158.57	3417	2255	541.88	357.65	4.56	5078	2510	23.17	15.29	163.13	3464	2286	565.05	372.94
6	Boudh	66.25	5353	3533	354.61	234.04	1.69	4805	2918	8.12	5.36	67.94	5339	3524	362.73	239.40
7	Cuttack	101.30	4368	2883	442.43	292.01	3.20	5743	3837	18.35	12.11	104.50	4409	2910	460.78	304.12
8	Deogarh	46.87	3588	2368	168.15	110.98	0.33	4398	2833	1.45	0.96	47.20	3593	2372	169.60	111.94
9	Dhenkanal	84.15	4543	2998	382.28	252.30	0.10	4871	2900	0.51	0.34	84.25	4544	2999	382.79	252.64
10	Gajapati	33.05	3767	2486	124.49	82.16	0.19	3089	1611	0.58	0.38	33.24	3763	2483	125.07	82.54
11	Ganjam	274.79	4334	2860	1190.88	785.98	0.12	3277	2167	0.40	0.26	274.91	4333	2860	1191.28	786.24
12	Jagatsinghpur	82.36	3683	2431	303.31	200.19	1.13	5078	3274	5.74	3.79	83.49	3702	2443	309.05	203.98
13	Jajpur	128.07	2720	1795	348.34	229.90	1.68	4330	2721	7.29	4.81	129.75	2741	1809	355.63	234.71
14	Jharsuguda	45.69	3974	2623	181.58	119.84	1.52	7150	4618	10.84	7.15	47.21	4076	2690	192.42	126.99
15	Kalahandi	195.74	3857	2545	754.90	498.24	54.85	5449	2422	298.86	197.25	250.59	4205	2775	1053.76	695.49
16	Kandhamal	45.96	3159	2085	145.21	95.83	0.35	3885	2486	1.37	0.91	46.31	3165	2089	146.58	96.74
17	Kendrapara	129.11	2743	1810	354.17	233.75	0.90	4855	3400	4.39	2.90	130.01	2758	1820	358.56	236.65
18	Keonjhar	169.03	4518	2982	763.68	504.03	1.74	5077	2712	8.84	5.83	170.77	4524	2986	772.52	509.86
19	Khordha	86.78	3720	2455	322.79	213.04	1.50	5919	3846	8.87	5.85	88.28	3757	2479	331.66	218.89
20	Koraput	106.94	4433	2926	474.11	312.92	23.99	4161	2649	99.80	65.87	130.93	4383	2893	573.91	378.79
21	Malkangiri	92.41	3705	2446	342.41	226.00	0.94	3449	2617	3.24	2.14	93.35	3703	2444	345.65	228.14
22	Mayurbhanj	322.36	4152	2740	1338.37	883.32	4.99	4124	2603	20.59	13.59	327.35	4151	2740	1358.96	896.91
23	Nabarangpur	135.20	4443	2933	600.76	396.50	0.52	3465	2250	1.78	1.18	135.72	4440	2930	602.54	397.68
24	Nayagarh	90.63	3576	2360	324.12	213.92	0.03	1512	1667	0.05	0.03	90.66	3576	2360	324.17	213.95
25	Nuapada	87.62	3726	2459	326.44	215.45	6.47	4729	2847	30.59	20.19	94.09	3795	2504	357.03	235.64
26	Puri	100.49	3237	2136	325.28	214.68	39.04	5056	2970	197.40	130.28	139.53	3746	2472	522.68	344.96
27	Rayagada	49.36	4350	2871	214.72	141.71	2.47	4460	1164	11.03	7.28	51.83	4356	2875	225.75	148.99
28	Sambalpur	119.72	4267	2816	510.82	337.15	16.95	6922	4503	117.33	77.44	136.67	4596	3034	628.15	414.59
29	Subarnapur	116.37	5077	3351	590.76	389.90	36.15	6496	3889	234.80	154.97	152.52	5413	3572	825.56	544.87
30	Sundargarh	194.25	3505	2313	680.85	449.36	0.48	3630	2563	1.73	1.14	194.73	3505	2313	682.58	450.50
	Odisha	3690.14	3984	2630	14702.80	9703.85	339.35	5783	3817	1962.54	1295.28	4029.49	4136	2730	16665.34	10999.13

(In Th.Ha.)

Table A.2.4: District wise Created Irrigation Potential ending March 2021

Sl. No.	Name of the District	Cultivated Area	Maj & Med (ending 03/2021)		Mega Lift (ending 03/2021)		Minor flow (ending 03/2021)		Minor Lift (**) (ending March 2021)				Other Sources		Total	
			Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Angul	216.009	21.855	5.487	0	0	27.840	3.963	25.238	14.163	15.030	5.394	24.147	19.680	114.110	48.687
2	Balasore	250.550	29.530	7.180	0	0	17.076	3.763	61.883	36.345	8.625	2.775	88.396	76.846	205.510	126.909
3	Bargarh	348.747	91.220	57.060	6.095	0	38.029	3.880	27.467	15.378	97.270	35.856	34.917	22.725	294.998	134.899
4	Bhadrak	176.000	92.095	12.000	0	0	4.709	0.280	30.040	17.613	0.000	0.000	31.055	24.374	157.899	54.267
5	Boudh	89.000	30.835	3.522	7	0	16.745	1.351	21.498	12.448	17.180	5.388	6.759	6.599	99.617	29.308
6	Cuttack	188.150	90.117	55.366	16.751	0	30.461	4.418	35.836	20.671	3.595	1.092	34.406	30.977	211.167	112.524
7	Deogarh	66.950	8.100	5.700	6.573	0	8.216	0.459	5.243	2.990	10.290	3.526	10.845	9.706	49.267	22.381
8	Dhenkanal	186.030	70.810	43.977	0	0	36.021	6.161	23.584	13.687	7.335	2.682	21.225	18.780	158.975	85.287
9	Gajapati	76.555	0.000	0.000	5.409	0	25.211	2.906	8.707	5.133	0.980	0.392	4.371	3.504	44.678	11.935
10	Ganjam	406.000	132.697	13.930	14.361	0	121.698	8.577	37.332	21.965	11.270	3.985	38.763	29.597	356.122	78.054
11	Jagatsingpur	104.335	35.031	17.337	0	0	0.000	0.000	16.291	8.746	0.000	0.000	34.264	31.720	85.586	57.803
12	Jajpur	145.250	62.274	33.590	12.689	0	10.813	1.751	51.806	29.690	8.105	2.775	29.863	21.950	175.550	89.756
13	Jharsuguda	87.783	0.000	0.000	6.322	0	9.799	1.609	9.866	5.682	10.760	3.780	7.732	6.226	44.479	17.297
14	Kandhamal	127.790	2.390	1.200	0	0	14.070	4.064	12.514	6.955	3.985	1.146	12.646	6.942	45.605	20.307
15	Kendrapada	152.000	81.445	42.500	2.796	0	0.884	0.047	49.406	29.091	0.110	0.055	16.447	15.167	151.088	86.860
16	Keonjhar	297.873	28.400	6.090	0	0	40.499	6.179	23.672	13.927	9.370	3.383	31.774	25.750	133.715	55.329
17	Khurda	128.530	44.924	26.210	0	0	26.736	2.529	12.532	7.156	7.720	2.011	19.299	15.951	111.211	53.857
18	Mayurbhanj	437.000	88.409	45.894	3.977	0	51.219	6.281	41.103	22.350	23.265	7.851	68.930	37.894	276.903	120.270
19	Nayagarh	133.606	10.930	3.020	0	0	29.017	5.020	17.380	9.894	8.650	2.489	13.919	13.242	79.896	33.665
20	Puri	188.745	116.166	74.160	0	0	0.947	0.099	33.120	19.127	1.030	0.206	20.980	15.026	172.243	108.618
21	Sambalpur	194.020	31.510	23.000	13	0	27.729	2.964	19.963	11.451	33.330	11.756	12.531	11.997	138.065	61.168
22	Sundergarh	312.990	18.570	9.166	16	0	29.912	4.093	34.191	19.829	37.885	13.156	36.520	20.649	173.471	66.893
	Non-KBK	431.3.913	1087.308	486.389	110.970	0.000	567.631	70.394	598.672	344.289	315.785	109.698	599.788	465.302	3280.154	1476.072
23	Kalahandi	378.387	145.458	86.290	9	0	45.590	6.126	33.445	19.631	24.120	7.172	26.086	21.212	283.811	140.431
24	Koraput	303.977	54.321	32.841	2	0	11.500	2.004	32.849	17.152	10.095	3.610	41.305	40.252	151.788	95.859
25	Malangiri	141.561	70.030	35	3.823	0	5.011	0.443	11.276	6.424	11.620	3.682	3.173	2.313	104.933	47.512
26	Nowrangpur	185.824	4	2	4	0	13.007	1.089	27.047	14.910	24.220	8.346	17.167	15.237	90.004	41.832
27	Nuapada	189.170	30.358	8.461	1.185	0	19.111	2.284	12.713	7.327	25.725	9.042	18.975	11.938	108.066	39.052
28	Sonepur	128.318	58.590	26	4	0	10.030	0.769	33.720	18.238	20.265	6.554	7.110	6.577	133.615	57.898
29	Rayagada	193.504	10	3	2	0	33.157	6.391	30.171	17.107	8.310	2.734	9.404	7.120	93.073	36.352
30	Bolangir	345.592	26.122	5.989	18	0	30.546	3.351	29.286	15.847	48.320	17.146	41.010	22.879	193.212	65.213
	KBK	1866.33	398.929	199.241	44.213	0.000	167.952	22.457	210.507	116.636	172.675	58.286	164.228	127.528	1158.504	524.149
	Odisha	6180.246	1486.237	685.630	155.183	0.000	735.583	92.851	809.179	460.926	488.460	167.984	764.016	592.830	4438.658	2000.221

Source: EIC, Major & Medium Irrigation, Sacha Sadan, BBSR

Table A.2.5 : District wise paddy procured (in MT) during Kharif Marketing Season 2020-21

Sl No.	District	No. of Mandies / PPCs	Paddy Procured (in'000 MT)	Sl. No.	District	No. of Mandies / PPCs	Paddy Procured (in'000 MT)
1	2	3	4	1	2	3	4
1	Bargarh	252	721.6	16.	Nuapada	89	159.3
2	Kalahandi	224	503.1	17.	Khordha	152	150.7
3	Ganjam	443	450.4	18.	Nayagarh	162	149.3
4	Balangir	174	383.2	19.	Jagatsinghpur	105	146.6
5	Sambalpur	142	340.9	20.	Jajpur	147	142.3
6	Koraput	111	280.8	21.	Dhenkanal	80	141.2
7	Bhadrak	154	273.1	22.	Rayagada	50	126
8	Subarnapur	107	242.5	23.	Puri	180	121.2
9	Sundergarh	137	228.5	24.	Malkangiri	66	116.9
10	Balasore	170	213.9	25.	Angul	94	99.6
11	Nabarangpur	55	194.6	26.	Kendrapara	122	98.7
12	Mayurbhanj	100	178.2	27.	Jharsuguda	43	92.9
13	Boudh	60	170.3	28.	Gajapati	46	70.1
14	Keonjhar	88	165.1	29.	Deogarh	40	54.1
15	Cuttack	225	164	30.	Kandhamal	22	10.5

