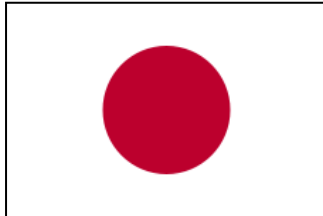


QUARTERLY PROGRESS REPORT (January, 2025 to March, 2025)



**THE PROJECT FOR FOREST AND BIODIVERSITY
CONSERVATION FOR CLIMATE CHANGE
RESPONSE IN WEST BENGAL
FUNDED BY JAPANESE ODA LOAN
AS A TOKEN OF FRIENDSHIP AND COOPERATION
BETWEEN
JAPAN AND INDIA**



**PROJECT MANAGEMENT UNIT
LB-2, SECTOR-III, SALT LAKE CITY
KOLKATA-700106**

Table of Contents

LOAN SUMMARY	2
1. Project Description (Relevance)	3
1-1 Project Objective	3
1-2 Necessity and Priority of the Project.....	3
1-3 Coherence of the Project	4
1-4 Rationale of the Project Design.....	5
2. Project Implementation (Efficiency)	7
2-1 Project Scope	7
2-2 Implementation Schedule	13
Table 2-2-1: Comparison of Original and Actual Schedule	13
2-3 Project Cost.....	14
2-4 Organizations for Implementation.....	16
2-5 Precautions (Measures To Be Adopted/Points Which Require Special Attention)	20
2-5 Photographs of Output of the project: <i>Will be attached with the subsequent QPRs</i>	21
3. Benefit Derived from the Project (Effectiveness).....	21
3-1 Operational and physical condition of each facility developed	21
3-2 Precautions (Measures to be adopted/Points which require special attention)	21
3-3 Environmental and Social Impacts	22
3-4 Gender Mainstreaming	22
3-5 Qualitative and Quantitative Data of Monitoring Indicators	22
3-6 Monitoring Plan for the indicators	23
3-7 Achievement of the Project Objective	24
4. Operation and Maintenance (O&M) (Sustainability).....	24
4-1 O&M and Management	24
4-2 O&M Cost and Budget.....	25
5. Evaluation	26
5-1 JICA and Borrower/ Executing Agency Performance	26
5-2 Additionality (If any)	26
5-3 Overall evaluation	26
5-4 Lessons Learnt and Recommendations.....	26
6. Component wise Project Status Report - Annexure-1.....	27

LOAN SUMMARY

ID – P 311

Signing of Loan Agreement :	29th March, 2023
Effectuation of Loan Agreement:	26th July, 2023
Date of Final Disbursement:	24th July, 2033
Loan Amount:	Total - 9308 Million Yen (650 Million INR.) Principal A (Ecosystem based Climate Change Measures, Biodiversity Conservation and Restoration, Livelihood Improvement & Institutional Strengthening) - 8513 Million Yen (4755.73 Million INR) Principal B (Consulting Services) - 369 Million Yen (206.14 Million INR)
Disbursed Amount:	0.00 Million Yen (0.00 Lakh Rs.)
Rate of Interest:	Principal A - 1.50% p.a. Principal B -0.01% p.a.
Repayment Period :	30 Years (includes grace period of 10 years)
Name of the Borrower:	The Government of India
Name of the Executing Agency:	Forest Department Government of West Bengal (Through West Bengal Forest & Biodiversity Conservation Society)

1: Project Description (Relevance, Coherence)

1-1 Project Objective

Original: (P/M)

To mitigate and adapt to climate change, conserve and restore ecosystems by ecosystem based climate change measures, biodiversity conservation and restoration, livelihood improvement activities and institutional strengthening, thereby contributing to sustainable socio-economic development in West Bengal.

Modified objective and its reason(s): No change (P/R and PCR)

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country and JICA/ Japanese development policy.

Original: (P/M)

National Policy

India's 85 percent of national land is high vulnerable to multiple natural disasters including cyclones, floods and sediment disasters due to climate change and these grow into a serious problem. Under the circumstances, the Government of India (GoI) is pursuing policies below and measures to mitigate the problems of climate change and conserve forest and biodiversity.

1. In Intended Nationally Determined Contributions (INDC) under the Paris Agreement, GoI has pledged to reduce the emissions intensity of its GDP by 45% of 2005 levels towards 2030.
2. Green India Mission that was launched in 2014, as one of the eight Missions under the National Action Plan on Climate Change. The Mission aims at protecting, restoring and enhancing India's forest cover and responding to Climate Change. One of the objectives of the Mission is to target to improve eco-system services including carbon sequestration and storage, hydrological services and biodiversity as a result of treatment of 10 million ha in 10 years.
3. The National Forest Policy 1988 stipulates that hilly area to maintain 2/3 of the green wash area for disaster prevention and for stabilization of the ecosystem.
4. Draft National Forest Policy in 2018 stipulates that strategic actions especially sustainable forest management will be taken to strengthen forest-based climate change mitigation and adaptation.

Necessity of the Project and State Policy

The state of West Bengal is endowed with long topography and varied flora and fauna from the north contains Himalayan alpine zone also bordering the Kingdom of Bhutan and Nepal, to the southern part with mangrove forests facing the Bay of Bengal. However, the forest cover of the state was 14.64% in 2011 which was lower than its national average 21.05%.

After that, a Japanese ODA loan project entitled the "West Bengal Forest and Biodiversity Conservation Project" was conducted from 2012 and the forest cover has been improved by 18.96% on 2021.

Although there has been improvement, the pressure on forest natural resources and

degradation of ecosystems remains strong and forest cover of the state has not achieved either of its national goal (33%) or national average (25%) of 2019 because of the progress of the urbanization, excessive loads on forest resourced brought by local residents' use of forest products and other resources to earn a living etc.

Furthermore, due to the climate change, frequent and intensifying natural disasters has impacted on the local residents seriously. In Deltaic landscape of coastal area the frequency of giant cyclones has been increasing in the Bay of Bengal, more than 10 million people were harmed in 2020. Also, not only in coastal area, but also in north hill area, many landslide disasters has been detected.

Under these circumstances, the restoration and conservation of forests and biodiversity remains as serious issues in West Bengal and the State of West Bengal expects the forest and biodiversity sector to mitigate and adapt climate change through the restoration and conservation of ecosystems.

The state of the West Bengal is pursuing policies below and measures to mitigate the problems of climate change and conserve forest and biodiversity.

1. In West Bengal State Action Plan on Climate Change (2017-2020), the implementation plans for climate change mitigation and adaptation including restoration and conservation of forest and biodiversity are stipulated.
2. West Bengal State Action Plan on Climate Change for 2020-2025 is under preparation. In this action plan, 9 strategies such as mitigating impacts of landslides, storm surges and fast river run off, study on long term impacts of climate change on forests and its Carbon sequestration potential are proposed.

Attachment(s):

Actual: No change (P/R,PCR)

Attachment(s): required only when they are revised.

1-3 Coherence of the Project

- Synergistic effect, harmonization, coordination, interconnection with the projects conducted by JICA, other donors or private companies.
- Consistency with global framework (international targets, initiatives, standards, etc)

Original: (P/M)

Coherence of the Project

1. Activities assisted by Japan

Department of Forests, Government of West Bengal (WBFD) implemented forest and biodiversity conservation project in West Bengal from 2012 to 2022 by assistance of JICA (Phase 1). The Project will be implemented partially in continuation of the past interventions with introduction of new methodologies based on the lessons learnt in the past pilot components.

In addition, through the National Workshop, annually hosted in turn by agencies executing Japanese ODA loan projects in the forest sector, and the Sustainable Forest Management and Biodiversity Conservation Training Course for India, good practices and lessons from other projects in India's forest sector and Japanese experience will be used to improve the Project's implementation and methods.

2. Activities assisted by other donors

World Bank assisted in piloting integrated coastal management approach in State of West

Bengal from 2010 to 2020. The activities were to include: a) conservation and protection of coastal resources including mangrove and coastal shelterbelt plantation, b) environment and pollution management by completing the sewerage system for Digha to prevent flow of sewage onto the sandy beach, c) livelihood security of coastal communities in Sagar Island.

GIZ has assisted human wildlife conflict mitigation project cooperation with Ministry of Environment, Forest and Climate Change (MoEFCC). Newly developed instruments for the mitigation of human wildlife conflict is applied in Gorumara Wildlife Division and adjoining landscape of West Bengal.

3. With sustainable development goals

The Project will also help achieve some of the Sustainable Development Goals, namely: Goal 1 (eradication of poverty), Goal 5 (achieve gender equality and empower all women and girls), Goal 13 (action against climate change), and Goal 15 (promoting the sustainable use and management of terrestrial ecosystems, and biodiversity conservation).

Attachment(s):

Actual: No change (P/R,PCR)

Attachment(s):required only when they are revised.

1-4 Rationale of the Project Design

- Timing, scale, technology of the project

Original: (P/M)

The Project aims to mitigate and adapt to climate change, conserve and restore ecosystems and livelihood for sustainable socio-economic development in WB. Scope of work to be implemented under the Project are as per below. The details are in the Attachment 3.

Component 1: Ecosystem Based Climate Change Measures

Component 2: Biodiversity Conservation

Component 3: Livelihood Improvement

Component 4: Institutional Strengthening

The duration of the Project is 8 years, from March 2023 to March 2031 in consideration of capabilities of stakeholders and time required to conduct activities in sustainable manners.

The project activities will be implemented in selected forest Ranges in project target districts. There is no overlap at Forest Range level with other on-going external aided projects.

Effective Utilisation of Phase 1 Assets including Lessons Learnt

One of the main strengths of WBFD is the assets gained from Phase 1 including lessons learnt. The proposed interventions will incorporate the major lessons learnt from Phase 1. These are mostly relevant to the livelihood-related interventions, capacity enhancement of JFMC and SHG, and convergence. Otherwise, the existing institutional set-up of PMU will give a head start to the project implementation.

Utilisation of Proven Package of Practices and Research Products to Project Implementation

Apart from the research products available from Phase 1, there are several research institutes in India and in Japan that are working on 1) climate change adaptation and mitigation; 2) Eco-DRR; 3) human and wildlife conflicts; 4) community resilience and other relevant issues. A number of effective methods are also developed from projects of similar

nature. Through collaboration with such institutes and taking advantage of existing and proven methods, this project will gain insights in project implementation.

Implementation Methods that Cater for Diversity and Heterogeneity

West Bengal is diverse in nature and society. From these perspectives, the project implementation method and process need to be developed to cater to the need. In this project, there are two ways to cater for such specificity.

1) Landscape-based Planning and Implementation

Each biogeographical zone experiences different types and level of climate change impacts. Furthermore, when considering interventions for disaster reduction, scattered treatment areas would not be beneficial. As the causes of damages are likely to be complex and a single intervention may not be effective in reducing the damages. In other words, there may also be a need to implement a combination of interventions to be effective in reducing disaster risks and sizable area may need to be treated. Thus, site identification and planning will be done on the basis of watershed, which is severely affected by disaster and forest-based intervention, are seen to be effective. In this way, limited financial resources can be utilised efficiently and effectively.

2) Institutionalising Convergence

The needs of a community are diverse and not all that are listed in the micro plan cannot be implemented by this project or by WBFD. On the other hand, a number of central and state schemes are already implemented. Thus, creating a mechanism and providing initial support for mobilising resources through convergence will be proposed this project. By creating an enabling environment for convergence, the purpose of developing a micro plan will be justified.

3) Developing Financial Mechanism to Cater for Women's Need

Women seeming to move as a homogeneous group is not the reality. Within a village, some women are more enterprising, and others are not. In some locality, giving loan would only result in adding debts to the household if the financial product is not designed well. In this project, a financial institution or an entity, which has a proven track record of managing funds and working with SHGs in enterprise development and livelihood improvement, may be engaged to handle the project fund for the purpose. Otherwise, a separate timebound mechanism shall be proposed for effective utilisation of the fund.

Building Sustainability of the Project Interventions

Sustainability of the project intervention depends on the capacity of the stakeholders who are engaged in implementation. Investment in capacity building will have a direct bearing on sustainability of the project outputs, which ultimately leads to attainment of project impact in the long run. Therefore, the capacity building of the community level institutions will be undertaken in a strategic manner to strengthen their organisational capacity. Furthermore, O&M system of the community infrastructure will be designed by this project so that the community will be able to take over the assets, by which system will be operationalised during the phase-out period (From the sixth to eighth year of the project).

Phase-wise approach

The Project will be divided into three phases; Preparatory Phase, Implementation Phase, and Phase-Out/Closing Phase.

1) Preparation Phase (1 year)

Preparation Phase is crucial for successful implementation of the Project. The first step

would be institutional arrangement by way of setting up Project Management Unit (PMU), Divisional Management Unit (DMU), and Field Management Unit (FMU) and so on, followed by recruitment of contractual staff, preparation of operation manual and other guidelines, orientation and capacity development for WBFD staff in each rank. Project Management Consultant (PMC) shall be deployed in a timely manner. Required surveys and assessments for planning and baseline data for sustainable forest management as well as biodiversity conservation will be conducted during this phase.

2) Implementation Phase (5 years) :

All components in implementation phase will be put into action based on the Preparatory phase.

3) Phase-Out/Closing Phase (2 years) :

After the Implementation phase, Phase-out works will be undertaken for sustainability. The focus would be on evaluating each component in detail to plan and take measures for covering up the backlog and to achieve greater impact and sustainability.

Application of Technologies for Scientific Implementation/Management

The Project shall adopt GIS and the state-of-the-art technologies for better implementation, monitoring and planning of the services of WBFD. For instance;

- Digitisation of JFMC boundary within the project target area.
- Development of web-GIS platform of WBFD.
- Upgrade of mobile application to add function of e-plantation journal.
- Development of project MIS platform linked to web-GIS.
- Pilot project for use of UAV

Actual: No change (P/R,PCR)

2: Project Implementation (Efficiency)

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	<p>Original: (P/M) State of West Bengal</p> <p>18 Districts: <u>Hills and North Bengal Landscape</u></p> <ol style="list-style-type: none"> 1. Jalpaiguri 2. Darjeeling 3. Kalimpong 4. Alipurduar 5. Coochbehar 6. North Dinajpur 7. South Dinajpur <p><u>Dry Lateritic & Alluvial Landscape</u></p> <ol style="list-style-type: none"> 8. Murshidabad 9. Birbhum 10. Purulia 	<p>Actual: 600 JFMCs (P/Rand PCR)</p> <p>Attachment(s):Map</p>
-----------------	---	--

11. Paschim Medinipur
 12. Bankura
 13. Purba Bardhaman
 14. Jhargram
 15. Paschim Bardhaman
 16. Nadia
 17. North 24 Parganas
- Deltaic Landscape
18. South 24 Parganas

34 Divisions:

Hills and North Bengal Landscape

1. Jalpaiguri
2. Baikunthapur
3. Kurseong
4. Darjeeling
5. Kalimpong
6. Darjeeling WL
7. Gorumara WL
8. Jaldapara WL
9. Buxa Tiger Reserve (BTR)
(East)
10. Buxa Tiger Reserve (BTR)
(West)
11. Cooch Behar

Dry Lateritic & Alluvial Landscape

12. Nadia-Murshidabad
 13. Birbhum
 14. Purulia
 15. Kangsabati (North)
 16. Kangsabati (South)
 17. Jhargram
 18. Medinipur
 19. Rupnarayan
 20. Bankura (South)
 21. Bankura (North)
 22. Panchet
 23. Burdwan
 24. Durgapur
 25. Kharagpur
 26. Raiganj SF
 27. North 24 Parganas
- Deltaic Landscape
28. South 24 Parganas
 29. Sunderban Tiger Reserve
(STR)

Functional Divisions

30. Silviculture (Hills)
31. Silviculture (North)
32. Monitoring (North)
33. Monitoring (South)
34. Purulia Extension Forestry

As shown in Location Map	
90 Ranges	
Attachment 1 : Location Map	
Attachment 2 : Selection Criteria	

