OFSDP-II
Annual Report 2023-24

Odisha Forestry Sector Development Project-II

Odisha Forestry Sector Development Society

Forest, Environment and Climate Change Department, Govt. of Odisha

OFSDP-II Annual Report 2022-23

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FOREWORD

The Odisha Forestry Sector Development Project Phase II (OFSDP- II) is a major initiative being carried out by the Odisha Forestry Sector Development Society (OFSDS) on behalf of the Department of Forest, Environment and Climate Change, Government of Odisha with the loan assistance from the Japan International Cooperation Agency (JICA). The successful implementation of Phase-I had encouraged the Govt. of Odisha to vest the responsibility of implementing the Phase-II of OFSDP to OFSDS under the overall administrative control of the Department of Forest, Environment and Climate Change, Govt. of Odisha since 2017-18. The tenure of the project is for ten years i.e., from 2017-18 to 2026-27.

The Odisha Forestry Sector Development Project Phase-II (OFSDP-II), with the Joint Forest Management (JFM) mode of operation, is tasked to ensure the sustainable use and conservation of forest resources and long-term livelihood security for economically marginalized households in forest fringe villages. In terms of geographical coverage, the project is under implementation in 12 Territorial Forest Divisions across ten Revenue Districts and two Wildlife Divisions, including the Bamra and Rajnagar Wildlife Divisions. The project encompasses 47 Forest Ranges within the 12 Territorial Divisions. The crucial role of grassroot level implementation of the project initiatives is being vested with the 1211 village forest protection and management committees, known as Vana Suraksha Simitis (VSSs) in the Territorial Forest Divisions and 10 Eco Development Committees (EDCs) in the Bamra Wildlife Division.

In fact, OFSDP-II strives to balance ecological sustainability with economic development by fostering a symbiotic relationship between local communities and their surrounding environment, ensuring that human communities thrive in their natural environment sustainably by building up their resilience through livelihood interventions. In this respect, the Satoyama Initiative, which is a Japanese approach under implementation in 10 EDCs of Badarma Wildlife Sanctuary within Bamra Wildlife Division, is able to achieve sustainable biodiversity management through integrated landscape management and has substantially benefited both biodiversity and human livelihoods. In addition, OFSDP-II, in collaboration with National Centre for Sustainable Coastal Management (NCSCM), Chennai carries out the long-term Monitoring Plan for Ecosystem-based Conservation and Management of Bhitarkaniaka Conservation Area (BCA) since January 2018. So far three Eco System Health Report Cards, one in every two years have been published out of monitoring exercise. Thus, the OFSDP-II initiatives constitute a holistic approach, integrating socio-economic development of forest fringe communities with conservation values.

While the year 2022-23, the sixth year of project implementation was marked by the revival of full-fledged implementation of project activities after the pandemic period which saw the substantial slowdown in project implementation, the seventh year of OFSDP-II i.e. 2023-24 continued and even accelerated the phase of project implementation. This year is particularly flagged with many new initiatives like estimation and exploration of training of Carbon sequestered in OFSDP-II areas and engagement of new and potential social enablers for promoting 'cluster' based value additions and marketing of forest and farm-based products from VSSs areas of the project and thus ensuring livelihood security to the local communities. Certainly, the credit goes to the project personnel at all project management levels, community members, associated line Departments and other collaborating partners, the Project Management Unit (PMU) for their committed and tireless efforts ensuring effective implementation of various project components and to successfully meet its set-targets during the year under report.

During the year 2023-24, the progress of the project has been significant with respect to the implementation of different components, more particularly in providing livelihood security to the vulnerable section of the community like Poorest of the Poor (PoP). The Re-visit of Micro Plan, which was initiated during last year, was carried out in 421 VSSs of Batch-II during 2023-24. The Re-visit of Micro plan was considered as a unique exercise and first among the JICA supported Natural Resource Management (NRM) projects across the country and in this respect OFSDP-II has set an example to other JICA-projects in the country. Preparations for repeating the micro plan revision exercise in the subsequent VSSs of Batch-III and IV have been already initiated.

Yet another accomplishment of the project is identification and establishment of Multi Product Clusters (MPCs) with the active participation of VSSs and SHGs in all the Forest Divisions under OFSDP-II. The Marketing and Management Support Agency (MMSA) which is a Consortium of KIIT Technology Business incubator (KIIT-TBI), Bhubaneswar; Bhubaneswar City Knowledge Innovation Cluster (BCKIC), Bhubaneswar and Indian Institute of Entrepreneurship ((IIE), Guwahati, in collaboration with the Livelihood Resource Centre (LRC) has played a pivotal role in operationalizing these MPCs and were able to provide strategic support to them in planning, skill building, establishing, operationalizing, positioning of multiple products in the market. During the year under report, LRC and MMSA, with the help of selected Social Enablers, continued their earnest efforts to achieve collective procurement of substantial quantity of forestry/agriculture / horticulture-based products produced by the VSSs / SHGs/MPCs in different DMUs. Through such intervention, OFSDP-II has enabled the subsistence farmers, PoP families and forest dependent communities to get access to adequate market and better price for their products.

During 2023-24, the project has witnessed a noticeable growth in funds raised through Inter Sectoral Convergence programmes. In total, Rs.165.35 Crores were mobilized through convergence, benefiting 5.10 lakh beneficiaries belonging to 2.19 lakh households. Various community development activities were implemented through inter- sectoral convergence with the help of the schemes of different line departments /agencies. The Revolving Fund (RF) which is provided by the project serves as a strong booster to the Women SHGs /CIGs / PoPs functioning in the VSS areas of the project for starting small business enterprises as an Income Generation Activity (IGA) or to strengthen the existing / ongoing IGA. Likewise, the project also assists the DMU level Multi Product Clusters to run

their daily production and business activities smoothly. In order to regulate the use of both types of Revolving Funds, the LRC of the project has evolved 'Operational Guidelines for utilization of Revolving Fund' during this year after the detailed deliberations involving the key-stakeholders. Till March 2024, the cumulative Revolving Fund amounting Rs. 19.55 Crore has been disbursed by the project to the SHGs, CIGs, & PoP members out of which Rs.10.21 Crore has been refunded by the Borrowing Entities. In total 2154 SHGs, 324 CIGs and 8303 PoPs have benefited by availing the RF. The focus of project interventions, including the capacity building inputs during the 2023-24 continued to remain on re-visit of micro plan in Batch-II VSSs, effective operationalization of DMU level Multi product Clusters and individual income generating activities for ensuring sustainable livelihood security through appropriate utilization of Revolving Funds by the community.

Consequent to the innovative component 'Community based Monitoring, Reporting and Verification (CMRV)' initiated in collaboration with the VSSs under the project during last year, OFSDP-II, during the year 2023-24, has collaborated with a professional agency M/s Kosher Climate India Pvt Ltd for making scientific assessment of the Carbon sequestered through some of the eligible interventions under OFSDP-II areas adopting the globally accepted standard protocol as well as for exploring and trading the accrued Carbon sequestered in the international market.

The Annual Activity Report of OFSDP-II for the year 2023-24 is an all-inclusive document, detailing various forest management, biodiversity conservation, livelihood promotion and community development activities carried out by the project with active community participation across the 12 Territorial Forest Divisions and two Wildlife Divisions of the state. The report also gives an account of progress achieved so far with respect to the major project components and is expected to provide a comprehensive view and understanding on the managerial regime of OFSDP-II and its field level implementation strategies to all the stakeholders associated with the project.

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Acknowledgement

The Odisha Forestry Sector Development Project, Phase-II (OFSDP-II) has been a significant initiative by the Odisha Forestry Sector Development Society (OFSDS), functioning under the Department of Forests, Environment and Climate Change, Government of Odisha, since 2017. During the seven years of implementation, the project has achieved notable success in various areas such as involvement of local communities in managing and conserving forests, preserving and enhancing biodiversity in the region, building the capacity of community institutions, enhancing the livelihood status of forest-dependent families, encouraging convergence with line departments to carry out community development activities and so on. OFSDP-II, due to successful implementation in 14 Forest Divisions of Odisha, is getting recognized as a 'Successful and Replicable model' in the area of participatory sustainable forest management and community development by the key-stakeholders, including Govt. of Odisha and JICA.

First and foremost, acknowledgement is to be given to the constant guidance and support readily provided by the Chief Secretary to Government of Odisha and the Chairperson of OFSDS along with the members of both the High-Power Committee (HPC) as well as the Governing Body of OFSDS, because of which the project has achieved success in field-level implementation and overall management. They are to be profusely thanked and accoladed.

The Odisha Forestry Sector Development Project, Phase-II (OFSDP-II) has been steered under the exceptional leadership and collaboration, leading to its positive impact on forest management and community development in its jurisdiction. While many people have assisted in carrying out the field level project activities, the critical contributions of the following top-level officers/ managers/ professionals/ community leaders to the project's achievements have to be duly acknowledged and heartfully thanked.

The project fully owes to

» The Additional Chief Secretary, Department of Forest, Environment and Climate Change, Government of Odisha who has consistently provided visionary leadership, appreciating and encouraging innovative interventions.

» The Principal Chief Conservator of Forests and Head of Forest Force (PCCF & HoFF) who along with the entire Department of Forests, Environment and Climate Change, has extended unwavering support and cooperation towards project implementation.

- All the Management Units of the project such as Project Management Unit (PMU), Divisional Management Units (DMUs), Field Management Units (FMUs), and P-NGOs for showing full dedication, sincere and hard work in executing the project activities.
- The Community Institutions, including VSSs and SHGs, other community groups like CIGs and PoPs in forest fringe villages for their active participation in micro-planning and implementation of project interventions.
- The Animators and community leaders like VSS Presidents who have played a vital role in guiding and facilitating community members in planning and implementing development activities.
- The officials and staff of various line departments for showing remarkable interest and commitment in converging and extending the benefits of community welfare schemes/programmes to project villages.
- Project Management Consultants (PMC) for providing consistent professional support in terms of technical guidance, capacity building, documentation etc to the PMU as well as other management units of the project and ensuring seamless implementation of the project activities.
- Marketing and Management Support Agency (MMSA) and Social Enablers for contributing significantly to livelihood enhancement by supporting the activities of Livelihood Resource Centre (LRC), particularly in establishing and activating the Multi Product Clusters at DMU level.
- The collaborative partner agencies like National Centre for Sustainable Coastal Management (NCSCM) and Kosher Climate India Pvt Ltd for efficiently undertaking special assignments such as Long-term Monitoring Plan for Ecosystem-based Conservation of BCA and Carbon estimation and trading in OFSDS areas.
- Senior Officials in PMU, including the Joint Project Director (JPD) and the Deputy Project Director (DPD) for having led the PMU and the project with dedication and providing valuable technical and administrative contributions.
- The State Project Managers (SPMs) who have guided the project team at DMU, FMU and VSS levels and ensuring smooth running of the project across all divisions.
- Above all and most importantly, the PCCF (Projects) and Project Director, OFSDS for the inspirational and visionary leadership which has been crucial in the overall success of project management, implementation of interventions, and equitable sharing of benefits among target communities. The professional guidance and encouragement provided by the PCCF (Projects) and Project Director have been instrumental in enhancing the project team's performance and enabling the timely achievement of set goals and milestones.

Overall, the combined efforts of all these contributors have been pivotal in the successful implementation of OFSDP-II, as highlighted in the Annual Progress Report for the financial year 2023-24.

Swayam Mallick
Joint Project Director, OFSDS

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Chapter 1

About Odisha Forestry Sector Development Project, Phase-II

1.1 Introduction

During last few decades most of the developmental activities were indiscriminately implemented and thus caused large scale deforestation and depletion of forest resources. Moreover, extensive and uncontrolled use of forest resources by the forest dependent communities who live below Poverty Line (BPL) also contribute to forest degradation in Odisha. Availability of very limited options for alternate livelihood leads these communities to resort to daily wage employment and increased forest-dependence for livelihood. This has resulted in severe biotic pressure and un-sustainable use of forest resources in the state. In addition, other factors such as frequent forest fires, illegal smuggling of wood by mafias, lack of active involvement of forest fringe dwellers in protection and management of forests etc. are also observed to be detrimental for conservation and protection as well as effective management of forest resources in the state.

In this backdrop, Government of Odisha intended to implement the Odisha Forestry Sector Development Project, Phase-II based on the achievements and learning's of OFSDP-I in compliance with the "Forestry Vision 2020" with the aim to promote sustainable forest management and community development through active community participation following Joint Forest Management guidelines. The Odisha Forestry Sector Development Project, Phase-II (OFSDP-II) is a significant initiative aimed at promoting sustainable forest management and community development in Odisha. This project is overseen by the Odisha Forestry Sector Development Society (OFSDS), under the Department of Forest, Environment, and Climate Change, Government of Odisha. Supported by the Japan International Cooperation Agency (JICA) through loan assistance. OFSDP-II spans during the period from 2017-18 to 2026-27. OFSDP-II is under implementation in 1211 VSSs of 50 Ranges in 12 Territorial Forest Divisions and two Wildlife Divisions in the state of Odisha. The project is being supported by Japan International Cooperation Agency (JICA).

1.1.1 The focal areas of the project are

i. **Sustainable Forest Management:** OFSDP-II seeks to curb deforestation and forest resource depletion, which have been exacerbated by indiscriminate developmental activities and the extensive use of forest resources by dependent communities. The project emphasizes sustainable practices and aims to reduce biotic pressure on forests.

ii. **Community Development:** Many forest fringe dwellers in Odisha live below the poverty line and rely heavily on forests for fuel wood and livelihood. OFSDP-II aims to provide alternative livelihood options to reduce this dependency. The project promotes active community participation in forest protection and management, aligning with Joint Forest Management guidelines.

OFSDP-II is being implemented across 1211 Vana Suraksha Samitis (VSSs) in 50 ranges within 12 territorial forest divisions and 2 wildlife divisions. The project tenure is ten years from 2017-18 to 2026-27.In fact, OFSDP-II represents a comprehensive effort to address the dual challenges of forest conservation and community livelihood in Odisha. By leveraging the successes and lessons of

OFSDP-I and integrating sustainable practices, the project aims to create a balanced approach to forest management and community development.

1.2 Objectives

The Odisha Forestry Sector Development Project, Phase II aims at enhancing forest ecosystem along with sustainable livelihood of local people by improving sustainable forest management, sustainable biodiversity conservation and simultaneous community development, thereby contributing to harmonization between environmental conservation and socio-economic development in the project area in the State. The major themes of the project are:

- Sustainable Forest Management (SFM) through community participation
- Livelihood promotion through Inter-sectoral convergence
- Experiments in Biodiversity Conservation & management, which include
    - Satoyama Initiatives in Badarama Wildlife Sanctuary&
    - Scientific Monitoring of Bhittarkanika Conservation Area in Mangrove Wildlife Division, Rajnagar.

OFSDP-II is being implemented following Joint Forest Management Mode, wherein, communities are facilitated by the project to initiate planning and execution of interventions with the assistance of project personnel. Funds for the implementation of the planned work is largely managed through the community institutions, namely-Vana Surakshya Samiti (VSS).

In order to achieve the overall goal, the basic approaches followed are:

- Protection and management of forest by active participation of community through Joint Forest Management.
- Forest Restoration component like plantation of indigenous forest species in the degraded forest land assigned to the VSSs, soil and moisture conservation measures and forest fire control and management.
- Augmenting alternate livelihood options for the forest fringe dwellers for the reduction of dependence and biotic pressure on forest.
- Conducting experiments on conservation and scientific management of the biodiversity in protected areas.
- Comprehensive community development through inter-sectoral convergence.
- Promotion of Income Generating Activities (IGAs) by the Self-Help Groups (SHGs), Common Interest Groups (CIGs) and Poorest of Poor (PoP) with the additional assistance of Revolving Fund (RF) at VSS level.
- Strengthening the backward and forward market linkages trough establishing & operationalizing the multi-product clusters under the project.
- Sustainable forest management and people's empowerment indecision making through enhanced capacity of community members.

1.3 Project Design

OFSDP-II has been formulated to be implemented in ten years commencing from 2017-18 to 2026-27 and the implementation modality has been divided into three phases, as below:

- Preparatory Phase (First Year of the Project-2017-18)
- Implementation Phase (2nd to 8th year of the Project-2018-19 to 2024-25)
- Consolidation/Phase Out Phase (Last two years of the project–2025–26 and 2026-27)

1.3.1 Preparatory Phase

The first year of the project, designated as the Preparatory Phase, involved several foundational activities to ensure effective implementation and management. The key activities undertaken during this phase include:

- Establishment of the Project Management Unit (PMU) at the state level.
- Creation of Divisional Management Units (DMUs) at the Forest Division level.
- Formation of Field Management Units (FMUs) at the Forest Range level.
- Hiring and deployment of necessary contractual staff across PMU, DMU, and FMU levels.
- Engagement of Partner Non-Governmental Organizations (P-NGOs).
- Procurement of a Project Management Consultant (PMC) at the PMU level.
- Preparation of various operational guidelines including Operation Manual, VSS (Vana Suraksha Samiti) Management Manual and Other essential guidelines for project execution.
- Formulation of a Training Needs Assessment (TNA).
- Preparation of guidelines for the development of Micro Plan documents at the VSS level.
- Selection and mobilization of VSS.
- Orientation for officials and staff of OFSDP-II (Odisha Forestry Sector Development Project-II).

These activities collectively laid a robust foundation for the project's subsequent phases, ensuring that the necessary structures, personnel, and guidelines were in place to facilitate smooth and effective project execution.

1.3.2 Implementation Phase

Implementation of the project activities in 1211 VSSs/EDCs were planned to be taken up in four batches by covering 300 VSSs in Batch-1, 400 VSSs in Batch-II, 350 VSSs in Batch-III & 150 VSSs in Batch-IV. In addition, the project is also implemented with the objective of sustainable biodiversity conservation in 10 EDCs of Badarama Wildlife Santuary in Bamra Wildlife Division. The P-NGO Teams were deployed in each FMU to ensure and assist VSSs to take up project activities inrespectivebatches. EngagementofAnimatorsatVSSlevelhasbeenprovisioned to facilitate the Executive Committee of the VSS and the Self-Help Groups (SHGs) for implementation of project activities.:

The implementation phase of the project involves a structured plan to cover 1211 VSSs and EDCs (Eco-Development Committees) in multiple batches, along with specific objectives for sustainable biodiversity conservation in selected wildlife sanctuaries. The plan and interventions for this phase include phased deployment of VSSs/ EDCs as given below:

- Batch-1: 300 VSSs
- Batch-2: 400 VSSs
- Batch-3: 350 VSSs
- Batch-4: 150 VSSs

The project aims for sustainable biodiversity conservation in 10 EDCs within the Badarama Wildlife Sanctuary, located in the Bamra Wildlife Division. The deployment of support staff includes

- P-NGO Teams: Partner-NGO teams are deployed in each FMU to ensure and assist VSSs in their respective batches.
- Animators: Engagement of Animators at the VSS level is provisioned to facilitate the Executive Committees of the VSS and the Self-Help Groups (SHGs) for effective implementation of project activities.

The broad categories of project interventions included

- Community Mobilization and Capacity Building: Training and capacity-building activities for VSS members, SHGs, and community stakeholders to enhance their participation and skills.
- Forest Management Activities: Initiatives such as afforestation, reforestation, and sustainable forest management practices.
- Biodiversity Conservation Measures: Activities aimed at protecting and enhancing biodiversity within the project areas, particularly in the designated wildlife sanctuary.
- Livelihood Development Programs: Support for SHGs and community members to develop sustainable livelihood options that align with conservation goals.
- Monitoring and Evaluation: Regular monitoring and evaluation of project activities to ensure progress and adapt strategies as needed for better outcomes.

These structured interventions and phased implementation plans are designed to systematically address the project's goals, ensuring sustainable development and conservation efforts are effectively integrated and executed. The specific interventions scheduled under each broad category which are taken up in the Implementation phase included as detailed below.

i. Sustainable Forest Management:

In JFM Mode

- Silvicultural Operations including Plantation
- ANR without gap plantation
- ANR with gap plantation of 200/400/800 seedlings/ha
- Block plantation v.i.z Fuel and Fodder, NTFP and other Block plantations
- Soil and Moisture Conservation (SMC) measures,
- Drainage Line Treatment (DLT)
- Fire prevention and protection measures

In Non-JFM Mode

- Consolidation and demarcation of forest boundaries
- Construction and improvement of permanent nursery in the form of Hi-Tech Nursery
- Soil and Moisture Conservation Measures
- Non-JFM Drainage Line Treatment
- Farm Forestry

ii. Experiments in Sustainable Biodiversity Management

- Formulation of scientific Health Report Card for concurrent monitoring of conservation and management parameters of Bhitakanika Conservation Area (BCA).
- Implementation of Satoyama Initiative model in Badarma Wildlife Sanctuary under Bamra Wildlife Division for Sustainable Biodiversity Management.

iii. Livelihood Initiatives

- Comprehensive community development through inter-sectoral convergence with the schemes and programme of line Departments
- Coordination with line Departments for convergence through District Advisory Committee (DAC) at District level and Block Level Advisory Committee (BLAC) at Block level.
- Augmenting alternate livelihood options through Vana Surakshya Samitees (VSS)/Self Help Groups (SHGs)/Common Interest Groups (CIGs)/Poorest of Poor (PoPs).
- Establishment of Product Clusters for promotion of income generating activities in the project area.
- Establishing Livelihood Resource Cell (LRC) at PMU level to facilitate promotion of cluster based income generating activities.

iv. Capacity Building:

- Capacity building trainings and orientations for all stakeholders
- Consultation and seminars
- Exposure visits

v. Knowledge Management and Documentation:

- Documentation of lessons learnt during implementation of project.
- Publication of success stories, newsletters, theme-based documentary films, quarterly reports, annual reports etc.
- Publication of training materials and guidelines.

vi. Cross-cutting Issues

- Gender Mainstreaming (GM)
- Community Based Monitoring, Reporting and Verification (CMRV)
- Environmental and Social Monitoring Framework (ESMSF)

vii. Monitoring and Evaluation System in OFSDP-II

The key elements of Monitoring and Evaluation System of OFSDP-II are mainly grouped into

A. Monitoring,

B. Impact Assessment and

C. Audit.

The elements of the M&E arrangement areas follows:

a. Monitoring:
   - Concurrent monitoring and periodic Reviews,
   - Inter-sectoral coordination meetings for convergence,
   - Community self-monsitoring
   - Computerized MIS & GIS,
   - Computerized Accounting System,
   - Technology based monitoring-GIS and MIS applications, and
   - Annual strategy planning and review workshops.

b. Impact Assessment:
   - Annual outcome assessments,
   - Baseline and impact surveys, and
   - Thematic and short studies.

c. Audits:
   - Social audits,
   - Statutory financial audits,
   - Concurrent audits,
   - Grievance redressal, RT I and public disclosure,
   - Operation and effect indicators

1.3.3 Consolidation/Phase-Out phase:

The consolidation phase is the Phase-out period of OFSDP-II which will start during the 9th year of the project i.e. during 2025-26. Accordingly, it has been planned to complete all project interventions by the end of 8th year for all batches (i.e. by 2024- 25). Phase-out is the time for consolidation of project achievements and to start the process to handover the project to the actual owners (Forest Department / Community Institutions). It is also mandated to review the capacity of the VSSs and SHGs and ensure sustainability of such institutions by way of linking them with appropriate institutions / support organizations for continued operations. The interventions proposed during the consolidation phase include:

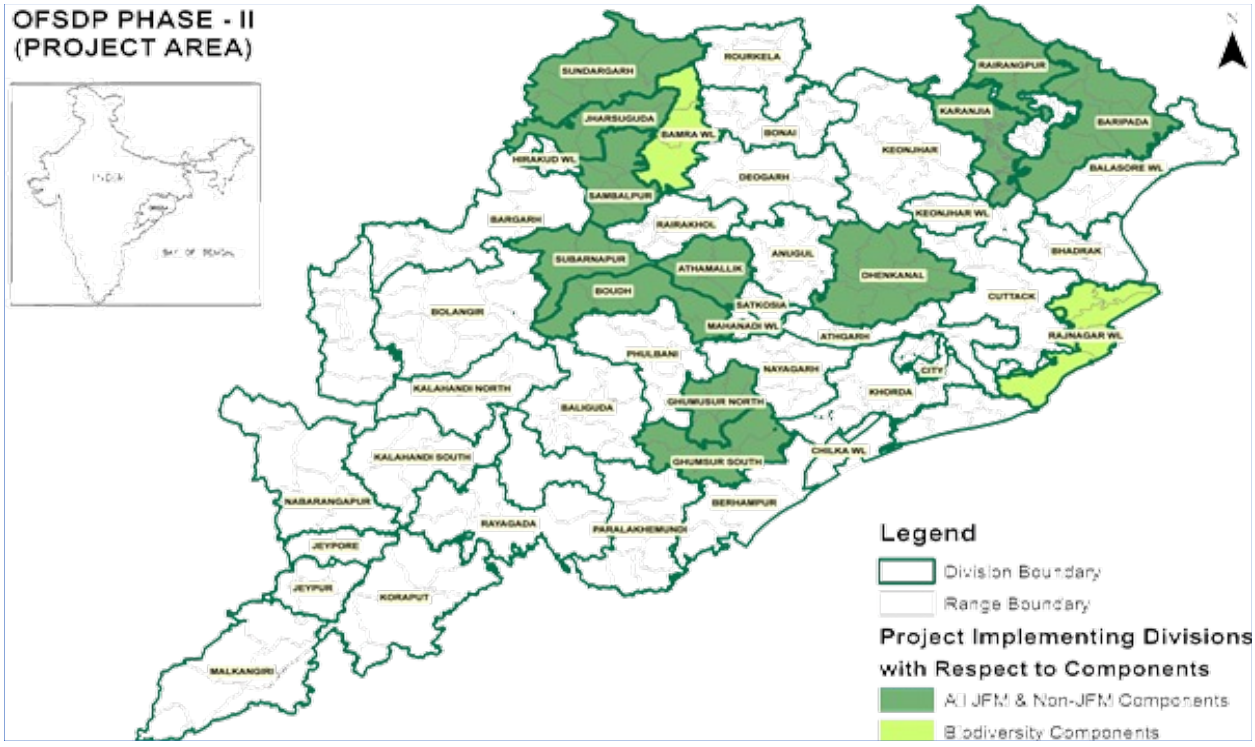
- Asset inventory
- Revisiting of Micro Plans
- Phase-out trainings
- Strengthening the clusters/federations of VSS at FMU level
- Linkage with the Livelihood Resource Centre
- End term evaluation
- Dissemination of knowledge/lessons learnt and its management etc.

1.4 Project Area

The project was planned to be implemented in 1200 VSSs from 50 Forest Ranges in 12 Territorial Forest Divisions and 10 numbers of EDCs in Badarma Wildlife Sanctuary of Bamra Wildlife Divisions and Experiment in Mangrove Wildlife Division, Rajnagar falling under 10 numbers of administrative Districts and 7 numbers of Forest Circles in the state of Odisha. The VSSs coverage under the project is given below:

Circle	District	Division	NoofFMUs	NoofVSSs
Angul	Angul	Athamallik	3	75
	Dhenkanal	Dhenkanal	6	150
Baripada	Mayurbhanj	Baripada	6	135
		Rairangpur	5	107
		Karanjia	4	80
Berhampur	Boudh	Boudh	3	71
	Ganjam	Ghumsur(N)	4	100
		Ghumsur(S)	3	65
Bhawanipatna	Sonepur	Subarnapur	3	84
Rourkela	Sundergarh	Sundergarh	5	156
Sambalpur	Jharsuguda	Jharsuguda	3	a88
	Sambalpur	Sambalpur	4	100
		Bamra (WL)	0	10EDCs
Bhubaneswar	Kendrapada	Rajnagar Mangrove(WL)	0	
7Circles	10Districts	12Divisions	49FMUs	1211VSSs+10EDCs

Note: Kendumundi and Thakurmunda FMUs of Karanjia Forest Division have been merged to form Thakurmunda FMU. Thus at present the number of FMUs in the Project area is 49



1.5 Institutional Arrangements

1.5.1 Odisha Forestry Sector Development Society (OFSDS)

Odisha Forestry Sector Development Project, Phase-II (OFSD-II) is being implemented by Odisha Forestry Sector Development Society (OFSDS), which is an autonomous registered Society under the administrative control of Forest, Environment and Climate Change Department, Govt. of Odisha. The office bearers of the Society areas below:

- President is the Chief Secretary, Government of Odisha
- Vice President is the Additional Chief Secretary Department of Forest, Environment and Climate Change, Government of Odisha
- Chief Executive Officer is the PCCF (Projects) and Project Director, OFSDS

1.5.2 High Power Committee

The High-Power Committee (HPC) is the highest decision-making body for the OFSDP-II at State Government level. HPC is responsible for the following

- approval of the Operation Manual (including Financial Rules/Procedures) for the Project,
- approval of Budget and Annual Plan of Operation of the Project,
- review the project performance every six months and framing of operational procedures for the project for smooth and effective implementation.

The Committee meets at least once in every six months or more frequently as per necessity. The HPC also facilitates coordination amongst various line Departments of the state and other agencies to achieve the project goals.

1.5.3 Governing Body

The Governing Body (GB) of the Odisha Forestry Sector Development Society (OFSDS) serves as the highest decision-making authority for the Odisha Forestry Sector Development Project-II (OFSDP-II) under the Society Registration Act of 1860. Chaired by the Additional Chief Secretary to the Government, Department of Forest, Environment & Climate Change, Government of Odisha, the GB is tasked with several critical responsibilities:

- The GB grants authority to the Project Management Unit (PMU) for day-to-day operations, ensuring smooth and efficient project management.
- It supports the PMU by approving the Budget and Annual Plan of Operation (APO) along with other necessary proposals throughout the year.
- The GB rigorously reviews project progress against the annual plans at least quarterly. This includes both financial and physical progress monitoring to ensure the project stays on track.
- It provides strategic guidance to the PMU in preparing the Operational Manual, ensuring that the project activities are well-documented and standardized.
- The GB prepares proposals for the High-Powered Committee (HPC) when necessary, facilitating the smooth implementation of project activities.

These responsibilities underscore the GB's pivotal role in ensuring that OFSDP-II meets its objectives effectively and efficiently.

1.5.4 Project Management Unit

The Project Management Unit (PMU) of the Odisha Forestry Sector Development Project-II (OFSDP-II) is established at the State level with the primary responsibility of managing, coordinating, implementing, and monitoring the project's activities. The PMU operates with a clear focus on executing the proposed project activities in accordance with the project implementation schedule, Annual Plan of Operations (APO), and prescribed processes.

Key aspects of the PMU's structure and functions include:

Leadership: The PMU is led by the Principal Chief Conservator of Forests (PCCF) (Projects) & Project Director of OFSDS. This position is pivotal in providing strategic direction and oversight for the project's execution.

Support Team: The Project Director is supported by a dedicated team of officers to ensure the smooth implementation of the project interventions. The support team includes:

- Additional Project Director / Joint Project Director: Assists in high-level project management and coordination.
- Deputy Project Directors (DPDs): Responsible for specific aspects of the project, ensuring detailed attention and management.
- State Project Managers: Facilitate various project interventions, ensuring that activities are carried out as planned.

Implementation Role: The PMU is exclusively dedicated to implementing the project's activities, adhering strictly to the detailed project implementation schedule and the Annual Plan of Operations. This ensures that all processes and activities are in line with the project's objectives and timelines.

Coordination and Monitoring: The PMU coordinates with various stakeholders and monitors the progress of project activities to ensure alignment with the project's goals. This involves regular reporting, assessment, and adjustment of strategies as needed to maintain the project's momentum and effectiveness.

The PMU's structured and focused approach is critical for the successful implementation and monitoring of OFSDP-II, ensuring that the project achieves its intended outcomes efficiently and effectively.

1.5.5 Regional CCF Offices (RCCFs)

Circle Offices of the Forest Department having the jurisdiction of the Project Divisions, supervise the project interventions and co-ordinate between the project and regular Departmental activities. The RCCFs also review the project works vis-à-vis financial and physical progress of the Divisions under their jurisdiction.

1.5.6 Project Management Consultants (PMC)

In the design and institutional arrangements of the Odisha Forestry Sector Development Project-II (OFSDP-II), a team of Project Management Consultants (PMC) has been deployed at the state level. The role of the PMC is crucial for the effective management and implementation of the project. The key functions and contributions of the PMC include:

Assistance to PMU: The PMC team works closely with the Project Management Unit (PMU) to assist in managing the project. This collaboration ensures that the PMU receives the necessary support to handle the complex aspects of project management effectively.

Technical Guidance: The PMC provides essential technical guidance for various project interventions. Their expertise helps in planning, executing, and monitoring the technical aspects of the project activities, ensuring that they are carried out efficiently and according to best practices.

Project Implementation Support: Throughout the implementation years, the PMC supports the PMU by offering specialized knowledge and skills that may not be available within the PMU. This includes assistance in areas such as project planning, resource management, capacity building, and performance evaluation.

Enhancing Project Outcomes: By extending their technical expertise and management support, the PMC plays a significant role in enhancing the overall outcomes of the project. Their involvement helps in overcoming technical challenges, optimizing resource utilization, and ensuring that the project objectives are met in a timely and effective manner.

The deployment of the PMC as part of the project design and institutional arrangements ensures that OFSDP-II benefits from professional management and technical expertise, which is vital for the successful implementation and sustainability of the project activities.

1.5.7 Divisional Management Unit

As part of the Odisha Forestry Sector Development Project-II (OFSDP-II), a structured approach has been adopted for implementing project interventions at the field level. This approach includes the creation of 14 Divisional Management Units (DMUs) within the existing Forest Territorial and Wildlife Divisions. Each DMU is designed to facilitate effective project implementation through localized management and coordination. Here are the key components of the DMU structure and their roles:

Leadership: Each DMU is headed by the Divisional Forest Officer (DFO) of the concerned division, who is designated as the DMU Chief. The DMU Chief is responsible for overseeing all project activities within their respective DMU, ensuring that interventions are carried out efficiently and effectively.

Support Team: The DMU Chief is assisted by a team of professionals to support the diverse needs of the project. This team includes:

Assistant Conservator of Forest (ACF): Provides administrative and operational support to the DMU Chief.

Subject Matter Specialists: Livelihood, Rural Financing, and Marketing Specialist: He focuses on improving livelihood options, facilitating rural financing, and enhancing market access for project beneficiaries. Monitoring & Evaluation (M&E), GIS/MIS, REDD+ Specialist: He is responsible for monitoring and evaluating project progress, managing Geographic Information System (GIS) and Management Information System (MIS) data, and supporting REDD+ (Reducing Emissions from Deforestation and Forest Degradation) initiatives.

Project Accountant: Engaged on a contractual basis, this role involves managing financial transactions, maintaining accounts, and ensuring compliance with financial regulations.

1.5.8 Field Management Units

The implementation of the Odisha Forestry Sector Development Project-II (OFSDP-II) at the field level is organized through Field Management Units (FMUs). Initially, 50 FMUs were established, but currently, there are 49 units. These FMUs are created within the existing Forest Ranges across 12 Territorial Forest Divisions. FMUs are responsible for implementing project activities at the field level, particularly at the Vana Suraksha Samiti (VSS) level. These FMUs are critical for the direct execution of project interventions within local communities. Here are the details of the FMU structure and their roles:

Leadership: Each FMU is headed by an FMU Chief, who is tasked with overseeing all project interventions within their jurisdiction. The FMU Chief is supported by a Forester designated as the Assistant FMU Chief, providing additional management and operational support.

Support Team: The FMU Chief is further assisted by a team of professionals to ensure effective implementation of project activities. This team includes: Assistant FMU Chief: A Forester who assists the FMU Chief in managing daily operations and field activities.FMU Coordinators: Two specialists focusing on different aspects of the project (a) Micro Planning & Livelihood Support Coordinator: This role involves planning and supporting livelihood initiatives to enhance the economic well-being of the local communities and (b) Training & Process Documentation Coordinator: He is responsible for organizing training sessions and documenting processes to ensure transparency and knowledge dissemination. Project Accountant: Manages financial transactions, maintains accounts, and ensures that financial operations comply with regulatory requirements.

Role and Responsibilities of FMU:

- Micro Planning: Developing detailed micro plans in collaboration with the local communities to ensure that interventions are tailored to meet local needs.
- Livelihood Support: Implementing programs that support sustainable livelihoods, such as skill development, income generation activities, and market linkages.
- Training: Organizing training programs to build the capacity of VSS members and other stakeholders.

- Process Documentation: Ensuring that all processes and activities are well-documented, promoting transparency and accountability.
- Financial Management: Handling the financial aspects of project implementation, ensuring proper use of funds and maintaining accurate financial records.

This structure ensures that the FMUs are well-equipped to manage and execute project interventions effectively at the grassroots level. By leveraging the expertise of the FMU Chiefs and their support teams, the project aims to achieve sustainable forestry management and enhance the livelihoods of local communities.

1.5.9 Van Surakshya Samiti (VSS) / Eco Development Committees (EDC)

Under the Odisha Forestry Sector Development Project-II (OFSDP-II), a robust mechanism has been established for engaging and empowering local institutions like Vana Suraksha Samitis (VSSs) and Eco-Development Committees (EDCs) to participate in project interventions through the Joint Forest Management (JFM) mode. Here are the key details and processes involved:

Identification and Engagement: Against the target of 1200 VSSs and 1 EDC, 1211 VSSs and 10 EDCs have been identified based on prescribed selection criteria.The willingness of these institutions was sought before involving them in the project interventions.

Joint Forest Management (JFM) Mode: Following the JFM Resolution, 2011 and its Amendment of 2015, a Memorandum of Understanding (MoU) has been signed between each VSS and the respective Divisional Management Unit (DMU).The MoU specifies the extent of the assigned area with geo-coordinates, detailed roles and responsibilities of both parties, and the facilities and usufructs sharing arrangements.

Recognition by Gram Sabha: The Executive Committee of each VSS is recognized by the Gram Sabha to function as a Sub-Committee of the Gram Sabha. This sub-committee is responsible for the protection and management of the forest assigned to the VSS.

Fund Transfer and Utilization: VSSs and EDCs receive funds directly from the DMU as per the Annual Plan of Operation (APO) during the respective financial year, in one or more instalments. This direct fund transfer mechanism promotes efficiency and timely implementation of project interventions as planned.

Roles and Responsibilities:

VSS/EDC: Responsible for planning, implementation, monitoring, and reporting of activities at the grassroots level as per the MoU agreements.

Project Implementation: The VSSs and EDCs implement project activities on the ground, ensuring alignment with the APO and MoU guidelines. Regular monitoring and reporting are conducted to ensure transparency and accountability in the utilization of funds and the execution of project interventions.

This structured approach ensures that local communities are actively involved in the management and protection of forest resources, promoting sustainable forestry practices and enhancing the livelihoods of the community members. The collaboration between DMUs, FMUs, VSSs, and EDCs fosters a participatory management model, critical for the success and sustainability of OFSDP-II.

1.5.10 Partner NGOs

Partner NGOs (P-NGOs) play a crucial role in the Odisha Forestry Sector Development Project-II (OFSDP-II) by supporting and mobilizing various community-based organizations at the field level. Here are the key aspects of their engagement and responsibilities:

Engagement and Supervision: P-NGOs have been engaged at the Field Management Unit (FMU) level to assist in the implementation of project activities. The teams from P-NGOs stationed at the FMU level are directly supervised by the FMU Chief, ensuring adherence to the Terms of Reference (ToR) and alignment with project goals.

Primary Responsibilities:

Community Mobilization: P-NGOs are responsible for mobilizing and engaging communities, including Vana Suraksha Samitis (VSSs), Eco-Development Committees (EDCs), Self-Help Groups (SHGs), Common Interest Groups (CIGs), and Poorest of the Poor (POPs).

Institution Building: They assist in building and strengthening community institutions, ensuring they are well-organized and capable of managing project activities.

Participatory Rural Appraisal (PRA) and Micro Planning: Facilitating PRA exercises and developing micro plans in collaboration with the communities to ensure that interventions are tailored to local needs and priorities.

Implementation of Interventions: Supporting VSSs and EDCs in implementing project activities as per the Annual Plan of Operations (APO).

Coordination for Convergence: Collaborating with extension officers from different line departments to achieve inter-sectoral convergence in community development initiatives.

Income Generating Activities (IGAs): Helping community institutions like VSSs and SHGs to identify, plan, and execute sustainable income-generating activities.

Role in Project Activities:

- P-NGOs play a pivotal role in ensuring that the community-based organizations are actively involved in the project, fostering a sense of ownership and participation.
- They provide technical and logistical support, capacity building, and continuous guidance to the community institutions.
- Their involvement ensures that the project interventions are culturally appropriate, economically viable, and environmentally sustainable.
- Coordination and Facilitation:
- P-NGOs work closely with FMUs to ensure seamless coordination and implementation of project activities.
- They facilitate communication between the community institutions and the project management structures, ensuring that feedback and progress are regularly monitored and addressed.

By engaging P-NGOs, OFSDP-II leverages local expertise and builds strong community partnerships, which are essential for the successful and sustainable implementation of the project. This approach not only enhances the effectiveness of project interventions but also empowers local communities to take an active role in forest management and sustainable development.

1.5.11 Animator

In the Odisha Forestry Sector Development Project-II (OFSDP-II), the engagement of Animators at the Vana Suraksha Samiti (VSS) level is a critical component to ensure the smooth functioning and effective documentation of project activities. Here are the key details regarding their engagement and responsibilities:

Engagement and Honorarium: Each VSS engages two Animators, one male and one female animator who are compensated with an honorarium by the respective VSSs, following the prescribed guidelines of the project. This arrangement is in place for the initial two years of the project.

Roles and Responsibilities:

- The Animators support the office bearers of the Executive Committee in their routine functions, ensuring efficient management and operation of the VSS.
- They assist VSS/EDC members in various activities, helping to enhance their participation and effectiveness in project interventions.
- Animators play a key role in maintaining accurate records and documentation of the VSS activities, which is crucial for monitoring and reporting purposes.

Transition to one Animator: From the third year onwards, the engagement strategy transitions to retaining one Animator per VSS, with a preference for selecting a female Animator. This Animator continues to work for the subsequent three years, providing ongoing support and ensuring continuity in the VSS operations.

Importance of female representation: The preference for a female Animator in the later years of the project highlights the emphasis on gender inclusion and empowerment. Female Animators can play a significant role in mobilizing women in the community, ensuring that their voices and contributions are recognized and integrated into the project activities.

Community empowerment: By engaging Animators, the project aims to build local capacity and ensure that VSS members are well-supported in their roles. Animators facilitate the effective implementation of project interventions, contributing to the overall success and sustainability of the project.

This strategy of engaging Animators not only enhances the operational efficiency of the VSSs but also fosters greater community involvement and ownership of the project. Their role is pivotal in bridging the gap between the project management and the community, ensuring that project goals are met through active and sustained participation of all stakeholders.

1.5.12 District Advisory Committee (DAC)

The establishment of the District Advisory Committee (DAC) is a significant step in ensuring the smooth implementation of the Odisha Forestry Sector Development Project-II (OFSDP-II) across ten project districts in the state. Here are the key details and functions of the DAC:

Constitution and Purpose: The DAC was constituted by the Government through Notification No 8118 / F&E, dated April 21, 2017. It functions as a multi-sectoral coordination body to ensure optimal and effective inter-sectoral convergence of various ongoing government programs and schemes within the districts where OFSDP-II is implemented.

The DAC is established in the following ten project districts: Mayurbhanj, Ganjam, Boudh, Sonepur, Sambalpur, Angul, Sundergarh, Jharsuguda, Dhenkanal, and Kendrapada.

Committee Composition:

Chairperson: The District Collector heads the DAC, providing overall leadership and ensuring district-level coordination.

Member Convenor: The Divisional Forest Officer (DFO) of the District Headquarters serves as the Member Convenor, facilitating communication and coordination among committee members.

Members: Senior officials from various line departments are members of the committee, ensuring representation from all relevant sectors.

Meeting Frequency: The DAC members meet at least once every two months. These regular meetings are crucial for discussing progress, addressing challenges, and planning coordinated actions for effective project implementation.

Roles and Responsibilities:

- The DAC ensures effective coordination among different government departments and agencies, promoting synergies and avoiding overlaps in activities.
- It works towards the convergence of various government programs and schemes, aligning them with the objectives of OFSDP-II to maximize impact.
- The committee provides support and guidance for the implementation of project activities, addressing any administrative or logistic issues that arise.
- It monitors the progress of the project, evaluates the outcomes of interventions, and ensures that the project stays on track to meet its goals.

The DAC plays a critical role in facilitating the integration of OFSDP-II with other development initiatives in the district It helps in leveraging additional resources, expertise, and support from various sectors, thereby enhancing the effectiveness and sustainability of project interventions. By fostering a collaborative approach among different sectors and ensuring regular oversight, the District Advisory Committee significantly contributes to the successful implementation of OFSDP-II, ultimately benefiting the forest management efforts and the livelihoods of the local communities.

1.5.13 Block Level Advisory Committee (BLAC)

The Government of Odisha has constituted Block Level Advisory Committees to further support the effective implementation of the Odisha Forestry Sector Development Project-II (OFSDP-II) at the block level. These committees play a vital role in ensuring coordinated efforts and convergence of various government programs and schemes within the respective blocks. Here are the key aspects of the committee:

Constitution and Purpose: The Block Level Advisory Committees were established through Notification No 4F (S)-03/2017 (Pt.) / 26724 / F&E, dated December 23rd, 2017. These committees are formed in 63 Blocks to cover areas within the 50 Field Management Units (FMUs) or Ranges of OFSDP-II. Their primary purpose is to facilitate smooth project implementation and act as multi-sectoral coordination bodies to ensure effective inter-sectoral convergence of ongoing government programs and schemes in the respective Community Development (CD) Blocks where OFSDP-II is implemented.

Committee Composition:

Chairperson: The Block Development Officer (BDO) of the respective Revenue Block chairs the committee meetings, providing leadership and ensuring coordination at the block level.

Member Convenor: The Headquarter Range Officer serves as the Member Convenor, facilitating communication and coordination among committee members and with the project management units.

Members: All block-level officials from various welfare departments are members of the committee, ensuring comprehensive representation from all relevant sectors involved in community and rural development.

Meeting Frequency: The Block Level Advisory Committee meets once every month. These regular meetings are essential for discussing progress, addressing challenges, and planning coordinated actions based on the needs identified by villagers during the micro-planning process.

Roles and Responsibilities:

Multi-Sectoral Coordination: The committee ensures effective coordination among different government departments and agencies operating at the block level, promoting synergies and avoiding overlaps in activities.

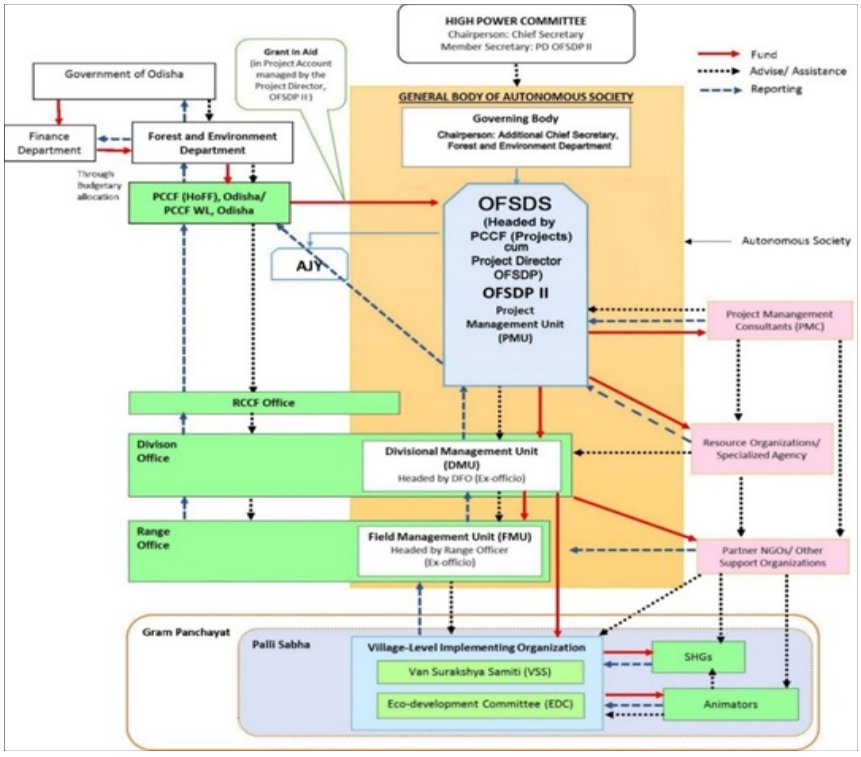
Convergence of Programs: It works towards the convergence of various government programs and schemes, aligning them with the objectives of OFSDP-II to maximize impact and resource utilization.

Support for Implementation: The committee provides support and guidance for the implementation of project activities, ensuring that interventions are in line with the needs identified by the community during micro-planning.

Facilitation of Government Schemes: It facilitates the implementation of government schemes and programs in project villages, addressing specific needs identified by the villagers.

The Block Level Advisory Committees play a critical role in integrating OFSDP-II activities with other development initiatives at the block level.By fostering a collaborative approach among different sectors, the committees enhance the effectiveness and sustainability of project interventions, ultimately benefiting forest management efforts and the livelihoods of local communities. The establishment of Block Level Advisory Committees ensures that the OFSDP-II can leverage additional resources and expertise from various sectors, promoting a holistic and integrated approach to rural development and forest conservation. Their regular oversight and support are crucial for addressing local needs and achieving the project's objectives.

1.5.14 **The Organogram** for implementation of OFSDP-II is as below:



1.5.15 Roles and responsibilities of different Institutions:

Institution	Roles and Responsibility
High Power Committee (HPC)	Highest decision-making Authority of the Project Approval of budget and Annual Plan of Operations of the Project; and review the project performance every six-months especially in the Preparatory Phase Approval of the Operation Manual (including Financial Rules/procedures)for the Project; Framing operational procedures for the Project for smooth and effective implementation; Facilitating inter-Departmental coordination for required synergy and convergence and also to supervise the minimizing duplication of efforts; Taking up initiatives to resolve issues with GOI and JICA, if required.
Governing Body (GB)	Highest decision-making body of the autonomous society Providing authority to the PMU for day-to-day functioning; Supporting the PMU in approval of Budget and Annual Plan of Operation, and other proposals of the project; Rigorously review the project progress vis-à-vis Annual Plans at least once every quarter; monitor financial and physical progress. Facilitate sanction of budgets & release and monitor the fund disbursement status Guide the PMU in the preparation of Operation Manual; Prepare proposals for the HPC whenever necessary for the smooth implementation of the Project
Project Management Unit (PMU)	Final decision maker with regards today-to-day Project activities, and would utilize autonomy to ensures mooth and timely implementation of the project PMU manages the budgets and releases and monitors the project activities Keeps track of the project implementation, and responsible to guide, issue instructions, prepare guidelines, execute capacity development plan, establish and operate M&E system, Undertake field visits and provide-hand holding support in field in almost all respect for ensuring efficient implementation of the project Collate and consolidate the expenditure statements from DMU and FMU offices and prepare Statement of Expenditures for getting Reimbursement of Claims Organize annual planning and review workshop at state level, and conduct AGM Under take statutory and internal/concurrent audits
Project Management Consultants (PMC)	Provides technical and managerial support to PMU Supports PMU by a team of experts to augment various skills required for the project implementation
Circle Offices	Are responsible for the regular overseeing of DMU offices Cross-checking project works vis-à-vis financial and physical progress reporting Conduct monthly meetings/hearings for Grievance Redressal Chair and participate in Annual Planning and Review Work shop and other events organized at Division level

Divisional Management Unit (DMU)	Assist the PMU in planning, fund management, work progress monitoring and documentation at the field level Supervise, monitor, review and guide field functionaries and activities; and conduct monthly review meetings Prepare physical and financial reports, and timely submit SOEs and utilization certificates Maintain separate bank account and records for project funds, and facilitate audits Organize annual planning and review work shop at Divisional level, and execute capacity building plan Provide budgets to VSSs, EDCs, prepared as per approved micro-plans/Annual plans of Implementation
Field Management Unit(FMU)	Assist the DMU in planning, fund management, work progress monitoring and documentation at the field level Facilitate micro-planning process, and support its implementation FMU will provide technical assistance directly to implementing institutions (VSSs, EDCs, SHGs) and Partner NGOs Maintain separate bank account and records for project funds, and facilitate audits Prepare physical and financial reports, and timely provide utilization certificates for all annual releases to FMU and VSSs/EDCs
District Advisory Committee (DAC)	For smooth implementation and to function as a multi-sector coordination body for ensuring optimum inter sectoral convergence of various ongoing government programmes / schemes in the district in which, Odisha Forestry Sector Development Project Phase-II is being implemented.
Block level Advisory Committee (BLAC)	To function as a multi-sector coordination body for ensuring optimum inter sectoral convergence of various ongoing government programmes/schemes in the CD Block in which, Odisha Forestry Sector Development Project, Phase-II is being implemented

Chapter 2

Target and Achievements upto 2023-24 (Consolidated)

2.1 Introduction

In the Financial Year 2023-24, the Odisha Forestry Sector Development Project, Phase-II (OFSDP-II) has completed six years and entered in seventh year of implementation, showcasing significant achievements and ongoing initiatives. The project has covered 1211 VSSs across 49 Forest Management Units (FMUs) till the year of reporting. All the planned interventions are being under implementation in all the VSSs spread over 12 Forest Divisions across the state, underscoring the steadfast commitment of the project to sustainable forestry practices with constant community engagement.

Moreover, the project's focus on sustaining socio-ecological production landscapes through initiatives like Satoyama indicates a holistic approach that balances environmental conservation and livelihood enhancement.The collaboration with the National Center for Sustainable Coastal Management (NCSCM) in Chennai to collect data for the Bhitarkanika Conservation Area's long-term monitoring plan reflects a proactive stance of the project towards coastal ecosystem conservation. The subsequent publication of the Ecological Health Report Card-3 for 2023 based on this data has led to increased understanding and better management of the region's ecological well-being.

These endeavours collectively depict OFSDP-II's comprehensive strategy in fostering forestry sustainability and environmental stewardship in Odisha, emphasizing collaboration and long-term planning for enduring impact.