Source: FS & CW Department

Table A.2.6 : Minimum Support Price of various agricultural commodities from 2015-16 to 2020-21

INR / Qtl. for FAQ (Fair Average Quality)

Sl. No.	Commodity	Variety	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4	5	6	7	8	9
Kharif Crops								
1	Paddy	Common	1410	1470	1550	1750	1815	1868
		Grade 'A'	1450	1510	1590	1770	1835	1888
2	Jowar	Hybrid	1570	1625	1700	2430	2550	2620
		Maldandi	1590	1650	1725	2450	2570	2640
3	Bajra		1275	1330	1425	1950	2000	2150
4	Maize		1325	1365	1425	1700	1760	1850
5	Ragi		1650	1725	1900	2897	3150	3295
6	Arhar(Tur)		4625	5050	5450	5675	5800	6000
7	Moong		4850	5225	5575	6975	7050	7196
8	Urad		4625	5000	5400	5600	5700	6000
9	Cotton	Medium Staple	3800	3860	4020	5150	5255	5515
		Long Staple	4100	4160	4320	5450	5550	5726
10	Groundnut In Shell		4030	4220	4450	4890	5090	5275
11	Sunflower Seed		3800	3950	4100	5388	5650	5885
12	Soyabean	BLACK		2775	3050			
		YELLOW	2600	2775	3050	3399	3710	3880
13	Sesamum		4700	5000	5300	6249	6485	6855
14	Nigerseed		3650	3825	4050	5877	5940	6695
Rabi Crops								
15	Wheat		1525	1625	1735	1840	1925	1975
16	Barley		1225	1325	1410	1440	1525	1600
17	Gram		3500	4000	4400	4620	4875	1600
18	Masur (Lentil)		3400	3950	4250	4475	4800	5100
19	Rapeseed/ Mustard		3350	3700	4000	4200	4425	4650
20	Safflower		3300	3700	4100	4945	5215	5327
Other Crops								
21	Jute	TD5	2700	3200	3500	3700	3950	
22	Sugarcane		230	230	255	275	275	
23	Copra (Milling)		5550	5950	6500	7511	9521	9960
24	Copra (Ball)		5830	6240	6785	7750	9920	10300
25	Jute				3500	3700	3950	4225
26	De-Husked Coconut				1760	2030	2571	2700
27	Sugarcane				255	275	275	285

Source: 5 decades of Odisha Agricultural Statistics, DA&FP(O), Odisha

Table A.2.7 : State-Wise Production of Total Food grains

(Thousand Tonnes)

State/UT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1	2	3	4	5	6	7	8	9
Andhra Pradesh	10429.8	10522.3	10494.1	10633.7	10365.4	12159.8	10838.8	12356.8
Arunachal Pradesh	369.6	384.6	409.0	327.5	343.3	359.1	365.2	373.2
Assam	5280.6	5096.8	5458.8	5358.6	4952.5	5525.9	5465.9	5236.4
Bihar	15939.6	12905.8	13208.6	14507.9	16530.8	17036.9	15600.1	14233.0
Chhattisgarh	7643.6	7598.0	7463.1	6654.3	9324.1	5958.7	7558.6	7501.8
NCT of Delhi	90.3	122.1	118.1	111.7	111.2	106.9	106.3	106.2
Goa	131.8	135.5	128.6	115.3	119.1	107.8	105.2	94.2
Gujarat	7056.2	9179.6	7109.3	6279.3	7422.0	7664.7	6803.6	8153.4
Haryana	16226.4	16974.1	15235.1	16358.7	17162.7	16191.8	18145.0	17863.5
Himachal Pradesh	1480.7	1528.4	1432.0	1615.0	1740.6	1488.3	1501.0	1530.1
Jammu and Kashmir	1831.9	1777.9	1220.3	1732.6	1618.9	1570.8	1892.5	1671.2
Jharkhand	4557.5	4285.7	4777.0	4092.1	5664.4	6001.3	4399.7	4792.3
Karnataka	10863.3	12208.9	12138.0	9924.0	9794.7	11791.2	10888.4	12783.7
Kerala	511.8	512.4	563.8	553.8	439.0	523.8	581.2	608.4
Madhya Pradesh	23690.4	22978.0	28687.000	30385.6	33224.4	33450.4	32208.7	33523.1
Maharashtra	10973.3	13846.2	11311.9	8754.4	15331.6	13246.7	10304.1	12819.9
Manipur	336.7	492.6	429.3	435.7	525.1	706.5	495.0	421.4
Meghalaya	265.0	320.0	353.8	357.7	260.1	361.8	260.7	360.8
Mizoram	41.8	72.8	75.3	77.4	75.2	74.2	76.9	76.5
Nagaland	600.6	624.6	649.6	515.8	536.9	552.3	558.1	565.4
Odisha	8008.8	8359.4	8980.5	6408.1	9061.3	7151.3	8315.2	9030.1
Puducherry	47.5	50.4	54.0	44.7	52.8	44.1	64.3	60.3
Punjab	28543.0	29480.4	26698.0	28400.8	28536.9	31691.9	31532.3	29857.3
Rajasthan	18367.7	17899.6	19621.9	18039.9	19353.6	19957.0	21288.8	23227.1
Sikkim	106.0	102.4	102.2	94.1	101.3	93.9	92.0	92.1
Tamil Nadu	5592.8	8783.2	9623.7	11478.5	4141.6	10713.6	10390.1	11269.8
Telangana	8232.7	9142.9	7114.8	5129.0	8484.6	9421.1	9275.2	11125.0
Tripura	725.2	726.7	761.5	818.3	859.6	855.4	836.3	853.3
Uttar Pradesh	50745.4	50027.5	39594.0	42550.8	49903.4	51369.9	54643.4	56169.1
Uttarakhand	1827.7	1776.5	1626.0	1746.0	1873.0	1903.2	1876.1	1886.0
West Bengal	16546.5	17078.9	16531.8	17980.6	17146.3	16877.5	18689.9	18794.3
ALL INDIA	257124.7	265047.7	252025.0	251541.6	275111.7	285013.2	285209.1	297504.0

Source: Ministry of Agriculture and Farmers Welfare, Government of India

Table A.2.8 : District wise Livestock Population under 20th LC for the State of Odisha

(in Nos.)

SLNo.	District name	Cattle	Buffalo	Goat	Sheep	Pig
1	2	3	4	5	6	7
1	Angul	364263	6321	200353	35110	1461
2	Balangir	312205	20760	313982	92209	1475
3	Baleshwar	622128	1342	313395	1987	2851
4	Bargarh	244755	4825	175820	62884	1947
5	Bhadrak	452147	3489	107591	842	270
6	Boudh	129631	6730	115103	64545	156
7	Cuttack	548770	14827	221665	67753	932
8	Deogarh	128338	1571	101691	1936	832
9	Dhenkanal	376196	13729	164167	19429	367

Sl.No.	District name	Cattle	Buffalo	Goat	Sheep	Pig
10	Gajapati	167664	5454	139274	9853	7657
11	Ganjam	445913	46775	235336	165614	3784
12	Jagatsinghapur	209978	10761	107573	12101	858
13	Jajapur	478510	3895	186456	10098	4443
14	Jharsuguda	95638	1524	57052	6956	1330
15	Kalahandi	284533	21432	257495	80834	2283
16	Kandhamal	261008	48739	269391	6803	5627
17	Kendrapara	322484	14561	112532	15675	1079
18	Kendujhar	626833	5707	517321	51040	3166
19	Khordha	276331	9636	79402	26974	1290
20	Koraput	443778	61019	143646	128662	6485
21	Malkangiri	300811	6400	126516	20532	17040
22	Mayurbhanj	673442	8569	1050151	98674	18324
23	Nabarangpur	338681	27882	63027	102986	3929
24	Nayagarh	210092	12363	102397	34629	0
25	Nuapada	155571	12659	80190	29903	647
26	Puri	367150	13524	111717	24774	1241
27	Rayagada	247259	48268	154622	21561	8278
28	Sambalpur	247795	5898	200748	18840	6453
29	Sonepur	112333	2570	108787	44787	738
30	Sundargarh	459733	17094	576052	21158	30219
	Odisha	9903970	458324	6393452	1279149	135162

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

Table A.2.9 : Veterinary Institutions and Personnel in Odisha, 2020-2021

(in Nos.)

District	Veterinary Hospitals/ Dispensaries	Live Stock Aid Centres	AJ Centres (A.H.Deptt.)	AJ Centres (others)	No. of Veterinary Doctors in position	No. of L.I. in position
1	2	3	4	5	6	7
Angul	16	91	94	52	9	46
Balasore	21	137	137	105	20	103
Bargarh	19	128	139	155	17	53
Bhadrak	13	110	100	88	13	71
Balangir	21	129	134	73	31	103
Boudh	7	32	30	15	9	17
Cuttack	26	188	206	150	25	121
Deogarh	4	24	24	2	5	8
Dhenkanal	18	93	103	39	20	40
Gajapati	11	59	47	4	11	32
Ganjam	39	265	280	43	40	128
Jagatsinghpur	14	101	102	196	13	51
Jajpur	19	126	116	74	15	82
Jharsuguda	9	37	42	15	12	21
Kalahandi	21	137	151	44	26	99
Kandhamal	20	94	96	2	24	73
Kendrapara	14	97	92	163	10	41
Keonjhar	22	126	174	32	29	82
Khurda	20	108	114	32	17	50
Koraput	24	142	142	14	30	135
Malkangiri	13	58	34	0	18	44
Mayurbhanj	42	184	208	31	51	115
Nawarangpur	16	80	78	44	20	39
Nayagarh	16	82	81	25	14	52
Nuapada	8	53	55	17	12	24
Puri	15	159	140	216	17	65
Rayagada	16	108	109	0	20	85
Sambalpur	17	122	117	37	16	50
Sonepur	10	42	47	39	13	29
Sundargarh	30	127	132	0	32	59
ODISHA	541	3239	3324	1707	589	1918

Source: Directorate of Animal Husbandry and Veterinary Services, Odisha

Table A.2.10 : State-wise Fish Production, India

(In Lakh Tonnes)