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
Component 1 : Ecosystem based Climate Change Measures		
1.1.1 Production of Quality Planting Material (QPM)	-	<i>(P/R and PCR)</i>
1.1.1.1 Upgrading Central Nurseries and Maintenance	9 units	-
1.1.1.2 Production of Quality Planting Material (QPM)	1,925,000 QPMs	5,54,450 QPMs
1.1.2 Improving Quality of Forests	-	
1.1.2.1 Creation of New Seed Production Areas (SPAs) and Maintenance	50 ha	-
1.1.2.2 Preparation of Range Forest Project Implementation Plan (RFIP)	90 plans for 1.1.2.2 & 1.2.2.1	-
1.1.2.3 Plantation in Degraded Forest Areas		
1) Sal Plantation	100 ha	-
2) Miscellaneous Plantation	250 ha	-
1.1.2.4 Tree Plantation Outside of Forest Areas (TPOFA)	250 ha	-
1.1.3 Ecosystem-based Disaster Risk Reduction (Eco DRR) Activities	-	
1.1.3.1 Embankment Protection	-	
1) Large Check dams	1 unit	-
2) Medium Check dams	15 units	-
3) Small Check Dams	20 units	-
4) Glass Planting along the outlet (Large)	5 ha	-
5) Glass Planting along the outlet (Medium)	45 ha	-
6) Glass Planting along the outlet (Small)	40 ha	-
7) Bunding along the embankments (for large check dams)	2 km	-
1.1.4 Green Laboratory Initiatives	-	
1.1.4.1 Nature Study in Forests Areas by Students	15 students	-
1.1.4.2 Nature and Forests Programme Engaging Education/Research Institutions	5 programs	-
1.2.1 Production of Quality Planting Material	-	
1.2.1.1 Upgrading Central Nurseries and Maintenance	31 units	02 units
1.2.1.2 Production of Quality Planting Material (QPM)	4,004,000 QPMs	14,78,400 QPMs
1.2.2 Improving Quality of Forests	-	
1.2.2.1 Preparation of Range Forest Project Implementation Plan (RFIP)	90 plans for 1.1.2.2 & 1.2.2.1	-
1.2.2.2 Assisted Natural Regeneration (ANR) of degraded sal forests (RDF) (Coppicing)	1,000 ha	-
1.2.2.3 Plantation in degraded forest areas		
1) Sal Plantation	400 ha	-
2) Miscellaneous Plantation	1,600 ha	-
1.2.2.4 Tree Plantation Outside of Forest Areas (TPOFA)	250 ha	-
1.2.3 Ecosystem-based Disaster Risk Reduction (Eco DRR) Activities	-	
1.2.3.1 Preparation of Catchment Treatment (CAT) Plans and site identification	13 CAT plans	-

1.2.3.2 Soil and Moisture Conservation Measures	1,000 ha	-
1.2.4 Green Laboratory Initiatives	-	-
1.2.4.1 Nature Study in Forests Areas by Students	20 students	-
1.3.1 Community Resilience Measures in Sundarbans	-	-
1.3.1.1 Preparatory Works including Site Selection	9 villages	-
1.3.1.2 & 1.3.1.3 Preparation of Designs of Mangrove Restoration with Traditional Defence Measures and Implementation of Pilot Activities		
1) Porcupine structure	12,150 sq m	-
2) Permeable dam	8,100 m	-
3) Survey, Earth Work and Vetiver/Mangrove dibbling	12,150 sq m	-
1.3.1.4 Evaluation of Pilot Activities	1 evaluation	-
1.3.1.5 Preparation of Plan to Install of Enhanced Models	9 villages	-
1.3.1.6 Installation of Enhanced Restoration Models	9 villages	-
1.3.2 Green Laboratory Initiatives	-	-
1.3.2.1 Nature Study in Forest Areas by Students	15 students	-
1.3.2.2 Nature and Forests Programme engaging Education/ Research Institutions	5 programs	-
Component 2: Biodiversity Conservation and Restoration		
2.1.1 Human-Wildlife Conflict Mitigation	-	-
2.1.1.1 Stress induced Conflict Risk Reduction by Wild Animals (solar-energised fencing)	40 km	-
2.1.1.2 Support Communities for Human-Wildlife Mitigation (torches, lights, and other mitigation measures, awareness generation and publicity)	40 units	-
2.1.1.3 Pilot (Eco Sensitive Zone (ESZ)) Plantation with Non-palatable/Repulsive Species	20 ha	-
2.1.2 Species Conservation Programme	-	-
2.1.2.1 Species Recovery Programme for Local RET (North)	50 ha	-
2.1.3 Studies on Wild Animals and their Behaviour	-	-
2.1.3.1 Study on 5 spp. of Lesser Cats in North Bengal	1 study	-
2.2.1 Biodiversity Conservation through People's Participation in Protected Area	-	-
2.2.1.1 Bethuadahari WLS	Lumpsum	0.02
2.2.1.2 Ballypur WLS	Lumpsum	-
2.2.2 Conservation for Smaller Mammals	-	-
2.2.2.1 Habitat Improvement	25 ponds	-
2.2.2.2 Conservation Awareness Generation	4,000 meetings	-
2.2.3 Human-Wildlife Conflict Mitigation	-	-
2.2.3.1 Rescue Centre for Elephants including Study of their Behavior	1 centre	-
2.2.3.2 Stress-induced Conflict Risk Reduction by Wild Animals (torches, lights, and other mitigation measures)	415 units	0.03
2.2.3.3 Tracking of elephant route through radio collaring	10 units	-
2.2.3.4 Enhancement of tranquilizer equipment for wild animals to be kept in Airavat vans	10 units	-
2.2.3.5 Installation of Early Warning System (EWS) for Wild Elephants	200 units	-
2.2.3.6 Development of software application for compensation for depredation by wild animals	Lumpsum	-
2.2.3.7 Installation of Elephant Proof Trench (EPT)	95.36 km	-

2.2.4 Species conservation programme	-	
2.2.4.1 Dolphin Conservation Programme	1 study	-
2.2.4.2 Breeding and Releasing of Indian Pangolin	1 study	-
2.2.4.3 Breeding and Releasing of Fishing Cat	1 study	-
2.2.4.4 Breeding and Releasing of Indian Vulture	1 study	-
2.2.4.5 Species Recovery Programme for Local RET (South)	25 ha	-
2.3.1 Biodiversity Conservation through People's Participation in Protected Area	-	
2.3.1.1 Chintamani Kar Bird Sanctuary (CKBS)	Lumpsum	-
2.3.1.2 Bibhutibhushan WLS	Lumpsum	0.10
2.3.2 Human-Wildlife Conflict Mitigation	-	
2.3.2.1 Stress Induced Conflict Risk Reduction by Wild Animals (steel-reinforced nylon nets)	84 km	-
2.3.2.2 Veterinary Facility in Sundarbans	1 facility	-
2.3.3 Studies on Wild Animals and their Behaviour	-	
2.3.3.1 Assessment of Aquatic Biodiversity in Sundarbans and Territorial Waters	1 study	-
2.3.3.2 Studies Suggested by Central Asian Flyway	1 study	-
Component 3: Livelihood Improvement		
3.0 Preparatory Works (All Landscapes)	7 guidelines/manuals (including gender guideline)	
3.1.1, 3.2.1, 3.3.1 Preparatory Activities for JFMCs	-	
3.1.1.1, 3.2.1.1, 3.3.1.1 Community Mobilisation	600 JFMCs	130 JFMCs
3.1.1.2, 3.2.1.2, 3.3.1.2 Reorganisation/ Reconstitution of JFMCs and Confirmation of Demarcation of JFMC Boundary	600 JFMCs	80 JFMCs
3.1.1.3, 3.2.1.3, 3.3.1.3 Familiarisation of Project to JFMC	600 JFMCs	80 JFMCs
3.1.1.4, 3.2.1.4, 3.3.1.4 Micro Planning	600 JFMCs	70 JFMCs
3.1.1.5, 3.2.1.5, 3.3.1.5 Entry Pointe Activity (EPA)/ Community Development Activities (CDA)	600 JFMCs	-
3.1.2, 3.2.2, 3.3.2 Support for Income Generation	1,200 SHGs	-
3.1.3, 3.2.3 Support for Community Well Being (Local Traditional Healers)	3.1.3 : 22 FMUs 3.2.3 : 57 FMUs	-
3.1.4, 3.2.4, 3.3.4 Support for Community Mobilising (Extension Workers)	120 EWs	-
Component 4: Institutional Strengthening		
4.1 Strengthening Project Management	-	
4.1.1 Capacity Development on MIS/DX	-	
4.1.1.1 Digitisation of JFMC boundary	600 JFMCs	150 JFMCs
4.1.1.2 Development of web-GIS platform of WBFD	1 unit	-
4.1.1.3 Upgrade of mobile application (e-monitoring) to add function of e-plantation journal	1 unit	-
4.1.1.4 Development of project MIS platform linked to web-GIS.	1 unit	-
4.1.1.5 Training of filed officers (range/ beat officers) in the target area on the operation of GPS and mobile application.	1/range in the target area	-
4.1.1.6 Training of DMUs/FMUs on the operation of MIS and mobile application	1/DMU	-

4.1.1.7 Site Verification		
1) On-site verification of JFMC boundary digitisation.	60 JFMCs	-
2) Inspection of plantation work.	500 ha	-
3) Boundary pillar setting	Lumpsum	-
4.1.1.8 Pilot Project for Use of UAV for Development of Technical Guidelines.	1 unit	-
4.1.2 Mobility	-	
1) Cars	30 units	-
2) Motorcycles	85 units	-
3) Airavat Van (Truck)	4 units	-
4) Speed boats for STR	7 units	-
4.1.3 Building	-	
1) PMU building	1 unit	-
2) CCF Offices	1 unit	-
3) Range Office Complex	25 units	-
4.1.4 Project Contractual Staff	-	
1) PMU	21 staffs	0.10%
2) DMU	120 staffs	0.10 %
3) FMU	255 staffs	-
4.1.5 Digital Strengthening	Lumpsum	-
4.2 Capacity Development	-	
4.2.1 Training Plan based on Training Needs Assessment (TNA)	1 plan	-
4.2.2 Trainings of Forest Officers (DCF and above ranks)	-	
1) Specialized Trainings - 20 batches (size 20; one week)	400 persons	-
2) Exposure Trips - 10 batches (size 12; one week)	120 persons	-
3) International Training - 3 batches (size 12; 2 weeks)	36 persons	-
4.2.3 Training of Forest Officers/ Frontline Staff (Ranger and below ranks)	-	
1) Specialized Trainings - 30 batches (size 20; 7-15 days)	600 persons	-
2) Exposure Trips - 10 batches (size 20; 10 days)	200 persons	-
3) International Training (Regional) - 5 batches (size 15; 2 weeks)	75 persons	-
4.2.4 National Workshop	70 participants	-
4.2.5 Trainings for JFMC/SHF members	-	
1) JFMC members - 120 batches (size 20; 5 days)	2,400 persons	100 persons
2) SHG members - 90 batches (size 20; 5 days)	1,800 persons	-
4.3 Monitoring and Evaluation	-	
4.3.1 Progress Monitoring	-	
4.3.1.1 Biodiversity Monitoring	4 monitorings	-
4.3.1.2 Concurrent Monitoring & Periodic Review	32 quarterlies	-
4.3.1.3 Community Self-monitoring	32 quarterlies	-
4.3.1.4 Computerized MIS & GIS/applications/ UAV for monitoring	Lumpsum	-
4.3.1.5 Computerized Accounting System	30 DMUs	-
4.3.1.6 Annual Strategy Planning & Review Workshops	8 Annuals	-
4.3.2 Impact Evaluation	-	
4.3.2.1 Annual Outcome Assessments	7 annuals	-
4.3.2.2 Baseline and Impact Surveys	3 surveys	-
4.3.2.3 Thematic and Short Studies	10 studies	-
4.3.2.4 Environmental Impact Assessment (if necessary)	1 assessment	-
4.3.3 Audits	8 annuals	-
4.4 Strengthening Forest Research	1 unit	-

4.5 Publicity and Publication	-	
4.5.1 Project Website	1 website	-
4.5.2 Guidelines, Manual and Annual Reports	8 guidelines/manuals (including gender guideline and monitoring manual)	-
4.5.3 Short Films/ Digital Documentation	Lumpsum	-
4.5.4 Knowledge Material	Lumpsum	-
4.5.5 "Proof of Concept" (PoC) activities for several digital technology/ innovation	Lumpsum	-
Project Management Consultant (PMC)	-	-
Pro A Consultant	18 P/M	-
Pro B Consultant	107 P/M	-

Attachment 3: Detailed Scope of Work - Attached

Attachment 4: Terms of Reference for Consulting Services - NA

2-1-2 Reason(s) for the modification if there have been any.

No change (P/R and PCR)

2-2 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original	Actual
Signing Loan Agreement	March 2023	<i>(P/R, PCR)</i> As of (Date of Revision) Please state not only the most updated schedule but also other past revisions chronologically.
Effectuation of Loan Agreement	July 2023	
Procurement of Consultant	February -December 2023	
Consulting Services	December 23 - March 2030	
Establishment of PMU/DMU/FMU	April - June 2023	
Procurement of Staff and deployment	April 2023 - April 2024	
Preparation of Reports, Guidelines & Manuals	April 2023 - April 2024	
Component 1 Ecosystem-based Climate Change Measures	May 2023 - February 2031	
Component 2 Biodiversity Conservation and Restoration	April 2023 - September 2029	
Component 3 Livelihood Improvement	July 2023 - March 2030	
Component 4 Institutional Strengthening	April 2023 - March 2031	
Project Completion*	March 2031	
Termination of Loan period	July 2033	

*Project Completion was defined as the date by when activities of the Project shall be completed in totality at the time of L/A.

Attachment 5: Detailed Implementation Schedule

Attachment 23: Time Bound Action Plan

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

No change (P/R and PCR)

2-3 Project Cost

2-3-1

Table 2-3-1a: Comparison of Original and Actual Cost BY ITEM

Unit: (million \)

Breakdown of Cost	Original								
	Foreign Currency Portion			Local Currency Portion			Total		
	Total	JICA Portion	Others	Total	JICA Portion	Others	Total	JICA Portion	Others
1. Ecosystem Based Climate Change Measures	0	0	0	1,886	1,886	0	1,886	1,886	0
2. Biodiversity Conservation and Restoration	0	0	0	1,870	1,870	0	1,870	1,870	0
3. Livelihood Improvement	0	0	0	1,355	1,355	0	1,355	1,355	0
4. Institutional Strengthening	0	0	0	1,924	1,924	0	1,924	1,924	0
Sub Total	0	0	0	7,035	7,035	0	7,035	7,035	0
Price Escalation	0	0	0	1,478	1,478	0	1,478	1,478	0
Physical Contingency	0	0	0	426	426	0	426	426	0
Consulting Services	96	96	0	273	273	0	369	369	0
Interest during Construction	613	0	613	0	0	0	613	0	613
Front End Fee	19	0	19	0	0	0	19	0	19
Land Acquisition	0	0	0	0	0	0	0	0	0
Administration Cost	0	0	0	765	0	765	765	0	765
VAT	0	0	0	931	0	931	931	0	931
Import Tax	0	0	0	0	0	0	0	0	0
Other Taxes	0	0	0	0	0	0	0	0	0
Total	727	96	631	10,907	9,212	1,696	11,634	9,308	2,327

(Note) Exchange Rate: US\$1=INR 82.3 =\ 147 (INR 1=\ 1.79)

Base Year for Cost Estimation: November 2022

Unit: (million \)

Breakdown of Cost	Actual		
	Foreign Currency Portion	Local Currency Portion	Total

	Total	JICA Portion	Others	Total(JICA Portion	Others	Total	JICA Portion	Others
Item	()	()	()	()	()	()	()	()	()
(P/R,PCR)									
Total									

(Note) Exchange Rate: US\$1=INR =\ (INR 1=\)

Base Year for Cost Estimation:

Table 2-3-1b: Comparison of Original and Actual Cost BY YEAR

*Fiscal Year starting in 2023 and ending in 2031

Unit: (million \)

Breakdown of Cost	Original			Actual		
	JICA Portion	Others	Total	JICA Portion	Others	Total
2023	1,013	218	1,231	()	()	()
2024	1,176	246	1,422			
2025	1,229	273	1,502			
2026	1,274	299	1,573			
2027	1,318	326	1,644			
2028	1,377	357	1,734			
2029	1,232	348	1,580			
2030	689	260	948			
Total	9,308	2,327	1,1634			

Note: Exchange Rate used: US\$1 = INR 82.3 = \ 147 (INR 1 = \ 1.79)

You can use any currencies in this chart, i.e. you may use your local currency as well as Yen for each figure.

If there were the portion of the financial resources such as of World Bank, ADB and so forth, other than your own budget, please fill in another column between "JICA Portion" and "Others" and fill in the figures of them

Attachment 6: Annual Fund Requirement - No change

Attachment 7: Cost Breakdown - No change

Attachment 8: Cost Breakdown for Project Management Consulting - No change

Attachment 9: Manning Schedule for the Consulting Services - No change

2-3-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

No change (P/R, PCR)

2-4 Organizations for Implementation

2-4-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (P/M)

Executing Agency

Department of Forests, Government of West Bengal (WBFD)

Organization's Role

WBFD was established by the State Government, with the vision & mission for the development, conservation and management of Forest, Tree growth, wildlife habitat etc. on sustainable basis for present and future generation, by planning, executing, coordinating and monitoring the implementation of Forestry and Wildlife conservation programmes.

High-Power Committee (HPC)

HPC for the project will be freshly constituted and established within the state government prior to the initiation of the project implementation. HPC will act as the highest decision-making body for policies, inter-departmental coordination, and convergence for the project. HPC will remain outside the autonomous structure of the society and will support and guide the project at the state level.