2.2 Targets and Achievements up-to 2023-24 (Consolidated)

The consolidated Targets and Achievements up-to 2023-24 are narrated in the table given below:

Sl. No.	Component	Activities	Target Details	Cumulative Achievements
1	Preparatory Works	Constitution of PMU, DMU, FMU and deployment of Staff	1 PMU, 12 DMU, 50 FMU	1 PMU, 12 DMU, 50 FMU
		Deployment of P-NGO	50 Nos	34 Nos
		Engagement of PMC	1 Team.	1 Team.
		Orientation for PMU/DMU/FMU	1 PMU, 12 DMU, 50 FMU	1 PMU, 12 DMU, 50 FMUs
		Identification and constitution of VSSs /EDCs	1200 Nos.	1211 Nos

1	Preparatory Works	Survey, demarcation and mapping of area assigned to VSSs.	1200 Nos.	1211 Nos; Assigned Area = 1,25,612 ha. Treatment Area = 57,292 ha.
		Review and revision of project Manuals /Guidelines	11 Nos	20 Nos
		Engagement of VSS/EDC animators	2400 Numbers	2422 Numbers
		Micro Planning	1200 Nos	1211 Nos
		Annual Planning	1200 Nos	1211 Nos
		Revisit of Micro Plan (Fourth Year)	1200 Nos	777Nos in Batch-I&II VSSs
		Social and Environmental Consideration	1 PMU, 12 DMU, 50 FMU	1 PMU, 12 DMU, 50 FMU
2	Sustainable Forest Management – JFM Mode	Assisted natural Regeneration.	51000 ha.	51006 ha
		Artificial Regeneration.	6000 ha.	6286 ha
		Fire Protection.	1710 km.	1710 Km
		Drainage line treatment and maintenance JFM.	1500 ha.	1505 ha
	Sustainable Forest Management – Non JFM Mode	Drainage line treatment and maintenance non JFM.	750 ha.	756 ha
		Consolidation and demarcation of forest boundaries.	1898 km.	1898 Km
		Setting up of Hi-Tech Nursery	6 Numbers	6 Nos
		Farm Forestry	10000 ha.	7874 ha
3.	Sustainable Biodiversity Management	Sustainable biodiversity management incorporating concept of SATOYAMA model.	1 Sanctuary	1 Sanctuary: 10 EDCs
		Establishment of scientific monitoring system at Bhitarakanika	1 Sanctuary	1 Sanctuary: Health Report Card for 3 years published

4.	Livelihood Improvement	Community Development	1200 VSS	1211 VSS
		Promotion of IGA	3600 WSHG	12596 Borrowing Entities: WSHGs: 4406 Nos CIGs: 311 Nos PoPs: 7879 Nos
5.	Capacity Development	Executing Agency	1 PMU,12 DMUs, 50 FMUs	Capacity Building Training of All Stakeholders as per target completed. Till March, 2024: 4699 Nos of CBTs on 33 themes conducted covering 1,93,431 participants.
		Community Institutions	1200 VSS	
		Training of P-NGOs	50 Teams	
		Training of Animators	2400 Numbers	
		Promotion of product cluster at DMU	12 Numbers	
		Training of expansion of Farm Forestry	1200 VSS	
6.	Supporting activities	Institutional and project management support	1 PMU,12 DMU, 50 FMU & 6 Circle Offices.	1 PMU, 12 DMU, 50 FMU & 6 Circle Offices
		Monitoring and evaluation		
		Community based MRV system		

Chapter 3

Revisit of Micro Plan

3.1 Introduction

"MICRO PLAN" as a "Village Development Plan" encompasses the expectations of the villagers, particularly the forest-dependent communities, poorest of the poor households and other socially vulnerable sections and prospective plan for development activities of the village. In the context of Odisha Forestry Sector Development Project Phase-II it is a guiding document for both management of forest areas assigned to the community under Joint Forest Management (JFM) mode as well as to plan for livelihood initiatives including income generating activities at the community level.

Village micro plan is a document which is used to plan out the needs and priorities of a community. It has been used to enable the forest fringe dwellers to effectively identify their needs and find means to fulfil them in a time bound manner. Micro plan is a dynamic document and should address the requirements of changing times registering the achievements, the gaps and the prospects of addressing new domains within the available and restricted resources. During the initiation of the project, micro plans spanning over a decade were prepared for all 1211 VSSs covered under OFSDP-II, emphasizing community involvement and addressing the challenges in rural development by meeting the local needs.

In this scenario, the 'Revisit of micro plan' has been envisaged in the project document after 4 years of initial micro plan formulation to address the progress made so far, identify the gaps and explore the new possibilities. It should help in readjusting the project prescriptions from sustainable forest management, and to augment cross-cutting issues related to Gender Mainstreaming, Community Based Monitoring Verification and Reporting and registering Environmental and Social concerns in the form of community based self-assessment frameworks which can be monitored at the grass-root level by the community itself.

3.2 Rationale Behind Revisit of Micro Plan:

The reasons for revisiting and updating the micro plan are outlined below:

- Assess Implementation Progress: Review the current status of the work items outlined in the original micro plan to evaluate what has been accomplished.
- Adapt to Community Needs: Identify and address any emerging needs of the community that have arisen since the initial plan was created.
- Incorporate New Components: Add any relevant cross-cutting elements that were not included in the previous version of the micro plan.
- Reassess and Adjust Priorities: Examine the importance of the planned activities that have not yet been initiated or addressed, and adjust them to fit the current context.

3.3 Objectives of Revisit of Micro Plan:

The objectives of the revisit of Micro Plan are:

- To ensure the community participation in assessing the progress made through the implementation of the Micro Plan by themselves.
- To examine each intervention in terms of the targets, achievements and progress.
- To incorporate and register the changing needs and situation of the community.
- To realign the interventions according to changing / current needs of the community.
- To address the emerging concepts and the cross-cutting project components like Gender Mainstreaming, CMRV, and Social and Environmental considerations at community level.

3.4 Process of Revisit of Micro Plan:

OFSDP-II commenced preparatory work in 2017-18 and starting implementation of project activities in Batch-I VSSs in 2018-19. As per the project mandate, the revisit of Micro Plans for 355 VSSs of Batch-I under all 12 Forest Divisions was taken up in 2022-23. In order to carry out the process of revisit the micro plan, a comprehensive procedure is proposed to ensure that all the parameters that need to be reviewed have been captured and analysed properly. For better understanding of the process and to follow a uniform format for all VSSs, a "Hand Book for Micro Plan Revision" was prepared by the PMU / PMC Experts in both English and Odia and was supplied to all DMU and FMUs both in hard and soft copies.

To effectively review the micro plan at the VSS (Village Social Society) level, a comprehensive approach is required, which involves the following tasks:

- Evaluate Implementation Progress: Conduct a participatory assessment to determine the status of the work outlined in the original micro plan and whether these tasks have been completed.
- Reassess Proposed Activities: Analyze and review the works proposed in the updated micro plan to ensure they are relevant to the current context and community needs.
- Integrate Gender Mainstreaming: Apply the principles of gender mainstreaming throughout the planning and implementation phases, ensuring the active involvement of women, as guided by the Gender Action Plan (GAP).
- Educate on Self-Monitoring: Train the community on self-monitoring practices, and use participatory tools to create performance reports based on actual achievements at the VSS level.
- Address Vulnerable Groups: Ensure the needs and priorities of marginalized groups, such as Scheduled Castes (SC) and Scheduled Tribes (ST), are genuinely addressed. Evaluate these aspects through the Scheduled Cast and Forest Dependent Management Framework.
- Adopt Safeguards Frameworks: Guide the community/VSS in adopting Environmental and Social Safeguards Frameworks during project implementation and conduct regular assessments using community-based tools.
- Build Community Capacity: Enhance the community's ability to conduct activities and perform regular, scientific assessments of progress through Community-based Monitoring, Reporting, and Verification (CMRV), aiming to reduce the negative impacts of forest degradation.

- Engage in Ongoing Consultations: Use Focus Group Discussions (FGDs) to gather insights and understand the evolving priorities and needs of the community.
- Plan Livelihood Initiatives: Develop livelihood strategies through convergence and financial support, such as the provision of a Revolving Fund, and establish feeder and product clusters to support economic growth.

3.5 Progress of Re-visit of Micro Plan in Batch-I and Batch-II VSSs:

After the completion of four years, the Micro Plans prepared for the VSSs of Batch-I and Batch-II under OFSDP-II were revisited during 2022-23 and 2023-24 respectively. The objectives of revisit of Micro plan were to assess the status of the development initiative planned and executed. Further, it was emphasised to capture current need and requirements and to incorporate those in the revised Micro Plan.

Under this initiative, the initial Micro Plan Documents were analysed and appropriately revised by following participatory approach through PRA Exercises, involving the VSS members, the officials and functionaries of DMU, FMU, P-NGO Team etc. Capacity Building and Trainings for Master trainers at DMU level were organized for Revisit of Micro Plans by the PMU-PMC expert team during 2022-23 followed by Orientation cum Capacity Building Training at FMU level for all Batch-I VSSs. During 2023-24, the capacity building training and orientation of all field functionaries were organized at all FMU level by the Master Trainers of the DMU for revisit of Micro Plans of all Batch-II VSSs.

Revisit of Micro Plans of all 355 Batch-I VSSs was almost completed during 2022-23. During the reporting year 2023-24, the revisit of Micro Plan across the 422 VSSs covered in Batch-II VSSs was initiated. The community members were actively involved in revisiting the Micro Plans prepared by their respective VSSs. The officials from PMU, PMC, DMU & FMU facilitated the processes at different level to make the revisit of micro plan effective and relevant and responsive to the community needs and priorities. Revised Micro Plans were prepared in all Batch-II VSSs by following the participatory approaches like PRA exercise with full involvement of VSS members, particularly women members.

The Division wise number of Micro plans revised during 2022-23 covering Batch-I and during 2023-24 covering Batch-II VSSs is as follows:

Name of Division	Revision of Micro Plans		
	Batch – I VSSs during 2022-23	Batch – II VSSs during 2023-24	Total
Baripada	46	70	116
Rairangpur	40	60	100
Karanjia	20	20	40
Dhenkanal	25	27	52
Athamallik	20	25	45
Sundargarh	30	60	90
Jharsuguda	29	51	80
Sambalpur	55	20	75
Subarnapur	25	25	50
Boudh	20	20	40
Gumusar North	25	24	49
Ghumusar South	20	20	40
Total	**355**	**422**	**777**

3.6 Review and Feedback on Revised Micro Plans in Batch-I and Batch-II VSSs:

To refine the revised micro plans, a thorough review process was conducted at the PMU (Project Management Unit) level by PMC (Project Management Consultant) experts by adopting the following steps:

i. Draft Review and Feedback: Drafts of the revised micro plans were submitted by all DMUs (District Management Units) and carefully reviewed by experts at the PMU level. Detailed

feedback, including necessary modifications and corrections, was compiled into reports and communicated to the respective divisions.

ii. Division-wise Review Meetings: Following the feedback reports, division-wise discussions were held to address the observations and suggestions made on the sample revised micro plans submitted by the divisions. These meetings facilitated in-depth examination and adjustments to the drafts.

iii. Participation of Key Officials: Key officials from both the DMU and FMU (Forest Management Unit) levels attended the review meetings. This included the DMU Chief, Assistant DMU Chief, Subject Matter Specialists (SMSs), FMU Chief, Assistant FMU Chief, FMU Coordinators, Partner NGO (PNGO) staff, Member Secretaries, and VSS (Village Social Society) Animators.

iv. Facilitation by PMC Experts: The review sessions were led by the PMC-Expert (CFM&MP) and the Team Leader-PMC. During these sessions, the feedback on various chapters of the draft micro plans was discussed in detail.

v. Incorporation of Feedback: Based on the discussions, necessary rectifications, modifications, and additions were made to the revised micro plans.

vi. Final Approval: The finalized micro plans were then presented to the Gram Sabha for approval, ensuring community endorsement and support for the updated plans.

The batch wise number of micro plans reviewed by the PMC-Experts at PMU level is as follows:

Batch of VSS	Total no of Micro Plans Revised	Total no. of sample Micro Plans scrutinized at PMU level
Batch-I	355	53
Batch-II	422	52

Review of Revisit of Micro Plans in Baripada DMU

Review of Revisit of Micro Plans in Athamallik DMU

Interaction of PMC Team with VSS Members of Bandijharan in Dhama Range of Sambalpur Division

Chapter 4

Initiatives on Sustainable Forest Management

4.1 Site Specific Plan& Monitoring (JFM Mode)

The sustainable Forest Management Interventions taken up across the 1211VSSs under the project in a phased manner through Joint Forest Management (JFM) Mode over the years were monitored by the community representatives. The issues and challenges observed during the monitoring were recorded at VSS level through resolutions. Based on these resolutions, necessary measures such as maintenance of the DLT Structures, maintenance of fire lines, restocking of plantation, post-planting operations, silvicultural interventions etc. were planned and executed. Such initiatives ensured the stakeholder ship of the communities in maintenance of the assets created under the project.

Community Monitoring in Boudh DMU

4.2 Drainage Line Treatment under JFM & Non JFM Mode (Ex-situ SMC Work):

Under the ridge to valley approach, the Soil and Moisture Conservation Measures were taken up both within as well as outside the assigned area of the VSSs. Drainage Line Treatment (DLT) within the assigned area of VSSs were taken up with the active participation of VSS members following JFM Mode, whereas the sites beyond the assigned area were treated in Non JFM Mode. Soil and Moisture Conservation (SMC)measures such as gully plugging, construction of staggered trenches, digging of percolation pits, construction of check dams etc. have been taken up as interventions under DLT under OFSDP – II. Ridge to valley approach of SMC treatment helped significantly in improving the moisture content and the water table across the VSS area. Construction of DLT Structures within and

outside areas of 1211 VSSs covered under the project have been completed by 2021-22. Batch wise details of DLT Structures established under OFSDP-II are as below:

SMU in Sundergarh DMU

Establishment of DLT Structures under OFSDP-II (All Batches)

Batch	No of Ranges (FMUs)	No of VSSs	Year	DLT on JFM Mode (In ha)	DLT on Non JFM Mode (In ha)	Total DLT (In ha)
Batch-I	15	355	2018-19	446	222	668
Batch-II	18	422	2019-20	530	270	800
Batch-III &IV	16	403	2020-21	502	251	753
Batch-IV (31 VSSs)	-	31	2021-22	26	13	39
Total	**49**	**1211**		**1504**	**756**	**2260**

4.3 Maintenance of Drainage Line Treatment (DLT) (under JFM & Non JFM Mode):

The project has the provision to maintain the established DLT structures in the subsequent years so as to ensure effective functioning of the structures established at VSS level under JFM & Non JFM mode. Under the project, fund has been provisioned to maintain the established DLT structures such as Loose Boulder Check dam, Gully Plugs, Concrete Check Dams, Water Harvesting Structures, Staggered Trench, Counter Trenches etc. after first year & third year of their establishment. The details of DLT Structures established during the year 2023-24 were as below:

After 3rd year (2nd Maintenance) of DLT Structures in Batch-II -422 VSSs

Division (DMUs)	Ranges (FMUs)	DLT on JFM Mode (In ha)	DLT on Non JFM Mode (In ha)	Total DLT (In ha)
Athamallik	Madhapur	31	16	47
Baripada	Bangriposi	25	13	38
	Pithabata	31	16	47
	Udala	31	16	47
Boudh	Kantamal	25	13	38
Dhenkanal	Hindol	34	17	51
Ghumsur North	Jagannathprasad	31	16	47
Ghumsur South	Sorada	25	13	38
Jharsuguda	Bagdihi	25	13	38
	Kolabira	39	19	58
Karanjia	Guguria / Dudhiani	25	13	38
Rairangpur	Bisoi	25	13	38
	Manada	10	05	15
	Rairangpur	33	16	49
	Badampahad	08	04	12
Sambalpur	Dhama	25	13	38
Subarnapur	Ulunda	31	16	47
Sundargarh	Hemgiri	38	19	57
	Lephripara	38	19	57
Total		**530**	**270**	**800**

4.4 Silvi-cultural Operations including Plantations under JFM Mode:

Silvi-cultural operations including plantations in the assigned forest area are being taken up through JFM Mode. Interventions pertaining to sustainable forest management including plantations are being planned by the communities of respective VSS with the assistance of project personnel. Selection of species to be planted, nature of silvi-cultural operations, restocking of plantation etc. are decided through a participatory manner. Such initiatives, in addition to

enabling forest restoration through joint effort of VSS members and the project personnel, also significantly contributingincreating employment opportunities for the poor forest fringe dwellers.

Plantation in Ghumsur South DMU

The interventions proposed to be executed at VSS level are being finalised by each VSS and the same are recorded in the Resolution Register of the respective VSSs. Different silvicultural operations like singling of coppice shoots, removal of high stumps and climbers, fire line tracing, etc., are being executed by the villagers with the overall guidance of forestry officials under ANR without gap model. Similarly plantations under ANR with 200 seedlings, 400 seedlings, 800 seedlings per hectare along with Artificial Regeneration (AR) under Fuel Fodder, NTFP & Other Block models have been taken up under OFSDP-II in the degraded sites identified jointly by the Forest Department and the members of VSSs. Especially, indigenous species are selected by the VSS members for the plantation in the assigned area as indicated in the Micro Plan document.

Plantation in Ghumsur South DMU

4.5 Plantations through Assisted Natural Regeneration & Artificial Regeneration:

The plantations under the Assisted Natural Regeneration (ANR) & Artificial Regeneration (AR) have been taken up in the project villages of OFSDP-II through Joint Forest Management Mode. The consolidated figure of plantations taken up under the project is given below:

Division	Year	ANR Without Gap (In Ha)	ANR with Gap (in Ha)	AR (In Ha)	Total (in Ha)	Total Seedlings planted (Nos.)
Athmallik	2019-20	391	465	92	948	295800
	2020-21	443	637	113	1193	339600
	2021-22	131	1194	209	1534	541400
	Total	965	2296	414	3675	1176800
Baripada	2019-20	550	355	0	905	95000
	2020-21	929	120	126	1175	177000
	2021-22	48	110	181	339	392600
	Total	1527	585	307	2419	664600
Boudh	2019-20	1614	448	28	2090	200000
	2020-21	364	530	61	955	299200
	2021-22	107	899	163	1169	603600
	2022-23	21	194	56	271	151100
	Total	2106	2071	308	4485	1253900
Dhenkanal	2019-20	319	745	95	1159	299200
	2020-21	370	732	155	1257	377800
	2021-22	126	3899	679	4704	1737500
	Total	1115	5376	929	7420	2414500
Ghumsur (N)	2019-20	319	536	45	900	304000
	2020-21	771	390	17	1178	108800
	2021-22	222	2041	349	2612	968700
	Total	1312	2967	411	4690	1381500
Ghumsur (S)	2019-20	255	595	100	950	471100
	2020-21	443	414	100	957	203400
	2021-22	87	803	133	1023	536400
	2022-23	13	213	12	238	82000
	Total	798	2025	354	3177	1292900

Jharsuguda	2019-20	348	863	145	1356	604000
	2020-21	988	991	198	2177	517000
	2021-22	35	140	85	260	167000
	2022-23	9	80	20	109	50300
	Total	1380	2074	448	3902	1338300
Karanjia	2019-20	765	396	17	1178	185900
	2020-21	255	807	32	1094	254600
	2021-22	174	2270	295	2739	1082600
	Total	1194	3473	344	5011	1523100
Rairangpur	2019-20	585	1115	112	1812	350000
	2020-21	954	2672	88	3714	676100
	2021-22	48	238	17	303	54400
	Total	1587	4025	217	5829	1080500
Sambalpur	2019-20	755	1332	671	2758	1804600
	2020-21	255	595	105	955	378300
	2021-22	109	995	173	1277	482000
	Total	1119	2922	949	4990	2664900
Subarnapur	2019-20	319	743	225	1287	747700
	2020-21	319	744	130	1193	473300
	2021-22	109	995	173	1277	698900
	2022-23	24	145	205	374	128000
	Total	771	2627	733	4131	2047900
Sundergarh	2019-20	382	893	148	1423	701700
	2020-21	766	1784	317	2867	1017100
	2021-22	262	2388	416	3066	1337200
	2022-23	16	200	0	216	40000
	Total	1426	5265	881	7572	3096000
Grand Total		**15300**	**35706**	**6286**	**57292**	**19934900**

4.6 Maintenance of Previous Year's Plantations

Plantations taken up in the previous years in VSSs under the fold of OFSDP-II in different batches were maintained during 2023-24 as detailed below:

4th year Maintenance of ANR & AR taken up in Batch-II VSSs during 2023-24									
Division	No of FMUs	No of VSSs	ANR without gap in Ha	ANR with 200 Seedlings in Ha	ANR with 400 Seedlings in Ha	ANR with 800 Seedlings in Ha	AR – Fuel Fodder @ 2500 Seedlings in Ha	AR – NTFP @ 400 Seedlings in Ha	AR – Other Block @ 1600 Seedlings in Ha
Baripada	03	70	929	120	0	0	38	69	19
Rairangpur	04	60	954	2672	0	0	33	24	31
Karanjia	01	20	255	552	255	0	10	15	7
Dhenkanal	01	27	370	661	61	10	72	83	0
Sundargarh	02	60	766	892	638	254	103	183	31
Jharsuguda	02	51	988	729	232	30	52	91	55
Sambalpur	01	20	255	298	212	85	55	43	7
Subarnapur	01	25	319	372	266	106	69	47	9
Boudh	01	20	364	210	256	64	32	19	10
Athamallik	01	25	443	402	235	0	52	52	9
Ghumsur(N)	01	24	771	328	60	2	0	8	9
Ghumsur(S)	01	20	443	310	94	10	22	70	8
Total	**19**	**422**	**6857**	**7546**	**2309**	**561**	**538**	**709**	**195**

3rd year Maintenance of ANR & AR taken up in Batch-III & IV VSSs during 2023-24									
Division	No of FMUs	No of VSSs	ANR without gap in Ha	ANR with 200 Seedlings in Ha	ANR with 400 Seedlings in Ha	ANR with 800 Seedlings in Ha	AR – Fuel Fodder @ 2500 Seedlings in Ha	AR – NTFP @ 400 Seedlings in Ha	AR – Other Block @ 1600 Seedlings in Ha
Baripada	01	19	48	110	0	0	142	39	0
Rairangpur	02	07	48	238	0	0	0	17	0
Karanjia	02	40	174	1649	621	0	184	111	0
Dhenkanal	04	98	426	3648	231	20	299	380	0
Sundargarh	02	60	262	1933	430	25	282	134	0
Jharsuguda	02	05	35	140	0	0	50	35	0
Sambalpur	01	25	109	735	160	100	58	115	0
Subarnapur	02	25	109	468	328	199	117	56	0
Boudh	01	23	107	419	311	169	90	68	5
Athamallik	01	30	131	990	204	0	62	107	40
Ghumsur(N)	02	51	222	1791	147	103	157	192	0
Ghumsur(S)	01	20	87	398	263	142	88	45	0
Total	**21**	**403**	**1758**	**12519**	**2695**	**758**	**1529**	**1299**	**45**

2nd year Maintenance of ANR & AR taken up in 31 VSSs during 2023-24									
Division	No of FMUs	No of VSSs	ANR without gap in Ha	ANR with 200 Seedlings in Ha	ANR with 400 Seedlings in Ha	ANR with 800 Seedlings in Ha	AR – Fuel Fodder @ 2500 Seedlings in Ha	AR – NTFP @ 400 Seedlings in Ha	AR – Other Block @ 1600 Seedlings in Ha
Boudh		08	21	129	31	34	17	16	23
Ghumsur(S)		05	13	138	50	25	0	4	8
Jharsuguda		03	09	40	40	0	7	10	3
Subarnapur		09	24	60	85	0	0	205	0
Sundargarh		06	16	200	0	0	0	0	0
Total		**31**	**83**	**567**	**206**	**59**	**24**	**235**	**34**

Plantation in OFSDP-II Project Divisions

4.7 Maintenance of Hi-Tech Nursery

The establishment of six Hi-Tech Nurseries, one in each Circle, under OFSDP-II during the period 2018-19 aimed to enhance the production capacity of quality planting material of indigenous species, including Non-Timber Forest Products (NTFP) and Agro Forestry species. Each nursery was equipped to raise 4.40 lakh seedlings, with 2.20 lakh seedlings cultivated in Poly-pots and the remaining 2.20 lakh in hyco-pots. Specifically, the facilities allowed for the cultivation of 1.1 lakh hyco-pot seedlings in 300 CC pots and another 1.1 lakh seedlings in 150 CC pots. During the reporting year, 18-month-old seedlings from these nurseries were utilized for casualty replacement in the plantation sites of VSSs under OFSDP-II. Additionally, the seedlings raised in these nurseries were deployed for departmental

plantations in respective Forest Divisions and nearby areas as needed, contributing to meeting the plantation targets of the Project Divisions.

The revolving fund released to the DMUs for rising of seedlings is available in the separate book of account under the head of "Revolving Fund- Hi-tech Nursery". The locations of the Hi-Tech Nurseries and the capacity of raising seedlings in poly-pots and hyco-pots are given below:

Division	Locations	Poly Pot Seedlings	Hyco-Pot Seedlings (with 150 CC pot)	Hyco-Pot Seedlings (with 300 CC pot)	Total Seedlings
		(Capacity In nos. lakh)			
Athamallik	Badarohila, Bamur FMU, Athmallik	2.20 Lakh Seedlings in each Hi-Tech Nursery	1.10 Lakh Seedlings in each Hi-Tech Nursery	1.10 Lakh Seedlings in each Hi-Tech Nursery	4.40 Lakh Seedlings in each Hi-Tech Nursery
Baripada	Sankhabhanga FMU, Baripada				
Sambalpur	Larasara FMU, Sambalpur				
Subarnapur	Chhanchhandunguri FMU, Subarnapur				
Ghumsur (N)	Lalsingh FMU				
Sundergarh	Ujjwalpur, FMU, Sundergarh				

Hi tech Nursery at Sundergarh

4.8 Fire Line (FL) Creation and Maintenance:

Wildfireshave always been a major threat to forest conservation, and it destroys the forest resources that have taken many decades of growth and development in matter of days or hours. Like many other tropical states in the country, forests in Odisha also subjected to the fury of major wildfires, particularly in summer months, loosing major junk of forest wealth every year. However,the experience gained through the community-based interventions being adopted under OFSDP-II prove that with some advance planning, which includes adopting participatory fire prevention strategies, implementing early detection systems, and conducting community awareness programs, all can contribute to reducing the frequency and severity of forest fires. Additionally, promoting sustainable land management practices and maintaining firebreaks can help create barriers to halt the spread of fires.

For protection of forest from fire incidences, 4 meter wide forest lines have been established to the extent of 1710 Kms across the project VSSs and the same is being maintained for subsequent three years. The entire works has been done through Joint Forest Management Mode of interventions. Further, series of awareness campaign have been conducted to sensitize the villagers on protection and management of forest for fire incidences.

Besides the fire linesof 573 Kms constructed in Batch-III & IV VSSs and 28 Kms in 31 VSSs during the FY 2020-21 & 2021-22 respectively were maintained though the respective VSSs as below:

Maintenance of Fire Lines during 2023-24			
Division (DMUs)	**Batch – III & IV (2020-21)**	**31 VSSs (2021-22)**	**Total Fire line Maintained (In Kms)**
Athmallik	42.75	0	42.75
Baripada	27.08	0	27.08
Boudh	32.78	7.0	39.78

Dhenkanal	139.65	0	139.65
Ghumsur (N)	71.26	0	71.26
Ghumsur (S)	28.5	5.0	33.5
Jharsuguda	7.13	3.0	10.13
Karanjia	57	0	57
Rairangpur	9.98	0	9.98
Sambalpur	35.63	0	35.63
Subarnapur	35.63	8.0	43.63
Sundergarh	85.5	5.5	91.0
Total	**572.89**	**28.50**	**601.39**

The project experience clearly demonstrates that continued vigilance and cooperation among stakeholders, particularly from the local community are vital to sustainably manage forest ecosystems by minimizing the impact of forest fires on biodiversity, ecosystems, and bio-resources. By working together and remaining proactive, forests can be well protected and continue to derive benefits from the invaluable resources they provide.

4.9 Consolidation and Demarcation of Forest Boundaries

Consolidating and demarcating the boundaries of Reserved Forest (RF), Protected Reserve Forest (PRF), and Demarcated Protected Forests (DPF) within the project villages of OFSDP-II play a crucial role in effective forest management and protection. By clearly identifying and delineating these boundaries, it becomes easier to understand the extent of different forest areas and their respective management zones. Clear demarcation helps in controlling encroachment of forest area by establishing legal boundaries.Moreover, consolidating and demarcating forest boundaries aids in effective planning and management of forest resources. It allows the project personnel and the VSSs to implement targeted forest management interventions and conservation measureswithin specific areas and thus contributing to sustainable forest management practices.

During Consolidation and Demarcation process, the damaged / dilapidated pillars are repaired / replaced around the RFs, PRFs, & DPFs under Project Activities. All pillars were appropriately maintained, coloured and geo-referenced. Consolidation and Demarcation of forest boundaries to the extent of 1898 Kms covering 229 numbers of Forest Blocks across 1211 VSSs from all batches covered under OFSDP-II which were completed during the FY 2021-22. Further, the Consolidation and Demarcation of forest boundaries over669 Kms across the 422 Batch-II VSSs and 636 Kms across the 403 Batch-III & IV VSSs were maintained through JFM Mode during 2023-24. The cumulative progress of Consolidation and Demarcation of forest boundaries taken up under OFSDP-II over the years are as below:

Demarcation of Forest Boundary in Boudh DMU

Cumulative progress in Consolidation and Demarcation of Forest Boundaries under OFSDP-II

Batch	No of DMUs	No of FMUs	No of VSSs	Area Covered	Forest Block Covered
Batch-I	12 DMUs	15 FMUs	355 VSSs	561 Kms	58 Nos
Batch-II	12 DMUs	18 FMUs	422 VSSs	669 Kms	62 Nos
Batch-III	12 DMUs	11 FMUs	281 VSSs	445 Kms	64 Nos
Batch-IV	4 DMUs	5 FMUs	122 VSSs	191 Kms	45 Nos
Batch-IV	5 DMUs	-	31 VSSs	32 Kms	
Total	**12 DMUs**	**49 FMUs**	**1211 VSSs**	**1898 KMs**	**229 Nos.**

Division wise cumulative details on Consolidation and Demarcation of Forest Boundaries under OFSDP-II

Division (DMUs)	Ranges (FMUs)	No of VSSs Covered (In Nos.)	Consolidation of Forest Boundaries (In Kms)	No of Forest Blocks Covered	Forest Boundaries Maintained during 2023-24
Athmallik	03	75	118.99	13	86.99
Baripada	06	135	213.76	21	140.76
Boudh	03	71	108.01	07	68.01
Dhenkanal	06	150	236.71	32	197.71
Ghumsur North	04	100	157.58	13	118.58
Ghumsur South	03	65	100.26	06	63.26
Jharsuguda	03	88	137.57	18	88.57
Karanjia	04	80	126.89	51	94.89
Rairangpur	05	107	169.96	20	105.96
Sambalpur	04	100	157.17	09	71.17
Subarnapur	03	84	128.08	07	79.08
Sundergarh	05	156	242.80	32	189.8
Total	**49**	**75**	**1897.78**	**229**	**1304.78**

4.10 Farm Forestry Operations:

A comprehensive approach has been taken to develop guidelines for the Farm Forestry Component of the project. In consultation with local farmers coupled with the technical guidance from institutes and stakeholders, including the ICAR's Central Horticulture Experiment Station, Central Institute for Women in Agriculture (CIWA), OUAT, J K Paper Mill, Avanthi Agri-tech Pulp wood Industries, and the Directorate of Horticulture, suitable agroforestry models and specific tree species for plantation were selected for each VSS area under the project. The involvement of villagers in providing feedback on species and plantation models is also crucial for ensuring the suitability and sustainability of the interventions. By

Hi tech Nursery at Sundergarh

considering local knowledge and preferences, the project is able to align with the needs and priorities of the communities it aims to benefit.

Based on the above consultation, the following models were considered and implemented.

Farm Forestry Models under OFSDP- II

Models	Species / No of Seedlings per Ha.	Seedlings/ ha	Area	Inter Cropping
Agro Forestry Model	Forest Plants	96 Nos	0.15 ha	Arher/ Sesame/ Bengal Gram / Turmeric- during 1st to 3rd year Pineapple/ Ginger 4th year onwards Usual Food Grain Crops
	Pulp wood Plants	480 Nos	0.48 ha	
	Horticulture Plant	78 Nos	0.37 ha	
Timber Species Model	Forest Plant	1000 Nos	1 ha	
Pulp wood Model	Pulpwood Species	1000 Nos	1 ha	
Horti-NTFP Model	NTFP Species	200 Nos	0.5 ha	
	Horti Species	200 Nos	0.5 ha	
Field Bund / Dyke Model	Forest Plants	75 Nos	Across the field	
	Horti Plants	25 Nos		
Horticulture Model	Horti Plants	400 Nos	1 ha	

Up to 2022-23, a total of 6814.5 ha area covered under Farm Forestry Plantation Component covering 13454 numbers of beneficiaries from 1180 VSSs of Batch-I, II, III & IV FMUs of OFSDP-II and a total of 50,99,344 numbers of seedlings were planted outside the forest. Further, 3573 numbers of beneficiaries from the project villages were identified during 2023-24 for undertaking farm forestry plantation over 1060 Ha of patta land. A total 9,52,130 numbers of seedlings were planted outside the forest under farm forestry component during 2023-24.

Farm Forestry Plantation during 2023-24													
Division	Agri Hort- Silvi @ 658 Plants		Timber @ 1000 Plants		Pulpwood @ 1000 Plants		Hort-NTFP @ 400 Plants		Horticulture @ 400 Plants		Total		
	Area	Beneficiries	Area	Beneficiries	Area	Beneficiries	Area	Beneficiries	Area	Beneficiries	Area	Beneficiries	Seedlings planted
Athmallik	0	0	0.8	2	20.33	48	8.06	12	0	0	29.19	62	541756
Baripada	8	27		0	0	0	0	0	0	0	8	27	251937
Boudh	0	0	0	0	0	0	0	0	0	0	0	0	502273
Dhenkanal	0	0	0	0	222.06	288	0	0	0	0	222.05	288	1222559
Ghumsur North	0	0	0	0	158.7	384	0	0	0	0	158.7	384	263834
Ghumsur South	0	0	0	0	9.9	23	0	0	0	0	9.9	23	128889
Jharsuguda	0	0	9.3	31	125.7	291	0	0	32	120	167	442	541980
Karanjia	0	0	0	0	0	0	0	0	0	0	0	0	350959
Rairangpur	0	0	0	0	0	0	0	0	0	0	0	0	517550
Sambalpur	0	0	0	0	0	0	0	0	70.69	1661	70.69	1661	439922
Subarnapur	0	0	28.07	30	51.5	52	63.84	137		0	143.41	219	492860
Sundergarh	0	0	0	0	250.59	467	0	0	0	0	250.59	467	796874
Total	**8**	**27**	**38**	**63**	**839**	**1553**	**72**	**149**	**103**	**1781**	**1060**	**3573**	**6051394**

4.11 Farm Forestry Incentives:

Farm Forestry Incentives for raising good plantation under the Farm Forestry Component has been provisioned under OFSDP-II. Farmers having more than 90% of survival status of plants would be eligible for award of incentives. Incentives per seedlings on 2nd year and 4th year of plantations have been finalised by the project.

The survival status of seedlings planted and its growth are being monitored by the Cluster Plantation Team (CPT) of each FMU during 2nd year / 4th year of plantations. The observations of the CPT on the survival status are further being cross checked by the FMU Chief to prepare final list of eligible farmers to qualify for award on Incentives.During 2023-24, a total of 680 farmers from Batch-I VSSs and 468 farmers from Batch-II VSSs were awarded with Farm Forestry Incentives.

Chapter 5

Sustainable Biodiversity Management:

5.1 SATOYAMA initiative in Badrama WL sanctuary of Bamra WL Division:

5.1.1 SATOYAMA – a Pilot approach on Bio-diversity conservation:

The SATOYAMA Initiatives, inspired by the Japanese concept of Socio-Ecological Landscapes, have been implemented in the Badrama Wildlife Sanctuary within the Bamra Wildlife Division of Sambalpur District. These initiatives exemplify how Socio-Ecological Production Landscapes can ensure local communities' livelihoods while conserving biodiversity, fostering a society that thrives in harmony with nature.

Rooted in the principle that well-managed landscapes can simultaneously support biodiversity and human livelihoods, the SATOYAMA approach counters the idea that these two are inherently at odds. In 2018-19, under the OFSDP-II program, a pilot study in Badrama Wildlife Sanctuary sought to promote socio-ecological landscapes through sustainable biodiversity management. This initiative aims to develop a collective appreciation for nature's value and create sustainable rural models where human and ecological systems coexist peacefully.

5.1.2 Rationale of SATOYAMA Initiative under OFSDP II:

A central aim of the OFSDP-II project is to conserve and scientifically manage biodiversity while fostering livelihood development initiatives. This goal has led to the adoption of landscape management practices under the SATOYAMA framework in Badrama Wildlife Sanctuary. The SATOYAMA approach, centered on socio-ecological production landscapes, emphasizes the sustainable management of ecosystems with active community involvement.

Under this framework, community members are empowered to map and reflect upon landscape indicators, fostering a deeper understanding and appreciation of living in harmony with nature. For local communities to enhance their resilience, it is crucial that they grasp the dynamic interactions within their landscapes. This holistic view encompasses ecological, agricultural, cultural, and socio-economic changes.

Badrama Wildlife Sanctuary serves as a pilot site for the SATOYAMA concept, grounded in the belief that local communities, with a comprehensive understanding of their environment, can better adapt to social, economic, and environmental changes. This adaptation not only improves their resilience but also enhances their environmental and economic well-being.

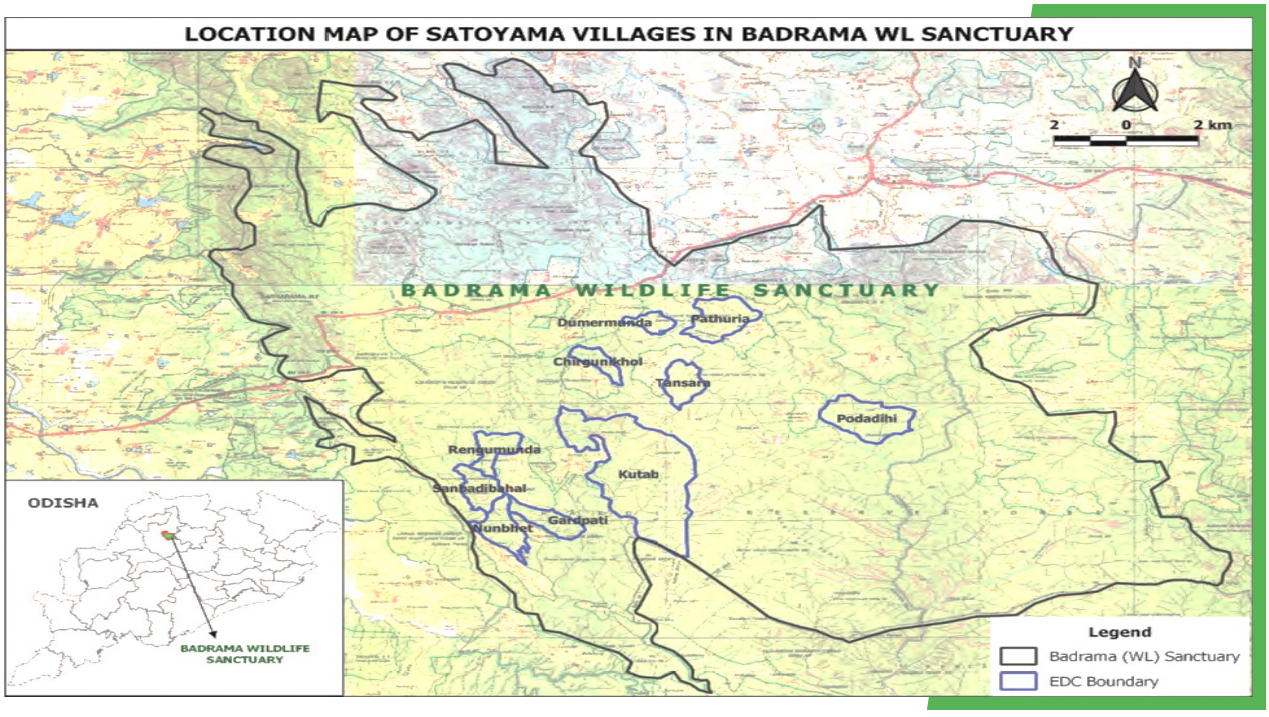
5.1.3 SATOYAMA initiative in Badrama WL sanctuary of Bamra WL Division.

Building on Japan's successful implementation, the SATOYAMA model is now being adopted in 10 villages within the Badrama Wildlife Sanctuary of the Bamra Wildlife Division, a remote region in western Odisha. This initiative focuses on conserving biodiversity and improving the livelihoods of rural communities living within this protected area. The SATOYAMA model also addresses the human-wildlife conflicts faced by these communities and aims to preserve local traditional cultures, ultimately

fostering socio-economic development. The initiative began in the village of Nunvet in 2018-19 as a pilot project. Due to the positive response from surrounding villages, the program was expanded in 2019-20 to include nine additional villages within the sanctuary.By integrating the SATOYAMA principles, these communities are working towards a future where they can thrive economically and culturally while maintaining the delicate balance with their natural environment.

5.1.3.1 Target Area under SATOYAMA:

Badrama WL Sanctuary in Bamra Wildlife Division is spread over 348.17 Sq Km in Sambalpur district. The forest type in the area is Dry Deciduous and rich in biodiversity i.e. in both flora and fauna composition. The area is also part of notified Sambalpur Elephant Reserve. Local inhabitants are mostly tribal and live in the available valleys within the sanctuary and mostly depend on agriculture for their livelihood. The EDCs / villages covered under the project are adjoining to each other and located within a radius of 20 Kms from the Range Headquarters located at Badrama.



Local communities living in and around the sanctuary are involved in protection of forest and wildlife. The Eco-Development Committees (EDCs) have been constituted with active participation of local communities for protection of forests as per the JFM Resolution of Govt. of Odisha and the communities have been assigned with specific forest areas for conservation and sustainable management inputs. The forest areas assigned to the EDCs covered under SATOYAMA model are as follows:

Sl no	Name of EDC	Assigned forest area in ha	Name of R.F
1	Rengumunda	142.91	Ushakothi R.F
2	Kutab	168.44	do
3	Sana badibahal	152.37	do
4	Tansara	144.42	do

5	Podadihi	324.76	do
6	Pathuria	250.68	do
7	Gadapati	150.87	do
8	Dumermunda	78.66	do
9	Chirgunikhol	95.73	do
10	Nunvet	195.52	do
	Total	**1704.36**	

5.1.3.2 Demographic Profile of villages under SATOYAMA Initiative:

The target villages (EDCs) under the SATOYAMA Initiative in Badrama Wildlife Sanctuary are predominantly small, with household sizes ranging from 23 in Sana Badibahal to 77 in Nunvet and Kutab. The population is largely composed of Scheduled Tribes, making up 79.4% of the community. The sex ratio in these areas is notably favorable, with 1,050 females for every 1,000 males.Literacy levels are relatively low. Out of 487 households, only 117 are literate, and among these, only 11 individuals have attained education beyond the secondary level. Agriculture is the primary occupation for most residents, supplemented by income from daily wage labor. On average, each household holds about 2 acres of land, although approximately 10% of households are landless, indic ating a reliance on other means for their livelihood.This demographic and socio-economic snapshot underscores the challenges and opportunities for enhancing the well-being of these communities through the SATOYAMA model.

Sl. No.	Village Name	Total HH	ST HH	OBC and others HH	Total family Members	Total Male Members	Total female Members	%age of ST	Other %
1	Rengumunda	32	20	12	129	60	69	63	37
2	Kutab	77	40	37	296	152	144	52	48
3	Sana badibahal	23	18	5	108	56	52	79	21
4	Tansara	68	65	3	271	130	141	96	4
5	Podadihi	51	49	2	204	88	116	96	4
6	Pathuria	68	52	16	251	123	128	77	23
7	Gadapati	25	25	0	101	53	48	100	0
8	Dumermunda	26	26	0	108	52	56	100	0
9	Chirgunkhol	40	35	5	177	90	87	88	12
10	Nunvet	77	54	23	307	147	160	70	30
Total		**487**	**384**	**103**	**1952**	**951**	**1001**	**79.4**	**20.6**

5.1.4 Activities Taken Up:

Broadly the interventions taken up in the project villages are categorised as Community Mobilization by micro plan formulation natural resource and biodiversity management, habitat improvement, resolution of man-animal conflicts, environmental conservation, livelihood improvement, retaining and improving socio-cultural fabric and Institution &capacity building etc.

5.1.4.1 Community Mobilization and Preparation of Village Development Plan:

EDC meetings were held in all 10 Villages / EDCs at regular intervals ensuring participation of villagers in planning process as well as during implementation of the project activities. Micro Plan for each individual EDC was prepared through PRA exercise involving stakeholders such as EDC members, PRI members, local line department representatives and have been approved by the respective Palli / Gram Sabhas making it FRA compliant. The micro plans indicated the aspirations of villagers and overall planning for village level development assigning environmental conservation.



PRA exercise Kutab EDC PRA Exercise Dumermunda EDC PRA Exercise Pathuria EDC

5.1.4.2 Construction of Multipurpose EDC Buildings:

Multi-purpose EDC buildings have been constructed in all 10 EDCs / villages for holding EDC meetings, training programmes as well as showcasing the activities taken up in the village. These EDC buildings can also serve as the community centres for the village for observing common festival / cultural activities, celebrations etc.

EDC Building Podadihi

EDC Building Chirugunilhol

EDC Building Dumermunda

Inauguration of Nunvet EDC Building

5.1.4.3 Natural Resource and Biodiversity Management: The following activities were taken up in the project villages during 2023-24 towards natural resource and biodiversity management.

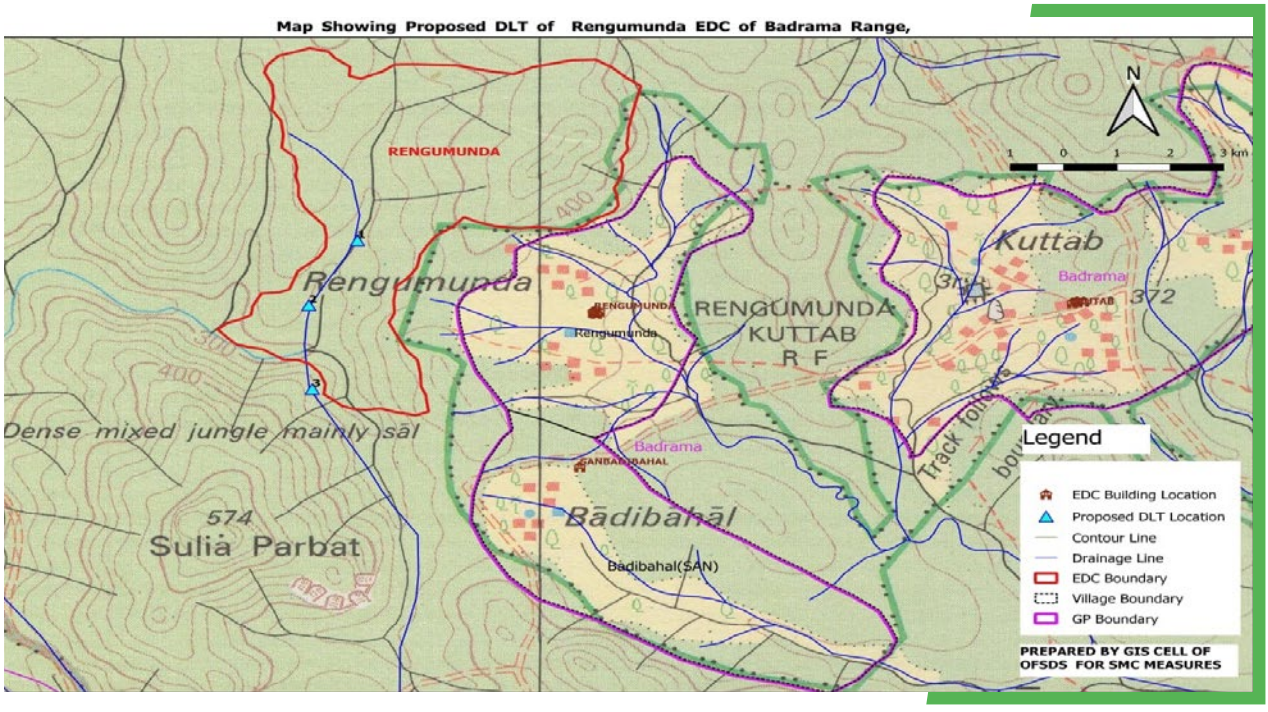
a) Forest Fire Management: Under SATOYAMA Initiative, extensive awareness campaign to prevent forest fire in the assigned forest area were taken up in all 10 EDCs (Project villages) during 2023-24. Repeated meetings with villagers were conducted in each and every EDC highlighting the adverse effects of forest fire. Fire lines over a length of 20 Km per EDC has been created and about 10 Km of existing fire lines in each EDC has been maintained to prevent occurrence and spread of forest fire during the year 2023-24. Due to the sincere efforts of villagers, no fire incidence was noticed in any of the assigned area & young regeneration of Sal has come up those areas.

Awareness meeting on Forest Fire

Fireline Creation

Regeneration after zero fire

b) SMC and DLT activities: Soil and Moisture Conservation measures and drainage line treatment was taken up in Rengumunda EDCs during 2023-24 to conserve the soil in the slopes and to improve moisture regime in the area. Check dams (Lose Boulder Check Dam - LBCD) numbering 127 across seven numbers of existing nallahs were constructed under the project initiative. This activity is being continued in all target villages in a phased manner with planning for SMC and DLT structures as per the field requirement based on the treatment map prepared for each EDC.



Rengumunda DLT Map

No.6: Photograph of Check dams Constructed by EDCs under Satoyama Initiative of OFSDP-II

Check dam at Ghudiamba Nala 2

Check dam at Ghudiamba Nala 4

Check dam at Ghudiamba Nala 7

Check dam at Ghudiamba Nala 8

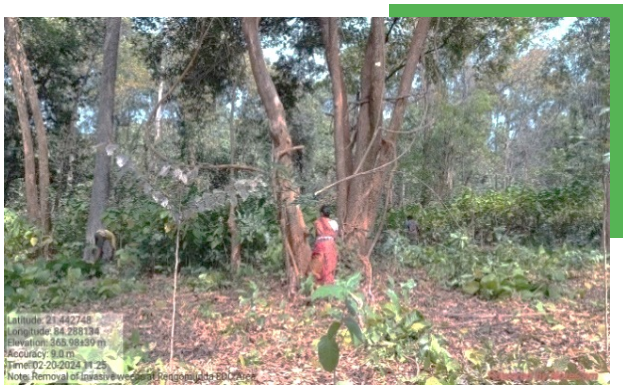
c) Removal of invasive weeds: The Badrama Wildlife Sanctuary is characterized by dry deciduous forests predominantly consisting of Sal trees. However, this forest type also fosters the growth of invasive weeds such as Lantana, Eupatorium, and Atundi, particularly in the foothill regions. These invasive species hinder the regeneration of ground flora, which is crucial for supporting herbivorous wildlife.

To address this issue and in accordance with the sanctuary's management plan, a targeted effort to remove invasive weeds was implemented during 2023-24. This initiative covered 6 hectares each in three EDCs: Nunvet, Rengumunda, and Gadapati. This intervention is part of a broader wildlife management strategy aimed at promoting the healthy regeneration of native vegetation essential for the ecosystem's balance.

Photograph of weed removal in Nunvet /Rengumundaand Garpati EDCs

Weeding Eradication, Nunvet EDC

Regeneration after weeding



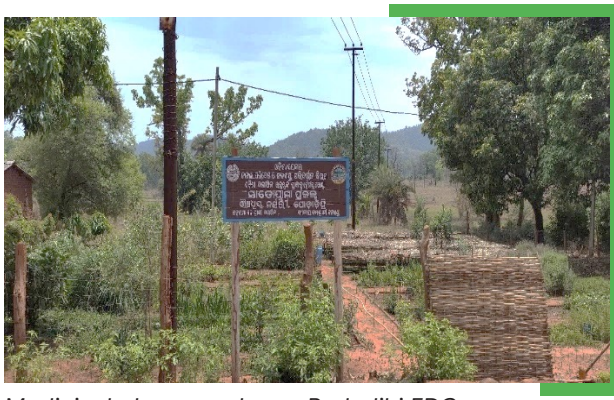
Weeding time photo of Rengumunda

Present time photo of Rengumunda

Weeding time photo of Gardpali

Present time photo of Gardpali

d) Medicinal Plants (Nursery and Garden): With an objective of preserving and promoting locally available medicinal plants, one medicinal plants nursery cum garden has been established in Podadihi village over an area of 1.5 Acres of land. In the medicinal garden, seedlings of about 100 varieties i.e. mostly indigenous and available in the locality were planted and are being maintained. Seedlings of local indigenous species of medicinal plants are being raised in the nursery with an objective to restock the varieties in its habitat through enrichment planting.



Medicinal plants garden at Podadihi EDC

Seedlings Raised at Podadihi Nursery

5.1.4.4 Habitat Improvement: During summer months most of the natural water sources in the sanctuary get dried up and the wild animals face a lot of problem for their survival in water scare area. To address the issue, one water body of size 40m x 30m x 4m in Ushakothi RF within assigned area of Podadihi EDC has been created during 2022-23 which is being used by the wildlife. Another water is being created during 2023-24 in the forest areas of Nunvet EDC.

Water Body at Podadihi EDC

5.1.4.5 Mitigation of Man – Animal conflict:

All the target villages (10 Nos.) are located within the limits of Badrama Wildlife sanctuary and very often wild animals from the forest area of the Sanctuary stray into the village limits. The area being part of Sambalpur Elephant Reserve, crop damage & house damage due to elephant depredation is very common in the landscape. To avoid such problem, solar streetlights have been installed in all the villages and to solar fencings and crop field have been proposed to prevent entry of elephants. At least two nos of solar street light system has been installed in each EDC and solar fence over a length of 2.0 km has been erected in Nunvet EDC to address the issue of man-animal conflict in the villages. Wild animal

driving equipment like High Beam Torch lights and canon guns have been planned to be purchased and distributed to EDC members for emergency use to drive out wild elephants from their village limits.

Rengumunda EDC Tansara EDC

Torch light distribution Nunvet EDC Torch light distribution Rengumunda EDC

Cannon Gun is ready to distribute

5.1.4.6 Environmental Conservation:

The overarching aim of the project is to enhance environmental conditions by actively involving local communities, fostering sustainable practices as a natural part of their lives. To this end, an initiative was launched to combat plastic pollution in the rural environment. Villagers were educated about the detrimental effects of plastic, leading to a collective decision by EDC members to keep their villages free from plastic waste.

Each village appointed two Eco-volunteers from every hamlet (Pada) to spearhead the campaign. These volunteers are tasked with educating residents on how to segregate plastic waste and ensure

its proper disposal at designated sites. Currently, 80 Eco-volunteers across 10 EDCs are dedicated to this cause, working diligently to make their communities plastic-free.

To support these efforts, the project provided each family with two cotton bags (Eco-bags) as alternatives to plastic bags. A total of 1,020 specially designed cotton bags were distributed among the households in all 10 EDCs. Additionally, bamboo garbage bins were installed throughout the villages for domestic waste, and septic pits were dug to manage biodegradable and non-biodegradable waste separately.

Regular anti-plastic campaigns are conducted every three months across the EDCs, involving community members, school teachers and students, PRI members, and SGS members. These campaigns aim to sustain the commitment to a plastic-free environment and keep the initiative's momentum alive.