State/UT's	2015-16		2016-17		2017-18		2018-19		2019-20	
	Inland	Marine	Inland	Marine	Inland	Marine	Inland	Marine	Inland	Marine
1	2	3	4	5	6	7	8	9	10	11
Andhra Pradesh	18.32	5.2	21.86	5.8	28.45	6.05	33.91	6	36.1	5.64
Arunachal Pradesh	0.04	0	0.04	0	0.04	0	0.05	0	0.05	0
Assam	2.94	0	3.07	0	3.27	0	3.31	0	3.73	0
Bihar	5.07	0	5.09	0	5.88	0	6.02	0	6.41	0
Chhattisgarh	3.42	0	3.77	0	4.57	0	4.89	0	5.72	0
Goa	0.05	1.07	0.04	1.14	0.06	1.18	0.05	1.15	0.04	1.01
Gujarat	1.12	6.97	1.17	6.99	1.38	7.01	1.42	6.99	1.58	7.01
Haryana	1.21	0	1.44	0	1.9	0	1.8	0	1.91	0
Himachal Pradesh	0.12	0	0.13	0	0.13	0	0.13	0	0.14	0
Jharkhand	1.16	0	1.45	0	1.9	0	2.08	0	2.23	0
Karnataka	1.69	4.12	1.59	3.99	1.88	4.14	1.98	3.9	2.29	4.03
Kerala	2.11	5.17	1.61	4.31	1.89	4.84	1.92	6.09	2.05	4.75
Madhya Pradesh	1.15	0	1.39	0	1.43	0	1.73	0	2	0
Maharashtra	1.46	4.34	2	4.63	1.31	4.75	1	4.68	1.18	4.43
Manipur	0.32	0	0.32	0	0.33	0	0.32	0	0.32	0
Meghalaya	0.11	0	0.12	0	0.12	0	0.13	0	0.14	0
Mizoram	0.07	0	0.08	0	0.08	0	0.07	0	0.07	0
Nagaland	0.08	0	0.09	0	0.09	0	0.09	0	0.09	0
Odisha	3.77	1.45	4.55	1.53	5.34	1.51	6	1.59	6.6	1.58
Punjab	1.2	0	1.33	0	1.37	0	1.35	0	1.51	0
Rajasthan	0.42	0	0.5	0	0.54	0	0.55	0	1.16	0
Sikkim	0	0	0	0	0	0	0	0	0	0
Tamil Nadu	2.43	4.67	1.97	4.72	1.85	4.97	1.7	5.2	1.74	5.83
Telangana	2.37	0	1.99	0	2.7	0	2.84	0	3	0
Tripura	0.69	0	0.72	0	0.77	0	0.7	0	0.78	0
Uttar Pradesh	5.05	0	6.18	0	6.29	0	6.62	0	6.99	0
Uttarakhand	0.04	0	0.04	0	0.05	0	0.05	0	0.05	0
West Bengal	14.93	1.78	15.25	1.77	15.57	1.85	16.19	1.63	16.19	1.63
A and N Islands	0	0.37	0	0.39	0	0.39	0	0.4	0	0.4
Chandigarh	0	0	0	0	0	0	0.01	0	0.01	0
D & Nagar Haveli and Daman and Diu	0	0.23	0.01	0.23	0	0.24	0	0.28	0	0.32
Delhi	0.01	0	0.01	0	0.01	0	0	0	0.01	0
Jammu & Kashmir	0.2	0	0.2	0	0.21	0	0.21	0	0.21	0
Ladakh	-	-	-	-	-	-	-	-	0	0
Lakshadweep	0	0.16	0	0.3	0	0.21	0	0.22	0	0.2
Puducherry	0.07	0.47	0.04	0.46	0.07	0.42	0.07	0.4	0.07	0.44
India	71.62	36	78.06	36.25	89.48	37.56	97.2	38.53	104.37	37.27

Source: Department of Fisheries, States Government / UTs Administration, Hand Book on Fishery Statistics, Department of Fisheries & Animal Husbandry & Dairying, Govt. of India

Table A.2.11 : Natural calamities of last ten years

Year	Natural Calamities
2010	Flood, Heavy Rain, Drought & Unseasonal Cyclonic Rain
2011	Drought & Flood
2012	Drought & Flood
2013	Very Severe Cyclonic Storm "Phailin"/Flood
2014	Very Severe Cyclonic Storm "Hudhud"/Flood
2015	Drought, Flood & Heavy Rain
2016	Drought, Flood & Heavy Rain
2017	Flood, Heavy Rain, Drought & Pest Attack, Unseasonal Rain
2018	Cyclonic Storm "Titli" and "Pethai" / Drought
2019	Extremely Severe Cyclonic Storm "Fani" and "Bulbul"
2020	Severe Cyclone "AMPHAN" and heavy flood
2021	Drought, Unseasonal Rain and Cyclone "JAWAD"

Source: Directorate of Agriculture and Food Production (5 Decades of Odisha Agriculture Statistics-2020)

Table A.2.12 : District wise Forest Area, 2020-21

(in sq. km.)

Sl. No.	Name of the District	Geographical Area	Total forest Area	Forest land under control of Forest Department		Forest land under control of Revenue Deptt.		
				Reserve forests	Un-classified forests	Demarcated Protected forests (DPF)	Undemarcated Protected forests (UDPF)	Other forests under Revenue Deptt.
1	2	3	4	5	6	7	8	9
1	Angul	6375	3106.6	1762.2	0.73	65.17	0.00	968.20
2	Balangir	6575	1611.29	1105.68	0.14	0.00	0.00	496.69
3	Balasore	3806	360.91	205.70	0.02	0.00	22.65	107.79
4	Bargarh	5837	1329.38	571.16	0.19	0.19	1.38	284.17
5	Bhadrak	2505	97.66	0.00	0.02	0.00	32.96	60.12
6	Boudh	3098	1280.47	981.52	1.07	11.87	249.34	0.00
7	Cuttack	3932	890.47	522.39	0.02	0.83	0.00	276.71
8	Deogarh	2940	1550.91	718.19	0.04	0.00	0.00	561.21
9	Dhenkanal	4452	1912.45	1141.02	0.04	130.08	568.00	35.43
10	Gajapati	4325	2477.13	447.18	0.15	90.32	1116.67	794.40
11	Ganjam	8206	3069.38	1486.48	0.81	593.66	506.49	280.29
12	Jagatsinghpur	1668	46.66	0.00	0.01	0.00	0.00	43.84
13	Jajpur	2899	316.43	6.35	0.00	241.99	0.00	0.00
14	Jharsuguda	2081	450.30	35.48	0.015	28.72	0.00	273.74
15	Kalahandi	7920	2854.07	1449.03	0.54	405.41	0.04	496.21
16	Kandhamal	8021	5859.85	2050.42	2.00	763.65	74.31	1952.91
17	Kendrapara	2644	356.24	15.90	4.50	0.00	0.00	39.17
18	Keonjhar	8303	3269.82	2004.83	0.22	233.93	5.26	815.46
19	Khurda	2813	669.74	268.46	0.84	260.34	0.00	125.39
20	Koraput	8807	2355.94	478.59	0.68	353.90	0.00	468.31
21	Malkangiri	5791	3541.57	352.56	0.30	188.65	636.64	1408.61
22	Mayurbhanj	10418	4458.1	3325.89	2.20	77.98	65.78	814.73
23	Nuapada	3852	2826.51	535.34	0.07	0.000	0.000	1241.55
24	Nayagarh	3890	2002.52	1402.48	3.77	81.77	0.00	380.23
25	Nabrangpur	5291	1907.35	0.87	0.44	24.33	0.00	384.03
26	Puri	3479	187.83	15.66	0.12	0.00	0.00	57.07
27	Rayagada	7073	3567.48	773.37	0.96	334.35	0.00	1274.31
28	Sambalpur	6657	4010.56	2207.09	1.18	46.61	460.81	912.92
29	Sonepur	2337	428.75	316.52	0.03	0.00	0.00	111.13
30	Sundargarh	9712	4407.78	2693.30	0.92	245.85	532.22	452.68
	Odisha	155707	61204.15	26873.66	22.025	4179.6	4272.55	15117.30

Note: Un-classified forests includes Forest Deptt. Buildings, Forest roads, nurseries etc.; Source: PCCF, Odisha Bhubaneswar

Table A.3.1 : Performance of Manufacturing sectors over the years 2016-17 and 2017-18, 2018-19

(Share in per cent)

Sl. No.	Indicator	2016-17			2017-18			2018-19		
		India	Odisha	Share*	India	Odisha	Share*	India	Odisha	Share*
1	2	6	7	8	9	10	11	12	13	14
1	Number of Registered Factories	234865	3051	1.3	237684	3066	1.29	242395	3063	1.26
2	Fixed Capital	319038649	33800626	10.59	328588927	33907302	10.32	346677252	30927574	8.92
3	Total output	726551423	15109219	2.08	807217258	22997037	2.85	928336190	30238991	3.26
4	Total Input	589746374	12025645	2.04	660520215	18895455	2.86	774804505	24933019	3.22
5	Gross Value Added	136805049	3083574	2.25	146697043	4101582	2.8	153531685	5305972	3.46
6	Net Value Added	114591911	1847663	1.61	122967418	2698489	2.19	127369428	3722012	2.92
7	Total no. of Employees	14911189	272508	1.83	15614619	279496	1.79	16277019	281520	1.73
8	Output/Input	1.23	1.26		1.22	1.22		1.2	1.21	

Note: * - Share of Odisha in All India Source: CSO (5 wing), Gol

Table A.3.2 : Districtwise MSME Scenario in Odisha

Sl.No	Name of the District	No. of MSME Units		Investments (INR in Lakhs)		Total Employment	
		2019-20	2020-21	2019-20	2020-21	2019-20	2020-21
1	2	3	4	5	6	7	8
1	Bargarh	1601	1200	4441.79	3601.26	2967	2864
2	Jharsuguda	1709	1330	10410.11	12369.20	11880	4833
3	Sambalpur	2247	1321	16699.22	5074.73	6550	2895
4	Deogarh	600	611	1258.45	1090.87	1179	1695
5	Sundargarh	5814	4019	18435.27	11424.27	12364	6963
6	Keonjhar	2300	1270	8118.66	12659.12	5453	3709
7	Mayurbhanj	3348	3400	9112.85	12039.38	8302	8769
8	Balasore	4108	4105	12019.09	13446.39	11403	11956
9	Bhadrak	3008	2100	6792.41	5333.94	6630	4386
10	Kendrapara	1333	1333	5576.42	6346.12	3741	3111
11	Jagatsinghpur	1641	1566	9577.22	6842.93	4871	4235
12	Cuttack	3271	1798	15317.28	7631.02	7737	4288
13	Jajpur	2976	1660	20966.94	10054.23	7244	3849
14	Dhenkanal	900	2072	2948.56	9164.08	1940	4294
15	Angul	2140	1682	26629.63	6680.40	5246	3972
16	Nayagarh	582	700	2176.25	3054.01	1878	1727
17	Khurda	4973	1016	31476.66	4986.63	16735	2984
18	Puri	2451	2452	8163.03	8445.05	5794	5267
19	Ganjam	1302	1174	1273.15	2222.48	2671	2687
20	Gajapati	460	484	2928.50	1845.18	1374	1501
21	Phulbani	804	840	3181.62	2600.55	2233	2065
22	Boudh	64	35	217.00	96.65	170	100
23	Sonepur	563	602	1051.88	1155.77	1392	1434
24	Bolangir	2429	1516	10523.28	8781.55	7929	5778
25	Nuapada	910	442	4333.46	2314.42	2687	1345
26	Kalahandi	1206	1281	6750.65	7688.64	6216	6165
27	Rayagada	1981	1642	14944.37	9274.08	5658	6253
28	Nawarangpur	808	662	4193.80	3208.68	2475	2000
29	Koraput	1760	1610	4470.85	8027.20	6597	6610
30	Malkangiri	362	350	1980.21	1320.39	1519	1283
	Odisha	57651	44273	265968.61	188779.22	162835	119018

Source: Directorate of Industries, Cuttack

Table A.3.3 : Number of workers directly employed in major mineral activities, during the period 2016-17 to 2020-21 (PE)