The Additional Chief Secretary Forests/ Principal Secretary Forests will chair HPC meetings, while secretaries and heads of line departments will be members to the committee, whereas the Chief Project Director (CPD) will be the Member-Secretary. As per the current responsibilities within the state government, the composition of HPC is given in the following table.

Governing Body (GB)

GB will be reconstituted and will be the decision-making bodies for the project within the autonomous society, PMU, as per the provisions in the Societies Registration Act applicable in West Bengal. GB will be the highest decision-making body within the society.

Project Management Unit (PMU)

The project will be implemented through the PMU that was established during Phase 1 as an autonomous registered society within WBFD. PMU will be made responsible to manage, coordinate, implement, and monitor the project activities. All offices created for the new project will exclusively work to assist and facilitate the implementation of the project activities following the project implementation schedule, annual plan of operations, and envisaged processes adopting an Operation Manual. PMU will have a comprehensive Operational Manual that will prescribe guidelines, policies, protocols, procedures and rules on finance, accounting, administration, and management for smooth implementation of the Project.

Divisional Management Unit (DMU)

DMU will be established at the divisional level and will function as the dedicated and extended unit of PMU for planning and implementation of the project activities, and as a part of the autonomous society, i.e., PMU. DMU will be headed by a Divisional Forest Officer (DFO) who is in the rank of DCF in the Forest Department. S/he would be an ex-officio in-charge of DMU and will be designated as DMU Head and would oversee the project in addition to the regular department functions and responsibilities. S/he will facilitate project implementation at the divisional level and will also extend all technical inputs and guidance to FMUs within their jurisdiction and at field level on a day-to-day basis. DMU will be responsible for supervising and guiding the works carried out by specialised agencies/ resource organisations or NGOs.

DMU Head will coordinate with the district administration for inter-sectoral convergence, organise and participate in DPC meetings at the district level, and extend support for preparing annual plans, estimates etc. DMU Head will also monitor, supervise, and follow-up with the subordinate offices, and provide guidance on documentation and reporting the physical and financial progress. DMU office will be guided by the project Operation Manual as well as PMU.

Field Management Unit (FMU)

FMU will be created as an extended arm of DMU and as a part of PMU. FMU will be headed by a Range Officer (RO) in the rank of forest ranger/ Deputy Ranger Forester in the Forest Department. S/he would be ex-officio in-charge of FMU and will be designated as FMU Head and would oversee the project in addition to the regular department functions and responsibilities.

S/he will facilitate project implementation at the range level and will also extend all technical inputs and guidance to Beat Officers within their jurisdiction and at field level on day-to-day basis. FMU Head will be responsible for supervising and guiding the works carried out by the Beat Officers as well as JFMCs and facilitate convergence at the block level. The structure of FMU is given in the figure below.

Village-Level Implementation Organization (JFMCs and SHGs)

The village level institutions (JFMCs) will be involved during community mobilisation and micro planning processes and will be shared with project information to build rapport, and bring in more synergy, ownership, and transparency in project operations.

Also, JFMCs identified in project areas will be engaged to execute JFM as well as livelihood interventions. The project will provide a one-time grant to JFMCs to support SHGs for income generation. In addition to NGOs/ resource organisations, JFMCs will facilitate to identify a local person who can qualify to act as extension worker as specified for the project. S/he will be guided by the project teams to handhold and extend support to these community institutions for project implementation and reporting.

Actual, if changed: No change (P/R and PCR)

Attachment 10: Institutional Arrangement - No change

2-4-2 Contractor(s)/ Supplier(s), and Consultant(s) and Their Performance:

2-4-2-1 Procurement and Consultant

Table 2-4-2: Procurement of Contractor(s)/Supplier(s) and Consultant(s)

Contract Package	Selection Method	
	Original: (P/M)	Actual: (P/R and PCR)
Contractor(s)	-The works for infrastructure and mobility will be procured by Local Competitive Bidding (LCB). -Studies on wild animals and their behavior will be procured by LCB or direct contract basis or by Memorandum of Undertaking (MOU).	No change

	<p>-Nature And Forests Programme Engaging Education/ Research Institutions will be established and implemented by Memorandum of Undertaking (MOU)</p> <p>-Statutory Audits will be procured by LCB.</p> <p>-Extension Worker will be procured by Direct Undertaking (DU).</p> <p>-Other works will be implemented by WBFD/PMU/DMU/FMU/Circles/JFMCs/SHGs/West Bengal Zoo Authority/Other Stakeholders.</p>	
Technical Assistance	<p>-NGOs will be selected and contracted by LCB.</p> <p>-Micro Finance Support Agency will be procured by LCB/ MoU.</p>	No change
Supplier(s)	LCB or direct contract basis or price quotation.	No change
Consultant(s) -Project Management Consultant	International competitive bidding (ICB) with short-list method for selecting Project Management Consultant	No change

Attachment 11: Principles of Procurement – No change

Attachment 12: Procurement and Implementation Method – No change

2-4-2-2 Performance

<p><i>(P/R and PCR)</i></p> <p>Information on the Contractor(s)/ Supplier(s): N.A.</p> <p>Evaluation: N.A.</p>
<p>Information on the Consultant(s): N.A.</p> <p>Evaluation: N.A.</p>

2-5 Precautions (Measures To Be Adopted/Points Which Require Special Attention)

- Risks and issues, if any, which may affect the project implementation and planned countermeasures to be adapted, in terms of physical, environmental or social aspects.(e.g., land acquisition, resettlement , HIV awareness and prevention program, gender consideration and EIA clearance)
- Environmental Checklist or report of monitoring indicator (if applicable)

Original issues and Countermeasure(s)	Actual issues and Countermeasure(s)
<p><i>(P/M)</i></p> <ul style="list-style-type: none"> ➤ When the project operation is conducted in the area, which requires Protected Area Permit, or when JICA personnel passes through such area, the procedure agreed in Main Points Discussed as per Annex II shall be taken. ➤ Any project activities shall be initiated after finalization of Project Operation Manual and Guidelines in order to avoid confusion in project operations. ➤ PMU shall finalize the selection criteria for Mode selection and monitoring methods under Departmental Mode as practiced. ➤ Original (baseline data) of Qualitative and Quantitative Data of Monitoring Indicators shall be reviewed based on Micro Plan and baseline survey and updated if necessary and reported to JICA along with their target to be set. ➤ Significant adverse environmental and social impacts such as land acquisition, resettlement which require EIA clearance are not anticipated from the Project intervention. The Environmental and Social Management System for the Project to be implemented will be established and monitored by Environmental and Social Assessment Framework and Vulnerable Scheduled Tribes Planning Framework. DMU shall work on categorization of the Project activities in each sub project when they approve the Micro Plan. Category B activities shall be reported through monitoring from DMU to PMU, and then to JICA. 	<p><i>(P/R and PCR)</i></p> <p><i>No change</i></p>

Attachment 13: Environmental Checklist - No change

Attachment 14: Definition of Environmental Categorization - No change

Attachment 15: Outline of Annual Environmental and Social Performance Report to JICA - No change

Attachment 16: Environmental and Social Management System (ESMS) Checklist - No change

Attachment 17: Environment and Social Management System Assessment Framework -No change

Attachment 18: Vulnerable Scheduled Tribes Planning Framework- No change

Attachment 19: Environmental and Social Compliance Monitoring Form - No change

2-6 Photographs of Output of the project (P/R and PCR): Attachment

3: Benefit Derived from the Project (Effectiveness, Impact)

3-1 Operational and physical condition of each facility developed/supplied by the project.

Facilities	Description of condition	Problems, its Background and Remedial Action Plan
<i>(P/R and PCR)</i> No change	<i>(P/R and PCR)</i> No change	<i>(P/R and PCR)</i> No change

3-2 Precautions (Measures To Be Adopted/Points Which Require Special Attention)

- Risks and issues, if any, which may affect the project outcome and planned countermeasures to be adapted, in terms of physical, environmental or social aspects.
- Environmental Checklist or report of monitoring indicator (if applicable)

Original issues and Countermeasure(s)	Actual issues and Countermeasure(s)
<ul style="list-style-type: none"> ➤ Capacity Risk and its countermeasures; <ol style="list-style-type: none"> 1) The project will focus on strengthening the institutional capacity. The project will implement capacity development strategy and annual training calendar for the project staff. If required, the project may acquire necessary skills and expertise from the market 2) Project Operation Manual and Accounting Rules/guidelines will be developed and adopted during the first year of operation. 3) PMU with technical assistance from the PMC will <ol style="list-style-type: none"> 1. i) prepare the project implementation guidelines 2. ii) organise orientation and guidance workshops/seminars for information dissemination amongst stakeholders 3. iii) provide training to the project staff to enable them to operate and manage the project as envisaged 4. iv) continuously provide technical and managerial support. ➤ Risk of Financial Capacity and Arrangements, its countermeasures; <ol style="list-style-type: none"> 1) Annual budgetary flows for the project to be ensured by the state government under the Loan Agreement. If the annual budget releases are not possible, the government may consider providing upfront revolving fund to the project. 	<p><i>(P/R and PCR)</i></p> <p>No change</p>

2) PMU/ WBFD proactively approach the state government for release of budgets on time every year and must obtain timely approval of the annual budgets and annual plans from HPSC and GB prior to the start of each fiscal year.	
--	--

Attachment 32: Risk Management Framework- No change

3-3 Environmental and Social Impacts

- Major environmental and social impacts have occurred during project implementation (e.g. involuntary resettlement, poverty reduction, systems and norms, people’s well-being, human rights, natural environment,)

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
(PCR) No change	(PCR) No change

3-4 Gender Mainstreaming

- Plan, Progress and impact on gender related activities during project implementation.
- This item should be filled in if the project is categorized by JICA as ‘Gender Equality Project’, ‘Project Targeting Women’ (GIP: Gender Informed Principle), or ‘Gender Integrated Projects’ (GIS: Gender Informed Significant).

Original gender related activities	Actual gender related activities, issues and Countermeasure(s)
WBFD shall develop guidelines for Gender Mainstreaming during the Preparatory phase. Appropriate gender training shall also be proposed for all levels of project implementation units and stakeholders. The gender monitoring system shall also be institutionalized. Activities and monitoring indicators of consideration measures/targets/measures for consideration are described in the Attachment 30 “Gender Action Plan”.	(P/R and PCR) No change

Attachment 30: Gender Action Plan - No change

3-5 Qualitative and Quantitative Data of Monitoring Indicators

- Operation and Effect Indicator, EIRR and/or FIRR
- Supporting data for computing EIRR and/or FIRR.

Indicators	Original (Yr 2022)	Present (Yr)	Target (Yr 2033) *two years after completion of the project

New plantation area by the project (ha)	-		3,900
Increase of carbon sequestration by the project (CO2t)	-		75,470
Survival rate of plantation (%) ① Plantation in Recorded Forest Area ② TPOFA	① 75-80% ② 65-70%		① 80% ② More than 70%
Reduction in soil erosion levels at treatment sites of the project in Dry Lateritic and Alluvial Landscape (%)	*1		*1
Number of incidents of village flooding in targeted villages in Deltaic Landscape	*2		*2
Number of villages covered by Eco-DRR Measures	-		*1
Percentage reduction in Human-Wildlife Conflict in the project intervention area (in terms of occurrences) (%)	-		10-20%
Number of endangered wild animal species to be protected by the project	-		5
Number of JFMCs supported and covered by livelihood improvement activity of the project	-		600
Number of SHGs supported for income generation	-		1,200
Annual profit earned per income generation activity under the project per SHG member	-		*3
Number of Forest Officers & Staffs trained (gender-segregated) by the project	-		Men: 1,746 Women: 430
Number of JFMC members trained (gender-segregated) by the project	-		Men: 1,680 Women: 720
Number of SHG members trained (gender-segregated) by the project			Men: 18 Women: 1,782
EIRR			10.5%
Qualitative effects: Sustainable socio-economic development in West Bengal, Restoration and enhancement of ecosystem services, Enhancement against Climate Change resilience, Climate Change mitigation and adaptation, Participation of women and vulnerable community in the society			

*1: After the preparation of CAT plan

*2: At the time of Preparatory Works including site selection

*3: At the Base Line Survey

Attachment 21: EIRR Calculation - No change

3-6 Monitoring Plan for the indicators

- **Monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term and so forth.**

Original: *(P/M and PCR)*

- (1) Monthly Reporting by Project Village to FMU
- (2) Monthly Reporting by FMU to DMU
- (2) Monthly Monitoring and Monthly Reporting by DMU/FMU
- (3) Monthly, Quarterly, half yearly and Annually Reporting by PMU (Annual Review Meeting) and Reporting by PMU twice a year
- (4) Quarterly Reporting to JICA and Yearly Monitoring by JICA
- (5) Mid Term evaluation at Year 5
- (6) End Term evaluation at Year 10

JICA will conduct ex-post evaluation 2 years after the project completion.

Effect indicators as under shall be monitored through sample-based experiments in a scientific manner. PMU shall conduct baseline survey, mid-term survey, thematic studies and endline survey to monitor the following indicators in areas of intervention by the project.

- (1) Increase of carbon sequestration by the project (CO₂t)
- (2) Reduction in soil erosion levels at treatment sites of the project in Dry Lateritic and Alluvial Landscape (%)
- (3) Number of incidents of village flooding in targeted villages in Deltaic Landscape
- (4) Percentage reduction in Human-Wildlife Conflict in the project intervention area (in terms of occurrences) (%)
- (5) Annual profit earned per income generation activity under the project per SHG member

Research activities under each component also assess the effects of ecosystems services in a coordinated manner with monitoring indicators.

Actual: No change *(P/R and PCR)*

3-7 Achievement of the Project Objective

No change *(PCR)*

4: Operation and Maintenance (O&M) (Sustainability)

4-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (P/M)

During the consolidation phase, the assets shall be transferred to the respective entity which will be responsible for O&M of the assets.

The overall responsibility of O&M for all the plantations and JFM areas will be with WBFD. Similarly, other assets like digital infrastructures such as web-GIS and MIS, buildings, vehicles, computers, and other equipment/ gadgets will also be maintained by the concerned offices of WBFD after the project completion. O&M responsibility for some of the assets/ infrastructure created at the community level will be with the Joint Forest Management Committees (JFMCs) or individual households. Other associate organisations like the West Bengal Zoo Authority (WBZA) will be responsible for assets supported through the project. WBFD is required to make sufficient financial and human resource arrangement to ensure the sustainability of the assets created during the project period. All the necessary capacity enhancement of the concerned personnel shall also be undertaken by the project prior to the project completion. One of the main assets that would require the technical capacity building for sustainability is the digital infrastructures including Web-GIS. Thus, the project shall provide the necessary training for personnel concerned of Web-GIS while WBFD shall provide adequate and continuous budgetary support for the operation, maintenance and further development of the system.

The provisional structure is as per Attachment 22 “Operation and Maintenance Structure”.

Actual: No change (PCR)

Attachment 22: Operation and Maintenance Structure - No change

4-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

No change (PCR)

5: Evaluation

5-1 JICA and Borrower/Executing Agency Performance

Please evaluate the performance of the two bodies .

JICA:

No change (PCR)

Borrower/Executing Agency:

No change (PCR)

5-2 Additionality (If any)

Please describe 1) the unique approaches, values, elements (inputs) and innovative initiatives from a different perspective than other donors based on Japan`s knowledge and experience, 2) the contribution of offering/sharing of new knowledge obtained through the project

No change (PCR)

5-3 Overall evaluation

Please describe your evaluation on the overall outcome of the project.

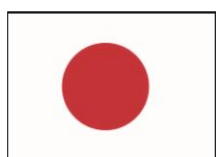
No change (PCR)

5-4 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

No change (PCR)

Annual Report for the Financial Year 2024-25



Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) (ID – P311)

Chapter I: About the Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal

1.1 Introduction:

Based on the Exchange of Notes between the Government of Japan and Government of India (GOI), Japan International Cooperation Agency (JICA) has extended a loan to implement the "Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR)".

The Govt. of West Bengal vide its Resolution No. 710-FOR/13099/18/2023, dated 4th May, 2023, the West Bengal Forest & Biodiversity Conservation Society, under the administrative control of the Department of Forests, West Bengal has established the administrative, supervisory and monitoring mechanism in respect of Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) and the project is being implemented by the Project Management Unit (PMU) already existing within the West Bengal Forest and Biodiversity Conservation Society.

1.2 The Project:

1.1.1 Objective:

It is a project to mitigate and adapt to climate change, conserve and restore ecosystems by ecosystem based climate change measures, biodiversity conservation and restoration, livelihood improvement activities and institutional strengthening, thereby contributing to sustainable socio-economic development in West Bengal.

1.1.2 Project Cost and Project Design:

The Japanese ODA loan assisted project worth ₹650 Crore (₹520 Crore loan component and ₹130 crore state share) is being implemented for 8 years starting from 2023-24 to 2030-31 in consideration of capabilities of stakeholders and time required to conduct activities in sustainable manner.