Awareness meeting on Forest Fire



ECO bag distribution Rengumunda EDC ECO bag distribution Chirugunikhol EDC

ECO volunteers Pathuria EDC

ECO volunteers Chirugunikhol EDC

Garbage pit Pathuria EDC

Garbage pit Kutab EDC

Baboo Dustbin Dumermunda EDC

Baboo Dustbin Chirugunilkol EDC

5.1.4.7 Livelihood Promotion:

a) Organic and traditional Paddy cultivation

With an aim of reducing the use of chemical fertilizer and pesticides and promoting use of organic manure, identified farmers in the project villages were motivated and trained through resource persons to prepare different organic bio-fertilizers and pesticides using cow dung/urine for use in their farmlands. Preparation and use of bio-fertilizer and pesticide for agriculture as well as kitchen garden (Mo Bagicha) is gaining popularity in the locality and more and more people/farmers are coming forward to accept and practise the concept. Farmers numbering 232 from all 10 EDCs, have been trained to produce bio-fertilizer and bio-pesticide on their own using Cow dung & cow urine and locally available organic materials like Neem leaves etc. which are called as Jibamruta and Agneyastra. The farmers are using such bio-fertilizers and bio-pesticides in their paddy fields and kitchen gardens for better production. The details of EDC wise no of farmers involved in preparation of bio-fertilizer and pesticide is given below:

Preparation of bio-fertilizer by farmers:

Sl. no.	Name of EDC	No of farmers
1	Nunvet	57
2	Gadapati	16
3	Sanbadibahl	22
4	Rengumunda	16
5	Kutab	36

6	Dumermunda	7
7	Tansara	5
8	Chirgenkhol	4
9	Podadihi	41
10	Pathuria	28
	Total	**232**

b) Promotion of aromatic rice cultivation and marketing

With assistance of MMSA and support from social Enabler M/s Kanak Bio-sciences, cultivation of Indigenous aromatic Paddy was introduced for cultivation using traditional method of farming in the project villages during 2023-24 involving132 Farmers from all 10 EDCs with traditional agricultural practices spreadingover total 75.7 Acres of land. Two varieties of aromatic paddy i.e. Gitanjali and Chinikamini were cultivated by the farmers. The EDC wise details of cultivation & production of aromatic paddy during 2023-24 is given as follows:

Cultivation of Aromatic Paddy using bio-fertilizer / bio-pesticides by traditional method during 2023-24:

Sl no	Name of EDC	No of Farmers	Area under cultivation in Ac	Total production in Kgs
1	Kutab	20	10.5	2855
2	Dumermunda	15	9.0	1405
3	Nunvet	21	4.7	1183
4	Pathuria	13	9.0	2436
5	Podadihi	17	11.0	2357
6	Gardpati	9	6.0	1432
7	Rengumunda	15	13.0	3988
8	Sanbadibahl	17	9.0	1032
9	Chirgenkhol	2	1.5	0
10	Tansara	3	2.0	721
	Total	**132**	**75.7**	**17409**

As per the agreement signed by the farmers with said social enabler M/s Kanak Bio-sciences, the total production of aromatic paddy was collected from the EDC villagesby door stepcollection method with a market price @ Rs.24.00 / Kg (higher than the prevailing MSP of the State).

Land Preparation

Sowing of seeds

Mother bed preparation

Transplantation

Training camps

Vermicompost Distribution

Appling organic fertilizer

Field inspection

Paddy land during harvest

Paddy brought to paddy land

Paddy sold to KBS (Vendor)

c) Promoting Horticulture and Custard Apple plantation

The SATOYAMA initiative covers areas within the Badrama Wildlife Sanctuary, which is also a typical elephant habitat. To mitigate the impact of elephant depredation on agriculture, the initiative promotes the cultivation of horticultural crops that elephants generally avoid, such as pineapples, yams, and lemons. Custard apple, a fruit commonly found in local villages and not favored by elephants, has a strong market demand and has been particularly emphasized.

In 2022-23, with the goal of expanding custard apple cultivation, villagers raised 8,000 seedlings in three key locations: Nunvet (4,000), Rengumunda (2,500), and Gadapati (1,500). Community plantation efforts included planting 368 custard apple trees over 1 acre in Kutab village and 600 seedlings over 2.56 acres in Nunvet village. Additionally, villagers have been encouraged to plant custard apple trees in their own backyards and on fallow lands.

This strategic approach not only reduces crop losses due to elephant activity but also supports sustainable agriculture and provides an economic boost to the local communities through the sale of custard apples.

Custard apple plantation site, Kutab EDC

d) Promoting Spine gourd cultivation

Spine gourd (locally called as Kankada) is available in wild in the sanctuary area and this wild native variety of spine gourd has high demand in the local markets during rainy season. People use to collect the fruits from wild in the rainy season and sell in the market. Taking the advantage of market potential of this gourd, a few households had chosen to take-up spine gourd cultivation by planting the rhizomes in the back yard and got afair sale price. Hence cultivation of this plant in the back yard& farm bonds through collection of rhizomes from the nearby forest areas was promoted under the project involving more and more households and the farmers got good return during the fruiting season. The EDC wise list of farmers who have taken up spine gourd cultivation and the village / EDC wise production in the project area during 2023-24 is given below:

Sl. no.	Name of EDC	Total no of farmers took up Olericulture	Total No of rhizomes/ plants planted	Total production in qntl during 2023-24
1	Nunvet	41	2130	30.0
2	Gadapati	08	84	1.0
3	Sanbadibahl	10	298	2.0
4	Rengumunda	15	200	1.5
5	Kutab	27	430	2.0
6	Dumermunda	08	69	1.5
7	Tansara	22	194	1.5
8	Chirgenkhol	17	150	1.0
9	Podadihi	21	380	3.5
10	Pathuria	13	96	1.0
	Total	**182**	**4031**	**45.0**

Rhizome Plantation

Fruiting

Collection

Sold to vendor from their doorstep

e) Apiculture through convergence

Collection of Honey from the nearby forest is a regular practice in the locality. Taking the feedback from the elderly people of the project villages, rearing of Honeybee was promoted. Honey Boxes were provided by the Odisha Forest Development Corporation (through) and 10 boxes were installed by the beneficiaries in 3 nos. of villages like Rengumunda, Nunvet and Kutab. Training on rearing of bees and collection of honey was imparted to the beneficiaries by the resource person on 24.09.2023 at Rengumunda where 35 participants from EDCs like Rengumunda, Sanbadibahl and Dumermunda had participated. It is expected that the activity would create opportunity for alternate livelihood to the beneficiaries in future.

Training Session on Apiculture to EDC members

f) Pisciculture

Pisciculture was taken up in five available ponds in the EDCs like Kutab, Rengumunda, Tansara and Podadihi since 2022-23 with release of 26000 fingerlings (IMC variety) in consultation with the Fisheries Department of Govt. The villagers have taken these ponds on long term lease from the Gram Panchayat for pisci-culture. Following the harvest of about 282 Kgs of fish during 2022-23, 186 Kg of fish were harvested from Kutab and Tansara EDCs during 2023-24. As per their usual practice, part of the harvest is consumed by the villagers and the surplus quantity is sold in the local market. The EDC wise fingerlings released, and fish harvested is given below:

Sl. no.	Name of EDC	No of ponds	2022-23	2023-24		
			Fingerlings released	Harvest in Kg	Fingerlings released	Harvest in Kg
1	Kutab	1	8000	72	4000	86
2	Tansara	1	6000	85	--	100
3	Podadihi	2	8000	125	4000	To be harvested
4	Rengumunda	1	4000	36	--	

Fish Harvesting and selling by Kutab EDC

g) Promotion of Nutri-Garden

All the households in all the 10 EDCs covered under the project were insisted on raising nutri-garden ***"Mo Baramasi Bagicha"*** in their backyard with an objective to supplement nutritious food throughout the year in general and vegetables in particular to the family. In total 322 households were provided with 10 types of seasonal vegetable seeds for raising in their back yard for their own consumption. They also used the bio-fertiliser and bio-pesticide produced locally for producing organic vegetable, primarily for family consumption and for market if surplus available. The EDC wise list of Beneficiaries who have raised ***"Mo Baramasi Bagicha"*** and list of vegetable species raised is given as follows:

"Mo Baramasi bagicha" (Kitchen garden) – 2023-24 (Beneficiaries)

Sl. no.	Name of the EDC	Nos of beneficiaries	Vegetable Seeds distributed
1	NUNVET	58	Cucumber, Brinjal, Chili, Bitter gourd, Ridge gourd, Tomato, Pumpkin, Cowpeas, Lady finger and Bhaji leaves.
2	GARDAPATI	17	
3	SANABADIBAHAL	23	
4	RENGOMUNDA	22	
5	KUTAB	40	
6	CHIRGENKHOL	20	
7	TANSARA	22	
8	DUMERMUNDA	20	
9	PATHURIA	62	
10	PODADIHI	38	
	TOTAL	**322**	

In addition to raising kitchen garden with seasonal vegetable, families were persuaded to plant Papaya, Drumstick, Lemon, Guava, pomegranate etc. to meet their daily requirements of fruits and vegetables. Out of total 487 hose holds in all the EDCs, 482 families were supplied with 5 nos of Papaya, 3 nos of Lemon, 2 nos of Guava, 2 nos of Drum stick and 2 nos of Pomegranate seedlings each. Villagers have planted these seedlings in their own backyards getting the fruits for consumption and sale.

Beneficiary with her MO Badi

Selling the surplus

h) Role of MMSA and Social Enablers in Promotion of Livelihood activities

M/s Kanak Bio-Sciences was involved as Social Enabler in capacity building of the local farmers for organic cultivation of aromatic paddy varieties within the project villages and subsequent marketing of the product with an objective to fetch better price / return for the farmers. Project staff along with the Marketing Executive of MMSA have mobilized 132 farmers covering 10 EDCs for organic cultivation of aromatic paddy in their field during 2023-24. For the capacity building and training of the local farmers, Training programmes were organisedby MMSA and M/s Kanak Bio-sciences during 2023-24 in the project villages and are as follows:

Sl. no	Date / Period	Place / Venue	Theme of training	No of Trgs	No of Participants
1	17-04-2023	Badrama FRH campus	Capacity building training on Organically Ingenious Aromatic paddy cultivation at FMU level	01	11
2	25-06-23 to 29-06-23	Sanabadibahal, Podadihi, Pathuria, Dumermunda, Kutab & Nunvet	CBT On Pre cultivation practices for Indigenous Aromatic paddy cultivation.	07	116
3	26-08-23 to 07-09-2023	Sanabadibahal, Podadihi, Rengumunda Pathuria, Badibahal, Dumermunda Kutab, Gardpati & Nunvet	Preparation of Bio fertilizer Pesticides and land management	08	125
4	3-12-23 to 8-12-23	Sanabadibahal Podadihi, Rengumunda Pathuria, Badibahal, Dumermunda, Kutab, Gardpati Nunvet	Pre and post Harvest Management of Indigenous Aromatic paddy	08	118

CBT on Aromatic Paddy cultivation

Social Enabler team at Badrama

5.1.4.8 Institution and Capacity Building:

Different Capacity Building activities are taken up at Range Level and EDC level at regular intervals involving the EDC and SHG members from the project villages. Members of EDCs and SHGs are also taken to other Divisions for direct exposure and interaction with successful entrepreneurs. The list of training programmes / exposure visits undertaken during 2023-24 is given below:

Sl. no	Date / period of training / exposure	Theme	Place / Venue	Target group	No of participants
1	24-09-2023	Capacity Building training on Api- culture	Rengumunda	EDC members of Rengumunda, Sanabadibahal and Dumermunda	35
2	24-02-2024	Exposer visit of EDC members on capacity building t	Sundergarh Division	EDC members	19
3	10-04-2024	Exposer visit of EDC members on IGA	OUAT, Chipilima	EDC members	19

Sensitization of EDC members by Line Dept

Training on Aromatic paddy cultivation by social enabler

Training of SHG members on Mushroom Farming

Exposer visit to OUAT Chipilimaon IGA

Exposure visit to Sundergarh Division on CBT of EDC leaders

Training on vermicomposting at Sundergarh

5.1.4.9 Retaining and Improving Socio-Cultural fabric:

a) Animal Health / Vaccination camp: People living in project villages are mostly dependent on agriculture and almost all households have reared domestic cattle, either for help in agriculture, or to get milk or even for the purpose of CDM only. Regular / periodical vaccination of these cattle population which is essential to prevent any spread of communicable diseases to wildlife in the sanctuary is carried out every year. In association with the Animal Husbandry Department, Govt of Odisha, Health cum Vaccination camps for the domestic cattle are also organized.

Cattle Immunization camp, Nunvet EDC

Cattle Immunization camp, Dumermunda EDC

b) Human Health Camps: The project villages are located mainly interior and about 20 Kms away from the Primary Health Centre located at Jamankira. People are neither health conscious nor without facilities are readily available to them. Under the circumstances, Health Camps are organised in consultation with the Health & Family Welfare Department for regular health check-up of the

EDC members / villagers in the project villages for early detection of diseases and to avoid future complications. During 2023-24, the health camps were organised at 10 nos. of location. The details are as under:

Sl. no.	Location of Human Health Camp	Date	No of People treated.
1	Podadihi	23-04-2024	68
2	Pathuria	23-04-2024	63
3	Kutab	24-04-2024	68
4	Rengumunda	24-04-2024	47
5	Sanabadibahal	24-04-2024	27
6	Nunvet	25-04-2024	61
7	Gardpati	25-04-2024	37
8	Dumermunda	26-04-2024	47
9	Chirgenkhol	26-04-2024	46
10	Tansara	27-04-2024	69

Health Camp at Rengumunda EDC

c) Recalling traditional cultural event: The landscape in which the project villages are located is inhabited by is mostly tribals having their own cultural heritage. Three numbers of local cultural groups have been identified & musical instruments traditionally used by them have been purchased and

distributed among them. Traditional theme based cultural events like Pala, Dasakathia etc on forest & wildlife protection subjects have been observed in 10 nos. of project villages during 2023-24 as under.

Sl. No.	EDC	Date	traditional cultural event
1	Podadihi	10-03-2024	Pala on Forest fire
2	Pathuria	10-03-2024	Pala on Forest fire
3	Dumermunda	13-03-2024	Pala on Forest fire
4	Tansara	13-03-2024	Pala on Forest fire
5	Chirgenkhol	22-03-2024	Pala on Forest fire
6	Rengumunda	18-03-2024	Pala on Forest fire
7	Sanabadibahal	18-03-2024	Pala on Forest fire
8	Gardpati	18-03-2024	Pala on Forest fire
9	Kutab	21-03-2024	Pala on Forest fire
10	Nunvet	21-03-2024	Pala on Forest fire

Distribution of Musical Instrument at Kutab EDC

Traditional cultural Event (pala) Gardpati EDC

Traditional cultural Event (pala) Pathuria EDC

5.2 Long term Monitoring Plan for Ecosystem-based Conservation and Management of BCA

5.2.1 Background

Bhitarkanika's unique biodiversity is the state's priority for conservation. Under the OFSDS supported project titled "Long term Monitoring Plan for Ecosystem-based Conservation and Management of Bhitarkanika Conservation Area (BCA), the National Centre for Sustainable Coastal Management (NCSCM) has been conducting monthly surveys at BCA since January 2018 to develop an integrated time series database for formulating a science-based management plan. These surveys focus on understanding ecosystem health, food web structure, biodiversity assessment, stress factors, particularly related to climate change on mangrove ecosystem and its response. Experts recommended augmentation of environmental and ecological monitoring to generate robust data. The project scope was further expanded to address pressing issues such as characterizing mangroves, assessing the eco-flows& status of biodiversity, monitoring microplastics, and continued development of the Ecosystem Health Report Card, capacity building for monitoring, and management of the BCA and so on.

Boundary map of Bhitarkanika Conservation Area (BCA)

5.2.2 Long term database of Water Quality

NCSCM has created a long-term database for the continuous assessment of physical, chemical, and biological parameters affecting/influencing the Bhitarkanika Conservation Area (BCA). Based on the observed spatial heterogeneity, BCA waters are categorized into five sectors viz. Bhitarkanika, Maipura, Dhamra, Brahmani, Mahanadi and samples from forty different zones of the above five sectors are collected for analysis in two seasons viz. Pre-monsoon (February – May) and Monsoon (June – September), for better assessment of ecosystem health. Apart from this, twenty-nine stations from the Gahirmatha marine area were also selected and assessed during the reporting period.

The water temperature pattern in the BCA waters is influenced by various factors such as solar radiation, river discharge, evaporation, and tides. The pH does not significantly differ between seasons, and the spatial distribution of total alkalinity concentrations shows a unique pattern. Salinity values are higher during pre-monsoon due to tidal flow and less fresh water mixing. Changes in the local hydrological regime are the most important factors determining salinity exposure to mangroves.

Sampling stations in the Bhitarkanika Conservation Area

The concentration of dissolved oxygen in BCA waters for a major part of the annual cycle are under saturated. Oxygen saturation and dissolved oxygen (DO) exhibited similar behavior, but water temperature also had an influence on oxygen saturation

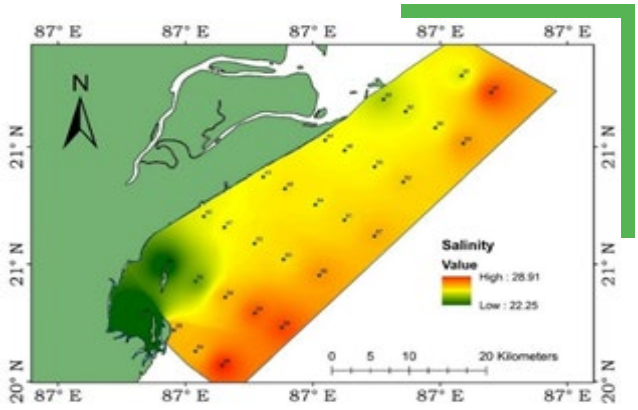
indexes. Low DO saturation values were observed during the monsoon season and high DO saturation values during the pre-monsoon season due to DO production through photosynthesis activity. Low DO values in the Bhitarkanika sector could be due to inadequate flushing conditions in interior creeks where mangrove litter accumulates. The amount of light that suspended solids attenuated varied across various BCA sectors, with BCA waters accounting for the non-chlorophyll suspended matter as the dominant fraction in Total Suspended Solid (TSS). Strong tidal hydrodynamics play a key role in suspended sediment concentrations, and the presence of suspended sediments acted as the key factor governing light penetration in the BCA system.

The mangrove waters are influenced by various sources, including agriculture runoff, nutrients from allochthonous and autochthonous sources, effluents from aquaculture ponds, atmospheric deposition, and nitrogen fixation. Nitrate concentrations are higher in the entire section in both seasons, possibly due to nitrate from aquaculture ponds or sewage discharge. Another internal source of nitrate is nitrification, which oxidizes ammonia to nitrite. In contrast, the BCA region has lower concentrations of ammonium and nitrite due to ammonium oxidation, bacterial decomposition of detritus, and phytoplankton excretion.

Seasonal variation in nitrogen species values at various sectors can be attributed to nitrogen regeneration, system release or uptake, water-sediment interaction, and both riverine and marine end members. Pre-monsoon DSi concentrations are lower, while monsoon DSi concentrations are higher, indicating silicate intrusion through the river. The average N/P ratio of the entire mangrove complex is higher in the monsoon season, possibly due to the more riverine influence, which is phosphorus limiting, and the lower N/P ratio in the pre-monsoon season due to the dominance of seawater, which is nitrogen limiting. This seasonal shift in nutrients has significant implications for the nutrient control and management of BCA mangroves and the adjacent coast of the Bay of Bengal.

5.2.3 Gahirmatha Marine Sanctuary

The water depth in Gahirmatha Marine Sanctuary ranged from 4.0 m to 24.0 m, with a mean depth of 15.7 ± 5.1 m. The water temperature was slightly lower than the bottom water, and the surface water salinity was lower than the bottom layer salinity. The study observed an average increase of 2 ppt in salinity from surface to bottom waters. The spatial distribution of DO values showed a distinct pattern of elevated values towards the southern part and lesser values near the northern part of Gahirmatha waters. No specific pattern of DO values was observed in the offshore waters from coastal waters. In both surface and bottom waters, ammonium ions (85%) dominated in dissolved inorganic nitrogen (DIN) concentrations, followed by nitrate (10.5%) and nitrite (4.5%). Ammonia values were higher in both the Mahanadi and Bhitarkanika mouths, possibly due to dissimilatory processes reducing nitrogen compounds into ammonia. The dominant fraction DIN distribution followed ammonia in Gahirmatha waters, with no significant variation observed for DIN species with respect to depth except for ammonia.



Spatial distribution of Salinity in the Gahirmatha area

Gahirmatha waters have the lowest DIP values, with higher DIP values in the southern portion than in the northern portion, possibly influenced by activities at the Paradip port. Major ions (Na, K, Ca, Mg,

SO4) were observed in the northern part and towards the coastal waters compared to other regions of Gahirmatha waters. Major ions showed higher values in the bottom water compared to surface water, possibly due to the salinity gradient of major ions in seawater.

5.2.4 Ecological Indicators and Eutrophication

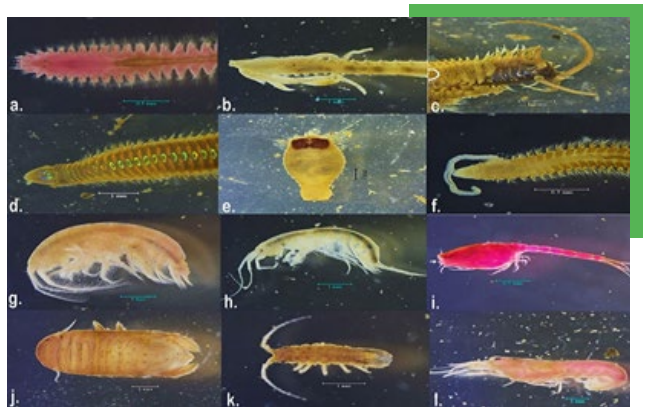
Ecological indicators, such as the Trophic Index (TRIX), are used to assess the trophic state of marine waters. TRIX, which includes four variables correlated with primary production, covers a wide range of trophic conditions. In 2022, data from the Gahirmatha marine area was used to evaluate the TRIX's trophic status. The results showed a good eutrophication status, with moderately productive waters and occasional turbidity. This data helps to understand the inter-relationships between variables and ecological processes, contributing to the understanding of the Gahirmatha region's eutrophication status.

5.2.5 Benthic Biodiversity

Biodiversity and productivity of macro- and micro-benthic communities in 40 locations of river-dominated estuaries of BCA were assessed using sampling from March, June, July, and September 2022, covering the Bhitarkanika river, Maipura river, Dhamra river, Brahmani river, and Mahanadi river. The study recorded 79 species from 53 genera of macrofauna in the Bhitarkanika conservation area. Polychaeta, Isopoda, Amphipoda, Tanaidacea, Bivalvia, Gastropoda, and others were the major groups.

Polychaeta was the dominant group with 32 species, followed by Amphipoda with 18 species. Parapsuedes sp. from Tanaidacea was the most abundant macrofaunal species, while Nephtys sp. and Lumbrinereis sp. were also abundant. Polychaeta, a dominant group, contributed 43% of the total macrobenthic density, followed by Tanaidacea (29%), Amphipoda (15%), Bivalvia (4%), Isopoda (2%), and Gastropoda (1%).

The diversity indices were calculated based on macrofaunal diversity, indicating a range between 1.46 and 3.30. The Shannon diversity index ranged from 1.46 to 3.30, with a minimum in July and maximum in March. The species richness ranged from 2.34 to 7.75, with minimums in June and maximums in March. The species evenness ranged from 0.48 to 0.94, with minimums in November and maximums in July. BCA recorded nine higher taxa, 75 genera, and 101 species from 33 meiofauna families.



Benthic macrofaunal species identified in BCA

Nematodes were the dominant group with 32 species, followed by foraminifera, benthic diatoms, ostracod, benthic ciliates, copepoda, tubulinea, turbellaria, and kinorhyncha. The most abundant nematode species were Daptonemasp, Oxystominaelongata, Halalaimus sp., and Desmodora sp., while foraminifera and benthic diatoms had Parafissurinabotelliformis, Rosalina globularis, Bolivina variabilis, Actinocyclus sp., Navicula sp., and Pleurosigma normanii. In 2022, meiobenthic species composition in the BCA area was dominated by nematodes, accounting for 35% of the total. Foraminifera followed with 24%, followed by benthic diatoms, ostracod, ciliates, copepod, tubulinea, turbellaria, and kinorhyncha.A-L: a. Nephtys sp., b. Prionospio sp., c. Diopatra sp., d. Lumbrinereis sp., e. Sternapsisscutata, f. Cossura sp., g. Byblis sp., h. Melita sp., i. Cumacea, j. Flabellifera, k. Idotea sp., l. Decapod.

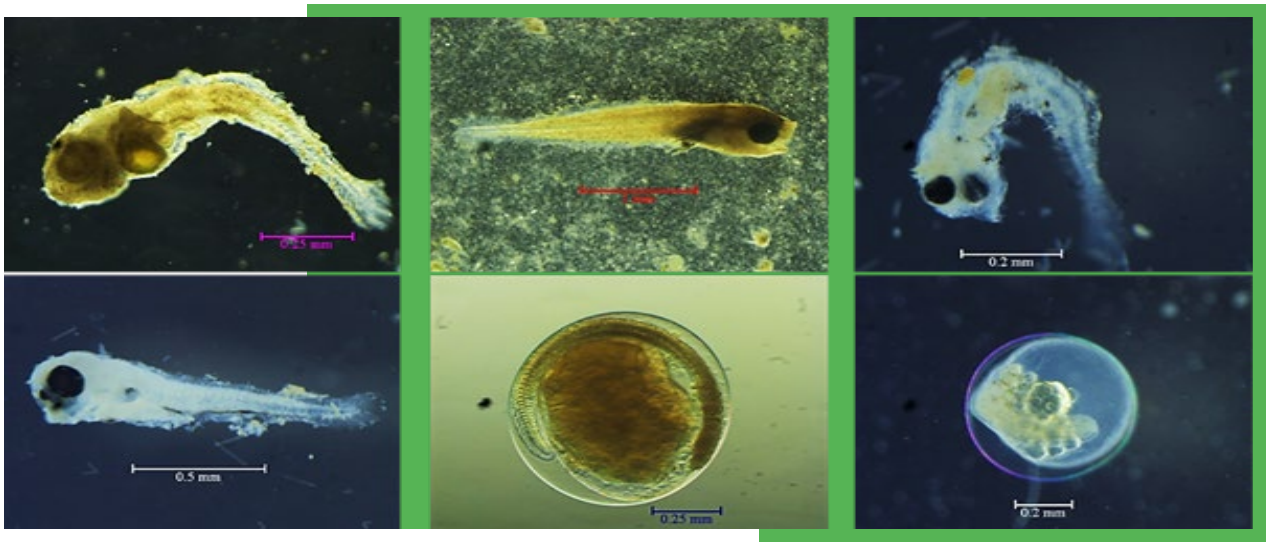
5.2.6 Plankton Diversity

The Bhitarkanika River region exhibits high abundance and diversity of phytoplankton and zooplankton, largely due to sheltered mangroves and ambient nutrient conditions, while low diversity may be attributed to marginal stress from high flushing of riverine water. The plankton Skeletonema bloom in Bhitarkanika River may be due to agricultural and aquaculture waste discharges and seabird guano deposits, indicating eutrophication and high chlorophyll concentration.

BCA is home to a diverse range of mesozooplankton taxa, including 29 copepod species. Copepods are the primary prey in the zooplankton community, providing high-quality food for fish larvae. Nine species, including Acartiaspinicauda, Acartiatropica, Bestiolinasimilis, Parvocalanus sp., Pseudodiaptomussewelli, Tortanusforcipatus, Oithona sp., Euterpinaacutifrons, and Clytemnestra scutellata, dominate the community. Other important communities include fish larvae, decapod larvae, gastropod veliger larvae, fish eggs, Oikopleura sp., and mysidacea. Low saline and demersal copepod species, belonging to the genera Acartiella and Pseudodiaptomus, form an important population characterized by the high influence of freshwater and shallow depths in the region.

The abundance of Nauplius and decapod larvae at Bhitarkanika and Maipura Rivers is remarkable, suggesting that dense mangrove waters are important nursery and spawning grounds for numerous crustacean species. The relative abundance of copepod species that contribute >5% of the abundance indicates that Acartiakempi occurs at narrow creeks enclosed with dense mangroves. The Brahmani River's shallow depth and dominance of freshwater support a diverse assemblage of euryhaline copepods. Rare communities include species labelled as rare, mostly from Bhitarkanika and Dhamra River. Highly abundant species like Bestiolinasimilis, Acartiatropica, Acartiaspinicauda, andParvocalanus sp. are found in the BCA, with Acartiatropica being the most dominant.

Fish eggs and larvae assessment is crucial for assessing fishery stock, mapping spawning areas, and contributing to fisheries management plans. The abundance of fish eggs and larvae in dense mangrove areas, except Mahanadi, indicates their importance as nursery and spawning grounds. Dhamra and Brahmani Rivers have a high density of larvae during monsoon and post-monsoon periods, while Bhitarkanika River has a significant number of eggs during post-monsoon periods. The community structure and abundance of ichthyoplankton are influenced by seasonality, environmental conditions, and prey availability.



Fish eggs and larvae in the Bhitarkanika conservation area

5.2.7 Lichen Biodiversity

Lichen, a composite organism made up of fungus and algae, are particularly prevalent in mangroves. A total of 49 manglicolous lichens are in the BCA mangrove ecosystem, with Habelikhati being the most lichen-diversified location. The majority of lichens are crustose, with 57% being crustose, 37% foliose, and 6% fruticose. Excoecariaagallocha mangrove species, was found to host 38 lichen species, with 45% being crustose, 47% foliose, and 8% fruticose.

Lichens on mangrove vegetation

The Physciaceae lichen family had the highest number of species. E. agallocha was the most preferred mangrove species for lichen establishment, housing the highest number of lichen species on its surface. Other mangrove species, such as Avicennia officinalis, A. marina, and C. iripa, housed five lichen species each, while Heritiera fomes only hosted three crustose types. Ceriopsdecandra, Rhizophora mucronata, and Kandeliacandel showed the presence of only crustose lichens. Lichens were rarely recorded from mangrove species like Avicennia alba and Bruguiera cylindrica. The frequency of lichen occurrence per mangrove plant was highest in Habelikhati (98.5%) and least in Ekakula (36.5%). Foliose and fruticose lichens were found in many sites within Bhitarkanika National Park.

The lichen indicator is a crucial tool in Forest Inventory and Analysis (FIA) for assessing forest health. Laboratory analysis, including sample collection, drying, grinding, and chemical analysis, helps determine the carbon and nitrogen concentrations in lichens. These analyses provide insights into lichens' nutritional status and nutrient cycling dynamics, aiding our understanding of their ecology and interactions with the environment.

Field data from BCA mangroves showed that lichens in BCA mangroves were less influenced by anthropogenic activities, and healthy and old mangrove plants favored lichen growth. Lichens effectively intercept particles from the atmosphere and substrates, accumulating and retaining many heavy metals in quantities that exceed their physiological requirements. The toxicity of these metals is determined by chemical and physical factors, including abundance, chemical form, water solubility, pH, and temperature. Statistical processing of collected data can provide information on lichen communities and air quality trends in BCA mangrove forests. This lichen-based critical loads could help managers, regulators, and policymakers protect biodiversity and sustain the health and productivity of forests in the future.

5.2.8 Organic carbon in mangrove wood and lichens

Mangrove wood samples had an organic carbon content ranging from 41.8 to 46.0%, while lichen samples had an organic carbon content ranging from 54.3 to 40.5%. The total nitrogen content varied between wood samples and lichen samples, with the Corg/Ntot ratio varying significantly between species. The study found that lichen covers 2.2% more carbon than wood samples, accounting for about 2% of net primary production by coastal vegetation. The nitrogen intake by lichen covers is estimated to be around 0.5%, indicating that lichen covers are responsible for nearly half of the biological nitrogen fixation in mangrove ecosystems.

The accumulation of heavy metals by lichens is a widely studied aspect of modern lichenology, as it is crucial for biomonitoring and environmental management. The presence of heavy metals in lichens does not necessarily pose a threat to human health, but it indicates potential environmental contamination and can serve as a warning sign of adverse conditions. Monitoring heavy metal levels in lichens helps assess ecosystem health and guide environmental management strategies.

5.2.9 Mangrove Litter

Litter production by Bhitarkanika mangroves was assessed from November 2019 to February 2020. The monthly mean litter fall was estimated to be 5.43 ± 0.75 Mg dry litter ha-1, corresponding to a mean annual leaf litter fall of 11.49 ± 1.57 Mg dry litter ha-1 y-1 or 5.17 ± 0.70 Mg C ha-1 from the Bhitarkanika mangrove ecosystem. The annual mean litter fall rate from the Bhitarkanika mangroves was estimated to be 317.1 ± 43 Gg of dry leaf litter, corresponding to 142.7 ± 19.4 Gg of C. An important fraction of mangrove net primary production is returned to the environment through litter fall in the BCA mangrove area. The leaching data from the incubation experiment was combined with field data to estimate the DOC and nutrient export potentials of mangrove leaf litter to the coastal environment. The mean leaf litter fall rate from Bhitarkanika mangrove forest was found to be higher than that reported from the mangrove ecosystems of Indian Sundarbans (0.1173 Mg ha-1 y-1). Export of mangrove litter, primarily driven by rainfall and temperature, is estimated to be 50% of average mangrove litter fall.

5.2.10 Fisheries and Aquaculture

The Odisha Fisheries Policy, 2015, was introduced by the Government of Odisha to promote aquaculture development and fisheries extension, ensuring food security, livelihoods, and welfare for the traditional fishing community of Bhitarkanika. The policy aims to address gaps in legal and regulatory frameworks, administrative structure, financing mechanisms, and social and environmental implications. The Department of Fisheries focuses on generating employment, improving socio-economic conditions, doubling income, acquiring self-sufficiency in the inland sector, and conserving aquatic resources.

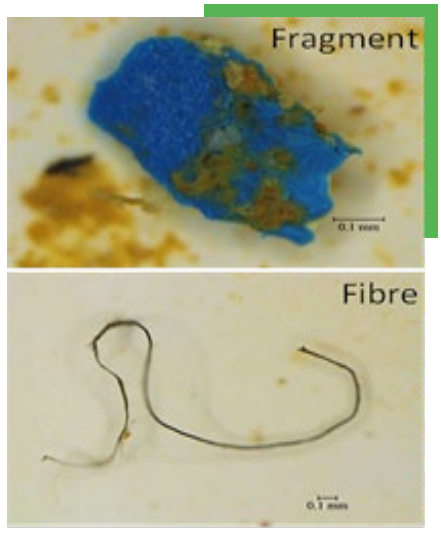
The Supreme Court constituted the Coastal Aquaculture Authority (CAA) in 2005 to provide directives for shrimp aquaculture in coastal zones. However, no permission was granted for aquaculture farming proposed within 200 meters of the high tide line or the CRZ. MoEFCC declared 192 villages around Bhitarkanika National Park as Eco-sensitive Zones, prohibiting shrimp farming. The government plans to initiate new schemes to support income generation activities for traditional fishermen and reduce migration. The Wildlife Protection Act, 1972 protects saltwater crocodile habitats, and fishing activity in crocodile habitation corridors is punishable under the Wildlife Protection Act. Traditional fishermen living in the periphery of the park should be sensitized and encouraged to limit their dependence on forests and adjacent water bodies.

5.2.11 Ambient Air Quality

Environmental monitoring on the BCA has been conducted in mangroves and coastal and marine ecosystems. Dangmal was chosen as a sampling location for assessing the ambient of air quality. Temperature and relative humidity varied significantly, with the lowest recorded in February and highest in August. Wind patterns changed over the region, with wind direction predominantly from the southwest. Factors such as dew point temperature, ambient temperature, and solar radiation can influence relative humidity. High humidity can cause discomfort due to deliquescent salt on skin surfaces, while 100% humidity leads to muggy conditions.

PM2.5 and PM10 concentrations were found to be higher in August and lower in February. These concentrations are within the safe limits set by the National Ambient Air Quality Standards (NAAQS) for ecologically sensitive areas. The average concentrations of NOx and SO2 were 13.32 and 15.36 µg/m3, respectively. PM variation is an essential component of the air quality index in any ecosystem, with possible variances mainly due to anthropogenic activities or natural calamities.

5.2.12 Micro-plastics



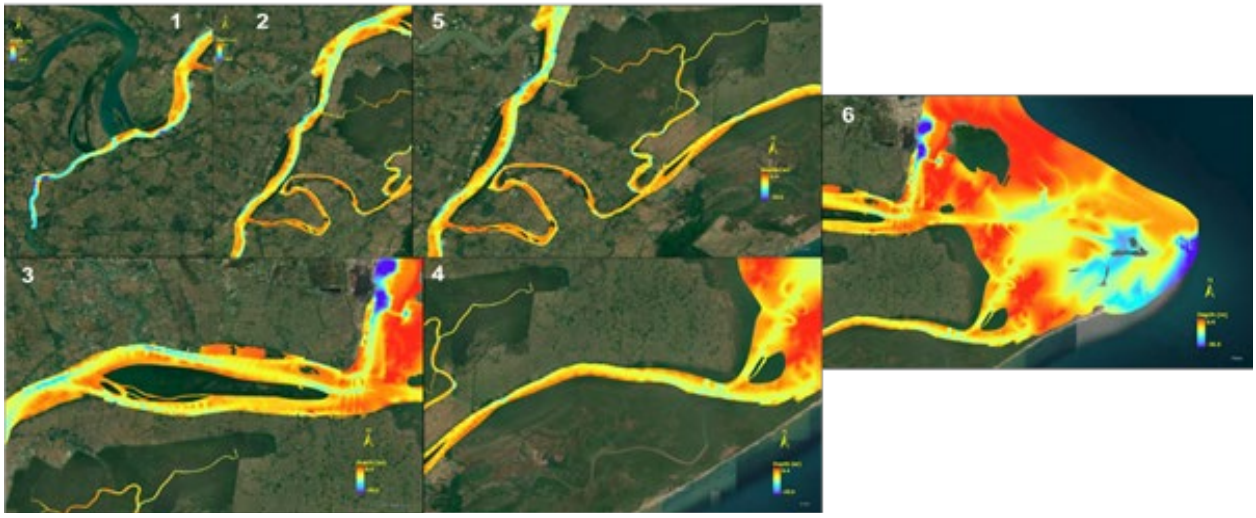
Micro-plastics (MPs) levels in the Bhitarkanika Conservation Area (BCA) range from 0.32 to 1.25 particles/m3, with a mean of 0.68 ± 0.26 particles/m3. The main sources of MPs are domestic items and tourism. Currently, single-use plastics have been banned in the reserve forest area while promoting eco-tourism. However, older discards of plastic materials remain in intertidal spaces between mangrove roots. MPs are characterized into different sizes, types, colors, and other factors to identify their source, chemical composition, degradation status, and palatability.

The 0.3-1 mm size accounts for up to 50% of the total MP content in surface water, followed by 1-2 mm (30%) and 2-5 mm (10%). Researchers have studied the size distribution of MPs in marine and freshwater environments to understand their impact on the food chain. Distribution of plastic particles often shifts into medium and small size categories due to the decomposition of large plastic particles producesa large number of small fragments in the form of secondary microplastics. These small particles pose greater risk to aquatic organisms due to their large surface area and high adsorption capacity to absorb other pollutants. White MPs dominate in the water, accounting for 35%, followed by blue (21%), and green (16%). Colored microplastics are commonly used in packaging, clothing, and other applications. The chemical composition of micro-plastic particles from all examined samples shows the dominating presence of polyethylene (32%), polypropylene (24%), polyamide (14%), polystyrene (13%), and other types of polymers (17%).

5.2.13 Hydrodynamic studies – Eco-flows

Hydrodynamic model simulations conducted in 2018 revealed that water levels in the Bhitarkanika region reached approximately 1.2 meters during the flood period and dropped to 0.15 meters during the ebb period. These water level characteristics were observed at five locations, with distinct variations ranging from -0.5 to 1.5 meters. Tidal currents varied from 0.1 m/s to 1.2 m/s, with the maximum speed observed at about 1.2 m/s in the creeks. The direction of the current and its magnitude varied from 0.3 m/s to 0.92 m/s at different locations in the northeast and east directions.

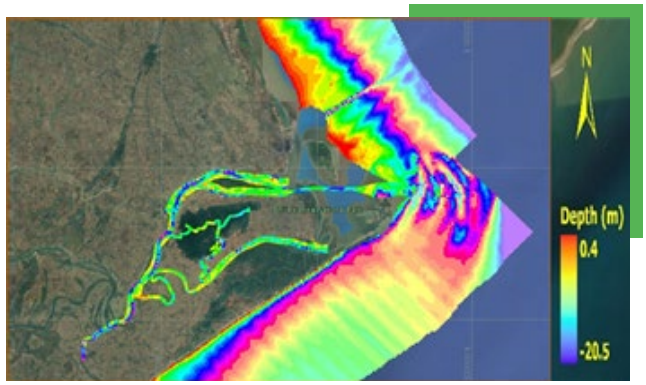
The Bhitarkanika region has been surveyed using bathymetry and oceanographic instruments during the dry season (February - March 2022) to understand the tidal flow environment and fluctuations in river discharge. The tidal amplitude and currents varied between -1.35m and 1.35m, with high tidal amplitude in the narrow creek region. The maximum tidal currents were between 80 cm/sec and 120 cm/sec, with maximum at the Brahmani River confluence and Kola region.



Block-wise bathymetry in the creeks and coastal regions of Bhitarkanika

The Bhitarkanika region has undergone a comprehensive assessment of eco-flows, including a bathymetry survey of major creeks and an estimation of river discharge using a real-time current meter (RCM) during the dry season. This data is crucial for the preparation of an ecosystem conservation plan and mitigation measures for bank erosion of creeks. Coastal processes data, including bathymetry, tides, currents, and sediments, were collected during these periods.

The Bhitarkanika region's mouth has a shallow depth of six meters, while the Brahmani River Creek, Taluchava regions, and open ocean creeks have maximum depths ranging from 18 to 21 m. The mangrove creeks in the region have a variable depth of 0.4 to 12 m, indicating a medium depth compared to other blocks. The bathymetry data is essential for real-time monitoring buoys to observe seasonal and annual variations in water environment and water quality parameters, as well as for designing bank erosion protection measures to maintain creek tidal flow conditions.



Bathymetry in the creeks and coastal regions of the Bhitarkanika

Coastal erosion in the region is primarily due to wave energy, with high wave heights being the primary cause of erosion. River discharge was estimated using parameters such as width between two banks, depth values from bathymetry data, and flow velocity from field measurements. The river discharge assessment at three locations, Brahmani, Dhamra, and Gupti, was about 1567 m-3 s-1, 3740 m-3 s-1, and 1237 m-3 s-1, respectively. These inflow river discharges during tidal fluctuations significantly influence nutrient transport. The surveyed bathymetry and coastal processes data are useful in understanding the estuarine dynamics, tidal prism, nutrient advection and dispersion, and estimate residence time of nutrients and pollutants in the mangrove waters. Future studies will use numerical coastal estuarine model simulations.

5.2.14 Shoreline Change Dynamics

The coastal stretch along Bhitarkanika has experienced significant changes due to natural and human-induced coastal activities. Shorelines oscillate in response to winds, waves, tides, currents, sediment

supply, and changes in sea level. These changes are not constant and often reverse in sign, causing accretion to erosion and vice versa. It is crucial to determine whether long- or short-term rates of shoreline change reflect present-day dynamics.

Analysis of shoreline change from 1990-2021 revealed two hotspots for intense erosion: one adjacent to the Hatamundia reserve forest, with an average erosion rate of -9.3 m/yr, and another major region besides the Bhitarkanika reserve forest, with an average erosion rate of -8.03 m/yr. The Pentha coast has suffered severe erosion, with seawalls protecting about 0.75 km. High accretion is also observed along the Hatamundia Reserve Forest, with the northern portion of the Mahanadi River experiencing high accretion. The Dhamra river mouth experiences low erosion on the southern side and accretion on the northern side, and both the northern and southern portions of Dhamra port experience accretion.

5.2.15 Nature-based Solutions

Nature-based solutions play a critical role in protecting against bank erosion. There are five types of nature-based solutions:

i. living reef breakwater,

ii. ecological enhanced revetments,

iii. geo-tube structures,

iv. living breakwaters, and

v. dune and beach nourishments.

Desilting locations where significant siltation has occurred resulting in an increase in water levels and flow rates due to the acceleration of current speeds. This leads to an improved flow environment and reduced bank erosion. In estuary regions, rivers are the dominant factor, and managing siltation within these water bodies is crucial.

Removing siltation would improve and enhance the free-flow tidal dynamics within creeks, reducing sediment accumulation, and mitigating the adverse effects of excessive sedimentation. Strategic management of siltation in estuaries not only enhances natural flow dynamics but also safeguards against destructive forces of erosion, promoting the ecological health and resilience of these vital coastal environments.

5.2.16 Real-time Greenhouse Gas Measurements

Greenhouse gas (GHG) estimation in Bhitarkanika Conservation Area (BCA) and Mahanadi mangroves, along with Gahirmatha Marine Sanctuary, was conducted on a seasonal and spatial scale. The study quantified greenhouse gas concentrations (pCO_2) and air-water flux (FCO_2) for all sampling sites in the mangrove waters. The highest pCO_2 concentrations were observed during the monsoon season, with the highest in the Brahmani river stretch.

During pre-monsoon, the highest pCO_2 concentrations were observed in the Bhitarkanika river stretch. The pCO_2 quantification revealed that all river stretches were supersaturated with respect to atmospheric CO_2 concentration during the monsoon season and 11 times supersaturated during pre-monsoon. This indicates that both the systems (BCA and Mahanadi) are net heterotrophic, regardless of seasons. The estimated air-water CO_2 flux from Gahirmatha Marine Sanctuary was 40 mM m^{-2} d^{-1} with an average pCO_2 concentration of 817 ppmV. Throughout the year, the mangrove surrounding waters of Bhitarkanika and Mahanadi are heterotrophic, with high super-saturation up to 51 times with respect to atmospheric CO_2.

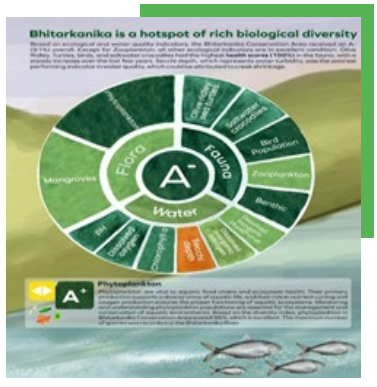
Oxidation of organic matter in mangrove waters and sediments results in super-saturation of CO2, which is then fed to the atmosphere. The lowest pCO2 concentration in the Maipura sector indicated healthy water quality with low anthropogenic inputs and regular tidal flushing. In contrast, the Gahirmatha marine sector showed lower oversaturation of CO2 due to the persistently high salinity profile. High salinity zones allowed for the dilution of dissolved and particulate carbon flushed out from adjacent mangrove ecosystems, and suppressed microbial degradation processes, controlling pCO2 concentrations and fluxes.

Eddy-covariance flux tower at Bhitarkanika for real-time CO2, CH4 assessment

From the real-time observations the source or sink characterization of CO2 and CH4 from tropical mangroves in Bhitarkanika can be measured, using the Eddy covariance technique to interpret landscape-wide exchanges of CO2, CH4, H2O, and heat fluxes. The undisturbed Bhitarkanika mangrove forest is observed as a significant net CO2 sinkbut also a minor source of CH4 in the atmosphere. Strong seasonal variability in CO2 and CH4 fluxes was recorded in the study area. However, the assimilation rates of these ecosystems are expected to drop due to global warming and exploitation of these systems. More research is needed to determine the environmental variability response on the carbon cycle to simulate ecosystem-level C sequestration under different climate change scenarios. Any disturbance to these blue carbon ecosystems could significantly reduce their carbon sequestration capacities and amplify greenhouse gas emissions. The study confirms that mangroves are prime ecosystems for conservation, reforestation, and restoration, despite uncertainties and the unique nature of implementing REDD+ and Blue Carbon projects.

5.2.17 Ecosystem Health Report Card 2022-2023

Continuous improvement in planning/policy is required for maintaining the ecosystem health of BCA. Hence, preparation of 3rd annual health report card 2022 was initiated to closely monitor the ecosystem health status and the information generated from this, will allow the local Government, Policymakers and other natural resource managers to better manage the aquatic ecosystem. Ecosystem health status was assessed as A- grade. The 3rd Eco system Health Report Card published during November, 2023.



Water quality is a critical indicator of ecosystem health in marine conservation areas, affecting various parameters like dissolved oxygen, pH, turbidity, nutrient levels, and pollutant concentrations. High water quality indicates a healthy ecosystem with diverse habitats and abundant biodiversity, while deteriorating water quality can indicate stressors like pollution, habitat degradation, or overfishing. The Ecosystem Health Index (EHI) is a vital tool for assessing the effectiveness of conservation areas, gauging biodiversity, habitat quality, and ecological balance. The EHI guides management decisions, tracks changes over time, and prioritizes conservation efforts. It promotes sustainable land use practices, protects critical habitats, and safeguards biodiversity for future generations, ensuring the long-term viability of conservation areas worldwide.

BCA consistently meets desired water quality levels, that demonstrates the significance of conservation efforts and sustainable management practices in preserving coastal ecosystems and their biodiversity, highlighting the importance of nutrient cycling, habitat provisioning, and species interactions.

5.2.18 Establishing the Dangmal Laboratory & Capacity Building

NCSCM has assisted the OFSDS in the enhancement of the Dangmal laboratory for continuous monitoring of BCA by the Odisha Forest department. Field-level Forest personnel are trained in sample collection, analysis, and interpretation. The Dangmal Laboratory serve as a unique demonstration site in India, showcasing the Odisha Forest Department's science-based conservation and management strategy for the mangrove ecosystem. The training program aims to develop skilled professionals capable of using the latest methodologies, advanced analytical techniques, and decision support systems to monitor and manage the environmental and ecological quality of BCA. The process includes equipment identification, procurement, transfer, and training for forest officials.

NCSCM conducted several training sessions at Bhitarkanika, Dangmal, for eight forest officers from Rajnagar forest divisions. The training aimed to equip them with the knowledge and skills to handle and use newly procured equipment for monitoring the Bhitarkanika Conservation Area's mangrove ecosystem. NCSCM's scientists provided a comprehensive working knowledge on the equipment's working principles, applications, and proper handling techniques to the forest officers and field staff. A field visit was conducted at Bhitarkanika to demonstrate how to incorporate the tools into the monitoring program and provide hands-on experience.

The OFSDS is proposing to monitor environmental variables in real-time through the deployment of a data buoy. The buoy provides automatic data collection, transmission, storage, processing, analysis, publishing, and sharing of data products. Two strategic locations were chosen for monitoring water quality changes. A detailed site selection survey was conducted in December 2023, and the first data buoys were deployed at Mahisamada creek in the Kanika Range near Dangmal jetty. The second data buoy was deployed at Krishnapriyapur in February 2024.

The buoy has field-replaceable probes for measuring eight parameters, including salinity, DO, conductivity, temperature, pH, ORP, turbidity, and chlorophyll. The data will be transmitted real-time to three locations: NCSCM Lab, Dangmal Field Lab, and the DFO office at Rajnagar. The acquired data will serve as a baseline for developing future environmental strategies for the conservation and management of the BCA's fragile resources.

NCSCM conducted a five-day training session in Bhitarkanika, Dangmal, from December 18 to 22, 2023, to build capacity to forest officers about the use of Data buoy and water quality probes for monitoring the Bhitarkanika Conservation Area's mangrove ecosystem. The training focused on equipping officers with the knowledge and skills to handle these probes effectively. NCSCM scientists provided a comprehensive orientation session on the equipment working principles, applications, and proper handling techniques. A field visit was conducted to demonstrate how to incorporate these tools into the monitoring program and provide hands-on experience. Forest staff were thoroughly briefed on safety procedures and do's and don'ts.

In summary, a holistic conservation and management of the Bhitarkanika Conservation Area and the adjoining Gahirmatha Marine Sanctuary is being accomplished through science-based long term and real-time assessments. This would provide a robust foundation for the scientific management of the fragile and pristine mangroves of Bhitarkanika. Deployment of the various equipment for real-time assessments and the establishment of the Dangmal laboratory have facilitated in the enhancement of the existing skills of the forest officers to deal with the challenging conservation measures- especially under climate change.

Chapter 6

Livelihood Initiatives under OFSDP-II

6.1 Introduction:

The objectives of the Odisha Forestry Sector Development Project, Phase II (OFSDP-II) are largely focused on improving the livelihoods of forest fringe dwellers in a holistic manner. Rather than simply aiming to alleviate poverty, the project aims to promote sustainable livelihoods that encompass economic, ecological, and social dimensions. The adoption of a cluster approach suggests a targeted strategy to enhance opportunities for forest fringe dwellers to earn a living sustainably. By clustering resources and efforts, the project can more effectively address the diverse needs and challenges faced by these communities. The convergence approach recognizes that sustainable development requires coordinated efforts across different domains. The involvement of various line departments through convergence and the utilization of project funds indicates the project's collaborative and multi-sectoral approach to livelihood improvement. Community mobilization and facilitation are essential components for ensuring the success and sustainability of livelihood initiatives. By empowering communities at the grassroots level, the project fosters ownership and participation, which are crucial for long-term impact. Guidelines, training, capacity building, and micro plan documents serve as important tools for implementing and monitoring livelihood and community development activities. By providing clear frameworks and building the skills of project staff, field functionaries, and partner NGOs, the project enhances the effectiveness and efficiency of interventions.

6.2 Strategies:

The following strategies outlined for livelihood interventions under the project highlight the comprehensive approach to address the multifaceted challenges faced by forest fringe dwellers:

i. Preparation of community development plan through microplanning: This involves a bottom-up approach where communities actively participate in the planning process to identify their needs, resources, and priorities. Microplanning ensures that interventions are tailored to the specific context and requirements of each community.

ii. Developing Common Facility Centre: VSS building-cum-IGA facilitation centre: Establishing a common facility centre serves as a hub for various income-generating activities (IGAs) and community gatherings. It provides a physical space where resources, knowledge, and support services can be accessed by forest fringe dwellers.

iii. Community development through Inter-Sectoral Convergence: Convergence in terms of collaboration and coordination among different development sectors, represented by line departments in the government and other organizations ensures a holistic approach to community development. By leveraging resources and expertise from various line departments, the project is able to address multiple dimensions of livelihood improvement effectively.

iv. Provisioning of Revolving Fund to VSSs: Providing revolving funds to VSSs enables them to initiate and sustain income-generating activities through the SHGs. These funds can be used for seed capital for starting small enterprises, equipment purchase, or other business investments, with the returns reinvested or rotated among the community.

v. Livelihood Resource Centre for strategic planning: Establishing a livelihood resource centre serves as a knowledge hub for providing information, training, and technical assistance to the field functionaries in the project and VSS/SHG members for strategic planning and implementation of livelihood activities.

vi. Value addition through establishment of Multi Product Clusters: As the project's livelihood focus is on value addition of forest-based products for enhancing their economic viability, it tries to achieve this feat by establishing Multi Product Clusters (MPCs) with an objective to promote entrepreneurship and viable market linkages while adding value to local / forest products.

vii. Activities taken up in Sal Leaf Clusters: The initiatives taken up by the Sal leaf clusters aim at harnessing the potential of sal leaves for income generation. This could include training the SHG members in leaf plate making, supporting the production process, product diversification, and market access and so on.

viii. Engagement of Marketing and Management Support Agency (MMSA): Collaborating with MMSA helps the project in promoting and scaling up livelihood initiatives. These agencies provide expertise in market analysis, branding, and distribution, facilitating better market linkages for forest fringe products.

ix. ix Participation of VSS and SHGs in State Level Tribal and Herbal Fairs: Participation in state-level fairs provides the VSS /SHG members of various forest divisions to get exposed to wide range of marketing opportunities for their products. Participation in these fairs enhances visibility, networking, and market access for community-produced goods.