Mineral ores/ District	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	2	3	4	5	6
Bauxite (Koraput, Sundargarh)	1215	1350	1650	1750	1840
Chromite (Dhenkanal, Jajpur, Keonjhar)	5974	6074	6374	7010	7690
Coal (Angul, Jharsuguda, Sundargarh, Sambalpur)	20800	22200	22700	22700	21890
Dolomite and lime stone(Bargarh, Bolangir, Koraput, Sundargarh)	450	550	660	760	810
Iron ore (Jajpur, Keonjhar, Mayurbhanj, Sundargarh)	18600	19600	19850	19850	21670
Manganese ore (Keonjhar, Sundargarh, Rayagada, Bolangir)	2915	3915	4115	4215	3900
Others(China clay, Quartz and Quartzite, Graphite, Mineral sand, Gemstone, Pyrophyllite etc.)	2451	2251	3251	3351	3600
Total	52405	55940	58600	59636	61400

Source: Directorate of Mines, Odisha

Table A.3.4 : Geological exploration in Odisha during 2020-2021 (Up to March 2021)

Item of work	Achievement/area covered /Samples collected	
	2019-20	2020-2021
1	2	3
No. of geological explorations (Nos.)	26 (upto March, 2020)	16(Up to March 2021)
Geological mapping(1:25,000)	179 sq. km	252 sq. km
Detailed geological(1:5000/ 1 : 2000)	5.6925 sq. km.	4.5575 sq. km
Trial excavation	208.21 cu.m.	77.6 cu.m.
Drilling	6347.95 m	6307.23 m
	4805.45 m (in house)	2891.23m
	1542.5 m (outsourcing)	(in house)
		3416m
		(out sourcing)
		2891.23m
	(in house)	
	3416m(out sourcing)	
Sampling –mineral rock (Nos.)	3043	978
Sampling –coal	449.21 m	286.59m
Geophysical survey	1.5 sq. km,IP-0.28 sq. km	0.25 sq. km IP- 0.74 sq. km
i) Investigation Reports approved(50m x 10m)	21 nos.	18 nos.
ii) Approval of Mining Plans of Minor Minerals other than decorative stones	593 nos.	5754 nos.
Technical evaluation of prospecting reports	4 nos.	5 nos.
Finalization of geological reports of auctionable blocks	7 nos.	4 nos.
Identification of mineral blocks for up gradation of resource	9 blocks	3 blocks
No. of Gems tested in a laboratory	1396	380
Testing charge collected	833870	2,24,200/-
Rock Sample	5	44
Heavy minerals	79	96

Source: Directorate of Geology, Odisha

Table A.3.5 : Progress on exploration programme during 2020-21

Mineral	Location (Area/District)	Resource Estimated
1	2	3
Dimension/ Decorative stone	Endrima, Gajapati district	GR is under progress
Quartz	Kadalimunda, Balangir district	GR is under progress
Pyrophyllite	Jumudiha, Keonjhar district	GR is under progress
Quartz & Quarzite	Soroda, Sundargarh, Kanaktora & Bhikampali, Jharsuguda district	GR is under progress
Quartz	Lumrajhola (SE) of Boudh District	0.057 mt
Heavy mineral	Coastal tract of Jagatsinghpur district	10.42 mt
Decorative stone and other minor mineral in freehold areas	Around Tarbha and Lubarsing, Gajapati district	Damba:0.68 Million Cu.m
		Nuagaon: 1.30 Million Cu.m
		Betarsing Block – A: 2.09 Million Cu.m
		Betarsing Block – B: 0.795 Million Cu.m
Decorative stone and other minor mineral	Antarba and Kandha Adaba of Gajapati District	Derab East : 25.56 Million Cu.m
		Derab West : 23.47 Million Cu.m
		Tentulikhunti:6.586 Million Cu.m
		Baharpada Jamundiha East:12.66 Million Cu.m
		Baharpada Jamudiha West:10,719 Million Cu.m

Mineral	Location (Area/District)	Resource Estimated
Decorative stone and other minor minerals	Tulsipal, Nalatangra, Nuagaon and Sarapa of Dhenkanal & Angul district	Chandia: 0.088334 Million Cu.m
		Telegarph: 0.651640 Million Cu.m
		Sukhupada: 6.862 Million Cu.m Gobindpur: 0.846332 Million Cu.m
Dimension/Decorative stone	Jhadapada, Gajapati district	Ds: 0.407 Million Cu.m Construction grade: 1.63 Million Cu.m
	Lausahi, Gajapat district	Ds: 0.535 Million Cu.m Construction grade: 2.142 Million Cu.m
	Nuagaon, Gajapat district	Ds: 2.03 Million Cu.m Construction grade: 8.13 Million Cu.m
Quartz & Quarzite	Bhatuabeda-Chiringdih, Mayurbhanj district	Quartz: 24498.2 tonnes of quartz: has been estimated at G3 stage
Bauxite	Recast of Karlapat Bauxite Block, Kalahandi district	248.20 mt

Source: Directorate of Geology, Odisha

Table A.3.6 : Value of Mineral production of Major states from 2015-16 to 2020-21 and its percentage to all India total

(In Lakh Tonnes)

State Name	2015-16 (April-March)	2016-17 (April-March)	2017-18 (April-March)	2018-19 (April-March)	2019-20 (April-March)	2020-21 (April-February)
1	2	3	4	5	6	7
Odisha	26390.04 (11.43)	16019.51 (33.52)	19610.1 (32.78)	30444.83 (41.17)	32755.55 (43.69)	23680.12 (35.07)
Rajasthan	26042.02 (11.28)	9653.22 (20.20)	11177.75 (18.68)	12999.83 (17.58)	12500.29 (16.67)	14247.07 (21.10)
Chhattisgarh	20855.99 (9.03)	7067.99 (14.79)	9241.13 (15.45)	10827.54 (14.64)	11125.16 (14.84)	11940.82 (17.69)
Karnataka	4263.66 (1.85)	5552.18 (11.62)	8680.92 (14.51)	8480.31 (11.47)	8128.64 (10.84)	8932.03 (13.23)
Jharkhand	20613.79 (8.93)	1716.04 (3.59)	2415.67 (4.04)	3116.63 (4.21)	3118.41 (4.16)	2376.63 (3.52)
Madhya Pradesh	15041.4 (6.51)	1814.56 (3.80)	2318.64 (3.88)	2609.49 (3.53)	2506.26 (3.34)	2284.43 (3.38)
Maharashtra	7358.54 (3.19)	1115.99 (2.34)	1240.53 (2.07)	1310.52 (1.77)	1123.54 (1.50)	1004.52 (1.49)
Andhra Pradesh	1847.01 (0.80)	933.08 (1.95)	1143.51 (1.91)	1302.83 (1.76)	1074.49 (1.43)	870.24 (1.29)
Tamil Nadu	6977.83 (3.02)	747.81 (1.56)	655.3 (1.10)	723.01 (0.98)	666.02 (0.89)	521.16 (0.77)
Gujarat	11769.58 (5.10)	857.59 (1.79)	785.05 (1.31)	739.93 (1.00)	652.68 (0.87)	556.62 (0.82)
Telangana	12720.81 (5.51)	502.61 (1.05)	554.96 (0.93)	613.99 (0.83)	520.99 (0.69)	420.73 (0.62)
Meghalaya	2125.65 (0.92)	254.06 (0.53)	286.3 (0.48)	295.05 (0.40)	296.63 (0.40)	247.34 (0.37)
Himachal Pradesh	218.1 (0.09)	218.55 (0.46)	246.65 (0.41)	251.95 (0.34)	275.31 (0.37)	231.98 (0.34)
Uttar Pradesh	1445.64 (0.63)	51.52 (0.11)	77.38 (0.13)	84.84 (0.11)	75.34 (0.10)	64.63 (0.10)
All India	230905.25 (100)	47788.80 (100)	59830.52 (100)	73952.15 (100)	74965.79 (100)	67513.97 (100)

Note: Figures in parenthesis is percentage to all India total Source: Monthly Statistics of Mineral production, IBM Nagpur

Table A.3.7 : State-wise Per capita availability of Power* and Installed Capacity of Power in Odisha

State/Union Territory	Per capita availability of Power (in Klowatt-Hour)				Installed Capacity of Power (in Mega Watt)			
	2017-18	2018-19	2019-20	2020-21	2017-18	2018-19	2019-20	2020-21
1	2	3	4	5	6	7	8	9
Andaman and Nicobar Island	789.6	850.1	850.1	850.1	52	57	57	75
Andhra Pradesh	1180.3	1289.4	1321.9	1254.5	23674	24184	24854	25484
Arunachal Pradesh	570.7	618.4	539.2	514	301	337	379	765
Assam	281.7	295.3	296.9	313.7	1571	1710	1757	1794
Bihar	256.3	287.3	303.8	327.7	4341	4566	5792	6321
Chandigarh	1518	1480.1	1631.8	1434.9	193	198	207	215
Chhattisgarh	1011.4	1021	1163.6	1176.8	13527	14044	12835	13076
Dadra and Nagar Haveli	17987.3	18424.8	19085.5	16071.3	255	276	493	509
Daman and Diu	10431.8	10526.5	10592.3	9147.9	190	206	224	256
Delhi	1898.6	1926.9	1974.4	1764.1	7180	7237	7582	7590
Goa	2824.3	2936.1	2975.8	2793.1	549	567	581	596
Gujarat	1821.2	1930.5	1890.4	1852	31043	32291	35211	37893
Haryana	2002.7	2116.7	2149.3	2094.7	11260	11268	12290	12481
Himachal Pradesh	1362.9	1402.7	1509.9	1477.4	4047	4068	4007	4155
Jammu and Kashmir	1199.3	1264.5	1316.6	1394.5	3389	3394	3417	3478
Jharkhand	235.2	256.7	268.2	292.5	1771	1774	2514	2548
Karnataka	1107.5	1172.7	1190.7	1125.9	27157	28075	29825	30091
Kerala	746.3	746.2	787.2	752.3	5083	5083	5696	5837
Lakshadweep	745	714	714	869.2	1	1	1	1
Madhya Pradesh	963.2	1042.3	1043.9	1143.5	21728	23334	24821	25489
Maharashtra	1330.7	1407.4	1380.8	1340.7	43255	44144	43496	44166
Manipur	303.8	332.8	341	360.3	242	259	268	262
Meghalaya	523.3	658.9	695.3	675.4	565	582	609	616
Mizoram	447.3	605.9	613.5	689.9	196	206	212	207
Nagaland	389.3	408.5	415.7	422.4	159	170	175	179
Odisha	684.3	757.6	700.4	704.1	7377	7654	8567	8594
Puducherry	2139.1	2210.6	2282.8	2120.8	369	370	375	380
Punjab	1978.5	1995.2	2047.7	2105.6	13432	13432	14205	14389
Rajasthan	1028.9	1160.6	1183.9	1241.9	21684	22589	25360	26045
Sikkim	798.1	842.5	885.7	872.9	962	962	674	678
Tamil Nadu	1467.2	1514.8	1506.9	1401.4	30327	31059	32840	33695
Telangana	1707.1	1888.4	1941.7	1904.5	15139	15826	16024	17218
Tripura	695.2	500.4	411.8	402.5	733	752	764	724
Uttar Pradesh	592.8	581.9	606.2	618.1	24909	25130	26162	27896
Uttarakhand	1327.1	1359.4	1421	1365.8	3399	3403	3550	3731
West Bengal	553.6	570.1	587.2	572.9	10518	10568	11027	11037
ALL INDIA	978.1	1028.9	1042.6	1031	330580	356100	370106	382151

Note: ***: Per Capita Availability of Power is worked out based on Census Population and the population for Andhra Pradesh and Telangana drawn from both Governments' portals for the years 2014-15 and 2018-19.