1.1.3 Implementation Structure:

The Project is being implemented through an autonomous Society named "West Bengal Forest and Biodiversity Conservation Society". The Society has been registered under West Bengal Societies Registration Act, 1961, on 19th July, 2012, at Kolkata vide Registration Number S/1L/93991 of 2012-2013, dated 19.07.2012. The present office of the Society is located at Block-LB-2, Sector-III, Salt Lake City, Kolkata-700106, West Bengal.

1.1.4 Hierarchy:

The Project Management Unit (PMU) under Society is in-charge of the overall managerial tasks of the Project. Various offices of the West Bengal Forest Department (WBFD) at the Circle, Division and Range levels are implementing the Project. At the field level, 34 nos. of Division Management Units (DMU) and 90 nos. of Field Management Units (FMU) have been established. A total to 600 number of Joint Forest Management Committees (JFMC), formed as per the extant resolutions/regulations issued by Government of West Bengal are implementing the “Community Infrastructure Development Activities” and “Income Generation Activities”. Income Generation Activities shall be undertaken through Self-Help Groups (SHGs) from within the members of JFMCs.

1.2 Components:

The various components of work being implemented under the Project are as follows:

Component 1: Ecosystem Based Climate Change Measures (Production of Quality Planting Material (QPM), Plantation in degraded forest area and outside forest areas, Creation of Seed Production Area(SPA), Ecosystem based Disaster risk reduction through Catchment Treatment Plan(CAT), Green Laboratory initiatives etc.)

Component 2: Biodiversity Conservation (Human-Wildlife conflict mitigation, Species Conservation program, Studies on Wild Animals and their behavior etc.)

Component 3: Livelihood Improvement (Community Infrastructure Development & Income Generation activities)

Component 4: Institutional Strengthening (Digital transformation through MIS platform linked to web-GIS, Digitization of JFMC boundary, Monitoring and Evaluation, Publicity and Publication, Strengthening Forest Research, Mobility, Buildings, Staff, Equipment, Trainings etc.)

1.2.1 Phases of Project:

The Project is divided into three phases- Preparatory Phase, Implementation Phase, and Phase-Out/Closing Phase.

Preparatory Phase (1 year): 2023-24

Preparation Phase is crucial for successful implementation of the Project. The first step is institutional arrangement by way of setting up Project Management Unit (PMU), Divisional Management Unit (DMU), and Field Management Unit (FMU) and so on, followed by recruitment of contractual staff, preparation of operation manual and other guidelines, orientation and capacity development for WBFD staff in each rank. Project Management Consultant (PMC) shall be deployed as per rules in vogue. Required

surveys and assessments for planning and baseline data for sustainable forest management as well as biodiversity conservation has been conducted during this phase. **Implementation Phase (5 years): 2024-25 to 2028-29**

All components in implementation phase are put into action based on the Preparatory phase.

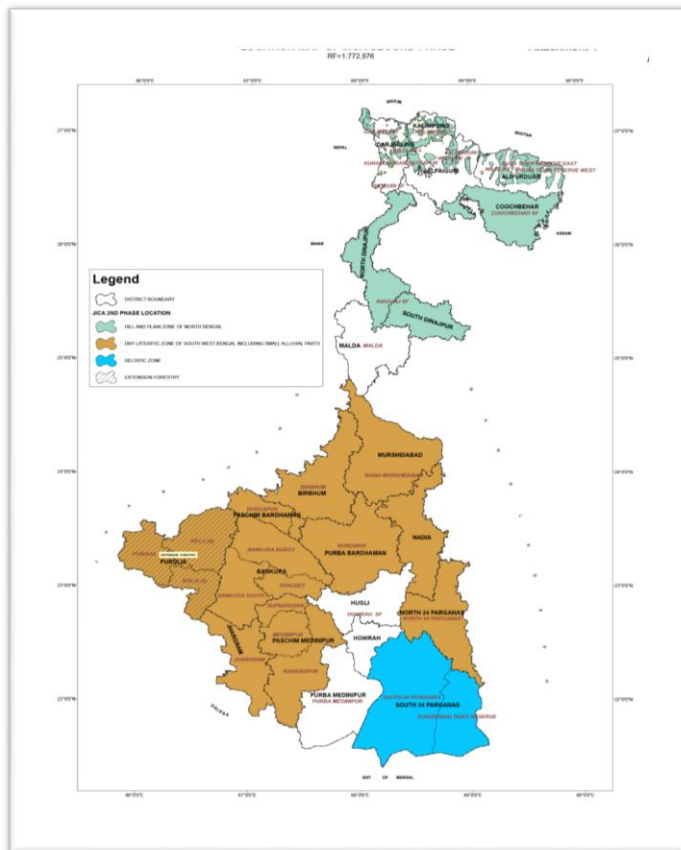
Phase-Out/Closing Phase (2 years): 2029-30 to 2030-31

After the Implementation phase, Phase-out works will be undertaken for sustainability. The focus would be on evaluating each component in detail to plan and take measures for covering up the backlog and to achieve greater impact and sustainability.

1.3 Organizational Details:

1.3.1 Establishment of PMU, DMUs and FMUs:

The State Government, vide its no. 710-FOR/13099/18/2023, dated 4th May, 2023, adopted the resolution that the West Bengal Forest and Biodiversity Conservation Society was established for the administrative, supervisory and monitoring mechanism in respect of WBFBC Project and got the project implemented by the Project Management Unit (PMU) to be set up within the Society and that at the field level, Divisional Management Units (DMUs) and Field Management Units (FMUs) were established under the Society. 34 DMUs were established for participating in the Project activities and 90 FMUs were totally constituted in them.



Landscape based approach

- **Green colour-** Hills and North Bengal
- **Brown colour-** Dry lateritic and alluvial
- **Blue colour-** Deltaic landscape
- **White colour-** Outside Project area

Figure 1: Location Map of WB-FBCCCR Project

1.3.2 Consolidation of Legal System for Institutionalization of Society and PMU:

- The Regulations and By-Laws of the Society have been duly framed.
- The Operational Manual for the West Bengal Forest and Biodiversity Conservation Society has been prepared and approved by the Governing Body (GB) of the Society in its meeting held on 22.06.2023. Delegation of Financial Powers has also been approved by Governing Body of the Society.
- Accounting Procedure for the Society has also been prepared and communicated to the DMUs.
- The website of the project titled <https://wbfbccr.in/> has been launched in March, 2024.

1.3.3 Deployment of Staff:

The G.O. for establishment of exclusive PMU for the Project has been issued vide No. 740-FOR/13099/20/2023 dated 12th May, 2023.

The Department of Forest, Govt. of W.B. issued orders for the appointment of six (6) officers to the PMU, as Chief Project Director, Project Director (Administration, Finance and Coordination), Additional Project Director (Administration, Finance and Coordination), Additional Project Director (Planning, Implementation and Monitoring), Joint Project Director (Administration, Finance and Coordination) and Joint Project Director (Planning, Implementation and Monitoring) as on date.

At present five (05) Officers have joined the Society on deputation whereas two posts namely, Additional Project Director (Administration, Finance and Coordination) and Additional Project Director (Planning, Implementation and Monitoring) are vacant as on date.

The Governing Body (GB) of West Bengal Forest and Biodiversity Conservation Society, in its meeting, held on 22.06.2023, had approved recruitment of personnel - 29 for the PMU and 358 for the DMUs under various categories - by the Society through Service Provider under the Provision "Support Staff of PMU and DMU" of the Chapter "Recruitment and Service Rules."

In addition the GB of the Society, in its meeting held on 22.06.2023, had approved engagement of retired personnel on contract basis for PMU. The positions of Accounts Officer and Authorized Range Officers are proposed to be filled up by retired Government Servants as per existing G.O. vide Nos 6093-F (P) dt: 25.11.2016 and 10935-F(P) dt: 05.12.2011.

The details of the staff working at the PMU and the mode of their engagement is tabulated below:

Table 1: Details of the staff working at the PMU

Sl. No.	Position	Mode of Engagement	Category of expenses	Joined On
1.	Chief Project Director	On Deputation	Non-reimbursable	September, 2021
2.	Project Director (Administration, Finance and Coordination)	On Deputation	Non-reimbursable	March, 2020
3.	Additional Project Director (Administration, Finance and Coordination)	On Deputation	Non-reimbursable	Vacant
4.	Additional Project Director (Planning, Implementation and Monitoring)	On Deputation	Non-reimbursable	Vacant
5.	Joint Project Director (Administration, Finance and Coordination)	On Deputation	Non-reimbursable	August, 2023
6.	Joint Project Director (Wildlife and Biodiversity)	On Deputation	Non-reimbursable	August, 2024
7.	Joint Project Director (Planning and Implementation)	On Deputation	Non-reimbursable	August, 2024
8.	Accounts Officer	Contractual Retired personnel	Non-Reimbursable	Vacant
9.	Forest Ranger	-do-	Non-reimbursable	April, 2023
10.	Accountant-cum-Cashier	Contractual through Service Provider	Reimbursable	July, 2014
11.	Accountant-cum-Cashier	-do-	Reimbursable	July, 2014
12.	Accountant-cum-Cashier	-do-	Reimbursable	June, 2014
13.	Computer Operator-cum-Office Assistant	-do-	Reimbursable	November, 2014
14.	Computer Operator-cum-Office Assistant	-do-	Reimbursable	November, 2014
15.	Computer Operator-cum-Office Assistant	-do-	Reimbursable	August, 2019
16.	Office Attendant	-do-	Reimbursable	November, 2014
17.	Office Attendant	-do-	Reimbursable	November, 2014
18.	Office Attendant	-do-	Reimbursable	May, 2016

1.3.4 High Power Committee:

The High Power Committee (HPC) for the Project has been constituted vide Government of West Bengal, Department of Forests' Notification no. 712-For /13099/19/2023 dated 04.05.2023. The constitution of High Power Committee for the new project is as follows:

Table 2: Members of the High Power Committee

Sl. No.	Position in HPC	Position in the Institutions
1.	Chairperson	Additional Chief Secretary / Principal Secretary Forests, GoWB
2.	Member	Principal Chief Conservator of Forests (HoFF), WBFD
3.	Member	Chief Wildlife Warden/ PCCF (Wildlife), WBFD
4.	Member	Representative of Dept. of Science and Technology and Biotechnology, GoWB
5.	Member	Representative of Dept. of Disaster Management and Civil Defence, GoWB
6.	Member	Representative of Finance Department, GoWB
7.	Member	Representative of Department of Environment, GoWB
8.	Member	Representative of Department of Panchayet & Rural Development, GoWB
9.	Member	Representative of Department of Self Help Group & Self Employment, GoWB
10.	Member Secretary	Chief Project Director, WB-FBCCR
By invitation – as required from time to time		
Special Invitee		Representative of Research Institutions/ Specialised Agencies
Special Invitee		Representative of GoI/ MOEF&CC
Special Invitee		Representative of JICA, India

1.3.4.1 Roles and Responsibilities of HPC

The High Power Committee has the following Roles and responsibilities:

- Approve the Operation Manual including the Financial Rules and Accounting Procedures, policies and guidelines on gender mainstreaming, differently-abled persons, and revolving fund;
- Advise/resolve issues and problems related to financial flow from GoWB to project, and with other government departments that are detrimental to the success of the project;
- Facilitate convergence and coordination of project with other government departments;
- Facilitate assistance from other government departments as per requirement;
- Suggest and endorse measures and actions to resolve issues raised by JICA, DEA, MOEF& CC or any other agencies related to the project; and
- Take up policy related matters of the project.

1.3.4.2 Meetings of HPC

HPC will meet at least once in a year or more frequently if the situation arises in a year, particularly during the preparatory phase of the project. In case the members are not available on the day of HPC meeting, they may nominate senior rank officers in the state government/ state department as their representatives to attend the meetings with authorisation for decision making.

A minimum of five members will form the quorum for HPC meetings. Agenda of the meeting and proposals will be circulated by the Member-Secretary well in advance to all members, at least seven days ahead of the meeting date. The proceedings of HPC meetings will be circulated to all the members/ attendees within reasonable timeframe, after the meeting is concluded.

1.3.5 Governing Body / Society:

The membership of the said Society consists of—

- i) All members of Governing Body of the Society.
- ii) All officers of Indian Forest Service in the rank of Addl. PCCF under the State Government.
- iii) All Invitee members who will be inducted by the Governing Body of the Society.

The members of the Governing Body of the Society and their designation are as follows:

Table 3: Members of the Governing Body of the Society

Sl. No.	Position in GB	Position in the Institutions
1.	Chairperson	Principal Chief Conservator of Forests and HoFF, West Bengal
2.	Vice Chairperson	PCCF, General, West Bengal
3.	Member	Chief Wildlife Warden/ PCCF, Wildlife, West Bengal
4.	Member	PCCF, RMD, West Bengal
5.	Member	PCCF & CEO, WBCAMPA
6.	Member	MD, Wbfdcl
7.	Member	Representative of Finance Department, Government of West Bengal
8.	Member	APCCF, Finance, Forest Directorate, West Bengal
9.	Member	APCCF & Director, Sundarban Biosphere Reserve, West Bengal
10.	Member	APCCF, WL (HQ), Forest Directorate, West Bengal
11.	Member	APCCF, HRD, Forest Directorate , West Bengal
12.	Member	APCCF, North Bengal, Forest Directorate , West Bengal
13.	Member	Chief Environment Officer, Department of Environment, Government of West Bengal
14.	Member	Member Secretary, West Bengal Biodiversity Board (WBBB)

Sl. No.	Position in GB	Position in the Institutions
15.	Member	CCF (Finance), Forest Directorate, West Bengal
16.	Member Secretary	Chief Project Director, WB-FBCCCR
By invitation - as required from time to time		
Special Invitee		Representative of Research Institutions/ Specialized Agencies
Special Invitee		Member Secretary, West Bengal Zoo Authority
Special Invitee		Representative of PMU
Special Invitee		Representative of Consulting Services/ Team Leader (PMC)

The project implemented by the Project Management Unit (PMU) to be set up within the Society and that at the field level, Divisional Management Units (DMUs) and Field Management Units (FMUs) will be established under the Society.

According to the Rules and By-Laws of the Society overall responsibility of the Society lies on a Governing Body in which senior officials of Forest Department, the Government of West Bengal are ex-officio members. The Governing Body (GB) headed by the Principal Chief Conservator of Forests and HoFF, West Bengal, will monitor the financial and physical targets to review the work of PMU and provide necessary assistance and direction from time to time.

The activities of the Society are vested in a Project Management Unit (PMU) comprising personnel of Forest Department of the Government of West Bengal at different levels and headed by the Chief Project Director.

PMU shall function for the overall project coordination, procurement management, financial management including collating the expenditure statements from field offices and preparation and submission of reimbursement claims to JICA, monitoring and evaluation, and preparation of reports such as Quarterly Progress Reports (QPR) and Project Completion Report (PCR).

There shall also be Divisional Management Units (DMU) which function under the guidance of PMU.

DMUs are implementing the activities of the project in the Division and assist the PMU in planning, fund management, work progress monitoring and documentation at the field level. The DMUs will receive project fund from PMU for the execution of the works and disburse it to project implementers such as FMUs/JFMCs/EDCs/SHGs/NGOs. The rules and the regulations of the West Bengal Forest Department and instructions issued by PMU from time to time are being followed by concerned officers heading DMU in execution of the works of the Project.

At the grass root level 90 Field Management Units (FMUs) under 34 nos. of DMUs were set up to ensure project implementation at the Range level.

FMUs were created within the office of Range Officer (RO). FMUs have following major functions:

- 1) Execution of works
- 2) Technical support to JFMCs, EDCs and SHGs etc. at the village level. At the field level, concerned Division Management Units (DMUs) are monitoring the functioning of FMUs.

Institutional arrangements made for implementation of the project:

Table 4: Institutional Arrangements

Sl.No.	Details of Institutional Arrangements
1	Constitution of the HPC (High Power Committee vide no. 712-FOR/13099/19/2023 dated 04.05.2023).
2	Constitution of the GB (Governing Body vide no.712-FOR/13099/19/2023 dated 04.05.2023).
3	Notification of 34 Divisional Management Units (DMUs) and 90 Field Management Units (FMUs) as implementation units of the project vide no.710-FOR/13099/18/2023. Dated 04.05.2023.
4	Authorization of WBFBCS (West Bengal Forest and Biodiversity Conservation Society to implement the Project vide no.740-FOR/13099/20/2023 dated 12.05.2023).
5	2 nd meeting of GB (Governing Body) was held on 03.05.2024 and APO (Annual Plan of Operation) for F.Y 2024-25 has been approved.
6	Identification of 600 JFMCs have been completed (Abstract in Table 10). Moreover they have been equally divided in 4 Phases (150 JFMCs in each Phase) for easy implementation and effective monitoring. The preparation of Microplan for Phase-I has been completed and Community Development Activity for this Phase is ongoing.
7	New Bank accounts have already been generated in Mother-Child-Grand Child mode for units under this project (Here PMU is Mother, DMU is Child and FMU is Grandchild).
8	Accounting platform for Cloud Hosted Real Time Online Accounting System has been developed and launched to DMUs and accounting operation has already been started after conducting sufficient training.
9	New e-Mail ID for project was created and intimated to all.