Overall, these strategies emphasize community participation, capacity building, market orientation, and inter-sectoral collaboration to promote sustainable livelihoods among forest fringe dwellers.

6.3 Livelihood Resource Centre (LRC).

The Livelihood Resource Centre (LRC) is an integral unit established within the Project Management Unit of the Odisha Forestry Sector Development Society (OFSDS). Its primary objective is to provide technical and managerial support to product clusters by promoting Income Generating Activities (IGAs). The LRC plays a crucial role in offering daily handholding support to various grassroots entities, including VSSs, SHGs, Common Interest Groups (CIGs), Poorest of Poor (POP) families, and multi-product clusters. This support is aimed at enabling these groups to undertake sustainable livelihood interventions with sufficient backward and forward linkages.

To enhance the establishment and operationalization of product clusters, the LRC has engaged a Marketing Management Support Agency (MMSA). This agency's role is to provide professional support necessary for the effective functioning of these clusters. Furthermore, the LRC extends its livelihood promotion support to other projects under OFSDS, such as Ama Jangala Yojana (AJY) and Odisha Mineral Bearing Areas Development Corporation (OMBADC)-OFSDS projects.

The LRC focuses on ensuring alternative livelihood opportunities for forest-dependent communities through strategies like Inter-Sectoral Convergence and the disbursement of Revolving Funds to borrowing entities. To achieve optimal synergy and coordination between various line departments and project authorities, different committees have been constituted from the state level down to the grassroots level. These committees work together to implement government schemes and programs effectively at the community level, ensuring the well-being and economic upliftment of the forest dependent populations.

6.4 Engagement of Marketing and Management Support Agency (MMSA)

To enhance technical, managerial, and implementation support for establishing and operationalizing Multi-Product Clusters aimed at sustainable livelihood initiatives and promoting Income Generating Activities (IGAs) through Self-Help Groups (SHGs), Common Interest Groups (CIGs), and the Poorest of Poor Households (PoPs), the project has been collaborating with several key organizations. These include the Consortium of Kalinga Institute of Industrial Technology and Technology Business Incubator (KIIT-TBI) in Bhubaneswar, the Bhubaneswar City Knowledge Innovation Cluster (BCKIC) in Bhubaneswar, and the Indian Institute of Entrepreneurship (IIE) in Guwahati. The Management and Marketing Support Agency (MMSA) is to ensure the successful establishment and operationalization of these Multi-Product Clusters in the project area under the overall guidance and support by LRC.

6.4.1 The key objectives of engaging MMSA are as under:

The objectives, responsibilities and scope of work of the MMSA (Multi-Product Cluster Support Agency) are outlined as follows:

1. Enhance Product Marketability: Facilitate the aggregation, value addition, packaging, and marketing of products, as well as develop supply chain infrastructure to ensure products reach profitable markets.
2. Strengthen Market Connections: Support the establishment of financial linkages, implement technological solutions, conduct quality checks, and enhance branding and market positioning of products to increase their competitive edge.
3. Promote Skill Development and Sustainability: Provide training for skill enhancement and capacity building to stakeholders, beneficiaries, and change agents. Focus on fostering a sustainable business culture and enterprise operations that prioritize the conservation of ecological assets. Scope of Work for MMSA:

- Establish and Operate Multi-Product Clusters: Provide strategic support for setting up and running Multi-Product Clusters, including community and CBO (Community-Based Organization) mobilization, comprehensive business planning, and relevant skill development.
- Cluster Identification and Development: Identify and define the Multi-Product Clusters, and develop systems and processes, including digital platforms, to streamline operations and product positioning.
- Strategic Planning and Management: Build strategies and plans for effective supply chain management, maximizing value chains, and fostering market development.
- Marketing and R&D Support: Offer ongoing support for marketing and research and development to enhance cluster viability.
- Ensure Financial and Environmental Viability: Work with clusters to develop financially sustainable models that comply with the environmental guidelines set by the Government of Odisha, aiming to transform these clusters into profitable entities.

The Consortium of MMSA under LRC, OFSDS is assisting in organizing tie up with social enablers who are capable of linking the value-added products to the market. The MMSA is also organizing the development of standard operating protocols for different products and rolling out of the capacity building programs and membership drive of primary producers for setting up value chains.

Consolidated Business Transaction Status by MMSA during (2023-24)						
Product	Social Enabler/ Local Trader	Coverage (In nos)		No of Beneficiaries	Quantity Traded (In Kgs/pieces/ bundles)	Amount (In INR)
		Project Divisions	No of VSSs/ EDCs			
Indigenous Aromatic paddy	Kanak Bio Science	2	14	114	19,909.2 kgs	4,78,332
Karanja Seed	TERVIVA	3	15	108	11681.4 kgs	4,51,407
Sal Leaf Dwipatree	MGPL	2	13		3393 Bundles	1,69,600
Dhatki	Agarwal Traders	1	7	98	99.3 kgs	4,468,50
Sal Seed	TDCC	1	10	91	344658 kgs	66,93,160
Vegatables	Villa Mart	1	1	1	30 kgs	1225
Vegatables	Weekly Market & Local Traders	8	39	26	105041 kgs	25,13,476
Pulses	Local Trader	4	9	70	2045.5 kgs	1,49,245
Cashew	Local Trader	1	5		11215 kgs	11,71,200
Harida	Local Trader	1	2		28.2 kgs	451.20
Honey	Local Trader	1	1	2	8 kgs	2,800
Tamarind	TDCC	1	6	130	38310 kgs	13,79,160
Broiler Chicken	Local Trader	1	3	17	14375 kgs	14,61,150
Chiraunji	Local Trader	1	2	25	310 kgs	62,000
Mushroom	Local Trader	1	4		2073 kgs	3,91,090
Groundnut	Local Trader	2	2	53	8800 kgs	5,72,000
Lemon grass oil	Taradeep Agro Biotech		1	11	41.6 kgs	53,100
Floriculture	Local Trader	1	1	1	30 kgs	1,500
Bamboo Craft	Local Trader	1	3		206 pieces	46,570
Hill broom	Local Trader	1	6	32	2826 pieces	90,225
Sal Leaf plate & bowls	Local Trader	4	3	11	2183 bundles	99,670
		3	5	8	222760 pieces	4,13,011
Others	Local Traders	9	5	10	7403	3,35,690
Total				**808**		**165,40,531**

6.5 Community Development through Micro planning

A micro plan is a crucial document developed at the Village Self-Help Society (VSS) level that serves as a blueprint for initiating project activities. This plan is crafted with substantial community involvement and revisited for updates after four years of project implementation.

The process of creating and revisiting Micro Plans cab be detailed as shown below:

1. Initial Preparation:

   • Community Engagement: The creation of the initial micro plan involves active participation from community members. Partner NGOs and project personnel facilitate this process using detailed Participatory Rural Appraisal (PRA) tools.

   • Drafting and Feedback: Once the micro plan is drafted, it is presented to the General Body of the respective VSSs for feedback and approval.

   • Formal Approval: After the General Body approves the micro plan, it is submitted to the Gram Sabha for final endorsement.

   • Incorporation into Panchayat Plans: Approved micro plans are then discussed in the Panchayat Samiti planning meetings to be integrated into the broader perspective plans of the Panchayats.

2. Revisiting and Updating:

   • Periodic Review: Four years into the project, existing micro plans are revisited to reflect the evolving needs and priorities of the community.

   • Continued Community Involvement: The revision process, like the initial preparation, heavily involves community participation, ensuring the plan remains relevant and effective.

Current Status:

- Micro Plans Formulated: To date, 1,221 micro plans have been developed and approved by the Gram Sabhas across 1,211 VSSs and 10 Eco-Development Committees (EDCs).
- Revised Plans: Out of these, 777 micro plans from the first and second batches of VSSs have been revisited and updated to align with current conditions and requirements.

This structured approach ensures that the micro plans are not only community-driven but also remain dynamic and responsive to changing circumstances.

6.6 Developing Common Facility Centre; VSS Building-cum-IGA Facilitation Centre:

The VSS Building cum IGA Facilitation Centre has been constructed based on the identified need for a Common Facility Centre during the preparation of village development plans or micro plans. These centres serve as valuable assets to the villagers, providing spaces for conducting meetings, cultural programs, health camps, storing Non-Timber Forest Products (NTFP), drying yards, animal health camps, training sessions, and more. Under OFSDP-II, a VSS Building cum IGA Facilitation Centre has been constructed in each of the VSS. As of March 2024, a total of 1,207 such centres have been completed, with the construction of the remaining four buildings currently in progress.

6.7 Inter-sectoral Convergence:

To ensure effective coordination with line departments and achieve inter-sectoral convergence under the Odisha Forestry Sector Development Project-II (OFSDP-II), a comprehensive institutional framework has been established at various levels.

Key Institutional Structures:

i. Apex Entities:

- High-Powered Committee (HPC): This is the top-level body responsible for overseeing the project.
- Governing Body of the Odisha Forestry Sector Development Society (OFSDS): This body collaborates closely with the HPC to issue directives to relevant line departments, ensuring seamless integration and synergy with the OFSDP-II initiatives.

ii. District and Block Level Committees:

- District Level Advisory Committees (DAC): Chaired by the District Collector, these committees include senior officials from various line departments at the district level. The DAC convenes quarterly to discuss and coordinate project activities.
- Block Level Advisory Committees (BLAC): Led by the Block Development Officers, these committees comprise senior officials from line departments at the block level. The BLAC holds monthly meetings to ensure regular and focused implementation.

Roles and Activities:

- Facilitation of Inter-Sectoral Convergence: The DACs and BLACs play a crucial role in facilitating the smooth implementation of the inter-sectoral convergence program under OFSDP-II. They help integrate various government schemes and ensure their execution in the project villages.
- Livelihood Development Plan Implementation: These committees are instrumental in implementing the Livelihood Development Plan by leveraging resources and support from different sectors.
- Community Development through Convergence: At the VSS level, various community development activities, known as Entry Point Activities (EPAs), are carried out through convergence. These include among others:
  - Repair and maintenance of approach roads and tube wells.
  - Cleaning of drains.
  - Installation of streetlights.
  - Organization of animal and human health camps, among other initiatives.

This structured approach at multiple levels ensures that the project achieves optimal synergy and inter-sectoral convergence, facilitating the successful implementation of development activities in the OFSDP-II project areas.

DMU wise Convergence During 2023-2024

Name of DMU	No. of VSSs Covered	No. of H.H Covered	No. of Beneficiaries	Amount of Convergence (Rs. in Lakhs)
Athmallik	75	14776	17072	1199.40
Baripada	135	21850	62561	1532.60
Boudh	71	14341	24522	1015.99
Dhenkanal	150	34490	56942	1289.97

Ghumsur (N)	100	11478	9782	1499.24
Ghumsur (S)	65	19639	34361	1073.87
Jharsuguda	88	25077	52539	1599.46
Karanjia	80	9885	28364	775.46
Rairangpur	107	10007	15741	1360.76
Sambalpur	100	19080	15769	1889.60
Subarnapur	84	16881	16455	1084.93
Sundargarh	156	21132	29878	2213.06
Grand Total	**1211**	**2,18,636**	**5,10,074**	**16534.35**

During the Financial Year 2023-24 a sum of Rs.1653.5 lakhs have been mobilized covering 5.10 lakh beneficiaries belonging to 2.19 lakh households. Different type of works of line departments have been executed by the VSSs for IGA promotion. Details of the convergence activity is given in the following table. So far, 1211 VSSs have been covered under convergence during the reporting period. Departments like Panchayti Raj & Drinking Water, Soil Conservation, SC & ST Dev., Women and Child Development, Horticulture, Fisheries & ARD, Health & Family Welfare, Irrigation, PWD etc. have made significant contribution to the OFSDP-II project area through inter-sectoral convergence.

Department Wise Convergence During 2023-2024 Under OFSDP-II		
Department	**Total Beneficiaries (In Nos.)**	**Amount of Convergence (Rupees in Lakh)**
Agriculture & Farmers' Empowerment	17616	295.62
Bank	3372	674.68
Corporate	2168	149.33
Department of Water Resource	2576	216.62
Dept. of Industry	5	8.06
Dept. of Energy	127	11.20
District Mineral Foundation	433	25.77
Education	260	6.00
Fisheries and ARD Department	8987	513.68
Forest Environment & Climate Change	25044	616.07
Handloom & Textile Dept.	27	4.10

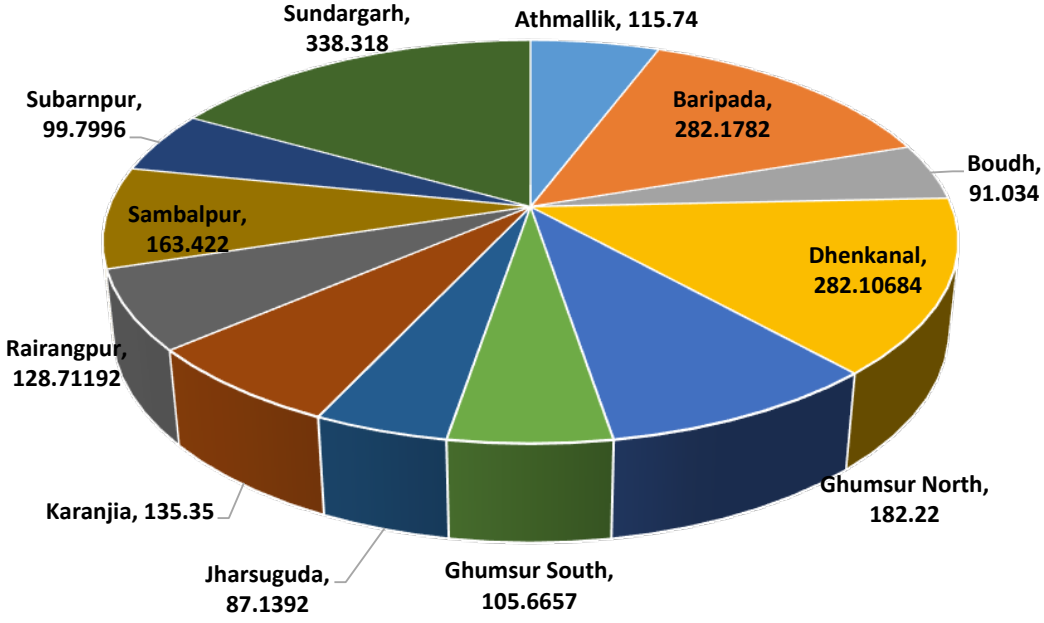
Health & FW Dept.	9985	49.86
Horticulture Dept.	9403	357.04
Irrigation	4125	531.54
Labour Deptt.	30	0.05
Ministry of Communication	1021	575.60
Ministry of Petroleum and Natural GAS	19	0.82
Mission Shakti	2853	360.23
MP/MLA LAD	3785	19.30
NGO	5262	77.76
Odisha Khadi & Village Industries Board	100	9.74
Panchayatiraj & Drinking water	353005	9027.72
PWD dept.	2458	590.51
Rural Development	15628	943.17
SC & ST Dev. Dept.	17407	690.73
Skill Development	232	10.20
Soil Conservation Dept.	13984	668.95
SSEPD	104	0.99
Urban Development	1899	73.50
Women and Child Development	8159	25.54
Grand Total	**510074**	**16534.35**

The convergence initiatives can be grouped into various areas, viz resource based, policy based, skill based, infrastructure based and service based. The P-NGOs teams and field functionaries have played an important role in mobilising the community and facilitating the community development at the local level under the guidance of project personnel. Various livelihood initiatives like mushroom cultivation, Mo-bagicha, sal seed selling, floriculture, vermi compost, vaccination of livestock, poultry, seeds distribution, selling of medicinal products, fish farming etc. were initiated through Inter-Sectoral convergence.

6.8 Utilisation of Revolving Funds by VSS:

Revolving Fund is one time grant to each VSS that has been provisioned under the project to provide loan to the SHGs, CIGs and PoPs for undertaking IGAs to augment the family income. This fund will help to improve access to small scale finance required for investment towards IGAs. A detailed RF Guideline has been prepared for effective use of this fund. Training and capacity building programme have been conducted for the project personnel in order to manage the fund effectively at each VSS. A Loan Appraisal Committee has been created in each project VSS to thoroughly verify the Business Plan and approve the loan. Borrowing Entities like; SHGs, CIGs and Poorest of Poor need to prepare the Business plan to avail the loan from Revolving Fund through VSS.

DMU wise Amount Released to the Borrowing Entities till March 2024 (Rs. in Lakhs)



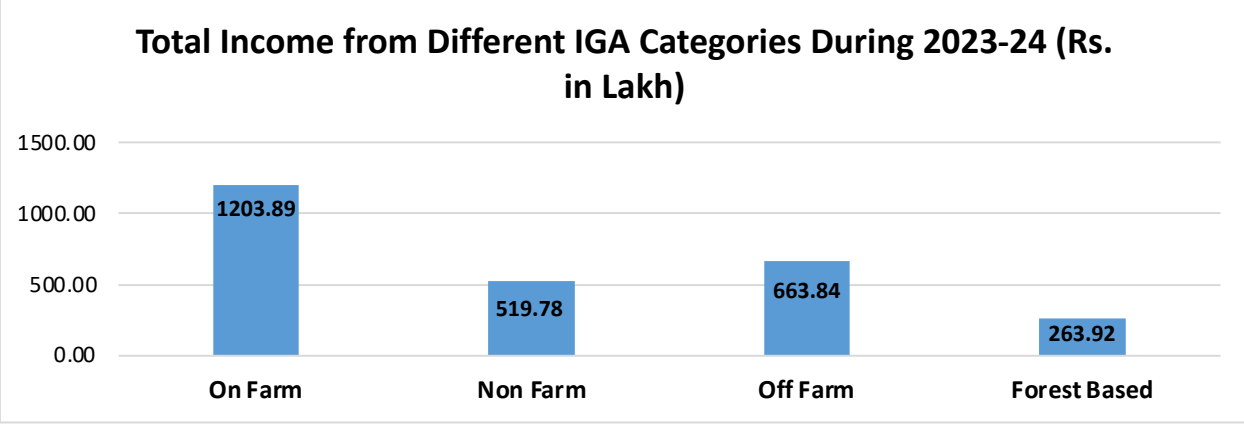
Status of Utilisation of RF During (2023-24)

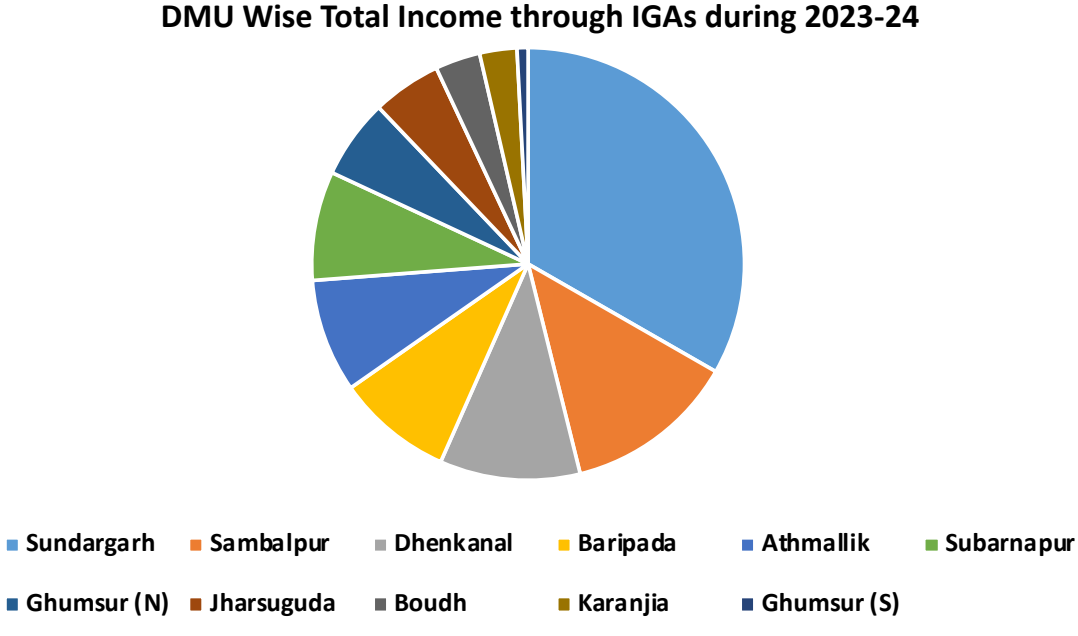
Total no. of DMUs	**12**
No. of FMUs	48
No. of VSS Released RF	192
Total Amount Disbursed to Borrowing Entities (SHG/CIG/PoP) Rs. in Lakh	890.73
Total Amount repaid by BEs (Rs. in Lakh)	763.97
No. of SHGs received Loan	827
No. of CIGs received Loan	141
No. of PoPs received Loan	3882
Total number of beneficiaries benefitted	**13,071**

Till March 2024, Rs. 19.55 Crore has been disbursed to the SHGs, CIGs, & PoP members out of which Rs.10.21 Crore has been refunded by the Borrowing Entities. Total beneficiaries; SHG= 2154, CIG=324, PoP =8303.

6.9 Providing IGA Options and Market Support:

Promotion of IGAs among the forest dwellers has been one of the major target of OFSDP-II. Till now small IGAs have been promoted in 2478 SHGs & CIGs and among 8303 PoP members through the support of Revolving Fund. Support has also been provided to the forest dwellers through convergence with different line departments. Highest income has been generated through on farm activities like agriculture, horticulture and allied activities.





6.10 Value addition through Establishment of Product Cluster:

Creating opportunities for sustainable Income Generation Activities (IGAs) for targeted forest-dependent communities is a key component in achieving the overall goals of the OFSDP-II. This initiative aims to improve the income of forest fringe dwellers, thereby promoting sustained livelihoods

and significantly reducing biotic pressure on forests. While small-scale IGAs are essential, a major component of the project is the establishment of Multi-Product Clusters (MPCs) in the project divisions. This cluster approach is an effective strategy for creating long-term economic opportunities. It specifically targets SHGs, CIGs, and the PoPs within the VSS areas. The clusters enable these groups to sell their products at remunerative prices, ensuring sustainable income for the community members.

The establishment of MPCs not only fosters economic growth but also strengthens the collective bargaining power of the community, enhances market access, and improves the overall quality and standardization of the products. Through this approach, the project aims to create a sustainable and resilient economic model that benefits the forest-dependent communities in the long term.

List of Products identified for Proposed Multi Product Clusters

Division	Range	Name of the Proposed Cluster Location	Name of the Major Product	Name of the other Products for Multi cluster
Athamallik	Athamallik	Tangianisha	Ground-nut	Mango, Bahada, Harida, Amla & Char
Baripada	Betonoti	Baidpur, Bartana	Sal Leaf	Honey, Harida, Bahada, Mahua seed (Tola), Bamboo
Dhenkanal	Dhenkanal	Hi-tech Nursery,	Cashew	Mango, Sal Leaf, Black Gram, Jack Fruit & Honey
Subarnapur	Ullunda	Matupali	Hill Broom	Sal leaf
Karanjia	Thakurmunda	Kendumundi	Sal Leaf	Myrobalans, Pongamia seed, Lemon, Tamarind,
Rairangpur	Bisoi	Bartana	Sal Leaf	Pongamia seed, Honey, Harida, Bahada, Charaand others
Boudh	Boudh	Bamanda Central Nursery	NTFP & Pulses	Chara, Pongamia seed, Pulses, Tamarind
Sambalpur	Padiabaha, Dhama	Chamunda/Badmal/ Bhimkhoj	Sal Leaf	Tamarind, Bahada, Harida, Mahua flower
Ghumsur (N)	Mujagada	Bhanja Nagar (Bana Vihar)	Sal Leaf	Cashew, Tamarind, Amla, Bahada, Harida
Ghumsur (S)	Buguda	Matajhari	Pulses	Cashew, Mango, Tamarind, Amla, Bahada, Harida
Sundargarh	Ujjalpur, Hemgiri	Hi tech Nursery, Ujjalpur	Sal Leaf	Mango, Char, Harida Bahada
Jharsuguda	Kolabira, Bagdihi	Borpain/Ganjudihi/ Kukerama/Bhimjore	Lemongrass	Mango, Chilli, Harida, Bahada & Amla

As individual VSS does not have the ability and resource to take up bulk processing, marketing and retailing of the products, the Multi Product Cluster for aggregation and value addition of the product is promoted so as to ensure a greater remunerative marketing and improved income for the forest fringe dwellers.

6.11 Activities taken up in Sal Leaf and other Product Clusters:

Sal leaf collection, processing, and marketing play a vital role as an Income Generating Activity (IGA) for communities living near forest areas. The focus on collective marketing of value-added Sal leaf products has become a central livelihood strategy in the Divisional Management Units (DMUs) of Baripada, Karanjia, and Rairangpur.

Key Initiatives and Developments:

1. Collective Effort in Project Villages:

   • Over the past two years, the collection, processing, and marketing of Sal leaf products have been extensively promoted in project villages through the VSSs, Self-Help Groups (SHGs), Common Interest Groups (CIGs), and Poorest of the Poor (PoPs) members.

2. Establishment of Multi-Product Clusters:

   • Karanjia, Rairangpur, and Baripada Sal Leaf Cluster: Three Multi-Product Clusters have been established in these Forest Divisions of Mayurbhanj District, focusing primarily on Sal leaf processing and value addition.

   • Facilities and Equipment: These clusters are equipped with dedicated cluster buildings, essential processing equipment, and electricity, enabling advanced processing of Sal leaf plates and enhancing production efficiency.

3. Active Involvement and Support:

   • Livelihood Resource Centre (LRC) and MMSA: The LRC team, along with the Multi-Product Cluster Support Agency (MMSA), has been actively involved in ongoing social mobilization efforts to ensure the successful operation of these Sal leaf clusters.

4. Expansion to New Areas:

   • New Clusters in Development: Three additional clusters are being developed in the Dhenkanal, Boudh, and Jharsuguda Divisions. Each cluster will concentrate on one primary product, with the inclusion of a few supplementary products, to provide diverse and sustainable income sources for forest-dependent communities.

Goals and Impact:

- Economic Resilience: These initiatives aim to bolster the economic resilience of forest dwellers by offering them sustainable and diversified income opportunities through organized and value-added processing of Sal leaf products.
- Sustainable Livelihoods: By focusing on value addition and collective marketing, these clusters help ensure that forest fringe communities can secure a stable and enhanced income from their traditional activities.

This comprehensive approach not only supports the local economy but also promotes sustainable practices and long-term community development.

Multi Product Cluster Progress Status till March 2024, OFSDP-II								
Name of the Cluster	Production Status (In Numbers)		Selling Status					Number of persons benefitted
	Total Production		Total Sales (In numbers)		Average Selling Price (In Rs.)		Total Sale	
	No. of Plates Produced	No. of Bowls Produced	Khali/ Pressed Khali	Bowl	Khali (Rs.)	Bowl (Rs.)		
MPC,Baripada	126779	3750	116529	3400	2.95	0.7	289335	156
MPC Rairangpur	18425	94900	15125	65740	4.02	0.85	111374	240
MPC Karanjia	45585	19850	31550	13875	4.25	0.75	69610	163
Lemon Grass Oil, Jharsuguda	104.93 Kg		103.72 kg		1081.5		112173	16
TOTAL							582492	575

6.12 Participation of VSSs/SHGs in the State Level Herbal Fair and Adivasi Mela at Bhubaneswar

The Odisha Forestry Sector Development Society (OFSDS) participated in the 16th State Level Kalinga Herbal Fair- 2023 organized by State Medicinal Plant Board, Government of Odisha from 5th December to 11th December 2023. The exhibition-cum-sale counter in the 16th Kalinga Herbal Fair – 2023 had witnessed participation of thirteen Territorial Forest Divisions of OFSDP-II and AJY being implemented under Odisha Forestry Sector Development Society. The OFSDS stalls were visited by Honourable Minister, Department of Forest, Environment and Climate Change, Government of Odisha, Shri Pradeep Kumar Amat and Sri Debidutta Biswal, IFS, Principal Chief Conservator of Forests, HoFF, Govt of Odisha, and Dr. Meeta Biswal, IFS, PCCF (Projects) and Project Director, Odisha Forestry Sector Development Project participated in the inauguration of the Herbal Fair.

This was a fair with a major thrust on herbal products, organic products and wellness activities, VSSs were chosen from the identified Herbal Cluster of OFSDS. This time, priority was given to introduce the products of Self-Help Groups operationalized under OFSDP-II and AJY herbal clusters.

The OFSDS ensured display of project activities and achievements at the exhibition. As many as 24 SHGs strengthened under Ama Jangala Yojana & OFSDP-II, had participated in the event. Total 59 members of 24 Self Help Groups representing the Vana Surakhya Samitis of OFSDP-II and AJY Divisions participated in the seven-day exhibition.

The Odisha Forestry Sector Development Society (OFSDS) also participated in the Adivasi Mela 2023-24 from 26th January to 5th February 2024. The exhibition-cum-sale counter had witnessed participation of eleven Territorial Forest Divisions of OFSDP-II and AJY being implemented under Odisha Forestry Sector Development Society. In total 16 SHGs with 28 members had participated in the exhibition and sale of Rs.15.49 Lakhs was generated for the participants. Such exhibition at State level is quite encouraging for the SHG and CIG members.

Chapter 7

Innovations under OFSDP-II

7.1 Introduction

Traditionally, the forest sector has been seen as conservative, often resistant to change despite potential benefits, owing to its long operational cycles. However, in a rapidly globalizing world, fostering innovation is imperative for competitiveness. Government policies play a crucial role in encouraging innovation within the forest sector. Transformative innovations, involving various stakeholders beyond the sector's current dominators, are already emerging. Governments, particularly those leveraging the forest sector for rural development, have a vested interest in fostering such innovations, especially amid deepening crises. Effective partnerships among government, industry, academia, and NGOs are essential, alongside addressing cross-cutting issues and interventions. OFSDS, through its Project OFSDP-II, has spearheaded several transformative innovations, detailed in this chapter.

The conceptualization and implementation of transformative innovations began with countering the challenge of strategizing innovative approaches. Few more hurdles that have to be overcome in this process are unrealistic expectation from innovations, lack of sufficient empowerment of teams enforcing innovations, deficient cultural traits that support innovativeness and social change, lack of proper managerial support, difficulty in finding appropriate collaborators and viable process of collaboration, uncertainties during transition phases of growth and development and ineffective and proven tools of implementing innovations. In order to overcome these challenges, along with clear conceptualization of innovative ideas, evolving Standard Operating Procedure (SOP) for each set of activities, meticulous planning, effective capacity building, strict schedule of implementation, rigorous concurrent monitoring & evaluation, continuity in progression from one milestone to another and regular documentation are the underscored project norms for the success in attaining the set objectives.

7.2 Revisiting Micro plans

A Village-level Micro Plan serves as a blueprint for a long-term (ten years) comprehensive village development plan, tailored to local needs and resources, with a focus on enhancing forest ecosystems and sustainable livelihoods. These Micro Plans, crafted under OFSDP-II with active involvement of VSSs are aligned with the Joint Forest Management (JFM) Resolution of the Government of Odisha. Micro Plans have been prepared for all 1211 VSSs covered under OFSDP-II, emphasizing community involvement, span over a decade, addresses the challenges in rural development by meeting the local needs. Under the project guidelines, the revision of Micro Plans for villages / VSS was scheduled to be taken up in the fifth year, i.e., after four years of implementation of first Micro plan as discussed in Chapter 3.

7.2.1 Implementation Process:

OFSDP-II commenced preparatory work in 2017-18 and started implementation of project activities in Batch-I VSSs in 2018-19. As per the project mandate, the revisit of Micro Plans for 355 VSSs of Batch-I under all 12 Forest Divisions was taken up in 2022-23. It was a rigorous process, comprised of following stages:

- A 'Handbook on Micro Plan Revisit' containing detailed formats, in English and Odia was developed and distributed to all Divisions.
- A two-day Orientation training for all DMU Chiefs and SMSs was conducted at Bhubaneswar in collaboration with XIM University, Bhubaneswar.
- Subsequently, "Two-day training programs" were conducted at all DMU headquarters by PMU and PMC experts, to orient FMU and PNGO staff.
- The Re-visit of Micro Plan exercise was conducted with full community participation. It incorporated existing activities, changes occurred in the village since initial days of the project implementation and when the first Micro plan was drawn, challenges to be addressed, newly introduced 'Cross cutting components like Gender mainstreaming, Environmental & Social Management Framework and CMRV, future plan of action and annual plan & progress formats etc.
- Review and scrutiny of draft revised Micro Plans prepared by DMUs by the PMU and PMC experts and providing the feedback for incorporation in the final version of revised micro plan. This was followed by review meetings at each DMU to address discrepancies in the draft.
- After rigorously following these steps, the revised Micro Plans were approved in the VSS General Body meetings and subsequently in Palli Sabha/Gram Sabha meetings, ensuring FRA compliance.

7.2.2 Special Features of Micro Plan Revisit under OFSDP-II:

The revised micro plan, as in case of first micro plan, was fully participatory, involving the VSS members in the entire exercise with the emphasis on the bottom-up planning approach. It integrates the cross-cutting project components like Gender Mainstreaming, Environmental & Social Management Safeguard Framework, and Community-based Monitoring, Reporting, and Verification. Lot of focus has been given in the revised micro plan on convergence activities with line departments, with particular effort to provide access to the government welfare schemes for the benefit of marginal and poorest of poot families.

Further, the micro plan re-visit process helps in empowering and building the capacity of community members, including women to make self-assessment, monitoring the progress and carry out mid-way corrections if needed. The exercise, while encouraging collective planning at grassroot level, also aims at strengthening the community institutions. Overall, it was an inclusive process ensuring community ownership.

7.2.3 Lessons Learnt/Benefits derived from Micro Plan Re-visit

While micro plan revisit facilitates prompt addressing of evolving local issues, sustainability and self-reliance in the community-based planning process is ensured. It enables the villagers to access the benefits of the various government's welfare schemes through convergence program. Ultimately, the local community is empowered through the micro planning and its execution for the integrated development of the village. Revisiting Micro Plans in all 1211 VSSs covered under OFSDP-II is mandated, ensuring community involvement in developmental schemes and fulfilling rural aspirations.

7.3 Gender Mainstreaming

7.3.1 Concept of Gender Mainstreaming (GM)

Gender Mainstreaming (GM) has emerged as a crucial concept and tool for ensuring gender equality and equity in social and community development, particularly in developing countries. Development

projects, including those in the forestry sector, adopt gender mainstreaming strategies to facilitate meaningful participation and equitable access to benefits for both men and women. The key aspects of Gender Mainstreaming are as under.

i. Recognition of Gender as Key Stakeholders:

- Gender Mainstreaming (GM) acknowledges that both men and women are essential stakeholders in natural resource management and development sectors.
- It aims to achieve equality and equity in gender participation, contribution, resource accessibility, and benefit sharing.

ii. Inclusive Development Process:

- GM approach ensures that men and women are equally involved in the development management process.
- It emphasizes the importance of considering the differing needs and priorities of men and women during planning, implementation, and monitoring of community development interventions.

iii. Social and economic empowerment:

- GM can only be effective through the social and economic empowerment of women.
- Empowering women involves building their capacity to manage livelihood support activities, ensuring they achieve equal status with men in all aspects of rural life.

iv. Sensitization and mutual support:

- GM approach promotes the sensitization of both men and women towards their equal social responsibilities.
- It encourages mutually supportive roles for community betterment.

Gender mainstreaming in community development projects ensures that both men and women are equally involved and benefitted, leading to more sustainable and inclusive development. The Joint Forest Management (JFM) programme in Odisha serves as a model, demonstrating the positive impact of gender mainstreaming through active community engagement and empowerment initiatives. It remains as one of the key-domains of JFM which is being rigorously implemented since the early 1990s. The success achieved in gender mainstreaming in JFM programme is largely attributed to the highly resilient community-based organizations such as Vana Suraksha Samitis (VSSs), Self-Help Groups (SHGs), Common Interest Groups (CIGs), and Palli Sabhas. These organizations have provisions for active participation of women in most villages. Under the Odisha Forestry Sector Development Project-II (OFSDP-II), there has been a significant focus on gender mainstreaming. This includes ensuring women's participation in decision-making processes and equitable access to project benefits.

7.3.2 Gender Mainstreaming in OFSDP-II

The Odisha Forestry Sector Development Project (OFSDP-II) primarily aims to achieve sustainable forest management through active community participation and to provide diversified livelihood opportunities for the economic betterment of forest-dependent communities. A key aspect of this developmental initiative is the emphasis on gender mainstreaming, which ensures equitable sharing of project benefits among stakeholders without gender discrimination. Gender mainstreaming is a cross-cutting component of OFSDP-II, applicable to all major project components and at all levels of project management and implementation, from VSS level to Forest Management Units (FMU), Divisional Management Units (DMU), and the Project Management Unit (PMU).

7.3.2.1 Roles of Project Management Units in Gender Mainstreaming

- **Vana Suraksha Samiti (VSS):** These village-level organizations are central to implementing gender mainstreaming strategies with support from FMUs. Each VSS develops a Gender Action Plan (GAP) during the microplanning process, which is incorporated into the village-level micro plan.
- **Forest Management Unit (FMU):** Provide technical support and facilitate the implementation of gender strategies at the village level.
- **Divisional Management Unit (DMU) & Project Management Unit (PMU):** Develop and oversee the implementation of gender action plans at higher administrative levels. PMU, in consultation with DMUs and FMUs, formulates GAPs for the project management levels.

7.3.2.2 Components of Gender Mainstreaming:

The following are the key components of GM which need to be ensured for its implementation at all levels of project management units, more particularly at VSS level with community participation.

- **Gender Analysis:** Conducting studies to understand gender-specific issues, needs, and priorities.
- **Gender-Segregated Data:** Collecting and utilizing data to design interventions that address specific needs of men and women.
- **Equal Participation:** Ensuring that both men and women participate equally in planning, implementation, monitoring, and evaluation processes.
- **Gender Empowerment:** Capacity building for both men and women to maximize the benefits from project interventions and improve their living standards.

OFSDP-II guidelines detail how to integrate gender-specific actions across all project components. The Gender Action Plan aims to

- enhance participation of both genders in decision-making processes.
- reduce gender gaps in access to information, funds, services, and control over natural resources and
- ensure equitable distribution of project benefits.

The gender mainstreaming strategies under OFSDP-II are designed within the framework of the Joint Forest Management (JFM) Resolution 2011 by the Government of Odisha. These strategies focus on promoting community and gender participation in forest protection, sustainable management, livelihood promotion, and community development activities. The ultimate goal is to empower communities, particularly women, ensuring they have the necessary skills and opportunities to benefit from the project and contribute to sustainable forest management. By implementing these gender-oriented actions, OFSDP-II strives to achieve not only environmental sustainability but also social equity, thereby improving the overall well-being of forest-dependent communities.

7.3.3 Addressing Issues of Transgenders in Odisha

The OFSDP-II (Odisha Forestry Sector Development Project-II), under its cross-cutting component of Gender mainstreaming, recognizes the necessity of addressing issues beyond the traditional scope of gender equality and equity. It acknowledged the unique challenges faced by the transgender community, such as discrimination, stigma, limited educational facilities, unemployment, lack of shelter and supportive medical services, and issues related to marriage, property, and livelihood insecurity. To address these challenges effectively, a collaborative effort with VSSs is planned to gather reliable and

relevant data on various aspects of the transgender community's lives, including their demographic, socio-psychological, educational, economic, and livelihood status.

The project management recognized the importance of increasing the participation of the transgender community in special welfare schemes introduced by the Government of Odisha. The goal was to achieve economic and social empowerment for transgender individuals, enabling them to lead dignified lives with sustained income. However, the initiative faced a significant barrier due to the lack of comprehensive data and information about the transgender community. To overcome this, project implementing agencies were sensitized to the necessity of collecting this data and developing policies accordingly. Once the data and policies are in place, targeted interventions can be designed and implemented to address the specific needs of the transgender community, ensuring their inclusion and support in the project's activities.

7.3.4 Progress made in Gender Mainstreaming under OFSDP-II

Gender mainstreaming is a critical focus of the OFSDP-II, and it is integrated into every level of the project's structure. This includes the Project Management Unit (PMU), Division Management Unit (DMU), Field Management Unit (FMU), Partner Non-Governmental Organizations (PNGO), Vana Suraksha Samiti (VSS), and Self-Help Group (SHG). The aim of gender mainstreaming is to achieve gender equity and equality within community development initiatives, ensuring that these goals are not treated as standalone components but as part of the comprehensive project framework. The strategy for gender mainstreaming in OFSDP-II is outlined in the document titled "Gender Mainstreaming Strategy under OFSDP, Phase-II (2019)." This strategy guides the implementation of the Gender Action Plan (GAP), which addresses various project components and management levels. Since the project's inception, the GAP has been actively implemented, reinforcing the project's commitment to gender equity and equality as fundamental aspects of sustainable community development.

Key components of the GAP include:

i. **Capacity Building:** Training and workshops to enhance the understanding and capabilities of all project stakeholders regarding gender issues and their importance in forestry and community development.

ii. **Participation and Representation:** Ensuring that women are adequately represented in decision-making bodies and processes at all levels, from local VSS and SHG groups to higher management units.

iii. **Economic Empowerment:** Supporting women's self-help groups with resources and opportunities to engage in income-generating activities, thereby boosting their economic independence and status within the community.

iv. **Monitoring and Evaluation:** Establishing mechanisms to monitor the implementation of gender mainstreaming activities and evaluate their impact, ensuring continuous improvement and accountability.

The integration of gender mainstreaming into the OFSDP-II underscores the project's holistic approach to sustainable forestry development, recognizing that gender equity is crucial for the success and sustainability of community development initiatives.

Specifically, the progress made with respect to gender mainstreaming under the project during the year the year 2023-24 has been detailed below:

7.3.4.1 Gender Mainstreaming at VSS Level through Micro Plan Revisit

The micro plans prepared by the VSSs under OFSDP-II are playing a crucial role in ensuring gender balance and equity in development interventions within the community. The involvement of the Women Working Group (WWG) seems to be key in capturing gender concerns and incorporating them into the Gender Action Plan (GAP) which is an important component of the micro plan document. By focusing on reducing work-drudgery and increasing women's participation in community institutions and governance, the GAP appears to address the specific needs of women effectively.

The re-visit process undertaken in the 422 VSSs of Batch-II reflects a commitment to continuously improving and refining the micro plans with a gender perspective. Reviewing the plans with a focus on gender analysis, needs, priorities, and potential impacts on both women and men demonstrates a thorough approach to ensuring inclusivity. The approval of the revised micro plans by the General Body of VSS and subsequently by the Gram Sabha / Palli Sabha underscores the democratic and participatory nature of the process, ensuring community buy-in and ownership of the gender-responsive interventions outlined in the plans. Overall, it appears that the micro plan is serving as an effective tool for promoting gender equality and equity within the community development framework.

7.3.4.2 Incorporation of Gender Related Formats in the Handbook for Micro Plan Revision

A comprehensive 'Framework for VSS level assessment of micro plan with reference to Gender Mainstreaming and Development under OFSDP-II was developed and incorporated in the Micro plan revision document meant to be used in the Batch-II VSSs. This apart, few other gender related formats were also prepared by the Project Management Unit (PMU) in collaboration with Project Management Consultants (PMC) and the same in English and Odia versions were included in the Handbook for Micro Plan Revision. These formats were meant to elicit exhaustive gender-segregated data and to formulate and incorporate gender action plan in the revised micro plan of each VSS. The following gender related formats were included in the Handbook for Micro Plan Revision which was used in the Batch-II VSSs:

i. Gender involvement in daily routine works

ii. Gender based participation in planning process, access and control over resources.

iii. Gender Resource Map

iv. Format for compilation of gender related responses at VSS level

v. Assessment of budget allocation and expenditure in micro plan as per Gender Action Plan

By incorporating these gender-related formats into the handbook for micro plan revision, the project is not only promoting gender equality but also facilitating a more nuanced understanding of how gender dynamics intersect with community development initiatives. This approach has the potential to lead to more effective and sustainable outcomes by addressing the specific challenges and opportunities faced by women and men within the community.

7.3.4.3 Capacity Building in Gender Mainstreaming

During the year under report, series of Orientation training programmes on the process of conducting Micro plan re-visit and the proper way of using the different formats (inclusive of gender related formats) incorporated in the Handbook of Micro Plan Re-visit were conducted for the Batch-II project staff at FMU level and the community members at VSS level. These training programmes were conducted by the trained staff of DMU/FMU/PNGO.

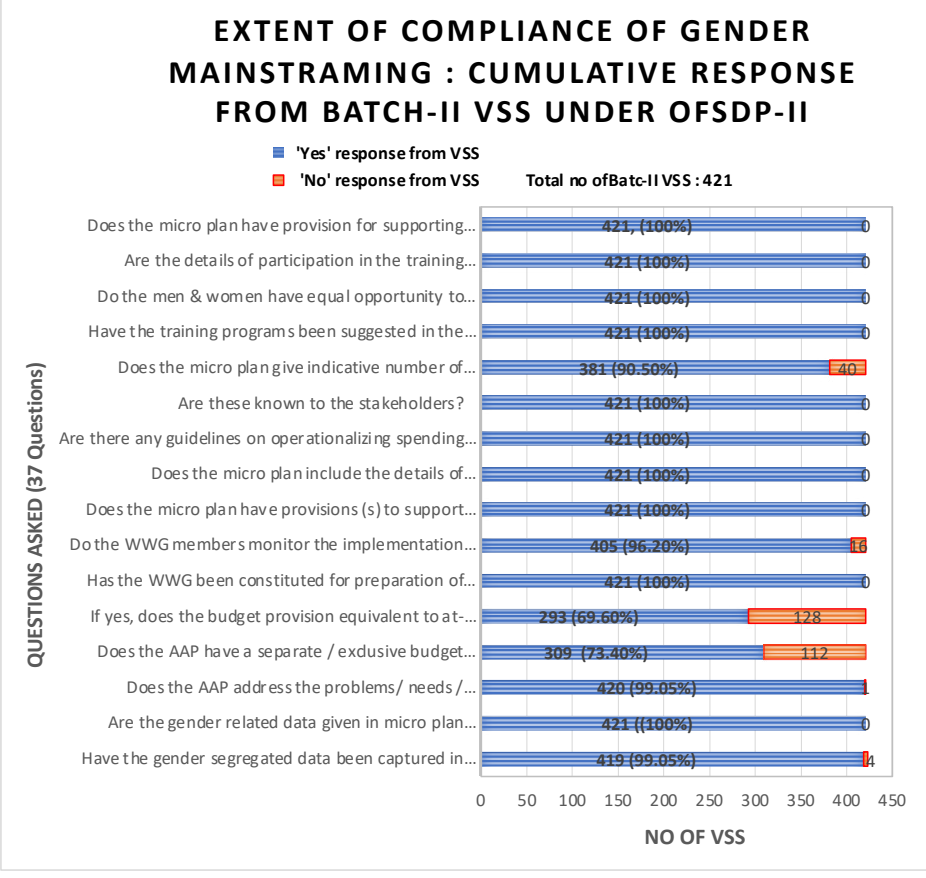
7.3.4.4 Review of Revised Micro Plans Prepared by DMUs

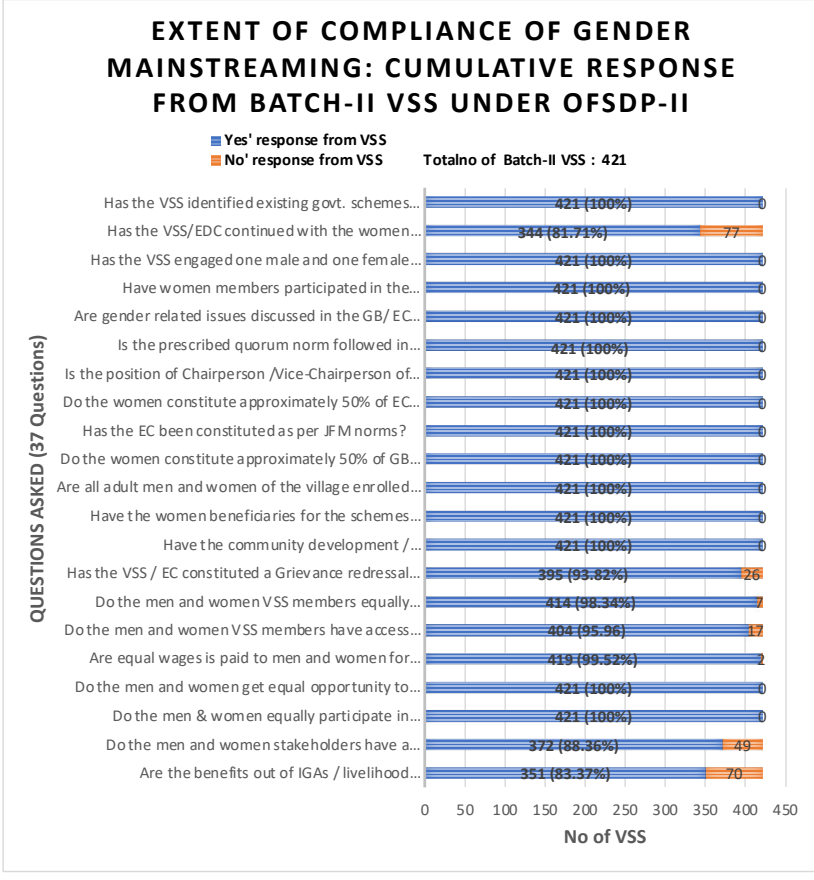
The sample Revised micro plans prepared by the Batch-II VSSs were sent by the DMUs for the review and for providing feedback by the PMU officials and the Experts of PMC. The feedback report was prepared by the experts with respect to all sections of Revised micro plan, including the Gender mainstreaming and shared with respective DMUs for carrying out the corrections / modification suggested in the Revised micro plans. Apart from sharing written feedback, the PMC Experts also conducted review meetings in all DMU headquarters with the presence of DMU Chiefs, SMSs, Batch-II FMU Coordinators, PNGO staff and VSS secretaries. These review meetings helped to clarify all doubts /misunderstandings raised by DMU and field staff with respect to different chapters of revised micro plans, particularly those related to cross cutting components like gender mainstreaming and properly carry out the corrections in the drafts of revised micro plans.

7.3.4.5 Analysis of Gender Related Data Captured through Revised Micro Plans of Batch-II VSSs

The data /information related to the status of gender mainstreaming at VSS (Batch-II) level were captured through the Format for Compilation of Gender related responses at VSS level included in the Handbook of Micro Plan Revision. The format contained 11 broad categories of gender mainstreaming actions envisaged at VSS level. Each of these gender related actions were subjected to several criteria which were measured through 37 specific questions related to gender responses expected to be complied at VSS level.

The data pertaining to the existing status of gender mainstreaming (in terms of Yes /No responses to the 37 questions) in 421 VSSs of Batch-II of 12 Forest Divisions are presented below in graphical form.