Source: Central Electricity Authority, Ministry of Power, Government of India

Table A.4.1: Percentage of projected urban population to total population of Odisha by sex as on 1st July, 2011-2036

Year	Person	Male	Female
1	2	3	4
2011	16.75	17.15	16.33
2016	17.63	18.09	17.16
2021	18.53	19.05	18
2026	19.44	20.03	18.85
2031	20.38	21.03	19.72
2036	21.35	22.07	20.62

Source: Report of Tech group on population projection, National Commission on population, Ministry of Health & Family welfare (MH&FW), July 2020

Table A.4.2 : Total Population and Share of Urban Population Projected for Districts of Odisha for 2021

District	Total Population in 2021 (in '000)	Percentage of urban population	District	Total Population in 2021 (in '000)	Percentage of urban population
1	2	3	1	2	3
Khordha	2600	55	Bargarh	1545	12
Jharsuguda	628	42	Jagatsinghpur	1190	12
Sundargarh	2281	36	Kandhamal	807	11
Sambalpur	1115	31	Nayagarh	1002	11
Cuttack	2802	31	Dhenkanal	1261	11
Ganjam	3829	25	Jajpur	1990	9
Angul	1396	19	Mayurbhanj	2764	9
Puri	1833	17	Nabarangpur	1382	8
Rayagada	1062	17	Subarnapur	651	8
Koraput	1501	16	Kalahandi	1753	8
Keonjhar	1976	15	Malkangiri	692	8
Bhadrak	1674	13	Deogarh	343	7
Gajapati	616	13	Kendrapara	1523	6
Balangir	1762	13	Nuapada	654	5
Baleswar	2574	12	Boudh	489	4

Note: Urban Share of Population are estimated using Ratio Method
Source: District at a Glance 2022 by DES, Odisha and DES Provisional Estimate

Table A.4.3 : Key Statistics of water supply and sewerage schemes under State Plan during 2020-21 (Up to March 2021)

Sl No	Scheme	No of Projects		Budget Provision INR in Lakhs	Expenditure incurred INR in Lakhs
		Sanctioned	Completed		
1	2	3	4	5	6
1	Urban Water supply programme	509	110	20938.33	9468.01
2	Household service connection	166	14	4341.02	3553.94
3	Hand pump Tube wells	10	10	32.27	32.27
4	Water supply to Anganwadi and School	86	26	18.38	18.38
5	DG on Wheel	16	0	670	603.96
6	Water supply for 24 x 7	3	0	4000	0
	Total water supply	790	160	30000	13676.56
7	Information, Education, Communication	82	31	200	35.17
8	Service level Bench (SLB) marking	44	3	3000	187.38
9	Automation of Water treatment plant & system	28	2	991.59	70.67
10	Computerization and e-Governance	74	19	200	127.72
11	Development of water testing laboratory	4	3	300	284.06
12	Efficiency measures for urban water supply system.	35	0	0.01	0
13	Land Acquisition charges	2	1	8.43	8.41
14	Payment of Decretal dues	4	4	53.56	53.56
15	Capacity Development and preparation of DPR	63	0	200	26.79
16	Urban Sewerage	0	0	100	0
17	RLTAP (Revised Long-Term Plan)	0	0	0	0
	Grand Total	1126	223	35053.59	14470.32

Source: Housing & Urban Development Department.

Table A.4.4 : List of Major Scheme Benefiting Urban Population

Sl No.	Name of Scheme	Purpose
1.	UNNATI	All round inclusive development of urban areas by synergizing the resources from various schemes, agencies and providing critical gap funding
2.	Odisha Urban Housing Mission	The mission to fulfil the housing requirements through Situ Slum Redevelopment, credit linked subsidy scheme, partnership with Public and Private Sectors
3.	Pradhan Mantri Awas Yojana (PMAY)-Urban	The Mission to address urban housing shortage among the EWS/LIG and MIG categories including the slum dwellers by ensuring a pucca house to all eligible urban households
4.	JAGA Mission	Aims to provide land rights to identified and eligible slum dwellers with the objectives of providing security of tenure and transform the slums into liveable habitats
5.	Mo Bus	It aims to strengthen public transport by providing free Wi-Fi, clean and technologically advanced equipment
6.	Smart Led Street light programme	Aims to increase public safety and convenience along with saving of energy as well as reduction of power cost.
7.	Greenfield LED public street lighting projects	It aims to help in designing, implementing, operating and maintaining the greenfield public street Lighting system
8.	NEESL (LED light retrofitting & greenfield project)	The project aims to retrofit streetlight with M/S EESL in 109 ULBs except the five municipal corporations
9.	BASUDHA scheme.	It is a mega pipe water scheme to supply potable piped water to all
10.	Water for all	It is a universal coverage scheme of water supply
11.	Atal Mission for Rejuvenation and urban Transformation (AMRUT)	To provide basic civic amenities like water supply, sewerage, urban transport, parks to improve the quality of life for all
12.	Drink from Tap Mission	The Mission to achieve 24x7 water supply (including 100 per cent metering), quality surveillance and assurance of Tap water quality
13.	Jalsathi Initiative	Aims to facilitate effective water management through participation of the community at the ward level i.e SHG members as Jalsathis
14.	Swachha Bharat Mission	It aims to accelerate the universal sanitation consciousness to make Odisha open defecation free and improve levels of cleanliness through solid and liquid waste management.
15.	Swachh Odisha Suth Odisha	Aims to construct toilets along with Public toilet seats and community toilet seats
16.	Swachha Sahar Odisha	The web-application has been developed for close and effective monitoring of urban sanitation activities
17.	Swachhata App	Developed to facilitate scoring under "Citizen Feedback regarding Solid Waste Management
18.	Garima scheme	The scheme aims to ensure safety and dignity of core sanitation workers by introducing risk & hardship allowance, financial assistance to the families in the event of accident or injury, financial support

Sl No.	Name of Scheme	Purpose
19.	National Urban Health Mission	It aims to meet the diverse health care needs of the urban poor and other vulnerable sections
20.	Biju Swasthya Kalyan Yojana	Aims to provide universal health coverage by transforming service delivery systems
21.	Deendayal Antyodaya Yojana- National Urban Livelihood Mission (DAY-NULM)	The mission's objective is to reduce poverty and vulnerability of the urban poor household by enabling them to access gainful self-employment and skilled wage employment opportunities to improve their livelihoods and also aims at providing shelter equipped with essential services to the urban homeless in a phased manner. The programme has major six components which are Social mobilization & Institutional Development, Employment through Skill Training & Placement, Self-employment Programme, Capacity Building & Training, Shelter for Urban homeless, Support to Urban Street Vendors
22.	MUKTA	Aims to create livelihood opportunities for urban poor and migrant workers rendered unemployed and vulnerable during the pandemic. It included work such as sanitation drives, construction of roads and toilets, recovering water bodies, cleaning work, development of public parks, playgrounds, community centers, etc.
23.	Parichaya community centres	Under JAGA mission in convergence with UWEI, multipurpose community centers named as "Parichaya" are constructed within the locality of the slums that can be accessed by every family and community. They are for the purpose of having meeting, social functions, Slum Dwellers Associations, Self-Help Groups and bounded by developed spaces for their children to play and the elderly to relax for healthier lifestyles.
24.	Heritage City Development and Augmentation Yojana (HRIDAY) Scheme	HRIDAY aims at preserving and revitalizing the soul and unique character of the Heritage Cities in India
25.	24X7 Helpline	During the period of COVID 19, a 24X7 toll -free number (Bhubaneswar helpline: 1929) was provided for guidance, support and information to the public of Bhubaneswar. These services were related to medicines, hospital shifting, ambulance, doctor consultation
26.	Sensory Park (Smart City Initiative Bhubaneswar)	It is a park for special needs children built with all the accessibility features such as ramps and facilities like sand pit and rubber flooring to curb any chances of injury, in case, children fall during playing.
27.	Adoptive Traffic Signal Control (ATSC) System (Smart City Initiative Bhubaneswar)	The project aims at improving travel time reliability, predicting traffic volumes including adjustment to signal timings, distribution of green phase time equitably, faster response to traffic conditions and providing timely support for emergencies
28.	Socially Smart Bhubaneswar (Smart City Initiative Bhubaneswar)	The project aims to promote people centric interventions through engagement of youth, especially women and girls with a focus on the most marginalized to make Bhubaneswar socially smart.
29.	Social Equity Centres (Smart City Initiative Bhubaneswar)	BSCL completed construction of Social Equity Centres which are now being used as night shelters for beggars and the homeless free of cost as well as shelter for construction workers
30.	Smart Parks (Smart City Initiative Bhubaneswar)	Smart parks will incorporate child-friendly and social landscape features. Technological features such as Water ATMs, Wi-Fi and informative variable signage systems will also be added to connect the local communities with the open spaces in the city.
31.	Integrated Public Services Centre (Public Internet Access Centres), Saheednagar (Smart City Initiative Bhubaneswar)	IPSC has been envisaged as an integrated facility for the citizens to get e-seva, Health Care Centre, Library, and Crèche facilities. It will address the social and urban services needs of the immediate neighbourhoods and provide the required social space for community interaction
32.	Public Bicycle Sharing System (Smart City Initiative Bhubaneswar)	The project aims to provide low-cost mode of transport to the citizen of Bhubaneswar. Overall, 2000 bicycles have been deployed under the project.
33.	Multi-Level Car Parking (MLCP) (Smart City Initiative Bhubaneswar)	Aims to reduce parking congestion in the area. The building will have smart features and commercial spaces to be leased out
34.	Smart Janpath (Smart City Initiative Bhubaneswar)	It is a dedicated corridor for pedestrians, cyclists, etc. The entire stretch shall have public plazas, proper crossings on the junctions, street furniture, dedicated multi use vending zones.
35.	ICOMC Building (Smart City Initiative Bhubaneswar)	ICOMC Building is proposed as an Iconic Building and is envisaged to emerge as the city's Service Head Quarter integrated with various city level agencies under BMC; it will house Bhubaneswar's state-of-the-art Intelligent City Operations and Management Centre (ICOMC) which will provide a digital platform for integrating multiple city sub-systems. All citizen centric services under BMC shall be available under one roof.