1.3.6 Organogram:

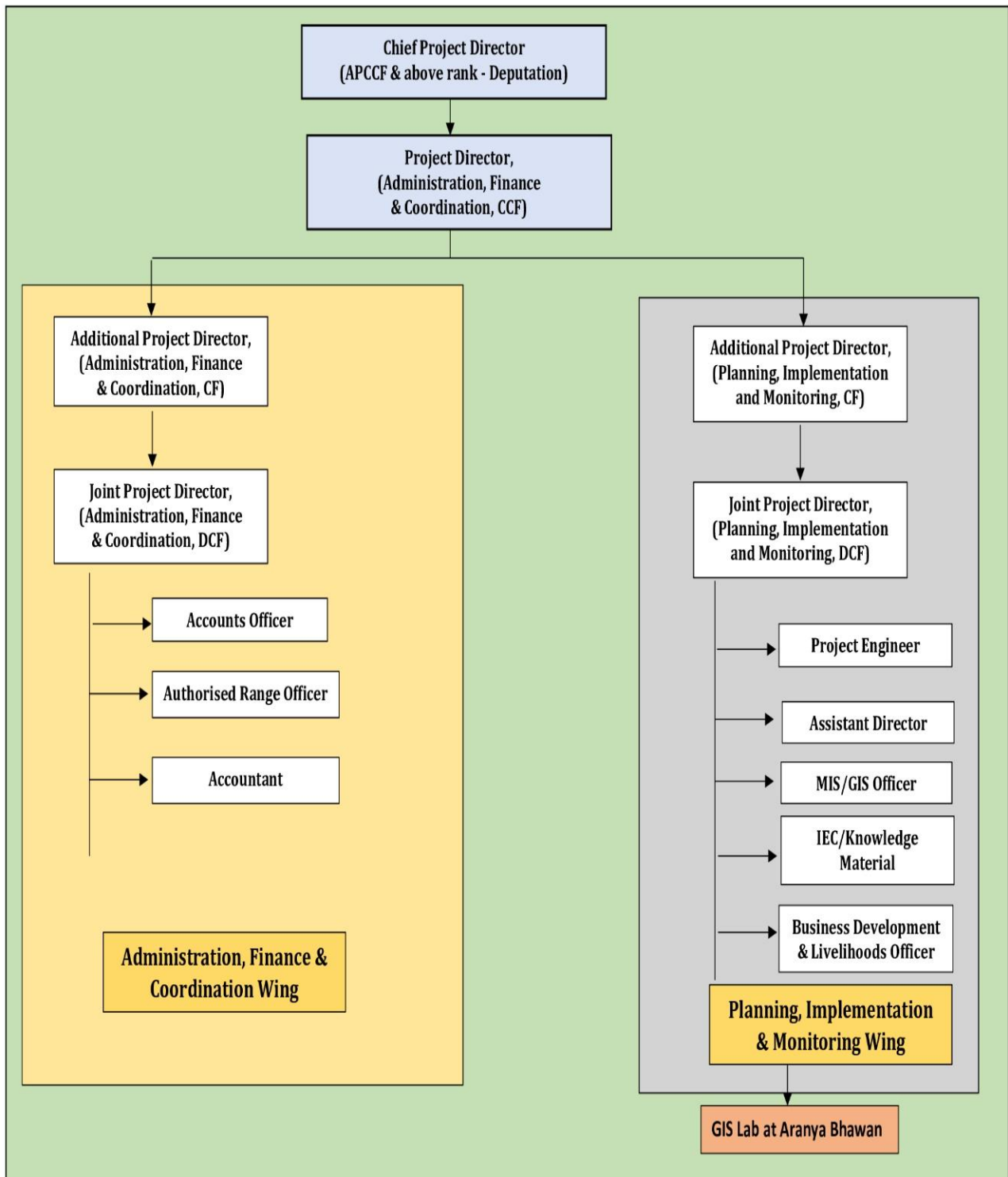


Figure 2: Organogram of PMU, WB-FBCCCR Project

1.3.7 Schedule of Meetings held:

1. The 2nd Meeting of the Governing Body of the WB-FBCCCR under West Bengal Forest and Biodiversity Conservation Society was held on 03.05.2024 at 12:00 PM in the 6th Floor, Conference Room, Aranya Bhawan at LA-10A, Sector,-III, Salt-lake City, Kolkata-700106.
2. Online Meeting with respective CCFs/CFs and Head, DMUs to discuss Budget Allocations to DMU under the Project WB-FBCCCR for Financial Year 2024-25 was held on 14.05.2024 at 12 PM in the Conference Room, WB-FBCCCR.
3. Meeting of Evaluation Committee for PMC engagement for the Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 20.05.2024 at 01:00 PM in the Mini-Conference Room, WB-FBCCCR.
4. Meeting of the Steering Committee for the project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) regarding "West Bengal Data Strategy" was held on 30.05.2024 at 03.30 PM in the Mini-Conference Hall, PMU Office, WB-FBCCCR.
5. Meeting of Evaluation Committee for PMC engagement for the Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 01.08.2024 at 01:00 PM in the Mini-Conference Room, WB-FBCCCR.
6. Meeting on deciding scope of study of assessment of Aquatic Biodiversity in Sundarban and Territorial Water for the Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 12.08.2024 at 01:00 PM in the Mini-Conference Room, WB-FBCCCR.
7. Meeting of the committee for Creation of Carbon Estimation Lab for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 03.09.2024 at 12:00 PM in the Mini-Conference Room, PMU at WB-FBCCCR.
8. Review Meeting with Shri Mana Ram Baloch, IFS Principal Chief Conservator of Forests and WB-FBCCCR Project Officials for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 12.09.2024 at 12:30 PM in the Mini-Conference Room, PMU at WB-FBCCCR.
9. Review Meeting with respective CCFs/CFs and Head, DMUs on Progress of work under WB-FBCCCR during the year 2024-25 and WB-FBCCCR Project Officials was held on 11.12.2024 and 13.12.2024 at Mini-Conference Room, PMU, WB-FBCCCR.
10. An online meeting with third party evaluators selected by JICA regarding JICA Ex-Post Evaluation on "West Bengal Forest and Biodiversity Conservation Project" (L/A No. ID-P223) under WB-FBCCCR Project was held on 13.01.2025 at Mini-Conference Room, PMU, WB-FBCCCR.
11. Meeting of Evaluation Committee for PMC engagement for the Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 30.01.2025 at 01:00 PM in the Mini-Conference Room, WB-FBCCCR

12. Minutes of the Meeting with Working Plan & G.I.S. Circle regarding present status of work and future proposals of work in Working Plan & G.I.S. Circle under WB-FBCCCR Project was held on 18.03.2025 at 01:00 PM at Mini-Conference Room, PMU, WB-FBCCCR.
13. Meeting on finalizing scope of study of assessment of Aquatic Biodiversity in Sundarbans of JICA assisted Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held on 24.03.2025 at Mini-Conference Room, PMU, WB-FBCCCR.
14. 1st Meeting of Committee on Knowledge Material Preparation was held on 25.03.2025 at Aranya Bhawan for the purpose of creating Knowledge Material under WB-FBCCCR as per the committee created by CPD, WB-FBCCCR vide his office order no. 10/WBFBCCCR/7-4(30)/24-25 dated 10.03.2025.

1.3.8 Engagement of Project Management Consultant:

As a part of the project design and institution arrangements, a team of experienced professionals will be procured and deployed at the state level as PMC to assist PMU in managing the project and to extent required technical guidance for a limited number of years. They will assist the Project Management Unit of the project by providing following services.

1. Assistance in the management of the project.
2. Technical Assistance in the implementation of the project components/activities in an efficient and effective manner.
3. Facilitation of implementation of Environmental and Social Assessment Framework (ESAF) and Vulnerable People's Planning Framework (VPPF).
4. Technology Transfer.

The process of Engagement of Project Management Consultant is going on step wise viz. floating of REOI, shortlisting of bidders, floating of RFP followed by technical evaluation. Now, we are waiting for approval from JICA regarding technical evaluation, once completed financial evaluation and final selection would be done hopefully in F.Y. 2025-26.

1.3.8.1 Staffing:

Two positions of the Professional (A) consultant (International Expert and Eight Positions of Professional (B) consultant would be engaged during the project.

Professional (A) consultant would be for following designations:

- a) Community Resilience against Climate Change
- b) GIS/MIS/DX

Professional (B) consultant would be for following designations:

- a) GIS/MIS/DX
- b) Sustainable Forest Management
- c) Biodiversity Conservation
- d) Soil/Water Conservation
- e) Capacity Development
- f) Micro-Finance/Business Development Support
- g) Monitoring & Evaluation
- h) Social and Environmental Consideration

The procurement of PMC (Project Management Consultant) for the project is under process. The RFP (Request for proposal) was floated and Technical Evaluation is under approval from JICA, India (Ref: Memo no 267/WBFBCCCR/4-1(1)/24 dated 27.02.2025).

1.3.9 Project Contractual Staff:

PMU will hire the professional from the open market through outsourcing to extend support and assist project operations at PMU, DMUs, FMUs and JFMCs level. These project staffs will be in addition to the project staff that will be deployed by WBFD on deputation to PMU, and notify the field units, viz., offices of CCF, CF, DFO and ranges to work on the project in addition to the regular departmental functions. The type of staff to be hired on contract includes - Technical Experts/Professional, Office Assistants, Multi-Utility Persons, Computer Operators, Drivers, Security personnel etc.

The Procurement process of Manpower deployment has been concluded successfully and Award of Contract would commence in F.Y. 2025-26.

Chapter II: Achievements in brief during Financial Year 2024-25

2.1 Background:

India's 85% National Land is highly vulnerable to multiple natural disasters including cyclones, floods and sedimentation due to climate change and this grow in to a serious problem. In Intended Nationally Determined Contributions (INDC) under the Paris Agreement, Government of India has pledged to reduce the emissions intensity of GDP by 45% of 2005 levels towards 2030. The National Forest Policy 1988 stipulates the hilly area to maintain 2/3rd of the Green Cover Area for disaster prevention and for stabilization of the ecosystem. Draft National Forest Policy in 2018 stipulates that strategic actions especially sustainable forest management will be taken to strengthen forest-based climate change mitigation and adaptation.

The State of West Bengal is endowed with long topography and varied Flora and Fauna from the North containing Himalayan Alpine Zone to the Southern part of the mangrove forest facing the Bay of Bengal. However, the forest cover of the state was 14.64% in 2011 which was lower than its national average 21.05%. After that, a Japanese ODA Loan Project entitled the "West Bengal Forest and Biodiversity Conservation Project" was conducted from 2012 and the forest cover have been improved to 18.96% in 2021. Although there has been improvement, the pressure on forest natural resources and degradation of ecosystem remains strong and forest cover of the state is still below 1/3rd of the geographical area due to progress of urbanization use of forest products and other resources to earn a living etc.

The project is being implemented partially in continuation of the past interventions with introduction of new methodologies based on the lessons learnt in the past. West Bengal is diverse its nature and society. The project implementation method is based on landscape-based planning. Each bio-geographical zone experiences different types and level of climate change impacts. Furthermore, when considering interventions for disaster reduction, scattered treatment areas would not be beneficial. As the causes of damages are lightly to be complex and a single intervention may not be effective in reducing the damages. In other words, there may also be a need to implement a combination of interventions to be effective in reducing disaster risks and sizeable area may need to be treated. Thus, side identification and planning are being done on the basis of watershed, which is severely affected by disaster and forest-based intervention, are seen to be effective. In this way, limited financial resources can be utilized efficiently and effectively.

2.2 Selection Criteria:

Identification of project side was undertaken in the following steps: 1) Identification of landscape; 2) Scoping of districts and divisions and 3) Identification of ranges or unit of project intervention for each sub-component. Interventions are being done at 23 territorial divisions, 06 wildlife divisions and 05 functional divisions.

2.3 Summary of Works:

Component 1: Ecosystem Based Climate Change Measures (Production of Quality Planting Material (QPM), Plantation in degraded forest area and outside forest areas, Creation of Seed Production Area(SPA), Ecosystem based Disaster risk reduction through Catchment Treatment Plan(CAT), Green Laboratory initiatives etc.)

Table 5: Ecosystem Based Climate Change Measures

Sl.No.	Name of Intervention	Quantity	Remarks
1	Upgrading and Maintenance of Central Nursery	37 Central Nurseries	Ongoing
2	Quality Planting Material (QPM) Production	17, 36,350 nos. of QPM	Ongoing
3	Preparation of Catchment Area Treatment (CAT) Plan	13 Forest Divisions	MoU (Memorandum of Understanding) signed on 31 st July 2024 with ICAR - Indian Institute of Soil and Water Conservation (IISWC) Dehradun. Field Survey in Purulia, Kangsabati (North) and Kangsabati (South) DMUs is completed
4	Creation of Seed Production Area (SPA)		Advance work done for 1. 15 Ha in SRVK-9 by Buxa-Coochbehar Research FMU under Silviculture (North) DMU and 2. 4 ha and 6ha in Senchal Catchment and Lava respectively by Silviculture (Hill) DMU respectively.

Component 2: Biodiversity Conservation (Human-Wildlife conflict mitigation, Species Conservation program, Studies on Wild Animals and their behavior etc.)

Table 6: Biodiversity Conservation

Sl.No.	Name of Intervention	Quantity	Remarks
	Biodiversity Conservation through people's participation in Protected Area		
1)	Training on Dolphin Conservation	LS	2 day workshop held at Bethuadahari WLS under Nadia-Murshidabad DMU for field staffs handling Dolphin rescue in field during September 2024.

Sl.No.	Name of Intervention	Quantity	Remarks
			A total of 40 field staffs from 4 Forest Divisions participated in this workshop (12 each from Burdwan, Nadia-Murshidabad, Malda Division and 4 from Howrah Division).
2)	Training on Conservation of Fishing Cat	1	One day workshop on breeding and releasing of fishing cat was organized at Alipore Zoo during October 2024. Total of 38 nos. of participant participated in the workshop.
3)	Assessment of Aquatic Biodiversity in Sundarban Biosphere Reserve		A committee has been formed and proposal submitted by Zoological Survey of India. Presentation on this was held on 24.03.2025 at PMU in presence of officers of Wildlife Wing related with the work. Revised scope of work would be submitted by ZSI in this regard shortly as per discussion at the meeting.
4)	Development of Ex-Gratia Payment Software		Development of Ex-Gratia Payment Software is ongoing with WEBEL. Meetings are being held at PMU as well as with Addl. PCCF & CCF/MIS & e-Gov. in this regard.

Table 7: Activities taken up in four smaller sanctuaries

Name of the Sanctuary	DMU	Amount (Rs. in Lakh)	Activities
Bethuadahari WLS	Nadia-Murshidabad	12.54	Improvement of Boundary Wall with concertina wire fencing.
Ballavpur WLS	Birbhum	19.32	Construction of boundary wall (800 mtr.), Repairing of water tank, feeding shed, feed godown and ticket counter, nature trail and sitting arrangement for visitors.
Bibhutibhusan WLS	24 Parganas (North)	10.46	Visitor sitting arrangement, rest shed & plinth protection and construction of drinking water booth.
Chintamani Kar WLS	24 Parganas (South)	24.87	Repairing and maintenance of toilet, sinking of submersible pump, morrum road and renovation of staff quarter.

2.3.1 Component 3: Livelihood Improvement (Community Infrastructure Dev. & Income Generation activities)

Table 8: Livelihood Improvement

Sl.No.	Name of Intervention	Quantity	Remarks
1)	Community Mobilisation	150 JFMCs (Batch-II)	Ongoing
2)	Reorganisation/ Reconstitution of JFMC		Completed
3)	Project Familiarization		Completed
4)	Microplan preparation and related training		Preparation of Microplan on the basis of training is ongoing.
5)	Training on SHEP (Smallholders Horticulture Empowerment and Promotion) Approach		3 day Training of Trainer (ToT) was held at SFTI, Hijli during November 2024. 20 nos Field trainings to JFMC members were arranged in Kharagpur, Midnapore, Jhargram, Rupnarayan and Panchet DMUs

2.3.4 Component 4: Institutional Strengthening (Digital transformation through MIS platform linked to web-GIS, Digitization of JFMC boundary, Monitoring and Evaluation, Publicity and Publication, Strengthening Forest Research, Mobility, Buildings, Staff, Equipment, Trainings etc.)