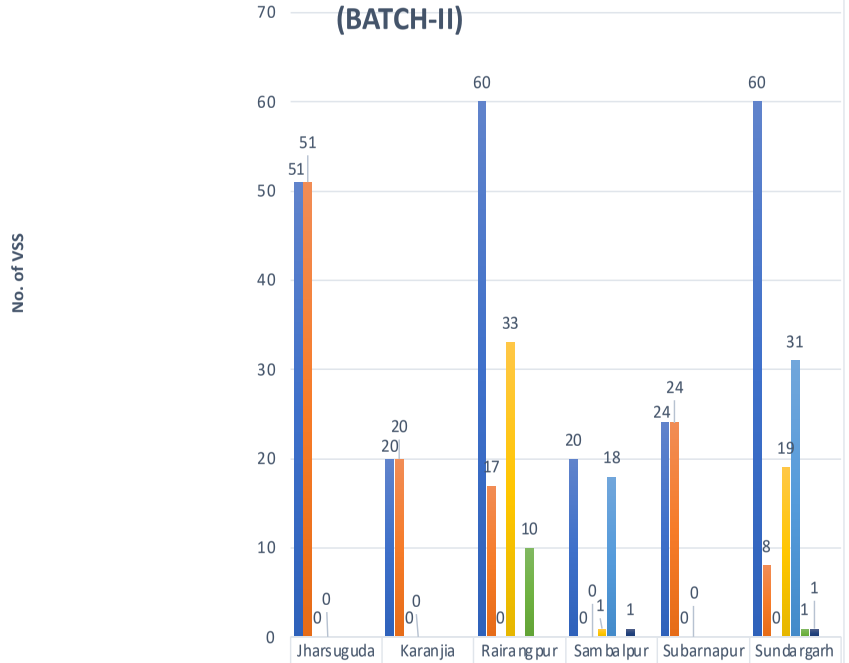




Summary of Responses from Batch-II VSSs on GM Compliance / Actions towards GM Related actions

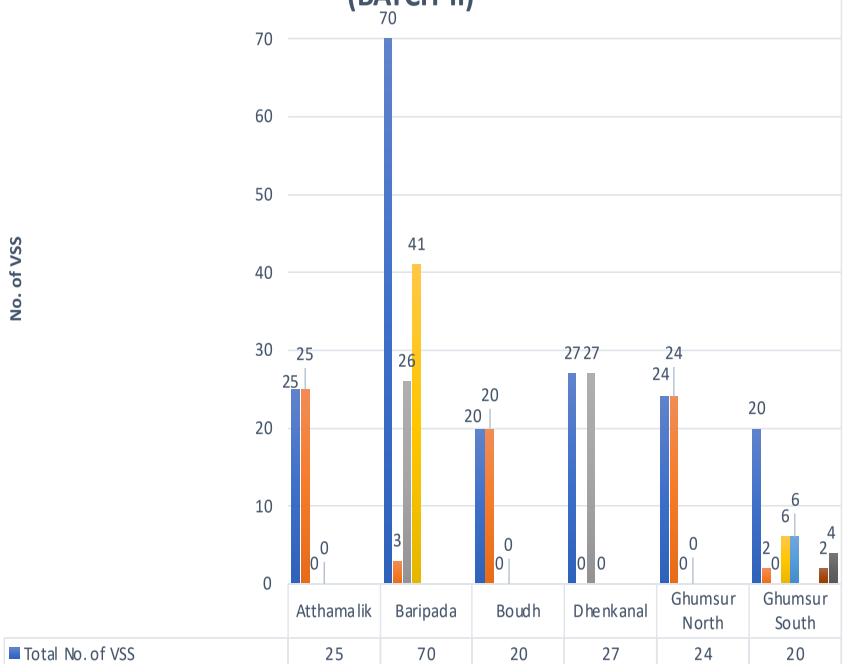
Number of VSSs given positive (yes) response to GM questions / actions (Extent of compliance of prescribed GM parameters)							
100%	97.30%	94.59%	91.89%	89.19%	86.49%	78.38%	75.68%
i.e 'Yes' response to all 37 questions	i.e 'Yes' to 36 questions & 'No' to one question	i.e 'Yes' to 35 questions & 'No' to 02 questions	i.e 'Yes' to 34 questions & 'No' to 03 questions	i.e 'Yes' to 33 questions & 'No' to 04 questions	i.e 'Yes' to 32 questions & 'No' to 05 questions	i.e 'Yes' to 29 questions & 'No' to 08 questions	i.e 'Yes' to 28 questions & 'No' to 09 questions
169	78	100	55	11	2	2	4

EXTENT OF COMPLIANCE OF GENDER MAINSTREAMING: DMU WISE RESPONSE FROM VSS (BATCH-II)



	Jharsuguda	Karanjia	Rairangpur	Sambalpur	Subarnapur	Sundargarh
Total No. of VSS Name	51	20	60	20	24	60
100% GM compliance ('Yes' response to all 37 questions)	51	20	17	0	24	8
97.30% GM compliance ('Yes' to 36 questions & 'No' to 01 question)	0	0	0	0	0	0
94.59% GM compliance ('Yes' to 35 questions & 'No' to 02 questions)	0	0	33	1	0	19
91.89%GM compliance ('Yes' to 34 questions & 'No' to 03 questions)				18		31
89.19%GM compliance ('Yes' to 33 questions & 'No' to 04 questions)			10			1
86.49%GM compliance ('Yes' to 32 questions & 'No' to 05 questions)				1		1
78.38% GM compliance ('Yes' to 29 questions & 'No' to 08 questions)						
75.68% GM compliance ('Yes' to 28 questions & 'No' to 09 questions)						

EXTENT OF COMPLIANCE OF GENDER MAINSTREAMING: DMU WISE RESPONSE FROM VSS (BATCH-II)



	Atthamalik	Baripada	Boudh	Dhenkanal	Ghumsur North	Ghumsur South
Total No. of VSS	25	70	20	27	24	20
100% GM compliance ('Yes' response to all 37 questions)	25	3	20	0	24	2
97.30% GM compliance ('Yes' to 36 questions & 'No' to 01 question)	0	26	0	27	0	0
94.59% GM compliance ('Yes' to 35 questions & 'No' to 02 questions)	0	41	0	0	0	6
91.89%GM compliance ('Yes' to 34 questions & 'No' to 03 questions)						6
89.19%GM compliance ('Yes' to 33 questions & 'No' to 04 questions)						
86.49%GM compliance ('Yes' to 32 questions & 'No' to 05 questions)						
78.38% GM compliance ('Yes' to 29 questions & 'No' to 08 questions)						2
75.68% GM compliance ('Yes' to 28 questions & 'No' to 09 questions)						4

Inference derived from the analysis of data on GM compliance at Batch-II VSS level:

The analysis / interpretation of above-mentioned gender related data represented in graphical and tabular forms indicate the following trend with respect to gender mainstreaming at Batch-II VSS level under the project:

i. Most of the VSSs (82.00%) among the total 421 Batch-II VSSs are 95% to 100% 'Gender Responsive', as they comply with most of the gender mainstreaming actions envisaged at VSS level.

ii. Two-fifths (40.14%) of total Batch-II VSSs have fully complied with the GM related actions, reflected through the positive responses to all 37 GM related questions in the format.

iii. Rest of Batch-II VSSs (about 18.00 %) have complied between 75% and 90% of GM related actions, reflecting positive responses to the GM related questions.

iv. Following table reveals the GM specific actions (questions) which have not been complied (negatively responded) by nearly 60% of VSSs (except about 40% of VSSs which have shown full compliance of all GM actions by providing positive response to all 37 questions) out of total 421 Batch-II 355 VSSs.

Summary of Non-Compliance of Gender responses by Batch-II VSSs (FMU/DMU wise Response)

GM related question No (as per the format)	GM related question to which 'Negative' (No) response given by VSS	Number of VSSs (FMU / DMU wise) given negative response
I-Q (i)	Q (i): Have the gender segregated data been captured in the Micro plan?	4 VSSs in Hindol FMU of Dhenkanal DMU
II-Q (i)	Q (i): Does the GAP address the problems/ needs / priorities of men & women separately?	1VSS in Rairangpur FMU of Rairangpur DMU
II-ii (Q-i)	Q (i): Does the AAP have a separate / exclusive budget allotted for implementing the gender action plans?	In total 112VSSs in 6 FMUs of 3 DMUs with following breakup: • 18VSSs in Sorada FMU of Ghumsur South • 20 VSSs in Bisoi FMU, 9VSSs in Manada FMU & 13VSSs in Rairangpur FMU of Rairangpur DMU • 22VSSs in Hemgiri FMU & 30 VSSs in Lephripara FMU of Sundargarh DM
II-ii (Q-ii)	Q (ii): Is the gender budget provision equivalent to at-least 5% of micro plan budget?	Total 128VSSs in 7FMUs of 4 DMUs with following breakup: • 25VSSs in Madhupur FMU of Athamallik DMU • 18VSSs in Sorada FMU of Ghumsur South DMU • 20VSSs in Bisoi FMU,9VSSs- Manada FMU & 4VSSs Rairangpur FMU of Rairangpur DMU • 22VSSs in Hemgiri FMU & 30VSSs-Lephripara FMU of Sundargarh DMU)

III- ii (Q-i)	Q (i): Do the members of Women Working Group (WWG) monitor the implementation GAP	Total 16VSSs in 2 FMUs of 2 DMUs with following breakup: • 6VSSs in Saroda FMU of Ghumsur South DMU • 10VSSs in Rairangpur FMU of Raurangpur DMU
V-i (Q-i)	Q (i): Does the micro plan give indicative number of gender awareness trainings to be organized for VSS members (men & women)?	Total 40 VSSs in 2FMUs of 2DMUs with following breakup: • 10VSSs in Rairangpur FMU of Rairangpur DMU, • 30VSSs in Lephripara FMU of Sundargarh DMU
VI-ii-(Q-i)	Q (i): Are the benefits out of IGAs / livelihood interventions equitably shared among men and women involved?	Total 70VSSs in 5FMUs of 2DMUs with following breakup: • 19VSSs in Bangiriposi & 23 VSSs in Pithabata FMU of Baripada DMU • 6VSSs in Saroda FMU of Ghumsur South DMU • 20VSSs in Dhama FMU of Sambalpur DMU • 2VSSs in Hemgiri FMU of Sundargarh DMU
	Q (i): Do the men and women stakeholders have a defined role in various activities related to product Clusters?	Total 49VSSs in 4FMUs of 4DMUs with following breakup: • 21VSSs in Hindol FMU of Dhenkanal DMU • 6VSSs in Saroda FMU of Ghumsur South DMU • 19 VSSs in Dhama FMU of Sambalpur DMU • 3VSSs in Hemgiri FMU of Sundargarh DMU
VII-ii-(Q-i)	Q (i): Are equal wages is paid to men and women for sustainable forest management works (JFM & Non-JFM modes) and other similar works?	2VSSs in Hindol FMU of Dhenkanal DMU
VIII-i-(Q-i)	Q (i): Do the men and women VSS members have access to community / common resources / facilities?	Total 17 VSSs in 3FMUs of 3DMUs with following breakup: • 6VSSs in Saroda FMU of Ghumsur South DMU • 10VSSs in Rairangpur FMU of Rairangpur DMU • 1 VSSs in Dhama FMU of Sambalpur DMU
VIII-i-(Q-ii)	Q (ii): Do the men and women VSS members equally derive benefits from the use of community resources?	Total 7 VSSs in 2FMUs of 2DMUs with following breakup: • 6VSSs in Saroda FMU of Ghumsur South DMU • 1VSSs in Dhama FMU of Sambalpur DMU
VIII-ii-(Q-i)	Q (i): Has the VSS / EC constituted a Grievance redressal mechanism to address and redress the grievances of VSS members on use of community resources?	Total 26VSSs in 3FMUs of 3DMUs with following breakup: • 5VSSs in Saroda FMU of Ghumsur South DMU • 20VSSs in Dhama FMU of Sambalpur DMU • 1VSSs in Hemgiri FMU of Sundargarh DMU
X-ii-(Q-ii)	Q (ii) Has the VSS/EDC continued with the women Animators after two years based on satisfactory performance	Total 77VSSs in 4FMUs of 2DMUs with following breakup: • 18VSSs in Bangiriposi FMU, 25VSSs- Pithaba FMU & 23VSSs in Udala FMU of Baripada DMU • 11VSSs in Saroda FMU of Ghumsur South DMU

V. DMU wise GM analysis reveals the following trend in complying GM actions by VSSs under different DMUs

- Out of 12 DMUs, the Batch-II VSSs under six number of DMUs viz. Athmallik, Boudh, Ghumsur-North, Jharsuguda, Karanjia and Subarnapur have fully complied the GM related actions.
- Though no Batch-II VSS under Dhenkanal DMU has fully complied the GM related actions, all 20 VSSs have fulfilled 97.30% GM actions.
- In the case of other six DMUs v.i.z Baripada, Dhenkanal, Ghumsur-South, Rairangpur, Sambalpur and Sundargarh, the Batch-II VSSs comply between 77% and 100% GM related actions.
- However, most of the Batch-II VSSs in the above mentioned six DMUs comply between 90% and 100% GM related actions.
- Only 20 out of 421(5.00%) of Batch-II VSS belonging to Ghumsur-South, Rairanpur, Sambalpur and Sundargarh DMU fall below 90%, but within 75% compliance of GM related actions.

In overall assessment, all the 421 VSSs of Batch-II of all 12 DMUs show a reasonably high-level positive response towards fulfilling actions related to gender mainstreaming and thus providing a positive trend of equal as well as equitable gender participation in community developmental and forest management activities as envisaged in their respective micro plans. It is expected that the Revised micro plans prepared under the project would further strengthen this positive trend in gender mainstreaming at community level.

7.4 Community based Monitoring, Reporting & verification (CMRV) and REDD + readiness

7.4.1 Concept of REDD+ (Reducing Emission from Deforestation and Forest Degradation)

REDD+ (Reducing Emissions from Deforestation and Forest Degradation) is a mechanism under United Nations Framework Convention on Climate Change (UNFCCC) aiming for combating climate change by incentivizing the reduction of greenhouse gas emissions from deforestation and forest degradation in developing countries.

7.4.1.1 Objectives of REDD+

i. Reducing emissions: The core goal is to decrease the emissions of greenhouse gases (GHGs) that result from deforestation and forest degradation.

ii. Conservation: REDD+ promotes the conservation of forest carbon stocks.

iii. Sustainable Management: It supports the sustainable management of forests.

iv. Enhancement of Carbon Stocks: The program encourages activities that increase forest carbon stocks, such as reforestation and afforestation.

7.4.1.2 Factors Contributing to Forest Degradation and Deforestation

i. Agricultural expansion: The conversion of forests to agricultural land is a major driver, including both subsistence farming and large-scale agriculture.

ii. Logging: Both legal and illegal logging contribute significantly to forest loss and degradation.

iii. Infrastructure development: Road construction, urban expansion, and other infrastructure projects often lead to deforestation.

iv. Mining: Extractive industries can lead to significant deforestation and environmental degradation.

v. Industrialization: Increased industrial activities in developing regions often encroach on forest lands.

vi. Fire: Forest fires, whether natural or human-induced, also play a significant role in forest degradation.

7.4.1.3 Mechanisms of REDD+ Financing

i. Results-Based Payments: Countries receive payments based on verified reductions in emissions achieved through their REDD+ activities.

ii. Market-Based Approaches: Includes the sale of carbon credits on the voluntary carbon market or compliance markets.

iii. Non-Market Approaches: Grants, public finance, and development aid are also crucial components of REDD+ financing.

7.4.1.4 Implementation Phases of REDD+

i. Readiness Phase: Countries prepare for REDD+ by developing national strategies, capacity building, and establishing a baseline of current emissions.

ii. Implementation Phase: Encompasses the actual rollout of policies and measures to reduce deforestation and degradation.

iii. Results-Based Actions: Countries receive payments based on the results of their actions in terms of reduced emissions.

7.4.1.5 Benefits of REDD+

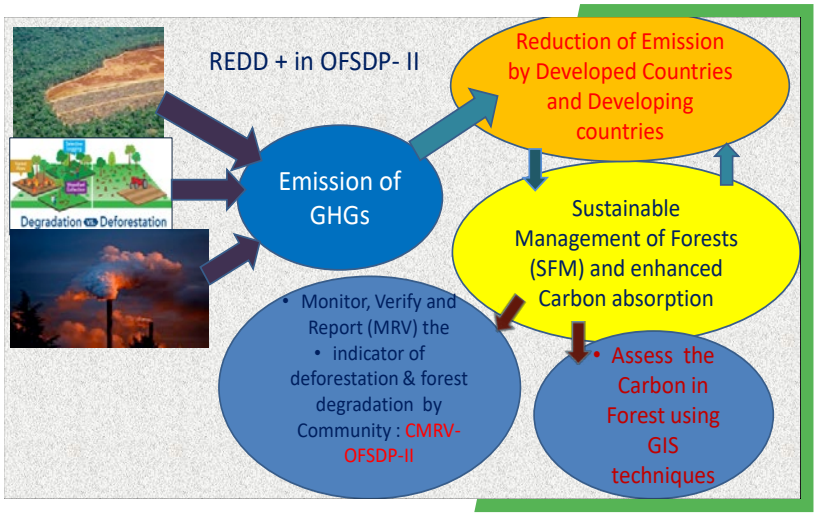
i. Climate Change Mitigation: By reducing emissions from deforestation and degradation, REDD+ contributes significantly to global efforts to combat climate change.

ii. Biodiversity Conservation: Protecting forests helps preserve biodiversity and ecosystems.

iii. Community Development: It can provide social and economic benefits to local communities, including jobs, improved livelihoods, and capacity building.

iv. Carbon Sequestration: Forests act as carbon sinks, capturing and storing carbon dioxide from the atmosphere.

Overall, REDD+ represents a crucial component of global strategies to reduce greenhouse gas emissions and combat climate change, particularly in developing countries where forests are a significant carbon sink.



7.4.2 REDD+ Under JICA supported NRM Projects

In the context of Japan International Cooperation Agency (JICA) assisted Sustainable Forest Management Projects, several critical elements are required to qualify for earning carbon credits through the REDD+ mechanism. These elements ensure that projects are not only environmentally sustainable but also socially equitable and beneficial for the involved communities.

7.4.2.1 Key Requirements for Earning Carbon Credits through REDD+

i. **Additionality:** This principle ensures that the project activities result in real, measurable, and additional reductions in emissions that would not have occurred under a "business as usual" scenario. It ensures the project goes beyond what would naturally happen without intervention.

ii. **Sustainable Forest Management (SFM) with Community Participation:** Effective REDD+ projects involve local communities in forest management. This participatory approach helps in the sustainable management of forest resources, ensuring that the forests are conserved and utilized in ways that meet the needs of present and future generations.

iii. **Environmental and Social Safeguards:** These safeguards ensure that the projects do not cause harm to the environment or the communities. They include measures to protect biodiversity, prevent deforestation, and respect the rights of indigenous and local communities.

iv. **Equity:** Ensuring fair distribution of benefits derived from the project is crucial. Equity in REDD+ projects means that all stakeholders, particularly local communities, share the benefits equitably.

7.4.2.2 Monitoring, Reporting, and Verification (MRV)

MRV is a fundamental component of REDD+ implementation, providing transparency and accountability in the measurement of emission reductions. Key aspects include:

i. **Monitoring:** Continuous observation and recording of forest conditions and carbon stocks. This involves using remote sensing technology, ground-based surveys, and other methods to gather data on forest cover and carbon emissions.

ii. **Reporting:** Systematic documentation and reporting of the findings from the monitoring activities. This ensures that data is available for verification and that all stakeholders are informed about the progress and outcomes of the project.

iii. **Verification:** Independent verification of the reported data to ensure accuracy and reliability. Verification is typically conducted by third-party organizations to maintain objectivity.

7.4.2.3 Community-Based Monitoring, Reporting, and Verification (CMRV)

In OFSDP-II the MRV is being implemented by Community through an community-based institute the VSS. So, it is Community based MRV (CMRV) enhances the effectiveness of MRV by involving local communities in the process. This approach has several advantages:

i. Empowerment of Communities: By training and involving local communities in monitoring activities, CMRV builds local capacity and empowers communities to take an active role in forest management.

ii. Enhanced Accuracy and Relevance: Local communities often have detailed knowledge of their forests, which can lead to more accurate and context-specific data collection.

iii. Increased Ownership and Commitment: When communities are involved in monitoring and reporting, they are more likely to be committed to the success of the project, leading to better outcomes.

7.4.3 Implementation in OFSDP-II

In the Odisha Forestry Sector Development Project-II (OFSDP-II), the CMRV approach is being implemented across 1211 VSSs. These committees, composed of forest-dependent communities, play a critical role in :

i. Implementing Sustainable Forest Management (SFM): Engaging in activities that promote sustainable use and conservation of forest resources.

ii. Livelihood Promotion: Developing alternative livelihoods for forest fringe-dwelling communities, reducing their dependence on forest resources.

iii. Capacity Building: Training stakeholders, including community members, to effectively participate in and manage CMRV activities.

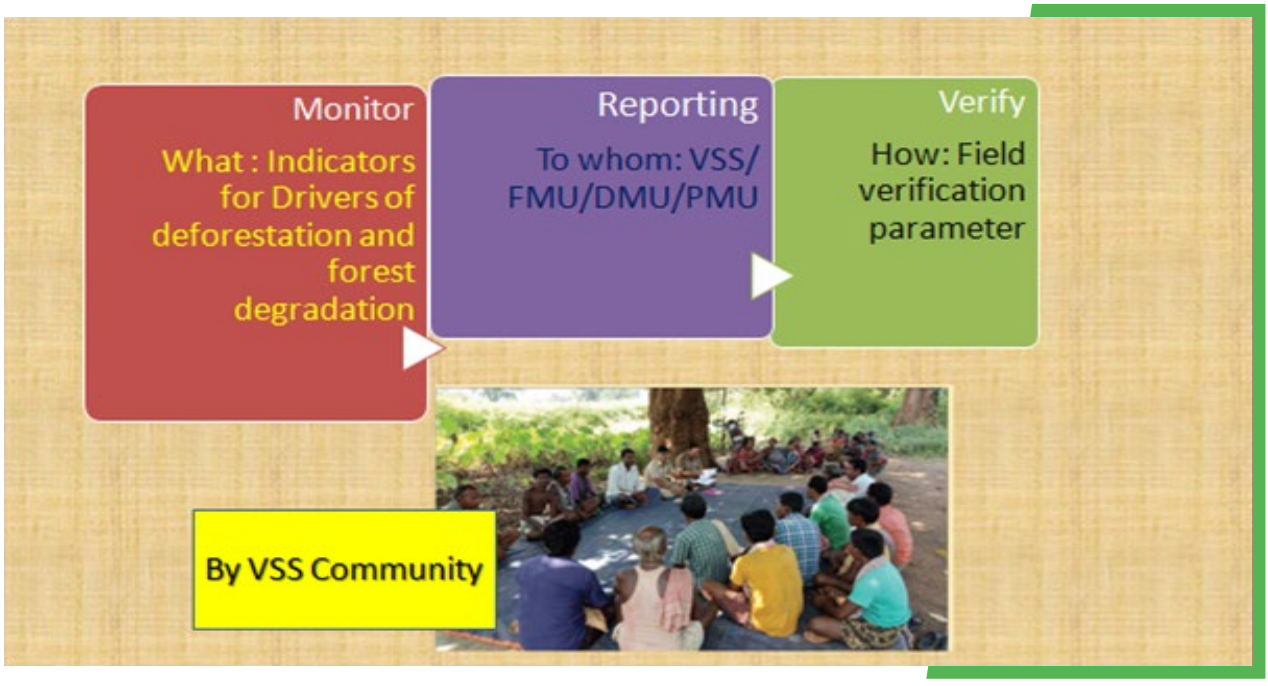
By maximizing community involvement through capacity-building initiatives, OFSDP-II ensures that the forest-dependent communities are equipped to manage their forest resources sustainably and benefit from the REDD+ projects. This approach not only meets the criteria for earning carbon credits but also contributes to the overall well-being and empowerment of the local communities.

7.4.3.1 VSS based CMRV

The steps of CMRV implementation are as under:

- Identification of the Drivers of Deforestation and Forest Degradation
- Ranking of the Drivers
- Designing participatory strategy for mitigation of these Drivers so that the goals of Sustainable Forest Management are achieved.
- Concurrent Monitoring of the outputs or effects of SFM on Drivers of degradations on annual basis.

CMRV Process



Hence, the processes of Identification of Drivers, Strategy to mitigate the drivers, Measure and Monitor the effects, Report and Verify them by the community constitute Community Based Monitoring, Reporting and Verification (CMRV). This has been incorporated at the level of micro planning to mitigate the drivers. The possible drivers identified (in the year of 2022-23) in case of OFSDP-II are given below:

1	Illicit removal / smuggling of timber and fuel wood
2	Uncontrolled Grazing
3	Uncontrolled Exploitation of wood
4	Encroachments
5	Forest Fire
6	Soil Erosion
7	Fodder Collection and Sale
8	NTFP Collection
9	Natural Causes- like Cyclone, Diseases and Pests etc.
10	Poverty alleviation Issues

These drivers have been identified by the forest fringe dwelling communities and the ranking with suggested measures to address the drivers and monitor the effects as a part of the steps of CMRV. To achieve this, intensive training programs were conducted at PMU/DMU/ FMU level where the DMU Chief, SMSs PNGOs were the participants. The participants were in fact the master trainers who would train the community at VSS level.

A new chapter on CMRV was included in the Handbook of Micro Plan Revisit and also a book on the guidelines was issued. Both these booklets highlight the following key aspects of CMRV implementation under the project with community participation.

- The micro planning is the basic tool for addressing the identification and addressing the Drivers of Deforestation and Forest Degradation (DDFD)
- At the stage of the micro planning, the exercise of DDFD identification and mitigation measures were conducted.
- Ranking of the DDFD by VSS community with the help of PNGOs/ SMS/ other project staff
- Identification of DDFD mitigation measures
- Implementation of Mitigation Measures
- Measure the effects, monitor, report to the various levels and verify at the implementation site i.e. VSS assigned area.
- Orientation of the Community on CMRV: Importance of REDD+ was explained by the project personnel in simple terms to the GB members of the VSS
- Formation of community based Sustainable Forest Management Monitoring Group (SFMMG) constituted by Executive Committee of the VSS/ EDC.
- Orientation of the Members of Executive Committee to function as the SFMMG on following aspects:

7.4.3 Roles and Responsibilities of Sustainable Forest Management Monitoring Group (SFMMG) towards CMRV

- Identification of Drivers of Deforestation and Forest Degradation at VSS level
- Ranking of Drivers of Deforestation and Forest Degradation
- Assessment of the Magnitude of the Drivers of Deforestation and Forest Degradation
- Frequency of Monitoring: - Annual
- Preparation of Report Card at VSS Level
- After the identification, ranking of drivers of deforestation and forest degradation on the Rating Scale (High-3, Moderate-2 and Low-1) was done.
- The Annual Performance Report Card (based on color code performance rating system of High-Green, Moderate-Yellow, Low-Red given below) for each VSS/ EDC was made.
- Various formats for measuring the performance of VSS on different dimensions of management of the Drivers of Forest Degradation were introduced in Micro plan revisit (Chapter - 9)
- The effect of the addressing the drivers were numerically numbered and the total number obtained were scored with maximum marks of 50
- The ranking of the VSS based on the obtained marks were color coded as Red, Yellow and Green as given in the following table.

	High: (marks obtained = 45 and above) use green color code. The VSS is performing well to address the drivers of degradation can be an example for other VSS
	Moderate: (marks obtained between 40 to 44) Use Yellow Color code. The VSS is not performing satisfactorily. There is scope to improve the rating. Analysis is to be made for the cause of average performance and coarse correction is to be made
	Low: (Marks Obtained less than less than 40 Marks) Use Red Color code. The VSS is not performing well. Poor Performance. Needs immediate attention, Situation analysis is to be made and immediate course correction is to be taken up. Call GB / EC to rectify the management and fact finding and corrections.

Based on the above ranking at VSS level the data of the all VSS were shared by the VSS to Field Management Units.

7.4.4 Self Help Group (SHG) Based CMRV

In order to reduce the dependence on forest and augment the income of the forest fringe communities, the Self-Help Groups (SHGs) are mobilized at VSS level. This is an important component for improving the SFM with the reducing the dependence on Forests in forest fringe villages.

The rating in terms of CMRV performance is done at each SHG level through Focused Group Discussions (FGDs) with the following parameters:

- Regular meetings of SHGs
- Membership Status of SHGs (BPL)

- Regular record Keeping (Minutes register, Pass Book etc.as per the prescribed list)
- Internal savings has started and the contributions are made to SHG fund
- Involvement of Members in IGAs
- Training on Sustainable Practices for IGA
- Loan Availability from Revolving Fund
- Repayment of loan taken from Revolving Fund
- Default in Repayment of Loan taken from other Sources
- Any Other Item with the approval of SHG for scoring. (This will strengthen the Capacity of SHG for self-evaluation)

The above criteria are numerically rated and scored based on the scoring the SHGs would be rated with colour coding as following

	Score: Total: Maximum Marks 21 High = (marks obtained = 16 and above) use green color (performed better in IGA try to score more, can be used as an example for other SHGs)
	Moderate = (marks Obtained 12 to 16 Use Yellow Color): Efforts to improve the rating in next monitoring be analyzing and resolving the problem)
	Low = (Marks Obtained less than 12 Marks use color code red) Poor Performance Needs in depth analysis to study the main cause of poor performance

7.4.5 Findings of VSS Level CMRV

The VSS wise identification and ranking of the Drivers of Deforestation and Forest Degradation (DFDD) and the result of their mitigation measures were collated Division wise to develop a report card of status of implementation of mitigation measures, which is shown in the table given below:

Batch 1 First Cycle (2022-23)

Sl. no.	DMU	VSS Approved	VSS Reported	First cycle of CMRV (22-23)			Second Cycle of Batch II		
				Green	Yellow	Red	Green	Yellow	Red
1	Athamalik	20	20	19	1	0	19	1	0
2	Baripada	46	46	10	4	32	32	13	1
3	Boudh	20	20	17	3	0	17	3	0
4	Dhenkanal	25	25	11	13	1	11	13	1
5	Ghumsur North	25	25	1	23	1	1	23	1
6	Ghumsur South	20	20	16	4	0	16	4	0

7	Jharsuguda	29	29	9	18	2	9	18	2
8	Karanjia	20	20	0	20	0	0	20	0
9	Rairangpur	40	40	4	28	8	9	31	0
10	Sambalpur	55	55	29	24	2	29	26	0
11	Subarnapur	25	25	25	0	0	25	0	0
12	Sundargarh	30	30	20	10	0	20	10	0
Total:		**355**	**355**	**161**	**148**	**46**	**188**	**162**	**5**

Batch II first cycle (2023-24)

Sl. no.	DMU	VSS Approved	VSS Reported	Green	Yellow	Red
1	Athamalik	25	25	17	7	1
2	Baripada	70	70	43	22	5
3	Boudh	20	20	20	0	0
4	Dhenkanal	27	27	23	4	0
5	Ghumsur North	24	24	24	0	0
6	Ghumsur South	20	20	2	17	1
7	Jharsuguda	51	51	42	9	0
8	Karanjia	20	20	11	9	0
9	Rairangpur	60	60	23	37	0
10	Sambalpur	20	20	19	1	0
11	Subarnapur	25	24	24	0	0
12	Sundargarh	60	60	58	2	0
Total:		**422**	**421**	**306**	**108**	**7**

The results highlight the weak areas where the inputs have to be identified. This Report card works as an important tool for the managers at all levels to identify the areas of added interventions. The annual collation of data and its subsequent review will bring out the improvements through this CMRV Tool.

7.4.6 Beyond REDD+ in OFSDP-II Voluntary carbon Mechanism

In the year of 2023-24 OFSDP -A New milestone is accomplished with the entry to Voluntary Carbon Mechanism for incentivizing the community for Sustainable Forest Mechanism in VSS and farm Forestry areas.

7.4.6.1Key Components of the Voluntary Carbon Market:

- **Carbon Credits:** A carbon credit represents the reduction or removal of one metric ton of carbon dioxide or its equivalent in other greenhouse gases.

Types: Carbon credits can come from various types of projects, including renewable energy, reforestation, energy efficiency, methane capture, and more.

- **Project Development:**

Project Types: Projects can range from afforestation and reforestation to renewable energy installations and methane capture from landfills.

- **Certification:** Projects must be certified by recognized standards such as the Verified Carbon Standard (VCS), Gold Standard, or Climate Action Reserve (CAR). Certification ensures the credibility, additionality, and permanence of the emissions reductions.

Verification and Validation: Third-Party Auditors: Independent third-party auditors verify and validate the emissions reductions claimed by projects. This process ensures the transparency and integrity of the carbon credits.

- **Carbon Registries:** Registries track the issuance, transfer, and retirement of carbon credits. They prevent double counting and ensure transparency.

Examples: Examples of carbon registries include the Verra Registry, and the Gold Standard Registry.

- **Buyers and Sellers:**

Buyers: Companies, governments, and individuals looking to offset their emissions voluntarily purchase carbon credits.

Sellers: Project developers, brokers, and exchanges offer carbon credits for sale.

- **Market Dynamics:**

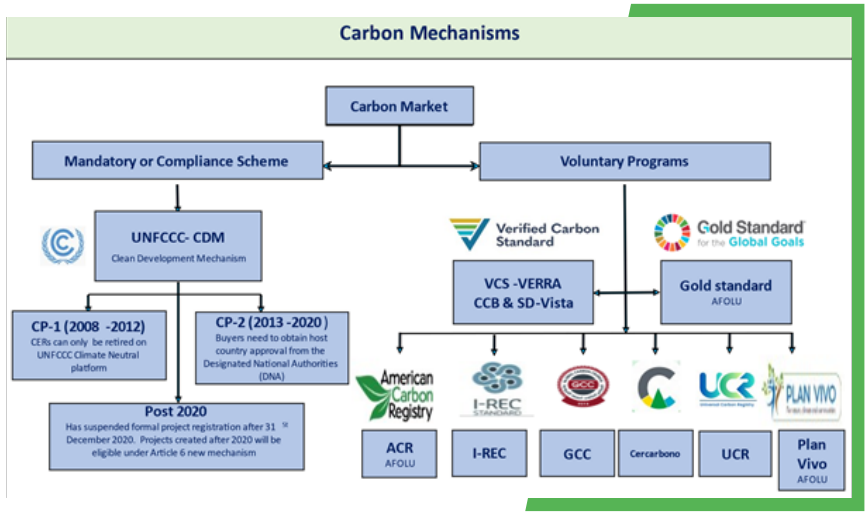
Pricing: The price of carbon credits can vary widely based on factors such as project type, location, and certification standard.

Supply and Demand: Market dynamics are influenced by the availability of high-quality carbon credits and the demand for offsets from organizations aiming to meet their climate goals.

7.4.6.2 Benefits of the Voluntary Carbon Market:

Climate Mitigation: Carbon credits support projects that directly reduce or remove greenhouse gas emissions, contributing to global climate change mitigation efforts.

Co-Benefits: Many projects provide additional benefits such as biodiversity conservation, improved air and water quality, job creation, and support for local communities.



The initiative for the accrual and trading of the carbon credits accrued from the SFM and farm forestry was undertaken to provide the financial incentive to the communities of the VSS with a participatory Tool of CMRV. The hiring of the agency with a transparent process of Quality Cum Cost Basis was undertaken. The feasibility report for the area eligible for the accrual and trading of the carbon credits. the feasibility studies based on the following information

i. OFSDS Detailed Project Reports (DPRs)

ii. Project Area Polygons for RS-GIs study

iii. Plantation database

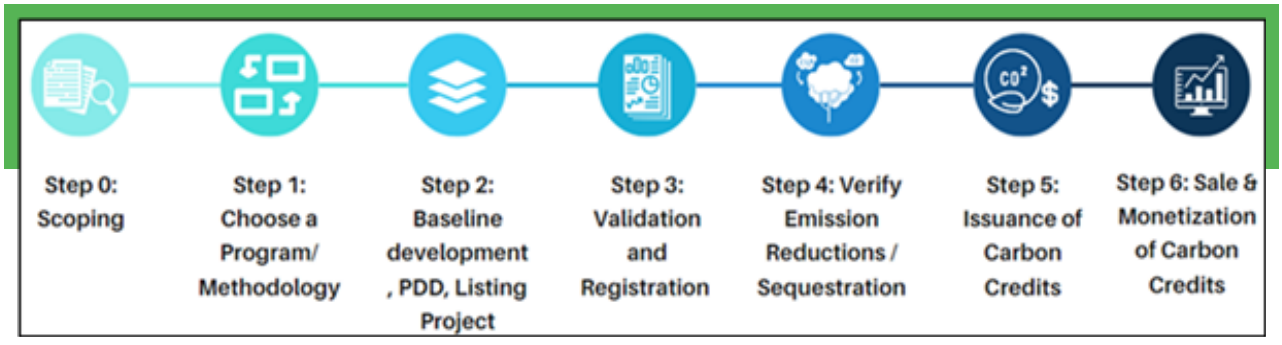
iv. VCS Program Guide v4.4

v. VCS Standard v4.5

vi. VCS Program definitions v4.4

vii. VM0045 Methodology for Improved Forest Management Using Dynamic Matched Baselines from National Forest Inventories, v1.0

viii. VM0047 Afforestation, Reforestation, and Revegetation, v1.0



The process for the registration and validation etc. with VCS (Voluntary Carbon Standard)

Eligible Area for Voluntary carbon Mechanism:

Divisions	Total Area	Eligible Area	Ineligible Area
Batch-III			
Athamalik	2520.66	1610.58	910.08
Baripada	2287.17	2186.49	100.68
Boudh	2603.29	1782.11	821.18
Dhenkanal	7254.59	6897.19	357.40
Ghumsur North	4126.84	3731.09	395.76
Ghumsur South	2380.06	1822.55	557.51
Jharsuguda	437.44	260.90	176.54
Karanjia	2192.80	1951.54	241.26
Rairangpur	572.15	505.33	66.82
Sambalpur	2779.30	2582.79	196.51

Subarnapur	2527.03	1733.03	794.00
Sundergarh	2116.37	1759.42	356.95
Total	31797.72	26823.03	4974.69
Batch-IV (I)			
Dhenkanal	5251.80	5089.10	162.71
Ghumsur North	3900.49	3287.26	613.23
Karanjia	2331.56	2147.80	183.76
Sundergarh	2304.35	2058.36	245.98
Total	13788.20	12582.52	1205.68
Batch-IV (II)			
Boudh	664.00	495.39	168.61
Ghumsur South	454.43	336.37	118.06
Jharsuguda	216.36	68.49	147.87
Subarnapur	763.95	727.83	36.13
Sundergarh	559.34	516.12	43.21
Total	**2658.08**	**2144.20**	**513.88**
Grand Total	**48244.00**	**41549.75**	**6694.25**

7.4.6.3 Capacity Building and Orientation Training on Accrual and Trading of Carbon credits from Projects of OFSDS

A Capacity Building cum Orientation training was organized by the OFSDPS-Ms. Koshar Climate Limited Bengaluru on Accrual and Trading of the Carbon Trading from projects under OFSDS. This training aimed for field staff orientation. In OFSDS, VERRA is a preferred option.

7.5 Environmental and Social Management Safeguard Framework (ESMSF) and Scheduled Tribe and Forest Dependent Planning Framework (STFDPF)

7.5.1 Concept and Rationale of ESMSF & STFDPF

The Environmental and Social Management Safeguards (ESMS) is a comprehensive framework designed to manage environmental and social risks associated with project interventions. It consists of policies, procedures, tools, and internal capacities that enable stakeholders, including local communities, organizations, and individual beneficiaries, to effectively identify and manage these risks. The ESMS framework facilitates the screening of project components, categorization based on potential environmental and social risks, application of relevant mitigation measures, and monitoring of the project's environmental and social performance. The Key Components of ESMS include

- Policies and Procedures to establish guidelines for identifying and managing risks.
- Tools: Provide methodologies for screening, assessment, and mitigation.
- Internal Capacity: Ensure that stakeholders have the necessary skills and resources.

According to the Japan International Cooperation Agency (JICA) Guidelines (2010), internalization and an institutional framework are prerequisites for managing the environmental and social impacts

of developmental projects, especially in developing nations. The Odisha Forestry Sector Development Project (OFSDP II) is categorized as a "Financial Intermediary (FI)" under these guidelines, indicating that it is not expected to have significant negative impacts on environmental and social dimensions. However, the project mandates a broad Environmental and Social Management System Framework (ESMSF) and a specific Scheduled Tribe and Forest Dependents Plan Framework (STFDPF). The Environmental and Social Management System Framework (ESMSF) is a comprehensive framework to manage the project's environmental and social risks. The Scheduled Tribe and Forest Dependents Plan Framework (STFDPF) is a specific framework to safeguard the interests of Scheduled Tribes and other forest-dependent communities. Any development project executed in indigenous habitats with multinational financial assistance must adhere to the "Indigenous Peoples' Planning Framework" as per the World Bank's Operational Policy 4.10. This policy, also followed under the JICA Guidelines, aims to protect the rights and interests of indigenous peoples, defined as Scheduled Tribes by the Indian Constitution. Under OFSDP II, the STFDPF is developed to ensure that the development, livelihood, and social interests of Scheduled Tribes and other forest dependents are safeguarded. Ultimately, the ESMSF, guided by JICA and World Bank policies, ensures that developmental projects like OFSDP II do not adversely affect the environment and local communities. By incorporating frameworks such as the ESMSF and STFDPF, the project proactively addresses and mitigates potential risks, promoting sustainable development and the welfare of indigenous and forest-dependent populations.

7.5.2 ESMSF and STFDPF under OFSDP-II

The Odisha Forestry Sector Development Project II (OFSDP-II), similar to other participatory forest management projects across India, primarily aims to improve biodiversity, wildlife conservation, sustainable forest management, and soil and moisture conservation. These goals represent significant strides towards forest conservation and sustainable management. However, the project also entails the development of infrastructure to enhance community life, such as constructing Village Forest Committees (VSS) buildings, small community facilities, and roads within villages and forest areas, as well as operating small machines and equipment for income-generating activities. Despite their positive intentions, these activities may introduce minor environmental and social risks. The Environmental and Social Management System Framework (ESMSF) and the Scheduled Tribe and Forest Dependents Plan Framework (STFDP) are essential for providing guidance and managing these risks. They ensure environmentally sound and socially acceptable project implementation by

- providing Guidance for adopting a structured approach to handle environmental and social risks;
- establishing the management process to identify, assess, and mitigate potential negative impacts and
- ensuring that the development interests of Scheduled Tribes (ST) and Forest Dependent (FD) communities are protected.

In this regard, the micro-plan serves as a participatory planning tool at the grassroots level and it helps to visualize project implementation and develop indicators to assess potential impacts. The key features of this approach include:

- community involvement in planning and decision-making processes;
- using micro-plans to forecast and evaluate environmental and social impacts and
- incorporating broad checklists in revised micro-formats to monitor the effectiveness of safeguard measures.

The key benefits of the frameworks are

- comprehensive Safeguards in the form of comprehensive and detailed checklists with procedures for assessing and monitoring environmental and social management measures;
- providing special focus on vulnerable communities by giving attention to the developmental and social concerns of ST and FD communities, ensuring their interests are safeguarded and
- achieving more sustainable and inclusive project outcomes by adhering to these frameworks.

While OFSDP-II promotes forest conservation and sustainable management, it also recognizes the potential environmental and social risks associated with infrastructure development. The ESMSF and STFDP frameworks provide essential guidance to mitigate these risks, ensuring that project interventions are both environmentally sound and socially acceptable. Participatory micro-planning further enhances the project's effectiveness by involving communities in the planning process and establishing robust mechanisms for impact assessment and monitoring.

7.5.3 Key objectives of ESMSF under OFSDP-II

The key objectives of ESMSF are:

- To provide practical guidance for identification, planning and implementing the environmental and social management measures across different components of the project and
- To enhance the project's positive environmental and social impacts and avoid or otherwise mitigate associated negative impacts.

7.5.4 Key objectives of STFDPF under OFSDP-II

The key objectives of STFDPF are:

- To ascertain that the project does not inadvertently induce disempowerment, or increase disparities between the tribal and other communities, and
- To propose ways for minimizing and mitigating adverse impacts on tribal households and their livelihoods

7.5.5 Progress made in Implementation of ESMSF & STFDPF under

The ESMSF and the STFDPF are the cross-cutting components integrated with the project activities throughout the project cycle. The application and implementation of these frameworks ensure compliance with environmental and social regulations and adherence to relevant JICA policies on environmental and social aspects. The monitoring of both frameworks is an integral part of the project management.

The implementation of ESMSF and STFDPF is tracked through regular progress reports, using structured tools to ensure comprehensive monitoring and the results from these progress reports are integrated into the Management Information System (MIS) of the OFSDP II, facilitating effective project management and oversight. This apart, periodic monitoring of potential impacts is conducted during the revisits of micro plans. This allows for the assessment of environmental and social impacts over time and ensures that mitigation measures are effective. The following outlines the specific progress made in implementing the ESMS and STFDP frameworks under the project during the fiscal year 2023-24:

- Compliance with Environmental and Social Regulations: Ensured all project activities comply with applicable laws and regulations and aligned with JICA policies.
- Structured Monitoring Tools: Utilized structured tools for systematic monitoring of framework implementation.
- Integration with Project MIS: Successfully integrated monitoring results into the project MIS, enhancing data management and decision-making processes.
- Periodic Reviews and Revisions: Conducted periodic reviews and necessary revisions of micro plans to address any emerging environmental and social impacts.
- Progress Reports: Prepared and submitted detailed progress reports highlighting the achievements and areas for improvement in the implementation of the ESMS and STFDP frameworks.

This comprehensive monitoring and reporting framework not only ensures compliance with environmental and social safeguards but also promotes transparency and accountability in project implementation. Specifically, the progress made with respect to the implementation of ESMS and STFDP frameworks under the project during the year the year 2023-24 has been detailed as under:

7.5.5.1 Incorporation of ESMSF & STFDPF Related Formats in the Handbook for Micro Plan Revision

Following listed ESMSF & STFDPF related formats, both in English and Odia versions were prepared and included in the Handbook for Micro Plan Revision in the Batch-II VSSs in order to elicit exhaustive information needed for monitoring the implementation of environmental and social (with particular respect to ST&FD communities) related safeguards at VSS level and accordingly to formulate the mitigation measures in collaboration with the VSSs.

i. Framework for Environmental Safeguards at VSS / EDC Level

ii. Framework for Social Safeguards at VSS / EDC Level

iii. Applicability of ESMSF and STFDPF

iv. STFDPF: Monitoring items, Indicators, means and Frequency of Verification & Responsibility Framework

v. Format for Assessment of STFDPF Safeguards at VSS Level

Relevant data on ESMSF and STFDPF were collected from Batch-II VSS level through these formats during the process of micro plan revisit and the same are captured through MIS portal at PMU level for meaningful analysis and initiate appropriate remedial actions.

7.5.5.2 Capacity Building in Implementation / Monitoring of ESMS and STFDP Safeguard Frameworks at VSS Level

Following the orientation training programs for the DMU staff, series of capacity building training programs on the field level use of revised / new formats (inclusive of ESMSF & STFDPF related formats) included in the Handbook for micro plan revision for the FMU & PNGO staff and for VSS and SHG members were conducted by the SMSs of DMU as the Master Trainers.

7.5.5.3 Review of Revised Micro Plans Prepared by DMUs

The process of revising and refining the micro plans for Batch-II VSSs involved a comprehensive review and feedback mechanism. This approach ensured that the micro plans were aligned with the ESMSF and STFDPF. The Project Management Unit (PMU) officials and the experts from the Project Management Consultant (PMC) conducted a thorough review of the samples of the revised micro plans of Batch-II VSSs submitted by the DMUs. The experts prepared a detailed feedback report addressing all sections of the revised micro plans, including the ESMSF and STFDPF components and shared with the respective DMUs, providing clear guidelines for necessary corrections and modifications.

In addition, the PMC experts organized review meetings at the headquarters of each DMU. These meetings were attended by DMU Chiefs, Subject Matter Specialists (SMSs) along with the FMU Coordinators, Partner Non-Governmental Organization (PNGO) staff, and VSS secretaries of Batch-II VSSs. During these meetings, any doubts or misunderstandings raised by the DMU and field staff regarding the revised micro plans, especially the cross-cutting components like ESMSF and STFDPF, were addressed. The meetings provided an opportunity for detailed discussions, helping the staff to understand the required corrections and properly implement them in the revised micro plans. Some of the benefits derived from these review meetings at DMU level listed below:

- The combination of written feedback and interactive review meetings ensured that all stakeholders clearly understood the required changes.
- The collaborative approach improved the quality and compliance of the revised micro plans with the ESMSF and STFDPF requirements.
- These activities also contributed to capacity building among DMU and field staff, enhancing their ability to prepare and implement effective micro plans in the future.
- Through such structured review and feedback mechanism, the project ensured that the revised micro plans were not only compliant with the relevant frameworks but also tailored to effectively address the environmental and social aspects of the project.

7.5.6 Analysis of ESMSF & STFDPF Related Data Captured through Revised Micro Plans of Batch-II VSSs

The data /information related to the status of implementation of ESMS & STFDP frameworks at VSS (Batch-II) level were captured through the following formats which were included in the Handbook of Micro Plan Revision for capturing ESMSF & STFDPF related responses at Batch-II VSS level:

i. Framework for Environmental Safeguards at VSS / EDC Level

ii. Framework for Social Safeguards at VSS / EDC Level

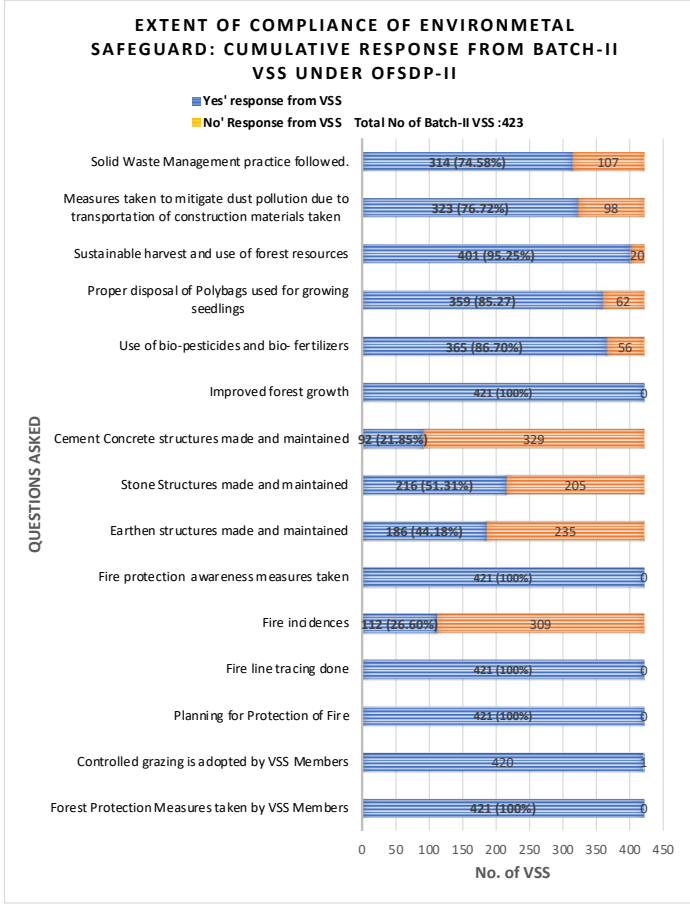
iii. Applicability of ESMSF and STFDPF

iv. STFDPF: Monitoring items, Indicators, means and Frequency of Verification & Responsibility Framework

v. Format for Assessment of STFDPF Safeguards at VSS Level

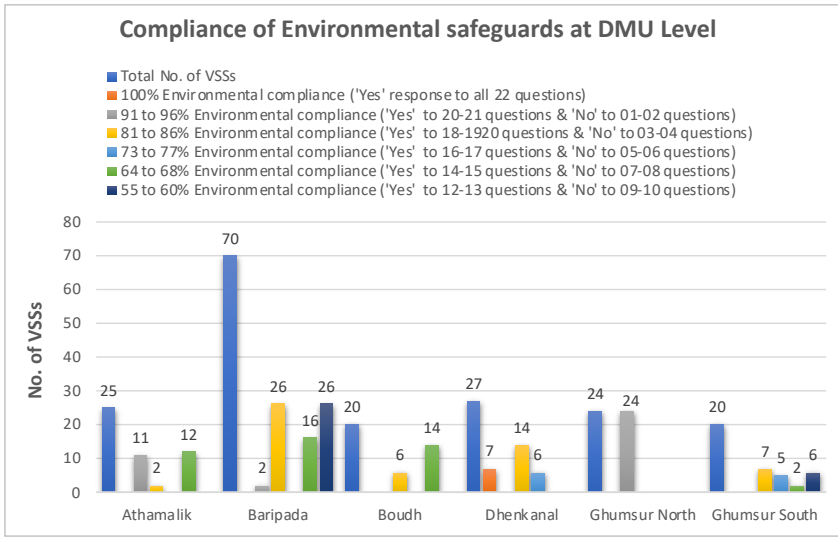
The data pertaining to the existing status of implementation of ESMSF & STFDPF reflected through the responses to the questions included in the formats from the members of 421 VSSs of Batch-II of 12 Forest Divisions are presented below in graphical form.

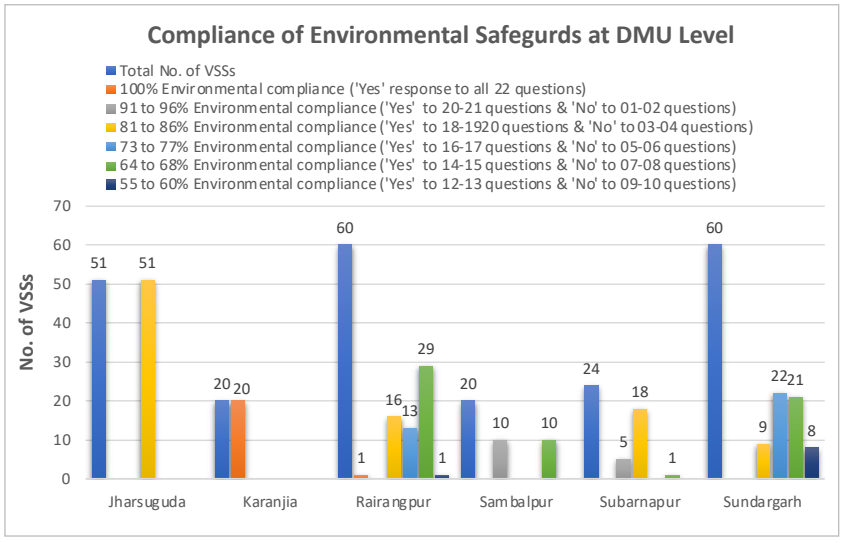
7.5.6.1 Analysis of Environmental Safeguard Related Data Captured through Revised Micro Plans of Batch-II VSSs



Summary of Responses from Batch-II VSSs on Compliance of Prescribed Environmental Safeguards

Number of VSSs given positive (yes) response to questions / actions (compliance) related to environmental safeguards						
Extent of compliance	100% positive i.e 'Yes' response to all 22 questions	91 to 96 % positive i.e 'Yes' to 20-21 questions & 'No' to 01-02 question	81 to 86% positive i.e 'Yes' to 18-19 questions & 'No' to 03 – 04 questions	73 to 77 % positive i.e 'Yes' to 16-17 questions & 'No' to 05-06 questions	64 to 68 % positive i.e 'Yes' to 14-15 questions & 'No' to 07 -08 questions	55 to 60 % positive i.e 'Yes' to 12-13 questions & 'No' to 09-10 questions
No. of VSSs	28	63	138	46	105	41
% of VSS	07.00	15.00	33.00	11.00	25.00	10.00





Inference derived from the analysis of data on compliance of Environmental Safeguards at Batch-II VSS level:

The analysis / interpretation of above-mentioned data related to compliance of environmental safeguards represented in graphical and tabular forms indicate the following trend with respect to compliance of environmental safeguards at Batch-II VSS level under the project:

i. The compliance of different prescribed environmental safeguards among the total 421 Batch-II VSSs varies from 22.00% to 100%

ii. Prescribed environmental safeguards that were complied cent per cent (100%) by the Batch-II VSSs were

- Improved Forest growth,
- Planning Control of forest fire,
- Fire line tracing,
- Creating awareness on fire control,
- Controlled grazing and
- Forest protection measures

iii. The other prescribed environmental safeguards which closely complied by most of the VSSs of Batch-II were

- Sustainable harvest and use of forest resources (95.25%)
- Use of bio-pesticide and bi-fertilizers (86.70%)
- Proper disposal of polybags used in the nursery (85.27%)
- Mitigating dust pollution (76.72%) and
- Solid waste management (74.58%)

iv. Among the prescribed environmental safeguards, the least (minimum extent) complied by Batch-II VSSs was 'Proper maintenance of cement / concrete / stone / earthen DLT structures'

v. In the case of environmental safeguards,

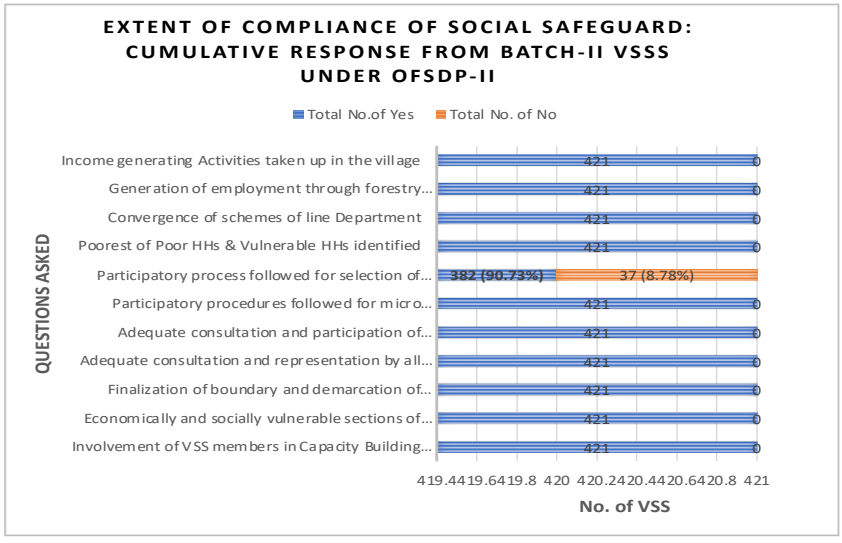
- all Batch-II 421 VSSs fall in compliance range between 55.00% and 100%.
- However, most of the Batch-II VSSs (84.00%) fall between compliance range of 64.00% and 96.00%.
- Only 7.00% Batch-II VSSs comply 100% environmental safeguards, while 10.00% of VSSs fall in the minimum compliance range between 55.00% and 60.00%.