Sl No.	Name of Scheme	Purpose
36.	On-line Building plan approval system (BPAS) (Smart City Initiative Bhubaneswar)	The application in the app covers Common Application Form (CAF) and allows easy online submission, verification and approval from all concerned agencies through a single application form to streamline processes and reduce effort and time for processing Building plan Approvals
37.	Puri Heritage Corridor Project under Augmentation of Basic Amenities and Development of Heritage and Architecture (ABADHA) scheme	Aims to transform the holy town of Puri into an international place of heritage. The project includes redeveloping major portions of the holy town and some areas in the vicinity of the temple for visitors and tourists.
38.	Ekamra Kshetra heritage project	The project involves comprehensive development of the Lingaraj temple and its periphery spanning 66-acre land
39.	Sustainable Urban Services In a Jiffy by Odisha Government	Aims to make urban governance transparent, predictable and data driven which will lead to improvement in quality of living for all citizens in all ULBs of the state.
40.	Gali Safai Abhiyan	Was started to clean streets and lanes in all wards during COVID-19

Table A.5.1 : Bank-Wise Key Indicators by the end of 31.03.2021

(INR in Crore)

Banks	Total branches	Deposit	Advance	CD Ratio	Total Adv. to Agri.	Adv. to MSME	Adv. to services sector.	Adv. to weaker section.	Adv. to DRI	Adv. to women	Adv. to SC/ST
1	2	3	4	5	6	7	8	9	10	11	12
Public Sector	3070	275916.18	133627.08	48.43	13710.91	25859.53	17887.66	13911.04	14.63	13011.67	4487.61
Private Sector	954	70111.45	54737.53	78.07	9283.03	15492.74	9893.56	8940.20	0.03	11108.85	1910.52
RRBs	984	20977.21	8690.84	41.43	4018.65	1255.60	859.59	5161.54	1159.94	1836.29	1599.49
RIDF (NABARD)	0	0	0	0	22711.59	0.00	0.00	0.00	0.00	0.00	0.00
Total Small Finance Bank	200	714.89	1571.18	219.78	877.24	175.63	163.31	1728.86	0	1332.26	205.44
Total commercial Bank Branches	5208	367719.73	198626.63	54.02	50601.42	42783.50	28804.12	29741.64	1174.60	27289.07	8203.06
Total Co-operative Bank	340	13079.75	16322.55	124.7	12532.78	71.17	28.69	11216.89	0	1108.24	1980.59
Grand Total	5548	380799.48	214949.18	56.45	63134.2	42854.67	28832.81	40958.53	1174.60	28397.31	10183.65

Source: SLBC, 163rd issue, March, 2021

Table A.5.2 : Market Share of Commercial and Cooperative Banks in Dispensing Crop Loan

Year	Commercial Banks	Cooperative Banks	Total	Market Share of Banks (per cent)	
				Cooperative	Commercial
1	2	3	4	5	6
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
2017-18	5524.00	11005.80	16529.80	67	33
2018-19	5922.46	12809.99	18732.45	68	32
2019-20	7353.01	13071.03	20424.04	64	36
2020-21	9427.83	15190.03	24617.86	62	38

Source: 163rd State Level Bankers Committee

Table A.5.3 : Progress on SHG Bank Linkage for 2020-21 (District wise)

Sl. No.	Name of District	Target (2020-21)				Cumulative Achievement				Percentage of Achievement				Average loan size
		Physical			Financial (INR in lakh)	Physical			Financial (INR in lakh)	Physical			Financial (INR in lakh)	
		Fresh	Repeat/Renewal	Total		Fresh	Repeat/Renewal	Total		Fresh	Repeat/Renewal	Total		
3	4	5	6	7	8	9 (7+8)	10	11 (7/3)	12 (8/4)	13 (9/5)	14 (10/6)	15		
1	ANGUL	3789	6576	10365	11487.97	4418	6009	10427	17551	117	91	101	153	1.68
2	BALASORE	3707	12880	16587	24676.86	4276	12230	16506	41066.52	115	95	100	166	2.49
3	BARGARH	2632	3652	6284	8494.6	3631	2272	5903	9821.42	138	62	94	116	1.66
4	BHADRAK	2978	8596	11574	17438.39	3251	6701	9952	20655.69	109	78	86	118	2.08
5	BOLANGIR	3527	3624	7151	7281.14	3293	3242	6535	9052.46	93	89	91	124	1.39
6	BOUDH	757	2147	2904	3699.77	1219	1690	2909	4884.94	161	79	100	132	1.68
7	CUTTACK	5192	11857	17049	26077.13	4241	10351	14592	28580.07	82	87	86	110	1.96
8	DEOGARH	646	3174	3820	3966.16	1025	2877	3902	5360.71	159	91	102	135	1.37
9	DHENKANAL	2892	4713	7605	10460.22	2928	3967	6895	13681.8	101	84	91	131	1.98
10	GAJAPATI	2213	2052	4265	4582.58	2385	2050	4435	5820.61	108	100	104	127	1.31
11	GANJAM	8826	7248	16074	16240.81	11032	7814	18846	30174.86	125	108	117	186	1.60
12	JAGATSingHPUR	3232	5354	8586	12122.74	2783	5056	7839	15016.96	86	94	91	124	1.92
13	JAJPUR	4471	7323	11794	16582.07	4303	6980	11283	23739.73	96	95	96	143	2.10
14	JHARSUGUDA	1085	1879	2964	4110.66	1650	1380	3030	4818.3	152	73	102	117	1.59
15	KALAHANDI	3298	2956	6254	6387.58	3731	1572	5303	6735.27	113	53	85	105	1.27
16	KANDHAMAL	2466	2100	4566	4690.96	2134	2535	4669	6471.08	87	121	102	138	1.39
17	KENDRAPARA	3334	4784	8118	11055.62	4355	4217	8572	14572.82	131	88	106	132	1.70
18	KEONJHAR	4034	6063	10097	11114.76	5207	4936	10143	14635	129	81	100	132	1.44
19	KHORDHA	3649	7457	11106	16922.6	2976	7801	10777	21568.03	82	105	97	127	2.00
20	KORAPUT	2854	4025	6879	7142.87	2674	2842	5516	7188.9	94	71	80	101	1.30
21	MALKANGIRI	1500	1491	2991	3074.99	1770	1537	3307	3703	118	103	111	120	1.12
22	MAYURBHANJ	6810	11207	18017	26727.06	5519	9702	15221	25115.7	81	87	84	94	1.65
23	NABARANGPUR	3500	2110	5610	5866.82	2099	1950	4049	5041.52	60	92	72	86	1.25
24	NAYAGARH	3573	5063	8636	11479.01	3040	4942	7982	15628.69	85	98	92	136	1.96
25	NIJAPADA	2073	1549	3622	3662.09	2311	1456	3767	5582.96	111	94	104	152	1.48
26	PURI	5122	7457	12579	16826.92	4190	5900	10090	21728.4	82	79	80	129	2.15
27	RAYAGADA	2792	3572	6364	6507.48	2425	3686	6111	7571.4	87	103	96	116	1.24
28	SAMBALPUR	2644	3945	6589	7738.93	2776	4157	6933	9200.23	105	105	105	119	1.33
29	SUBARNAPUR	2260	2245	4505	5104.51	2200	2290	4490	6932.59	97	102	100	136	1.54
30	SUNDARGARH	4584	6711	11295	12496.7	4299	7056	11355	17143.83	94	105	101	137	1.51
	Grand Total	10040	153810	254250	324020	102141	139198	241339	410448	102	90	95	129	1.74

Source: SLBC, 163rd issue, March 2021

Table A.5.4 : Tourist Composition and Inflow of money via Tourist spending in Odisha

Year	Tourist (in nos.)			Growth Rate (per cent)	Inflow of money (in INR crore)			Growth Rate (per cent)
	Domestic	Foreign	Total		Domestic	Foreign	Total	
1	2	3	4	5	6	7	8	9
2008-09	6,482,213	42,303	6,524,516	4.32	3254.65	135.46	3390.11	6.1
2009-10	7,104,079	47,105	7,151,184	9.60	3566.89	150.83	3717.72	9.66
2010-11	7,770,741	53,212	7,823,953	9.41	3901.61	170.39	4072.00	9.53
2011-12	8,472,208	62,816	8,535,024	9.09	4253.81	201.14	4454.95	9.40

Year	Tourist (in nos.)			Growth Rate (per cent)	Inflow of money (INR in crore)			Growth Rate (per cent)
	Domestic	Foreign	Total		Domestic	Foreign	Total	
2012-13	9,291,734	65,522	9,357,256	9.63	4665.29	209.81	4875.10	9.43
2013-14	10,064,072	67,400	10,131,472	8.27	10288.60	308.94	10597.54	117.38
2014-15	11,051,351	72,215	11,123,566	9.79	11297.91	331.01	11628.92	9.73
2015-16	12,067,695	67,364	12,135,059	9.09	12336.93	308.78	12645.71	8.74
2016-17	13,112,728	77,496	13,190,224	8.69	13405.27	355.22	13760.49	8.82
2017-18	14,261,546	102,995	14,364,541	8.90	14579.72	472.10	15051.82	9.38
2018-19	15,509,529	113,721	15,623,250	8.76	15441.67	474.00	15915.67	5.74
2019-20	15,035,593	100,567	15,136,160	(-3.12)	14,969.81	419.17	15388.98	(-3.31)
2020-21	2,376,523	652	2,377,175	(-84.29)	2375.04	2.72	2377.76	(-84.55)

Source: Department of Tourism, Odisha

Table A.5.5 : Total Road Length from 2000-01 to 2020-21

(Length in Kms.)

Year	National Highway	State Highway	Major District Road	Other District Road	Total
1	2	3	4	5	6
2000-01	2739.49	5048.68	3676.82	4576.50	16041.49
2001-02	2739.49	5048.68	3676.82	6176.50	17641.49
2002-03	3175.49	5048.68	3287.589	6153.379	17665.14
2003-04	3175.49	5048.68	3287.589	6138.379	17650.14
2004-05	3557.49	5014.477	3287.589	6138.379	17997.94
2005-06	3592.027	5102.477	3189.474	6122.379	18006.36
2006-07	3592.027	3886.966	4277.195	6314.049	18070.24
2007-08	3595.027	3886.966	4277.195	6314.049	18073.24
2008-09	3595.027	3886.966	4277.195	6314.049	18073.24
2009-10	3592.932	3686.889	4057.127	6812.699	18149.65
2010-11	3594.162	3686.889	4057.127	6812.699	18150.88
2011-12	3594.162	3695.475	4198.266	7024.769	18512.67
2012-13	3593.282	3607.128	4298.046	7521.854	19020.31
2013-14	3593.282	5124.576	2805.341	8589.837	20113.04
2014-15	3876.537	4840.491	2820.721	9804.953	21342.70
2015-16	4510.712	4175.901	2696.711	11997.863	23381.19
2016-17	4855.325	4139.006	2627.036	13666.819	25288.19
2017-18	4857.365	4137.530	2815.936	15328.71	27139.541
2018-19	4848.058	4143.053	2811.784	18835.008	30637.90
2019-20	4848.058	4172.80	2780.96	18840.81	30642.628
2020-21	5753.03	4124.37	2631.4	18792.37	31301.17

Source: Works Department, Govt. of Odisha and C.E., National Highway, Bhubaneswar

Table A.5.6 : Distribution of workers by activity status (per cent)