Table 9: Institutional Strengthening

Sl.No.	Name of Intervention	Quantity	Remarks
1	Digitization of JFMC Boundary	150 JFMCs (Batch-I)	Work for 30 JFMCs (Darjeeling DMU – 11, Darjeeling WL DMU – 4, Kurseong DMU – 6, Kalimpong DMU – 9) has been completed. Balance 120 JFMCs (Bankura South DMU – 88, Panchet DMU – 32) also on the verge of completion.
2	Mobility Support	30 Cars, 85 Motor Cycles, 4 Utility vehicles	Matter is lying with Finance Department, Government of West Bengal
3	JFMC Training on Microplan & PRA Techniques	450 nos. of JFMC Members have been trained in 11 batches	3 days Training on Microplan & PRA Technique were held at State Forest Training Institute Hijli and West Bengal Forest School, Dow Hill under Development Circle, West Bengal.

Sl.No.	Name of Intervention	Quantity	Remarks
4	Augmentation of Mini-Conference Room	01 No.	Completed
5	Computerized Accounting System		
a)	Tally Implementation Development and hosting in Microsoft Cloud	LS	Completed
b)	Development of component wise detailed Chart of Accounts (COA)	LS	Completed
6	Carbon Estimation Lab	01 No.	During FY 24-25 Fund was provided to SFTI, Hijli (through Kharagpur DMU) for purchasing Laboratory drying oven, micro weighing balance, Range finder, GPS, electronic clinometer, Computer, Printer etc. and the tender process is ongoing.
7	Launch of Website	01 No.	New website for West Bengal Forest and Biodiversity Conservation Society (www.wfbcs.in) is launched. This new website is linked to project website both old (www.wfbcp.org) and new (www.wfbcccr.in).
8	Guidelines and Manuals	02 Nos.	<ol style="list-style-type: none"> 1. A book on SHEP (Smallholders Horticulture Empowerment and Promotion) Handbooks in Bengali published, distributed and also loaded in our website for ready reference. This is also being used during training to JFMC members. 2. Brochure on Dolphin Handling. 3. Brochure on Breeding and Release of Fishing Cat.
9	Socio-Economic and Forest Resource Baseline Survey	LS	MoU (Memorandum of Understanding) signed on 5 th December 2024 with Indian Institute of Forest Management (IIFM), Bhopal. Field Survey already completed in Kharagpur DMU.
10	Preparation of Knowledge Material	LS	A committee has been formed in this regard and the committee suggested 25 relevant topics covering all four components of WB-FBCCCR.

Chapter III: Initiatives on Ecosystem based Climate Change Measures

3.1 Component Objective:

The objective is to enhance forest ecosystem services (multiple functions of forest), reduce disaster risk and enhance community resilience against climate change impacts. In order to reduce the adverse impacts of climate change in each landscapes, the component to mitigate the causes of frequently occurring disasters (flooding in North Bengal/Sundarbans, drought in South-West Bengal) are being implemented, the project is effectively utilizing multiple functions of forests. In order to do that, forest treatment has been properly zoned for the specific purpose. WB-FBCCCR is supporting preparation of Catchment Treatment (CAT) Plan for the 13 forest divisions of South-West Bengal. In Sundarbans, frequent flooding caused by sea level rising and damage to embankments is one of the most challenging topics in West Bengal. So attempts are being made to use bamboo structures to restore mangroves for mitigating the damages on embankment. In order to increase community resilience the plantation models in the project are mostly mixed plantations with NTFPs species/indigenous species where local populations will benefit and will be able to protect the community for a long term.

3.2 Upgrading and Maintenance of Central Nursery:

Central nursery facility constructed by the State Plan and Phase-I Project WBFBCP are being upgraded to ensure continuous production of QPM for planting activities under the project and under State Government schemes. The upgrading and Maintenance of 37 Central nurseries was started in the Financial Year 2023-24 and completed in Financial Year 2024-25.

Table 10: List of Central Nurseries under WB-FBCCCR Project

Sl. No.	Name of Circle	Name of DMU	Name of Range/FMU	Name of Beat	Name of Location	Installed Capacity (No. of Seedlings)
1	Western	Medinipur	Arabari	Arabari	Arabari Forest Range Office, Paschim Medinipur	60,000
2	Western	Medinipur	Medinipur	Gopegarh	Rangamati, Beside Rupnarayan Forest Division Office, Rangamati, Paschim Medinipur	60,000
3	Western	Medinipur	Pirakata	Bhimsole	Abradihi, Pirakata Forest Range Office, Paschim	60,000

Sl. No.	Name of Circle	Name of DMU	Name of Range/FMU	Name of Beat	Name of Location	Installed Capacity (No. of Seedlings)
					Medinipur	
4	Western	Kharagpur	Hijli	Hijli	Hijli Eco Park	60,000
5	Western	Kharagpur	Kalaikunda	Kalaikunda	This unit shall be raised at Hijli Central Nursery under Hijli Range/FMU	60,000
6	Western	Kharagpur	Nayagram	Nayagram	Nayagram Range HQ	60,000
7	Western	Rupnarayan	Amlagora	Pathrisole	Amlagora Modern Nursery	60,000
8	Western	Rupnarayan	Amlagora	Pathrisole	Pathrisole Central Nursery	60,000
9	Central	Bankura North	Barjora	Barjora	Barjora	60,000
10	Central	Bankura North	Beliatore	Beliatore	Beliatore	60,000
11	Central	Bankura North	G. Ghati	Amarkanan	Amarkanan	60,000
12	Central	Bankura North	Radhanagar	Bhora	Bhora	60,000
13	Central	Bankura South	Simlapal	Simlapal	Simlapal Central Nursery	60,000
14	Central	Bankura South	Bankura	Ratanpur	Ratanpur Central Nursery	60,000
15	Central	Bankura South	Indpur	Chingra	Chingra Central Nursery	60,000
16	Central	Panchet	Bishnupur	Bishnupur-I	Dwadasbari, Bishnupur Central Nursery	60,000
17	Central	Panchet	Bankadaha	Peardoba	Sabrakone, Amdangra Central Nursery	60,000
18	Central	Panchet	Joypur	Joypur	Joypur, Joypur Central Nursery	60,000
19	South East	Birbhum	Suri	Chhora	Chhora	60,000
20	South East	Birbhum	Dubrajpur	Hetampur	Hetampur	60,000
21	South West	Kangsabati North	Hura	Keshargarh	Keshargarh	80,000
22	South West	Kangsabati South	Manbazar-I	Kenda	Kenda Central Nursery	60,000

Sl. No.	Name of Circle	Name of DMU	Name of Range/FMU	Name of Beat	Name of Location	Installed Capacity (No. of Seedlings)
23	South West	Purulia	Balarampur	Balarampur	Rangadih	60,000
24	South West	Purulia Extension Forestry	Purulia Extension Forestry FMU	Purulia	Kantadih Central Nursery	60,000
25	North West	Raiganj	Attached Forest Range	-	Division Compound	60,000
26	Hill	Darjeeling	Rimbick	South Rimbick	South Rimbick-1	60,000
27	Hill	Kurseong	Tukriajhar	Tukriajhar	Tukriajhar	60,000
28	Hill	Kalimpong	Neora	Gorubathan	Gorubathan	60,000
29	Northern	Baikunthapur	Belacoba	Gourikone	Bodaganj	60,000
30	Northern	Jalpaiguri	Chalsa	Chalsa	Chalsa Range HQ	60,000
31	Northern	Jalpaiguri	Moraghat	Khuntimari	Central Moraghat-7	60,000
32	Northern	Cooch Behar	Cooch Behar-II	HQ	Debibari	60,000
33	Wildlife North	Jaldapara Wildlife	Nilpara	Nilpara	Nilpara	60,000
34	Buxa Tiger Reserve	Buxa Tiger Reserve (East)	South Rydak	SRD HQ	SRD HQ	60,000
35	Buxa Tiger Reserve	Buxa Tiger Reserve (West)	West Rajabhatkhawa	West Rajabhatkhawa	Rajabhatkhawa	60,000
36	Research	Silviculture Hill	Kalimpong Upper Hill Research	Lava	Lava-1	60,000
37	Research	Silviculture North	Buxa Coochbehar Research	Rajabhatkhawa	SRVK-15	60,000



Figure 3: Upgradation of MS Stand at Suri FMU under Birbhum DMU



Figure 4: Maintenance of Seedlings at Suri FMU under Birbhum DMU

3.3 Quality Planting Material (QPM) Production:

In the first meeting of the Governing Body of WBFBCS for WB-FBCCCR held at Aranya Bhawan on 22nd June, 2023, the issue of Production of Quality Planting Material (QPM) in central nurseries under WB-FBCCCR was discussed. It was decided unanimously that only good quality tall seedlings should be used for Plantations under WB-FBCCCR. This

practice has already been started for the proposed plantations under State Plan schemes and release of fund is split in two year for raising of seedlings in nursery (in first year) and maintenance of the same seedlings (second year till planted in filed). This was further suggested to use bigger hycopots of sizes 750 cc and 1000 cc and to constitute a committee to decide upon the Types (volume), Dimensions and proportion of hycopots (750 cc/1000 cc) for producing QPM under WB-FBCCCR.

The committee has recommended use of larger size hycopots of 750 cc and 1000 cc for producing tall seedlings keeping them in nurseries for longer period.

Larger sized hycopots of 750 cc and 1000 cc are available in market in West Bengal and will be better suited for producing tall seedlings, keeping them in nurseries for longer period whereas 1000 cc hycopots are suggested for slow growing species like Sal, Haritaki, Mahua, Piyasal, Dhaw, Haldu, Karam to be maintained in nurseries. Whereas 750 cc hycopots can be used for fast growing species like Arjun, Pakasaj, Panisaj, Sirish, Bahera, Challa, Karanj and Ficus species etc.

The production of 17, 36,350 nos. of QPM has started during Financial Year 2023-24 for planting two years old seedlings in plantation as per approved MoD of the project and this were maintained during Financial Year 2024-25.



Figure 5: Seeds dibbled in mother-bed during QPM Production at Bankura North DMU

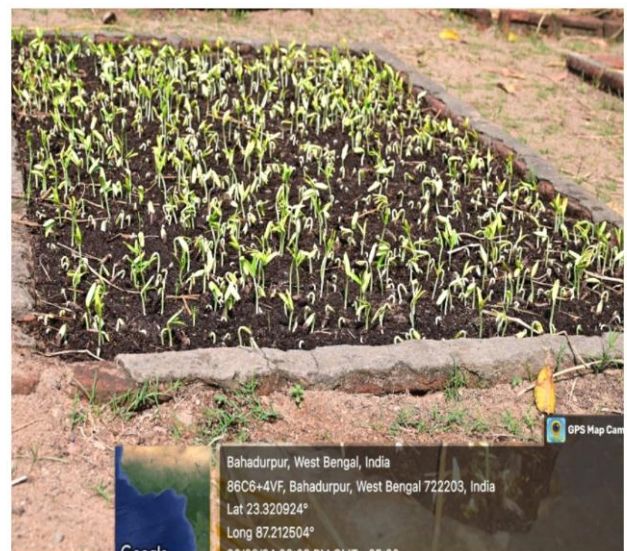


Figure 6: Germinated seedlings in mother-bed during QPM Production at Bankura North DMU

3.4 Preparation of Catchment Area Treatment (CAT) Plan:

Development of MoU with SLUSI (Soil and Land Use Survey of India) for Catchment area treatment (CAT) Plan preparation in 13 DMUs of South West Bengal is ongoing. A meeting regarding Catchment Area Treatment (CAT) Plan Preparation was held on 8th September, 2023 and 19th December, 2023. It was resolved that high priority area of micro-watershed would be generated from the existing database with SLUSI and division wise cost for generation of priority maps, detailed Soil Survey (in very high-priority area) would be proposed. We agreed to it and necessary steps for preparation of CAT Plans of 13 forest divisions within South-West Bengal with initial phasing of 3 forest divisions namely Jhargram, Medinipur and Rupnarayan Forest Divisions followed by the other Divisions as mentioned in MoU. SLUSI had been requested for necessary initiation for signing of MoU (Memorandum of Understanding) for taking up the work.

But, it was found that the organisation was incapable to take up the work and complete it in time bound manner. The matter was discussed and vide resolution at 2nd Governing Body meeting held on 03.05.2024. The work was awarded to ICAR-IISWC, Dehradun. MOU with ICAR-IISWC has been signed in October 2024 for preparation of CAT plan for 13 Divisions of WB and Release of 1st instalment of Rs. 13.00 Lakhs took place in 31.12.2024. Field Survey in Purulia Division took place from 24.01.25 to 31.01.25. Field Survey in Kangsabati North and Kangsabati South took place from 17.02.25 to 25.02.25

3.5 Community resilience works at Sundarban Tiger Reserve (STR):

3.5.1 Objective:

In order to reduce the risk of high-tide flooding increasing water embankment capacities, bamboo-based coastal defence structure was introduced with augmentation of vegetation covers including dibbling of mangroves.

3.5.2 Site Selection:

The sites for treatment were selected on the basis of following criteria:

- Villages which have serious damages by frequent cyclone attacks.
- Earthen embankments are constructed to protect the residential areas. The mangrove is damage but still has the potential to recover with artificial bamboo based defence structure.
- RCC embankment is not constructed.
- Villagers are willing to collaborate with the project via microplan.

On the ocean side of the mangrove, bamboo based defence structure are being installed namely Permeable Dam and Porcupine Structure. The porcupine structure are made up of bamboo and are placed near embankment to reduce the erosion at the base of the embankment by water current.

The porcupine structure under community resilience works was implemented in STR during Financial Year 2023-24. Porcupines are a form of a permeable structure made by

bamboo to reduce flow and trap sediment. They have pole-like projections in all directions that are used as flood control structure as well as river bank and river bed protection. No work was taken up in the Financial Year 2024-25 in this regard.



Figure 7: Porcupine structure made with bamboo before installation at STR in March, 2024



Figure 8: Porcupine structure made with bamboo after installation at STR in March, 2024

Chapter IV: Initiatives on Biodiversity Conservation

4.1 Component Objective:

The objective of this components are protection, preservation, management or restoration of biological diversity of the State through scientific and adaptive management of protected areas, conservation of rare and endangered species, mitigation of human-wildlife conflict, which are under threats of climate change impacts.

4.2 Biodiversity Conservation through people's participation in Protected Area:

4.2.1 Objective:

The objectives is to conserve biodiversity of protected areas and to strengthen the stake of the neighbouring communities in conservation of the PAs. A considerable part of West Bengals forest covering more than 30% of area is under PA network. Presently, there are 15 Wildlife Sanctuaries and 6 National Parks in the state. While most of the PAs are large and housed one or more flagship spp., a few of them are located mostly in laterite alluvial landscape and deltaic landscape of West Bengal, covering a small area and harbour local biodiversity. PAs of the latter category fails to attract considerable funding but serve the useful purpose of conservation of distinct genotype of local population as well as awareness generation for visitors. They also serve as habitat to various types of faunal wildlife.

4.2.2 Location:

This PAs are located in places that have little forest or wildlife and are close to urban areas. Given their proximity to urban centres, they receive relatively high number of visitors and serve as an opportunity for conservation- related education of the civil society. For intensified management of selected PAs of the latter category, the project is taking up four selected PAs (Bethuadahari Wildlife Sanctuary; Ballavpur Wildlife Sanctuary; Bibhutibhusan Wildlife Sanctuary and Chintamani Kar Bird Sanctuary) for critical activities and infrastructure development. Three of the four small PAs (except Chintamani Kar Bird Sanctuary) also have the facility, the Nature Interpretation Centre, which is under construction. The three also have various amenities of visitors including lodging, trails and sitting places that are in various states of utilisation.

4.2.2.1 Bethuadahari Wildlife Sanctuary (Nadia-Murshidabad DMU)

Following works are envisaged during the project:

1. Improvement of boundary fencing
2. Desilting , net fencing of one Gharial pond
3. Desilting and beautification of second pond.
4. Improvement and repairing of inspection shed.
5. Repair of Aviary.
6. Development and repairing of Deer feeding area.

7. Making new Orchidarium.
8. Development and digitization of Nature interpretation Centre

Improvement of boundary fencing was taken up at Bethuadahari Wildlife Sanctuary during Financial Year 2023-24. The work also continued in phased manner during Financial Year 2024-25 as per approved Annual Plan of Operations.



Figure 9: Brick work during development of Boundary wall and fencing at Bethuadahari Wildlife Sanctuary



Figure 10: Boundary wall after plastering at Bethuadahari Wildlife Sanctuary

4.2.2.2 Ballavpur Wildlife Sanctuary (Birbhum DMU)

Following works have been approved in MoD for implementation during the project:

1. Construction of boundary wall (800 mtr.)
2. Repairing of water tank ,feeding shed, feed godown and ticket counter
3. Chain link fencing over 400 mtr.
4. Development of nature trail over 400 mtr.
5. Installation of CC camera and accessories.
6. Development of signage, awareness books and faunal chart.
7. Interactive display arrangements for school children and tourists.

Development of nature trail and sitting arrangement for visitors was done at Ballavpur Wildlife Sanctuary during Financial Year 2023-24. No work was executed during Financial Year 2024-25 as the management plan of the wildlife sanctuary is under finalization.