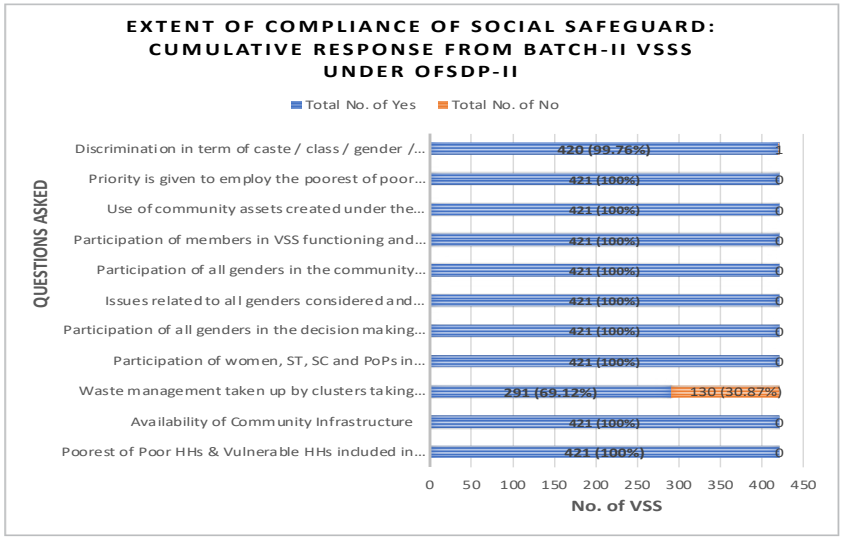
vi. DMU wise Environmental safeguard analysis reveals the following trend in complying prescribed environmental safeguards by Batch-II VSSs under different DMUs

- Out of 12 DMUs, the Batch-II VSSs three number of DMUs viz. Dhenkanal (7 VSSs) Karanjia (20 VSSs) and Rairangpur (1VSS) have fully (100%) complied the environmental safeguards related actions.
- Reasonable number of VSSs in three DMU v.i.z Athmalik (11VSSs) Ghumsur-North (24 VSSs), Samabalpur (10 VSSs) showed 91-96% compliance of environmental safeguards.
- All 24 VSSs (100%) in Ghumsur-North DMU exhibited 91-96% compliance as far as environmental safeguards concerned.
- Likewise, all 51 VSSs (100%) in Jahrsuguda DMU reflected 81-86% compliance of environmental safeguards.
- Most of the Batch-II VSSs in almost all 12 DMUs comply from 64% to 86% of prescribed environmental safeguards.
- Only 14 Batch-II VSSs in Ghumsur-South (6 numbers) and in Sundargarh (8 numbers) fall under minimum range of 55-60% of compliance of prescribed environmental safeguards.

In overall assessment, most of the 421 VSSs of Batch-II of all 12 DMUs show a reasonably good-level positive response towards fulfilling actions related to prescribed environmental safeguards. Though the minimum level of compliance of prescribed environmental safeguards by the Batch-II VSSs among the 12 DMUs was found to be 55%, measures to be initiated by the project personnel to sensitize and educate the Batch-II VSSs, particularly those falling within the compliance range of 55 to 75% on the importance and necessity of fulfilling the environmental safeguards as per the prescribed norms of JICA during the implementation process of project components related to sustainable forest management, biodiversity conservation, livelihood promotion, other convergence activities and so on.

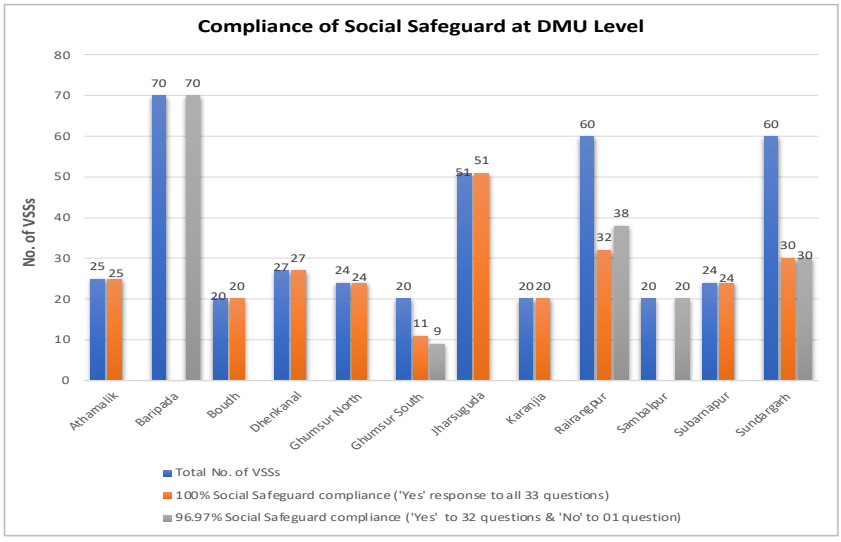
7.5.6.2 Analysis of Social Safeguard Related Data Captured through Revised Micro Plans of Batch-II VSSs





Summary of Responses from Batch-II VSSs on Compliance of Social Safeguards

Number of VSSs given positive (yes) response to questions / actions (compliance) related to Social Safeguards		
Extent of compliance	100% positive i.e 'Yes', response to all 33 questions	96.00 % positive i.e 'Yes' to 32 questions & 'No' to 01 question
No. of VSSs	254	167
% of VSS	69.33	39.66



Inference derived from the analysis of data on compliance of Social Safeguards at Batch-II VSS level:

The analysis / interpretation of above-mentioned data related to compliance of social safeguards represented in graphical and tabular forms indicate the following trend with respect to compliance of environmental safeguards at Batch-II VSS level under the project:

i. The extent of compliance of different prescribed social safeguards among the total 421 Batch-II VSSs was very high, varying from 96.00% to 100%

ii. Among the 421 Batch-II VSSs, 69.33 % VSSs (254 numbers) and 39.66% VSSs (167 numbers) have shown 100% and 96.00% compliance of prescribed social safeguards respectively

iii. Prescribed social safeguards that were compiled cent per cent (100%) by the Batch-II VSSs were

Prescribed social safeguard measures that were fully complied by almost seven-tenth (69.33%) of Batch-II VSSs
Involvement of VSS members in Capacity Building Measures
Economically and socially vulnerable sections of the VSS included in community development activities
Finalisation of boundary and demarcation of assigned area of the VSS in presence of representative of all villages with common boundary along with the Member Convenor of concerned VSSs.
Adequate consultation and representation by all section of the community in deciding the list of entitlement linkages
Adequate consultation and participation of vulnerable groups done in micro planning preparation
Participatory procedures followed for micro planning, screening of sub-projects and avoidance of projects leading to conflict
Poorest of Poor HHs & Vulnerable HHs identified
Convergence of schemes of line Department
Generation of employment through forestry activities
Income generating Activities taken up in the village
Poorest of Poor HHs & Vulnerable HHs included in IGA Activities
Availability of Community Infrastructure

Participation of women, ST, SC and PoPs in Livelihood initiatives.
Participation of all genders in the decision-making processes on community development activities
Issues related to all genders considered and addressed in community development works
Participation of all genders in the community development activities
Participation of members in VSS functioning and meetings
Use of community assets created under the project by all genders
Priority is given to employ the poorest of poor households and women in wage generating employment under SFM Works
Discrimination in term of caste / class / gender / religion is avoided

iv. The other two prescribed social safeguard measures that were partially met by two-fifths (39.66%) of Batch-II VSSs were

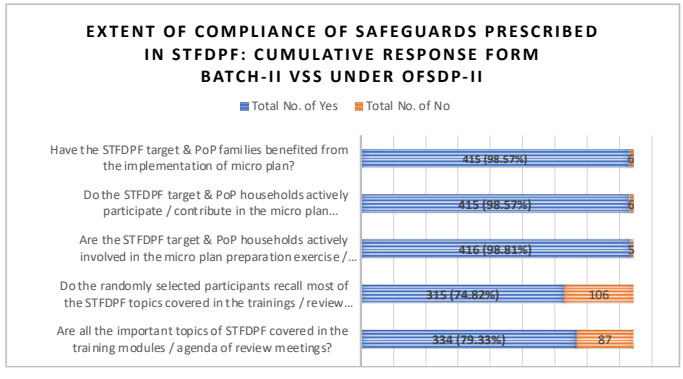
- Participatory process followed for selection of indigenous species
- Waste management taken up by clusters taking production/processing activities

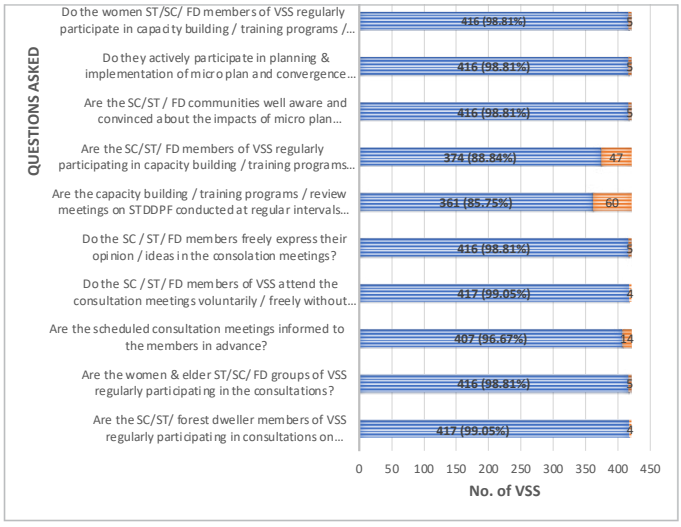
v. DMU wise social safeguard analysis reveals the following trend in complying prescribed social safeguards by Batch-II VSSs under different DMUs

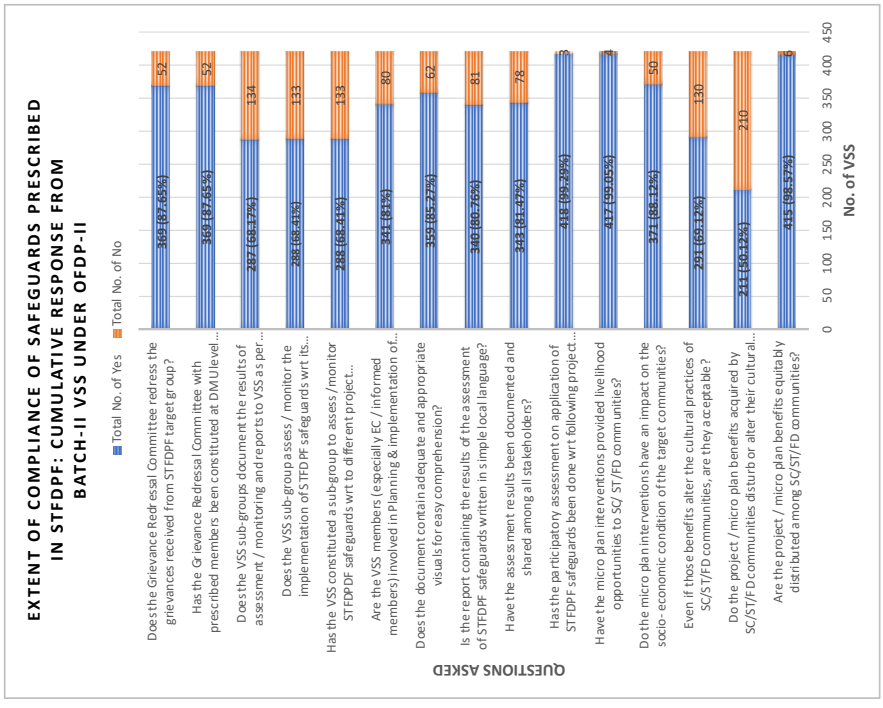
- In seven out of 12 DMUs viz. Athmallik, Dhenkanal, Boudh, Ghumsur-North, Jarsuguda, Karanjia and Subarnapur, all the Batch-II VSSs have fully complied the social safeguards measures.
- In rest of the five DMUs v.i.z. Baripada, Ghumsur-South, Rairangpur, Samabalpur and Sundargarh, substantial number of batch-II VSSs reflect 96.00% compliance with regard to social safeguards.
- In Baripada and Sambalpur DMUs, all 70 and 20 number of Batch-II VSSs respectively have shown 96.00% extent of compliance related to social safeguards. In other three DMUs, almost equal number of Batch-II VSSs showed both, 100% and 96.00% extent of compliance with regard to social safeguards.

In overall assessment, almost all the 421 VSSs of Batch-II of all 12 DMUs show the full extent of compliance level as far as the social safeguards concerned. Compared to the compliance level of environmental safeguards, compliance level was relatively much better in case of social safeguards. This trend reflects the good level of social consciousness, sensitivity and social responsibility among the Batch-II VSSs in all the 12 DMUs under OFSDP-II.

7.5.6.3 Analysis of Data Related to Safeguards prescribed in Scheduled Tribe and Forest Dependent Plan Framework (STFDPF) Captured through Revised Micro Plans of Batch-II VSSs

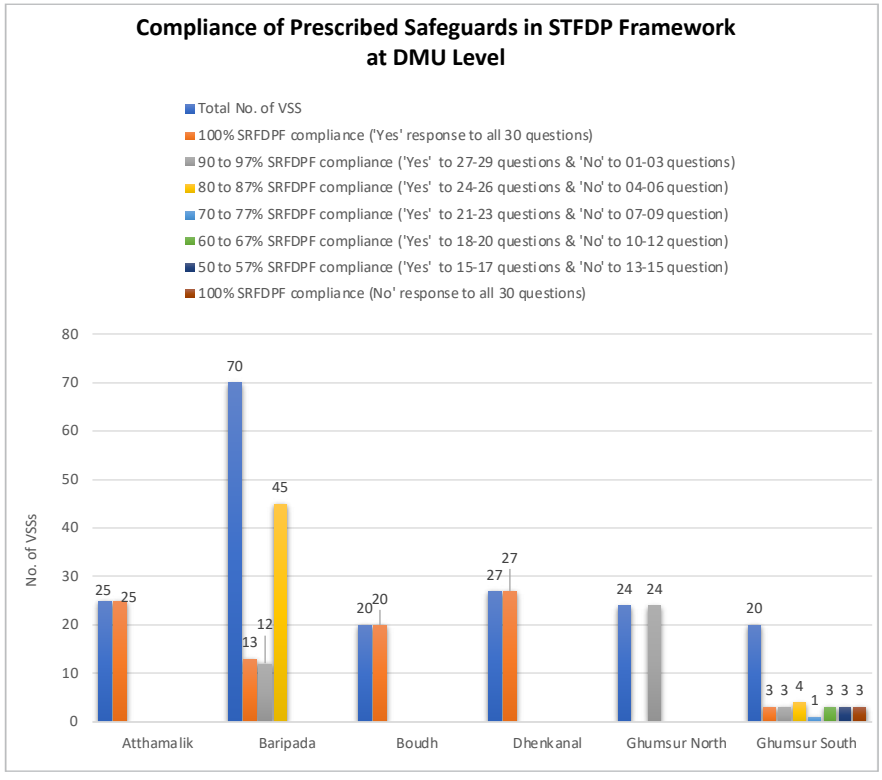


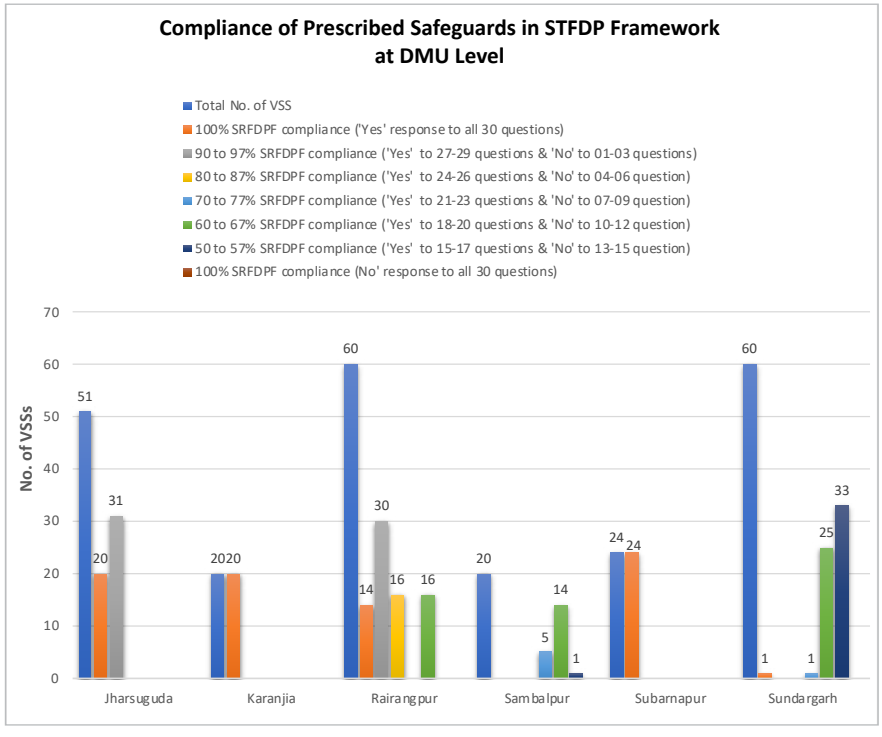




Summary of Responses from Batch-II VSSs on Compliance of Prescribed Safeguards in STFDPF

Number of VSSs given positive (yes) response to STFDPF related questions / actions (Extent of compliance of prescribed safeguards in STFDPF)							
Extent of compliance	100% positive i.e 'Yes' response to all 30 questions	90 to 97 % positive i.e 'Yes' to 27 -29 questions & 'No' to 01 - 03 questions	80 to 87 % positive i.e 'Yes' to 24-26 questions & 'No' to 04 - 06 questions	70 to 77% positive i.e 'Yes' to 21 -23 questions & 'No' to 07 - 09 questions	60 to 67 % positive i.e 'Yes' to 18-20 questions & 'No' to 10 -12 questions	50 to 57 % positive i.e 'Yes' to 15-17 questions & 'No' to 13-15 questions	100% negative i.e 'No' response to all 30 questions
No. of VSSs	166	101	65	7	42	37	3
% of VSS	40.00	24.00	15.00	2.00	10.00	9.00	0.71





Inference derived from the analysis of data on compliance of safeguards prescribed in Scheduled Tribe and Forest Dependent Plan Framework (STFDPF) at Batch-II VSS level:

The analysis / interpretation of above-mentioned data related to compliance of safeguards prescribed in STFDPF represented in graphical and tabular forms indicate the following trend with respect to compliance of STFDPF safeguards at Batch-II VSS level under the project:

i. The extent of compliance of the prescribed safeguards in STFDPF among the total 421 Batch-II VSSs was reasonably high, ranging from 80.00 to 100% i.e. fulfilling all the 30 prescribed safeguards in STFDPF.

ii. Among the above, 40% Batch-II VSSs have fulfilled all the safeguard requirements i.e. all 30 prescribed safeguards amounting to 100% compliance; 24% VSSs have complied 90 to 97% prescribed safeguards, while 15% VSSs fell within the range of 80 to 87% compliance. Put together, almost 80% VSSs showed the compliance range of 80 to 100% with respect to the prescribed safeguards in STFDPF.

iii. However, a noticeable number of VSSs i.e. almost 20% Batch-II VSSs (80 in number) showed relatively low range of 50 to 67% compliance as far as the prescribed safeguards in STFDPF.

iv. The observed trend of compliance of different safeguards among the total number of 30 prescribed in STFDPF by the Batch-II VSSs is as follows:

- The 14 safeguards that were almost fully (99%) complied by Batch-II VSSs were
  - Participatory assessment on the implementation of prescribed STFDPF safeguards across different project components by the VSS,
  - Equitable distribution of project / micro plan benefits among SC/ST/FD communities and
  - Micro plan interventions providing livelihood opportunities to SC/ ST/FD communities.
  - Implementation of micro plan benefitted the ST and Forest Dependent communities
  - The SC/ST/ forest dweller members of VSS regularly participating in consultations on formulating ST & FD planning
  - The women & elder ST/SC/ FD groups of VSS regularly participating in the consultations
  - All the scheduled consultation meetings informed to the members in advance
  - The SC / ST/ FD members of VSS attend the consultation meetings voluntarily / freely without compulsion
  - The SC / ST/ FD members freely express their opinion / ideas in the consolation meetings
  - The SC/ST / FD communities well aware and convinced about the impacts of micro plan interventions
  - The SC/ST / FD communities actively participate in planning & implementation of micro plan and convergence activities
  - The women ST/SC/ FD members of VSS regularly participate in capacity building / training programs / review meetings
  - The STFDPF target & PoP households actively involved in the micro plan preparation exercise / process
  - The STFDPF target & PoP households actively participate / contribute in the micro plan implementation.
- The eleven STFDPF safeguards that were highly (75 to 88%) complied by Batch-II VSSs were
  - Micro plan interventions having an impact on the socio- economic condition of the ST& FD communities

- Results of STFDPF safeguards assessment at VSS level been documented and shared among all stakeholders
- The report containing the results of the assessment of STFDPF safeguards written in simple local language
- The document contains adequate and appropriate visuals for easy comprehension
- The VSS members (especially EC / informed members) were involved in planning & implementation of STFDPF safeguard measures.
- The capacity building / training programs / review meetings on STDDPF conducted at regular intervals and at relevant stages of project implementation
- The SC/ST/ FD members of VSS regularly participating in capacity building / training programs / review meetings conducted at different stages of project implementation
- All the important topics of STFDPF covered in the training modules / agenda of review meetings.
- The randomly selected participants recall most of the STFDPF topics covered in the trainings / review meetings.
- The Grievance Redressal Committee with prescribed members been constituted at DMU level for the redressal of grievances received from the STFDPF target group
- The Grievance Redressal Committee redress the grievances received from STFDPF target group

• The five STFDPF safeguards that were complied at medium level (50 to 69%) by Batch-II VSSs were

- The project / micro plan benefits acquired by SC/ST/FD communities disturb or alter their cultural practices
- Even if those benefits alter the cultural practices of SC/ST/FD communities, they are acceptable.
- The VSS constituted a sub-group to assess /monitor STFDPDF safeguards with respect to different project components
- The VSS sub-group assess / monitor the implementation of STFDPF safeguards with respect to its assigned project component as per prescribed schedule
- The VSS sub-groups document the results of assessment / monitoring and reports to VSS as per schedule

v. DMU wise STFDPF safeguards analysis reveals the following trend in complying prescribed social safeguards by Batch-II VSSs under different DMUs

- In four out of 12 DMUs viz. Athmallik, Dhenkanal, Karanjia and Subarnapur DMUs, all the Batch-II VSSs have fully complied the social safeguards measures.
- In Ghumsur-North DMU, all 24 Batch-II VSSs have shown the compliance range of 90 to 97% with respect to the STFDPF safeguards. This compliance range of 90 to 97% was followed by maximum number of VSSs in Jharsuguda and Rairangpur DMUs even.
- In DMUs like Baripada, Ghumsur-South, Jharsuguda, Rairangpur, Sambalpur and Sundargarh, the Batch-II VSSs have exhibited mixed range of compliance varying from 50 to 100% as far as STFDPF safeguards concerned.

- In Sundargarh DMU, more than half the number of Batch-II VSSs (33 out of total 60 Batch-II VSSs) have shown minimum range of STFDPF safeguards compliance i.e. 50 to 57%.
- Interestingly, the 20 number of Batch-II VSSs in Ghumsur-South DMU have shown all kinds of range of compliance of STFDPF safeguards, including three VSSs showing no response towards any of the total 30 number of STFDPF safeguard

In overall assessment, almost all the 421 VSSs of Batch-II of all 12 DMUs show a reasonable compliance range (50 to 100%) with respect to STFDPF safeguards. However, measures to be initiated by the project personnel to sensitize and educate the Batch -II VSSs, particularly those falling within the compliance range of 55 to 70% on the importance and necessity of fulfilling the safeguards in STFDPF as per the prescribed norms of JICA during the implementation process of project components related to sustainable forest management, biodiversity conservation, livelihood promotion, other convergence activities and so on.

Chapter 8

Capacity Building Initiatives

8.1 Introduction

Capacity Building is a term that describes the activity aimed at empowering individuals, groups and communities by improving their skills and abilities to act effectively in achieving the goal. This includes providing the individuals or communities the clarity and confidence to gather information, plan, implement and monitor projects. Capacity building occurs at different levels such as individual, group / community and state /national levels. It is a deliberate and systematic effort to enhance the capacity in terms of knowledge, skill and attitude of the targeted group /communities and institutions so as to enable them to function with efficiency in achieving the desired results and obtaining the required outcomes.

The importance of capacity building in development projects is reflected in its crucial role in empowering local communities to address their own issues. This local and community-based approach acknowledges that sustainable change largely and quite often comes from within a community rather than through external interventions alone. By strengthening the skills, resources, and institutions within the community, capacity building aims to create a sustainable foundation for long-term development. Capacity building initiatives in OFSDP-II goes beyond simple training activities. It encompasses a holistic approach that addresses not only the development of individual skills but also the enhancement of organizational and institutional capacities. This multifaceted approach is crucial for ensuring that communities can effectively identify, plan, and implement solutions to their own challenges. Moreover, the emphasis on social and human capital underscores the importance of leveraging existing resources within the community. By recognizing and building upon local assets, development projects can be more sustainable and responsive to the needs of the community. Formulation of micro plans by the VSSs during the initial phase of the project and its revisit after four years of project implementation are the typical result of successful capacity building efforts at community / VSS level under the project.

In essence, capacity building serves as a framework for empowering communities to take ownership of their development processes, thereby fostering resilience and self-reliance. By minimizing reliance on external experts and fostering local leadership, capacity building facilitates sustainable development outcomes that are driven by the community itself.

8.2 Progress of Capacity Building

While the Odisha Forestry Sector Development Project, Phase-II has been making significant progress in its seventh year of implementation, the current focus of the project is on promoting Income Generating Activities (IGAs) through Community Based Organisations (CBOs). This approach demonstrates the commitment of the project towards sustainable development and empowerment at the grassroots level. By strengthening organizations like Self Help Groups (SHGs), Common Interest Groups (CIG), and supporting the most vulnerable households, the project aims to stimulate economic growth while ensuring inclusivity.

As a strategic move from the project side, the Multi-Product Clusters are being established and operationalized to enhance marketing opportunities for local produces, thus boosting the economic

viability of communities involved in forestry activities. Capacity building efforts aimed at fostering entrepreneurship and business acumen among community members further underline the project's holistic approach to development. Overall, the emphasis on livelihood initiatives and market facilitation reflects a nuanced understanding of the socio-economic dynamics and need within forestry-dependent communities and by integrating those elements into its interventions, the project is not only trying to contribute to forest conservation but also fostering sustainable livelihoods and resilience among local populations.

The capacity building initiatives undertaken by the project during the reporting year demonstrate a comprehensive approach to sustainable forest management and community empowerment. Trainings on Sustainable Forest Protection & Management, Fire Protection and Management and implementation of Community-based Monitoring, Reporting & Verification for REDD+ Readiness continued to be organized at DMU, FMU and VSS levels so as to achieve the project objectives and its commitment towards forest, environmental conservation and climate change mitigation.

Capacity building efforts on Gender mainstreaming underscore the project's recognition of the importance of gender equality and the inclusion of women in decision-making processes related to forest management. Similarly, the incorporation of Environmental and Social Management System Framework (ESMSF) ensures that the project activities are carried out in an environmentally and socially responsible manner. The training focus on Schedule Tribe and Forest Dependent Plan Framework indicates a targeted approach to address the specific needs and challenges faced by indigenous communities and those reliant on forest resources for their livelihoods. Capacity building on revisit of Micro Plans continued during the year under report for field-level officials and community members of Batch-II VSSs and SHGs. By empowering both officials and community representatives with the necessary skills and knowledge, the project is better positioned to achieve its objectives of sustainable forest management and community development.

The comprehensive capacity building and skill enhancement approach adopted by OFSDP-II to implement various livelihood interventions, particularly through SHGs, Common Interest Groups (CIGs), and Producer Organizations (POs) encompass a wide range of activities both on and off the farm, as well as non-timber forest product (NTFP) based initiatives. Following is a breakdown of some of the key areas covered:

i. Agriculture and Horticulture: Training on modern farming techniques, including soil management and harvesting methods have improved agricultural productivity. Similarly, horticultural trainings covered aspects like fruit and vegetable cultivation, greenhouse management, and post-harvest handling.

ii. Composting: Trainings on vermicompost production have largely provided farmers with an organic and sustainable method of soil enrichment, reducing the need for chemical fertilizers. Also provided a profitable livelihood option to many women SHG members in the project area.

iii. Livestock Rearing: Backyard poultry, dairy farming, goat rearing, and pisciculture (fish farming) are vital for both nutrition and income generation in the project area. Training contents in these areas have included animal husbandry practices, health management, and breeding techniques.

iv. Beekeeping: Beekeeping is not only beneficial for honey production and related livelihood but also for pollination and biodiversity conservation. Training given on beekeeping covered hive management, honey extraction, and its marketing.

v. Mushroom Cultivation: Training on mushroom production typically included cultivation techniques helping the farmers to obtain maximum output in terms of income with minimum investment

vi. Bamboo Craft Making: Bamboo is a versatile material for crafts and construction. Trainings on bamboo craft, provided with professional help included bamboo treatment, weaving techniques, and product design.

vii. Pickle Making and Other Food Processing: Food processing adds value to agricultural produce and extends its shelf life. Training in pickle making and other food processing techniques help the project to empower women by providing them with opportunities for entrepreneurship.

These skill enhancement trainings not only diversify livelihood options but also empower communities to make informed choices about their economic activities. Collaboration with other government departments ensures a holistic approach to rural development, leveraging resources and expertise across different sectors.

8.2.1 Capacity Building Training Initiatives at PMU level:

Important trainings conducted under Odisha Forestry Sector Development Project, Phase-II during the year 2023-24 are given below:

8.2.1.1 Capacity Building on Satoyama Initiatives:

Subsequent to joining of new officials in Bamra WL Division and Badrama Wildlife Sanctuary, who are the key stakeholders for effective implementation of Satoyama Initiatives, a Capacity Building Training of the field level officials of Bamra WL Division and Badrama Wildlife Sanctuary was conducted on 15th May, 2023. The RCCF, Sambalpur, DFO, Bamra, Asst. Conservator of Forests, Bamra, Range Officer, Bamra, Accountants, AJY Coordinator, Development Officers from Bamra WL Division along with other officials from PCCF (Wildlife) & Chief Wildlife Warden were attended the training programme. A total of 30 participants attended the training programme.

At the outset the concept of Satoyama Initiatives along the rationale and approaches of implementation of Satoyama Initiative were explained. Subsequently, the progresses made so far in detail were explained. In a separate session, the perspective five year plan and budget allocated for the said initiatives were briefed. During the session, the members presented from the field attended the training were facilitated to prepare a draft Annual Plan of Satoyama Initiatives for all 10 EDCs were outlined.

The field level officials also appraised on the functioning of Management and Marketing Support Agency (MMSA) initiatives of OFSDS, which play significant role not only support in promotion of income generating activities but also facilitate marketing of their produces at best remunerative price.

After the training, doubt clarification session was conducted, where all the participants had series of doubts particularly on operational aspects on implementation of Satoyama Initiatives were clarified.

8.2.1.2 Capacity Building and Orientation Training on Accrual & Trading of Carbon Credits:

A Capacity Building and Orientation Training on Accrual & Trading of Carbon Credits was convened at Plumeria Hall, Hotel Vivanta, Bhubnaeswar on 2nd November, 2023. The objective of the orientation programme was to sensitize the field level functionaries on the above initiatives and the necessary preparedness at DMU level for successful accrual and trading of Carbon Credits from the projects of OFSDS. About 80 members from PMU, DMUs and other organizations attended the training.

The PCCF (Projects) & Project Director, OFSDS at the outset explained in detail about the rationale of considering and trading of Carbon Credits from the projects of OFSDS. The processes followed in hiring the expert agency to facilitate the on accrual and trading of Carbon Credits from the projects of OFSDS were also shared.

The representatives from M/s Kosher Climate India Pvt. Ltd., Bangaluru explained in detail about the evolution of carbon project, step by step procedures and the requirement for formulating the Project Design Document were explained in detail. The topic covered by Mr. Nagaraju and Mr. Anuj Parihar, Kosher Climate India Pvt. Limited in their respective session were as below:

i. Objective of the Assignment under OFSDS

ii. Carbon Project Timeline of different Registries

iii. Approaches of Carbon Project: a. Pre- Feasibility, b. Baseline, c. Validation & Registration, d. Monitoring & Verification, e. Issuance

iv. Baseline & Additionality Aspects

v. Approach Cycles

vi. Documentations and way Forward

The session by M/s Kosher Climate India Pvt. Ltd., was followed by another technical Session byDr Paneerselvam, Scientist from National Centre for Sustainable Costal Management, Ministry of Environment Forest & Climate change who made a detailed presentation on scope of work of NCSCM on inventorizing the Blue Carbon Sequestration in Bhitarkanika Conservation Area. While explaining the Blue Carbon Eco-system as a natural sink, he stated in brief about the data collected on carbon sequestration under BCA assignment.

During the open discussion session, the participants from Division sought clarification on the preparedness at division level for successful execution of carbon project of OFSDS. All project division officials were requested to upload their data in the respective IMS modules, which will be essential, for preparing the Project Design Document for Carbon Project.

8.2.1.3 National Conference on Geo Smart- India, 2023

Officials from Odisha Forestry Sector Development Society participated in the National Conference on Geo Spatial Infrastructure and Digital Twin: Powering National Economy organized by Geo Spatial World in Hyderabad from 17th – 19th October, 2023. The themes covered in the Conference were as below:

i. The Geospatial Knowledge Infrastructure Supporting National Development: Enabling and Augmenting Sectoral Geospatial Programs.

ii. Modernization of Land Administration & its Socio-economic Impact

iii. Geo Spatial Infrastructure and Digital Twin Supporting Sustainable Mandates into Digital Exploration of Mining

iv. Future focus: India's New Space Economy

v. Connected Information Ecosystems Enabling Integrated Urban Governance

The paper of OFSDS on "Application of Geospatial Technology with Information Management System in decentralised Planning by Forest Fringe Dwelling Communities in Forestry Sector" was accepted for presentation. The officials attended the Conference were as below:

1. Shri Swayam Mallick, IFS, Dy. Project Director, OFSDS

2. Smt. Sharmistha Kar, State Programme Manager, GIS,MIS & Website, OFSDS

3. Shri Atul Jindal, IFS (Retd.), CMRV Consultant, PMC, OFSDS.

Eminent Professionals from both Industry and Govt attended the Geospatial Conference. Officials and Experts from different organizations / Govt. presented the initiatives and innovations of the respective organizations, highlighting the learnings and its scalability.

Sri Swayam Mallik, IFS, Dy. Project Director, PMU, OFSDS presented the innovations in OFSDS on analysing the Forest Canopy Density in 8 Classes against the 4 Classes of FSI to detect the minor details and use of the Geospatial data during micro planning on Forest Management and Livelihood Initiatives" at village community level.

Sri Atul Jindal, Retd. IFS, (Retd.), Expert, Community based Monitoring, Reporting & Verifications (CMRV), PMC, OFSDS presented the initiatives of OFSDS in use of Technology in Strategic Planning and recording & reporting the issues pertaining to deforestation and degradation of forest at Community level and the contribution of communities for sustainable forest management for REDD+ readiness.

8.2.1.4 Exposure Visit of Officials and Community Representatives of JICA Assisted Himachal Pradesh Project to OFSDS

Accepting the request made by the Chief Project Director of JICA Assisted Forestry Projects of India from Himachal Pradesh, OFSDS organized the exposure visit of 10 Officials and Community Representatives in collaboration with XIM, Bhubaneswar from 18th to 24th February, 2024.

The Officials and Community Representatives of JICA Assisted "Project for improvement of Himachal Pradesh Forest Eco-systems Management & Livelihoods" of Himachal Pradesh were exposed to the initiatives in Sustainable Forest Management and Livelihood promotion being implemented by OFSDS by Sri Swam Mallick, IFS, Joint Project Director, OFSDS. The learnings of JICA assisted Odisha Forestry Sector Development Project, Phase-II were shared by Sri Subrata Kumar Kar, State Programme Manager, OFSDS.

Subsequent to initial briefing on project initiatives on day-1, the exposure visit to the OFSDP-II project areas of Karanjia & Baripada Forest Divisions was organized for the participants from 19th to 23rd February, 2024. The participants, during the visit to the DMUs, FMUs and the project VSSs of the above divisions had interacted with the community representatives, P-NGO staff and project officials and learnt about different project interventions, including interventions on Sustainable Forest Management, participatory processes, forest fire protection &management by Communities, farm forestry plantations, optimal use of VSS building cum IGA Facilitation Centre, livelihood promotion through inter-sectoral convergence, promotion of Income Generating Activities (IGAs) through the Self Help Groups, Common Interest groups and Poorest of Poor Households etc.

8.2.1.5 Orientation of ACFs on Monitoring of Project Interventions through GIS and Computer Application for Monitoring

About 24 numbers of officials particularly the Asst. Conservator of Forest, who were undergoing the training in Odisha Forest Ranger's College, Angul were nominated for training on Importance of GIS and Computer Application on Monitoring at PMU, OFSDS on 19th January, 2024.

The participants were briefly explained by PCCF (Projects) & Project Director, OFSDS on different initiatives of OFSDS on Sustainable Forest Management and Livelihood Promotion and the Importance

of GIS and Management Information System for Concurrent Monitoring. The importance of identification of different parameters, which are crucial for smooth implementation of project and the use of technology to monitor were discussed. It was stated that concurrent monitoring by using technology not only help to maintain the updated database on all important parameters but also contribute significantly for timely decision making by the project authorities.

After the briefing session, the participants were exposed to the GIS Laboratory of OFSDS and interacted with the GIS Team. The tools and technologies used by OFSDS in GIS / MIS based monitoring were explained.

8.2.1.6 Orientation of IFS Officers on BCA Initiatives

One-week Compulsory Training Course was organized for the nominated Indian Forest Service (IFS) Officers on "Mangrove: ecology, conservation and management" in Bhitarkanika Conservation Area in Odisha from 5th – 8th March, 2024. The above training was jointly conducted by National Centre for Sustainable Costal Management (NCSCM), Ministry of Environment, Forestry & Climate Change, Chennai and OFSDS. Sri Yosobanta Beriha, OFS (SAG), Dy. Project Director, PMU, OFSDS also attended the said training.

After completing the field training at Bitharkankia, one day orientation to share the experience of OFSDS on "Development of Long term Monitoring Plan of Bhitarkanika Conservation Area" was conducted at PMU, OFSDS office premises in collaboration with NCSCM on 7th march, 2024 for the participants of the training programme. Dr. Meeta Biswal, IFS, PCCF (Projects) and Project Director briefed about the creation of database on physical, chemical and biological parameters pertaining to Eco system of BCA. She also highlighted on the Health Report Cards published based on the analysis of above parameters, which act as a management tool for the authorities for timely inputs for conservation management of Bhitarkankia Conservation Area. Senior officers from Forest Department, including PCCF & HoFF, Odisha attended the session. After the presentation, the participants briefly explained their understandings on different ecological aspects of their respective states and correlated to the learnings from the trainings conducted by NCSCM, Chennai.

8.2.1.7 Orientation to IIFM Students

A batch of 12 students of Post Graduate Diploma in Forest Management being offered by IIFM, Bhopal were deputed to Odisha for exposure and field work to different projects / schemes of Forest Department, Govt. of Odisha as a part of their Course Curriculum from 18th December, 2023 to 12th January, 2024. During their visit to Odisha, the students also visited Odisha Forestry Sector Development Society to have broader understanding on implementation of different Sustainable Forest Management initiatives under OFSDP-II through Joint Forest Management Mode in Odisha.

Sri Subrata Kumar Kar, State Programme Manager, C&ID, PMU, OFSDS deliberated in detail on project components, implementation modalities, roles and responsibilities of different stakeholders, importance of documentation, innovations and best practices etc. of different project of OFSDS through power-point presentation on 9th January 2024. During the open house session, the students sought clarification for understanding on the strategies of OFSDS, particularly related to inter-sectoral convergence which has significantly contributed for overall community development with substantial success. The students also discussed about the GIS & MIS based monitoring system of OFSDS for effective monitoring. The students expressed their gratitude and appreciation towards the authorities of OFSDS for providing the clear picture on implementation of Forestry management project through JFM Mode.

8.2.1.8 Stakeholders Consultation on Accrual & Trading of Carbon Credits;

The State level Stakeholders' Consultation on "Leveraging Carbon Credits through Improved Forest Management and Farm Forestry Interventions under Odisha Forestry Sector Development Society (OFSDS)" was held at Bhubaneswar on 5th February, 2024. Senior Forestry Officers from the State, Regional Chief Conservator of Forests, Divisional Forest Officer cum DMU Chiefs & Subject Matter Specialists from Project Divisions, Chief Executives from Partner NGOs, Representatives from NCSCM, Chennai, Kosher Climate India Pvt. Limited, Bengaluru, Boston Consulting Group, Mumbai etc. participated in the Consultation.

Dr. Meeta Biswal, IFS, PCCF (Projects) & Project Director, OFSDS, during the inaugural remarks highlighted the challenging issues pertaining to Climate Change, its impact on natural resources and importance of its mitigation measures. She elaborated the initiatives of OFSDS on "Leveraging Carbon Credits through Improved Forest Management and Farm Forestry Interventions" for broader understanding of the participants. She urged the audience to realize and appreciate the need for clear understanding by different stakeholders on the severe consequence of the fast and unforeseen changes occurring in climatic conditions as well as the concepts of carbon credits, carbon budgeting etc. in order to encounter and to mitigate the severity of adverse impact of climate change phenomena that threatens the very survival of human, plant and animal eco systems. The sessions taken by speakers on different subjects include:

i. Interventions under OFSDP-II & AJY by Sri Swayam Mallick, IFS, Dy. Project Director, OFSDS

ii. Role of Community in implementing the project interventions, Livelihood promotion for Community Based Organizations (CBOs like SHGs, CIGs & PoPs) by Sri Chittaranjan Mishra, IFS (Retd.), the CFM & Micro Planning Expert, PMC, OFSDP-II.

iii. Importance of CMRV on Accrual of Carbon Credit Project by Sri Atul Jindal, IFS (Retd.), the CMRV Expert, PMC, OFSDP-II

iv. Development of Marine Ecosystem Health Report Cards for Bhitarkanika Conservation Area by Sri Subrata Kumar Kar, State Programme Manager (Capacity & Institutional Development), OFSDS

v. Introduction to the Concept of Accrual of Carbon Credits, Project Descriptions, Potential Project Benefits, & Overall Role of M/s Kosher Climate India Pvt. Limited. & Concept of Carbon Budgeting by Dr. Anuj KS Parihar, Lead of Agro-forestry and Mangrove Programs and Mr. Nagaraju B., Head, Carbon, Kosher Climate.

vi. Digital Solutions for developing Projects with Component of Carbon Credits by Mr. Vivek Adhia, Associate Director from M/s Boston Consulting Group India (Private) Limited, Mumbai

Subsequent to deliberations with the respective speakers, the doubts and clarifications sought by the participants on the methodology of different registries like VERRA, VCS, concept of additionality, timeline of the projects for inclusion in carbon accrual &trading project, role of community in REDD+, difference between compliance market &voluntary market on carbon credits etc. were deliberated upon.

In concluding remark, Sri Debidutta Biswal, IFS, PCCF & HoFF, Odisha appreciated the initiatives of OFSDS on Accrual and Trading of Carbon Credits and stated that the interventions of different projects of OFSDS, which are being implemented following the Joint Forest Management Mode (JFM Mode) have the potential for getting registered for Carbon Accrual & Trading Projects. He wished the project for its success.

8.2.2 Capacity Building Training Initiatives at DMU / FMU level

8.2.2.1 Training on Revisit of Micro Plan at DMU level:

During the year under report, Revisit of Micro Plan was undertaken in 422 VSSs of Batch-II across the 12 DMUs. The DMU level officials who got trained on the Micro plan re-visit process and formats at the state level Capacity Building Training conducted during FY 2022-23 were identified as Master trainers for training the FMU level staff and the community level members on the processes of Revisit of Micro Plan. The Animators, Member Secretaries of VSSs, and Women Working Group Members of all 422 VSSs were oriented on the objectives of re-visiting the Micro Plans and how to collect of information through different formats pertaining to each component of micro plan re-visit, particularly related to the new chapters / components v.i.z People Biodiversity Register, Gender Mainstreaming initiatives, ESMSF & STFDPF and Community Based Monitoring, Reporting & Verifications etc. which were included in the Revisit of Micro Plan. During the financial year 2023-24, a total of 18 trainings were conducted for 575 numbers of Animators and Members Secretaries and 106 trainings were conducted to sensitize about 5064 numbers of community members on revisit of micro plan.

8.2.2.2 Training on Cultivation of Indigenous Aromatic Paddy:

About 132 farmers from 10 EDCs of Bamra WL Divisions and 145 farmers from 18 VSSs of Baripada Forest Division have taken up cultivation of Indigenous Aromatic Paddy in 76 Acre and 145 Acre farm land respectively during the year 2023-24. M/s Kanak Bio science & Research Pvt. Limited, Bhubaneswar provided required technical input and guidance for the said initiatives. The framers associated in farming of Indigenous Aromatic Paddy were trained on the agronomic practices during pre cultivation phase, cultivation phase and post cultivation phase. The topes covered in each phase were as below:

Phase	Topic Covered
Pre Cultivation Phase	1. Selection of varieties and seeds 2. Field treatment 3. Seed treatment 4. Seed bed raising 5. Preparation &application of organic manure etc.
Cultivation Phase	6. Farmers field inspection 7. Different agronomic practices 8. Preparation &application of organic manure etc 9. Insect &paste management 10. Methods of organic certifications
Post Cultivation Phase	11. Post harvest management 12. Water management 13. Disease control management 14. Drying / sorting / grading etc. 15. Quality management

The professionals from M/s Kanak Bioscience & Research Private Limited conducted the above trainings along with the representatives from PMU & MMSA in attendance as Resource Persons.

8.2.2.3 Capacity Building Training on Forest Fire Management:

Based on the learning from the past years, adequate preventive measures on prevention and management of forest fire were initiated across the VSSs under the project during the year 2023-24. Protection of Forest from fire has been one of the key tasks of the VSS members operating under OFSDP-II. They are being sensitized regularly to protect forest from forest fire.

During the year 2023-24, the DFO cum DMU Chiefs have identified the vulnerable sites which are prone to forest fire and sent the request to the PMU, OFSDS for provisioning of fund for equipping the VSS members for control and management of forest fire. These funds were meant for conducting sensitization trainings, theme based cultural programmes for creating awareness on forest fires among VSS members, rallies, street plays, for making wall paintings, posters for display etc., on forest fire control & management in all 1211 VSSs covered under OFSDP-II. Such initiatives have drastically reduced the forest fire incidences in the project villages of OFSDP-II during 2023-24.

8.2.2.4 Training on Vermi-Compost in Boudh

Boudh Forest Division has taken an initiative in establishing vermicompost units in the project VSSs not only to have required inputs for organic farming but also a source of sustainable income for the forest fringe dwelling communities. The stubble left out in the paddy land, which is often becomes the cause for forest fire during the summer season, is being used as raw material for preparation of vermi compost. During 2023-24, a total of 131 numbers of vermi compost units have been established in Boudh Division. Each unit has about 4-6 numbers of vermi compost chambers for production of compost. The SHGs functioning under the project VSSs have been trained by NHRDF & KVK, Boudh on preparation of vermi compost in their respective VSSs. Subsequent to the capacity building through training, the SHGs members have started preparing vermi compost in their respective VSSs. About 20 quintals of vermi compost and 125 litres of vermi wash is being harvested by each SHGs across the 61 VSSs during the reporting year. District Administration has issued a circular to all concerned departments to procure the vermi compost from these SHGs for use. Accordingly, vermi compost, worth of Rs. 26.24 lakhs have been marketed by 64 SHGs of 61 VSSs during the reporting year.

8.2.2.5 Exposure Visit to Dantebeda, Chattisgarh on Value Addition of Mahua Flower.

The DFO cum DMU Chief, Sambalpur coordinated with the DFO, Jagdalpur, Chattisgargh for an exposure visit of project personnel from DMU and FMUs of Sambapur Forest Division to Sangbari Mahila Sayang Sahayata Samuha, Ban-dhan Kendra, Dantebeda on value addition of mahua flower and its value chain as a potential source of income for the forest fringe communities. Prior to exposure visit series of training of the SHG members from different VSSs of Sambalpur Division were conducted on value addition of mahua flower in collaboration with Sambaplpur University.

During the visit, the team had interacted with the members of Sangbari Mahila Sayang Sahayata samuha, who exposed them to different value-added products prepared from mahua flower. The products include mahua ladu, cookies, hallwa etc. Further the team also exposed to the machineries being used for processing of mahua flowers into different value-added products. The initiatives taken

up by the SHGs with the assistance of Chattisgarh Minor Forest Produce Unit(CMFPU) of Chattisgarh state in marketing of the value-added product by branding, packaging etc. Besides, the management and legal aspects of forming a cluster unit for value addition and marketing of different produces were also discussed during the visit.

The learning from the said exposure visit helped the project personnel to understand the scope of value addition and the strategies for marketing of forest products at best remunerative price. The project team, after returning from Chattisgarh, had oriented the selected SHG members from different VSSs on the those initiatives learnt from Chattisgarh. Based on this exposure, now many SHGs have started preparing various value added products of mahua flower, which have great demand from the consumers in neighbourhood towns. This has created an opportunity for sustainable income generation for the SHG members associated in value addition practices.

8.2.2.6 Collaboration with Sambalpur University for training on Value Addition of Mahua Flower:

The Sambalpur Forest Division collaborated with the Department of Biotechnology & Department of Nutrition & Food Science with an objective to transfer the knowledge, skill and technologies required for value addition of mahua flower to the communities for establishing an alternate source of income. Initially, 25 potential members from each Forest Range (FMU) under OFSDP-II were identified for this purpose and were trained on value addition of mahua flower by the Departments of Biotechnology & Nutrition & Food Science ofSambalpur University. Particularly, the members were trained on preparation of mahua concentration from mahua flower and its application in preparation of different edible products like laddu, cookies, candy, cake etc. In total of 100 Master Trainers from different VSSs under the project were trained in Sambalpur University. Later about 1208 members (1069 Female & 139 male members) from the SHGs operating under various VSSs under the project were oriented on different technologies and processes of extraction frommahua concentration and making different value-added products. Currently, these SHGs are preparing 16 varieties of value-added products of mahua flower which include cake, cookies, jam, jelly, murku, ice cream, chatni, chikki, laddu, achar, candy, gulabjamun etc.

The officials from FMU, DMU and Marketing Executive from MMSA facilitated the VSS / SHG members for marketing of their produces in different markets in and around Sambalpur. As a result, the value-added produces on mahua flower prepared by the SHGs are being found in the display-shelves of different retailer in Sambalpur. The members of the SHGs / VSSs are very much satisfied by these innovative initiatives of OFSDP-II in collaboration with Sambalpur University as they helped the women members of SHGs to earn substantial income to run their families with ease and dignity.

8.2.2.7 Capacity Building Training cum Exposure Visit Programme on Integrated Farming in Sundergarh.

In order to fulfil the felt need of large numbers of progressive farmers belonging to the VSSs under OFSDP-II in Sundergarh DMU for the exposure on "Integrated Framing System", the Sundergarh Forest Division in corrdinartion with the Panchgaon Lakhanpur Block ofJharsuguda district and State Livestock Breeding Farm, Chiplima arranged for an exposure visit of the selected progressive farmers to learn about the methods and techniques of Integrated Farming System. About 287 Progressive Framers from 75 VSSs (15 VSSs per FMU) from five FMUs of Sundergarh DMU were sent for 3 days exposure visit in 10 batches. The project staff of FMUs and the P-NGO Team of each FMU accompanied the team during the exposure vsit conducted between 29th December, 2023 and 30th January, 2024.

The farmers were exposed to the agronomic practices on "Cultivation of grafted vegetable" that included methods of field preparation, use of grafted seed, mulching mechanism, use of drip irrigation, timely application of manure etc. Such mechanisms not only have the potential to double the framers income but also has the option to use the farm land productively round the year. The framers were also exposed to the scientific approaches adopted in LITC, Chiplima, Sambalpur on Goat, sheep and pig rearing practices as they are the potential source of income at the rural belt. Issues pertaining to fodder, breeding, vaccination, insurance etc., which are crucial for rearing of small ruminant were discussed and clarified. Other areas of integrated framing to which the farmers exposed include dairy farming, fodder cultivation, poultry rearing, pisciculture etc. It is worth to note that the framers after the exposure visit had started applying their learnings in their respective farms and started obtaining the benefit out of the said practices.

8.2.2.8 Exposure Visit of Primary Stakeholders of Jharsuguda DMU on Value Addition & Marketing of Sal Leaf Plate & Cups

The community members belonging to large number of VSSs of Belpahar FMU in Jharsuguda DMU are involved in marketing of Sal Leaf and its value-added products which is an important source of income. However, due to lack of adequate skill and technology, the earnings of the local communities from this IGA were not satisfactory. Realizing the need, the Jharsuguda DMU coordinated with 'Social Organization on Various Aspects (SOOVA)' and arranged an exposure visit of primary stakeholders to their successfully functioning Sal Leaf Cluster at Brundagadi, Udala Range of Mayurbhanj district

About 20 participants from the SHGs of Belpahar along with the field staff of Belpahar FMU and Jharsuguda DMU had visited SOOVA Sal Leaf Cluster for two days from 1st to 2nd March, 2024. The participants had learnings on techniques of sustainable harvest of sal leaf, safe storage, methods of stitching, value addition and

marketing of the same at remunerative price and so on. In addition, the challenges associated in establishing a entrepreneurship model of Sal leaf Cluster for sustainable income were learnt during the visit.

8.2.2.9 Trainings on IGA Related Skill Development through Convergence

Skill Trainings on different Income Generating Activities have been taken up by the Project Divisions during the year under report.

The DMU Athmallik organised Framers Field School cum Training on groundnut cultivation for 30 farmers. The objective of the training is to "learning by doing on the field". Besides the scientific practices of cultivation of groundnut was also discussed during the training.

About 120 numbers of primary collectors of medicinal plant resources from the VSSs of Bagdihi and Kolabira FMUs of Jharsuguda DMU were trained in four batches on the sustainable harvesting mechanism of the medicinal plants and the first level value addition, which was essential for fetching better price. The experts from Dabur – Baitaranee, Bhubaneswar had participated in the training programme as the resource persons. The field level officials from DMU and FMU also attended the training.

Similarly, series of trainings on making value added bamboo products for the local artisans were organised by Boudh Division. Different skill trainings on optimal utilisation of bamboo resources and making of bamboo craft have been conducted through convergence with Odisha Bamboo Development Agency. Similarly, 30 bamboo artisans were trained on making of value added bamboo products for duration of 30 days with the financial assistance of Ministry of Textile during 2023-24.