State	Rural			Urban		
	Self Employed	Salariied	Casual Labour	Self Employed	Salariied	Casual Labour
1	2	3	4	5	6	7
Andhra Pradesh	44.9	13	42	35.7	47.1	17.3
Bihar	58.9	7.6	33.5	58.6	27.8	13.5
Chhattisgarh	72.4	10.9	16.6	41	53.3	5.7
Gujarat	62	14.2	23.8	42.7	50.8	6.5
Haryana	48.8	29	22.1	31.4	57.3	11.3
Jharkhand	71.5	10.4	18.1	41.4	41.7	16.9
Karnataka	58.9	13.4	27.7	32.6	55.5	11.9
Kerala	44.5	28.6	26.9	38.6	41.4	19.9
Madhya Pradesh	66.5	7.4	26.1	41.3	46.7	12
Maharashtra	54	12.5	33.5	33.8	57.6	8.6
Odisha	63.3	11.6	25.1	38.3	48	13.7
Punjab	48.9	25	26.1	38.2	54.1	7.7
Rajasthan	77	10.4	12.6	51.6	40.3	8.1
Tamil Nadu	41	21	37.9	29.7	52.9	17.3
Telangana	55.3	10.6	34.1	32.2	56.1	11.7
Uttar Pradesh	73	17.2	9.8	39.3	54.2	6.5
Uttarakhand	73.9	8.2	17.9	48.9	42	9.1
West Bengal	54.5	15.3	30.2	42.8	46.2	11

Source: PLFS 2019-20, MoSPI

Table A.6.1: Health Infrastructure of the state by the end of March 2021

Health Facility	Numbers
1	2
Medical College and Hospitals	7
District Hospitals (in 30 districts + Capital Hospital, BBSR & R.G.H RKL)	32
Sub-Divisional Hospitals	32
Community Health Centres	377
Urban Community Health Centres	7
Other Hospitals	79
Infectious Disease Hospitals	5
Cancer Institute	1
Training Centres	5
Primary Health Centres (N)	1226
Urban Primary Health Centres	91
Sub-Centres	6688
A.N.M. Training Schools	21
G.N.M. Training School	8
M.P.H.W.(Male) Training School	3
Ayurvedic Hospitals (not attached to College)	2
Ayurvedic College & Hospitals	3
Ayurvedic Dispensaries	619
Homoeopathic College & Hospitals	4
Homoeopathic Dispensaries	560
Unani Dispensaries	9

Source: State Human Resource Management Unit (SHRMU), Directorate of Health Services (2021)

Table A.6.2 : Details of AYUSH institutions

Year	Type of Model Institutions	Medical College	Hospitals	Dispensaries	Doctors in Position	No. of Beds	Patients treated (in lakhs)
1	2	3	4	5	6	7	8
2019	Homeopathic	4	4	561	299	135	29.48
	Ayurvedic	3	5	620	254	468	35.37
	Unani	0	0	9	0	0	0
2020	Homeopathic	4	4	561	409	135	36.43
	Ayurvedic	3	5	620	520	468	31.88
	Unani	0	0	9	3	0	0.247

Source: Directorate of AYUSH, Odisha

Table A.6.3 : Interstate comparison of IMR (2001 to 2019)

Name of the States	2001	2005	2010	2013	2014	2015	2016	2017	2018	2019
1	2	3	4	5	6	7	8	9	10	11
Andhra Pradesh	66	57	46	39	39	37	34	32	29	25
Assam	74	68	58	54	49	47	44	44	41	40
Bihar	62	61	48	42	42	42	38	35	32	29
Gujrat	60	54	44	36	35	33	30	30	28	25
Haryana	66	60	48	41	36	36	33	30	30	27
Karnataka	58	50	38	31	29	28	24	25	23	21
Kerala	11	14	13	12	12	12	10	10	7	6
Madhya Pradesh	86	76	62	54	52	50	47	47	48	46
Maharashtra	45	36	28	24	22	21	19	19	19	17
Odisha	91	75	61	51	49	46	44	41	40	38
Punjab	52	44	34	26	24	23	21	21	20	19
Rajasthan	80	68	55	47	46	43	41	38	37	35
Tamil Nadu	49	37	24	21	20	19	17	16	15	15
Uttar Pradesh	83	73	61	50	48	46	43	41	43	41
West Bengal	51	38	31	31	28	26	25	24	22	20
India	66	58	47	40	39	37	34	33	32	30

Source: Sample Registration System Bulletin

Table A.6.4 : Interstate comparison of Institutional Delivery (2005-06 to 2019-21)

Name of the States	NFHS-3(2005-06)			NFHS-4(2015-16)			NFHS-5(2019-21)		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh	64.4	55.9	81.5	91.6	89.7	96.5	96.5	95.7	98.6
Assam	22.4	17.9	58	70.6	68.2	92.9	84.1	82.9	93.5
Bihar	19.9	16.7	44	63.8	62.7	74.3	76.2	75.0	84.1
Gujrat	52.7	39.2	75.7	88.7	85.5	93.4	94.3	92.2	97.8
Haryana	35.7	26.7	64	80.5	80.4	80.6	94.9	94.4	96.1
Karnataka	64.7	54.8	81.8	94.3	93.5	95.4	97.0	96.2	98.3
Kerala	99.3	99	100	99.9	99.9	99.9	99.8	99.8	99.7
Madhya Pradesh	26.2	17.1	57.2	80.8	76.4	93.8	90.7	89.2	95.8
Maharashtra	64.6	48.9	83.3	90.3	86.7	94.8	94.7	93.1	96.7
Odisha	35.6	31.3	63.1	85.4	84.7	89.7	92.2	91.3	97.5
Punjab	51.3	47.6	57.9	90.5	91.5	89	94.3	95.5	92.0
Rajasthan	29.6	20.8	63.7	84	82.3	90.3	94.9	94.2	97.5
Tamil Nadu	87.8	84	92.4	99	98.7	99.2	99.6	99.4	99.8
Uttar Pradesh	20.6	15.8	39.5	67.8	66.8	71.7	83.4	82.9	85.5
West Bengal	42	32.2	79.7	75.2	71.9	83.7	91.7	91.6	92.3
India	38.7	28.9	67.5	78.9	75.1	88.7	88.6	86.7	93.8

Source: NFHS Study Reports

Table A.6.5 : Progress of Immunization Programme in Odisha

Programmes	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4	5	6	7	8	9	10	11	12
TT(PW)	7.67	7.73	7.14	7.55	7.32	7.3	6.7	6.85	6.9	6.7	6.68
DPT	7.17	7.27	7.58	7.01	7.23	5.33	6.74	6.49	6.61	6.6	6.67
Polio	7.2	6.61	7.44	7.03	7.24	6.88	6.72	6.49	6.5	6.65	6.64
BCG	7.85	8.02	7.4	7.3	7.34	7.03	6.62	6.38	6.39	6.23	6.32
Measles	6.98	7.08	7.57	6.86	7.08	6.85	6.8	4.72	5.32	6.75	6.82
DT	5.68	5.53	6.39	6.19	6.24	6.46	7.19	4.9	5.99	5.75	6.79
TT (10 Yrs)	8.74	7.62	7.78	6.78	6.78	6.5	6.12	5.33	5.43	8.08	5.6
TT (16 Yrs)	8.15	7.22	7.77	6.77	6.58	6.16	5.82	5.13	5.11	7.67	5.11

Source: Directorate of Family Welfare, Odisha

Table A.6.6 : Status of Anaemia among children and adults

Anaemia among Children and Adults	Odisha NFHS-5 (2020-21)	Odisha NFHS-4 (2015-16)	India NFHS-5 (2020-21)	India NFHS-4 (2015-16)
1	2	3	4	5
Children age 6-59 months who are anaemic (<11.0 g/dl) (per cent)	64.2	44.6	67.1	58.6
Non-pregnant women age 15-49 years who are anaemic (<12.0 g/dl) (per cent)	64.4	51.2	57.2	53.2
Pregnant women age 15-49 years who are anaemic (<11.0 g/dl) (per cent)	61.8	47.6	52.2	50.4
All women age 15-49 years who are anaemic (per cent)	64.3	51	57	53.1
All women age 15-19 years who are anaemic (per cent)	65.5	51	59.1	54.1
Men age 15-49 years who are anaemic (<13.0 g/dl) (per cent)	28.5	28.3	25	22.7
Men age 15-19 years who are anaemic (<13.0 g/dl) (per cent)	30	30.3	31.1	29.2

Source: National Family Health Survey

Table A.6.7 : Family Welfare and Immunisation Programmes conducted under ESI Scheme in Odisha (in nos.)

Name of the Programmes	Achievement during the Year (in nos.)				
	2015-16	2016-17	2017-18	2018-19	2019-20
1	2	3	4	5	6
Family Welfare Programmes					
Vasectomy	0	7	7	6	5
Tubectomy	48	59	41	38	35
IUD	40	71	51	62	67
MTP	62	83	83	94	88
Oral Pills	4331	5849	3281	3310	3402
Nirodh	9678	8659	9427	9706	9628
Immunization Programmes					
BCG	2099	2013	1780	1823	1846
Polio	9805	9518	8755	9302	9643
DPT	10220	9826	9481	9402	8549
Tetanus Toxoid	12315	11132	4811	5918	6124
Measles	614	673	658	742	482

Table A.6.8 : Progress of Family Welfare Programmes in Odisha

Source: Directorate of ESI Scheme, Odisha

Year	Sterilisation	IUD Insertion	Conventional contraceptive users	Oral pills users	Medical Termination of Pregnancy	No. of Equivalent Sterilisation
1	2	3	4	5	6	7
2017-18	0.88	1.67	1.27	1.51	NA	NA
2018-19	0.82	1.64	1.26	1.38	0.18	1.59
2019-20	0.79	1.77	1.27	1.31	0.15	1.59
2020-21	0.56	1.84	1.11	1.52	0.12	1.39

Directorate of health and Family Welfare, Odisha

Table A.6.9 : Information on school, enrollment, and teachers in position in all schools during 2020-21

SL	DISTRICT	Primary Schools			Upper Primary Schools			Secondary Schools			Higher Secondary Schools/Jr. Colleges		
		No of Schools	Enrollment	Teacher	No of Schools	Enrollment	Teacher	No of Schools	Enrollment	Teacher	No of Schools	Enrollment	Teacher
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Angul	826	37245	2447	673	90802	4950	291	82163	3269	48	16988	333
2	Balasore	1487	89664	4874	1201	160867	8464	579	141692	5964	142	45862	1068
3	Bargarh	788	37856	2179	742	96679	5000	348	80915	3744	67	21872	214
4	Bhadrak	1067	54629	3354	757	111769	5952	356	96677	3667	70	24820	547
5	Balangir	1129	51525	2934	927	129025	5694	408	116020	4178	79	25938	276
6	Boudh	492	16438	1163	320	40515	2120	82	23935	673	20	6087	62
7	Cuttack	1253	56354	3858	1037	141463	8402	580	159227	7703	129	50616	977
8	Deogarh	257	10142	850	237	22760	1492	95	18221	887	16	4434	100
9	Dhenkanal	651	32390	1803	686	93183	4635	283	66156	2770	59	20191	212
10	Gajapati	483	16635	1354	455	47537	2647	176	50211	1975	23	7500	136
11	Ganjam	1913	100116	5321	1329	225035	10490	705	227757	8447	132	61137	554
12	Jagatsinghpur	625	26068	1971	511	66699	4577	287	62536	3393	49	17402	401
13	Jajpur	1078	61632	3478	951	132050	7058	492	116367	5153	105	36222	481