Figure 11: Development of nature trail at Ballavpur



Figure 12: Development of sitting arrangement for visitors at Ballavpur Wildlife Sanctuary

4.2.2.3 Bibhutibhusan Wildlife Sanctuary (North 24-Parganas DMU)

Following augmentation have been approved in MoD for implementation during the project:

1. Construction of chain link fencing along the buffer zone.
2. Construction of RCC Visitors Rest shed.
3. Development of Orchidarium.

Construction of RCC Visitors Rest shed was done at Bibhutibhusan Wildlife Sanctuary during Financial Year 2023-24. Work was also taken up during Financial Year 2024-25 as per approved Annual Plan of Operations.



Figure 13: Construction of RCC Visitors Rest shed was done at Bibhutibhusan Wildlife Sanctuary

4.2.2.4 Chintamani Kar Bird Sanctuary (South 24 Parganas)

Following augmentation have been approved in MoD for implementation during the project:

1. Increase height of boundary wall with concertina wire
2. Extension of rainwater harvesting unit in one existing pond using silpaulin sheet with bamboo piling
3. Submersible pump with RO system
4. Maintenance of patrolling and visitor path
5. Repair of toilet facility
6. Renovation and maintenance of staff quarter
7. Informative display boards
8. Community mobilisation and awareness creation

Work was also taken up during Financial Year 2024-25 as per approved Annual Plan of Operations.



Figure 14: Installation of Submersible Pump was done at Chintamani Kar Bird Sanctuary



Figure 15: Construction of Staff Toilet was done at Chintamani Kar Bird Sanctuary

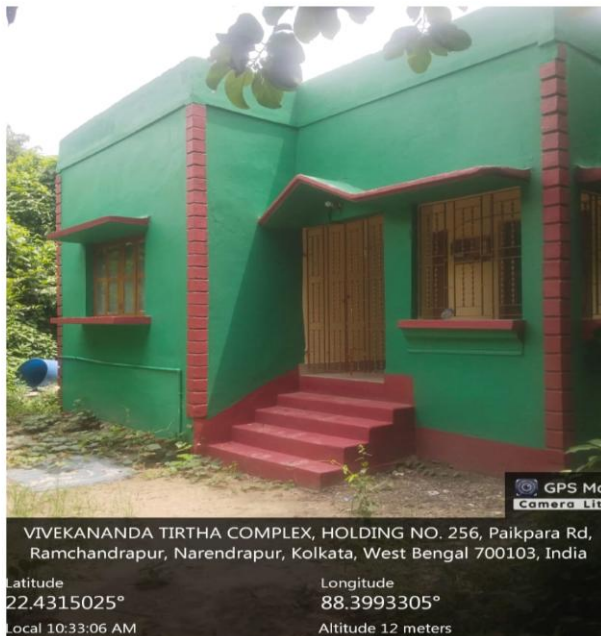


Figure 16: Construction of Staff Quarter was done at Chintamani Kar Bird Sanctuary

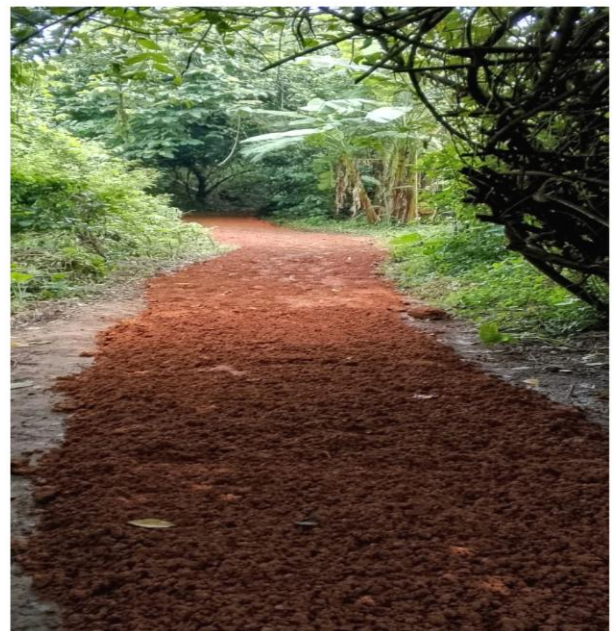


Figure 17: Construction of Morrum Road was done at Chintamani Kar Bird Sanctuary

Chapter V: Initiatives on Livelihood Improvement

5.1 Component Objective:

The objective is to strengthen community resilience against adverse impact on climate change in each landscape through community development activities, livelihood improvement and improved access to traditional medicine.

The communities living in and around forest areas in 3 project landscapes are part of JFMCs who would jointly undertake the work of forest and biodiversity conservation. Out of the 4,500 odd JFMCs in the state 600 have been selected for the purpose. These communities are scattered across the State and have different socio-economic backgrounds. Thus, the interventions to respond to their requirements vary from landscape to landscape. Thus, the activities in this component are planned landscape-wise and designed with flexibility to cater to varying requirements of the community.

5.2 Identification of JFMCs:

600 nos. JFMC were selected as a unit of project implementation from the area where Component 1 and 2 activities are being implemented. The selection criteria are as follows:

- Willingness of JFMC members for participation in the project.
- Keen interest in JFM and collective action towards forest protection and human-wildlife conflicts.
- High dependency on forest resources.
- Not received support from Phase 1.
- Constituting a cluster.
- Have protected forests on their own will as a collective action.
- Vulnerable to climate change.
- Minimum area in Hills and North Bengal Landscape and Dry lateritic & Alluvial Landscape for intervention would be at least 10 ha.

The identification of 600 JFMCs has been completed. The participation of JFMCs is vital in achieving project activities proposed to be undertaken at JFMC level by the community. Therefore, the project will undertake activities to enable community to be ready with robust institutional arrangements, equipped with project information, expected benefits and their responsibilities before microplanning, livelihoods, and other activities initiated. There will be total of four (04) batches in each of three landscapes during the project implementation period.

Table 11: Abstract of JFMCs selected for WB-FBCCCR

Name of Circle	Name of DMUs	Nos. of JFMCs Selected for WB-FBCCCR
Western	Medinipur	50
Western	Kharagpur	34
Western	Rupnarayan	30
Western	Jhargram	64
Central	Bankura North	74
Central	Bankura South	88
Central	Panchet	32
South-East	Birbhum	27
South-East	Burdwan	10
South-East	Durgapur	3
South-West	Purulia	30
South-West	Kangsabati North	33
South-West	Kangsabati South	41
Sundarban Biosphere Reserve	Nadia-Murshidabad	1
Sundarban Biosphere Reserve	South 24 Parganas	5
Sundarban Tiger Reserve	Sundarban Tiger Reserve	4
Hill	Darjeeling	11
Hill	Kalimpong	9
Hill	Kurseong	6
Wildlife North	Darjeeling Wildlife	4
Northern	Baikunthapur	9
Northern	Coochbehar	3
Northern	Jalpaiguri	8
Wildlife North	Gorumara Wildlife	2
Buxa Tiger Reserve	Buxa Tiger Reserve (East)	4
Buxa Tiger Reserve	Buxa Tiger Reserve (West)	5
Wildlife North	Jaldapara Wildlife	13
Total		600

5.3 Community Mobilisation:

Strengthening mutual trust and relationship with transparency is a pre-requisite for enhanced community involvement and developing belongingness as they need to be familiarised with the project objectives, activities, roles and responsibilities of key stakeholders and expected benefits, etc.

5.4 Reorganisation/ Reconstitution of JFMC:

5.4.1 Background:

Since some households may not have been enrolled as a member of JFMCs or detached from JFMCs, reorganising and reconstituting JFMC is being conducted. The process ensures membership to the households, which were not part of JFMC – based activities. Reorganisation of executive committee of JFMC will provide opportunities to the members to be elected as executive committee members.

5.4.2 Objective:

Revive and strengthen cohesiveness among JFMC members, trust and relationship.

5.4.3 Description of Activities:

- General Body Meeting was organised and Executive Committee was reconstituted and JFMC membership updated with inclusion of new eligible members in JFMCs as per the by-laws of JFMCs.
- Proceedings of the meeting were recorded and duly signed by the JFMC members present.

5.4.4 Implementation Structure:

FMU took the lead in planning and organising JFMC general meeting for reorganisation /reconstitution of JFMC activities in close coordination with the respective DMU.

5.4.5 Implementation Methodology:

Then the fringe population was familiarised with the objectives of WB-FBCCCR and then the guidelines for Microplan preparation were circulated in November, 2023 to the implementing DMUs. Training on PRA and Microplanning for 450 JFMC members (@ 3 members/JFMC for the 150 JFMCs where intervention would be done first) by CF, Development Circle has been successfully completed during Financial Year 2024-25.

5.5 Project Familiarization:

To strengthen mutual trust and relationship with transparency is a pre-requisite for enhanced community involvement and developing belongingness, WB-FBCCCR objectives, impact of climate change, activities, roles and responsibilities of key stakeholders and expected benefits have been familiarised among JFMC members.

5.5.1 Objective:

These are as follows:

- Inculcate JFMC support and participation in the project

- Familiarise JFMC members with the project objectives, activities, roles and responsibilities of key stake holders and expected short- and long-term benefits to JFMC members from the project etc.
- Inform them about project implementation modalities and further develop understanding on the objectives i.e. to enhance capacity of JFMCs/SHGs in developing resilience through implementation of the project, their benefits and their roles in the project

5.5.2 Implementation Structure:

Familiarization meeting has been organised in JFMC by FMU in close coordination with the respective DMUs.

5.5.3 Description of Activities:

- FMU has hold meetings with JFMC member and share brief descriptions of project objectives, key activities under each sub-component, institutional arrangement to plan and implement activities at JFMC level. Advance notices were given to JFMC members to secure their attendance.
- Landscape specific climate change impact on community were explained as indicated below:

Hills and North Bengal Landscape- They were explained about climate change-induced disasters like flood, heavy rain, landslides on forest, agriculture and on other livelihood resources, impact of wildlife on human lives, cattle, crop, house etc.

Dry Lateritic and Alluvial Landscape- Impact of recurrent drought, scanty rain on forest, agriculture, fishery/animal husbandry and on other livelihood resources, impact of wildlife on human lives, cattle, crop, house etc.

Deltaic Landscape- Impact of cyclone, heavy rain and flood on houses, embankment/village road, agriculture, fishery and on other livelihood resources, impact of tiger on human lives, cattle, crop, house etc.

- Roles and responsibilities of the project and JFMCs were explained in the meeting and minutes of the meeting were prepared.

5.6 Confirmation of JFM Boundary:

Since designated forest area protected by a JFMC has no defined digital boundary and physical demarcation, which may lead to dispute with neighboring JFMC during benefit sharing, forest resource extraction, harvesting of NTFPs etc., thus demarcation of JFMC boundary was undertaken as described in 6.2 Digitization of JFMC Boundary in Chapter 6.

5.6.1 Objective:

- Confirm JFM forest area prior to the project intervention and resolve disputes, if any.
- Ensure the proper benefit sharing by setting the clear boundary of JFM forest area.

5.6.2 Implementation Structure:

FMU worked with JFMCs to confirm JFMC Boundaries. Thereafter the pillar positioning will be done along the boundaries jointly by FMU and JFMC members (6.2 Digitization of JFMC Boundary in Chapter 6).

5.7 Microplan preparation and related training thereof:

JFM based activities and their implementation requires people-centric participatory planning and community collaboration. A process and approach needs to be followed by FMU where villagers' voices are heard, appreciated, and their choices and aspirations recognised rather than imposing upon them the ideas and priorities by outsiders. Out of many planning process and approach, microplanning at the village level provides scope for community involvement and say in planning and interventions. All activities planned by JFMC for implementation need to be included in the microplan.

The objectives of preparation of microplan are as follows:

- Identify the needs for forest and biodiversity conservation and livelihood improvement.
- Assess the potential for convergence and prepare a convergence plan.
- Develop a plan for JFMCs and the project to implement the community level interventions.

So, for Microplan preparation first Community Mobilisation followed by reorganisation/reconstitution of JFMC was continuing for 150 JFMCs in Second Batch.

Table 12: Abstract of Preparation of Microplan for the 2nd Batch 150 JFMCs under WB-FBCCCR

Name of Circle	Name of DMUs	Preparation of Microplan for the 2 nd Batch 150 JFMCs under WB-FBCCCR
Central	Bankura North	74
Western	Kharagpur	34
Western	Rupnarayan	30
Northern	Cooch Behar	03
Buxa Tiger Reserve	Buxa Tiger Reserve (East)	04
Buxa Tiger Reserve	Buxa Tiger Reserve (West)	05

Name of Circle	Name of DMUs	Preparation of Microplan for the 2nd Batch 150 JFMCs under WB-FBCCCR
Total		150

Chapter VI: Initiatives on Institutional Strengthening

6.1 Component Objective:

It is designed to support project implementation to strengthening of the capacity of implementing units at all levels and stakeholders as required. Activities required for monitoring and evaluation of the project implementation are also included in this component.

6.2 Digitization of JFMC Boundary:

As part of the project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR), boundaries of 150 nos. of JFMC are to be digitized. As per meeting held on 30th November, 2023 at PMU, WB-FBCCCR, the work was allotted to Working Plan and GIS Circle for boundary digitization for 150 nos. JFMCs in 06 Forest DMUs viz., Bankura South (88 JFMCs), Panchet (32 JFMCs), Darjeeling (11 JFMCs), Kalimpong (09 JFMCs), Kurseong (06 JFMCs) and Darjeeling Wildlife (04 JFMCs) during Financial Year 2023-24. For implementation the 06 DMUs were requested to submit the details of Area of Mouza, Plot/Compartment of the JFMCs to Conservator of Forests, Working Plan and GIS to undertake the work. Work for 30 JFMCs (Darjeeling DMU – 11, Darjeeling WL DMU – 4, Kurseong DMU – 6, Kalimpong DMU – 9) has been completed. Balance 120 JFMCs (Bankura South DMU – 88, Panchet DMU – 32) are also on the verge of completion.

6.3 Mobility Support:

The project will support mobility of the project implementation unit at all levels. Cars, Motorcycles, trucks and speed-boats are proposed to be procured under the project. Measures for Procurement of 30 Cars, 85 Motor Cycles, 4 Utility vehicles has been initiated. The matter is lying with the Finance Department, Government of West Bengal.

6.4 Two days Training Workshop on Dolphin Conservation and Handling:

A two day workshop on 'Dolphin Conservation and Handling' was organized by WB-FBCCCR on 6th and 7th September, 2024 at Bethuadahari under Nadia-Murshidabad DMU. A total of 40 field staffs from 4 Forest Divisions participated in this workshop (12 each from Burdwan, Nadia-Murshidabad, Malda Division and 4 from Howrah Division). 8 nos. Forest Range Officers, 2 nos. Deputy Ranger/Foresters, 14 nos. Forest Guards, 12 nos. Bana sahayak and one each from Zoo Keeper, Veterinary Assistant, Zoo Research Assistant and Bana shramik took part in the workshop. A resource person Md. Sahanawaz from WWF also took part in the workshop.

Awareness Generation Programme for Conservation of Gangetic Dolphin.
Venue: Uddharonpur Ferry Ghat of Ketugram Beat under
Katwa S. F. Range under Burdwan Division on 16/02/2025.



Flex for awareness generation programme for conservation of Gangetic Dolphin

Figure 18: Awareness Generation Programme for Conservation of Gangetic Dolphin at Katwa S.F. Range under Burdwan DMU on 16.02.2025

6.5 Breeding and Releasing of Fishing Cat:

The one day workshop on Breeding and Releasing of Fishing Cat organized by WB-FBCCCR Project in collaboration with West Bengal Zoo Authority and Zoological Garden Alipore was held on 04.10.2024 in the Conference Room of Zoological Garden Alipore. A total of 38 nos. of participant participated in the workshop. The resource person Dr. Sulata Maity, Scientific Officer, WBZA and Ms. Ishita Chongder, Zoo Biologist (CB), WBZA presented a brief overview on Technical Matters and Conservation Breeding Programme of Fishing Cat.