Different skill trainings for the primary stakeholders of the VSSs on various Income Generating activities based on farm, off farm, non-farm and NTFP etc. were organised at division level. Many of the above trainings were organised through convergence with different line departments. Training on mushroom cultivation, bee keeping, pisciculture, vegetable cultivation etc. were also organised for the primary stakeholders during the year under report. The abstract of trainings conducted during 2023-24 is as below:

Themes of training	Level of Training	Trainings (In Nos.)	Participants
CBT on Satoayama Initiatives	PMU level	10	30
Sameekshya - 2023: Innovations and Best Practices			131
CBT on Accrual & Trading of Carbon Credits			84
Knowledge Co creation Programme on Sustainable Forest Management in Japan by JICA			02
National Conference on Geo Smart- India, 2023			03
Exposure Visit of HP Team			10
Orientation of ACFs on Monitoring			24
Orientation of IFS Officers on BCA Initiatives			27
Orientation on IFM Students			20
Stakeholders Consultation on Accrual & Trading of Carbon Credits			143

CBT on Revisit of Micro Plan	DMU Level	27	1072
Training of IGA & Value Addition			
Training on IGA- Paddy Cultivation			
Environment Conservation & Management			
Training of Working Group & Women Working Group on Revisit of Micro Plan	FMU Level	889	37510
Training on Forest Fire Control & Management			
Training on Farm Forestry Plantation			
Environment Conservation & Management			
Training on Skill Programme on IGA			
Training on Cultivation of Aromatic Paddy			
Exposure Visits of Primary Stakeholders on Income Group Activities			
Total- 2023-24 (Up to Mar, 2024)		**926**	**39056**

8.2.3 Knowledge Co-creation Programme Sustainable Forest Management in Japan by JICA, India.

Under the Knowledge Co-creation Programme of JICA India onSustainable Forest Management and Integrated Watershed Management, two officials from OFSDP-II v.i.z Shri T. Ashok Kumar, IFS, RCCF, Sambalpur and Shri Swayam Maiilik, IFS, Dy. Project Director, OFSDS participated in the training cum exposure visit to Japan organized from 16th August to 7th September 2023. Under the same Knowledge Co-creation Programme of JICA India, Shri Sudhanshu Sekhar Khora, IFS, RCCF, Angul attended the Sustainable Forest Management and Biodiversity Conservation training in Japan from 4th – 13thDecember 2023. On return, the participants made a brief presentation on their learning at Project Management Unit for the better understanding and necessary adaption.

Chapter 9

Coordination and Supporting Activities:

Periodical meetings related to project-oriented policy issues, planning, coordination, collaborations, review of progress/ implementation etc., at different levels of project management were conducted during the year under report for better coordination and to provide support to the entire team of OFSDP-II.

9.1 Meeting of High-Power Committee (HPC)

The High- Power Committee (HPC) of OFSDS is the highest decision-making body of the Society. Itis chaired by the ChiefSecretary with the Additional Chief Secretary, Forest and Environment Departmentas the Vice Chairman andplays a significant role in making policy level decisions inconnection with the operational management and implementation of the project. HPCalso facilitates coordination between different line departments and OFSDP-II for optimaland successful inter-sectoral convergence so as to ensure the benefits of various povertyalleviation schemes / programmes adequately reach the needy households in the remoteforest fringe villages under the project. In view of this coordination role of HPC, senior officers at Principal Secretary/Commissioner-cum-Secretary levels from different govt.Departments such as Finance, Agriculture and Farmer's Empowerment, Revenue andDisaster Management, Panchayati Raj and Drinking Water, ST and SC Development, Rural Development, Women and Child Development, Mission Shakti, Health and Family Welfare,Principal Chief Conservator of Forests andHoFF and Principal Chief Conservator ofForests (Wildlife)-cum-Chief Wildlife Warden, Odisha etc. are themembers of the Committee.

The HPC meetings under the chairmanship of the Chief Secretary, Odisha were organized on six-monthly basis during the year under report. While reviewing the progress of work, the HPC also discussed about the challenges, issues relating to project implementation, inter-sectoral convergence etc., during the meetings.

9.2 Governing Body Meeting of OFSDS

The Governing Body (GB) of OFSDS is the planning and decision-making body of OFSDP-II as per the Society Registration Act, 1860. The Governing Body authorises the PMU for day-to-day functioning, supporting the PMU as per the approval of budget and annual plan of operation and other suggestions. It rigorously reviews the project progress vis-à-vis annual plans at least once in every quarter. During 2023-24, two GB Meetings were organised at the State level.

9.3 PMU level Review Meetings

Usually, quarterly Review Meetings with the Divisional Forest Officers are organized at PMU level to track physical and financial achievements vis-a-vis the plan for the corresponding quarter. During the year under report, component wise physical and financial progress made by each DMU was being reviewed under the Chairmanship of PCCF (Projects) & Project Director. Decisions taken in the meeting were recorded and the proceedings of the meetings were regularly communicated toall concerned Circle RCCFs and DMU Chiefs for information and timely action at DMU and FMU levels.

9.4 DMU level Meetings

Monthly review cum P-NGO Coordination Committee Meeting was held in every month at each Divisional Management Unit to monitor the progress of work vis-a-vis the plan. This meeting was conducted to review the plan of action of previous month and prepare the action plan for the next month for the project personnel and the P-NGO team.

9.5 FMU level Meetings

Fort nightly meetings were regularly organised at FMU level with the project staff and the P-NGO team under the chairmanship of respective FMU Chiefs of OFSDP-II to track the progress and to take necessary decisions for timely execution of project. This meeting served as a good platform to meticulously plan and execute the activities at VSS level.

9.6 VSS level Meetings

VSS level Executive Committee meetings were regularly conducted in each VSS under OFSDP-II. Concurrent monitoring at VSS level was taken up to ensure timely implementation of the project components. Required inputs were rendered by PMU to the DMUs and FMUs as and when required for smooth and timely implementation of project interventions at respective VSS level. It has been decided that at least two Executive Committee meetings in each month shall be conducted at VSS level to take necessary decision for smooth implementation of project.

Number of meetings conducted at different levels during 2023-24

Name of the Meeting	No of Meetings Conducted
High Power Committee Meeting	Nil
GoverningBodyMeeting	2 Nos.
PMU Review Meetings	2 Nos.
DMU level Review Meeting	90 Nos.
FMU level Meetings	667 Nos.
VSS Meetings	28533 Nos.
Total Number of Meetings	**27,172 Nos.**

9.7 Inter-Sectoral Coordination Committee Meetings

Inter-sectoral Coordination Committee meetings were organized at block level during every month under the chairmanship of Block Development Officer (BDO) of the respective Blocks. The FMU Chief was the Member- Convenor and block level officers of different departments attended the meeting as members. This forum was established to review and plan the community development activities to implement inter-sectoral convergence activities with other line departments at VSS level.

9.8 District Advisory Committee Meeting

District Advisory Committee (DAC) meeting was also organised for Inter-sectoral coordination. The meeting was chaired by the Collector and District Magistrate. Divisional Forest Officer of the

concerned Division Head Quarter was the member-convenor of the meeting. Senior officials of other line Departments are the members of the DAC. These meetings were conducted on fortnightly basis or once in every two months as per the availability of the Collector and other senior officials of line departments. This forum helped the project to ensure optimal coordination with other line departments for taking up the Convergence activities identified by the villagers during micro planning processes.

Number of BLAC & DAC meetings organized during the year 2023-24

Name of the meeting	No of Meetings conducted during 2023-24
District AdvisoryCommittee Meeting	16
Block level CoordinationCommittee Meeting	354

Chapter 10

Communication & Knowledge Management

10.1 Communication Strategy in OFSDP-II

A communication strategy is the critical process bridging the situation analysis and the implementation of a social and behaviour change communication (SBCC) program. It is a dynamic plan that strategizes how an SBCC program will attain its vision and align with the objective of the organisation and overall strategy of the organisation's programme implementation plan. Effective communication strategies use a systematic process of behavioural change and theories of human interaction to design and implement outreach activities that encourage desirable and sustainable social and behaviour change.

In the context of OFSDP-II, the communication strategy formulated is multi layered and dynamic approach. It uses all the communication tools to engage all the project stakeholders for project implementation. The strategy has been helpful in involving project functionaries towards achieving the development objectives by engaging strategies and functional communications during the period of project implementation. It also in mobilising local communities for successful implementation of the programme.

The communication strategy and the plan are integrated in the Annual Plan of OFSDP-II based on the information needs of the target groups viz. project functionaries at PMU, DMU and FMU levels and the local community at VSS level. The information and communication activities are planned, customised and implemented as per the felt-need at different project management level. OFSDP-II has engaged all the communication verticals of institutional communication, documentation and digital communication platforms to disseminate the real time information about the project to all of its targeted stakeholders.

As per the project document, mainly, three forms of project communication are being followed for project management of OFSDP-II. They are –

a. Information Management,

b. Internal Communication, and

c. External Communication.

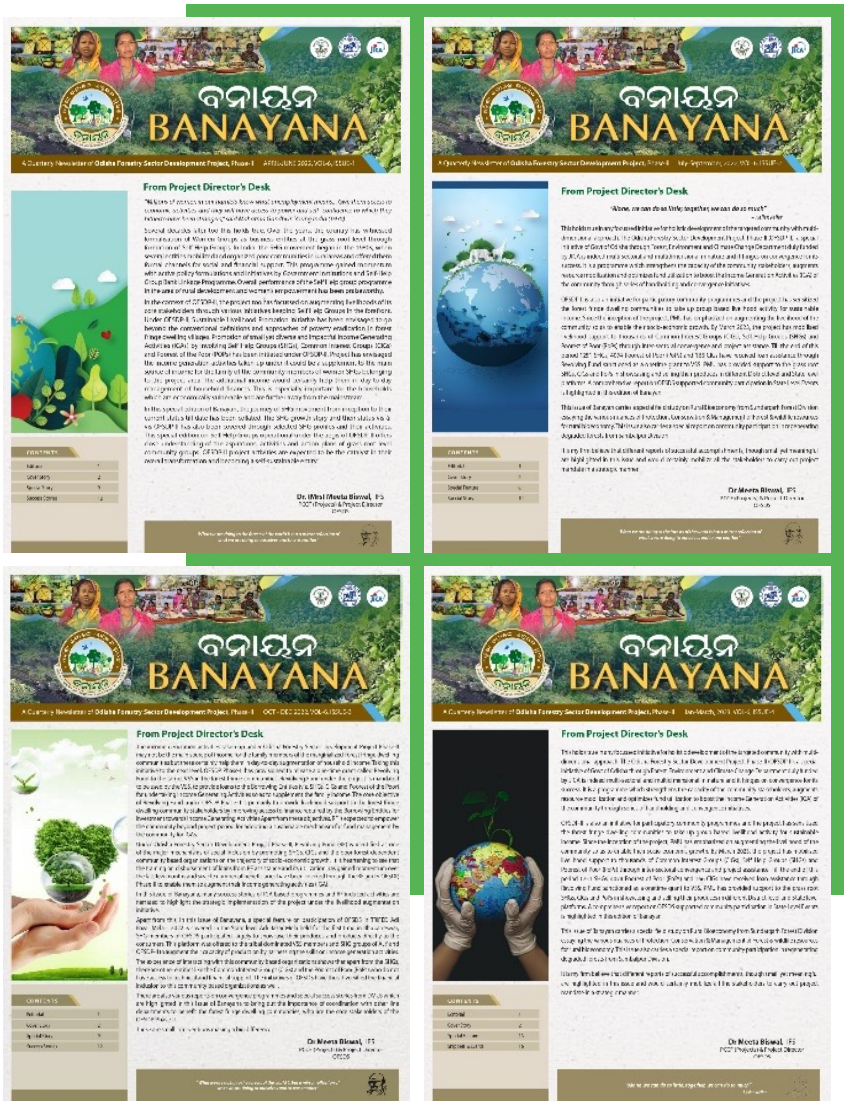
10.2 Knowledge Management

PMU of OFSDP-II has been following the approved Process Documentation Strategy and in principle follows the Knowledge Management methods to gather and disseminate information. Knowledge Management strategy under OFSDP-II creates / develops the properly organized, stored, shared, and analysed information system for project management, using defined methodologies. Disclosures through website, publications in the forms of Booklet, Guideline, Newsletter flyers and Documentations through short films and Visual Documentaries are made to ensure information flow to all stakeholders seamlessly. OFSDP-II has formulated a Process Documentation Strategy Guideline which describes the channels of communication, concepts and steps of documentation process, activities, outputs and responsibility centres for the understanding of project functionaries.

10.3 Publications during 2023-24

Following publications were made during the year 2023-24

1. Annual Activity Report of OFSDP, Phase-II – 2022-23.
2. Standard Operating Procedure (SOP) Manual of Harvesting and Primary Level Processing of Medicinal Plants under OFSDP-II,
3. BCA Health Report Card 2023
4. Best Practices of Odisha Forestry Sector Development Project – (Phase-II) – 2023-24
5. Hand Book for Micro Plan Preparation – revision
6. SHG Product Hamper from Beyond the Last Mile
7. Banayana Vol-7, Issue-1, April-June 2023 Edition
8. Banayana Vol-7, Issue-2, July-Sept 2023 Edition
9. Banayana Vol-7, Issue-3, Oct-Dec 2023 Edition
10. Banayana Vol-6, Issue-4, Jan-Mar 2023 Edition



10.4 Documentaries produced during 2023-24

Visual Documentation on the OFSDP-II activities was taken up by different Divisional Units to collate and present the project activities at their divisional level for process documentation of best practices and key progresses. PMU supported different Divisional Units to document the best practices of key project activities and reach out to larger stakeholders for dissemination.

10.5 Annual Review Meeting of OFSDP, Phase –II (SAMEEKSHYA):

OFSDS has formulated a distinctive mechanism to monitor the progress of the mandated activities of the schemes running under the society. This is a part of the monitoring activities through MIS tools to measure the real needs, inputs, evaluations and outcomes through participatory interactions with project stakeholders at the grass root level. The Sameekshya has been established as a platform to deliberate upon the project implementation issues and to engage all concerned to thrive for achieving the twin objectives of the Society.

During the year 2023, Sameekshya Meetings were organised at the Divisional level of OFSDP-II, to mobilize the scope of convergence with other line Departments and help the community groups in augmenting the benefit of the flagship programme in collaboration with the local administration.

The Sameekshya meetings were organized at the Divisional level of OFSDP-II to disseminate the project objectives and sensitize the local administration and other institutional stakeholders at large to leverage the benefit from the integrated planning. All the efforts and contributions of institutions were channelized to positively impact the livelihood of the forest fringe communities by undertaking and provisioning community programmes under convergence. PMU, OFSDP-II had ensured that all the convergence programmes were planned and proposed by the community at initial level through the Micro Plan preparation stage. The line departments also got an opportunity to review their own engagement with a large chunk of their stakeholders and partners with their development programmes. Some selective successful programmes of integration were also discussed at different divisional management units to enable cross learning and emulating as far as possible.

10.5.1 DMU LEVL SAMEEKSHYA

The Annual Review meetings under OFSDP-II is being conducted at every DMU in order to review the various forest management, development, livelihood and convergence activities undertaken during the year and also to plan next year activities. During the year 2022-23, all 12 DMUs under OFSDP-II had conducted Sameekshay meetings at their respective headquarters as detailed under. These meetings were attended by all key-stakeholders, including all DMU and FMU level staff led by DMU Chief, PNGO staff, FMU Coordinators, VSS & SHG members, line department staff, media persons and other invited guests. Usually the DMU level Sameekashya meetings are held before the State level Sameekshya conducted by PMU of OFSDP-II at Bhubaneswar. All the 12 Divisions of OFSDP-II had organised the DMU level Sameekshya in different timeline for the Financial Year of 2023-24. In the year 2023- 24 following meetings are organized at different level.

DMU LEVEL SAMEEKSHYA Meetings held during 2023-24

Sl. No.	Name of the DMU	Date of DMU level Sameekshya	Venue	No of Participants
1	Athamallik	23.06.2023	Mooney Conference Hall, OFRC, Angul	100
2	Baripada	04.08.2023	SANKALP Conference Hall, Baripada Forest Division	120
3	Boudh	28.06.2023	Biranarasinghpur Permanent Nursery	100
4	Dhenkanal	29.08.2023	Craft Village Sadeibereni, Saptasajya, Dhenkanal	140
5	Jharsuguda	11.06.2023	Hotel Micro Continental, Beheramal, Jharsuguda	150
6	Ghumusur-South	13.09.2023	BIDECA Bhawan, Bhanjanagar	130
7	Ghumusur-North	15.09.2023	Town Hall, Bhanjanagar	160
8	Karanjia	08.06.2023	Conference Hall DMU Office, Karanjia	110
9	Rairangpur	02.08.2023	Conference Hall of Rairangpur Range Office	110
10	Subarnapur	26.07.2023	New Town Hall, Subarnapur	125
11	Sundargarh	15.07.2023	Vikash Bhawan, Collectorate, Sundergarh	130
12	Sambalpur	07.07.2023	RCCF Conference Hall, Motijharan, Sambalpur	120

The brief reports of Sameekshya 2022-23 conducted by each DMU under OFSDP-II are furnished below.

i. Annual Review Meeting 'SAMEEKSHYA- 2022-23' at Karanjia DMU

Venue: Conference hall, DMU Office, Karanjia

Date: 8th June 2023

The Sameekhya 2011-23 of Karanjia Division was inaugurated by Dr. G. Prakash Chand, Field Director, Similipal Tiger Reserve (STR) cum Regional Chief Conservator of Forest (RCCF), Baripada Circle on 8th June 2023 in presence Sub Collector, Panchapir, Karanjia, DFO-cum-DMU Chief, Karanjia, Dr. Krishnakumar K. Navaladi, Team Leader-PMC, OFSDP-II, the officials from various line departments and the members of VSS / SHGs under OFSDP-II in Karanjia Division. The main focus of Sameekshya 2022-23 was to show case the last financial year's achievements and possible convergence of various activities in the VSS area through OFSDP-II.

Line departments like SDPO Karanjia, ITDA, Karanjia, Irrigation, Lift Irrigation, Agriculture, Horticulture, Soil Conservation, Fishery, BDOs of five blocks comes under OFSDP-II, Khadia and Mankedia Development Agency, KVK-II, OFSDC, Fire, Tussar Rearing Cooperative Society, Electricity, NAC, RWSS, MGPL Pvt. Ltd., TERVIVA India Pvt. Ltd. & MB GREEN etc. participated in the event. The VSS Presidents, Member Secretaries, Marketing Executive, Animators and three active members of VSSs from Batch I, II & IV of Karanjia & Thakurmunda FMUs participated in the meeting. During the event, the Booklet cum progress report of Karanjia Divisional Management Unit, OFSDP-II was released.

Sri Sri Srikanta Naik, DFO Cum DMU Chief, Karanjia Division made a detailed presentation on the work progress and achievements under OFSDP-II for the year 2022-23 of Karanjia Division. The meeting was also addressed by the Field Director-STR-cum RCCF, Baripada Circle, Dr. Krishana Kumar, Team Leader-PMC, OFSDP-II and the Sub Collector, Panchapidha, Karanjia. The officers of Line departments shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants. In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The participating VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II.

As the side event of the meeting, the display of photographs depicting the activities carried out by the Division under OFSDP-II and SHG stalls were arranged outside the conference hall. The photographs of different activities of last one year were displayed. SHGs from Jamukhanjari, Dirbo VSS from Thakurmunda FMU, Badadeuli VSS from Karanjia FMU, Puruna Deogaon and Kumudabadi VSS from Dudhiani FMU displayed and sold their products like millet chhatua, pickle, jackfruit chips, honey, palua, triphala churna, medicinal oil like neem, karanja and kusuma, phenyl, writing pen etc.

ii. SAMEEKSHYA- 2022-23 at Jharsuguda DMU

Venue: Hotel Micro Continental, Beheramal, Jharsuguda

Date: 11th June 2023

The Annual Review Meeting – "Sameekshya-2022-23" under OFSDP-II was organized by the Jharsuguda Forest Division on 11th June, 2023. The Annual review meeting was organized to review the progress of the implementation activities and share the success story & best practices in DMU, Jharsuguda Forest Division under OFSDP-II. The meeting was inaugurated by Shri Vishwanath Neelannavar, DFO Sambalpur in the presence of Shri Manu Ashok Bhat, DFO Jharsuguda Forest Division, Punyabati Helen Xess, DSW, Jharsuguda and Shi Biswajit Sahoo, SPM-KMPP, OFSDS, BBSR. The meeting was also attended by the district level line department Officials from Panchayati Raj & DW Department, CDMO, Watershed, Veterinary, RSETI, Education, OLM, Missionshakti, ORMAS. In addition, the Forest Department staffs, Project staffs, PNGO team members, VSS Members including SHG members attended the Sammekshya-2022-23 meeting. The District Level Officials shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants.

The Annual Report- Sameekshya-2022-23 of DMU, Jharsuguda Forest Division was released by the Guests on the dias. The FMU wise best Performing VSS, best Male & Female Animator and best Office Bearers among the OFSDP-II staff were awarded by the Guests as a recognition of good work / performance. SHG stalls were arranged to exhibit the produces under NTFP, Agri based farming and Micro Level Income Generating Activities by the WSHGs from Bagdihi, Belpahar & Kolabira FMUs.

Shri Manu Ashok Bhat, DFO cum DMU Chief, Jharsuguda Forest Division briefed the aim & objective of the Annual Review meeting "Sameekshya 2022-23. He Gave an overview of the project component under OFSDP-II and shared component wise progress made by FMUs and DMU in the FY 2022-23. He appreciated the line department's convergence activities that have been implemented in the VSS areas and he expects more from the line departments that their beneficial schemes to reach the VSSs community. In subsequent technical sessions, the Animators and FMU Coordinators shared the progress of activities in their respective FMUs. The participating VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II.

iii. SAMEEKSHYA- 2022-23 @ Athmallik DMU

Venue: Mooney Conference Hall, OFRC, Angul

Date: 23rd June, 2023

The Annual Review Meeting Samiksha - 2022-23 of Athmallik DMU was inaugurated by Sri Siddharth

Shankar Swain, IAS, Collector & D.M., Angul at Mooney Conference Hall, OFRC, Angul on 23rd June, 2023. The distinguished participants of this Annual meeting were Shri Sudhanshu Sekhar Khora, IFS, RCCF, Angul, Sri Yasobanta Beriah, OFS-I, SAG, Dy. Project Director (A & F), Representative of Project Director, Sangram Keshari Behera, IFS, Director, OFRC, Angul, Shri Santosh Koppula, IFS,DFO-Cum-DMU Chief, Athmallik, Shri Vivek Kumar, IFS, DFO, Angul Forest Division, Shri Saroj Kumar Panda, OFS-I(SB), DFO, Satkoshia Wild Life and others. The meeting was also attended by the officers of different line departments such as Veterinary, Fisheries, Agriculture, Horticulture, Minor irrigation, OLM, DIC etc. Around 70 VSS members, including significant women SHG members also actively participated in the meeting and exhibited their products in the mela organized as a side event of the meeting.

The DFO-Cum-DMU Chief made a detailed presentation on the progress made under OFSDP Phase-II by the Athmallik Division. He thanked the Collector-Cum-Chairman of the District Advisory Committee for supporting and extending cooperation in achieving a visible impact of Inter-Sectoral Convergence to the tune of Rs.27.79 Crore during the year 2022-23. This was followed by the deliberation by the officers representing different line departments on the various welfare schemes being implemented by their respective departments. During the final session of the day, the Range Officers, FMU Coordinators and Development Officers of the FMUs under OFSDP-II made the presentations with respect to the on-going project activities under their respective FMUs. The members of Hariharpur and Chapapur VSSs and SHG members shared their experiences / Best Practices / Success Stories/ Major achievements.

iv. SAMEEKSHYA- 2022-23 @ Boudh DMU

Venue: Biranarasinghpur Permanent Nursery

Date: 28th June 2023

The Sameekshya 2022-23 was held on 28.06.2023 under the Chairmanship of the DFO-Cum-DMU Chief, Boudh. The one day meeting was inaugurated by Sri Satya Ranjan Sahu, Collector & District Magistrate, Boudh. The meeting was also attend by Sri Ashwini Kumar Meher Chief Development Officer cum CEO Zilla Parisad Boudh District, Sri Debapriya Kampa, DFO-Cum-DMU Chief, Boudh and Sri Jashobanta Bariha, DPD(A&F), OFSDP-II. The Collector & District Magistrate als inaugurated the Photo Gallery of OFSDP-II achievement works and exhibition Stalls of SHG/VSSs. The DFO-Cum-DMU Chief, Boudh welcomeed all the participants and briefed the progress of OFSDP-II work carried out under OFSDP-II by Boudh DMU during the financial year 2022-23. The FMU wise

progress and achievements of the VSS was presented by The Asst DMU Chief cum ACF through a Power Point Presentation. The Line Department Officers who shared the knowledge about schemes, programmes and scopes of their department with the participants of the meeting were the Project Director, Soil Conservation &Watershed, Boudh, Chief District Veterinary Officer, Boudh, Asst Director horticulture, Boudh, District Welfare Officer, Boudh, District social Welfare Officer, Boudh, Technical Officer NHRDF, Boudh, DPC Mission Shakti , Boudh, SMS Krishi Vigyan Kendra , Boudh, PD, DRDA, Boudh. The members from VSSs /SHGs, apart from exhibiting the products generated through IG activities also shared their views, achievements and benefits on implementation of OFSDP-II during the meeting. The VSSs /SHGs participated in the meeting were Goundisar VSS, Brundaban VSS, Birnarasimhapur VSS, Banjimunda VSS of Manamunda FMU, Luising VSS of Kantamal FMU, Gohirapalli VSS of Kantamal FMU. At the end fo the meeting, Certificates of achivements were distributed to SMS (MIS, M&E, GIS, REDD+), Project Accountant, Computer operator and also to the best performing SHG, Animators and Member Secretary for their outstanding performance of each FMU.

v. SAMEEKSHYA- 2022-23 at Sambalpur DMU

Venue: RCCF Conference Hall, Motijharan, Sambalpur

Date: 7th July 2023

The Sameekhya 2022-23 of Sambalpur Division was inaugurated by Dr. Smt. Ananya Das, IAS, Collector and District Magistrate, Sambalpur on 7th July 2023 in presence Sri. T. Ashok Kumar, RCCF, Sambalpur, (Chair Person), Sri. Vishwanath Neelannavar, IFS,DFO-CUM-DMU Chief, Sambalpur, Dr. Pradeep Kumar Naik, Coordinator, FSTN Department, Sambalpur University, Dr.Krishnakumar Navaladi, Team Leader-PMC, OFSDP-II, Bhubaneswar, CDO-

CUM-EO Zilla Parishad, Sambalpur, Dharmendra Mallik, the officials from various line departments and the members of VSS / SHGs under OFSDP-II in Sambalpur Division. The main focus of Sameekshya 2022-23 was to show case the last financial year's achievements and possible convergence of various activities in the VSS area through OFSDP-II.

The Programme began with plantation and the inauguration of exhibition stalls by the RCCF Sambalpur & Collector & DM Sambalpur along with other dignitaries and discussed with the SHG members about different products / activities that were displayed and appreciated income generation activities carried out by the VSS & SHG Groups. A video on the project activities carried out by the Division under OFSDP-II was shown to the participants during the vent. The activities showcased in the video were overall progress of plantation, Re-visit of Micro plan in 55 VSSs, preparatory work, sustainable forest management works carried out in VSSs under JFN & Non-JFM modes, meeting details of various level-VSS,SHG, FMU, DMU, livelihood interventions under the project, capacity development by the Forest Department and by line departments under convergence mode, major convergence activities undertaken in the Division with the support of line departments and plan for next year.

During the occasion, two number of computer sets were distributed with the financial support from ICICI bank to the members of Kayakud VSS of Sadar FMU and Balanda VSS of Padiabahal FMU who have been trained in computer operations by SBRSETI. The computer sets were handed over by the Collector Samablpur in presence of Regional Sales head, ICICI Bank and other bank officials. This apart, the Prakruti Bandhu Award at Block Level for conservation of forest and nature was given to Mrs. Tulasi Manjari Bohidar, Mrs. Sunanda Chand, Mr. Debashish Sahu, Mr. Subash Ch Nayak, Mr. Pradyumna Bisi. In addition, Appreciation award for Best Work was given to the persons those who have done remarkable works in their respective fields.

The participants of the Sameekshya meeting were briefed about the activities carried out by the Division under OFSDP-II project during the year by Sri. Vishwanath Neelannavar, DFO cum DMU Chief. Further, the meeting was addressed by the Collector cum District Magistrate, Sambalpur, DMU Chief-cum-Divisional Forest Officer, Sambalpur Forest Division, RCCF Sambalpur, Dr. P. K Naik, Co-odinator, FS TN Dept. of Sambalpur University, Dr. Krishnakumar Navaladi, Team Leader-PMC, OFSDP-II, Head Scientist, KVK, Sambalapur, Team Leader, AJY, Rairakhol Division, Prakash Hota, Team Leader, AJY, Bargarh Division and P-NGO chairman, OFSDP-II, Sambalpur.

Apart from the officials of the line departments and Fores department, the VSS Presidents, Member Secretaries, Marketing Executive, Animators and the active members of VSSs from all batches of VSSs participated in the meeting. During the event, the Booklet cum progress report of Sambalpur Divisional Management Unit, OFSDP-II was released. The officers of Line departments shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants. In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The participating VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II. As the side event of the meeting, SHG stalls were arranged outside the conference hall for the display as well as for the sale of their products generated through their income generation activities.

vi. SAMEEKSHYA- 2022-23 at Sunargarh DMU

Venue: Vikash Bhavan, Collectorate, Sundargarh

Date: 15th July 2023

The Sameekhya 2022-23 of Sudargarh Division was inaugurated by the Collector & District Magistrate, Sundargarh on 15th July 2023 in the presence RCCF, Rourkela, Sri Yasobanta Beriha, OFS-1 (SAG). DPD (A & F), Chairman of Zilla Parishad sundargarh, DFO cum DMU Chief, Sundargarh along with other invited guests. Earlier, the Photo Gallery & SHG Stall was inaugurated by RCCF, Rourkela. The booklets on "Sameekshya 2022-23", "Sundargarh Forest Division", "Sarafgarh Eco-Tourism" & "Pratibimba" were released during the event. The branding of Vermicompost of Sundargarh Division "Srujanika" was launched and the SHG members were presented with a cheque of Rs. 8.8 Lakh as the revenue earned by selling the vermicompost to Bonai & Deogarh Forest Divisions. Further, the different VSS & SHG members, active and inspired departmetnal and project officials and some of the line departmental officials were awarded and felicitated for their outstanding dedication towards projects achievement by the chief guest and other dignateries.

The participants of the Sameekshya meeting were briefed about the activities carried out by the Division under OFSDP-II project during the year and plan to be made for the next year by DFO cum DMU Chief, Sundargarh Forest Division. Further, the meeting was addressed by the Collector cum District Magistrate, Sundargarh and other dignitaries like RCCF, Rourkela, Sri Yasobanta Beriha, OFS-1 (SAG). DPD (A & F), Chairman of Zilla Parishad sundargarh. The meeting was attended by the officials of the line departments like CDM & Public Health Officer, Sundargarh, Chief Dist. Veterinary Officer, Sundargarh, Wildlife Warden, Sundargarh, Chief District Agriculture Officer, Sundargarh, Senior Scientist & Head, K.V.K, Sundargarh, Dist. Fisheries Officer, Sundargarh, Asst. Director of Horticulture, Sundargarh, Project Administrator, ITDA, Sundargarh, Project Director, Watersheds, Sundargarh, Dist. Manager, TDCCOL, Sundargarh, Sr. Scientist, KVK-1, Sundargarh, Sr. EA, ORMAS, Sundargarh and Chairman, SEWAK, Sundargarh. In addition, the meeting was attended by the staff of Forest department, the VSS Presidents, Member Secretaries, Marketing Executive, Animators and the active members of VSSs from all batches of VSSs participated in the meeting.

The officers of Line departments shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants. In subsequent technical sessions, the FMU Chiefs, Asst. FMU Chiefs of different FMUs made their subject specific presentations. FMU Ujalpur presented on effective communication strategy and community initiatives in sustainable management of forests, FMU Hemgir presented on convergence activities at community level, FMU Lephripara presented on the functioning of VSS building-cum-IGA Facilitation centre, FMU Sundargarh presented on institution building and FMU Bargaon presented on Livelihood activities and so on.

As the side event of the meeting, five number of SHGs displayed their product for display and selling in the Annual Review Meeting, Sameekshya. The commodities displayed and sold were Terracotta, Ragi product, Vegetable, Bamboo Craft, Vermicompost. A photo gallery of different activities of Subarnapur DMU under OFSDP-II was also arranged in the same event.

vii. SAMEEKSHYA- 2022-23 at Subarnapur DMU

Venue: New Town Hall, Subarnapur

Date: 26th July 2023


Sameekshya Booklet inaugurated by the dignitaries.

The Sameekhya 2022-23 of Subarnapur Division was inaugurated by Sri Bimalendu Ray, Collector & District Magistrate, Subarnapur on 26th July 2023 in the presence Sri Amaresh Panda, SP, Subarnapur, Sri Yasobanta Beriha, OFS-1 (SAG). DPD (A & F). PMU, Sri Madanlal Sharma, OFS-A (SB), DFO cum DMU Chief, Subarnapur Forest Division, Nihar Ranjan Kanhar, Chief Development Officer cum Executive Officer, Zilla Parisad, Subarnapur, the officials from various line departments and the members of VSS / SHGs under OFSDP-II in Sambalpur Division. The main focus of Sameekshya 2022-23 was to show case the last financial year's achievements and possible convergence of various activities in the VSS area through OFSDP-II. The Programme began with the inauguration of exhibition stalls displaying the products of SHG members by the Collector & DM Sambalpur along with other dignitaries.

The participants of the Sameekshya meeting were briefed about the activities carried out by the Division under OFSDP-II project during the year by Sri Madanlal Sharma, OFS-A (SB), DFO cum DMU Chief, Subarnapur Forest Division. Further, the meeting was addressed by the Collector cum District Magistrate, Subarnapur and other dignitaries like SP, Subarnapur, DPD (A & F). PMU and the Chief Development Officer cum Executive Officer, Zilla Parisad, Subarnapur. The meeting was attended by the officials of the line departments like ADMO, Subarnapur, Dist. Fishery Officer, Subarnapur, Project Director Watershed, AHO Subarnapur, Scientist, KVK, Manager Dist. Lead Bank, Subarnapur, Coordinator, SBRSETI, DPC Mission Shakti. In addition, the meeting was attended by the staff of Forest department, the VSS Presidents, Member Secretaries, Marketing Executive, Animators and the active members of VSSs from all batches of VSSs participated in the meeting.

Sri. Soubhagya Ranjan Swain, SMS (GIS/MIS) made detail presentation on the work progress under Subarnapur Division during 2022-23. The presentation included the details of the works related to the plantation activities undertaken in batch- III & IV VSSs, farm forestry in private land during 2022-23, soil & moisture conservation measures, fire line creation and maintenance, VSS building cum IGA facilitation centre and its multipurpose uses, revisit micro plan, community mobilization, capacity building programme at different level, livelihood initiatives through revolving fund as well as through convergence and few success stories. The officers of Line departments shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants. In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The participating VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II.


The dignitaries visiting the SHG stall & interaction

As the side event of the meeting, six number of SHGs from Sonepur, Ullunda & Binka FMUs participated and displayed their product for selling in the Annual Review Meeting, Sameekshya. The commodities displayed and sold were paper made envelope. broom, sal leaf plate, badi & pampad, arisha pitha, bamboo craft materials, terracotta products, Sambalpuri clothes etc. A photo exhibition stall of different activities of Subarnapur DMU under OFSDP-II was also arranged in the same event.

viii. SAMEEKSHYA- 2022-23 at Rairangpur DMU

Venue: Conference Hall of Rairangpur Range Office

Date: 2nd August 2023

The Sameekhya 2011-23 of Rairangpur Division was inaugurated by Dr. Prakash Chand Gogineni, Field Director, STR and RCCF, Baripada, on 2nd August 2023 in presence Sj. Nalinikanta Behera, DFO-cum-DMU Chief, OFS (STS) and Sj. Chitta Ranjan Mishra, PMC-Expert (CFM&MP), OFSDP-II, the officials from various line departments and the members of VSS / SHGs under OFSDP-II in Rairangpur Division. The main focus of Sameekshya 2022-23 was to show case the last financial year's achievements and possible convergence of various activities in the VSS area through OFSDP-II.

Line departments Officials like LFM, Rai rangpur Fire Station, Rairangpur, ADO, Rairangpur,, APD, Soil Conservation, Rairangpur, Asst. Eng, RWSS, Rairangpur, WEO, Bahalda, WEO, Bijatala, SMS, ITDA, Rairangpur, WEO, Rairangpur, Director, Conserva, Udyaogvihar, Gurugaon, JE (Electri.), Rairangpur, AEL, Sub Division, Rairangpur, AAO, Rairangpur, AHO, Bijatala, ADWO, Rairangpur, AHO, Rairangpur, AFO, Rairangpur, AFO, Karanjia. And ABDO, Rairangpur participated and shred their vies in the meeting. In addition,

The VSS Presidents, Member Secretaries, Marketing Executive, ten number of Animators, ten number of VSS Presidents under OFSDP-II, ten number of Member-Secreteries of VSSs, 40 number of women members participated in the meeting. During the event, the Booklet cum progress report of Rairangpur Divisional Management Unit, OFSDP-II was released.

Sri Nalinikanta Behera, DFO-cum-DMU Chief, Rairangpur Division made a detailed presentation on the work progress and achievements under OFSDP-II for the year 2022-23 of Rairangpur Division. The meeting was also addressed by the Field Director-STR-cum RCCF, Baripada Circle, Sri. Chhittaranjan Mishra, PMC-Expert (CFM&MP), OFSDP-II. The officers of Line departments shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the

knowledge of the participants. In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The participating VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II.

As the side event of the meeting, five number of SHG stalls were arranged outside the conference hall. The products of SHGs displayed in these stalls were red rice, pickle, bamboo craft, NTFP products like honey, sal raisin, paluo, neem oil, pongamia oil, kusum oil, kujri oil, phynil, mushroom etc.

ix. SAMEEKSHYA- 2022-23 @ Baripada DMU

Venue: Sankalp" Conference Hall, Baripada Forest Division

Date: 4th August 2023

The Annual Review Meeting Sameekshya - 2022-23 of Baripada DMU was inaugurated by Sri Akshay Sunil Agrawal, IAS, Addl. District Magistrate, Mayurbhanj, Baripada on 4th August, 2023. Dr. Prakash Chand Gogineni, IFS, Field Director, STR-cum-Regional CCF, Baripada was the Chief Guest for the event. The other distinguished participants of this Annual meeting were Sri Krishnakumar Navaladi, Team Leader, PMU, OFSDS), DFO-cum-DMU Chief, ACF-cum-Asst. DMU Chief. The meeting was also attended by the representatives of line departments like PA, ITDA, Baripada, Agriculture District Officer, Baripada (Representative of CDAO), Asst. Director of Horticulture (Representative of DDH) and Addl. District Veterinary Officer (Representative of CDVO) who shared the details of welfare schemes being implemented by their departments and modalities of convergence program being operated under OFSDP-II.

In the second sessions, the Range Officers and FMU coordinators shared the progress being achieved by the FMUs under OFSDP-II. This was followed by the experience sharing by the VSS and SHG members on best practices / success stories and major achievements accomplished by their respective VSSs / SHGs.

The VSS and SHG members also exhibited their different products produced through Income Generation Activities in the mini-mela organized as a side event during Sameekshya. The VSSs participated were Jhinkpahai VSS, Bangriposi FMU, Silipuria VSS of Betnoti.FMU, Chakrabarti VSS of Dukura FMU, Raikali VSS of Kaptipada FMU, Sindurgoura VSS, of Pithabata FMU, Nahara VSS of Udala FMU, Sarabasa VSS of Kaptipada FMU, Bartana VSS of Betnoti FMU, Paktia VSS of Bangriposi FMU, Dalkisole VSS of Dukura FMU, Kathuabeda VSS of Udala FMU and Bhagabandh VSS of Pithabata FMU.

x. SAMEEKSHYA- 2022-23 @ Dhenkanal DMU

Venue: Craft Village Sadeibereni,Saptasajya, Dhenkanal

Date: 29th August 2023

The Sameekshya 2022-23 was inaugurated by Sri. Saroj Kumar Sethi (IAS), Collector & District Magistrate, Dhenkanal on 29.08.2023. The other distinguished guests present during the occasion were Sri. Sudhanshu

Sekhar Khora (IFS), RCCF-cum-Field Director, Angul, Sri. Gyanaranjan Mohapatra (OPS), Superintendent of Police, Dhenkanal, Sri. Ramesh Ch Sahoo, DIPRO, Dhenkanal, Sri. Jyotishankar Sahu, CDO-cum-EO, Zilla Parishad, Dhenkanal, Dr. Bimalendu Mohanty, Sr. Scientist & Head, KVK, Dhenkanal, Prof. Sarangadhar Samal, Director, P-NGO, NYSASDRI, Dhenkanal, Sj. Sumit Kumar Kar, IFS, DFO-Cum DMU Chief, Dhenkanal, Dr. Shyama Bharati, OFS, ACF, Dhenkanal, Sj. Subrata Kumar Patra, ACF-cum-ADMU Chief, Dhenkanal.

Sri. Sumit Kumar Kar, DFO-cum-DMU Chief, Dhenkanal while welcoming the participants of the meeting, briefed on the purpose behind organising the annual review meeting-Sameekshya-2022-23. He highlighted the OFSDP-II activities, particularly focussing on the livelihood promotion through SHGs. Dr. Shyama Bharati, OFS, ACF, Dhenkanal made a detailed presentation on the progress under OFSDP-II activities. The Line Department Officers who shared the knowledge about schemes, programmes and scopes of their department with the participants of the meeting were Sangram Keshari Kar, Dist Fishries Officer, Dhenkanal, Smt. Gitashri Padhy, Dy. Director (Horticulture), Dhenkanal, Sri Dambarudhar Samal, CDVO, Dhenkanal, Smt Satyavama Pradhan, DPM, OLM, Dhenkanal, Dr. Bimalendu Mohanty, Sr. Scientist &HoD., KVK, Dhenkanal, Ms. Swati Nanda, Asst. Agril. Engineer, Dhenkanal, Sri Premananda Mishra, GM, DIC, Dhenkanal. In addition, the representatives of private organizations associated with OFSDP-II activities who attend the event and shared their supportive activities in the project villages were Sri Manas Das, Operation head, KIIT TBI, Sri Rajanikanta Mishra, Manager, Turveva, Bhubaneswar, Sri Ranjan Kumar Mishra, DGM, MB Green Pvt. Ltd., Sri Achutanada Mishra, M/s. JK Papers Ltd., Rayagada.

In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II. The VSSs /SHGs that participated in the meeting as well as in the exhibition of IGA products were Gajamara VSS, Banasahi VSS, Lambodarpur VSS, Patalu VSS, Alusingh VSS, K.Nagr (East) VSS, K.Nagar (East); Basumati SHG, Mahalaxmi SHG in Baghamunda VSS, K.Nagar (West) VSS, Ambapada VSS and Radhakrushna VSS. There were 6 Stalls put up by the Six FMUs for the display of the products generated through IGA by the SHG members. The products were processed Cashew nut, honey, cow ghee, broom, incense sticks, handi craft and decorations, wooden handicrafts, brooms, food items, brass metal handicraft items, chandua, mushroom, desi eggs, disinfectants, floor cleaner, turmeric powder etc.

xi. SAMEEKSHYA- 2022-23 at Ghumsur-South DMU

Venue: BIDECA Bhawan, Bhanjanagar

Date: 13th September 2023

The Sameekhya 2011-23 of Ghumsur South was inaugurated by Sri Sanjay Kumar Swain, IFS RCCF Berhampur Circle on 13th September 2023 in presence Sri Sudarsan Behera DFO Cum DMU Chief

Ghumsur North Division, Sri Binod Kumar Acharya, DFO Cum DMU Chief Ghumsur South Division, Dr. Krishnakumar K. Navaladi, Team Leader-PMC, OFSDP-II, Sri Shankarsan Behera, DM OFDC, Bhanjanagar, officials of Line Departments and members of VSS / SHGs under OFSDP-II in Ghumsur-South Division.

The officers who represented the line departments in the meeting were SDVO Bhanjanagar, Sr Scientist KVK, Bhanjanagar, Asst Director Horticulture , Bhanjanagar, CDPO Suroda, Block Project Coordinator, Suroda, Asst Fishery officer, Bhanjanagar, Block Livelihood Coordinator, OLM, Suroda, Agriculture officer, Bhanjanagar. These officers shared the details of on-going convergence activities under OFSDP-II as well as the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants.

During the meeting, following publications of the Division were released:

- Annual Activity Report Sameekshya -2022-23 (English booklet)
- Bana Jiban (Odia Success Stories Booklet)
- Sameekshya Bibarani 2022-23
- Website (Blog) of Ghumsur South Division OFSDP-II

Sri Binod Acharya, DFO Cum DMU Chief, Ghumusur South Division made a detailed presentation on the work progress and achievements under OFSDP-II for the year 2022-23 of Ghumsur South Division. In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The participating VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II.

As the side event of the meeting, three number of stalls displaying the products of SHGs were installed. The SHGs /VSSs Partcipated were Maa Tulasi SHG, Ramnabadi VSS, Suroda FMU, Maa Kandhunidevi SHGs, Dhepaguda VSS of Suroda FMU, Sai Baba SHGs , Sapua VSS of Badagada FMU , Maa Tarini SHGs, Tikarpali VSS of Buguda FMU and Maa Singhasini SHGs of Golabandha VSS, Buguda FMU. The commodities displayed were – Black gram, green gram, horse gram, vegetables, ragi powder, mustard, turmeric, Badi, papad, some dry food items, leaf plates and tuber crops, bamboo craft, Hill brooms, cloth bag, Honey, Ghee, mixture, Papad, Spices items etc.

xii. SAMEEKSHYA- 2022-23 at Ghumsur-North DMU

Venue: Town Hall, Bhanjanagar

Date: 15th September 2023

The Sameekshya 2022-23 was inaugurated by Dr. Sanjay Kumar Swain, IFS, Regional Chief Conservator of Forest, Berhampur Circle on 15.09.2023. The other distinguished guests present during the occasion were Shri Jyoti Shankar Ray, Sub-Collector, Bhanjanagar, Shri Yosobanta Beriha, Dy. Project Director (A&F), OFSDS, Shri Sudarsan Behera, DFO-cum-DMU Chief, Ghumsur North, Shri Binod Acharya, DFO-cum-DMU Chief, Ghumsur South, Shri P.K.Badajena, Addl. S.P., Bhanjanagar, Shri Prasanta Patel, IFS, DFO, Phulbani

Forest Division, Shri Bidyadhar Jani, Chairman, Special Development Council, Ganjam. The meeting was also attended by the officers of different line departments which are associated with OFSDP-II implementation in the division. The officers who represented the line departments in the meeting were Executive Engineer, TPSODL, Bhanjanagar, S.D.M.O., Bhanjanagar, S.D.V.O., Bhanjanagar, Scientist, K.V.K., Bhanjanagar, D.A.O., Bhanjanagar, Divisional manager, OFDC, Berhampur. These offiers shared the details of on-going convergence activities under OFSDP-II as wellas the details of different welfare schemes being implemented by their respective departments for the knowledge of the participants.

Sri. Sudarsan Behera, DFO-cum-DMU Chief, Ghumsur North while welcoming the participants of the meeting, briefed on the purpose behind organising the annual review meeting-Sameekshya-2022-23. He highlighted the OFSDP-II activities, particularly focussing on the livelihood promotion through SHGs. In subsequent technical sessions, the Animators and FMU Coordinators had shared the progress of activities in their respective FMUs. The VSS & SHG Members shared their experience on the best practices & success stories and major achievements under OFSDFP-II. The VSSs /SHGs that participated in the meeting as well as in the exhibition of IGA products were Kanteipalli VSS, Kotibaradi VSS, Kriyadhar VSS and Indira Colony VSS.

There were four Stalls put up by the FMUs for the display of the products generated through IGA by the SHG members. The products were Biri, Kolatha, Moong, Ragi, Turmeric, Turmeric Powder, Spice Powder, Pickles, Badi, Pampada, Hand Wash, Dish Wash, Dress Material, Vermi Compost, Incense Stick, Mudki, Vegetable, Broomstick, Bamboo Craft, mango kernels etc.

10.5.2 State Level Sameekshya, 2023 - Innovations and Best Practices of OFSDP-II

The State level Sameekshya which is an annual event to show-case the innovations, best practices and the processes followed for effective implementation of project interventions across the project areas under Odisha Forestry Sector Development Project, Phase-II (OFSDP-II). This year, the focal theme of Sammekshya meeting was ***"Innovations and Best Practices"***. The State level Sameekshya 2023 held on 1st November 2023 was the culmination of series of Division level Sameekshya programme organized in all the 12 Territorial Forest Divisions under OFSDP-II, wherein the Innovations and Best practices adopted by all Divisional Management Units under the project were highlighted. These events provided the opportunity for cross learnings amongst the officials and project personnel associated in implementation of OFSDP-II. During the state level Sameekshya, all presenters from the PMU, DMU and other partners agencies shared their experiences and learnings on the perspectives of Innovations and Best Practices of OFSDP-II.

The One-day State level Sameekshya 2023 was attended by senior officials from Department of Forest, Environment and Climate Change, Government of Odisha, senior Forest Officials from the State Forest Head Quarter, officials from line Departments, Regional Chief Conservator of Forests, DFO cum DMU Chiefs, OFSDP-II, Subject Matter Specialists from Project Divisions, Social Enablers associated to facilitate establishing sustainable livelihood models, Scientists from National Centre for Sustainable Costal Management (NCSCM), Chennai, representatives from M/s Kosher Climate India Private Limited, Bengaluru, MMSA personnel, PMU officers and PMC experts, media personals etc. The Inaugural Session of Sameekshya was presided over by Shri Satyabrata Sahu, IAS, Additional Chief Secretary, Department of Forest, Environment and Climate Change, Government of Odisha as Chief Guest. The guest of honour was Shri Debidutta Biswal, PCCF & HoFF, Odisha

The topics covered in the Pre-lunch Technical Session of Sameekshya 2023 were as detailed below:

i. **Satoyama Initiative: An Alternate Approach to Protected Area Management:** Jointly presented by Shri Chittaranjan Mishra, PMC Expert (CFM & MP), Shri Sameer Kumar Sahu, OFS-I (SB), DFO Bamra.

ii. **Health Report Card: A Tool for Management of Bitharkanika Conservation Area (BCA):** Presented by Dr Kakolee Banerjee, Scientist, NCSCM, Ministry of Environment, Forest & Climate Change, Chennai.

iii. **Revisit of Micro Plan:** Presented by Shri Chittaranjan Mishra, IFS (Retd.), PMC, OFSDP-II

iv. **Community managed Monitoring, Reporting and Verification (CMRV):** Presented by Shri Atul Jindal, IFS (Retd), CMRV Expert, PMC Expert (CFM & MP), OFSDP-II

v. **Gender Mainstreaming:** Presented by Dr. Krishnakumar K. Navaladi, Team Leader, PMC, OFSDP-II

vi. **Administration of ESMSF & STFDPF:** Presented by Dr. Krishnakumar K. Navaladi, Team Leader-PMC, OFSDP-II

vii. **Impact Assessment of SMC Measures: An SMAP Approach using Google Earth Engine:** Presented by Shri Swayam Mallick, IFS, DPD (CME&S), OFSDS.

The topics covered in other Technical Sessions of Sameekshya 2023, were as under:

i. **Status on Livelihood Initiatives under OFSDP-II:** Presented by Dr. Mamata Mishra, State Programme Manager (Livelihood & Inter-Sectoral Convergence), OFSDS

ii. **Sal leaf plate: A biodegradable option to plastic :** Presented by Sri Santosh Joshi, IFS, DFO Baripada

iii. **Circular Bioeconomy Approach:** Presented by Shri M. Pradeep Devidas, IFS, DFO, Sundargarh

iv. **Lemon Grass Model of Farm Forestry:** Presented by Shri Manu Ashok Bhatt, IFS, DFO

v. **Mahua: A healthy alternative to liquor :** Presented by Shri Viswanath Neelannavar, IFS, DFO, Sambalpur

vi. **Vermicomposting: An option to chemical fertilizers,** Presented by Shri Debapriya Kampa, DFO, Boudh

vii. **IGA interventions related to Cashew and Honey:** Presented by Shri Sumit Kumar Kar, IFS, DFO, Dhenkanal

viii. **Karanja Seeds: A Marketing Initiative:** Presented by Shri Rajanikant Mishra

ix. **Production and Marketing of Indigenous Aromatic Paddy:** Presented by Shri Sandeep Kumar Sahu, Director and Ms. Sneha Khuntia, Asst. Project Manager, M/S Kanak Bio-science & Research Pvt. Ltd

x. **Opportunity with Cashew Apple:** Presented by Ms. Amrita Suhashini, Managing Director, Amritattava

xi. **Groundnut Cultivation: A Crop Diversification Option:** Presented by Mr. Manish Kumar, Co-Founder, Back to Village (B2V)

xii. **Silage from Maize-A source of Income:** Presented by Ms. Alisha Tirkey, Program Associate, Gangpur Ventures

xiii. **Solar Energy: An illuminating option:** Presented by Mr. Suraj Kumar, Vice President, Kalinga Renewable Energy Manufactures (KARMA)

The Sameekhys 2023 came to an end with the session on Brainstorming on Challenges and Solutions. Issues pertaining to implementation of different livelihood promotion interventions and the marketing issues were discussed at large. Officials from PMU and the Social Enablers tried to respond the issues raised by the participants with possible solutions. About 131 participants from State head quarter, Project Divisions, and Social Enablers from different parts of Odisha were attended the training.

Glimpses of State level Sameekshya 2023

Chapter 11

Progress of Geomatics Centre, PMU, OFSDS

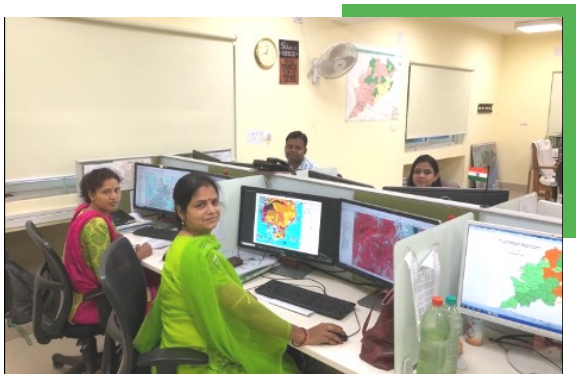
11.1 Geomatics Centre- About the Centre:

The Geomatics Centre of Odisha Forestry Sector Development Society (OFSDS) that was established in 2014 has matured into a Centre of Excellence for the entire state in augmenting the digital solutions for forestry sector development programme in Odisha. Simultaneously it has been recognized by JICA Head Quarter, Japan & JICA India as a viable unit that can contribute to varied needs and challenges pertaining to digital technology for other Externally Aided Projects in India.