SL	DISTRICT	Primary Schools			Upper Primary Schools			Secondary Schools			Higher Secondary Schools/Jr. Colleges		
		No of Schools	Enrollment	Teacher	No of Schools	Enrollment	Teacher	No of Schools	Enrollment	Teacher	No of Schools	Enrollment	Teacher
14	Jharsuguda	292	11933	903	304	34534	2071	143	45191	1953	22	7345	127
15	Kalahandi	1394	58884	3659	789	115376	5293	371	101033	3649	69	20219	355
16	Kandhamal	898	28130	2105	713	68281	3927	228	56671	2076	28	12024	58
17	Kendrapara	1096	50428	2868	756	96163	5452	374	82259	3713	94	26501	444
18	Keonjhar	1600	76878	4145	1037	137754	6418	525	126858	5410	64	24150	420
19	Khurda	839	43131	2769	927	148254	8231	409	193957	7475	156	54627	612
20	Koraput	1382	59166	3502	825	102158	4595	314	105251	3483	38	14625	161
21	Malkangiri	805	32729	1837	408	59908	2174	144	42030	1336	17	6726	63
22	Mayurbhanj	2701	107086	7050	1415	181540	8968	681	161493	6610	111	39027	483
23	Nawarangpur	1185	59001	2889	605	106038	3808	244	86537	2237	34	11268	178
24	Nayagarh	625	27371	1815	446	55632	3286	250	56347	2697	51	19141	251
25	Nuapada	436	21373	1197	471	64734	3008	164	42182	1590	26	8061	154
26	Puri	1236	49857	3423	856	102387	5870	377	88367	4090	96	34515	617
27	Rayagada	1199	42739	2999	600	65881	3169	245	74365	2331	36	11270	142
28	Sambalpur	747	28658	2026	558	66733	3981	247	69092	2974	52	19356	234
29	Sonepur	465	16915	1191	395	48576	2675	144	33033	1411	40	11803	152
30	Sundargarh	1428	68533	4218	908	117312	6103	475	160227	6146	79	30850	466
	Odisha	30377	1373506	84182	21839	2929645	150510	10017	2766770	111004	1952	690577	10278

Source: UDISE 2020-21

Table A.6.10 : Type and number of Higher Education Institutions in Odisha

Category of Degree Colleges/ Universities	Number
1	2
Government Colleges	51
Autonomous College (Govt and Non-Govt)	28
Aided colleges	872
Block Grant Colleges	284
Non-government unaided colleges	153
University	30
a) Government University	21
b) Private Universities	9

Source: Higher Education Department, Odisha.

Table A.6.11 : Number of students being trained per batch (break-up across skilling types & demographics) (five-year trend upto December 2021)

Sl.No.	Category of skilling Institutes	2017-18		2018-19		2019-20		2020-21		2021-22		Category of trained workforce
		M	F	M	F	M	F	M	F	M	F	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Govt ITIs	13931	1959	12489	2735	14024	2550	14324	3121	13767	3490	Semiskilled Craftsmen
2	Pvt ITIs	-	-	35379	2526	32172	2441	30907	2969	36619	4707	
3	Trade Apprentice	4457	308	4461	432	3621	359	2882	155	2222	211	Skilled Craftsmen
4	Govt Polytechnics	-	-	6878	1427	6787	1475	7216	1441	8056	1532	Diploma/Supervisory level workforce
5	Pvt Polytechnics	-	-	29861	5699	27662	5100	26473	5061	29626	5527	

Source: Skill Development & Technical Education Department

Table A.6.12 : No. of Youth Trained & No. of Youth Placed

Sl. No	Year	No. of youth trained	No. of trained youth placed
1	2	3	4
1	2017-18	14178	4304
2	2018-19	9048	4037
3	2019-20	9256	4000
4	2020-21	3115	876
5	2021-22	2513	

Source: Skill Development & Technical Education Department

Table A.6.13 : Number of students placed per batch (by sex, age) (five-year trend up to December 2021) – Through Central Placement Cell (CPC) & Institute level.

Sl.No.	Category of passouts	2017-18		2018-19		2019-20		2020-21		2021-22	
		M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12
1	ITIs (Through CPC)	1138	40	2370	1	1364	64	997	519	1510	36
	ITIs (institute wise)	3500	253	1300	98	1500	255	2700	383	1600	269
2	Polytechnics (CPC)	517	41	739	84	268	239	482	49	1034	42
	Polytechnics (inst.)	700	151	500	117	1300	229	600	118	475	124

Source: Skill Development & Technical Education Department

Table A.6.14 : Number of companies that come to campuses to hire students (five-year trend upto December 2021), (Through CPC)

Sl.No.	Category of passouts for hiring	Number of companies that come to campuses for hiring students				
		2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
1	ITIs	27	14	18	24	15
2	Polytechnics	27	17	15	19	13

Source: Skill Development & Technical Education Department

Table A.6.15 : Types of companies that come to campuses to hire students (five year trend upto December 2021), (Through CPC)

Sl.No.	Types of companies	Number of companies that come to campuses for hiring students				
		2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
1	Manufacturing	48	29	30	39	25
2	Service	6	2	3	4	3

Source: Skill Development & Technical Education Department

Table A.6.16 : Types of companies by sector that have hired from all campuses offering skill development and technical education (Through CPC)

Sl.No.	Types of companies	Number of ITIs / Polytechnic campuses covered				
		2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
1	Manufacturing	ITI-30	ITI-18	ITI-14	ITI-23	ITI-13
		DIP-18	DIP-11	DIP-16	DIP-16	DIP-12
2	Service	ITI-2	ITI-NIL	ITI-1	ITI-1	ITI-1
		DIP-4	DIP-2	DIP-2	DIP-3	DIP-2

Source: Skill Development & Technical Education Department

Table A.6.17 : Number of skill development and technical education institutes/year.

Sl.No.	Types of institute (Government)	Base Year 2016-17	Number of new Institutes established and operationalised					Remarks
			2017-18	2018-19	2019-20	2020-21	2021-22	
1	2	3	4	5	6	7	8	9
1	ITIs	45	4	0	0	0	49 Total	11 out of 23 new ITI completed
2	Polytechnics	35	0	0	0	0	35 Total	3 are society mode

Source: Skill Development & Technical Education Department

Table A.6.18 : The Third State Food Safety Index for the year 2020-21 for States/ UTs

Rankings	States Name	Human Resources and Institutional Data	Compliance	Food Testing Infrastructure and Surveillance	Training and Capacity Building	Consumer Empowerment	TOTAL
1	2	3	4	5	6	7	8
Larger State							
1	Gujarat	13	19	16	6	18	72
2	Kerala	13	22	17	8	10	70
3	Tamil Nadu	13	20	11	4	16	64
4	Odisha	11	20	11	5	13	60
5	Uttar Pradesh	14	20	12	1	12	59
6	Himachal Pradesh	11	18	12	3	14	58
7	Madhya Pradesh	10	19	12	1	15	57
8	West Bengal	13	15	12	6	8	54
9	Karnataka	10	13	10	4	14	51
10	Telangana	9	11	14	5	10	49
11	Punjab	9	15	13	4	7	48
12	Haryana	6	13	9	7	12	47
13	Jharkhand	11	16	10	1	9	47
14	Uttarakhand	7	17	13	5	5	47
15	Maharashtra	8	10	9	3	14	44
16	Chhattisgarh	7	15	9	3	9	43
17	Assam	8	8	17	2	3	38
18	Rajasthan	5	16	11	2	4	38
19	Andhra Pradesh	8	13	3	3	9	36
20	Bihar	5	11	5	2	12	35
Smaller State							
1	Goa	15	16	12	5	15	63
2	Meghalaya	8	18	8	5	14	53
3	Manipur	10	15	7	4	10	46
4	Sikkim	7	17	11	1	4	40
5	Arunachal Pradesh	8	21	2	0	6	37
6	Nagaland	5	12	11	3	7	38
7	Tripura	7	11	9	5	3	35
8	Mizoram	4	12	7	1	1	25
Union Territories							
1	Jammu & Kashmir	12	25	12	5	13	67
2	Andaman & Nicobar Island	15	24	5	3	14	61
3	Delhi	10	12	13	8	15	58
4	Chandigarh	11	20	5	4	13	53
5	Dadra & Nagar Haveli and Daman & Diu	7	16	4	0	8	35
6	Ladakh	8	16	1	1	8	34
7	Puducherry	5	11	8	0	4	28
8	Lakshadweep	6	11	0	0	1	18

Source: Food safety & Standard Authority of India

Table A.6.19 : Educational institutions under ST & SC Department as of 2020-21

Sl No.	Category	No. of Schools
1	2	3
1	Ekalavya Model Residential Schools (EMRS)	27
2	Higher secondary schools (HSS)	62
3	High schools (Co-ed)	234
4	Girls high schools	188
5	Ashram schools	720
6	Secondary teachers training schools	2
7	Residential Sevashrams	5
8	Educational complex for PVTGs (15 ECs upgraded to High Schools)	19
9	Sevashrams	504
10	Kalinga Model Residential Schools (KMRS)	10
	Total	1771

Source: ST & SC Department

Table A.6.20 : Progress under Livelihood Convergence Initiative

Sl. No	Department	SHGs	Turnover (INR in Cr)	Commission/ Incentive (INR in Cr)
1	2	3	4	5
1	Fisheries & Animal Resource Development Department	8191	194.33	
2	Food Supplies & Consumer Welfare Department	2388		46.36
3	H & UD Department	8419	145.13	9.45
4	Department of Agriculture & Farmers' Empowerment	13051	45.51	
5	Energy Department	1060	147.26	7.41
6	ST & SC Development, Minority and Backward Classes Welfare Department	3620	67.32	
7	Forest, Environment and CC Department	1429	11.55	
8	W & CD Department	3513	513.81	
9	PR & DW Department	45149	142.32	
10	MSME Department	2256	22.67	
11	School & Mass Education Department	7629		
12	Health & Family Welfare Department	23	1.87	
13	Handloom, Textiles and Handicrafts Department	1780	48.22	
	Total	98508	1339.99	63.22

Source: Mission Shakti Department

Table A.6.21: Government business to SHGs through Convergence Initiatives

(INR in Crore)

Sl No.	Department	Turnover
1	2	3
1	Forest, Environment and CC Department	11.55
2	Dept. of MSME	22.67
3	Dept. of Agriculture & Farmers' Empowerment	45.51
4	Food Supplies & Consumer Welfare Dept.	46.36
5	Handloom, Textiles and Handicrafts Dept.	48.22
6	ST & SC Development, Minority and Backward Classes Welfare Dept.	67.32
7	PR & DW Dept.	142.32
8	H & UD Dept.	145.13
9	Energy Dept.	147.26
10	Fisheries & Animal Resource Development Dept.	194.33
11	W & CD Dept.	513.81
12	Health & Family Welfare Dept.	1.87
13	Total	1386.35

Source: Mission Shakti Department