The Geomatics Centre of Odisha Forestry Sector Development Society has consistently been providing support in decision making and monitoring and evaluation (M & E) activities of all projects under OFSDS namely OFSDP-II, AJY and OFSDS-OMBADC. The core activity of OFSDS- Geomatics Centre includes image processing and interpretation, spatial analysis, map preparation and most importantly designing and developing digital solutions for capturing and managing the Geographic Information System (GIS) and Management Information System (MIS) information. The information generated from the MIS/GIS applications significantly aids in making decision in advance and in effective planning and implementing project components such as sustainable forest management and livelihood. Further, the Geomatics centre houses and manages its own data centre for in-house development, deployment and maintenance of MIS and GIS based digital solutions and mobile applications of OFSDP-II and other projects implemented under OFSDS.

A team of six personnel having expertise in Remote Sensing, Image Processing and Spatial Analysis, GIS and MIS systems development and management along with skill in tools of QGIS, ArcGIS, Erdas Imagine, MSOffice, Power BI and etc. are currently working in the Geomatics Centre of OFSDS.

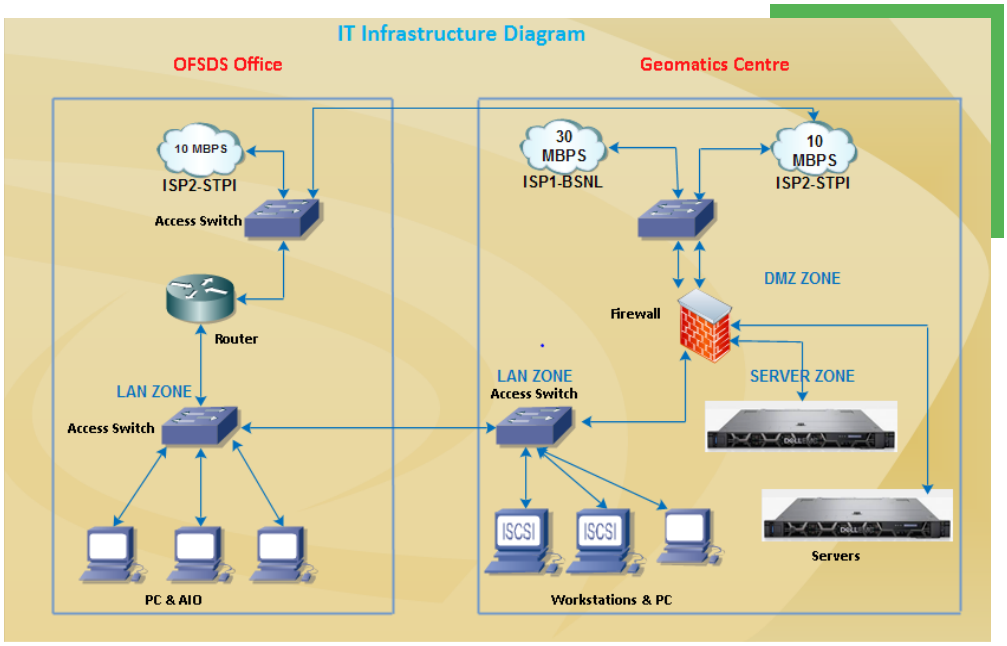
The GIS lab in the Geomatic Centre has been equipped with advanced infrastructure and licensed tools for processing and analysing the high resolution satellite imageries and GeoSpatial data. The Centre is also equipped with High end Workstations / systems, Laser Printer, Colour printer, Plotter and Scanner of high specifications. The other equipment existing in the GIS lab includes Altimeter, Densiometer, DGPS, GPS and Total Stations for conducting ground truthing activities and GIS studies.



GIS Lab

The Software Development Lab and a data centre of Geomatics Centre has been recently strengthened with 42U iDRAC and Rack Servers with SAN Storage of 14 TB volume. Moreover, the Firewall and Switches with dedicated 10 KVA Online UPS has been installed for secured server management and IT management. The servers are primarily used for Applications development, testing, deployment and backup. All applications hosted in old servers have been successfully migrated to new servers in latest versions of PHP and Post gre SQL.

The network system has been designed to provide 24 X 7 internet services in the entire office. A dedicated and high-speed data communication line of 30Mbps has been leased from BSNL for ensuring seamless services to the server zone and Geomatics Centre. Further, high speed RF connection and broadband connection have been subscribed from STPI and BSNL for providing highspeed bandwidth to entire Office and servers as alternate line. Geomatics centre promotes open-source software and uses CentOS 7/Linux OS, PHP, PostgreSQL etc. for server management, design and developing GIS solutions. Licenced software like ArcGIS (2 Nos.), Erdas Imagine and MS Office are also being used in the centre for processing high resolution imageries and raster data.



Network Architecture

11.2 Activities in Geomatics Centre

- **GIS and Remote Sensing based planning support-**
  - Procurement and Processing of satellite imageries and spatial data.
  - Preparation of Thematic Maps, Base Maps, Potential Treatment Maps, Forest Cover Maps, Forest Types Maps etc. to facilitate the officials for planning the forestry interventions and livelihood programme etc.
  - Development of GIS based digital solutions for decision support system.
  - Forest Cover Change analysis to assess the impact
- **Spatial & Non- Spatial Data Management –**
  - Creation of baseline information and baseline thematic maps with the high-resolution satellite imageries and Spatial data procured from NRSC and FSI, ORSAC, FITGC etc. for analysis and for planning on implementation of Community managed Monitoring, Reporting & Verification-REDD+ Readiness under OFSDP-II.
  - Archiving for spatial database for change analysis of project interventions periodically.
  - Formulating integrated MIS & GIS based Monitoring system for planning and concurrent monitoring of project activities to facilitate timely corrections and effective implementation.

- Concurrent data validation and verification
- Providing technical support in GIS based activities to partnering agencies of OFSDS in decision making and execution.

- **Application Development-**
  - Development of project / component specific MIS/GIS Applications System by in-house team.
  - Formulation of different modules, sub modules on different project components
  - Facilitate in formulating simple data collection tools and interfaces for uploading the information at field level.
  - Integration of innovative tool and applications for data consistency and correctness in the entry modules
  - Generating and providing MIS reports and dynamic information as and when required.
  - Establishing and building robust linkage of Mobile App Application with the IMS Database of OFSDP-II through APIs.

- **Capacity Building-**

The Geomatics Centre also augments required skill and knowledge of its professionals and field staff at PMU, DMUs and FMUs with regular Capacity Building Programme for optimum functioning of the Integrated Management System of OFSDS that contribute significantly for smooth and timely implementation and monitoring of project interventions. The initiatives of Geomatics Centre under the Capacity Building perspective are as below:

- Preparing Step by Step User Manuals for the Modules developed.
- Standard Operating Procedure (SOP) preparation for GIS based Studies.
- Augmenting Capacity Building Trainings for the Project officials and field staff for optimal use of GIS Tools and IMS Application.
- Handhold Training & Demonstration for Ground Truthing for assessment of Ground stock and Forest Canopy Density under CMRV.

- **Research and Development**
  - Studying research papers and understanding advanced technology relevant to Forest Canopy Density and Forest Types, Climate Change and Biomass Study.
  - Developing methodology for spatial analysis and map preparation.

- **IT Support-**
  - Procurement and Managing IT Infrastructure.
  - Tuning and migration of applications.
  - Coordinating and managing the internet services.
  - Development and Maintenance of Web Applications/Digital Solutions and official website.
  - Maintenance of Data Centre (Server Room) of OFSDS by in-house experts of OFSDS

iDRAC with Server systems in OFSDS

- Procurement of required items through Government e Procurement Portal (GeM) platform.
- Augment support to the project officials for preparation of thematic charts, analysis and report generation by use of data through Microsoft Excel etc.
- Augmenting required support in HR Management, Recruitment Processes, procurement through online portal of Amazon etc., email management, RTI Content Management and etc.

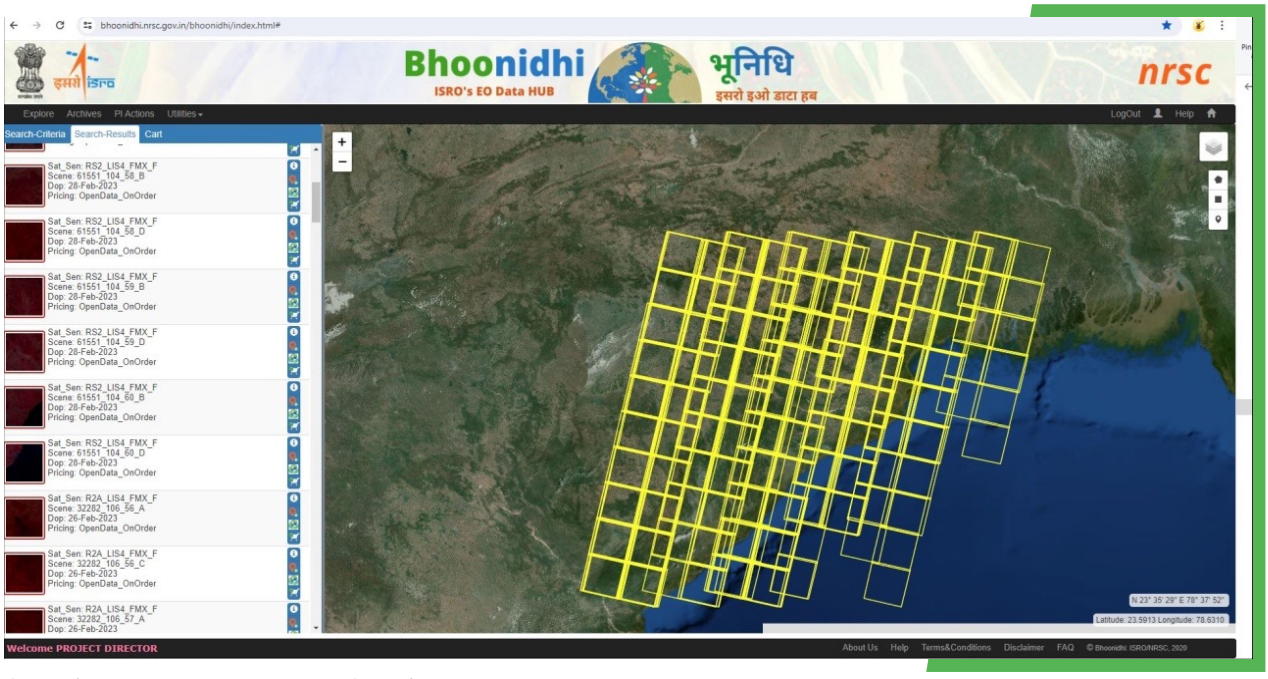
11.3 Remote Sensing and GIS Technology-

This year the GIS Lab has taken up various image analysis and map preparation activities for providing support in CMRV, REDD+ and livelihood Component of the Project. The activities taken up in GIS lab during the reporting year include the following.

Details of Satellite Imagery Procured

Sl. no	Satellite Imageries	Year	Quantity in Nos.	Processing
1	Resource Sat-2 LISS IV of 5.8 m resolution	2022-2023	66	Layer Stacking, NDVI, Reclassification, Mosaicing, FCD, Supervised Classification

- 66 nos. of cloud free LISS IV imageries (of 5.8m resolution) of 2022-23 have been downloaded from Bhoonidhi Portal of NRSC, Hyderabad. The satellite imageries have been processed for layer stacking and NDVI has been calculated.
- These imageries are interpreted and analysed to prepare different thematic Maps to facilitate planning & implementation of project interventions particularly on plantation, changes in canopy density etc.



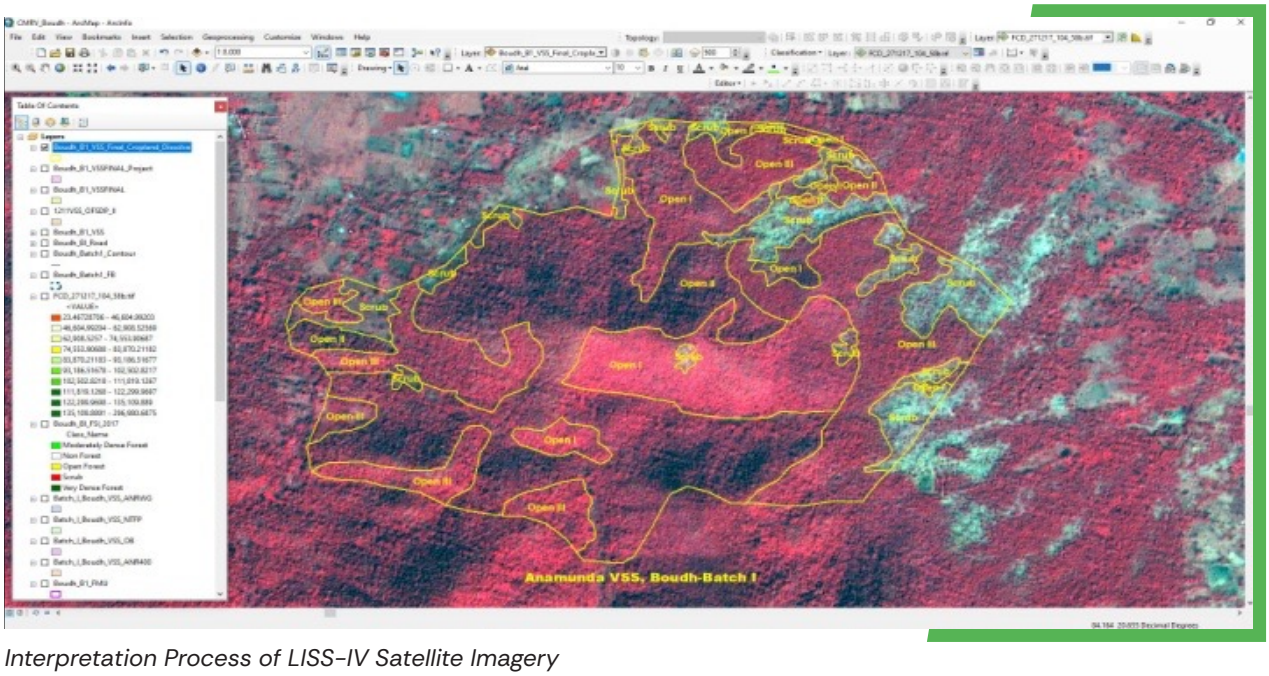
Selection Process of Row Path Satellite Imagery

- These imageries and the thematic layers have been used for analysing and classifying the Forest Cover Density in all 1211 VSS across the OFSDP-II Divisions. This analysis is facilitating in the implementation of Community based Monitoring, Reporting & Verifications (CMRV) and Biomass Study for REDD+ activity of the OFSDP-II Project.
- The Forest Cover Density has been determined and classified into 8 Density Classes from the merged imageries of Cartosat-I and LISS-IV images for the VSS assigned area referring the FSI Data, NDVI, FCD, Google Earth etc. The eight class of Forest Cover Density are as shown alongside:

Canopy Density Classes (in %)	Description
0-10	Scrub
10-20	Open-I
20-30	Open-II
30-40	Open-III
40-50	MDF-I
50-60	MDF-II
60-70	MDF-III
>70	Very Dense

Forest Density Class

- The Forest Canopy Density class has been digitized for all 1211 VSS of all Batches. Preparation of Base Maps and Forest Cover Density with Treatment Maps in the Scale of 1:5000 of each VSS assigned area has been completed for 355 VSS of Batch-I by super imposing the VSS assigned area polygon over the Pan-sharpened LISS-IV imagery of approximately 2.5m resolution and other thematic layers.



Interpretation Process of LISS-IV Satellite Imagery

- The other geospatial data layers like LULC of 2019-20, Desertification Status Mapping(DSM) layers for the year 2003-05, 2011-13, 2018-19, Administrative and Forest management Boundaries, Wildlife Sanctuary Boundary layer of latest versions have been obtained from the Odisha Space Applications Centre(ORSAC), Bhubaneswar and are used in monitoring and evaluation.
- The non-Forest area covering the project area has been identified and its Forest Density class has been determined referring to FSI maps, Google earth and Digitization process.
- The Farm Forestry Polygons of about 17116 sites have been generated and cross checked on Google Earth Pro. The overlapping area with VSS assigned area and forest areas have been rectified. Invalid geometry has been corrected using the QGIS tools.

WebGIS of IMS Portal

- Validation and Verification of GIS data have been completed for the following components of the project.

a. Survey and Demarcation polygons of all 1211 VSS assigned area of OFSDP-II.

b. ANR and AR treatment area Polygons of all 3487 sites

c. JFM and non-JFM DLT treatments

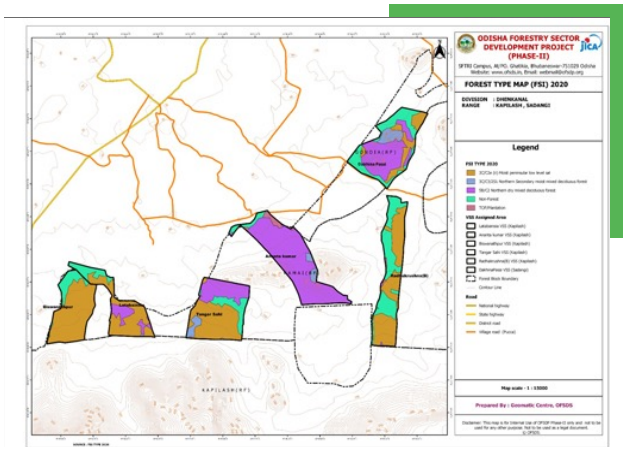
d. Fireline and Forest Boundary line Treatments

e. Location of 1210 VSS Building, DMU and FMU Buildings

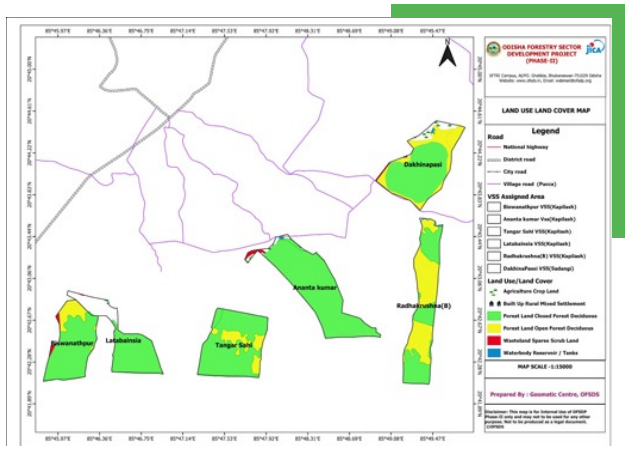
11.4 Digital & Non-Digital Support for Accrual & Trading of Carbon Projects of OFSDS

- Updated information pertaining to progress and achievements of different components of all projects covered under OFSDS namely Odisha Forestry Sector Development Project, Phase-II (OFSDP-II), Ama Jangala Yojana and OFSDS-OMBADC Livelihood Promotion Project have been provided to M/s Kosher Climate India Pvt. Ltd, Bengaluru for pre-feasibility study and for preparation of Project Design Document for listing of Projects of OFSDS under Improved Forest Management (IFM) and Afforestation, Reforestation and Revegetation (ARR) for Accrual and Trading of Carbon Projects.

- Information and documents furnished to M/s Kosher Climate India Pvt. Ltd, Bengaluru from GIS Cell for the feasibility survey and preparation of Project Design Document for the Accrual and Trading of Carbon Projects of OFSDS were as below:
  - Shape files of Project Boundaries/ Plantation polygons
  - Shape files of Official Forest Boundaries of project Area, Range Boundaries
  - Shape files of Updated Administrative Boundaries of village, tahasil, district, state etc.
  - Shape files of Land use & Land cover status, prior to project commencement (LULC from 5 year and 10 years prior to project initiation)
  - Shape files of Degradation Layers of Project Area for 5 years and 10 years prior to project initiation.
  - Shape files of Updated Current Forest Type Layers
  - Shape files of Updated Current Forest Density Layers
  - Shape files of Updated Drainage Layer
  - Plantation activity kick-off date of all the projects and evidence thereof in excel file
  - Year wise Plantation details under each project (Year 2015 onwards)
  - Unique IDs or Reference names of Plantation Parcels / Polygons, if any
  - Project -wise year-wise details of enrichment plantations/ gap fillings carried out
  - Details of species planted in the project field both for ARR & IFM Projects
  - Shape file of the farmers' plots under Farm Forestry Component of OFSDP-II for ARR project
  - Details of management interventions and silvicultural operations carried out
  - Information on Soil type soil disturbance & topography of the project area
  - Abstract and List of VSS Wise Assigned Area



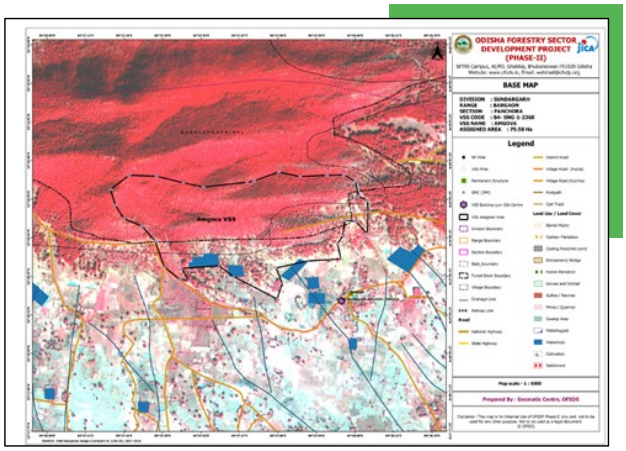
Forest Type Map-2020



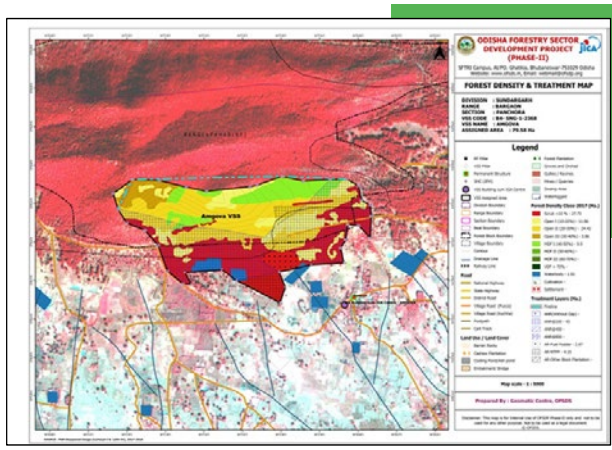
LULC Map

11.5 Map Preparation-

Various Maps were prepared in this reporting year for planning livelihood interventions and CMRV activities. The maps of Forest Density (ISFR 2021) and Forest Type maps (FSI-2020) were prepared for all Project Divisions for implementation of CMRV acivities & REDD+ Readiness initiatives. The maps prepared are as follows.



Forest Density & Treatment Map



Base Map

- Base Map and Forest Density and Treatment maps are being prepared for all VSS under OFSDP-II. The Base Map super imposes the VSS boundary over pan-sharpened LISS-IV imagery and LULC Layer. The Forest Density and Treatment Maps superimpose the digitized density classes over the imageries.
- Forest Density Map, Forest Type Map and LULC Map identifying the Points for ground truthing in Dhenkanal and Phulbani were prepared to locate the sites for studying the forest features under CMRV and REDD+ readiness.
- Different maps with the locations of the VSSs, super imposed over LULC were prepared for the potential VSSs / EDCs to facilitate planning and implementation of different Income Generating Activities through the Borrowing Entities (SHGs, CIGs and PoPs) taken up under the project. Maps prepared for the above initiatives during the reporting year include the VSS location Map in Baripada Circle for Capacity Building Training Programme with Social Enabler MGPL of MMSA. In another case, map showing the medicinal products in Baripada, Jharsuguda, Karanjia, Rairangpur and Sundargarh Divisions were prepared for Livelihood programme.
- Administrative map showing the peripheral villages around Simlipal Wildlife Divisions were prepared for proposing the livelihood interventions in the wildlife area.

11.6 Information Technology Maintenance & Management

The Data Centre of OFSDS has been upgraded with modern infrastructure and of latest technology to provide smooth and non-interrupted services as follows.

1. 42U Rack with cooling system (iDRAC)
2. Two Rack Server of Dell Make
3. SAN Storage of 14 TB
4. Firewall and Switches
5. 10 KVA Online UPS

The other activities in Software Lab of Geomatics Centre are detailed below.

- All the Application Systems of OFSDS i.e. the IMS Portal, MIS/GIS System of AJY and Website of OFSDS have been migrated successfully to the new environment in new servers. The versions of programming languages have been upgraded for PHP from 5.3 to 7.4, for Postgres from 9.6 to 12, for Geoserver 2.2 to 19.2 versions. Also the Operating System installed is latest version of CentOS 7.

- The user ids of IMS portal of all project staff have been standardized and privileges to access IMS portal has been assigned appropriately.
- The Integrated MIS/GIS System of OFSDP-II i.e the IMS Portal has been updated with new modules as below:

a. Farm Forestry Module for each Farm Forestry model has been developed and information has been captured pertaining to Farm Forestry interventions. These modules captured detail like Beneficiary's Name, land's GPS coordinates, size of plot, seedlings planted, date of plantations, species planted, survival rate and etc.

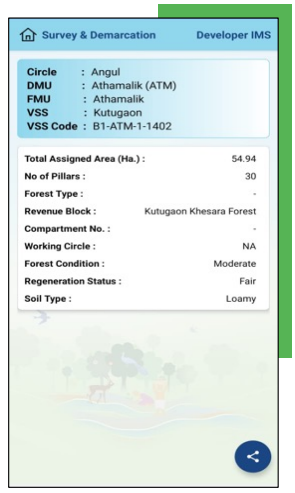
b. A form to collect the species planted in ANR and AR models have been developed and species information has been collected for all plantations.

c. The report module for Species information of ANR and AR Plantation has been developed.

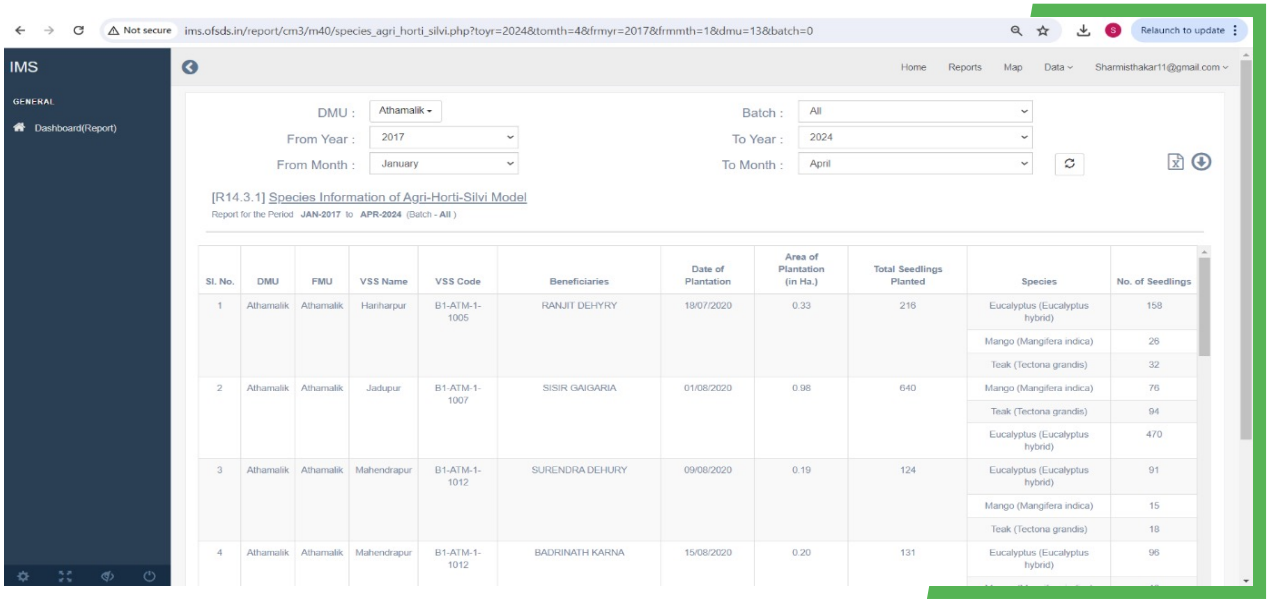
d. IMS portal of OFSDS has been updated with all relevant information pertaining to interventions taken up during the Financial Year 2022-23. All required corrections both in polygons and static information in relevant modules has been corrected.

e. The mobile APP of OFSDP-II has been published in both Android and IoS versions. All information of OFSDP-II project intervention has been made instantly available in mobile app by appropriate APIs to fetch data from the live database of IMS portal.

f. The website of OFSDS www.ofsds.in has been updated with recent news and events, publications and RTI Contents. A video gallery has been added for archiving and viewing all videos of OFSDS in the link is available at http://ofsds.in/videogallery.php.



Mobile App Interface

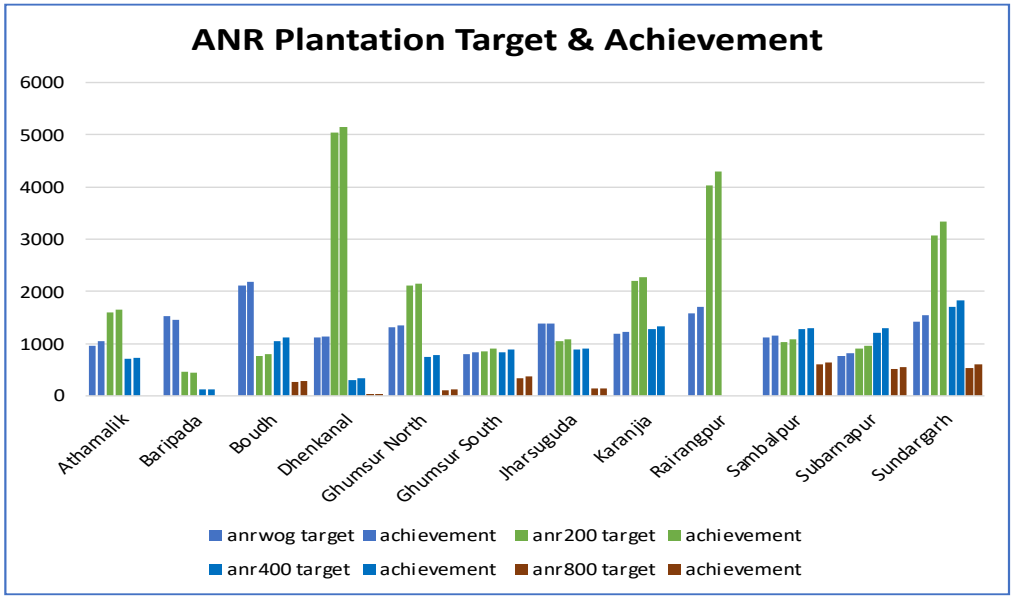


11.7 Monitoring and Evaluation

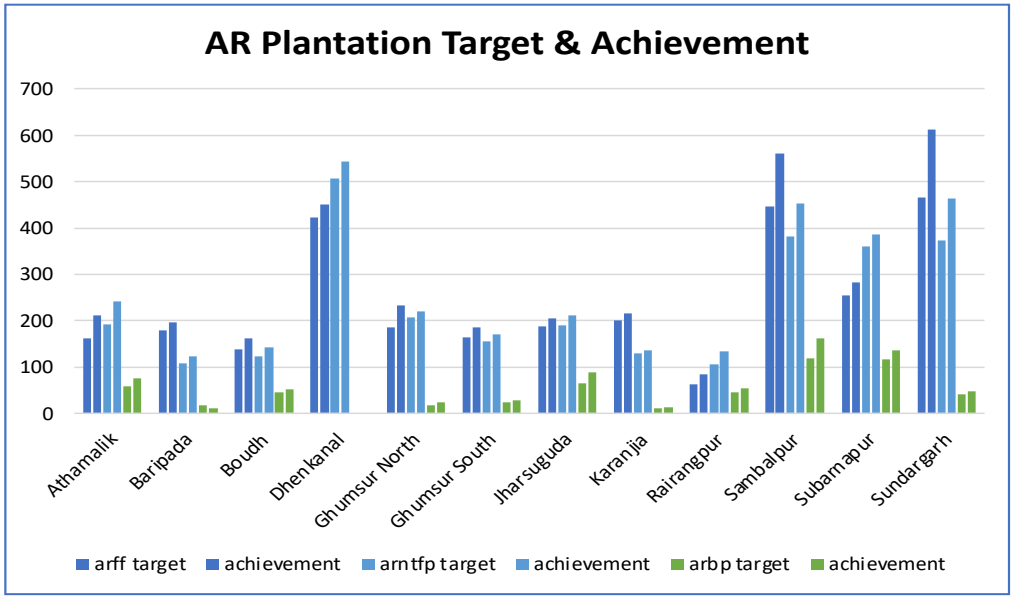
The MIS reports are regularly generated to review the progress and are discussed in the review meetings. The status of Data entry into IMS Portal is tracked every week to update the available current data.

Validation of online and off-line data is compiled for data consistency and accuracy. The reports of the following components have been generated and analysed.

1. ANR & AR Plantations- Data entry into ANR, AR and Farm Forestry Plantations modules of IMS Portal were tracked and the Target and Achievements comparison statement was reported. It is observed that 100% data entry has been completed in plantation modules.



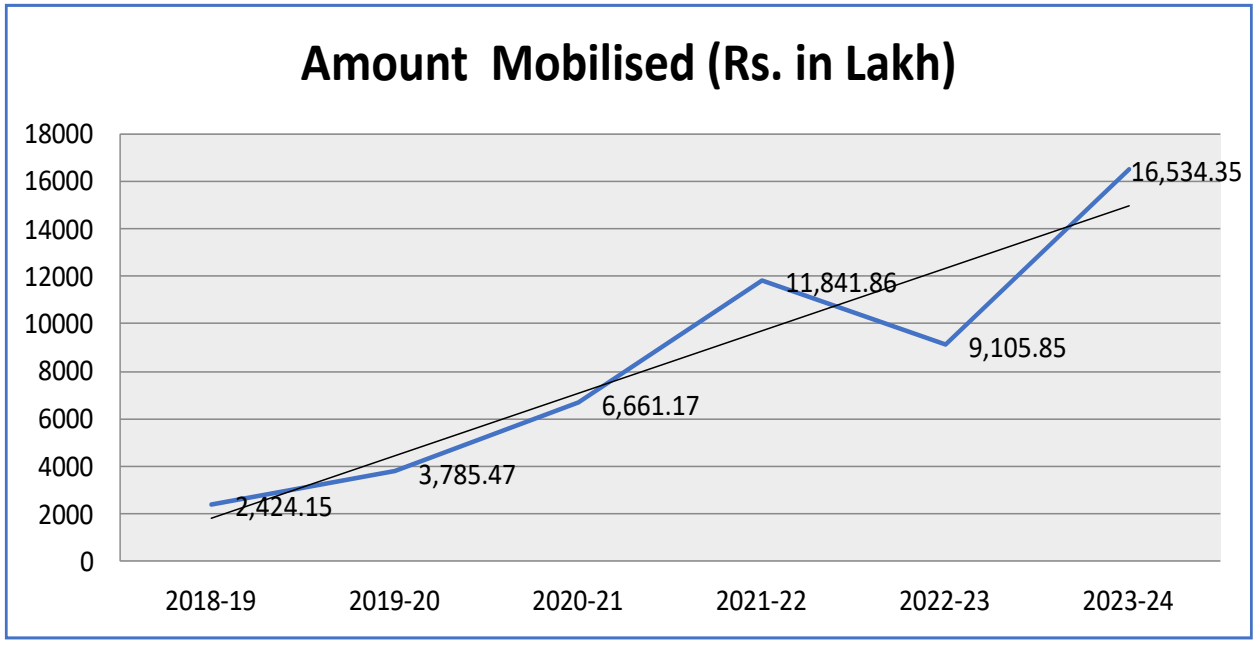
ANR Target & Achievement



ANR Target & Achievement

2. Convergence- The year wise convergence activities are collected online and offline and submitted to higher authority. Also this has been analysed and observed that there is increase in activities and thus more number of forest fringe people have been benefitted in the last six years.

3. CMRV of VSS and SHG – The abstracted CMRV Report Card of the Batch-1 VSS were analysed and appropriate follow up actions were taken.



Convergence Data

4. The data entry in CMRV report Card of Batch-II VSS and SHGs has been followed up and report card has been generated. The same is being analysed by the concerned Experts of PMC to understand the strengths and weaknesses in the VSS and SHG.

5. Similarly, the information on Gender Mainstreaming and Environment Safeguards for batch-II VSS have been captured and are being analysed by the concerned Experts of PMC & PMU.

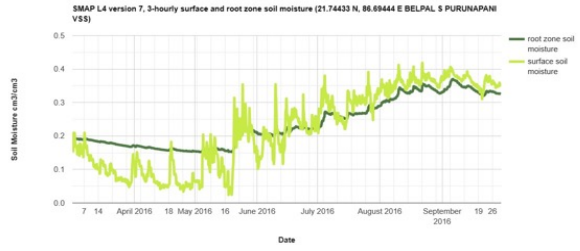
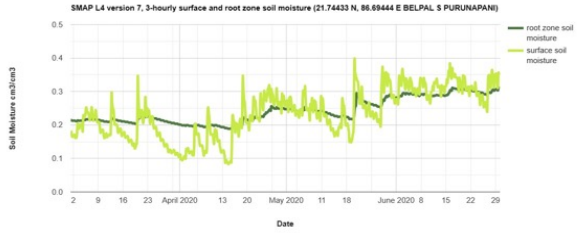
6. The achievement of Gender Mainstreaming for equitable sharing of benefit accrued out of the project interventions at the VSS level under OFSDP-II have been recorded by the communities and the same were analysed through a dedicated IMS Module. The information collated on Gender Mainstreaming has helped significantly for taking necessary steps in ensuring Gender Mainstreaming across the project VSSs of OFSDP-II.

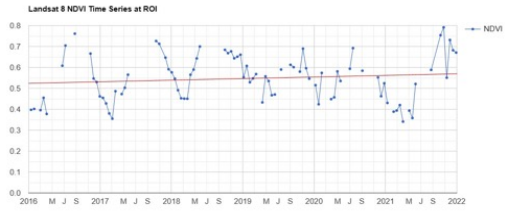
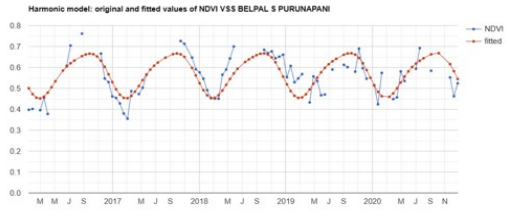
7. The progress made in addressing the issues pertaining to Environmental & Social Management System Framework (ESMSF) and Scheduled Tribe and Forest Dependant Framework (STFDPF) at the VSS level under OFSDP-II have been recorded through Community participation and the same were analysed through a dedicated IMS Module. The information collated on the above has helped significantly for taking necessary steps in addressing the environmental & social issues in the project VSSs of OFSDP-II.

8. The GPS coordinates of all VSS Buildings under OFSDP-II has been captured in IMS Portal and have been cross checked and the completion status has been verified.

9. The community mobilization activity is also monitored and the VSS meetings information in IMS portal is checked weekly.

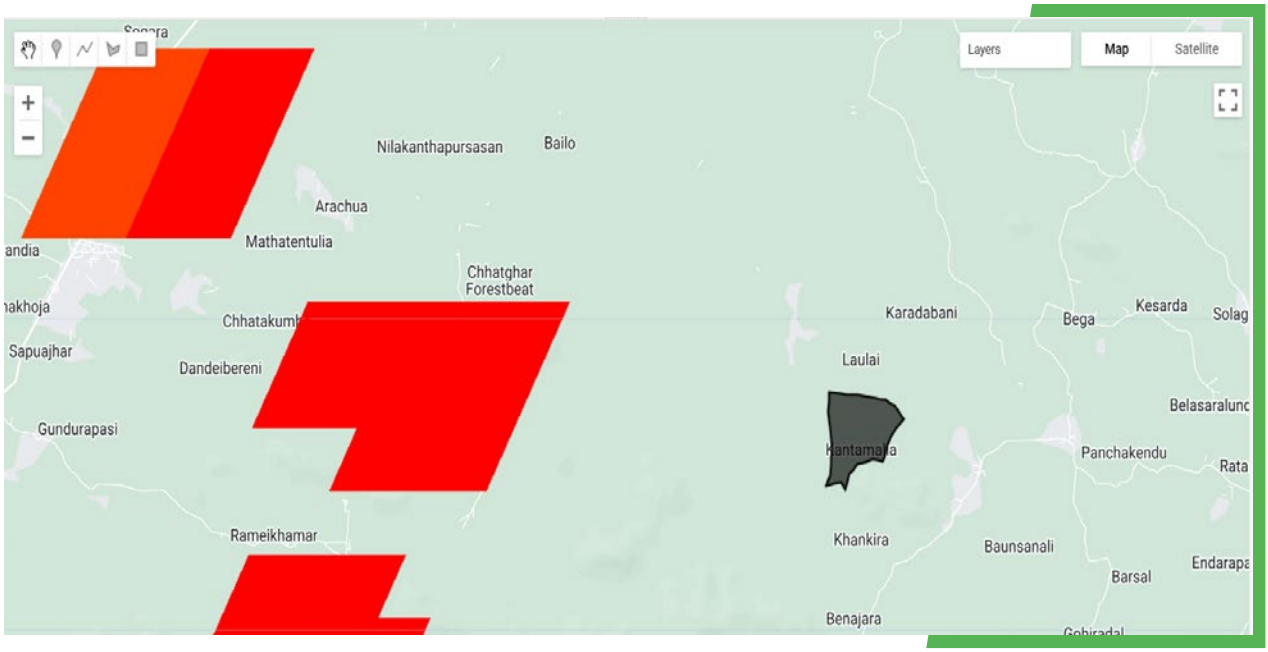
10. Apart from this reliance is also placed on utilization of open-source satellite images and Google Earth Engine platform for carrying out various studies e.g. two different studies have been completed (1) Impact Assessment of soil and moisture conservation activities under Odisha Forestry Sector Development Project Phase II – A SMAP approach using Google Earth Engine and (2) Analysing Forest fire occurrences in VSS areas under Odisha Forestry Sector Development Project – II.

Assessment of soil moisture content before and after project interventions (Root Zone Soil Moisture and Surface Soil Moisture)	
Belpal S Purunapni VSS in Dukura FMU of Baripada DMU	
Before project intervention	After project intervention
	

Variation of NDVI data during the period from 2016 to 2022. Fitting of a linear model and harmonic model to the data to account for observed variation.	
Linear Model Fitting	Harmonic Model Fitting
Belpal S Purunapni VSS in Dukura FMU of Baripada DMU	
	

Analysis of Forest Fire in VSSs of OFSDP II Divisions -

Map showing spatial extent of Shrichaitynajew VSS in Sadangi Range of Dhenkanal Forest Division vis a vis rasterized firepoints from FIRMS data during the period from 01.08.2017 to 10.08.2023



11.8 Training/Workshops/Conferences/Exposure Visit

The GIS team attends various online tutorials on latest tools and technology and conferences for advancement in Geo-Spatial Entity. Also, the following Capacity Development programmes have been attended.

- A Conference on Geosmart India 2023 – Geospatial Infrastructure and Digital Twin was attended at Hyderabad from 17.10.2023 to 19.10.2023.
- A State Level Sameeskhya-2023 on Innovations and Best Practices was attended on 1st and 2nd November 2023.
- A State Level Stakeholder Consultation on Leveraging Carbon Credits through Improved Forest Management and Farm Forestry Interventions under OFSDS was attended on 5th February 2024.
- The GIS Lab demonstrated as how Project Interventions are monitored through GIS and Computer Applications to the Refresher Course Trainees (ACFs) during their Exposure tour cum CBT training in OFSDS on Dated 19th January, 2024.
- The Project Director and Addl. Project Director of JICA Assisted Forest Development Project (GFDP) Phase II Gujarat visited GIS Lab on 9.03.2024.

The Geomatics Centre's active involvement has not only contributed in effective implementation of projects in OFSDS but also been well appreciated at state level and national level. Recently, OFSDS was selected and recommended in silver category of SCOCH Award-2023 for successful implementation and execution of projects in spatial and temporal scale.

Chapter 12

Financial Management

12.1 Budget and Expenditure F.Y 2023-2024:

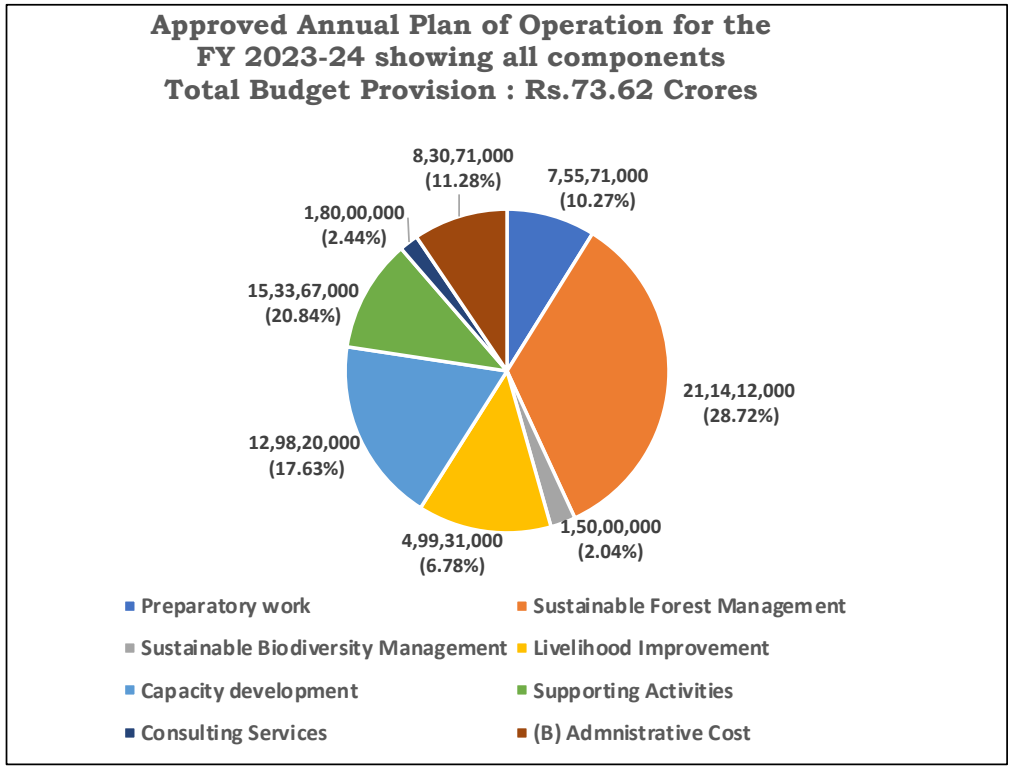
A budget of Rs. 73.62 Crores was provisioned and an amount of Rs.50.00 Crores was received from Forest, Environment and Climate Change Department, Government of Odisha for the Financial Year 2023-24.

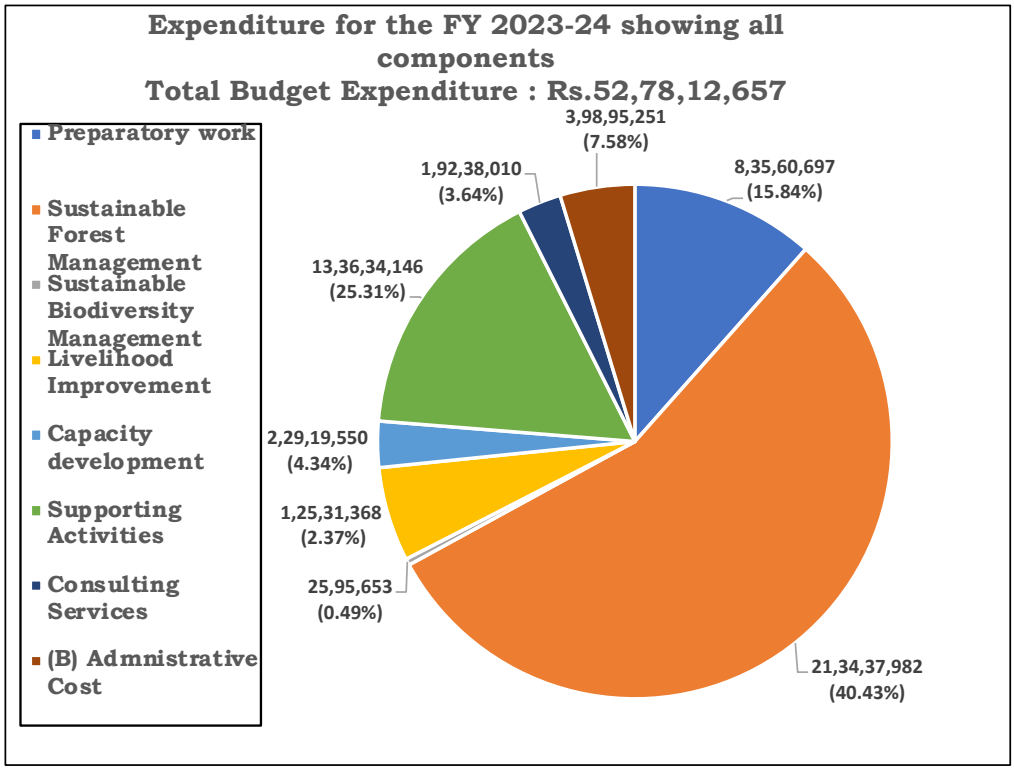
The total expenditure incurred during the year was Rs.52.78 Crores. Components wise Funds Proposed, Funds Received and Expenditure incurred during F.Y 2023-24 is given below:

Funds Proposed, Funds Received and Expenditure during the Financial Year 2023-24

Name of the Project: Odisha Forestry Sector Development Project Phase-II (ID-P257)

Item of Work		Budget Provision Rs. In Crore	Fund Received From FE&CC Dept., Govt. of Odisha	Total Expenditure Rs. In Crore
1	Preparatory Work	7,55,71,000	50.00 Crore	8,35,60,697
2	Sustainable Forest Management	21,14,12,000		21,34,37,982
3	Sustainable Biodiversity Management	1,50,00,000		25,95,653
4	Livelihood Improvement	4,99,31,000		1,25,31,368
5	Capacity Development	12,98,20,000		2,29,19,550
6	Supporting Activities	15,33,67,000		13,36,34,146
7	Consulting Services	1,80,00,000		1,92,38,010
Total(A) :		**65,31,01,000**		**48,7917,406**
(B)	Administrative Cost (State Share)	8,30,71,000		3,98,95,251
Grand Total:		**73,61,72,000**	**50.00 Crore**	**52,78,12,657**

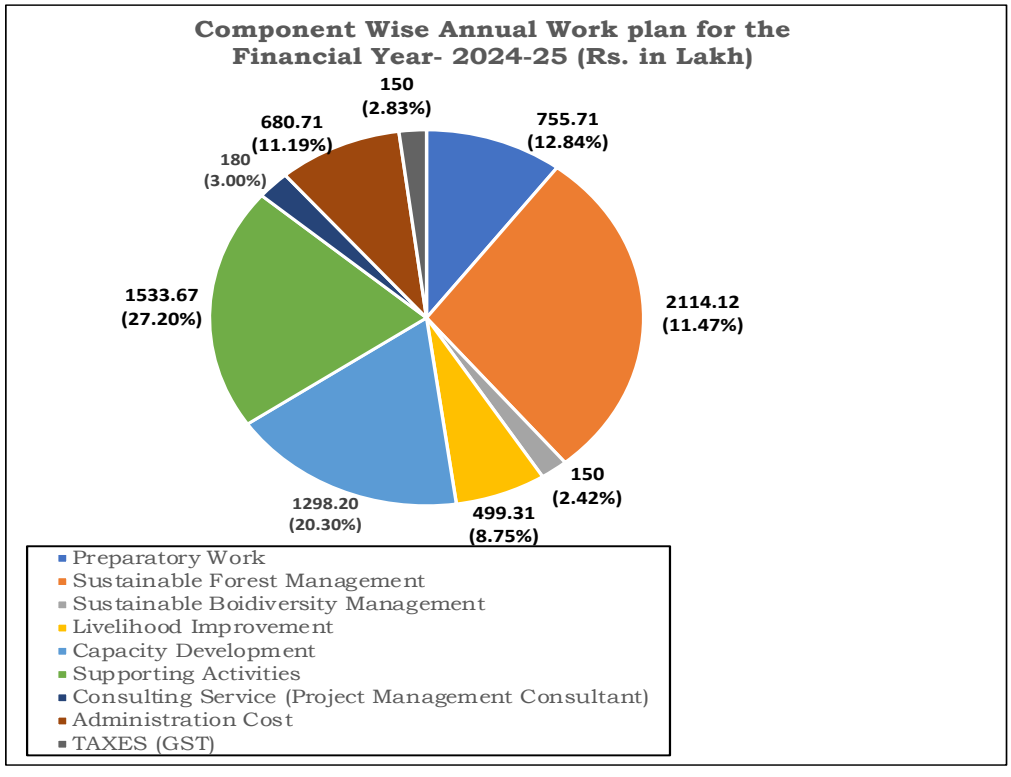




12.2 Annual Work Plan and Budget for 2024-25:

The Annual Work Plan of the year 2024-25 was prepared keeping in mind the continuity of work in 1211 VSSs of Batch-I, II ,III & IV as per the project schedule. The Annual Work Plan and Budget for-2024-25 is placed as per details given below:

Annual Work Plan for the Financial Year-2024-25	
ODISHA FORESTRY SECTOR DEVELOPMENT PROJECT, PHASE-II	
SUMMARY (INR in Lakhs)	
COMPONENT	Amount in Rs. Lakhs
(A) Programme Expenditure	
Preparatory Works	795.34
Sustainable Forest Management	709.68
Sustainable Biodiversity Management	150.00
Livelihood Improvement	541.75
Capacity Development	1,257.41
Supporting Activities	1,683.79
Consulting Services (Project Management Consultant)	186.00
TOTAL(A)	**5,323.97**
(B)State Share	
Administration Cost	692.73
TAXES (GST)	175.00
TOTAL (B)	**867.73**
GRAND TOTAL Rs. in Lakhs (A+B)	**6,191.70**
GRAND TOTAL Rs. in Crore	**61.92**



12.3 Summary of Budget Receipt, Expenditure and Reimbursement

The overall budget received and expenditure incurred for the project during the financial year 2023-24 is given below:

Summary of Receipt and Expenditure & Reimbursement Claim during 2023-24		
Funds Received & Expenditure		**Amount (Rs. In Crore)**
A	Opening Balance as on 01.04.2023	82.45
B	Funds Received from Forest, Environment and Climate Change Deptt., Govt. of Odisha during 2023-24	50.00
C	Less, expenditure made during F.Y 2023-24	52.78
D	Closing balance as on 31.03.2024 (D=A+B-C)	79.67

12.4 Re- imbursement Claims

The Funds received as Re-imbursement Claims from JICA is summarized below:

Reimbursement claims		Amount (Rs. In crores)
A	Reimbursement Claim due as on 01.04.2023	2.33
B	Reimbursement Claim submitted for disbursement during the Financial Year 2023-24	47.43
C	Less, Reimbursement Claim received up to 31.03.2024	31.73
D	Reimbursement Claim due but not received up-to 31.03.2024 (D=A+B-C)	18.03