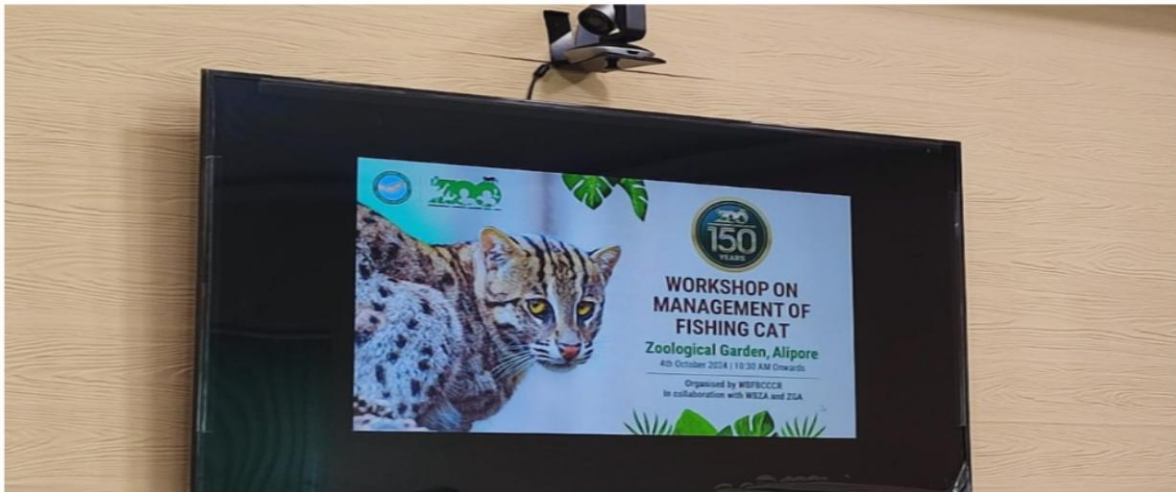


Figure 19: Workshop on Management of Fishing Cat organized by WB-FBCCCR in collaboration with WBZA and ZGA held at Zoological Garden, Alipore on 04th October, 2024

6.6 Training on SHEP:

The training on SHEP (Small-holder Horticulture Empowerment Promotion) was held at SFTI Hizli from 25th -27th November, 2024. It consisted of ToT (Training of Trainers) to forest officers and staffs (ADFO's, FR's, DR/Fr's etc.) on the first day followed by training to JFMC members on the 2nd day. On the 2nd day resource persons were from Forest Directorate, Horticulture Experts and representatives from local banks. On the third day field visit was made to horticultural firm to observe the avenues for cultivating alternative high value crops in the first half. This was followed by market surveys at 2 nearby localities. After returning to SFTI Hijli the participants made presentations group wise on the learnings during the training programme.



Figure 20: Banner and Group Photo of the training



Figure 21: Workshop cum Training Programme on SHEP approach at Goaltore FMU under Rupnarayan DMU



Figure 22: Inauguration of workshop on 25.11.2024 by Chief Conservator of Forests, Western Circle



Figure 23: Bank official explaining about KCC and other loans on 26.11.2024



Figure 24: Lecture on 26.11.2024 by Dr. Krishnendu Ghorai, Retd. Deputy Director, Department of Horticulture



Figure 25: Market survey at Prembazar, Kharagpur on 27.11.2024



Figure 26: Market survey at Khajra on 27.11.2024



Figure 27: Farm visit near Khajra on 27.11.2024

6.7 JFMC Training on Microplan & PRA Techniques:

414 nos. of JFMC Members have been trained in 11 batches in the State Forest Training Institute Hijli and 36 nos. of JFMC Members have been trained in the West Bengal Forest School, Dow Hill both under Conservator of Forests, Development Circle, West Bengal for the purpose of three days Training on Microplan & PRA Technique under Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) was held during Financial Year 2024-25.



Figure 28: Training on PRA and Microplan at SFTI Hijli



Figure 29: Training on PRA and Microplan at Bishnupur, Panchet



Figure 30: Training on PRA and Microplan at Bishnupur by SFTI Hijli



Figure 31: Group discussion on PRA at Bishnupur by SFTI Hijli

6.8 Carbon Estimation Lab:

6.8.1 Background:

According to Working Plan Code, 2014, details of biomass for carbon stock assessment is expected to be given based on the forest types and land used. The divisional level carbon data developed through the preparation of Working Plan needs to be organized at state level. Standardized framework of spatial database using modern technology is required in a cost effective way.

6.8.2 Objective:

The objective of a carbon estimation lab is to develop a spatial database of carbon stock assessment in the entire state of West Bengal with standardized framework.

6.8.3 Implementing Unit:

A carbon estimation lab will be established under the research and development wing at SFTI Hijli and will have close contact with the GIS and Working Plan circle. The lab will be engaged in following tasks:

- i. Collecting growing stock/carbon stock estimation data based on resource assessment.
- ii. Modelling of biomass/carbon stock with other parameters (e.g., Basal Area Factor) in the different forest types.
- iii. Spatial assessment of carbon stock based on satellite images.
- iv. Updating the data as required.

6.8.4 Progress

A presentation regarding this was made by Conservator of Forests, Development Circle on 04.01.2024 at PMU, WB-FBCCCR via a model based on Artificial Intelligence and Machine Learning. A follow-up meeting with Conservator of Forests, Development Circle was held on 19.03.2024 at PMU, WB-FBCCCR to further discuss the issues. Tender for procurement purpose was held at SFTI Hijli and the documents were submitted for approval to PMU, WB-FBCCCR.

6.9 Launching of Project website:

The project website will be utilised by PMU to disseminate and share the project details and achievements as a process of bringing in transparency. The website will also be utilised for real-time disclosure of information. The reports/knowledge material published by the project will be available in digital form as well, and will be shared through the project website to facilitate further information dissemination. The website would serve as means to minimize use of paper, and aligning with the digital initiatives by Government of India and Government of West Bengal.

The website has been developed to feature the following – photographs and videos, articles and messages, GIS based interactive maps, MIS reports, advertisements and notices, banners, reports and plans, budget and expenditure statements, featured links, comments, page to communicate with the project authorities and registering grievances, FAQs, surveys, newsletters and snapshots of project progress, etc.

The administrative access for editing, uploading and updating contents on the websites is with the PMU. PMU will be responsible for the task of website design, development and maintenance.

Our website <https://wbfbcccr.in/> has been launched in March 2024 and it is being updated regularly with new happenings during implementation of WB-FBCCCR Project.



Figure 32: Homepage of WB-FBCCCR website <https://wfbcccr.in/>

6.10 Guidelines and Manuals:


To share project results and success in the public domain, as well as bring in awareness on key project processes, publicity and publications activities are being taken up by PMU.

Publicity and publication are very important for creating an awareness environment as well as for sharing knowledge and information. These elements form the means for external communication and to make sure that outputs, results and best practices are landscape segregated and shared outside with the stakeholders. PMU is also ensuring that the publications are disseminated to all stakeholders in an effective manner.

Flexibility is with PMU to plan and execute the activities adjusted with the project pace and requirements and accordingly, allocations have been made.


The following publications were made during Financial Year 2024-25.

1. SHEP (Smallholders Horticulture Empowerment and Promotion) Handbooks in Bengali.
2. Brochure on Dolphin Handlings
3. Brochure on Breeding and Release of Fishing Cat.



GANGES RIVER DOLPHIN

Platanista gangetica



Ganges River Dolphin, 'Susu' is one of the two subspecies of the South Asian River Dolphin, the other being the Indian Dolphin 'Bhadra' found in the Indus River in Pakistan and Beas River in India. The four other obligate freshwater dolphins found in the world are the Amazon River Dolphin 'Boto', Bolivian River dolphin, the Argentinian River Dolphin and Yangtze Dolphin 'Shu' in the Yangtze River in China which is reported to be extinct since 2006.

The Ganges River Dolphin is flagged as the 'Tiger of the Ganges' being considered the mascot of a healthy aquatic environment and acts as an indicator species, which has the same role in a river ecosystem as a tiger does in a forest. It is one of the most charismatic mega fauna of the Indian subcontinent, found in the Ganges, Brahmaputra Meghna and Karaphali-Singri river systems of India, Nepal, and Bangladesh. The recent population estimate in its entire distribution range recorded around 2000 individuals, of which more than 90% is within India Territory, being adopted as the National Aquatic Animal in India in 2009, consequently every year October 9th is consequently celebrated as Ganges River Dolphin Conservation Day.

The species has also been granted 'non-human personhood' status by the Government of India, making India the first nation in the world to recognize their unique intelligence and self awareness.

The species has been included in Schedule I of the Indian Wildlife Protection Act, 1972, in Appendix I of the Convention on International Trade in Endangered Species (CITES), in Appendix II of the Convention on Migratory Species (CMS), and is categorized as 'Endangered' on the International Union for the Conservation of Nature's (IUCN) Red List.



IUCN RED LIST STATUS

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
---------------	----------------	---------------	-----------------	------------	-------------------	-----------------------	---------------------	---------

Source: www.iucnredlist.org

THREATS

The Ganges River Dolphin is threatened due to habitat degradation as a result of water development projects (such as dams, barrages and dredging operations), sand mining, over fishing and pollution. The incidental catch of dolphins in the fishing gears, specifically gillnets are key causes of dolphin mortality in the River Ganga. Despite their numbers plummeting in the last few years, dolphins are still hunted in some areas for their oil, which is used for fishing.

- **Blowhole** at the top of the head, acts as a nostril helping in breathing
- **Eyes** are very small and without lens. They can only differentiate between light and dark
- **Blubber** is a thick layer of fat deposited under the skin. It keeps the body warm
- **Flukes** are large and flat. They act as thermo-regulators and also help in propulsion
- **Flippers** are large which help in swimming and finding surroundings
- **Rostrum** is long and slim adapted to catching small fish

MORPHOLOGICAL FEATURES

The Ganges River Dolphin has a sturdy, yet flexible, body with large flippers and a low triangular dorsal fin. Calves are chocolate brown at birth and become grayish brown in adulthood with smooth and satiny skin. Females are larger than males and have long six curved mammae. The maximum size of a female is 2.67 m and the size of a male is 2 m. Newborn calves are pink in colour, measure 70-90 cm and weigh around 7-8 kg. The Ganges Dolphin has a pair of small, non-functional eyes that lack lenses, hence individuals are dependent on echolocation to navigate, detect prey, and to communicate. They have a layer of blubber which helps with buoyancy, protection from predators, and insulation from harsh climates. Olfactory lobes are absent, suggesting that they have no sense of smell.

HABITAT

The species is found exclusively in flowing, riverine freshwater habitat. It occurs in clean, slow flowing rivers and prefers deep pools, eddy currents, currents located downstream of the confluence of rivers and at sharp meanders, upstream and downstream of well-cleared channels.

SIZE AND WEIGHT



Ganges River Dolphins often occur in small clusters of 1-3 individuals; however sometimes lone individuals may also be found. An individual may weigh up to 150 kg. Polygamous mammals, they surface every 20-120 seconds for breathing. While no conclusive studies have been done, the maximum longevity is considered to be 20 years.

BREEDING HABITS

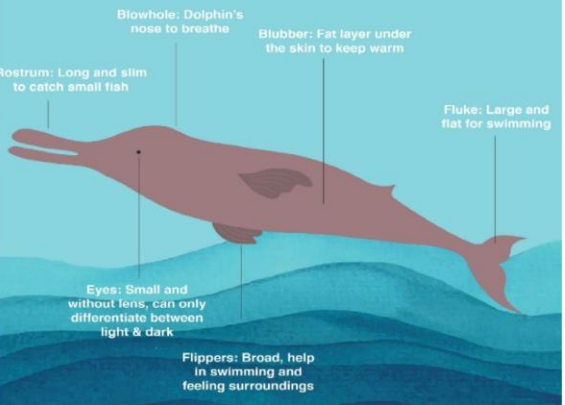
Females attain sexual maturity at an age of 10-12 years, while the males mature earlier. Females usually give birth from October to March, with a peak in December and January at the onset of the dry season. The gestation period is 9-11 months, and a female gives birth to only one calf, once in 2-3 years. The young wean away from the mother within their first year.

FEEDING HABITS

Dolphins emit an ultrasonic sound and use echolocation to detect their prey. They have conical teeth to catch their prey, that is subsequently swallowed. Diet includes small fish and invertebrates.

KNOW OUR GANGA RIVER DOLPHIN!



- **Blowhole:** Dolphin's nose to breathe
- **Blubber:** Fat layer under the skin to keep warm
- **Rostrum:** Long and slim to catch small fish
- **Fluke:** Large and flat for swimming
- **Eye:** Small and without lens, can only differentiate between light & dark
- **Flippers:** Broad, help in swimming and feeling surroundings

GIVE UP Water Wastage !

Conserve rivers and save Ganga River Dolphins

Water Programme | HSBC

Figure 33: Brochure on Dolphin Handling

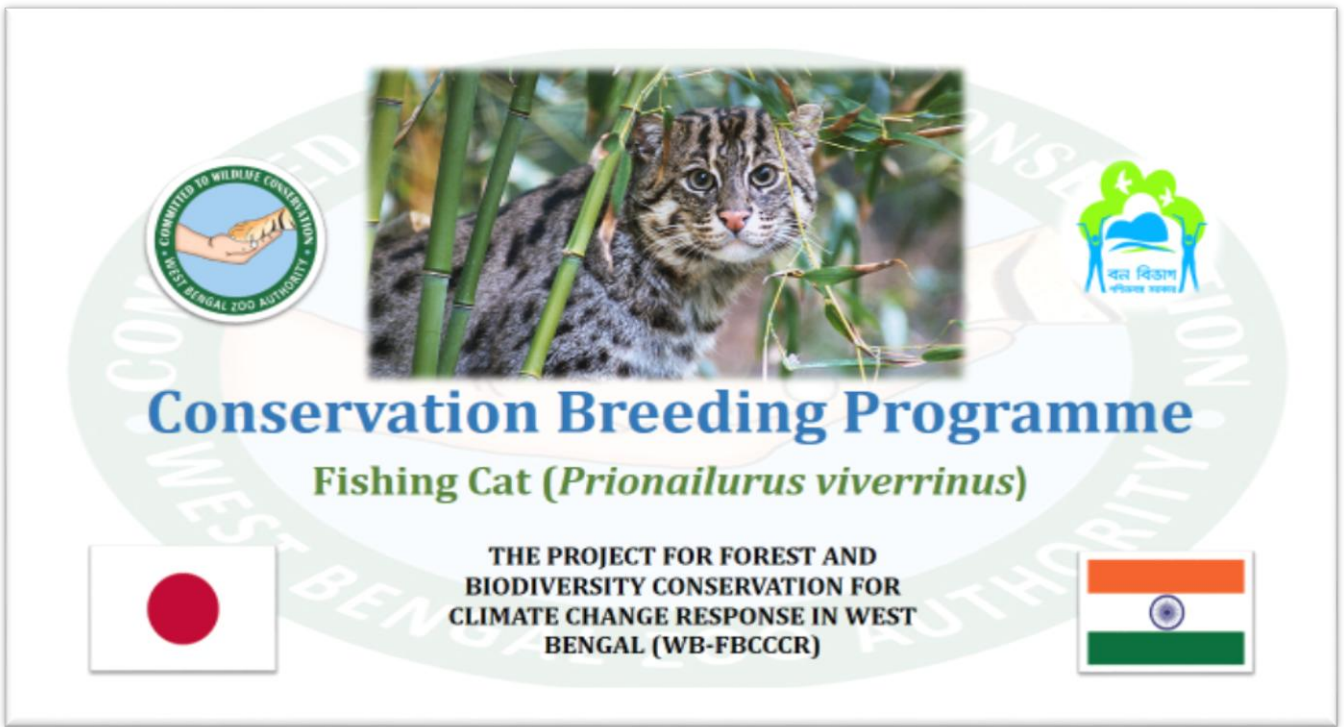


Figure 34: Brochure on Breeding and Release of Fishing Cat

Chapter VII: Other Activities

7.1 Background:

The activities outside the financial outlay of the project have been included here and PoC is one of the major components during Financial Year 2023-24 in this category which was implemented at Jhargram DMU to zero-in on efficacy of AI-Trailguards in Elephant infested lateritic tract of South-West Bengal with high population density.

7.2 Proof of Concept (PoC):

A Proof of Concept (PoC) is a demonstration of a product/phenomenon in which work is focused on determining whether an idea can be turned into a reality. A PoCs goal is not to seek market demand for the concept or choose the best way to produce it. Rather than focusing on building or developing the idea, it tests whether the idea is feasible or viable. In addition, it enables those involved in the Proof-of-Concept exercise to explore its financial potential.

7.3 Summary of Implementation

7.3.1 Objective: To mitigate human-elephant conflict in W.B, JICA worked with WBFD in a PoC at Jhargram, West Bengal and to zero-in on a methodology which may be replicable in similar tract of the state.

7.3.2 Technology partner: A Digital partner, with similar experience, "RESOLVE" was selected.

7.3.3 Funding: This PoC was complimentary in nature and selection of digital partner and entire payment was done by JICA.

7.3.4 Timeline and Budget:

Timeline: Mid-August 2023 to January 2024

Budget ceiling: USD 70,000 including all taxes and expenses

Cost of each AI Trailguard: USD 750 i.e. Rs. 62,273.00 (approx.)

7.3.5 AI Trailguard-Features:

- An AI -enabled camera-based alert.
- First, a motion sensor is triggered,
- Secondly, an AI algorithm in- camera selects images of interest and transmits directly
- Range of vision is 10-12 m

7.3.6 Activities in the PoC exercise:

1. Project setup and planning
2. Training workshop
3. Pilot deployment
4. Roll-out deployment

7.3.7 Transmission of alert:

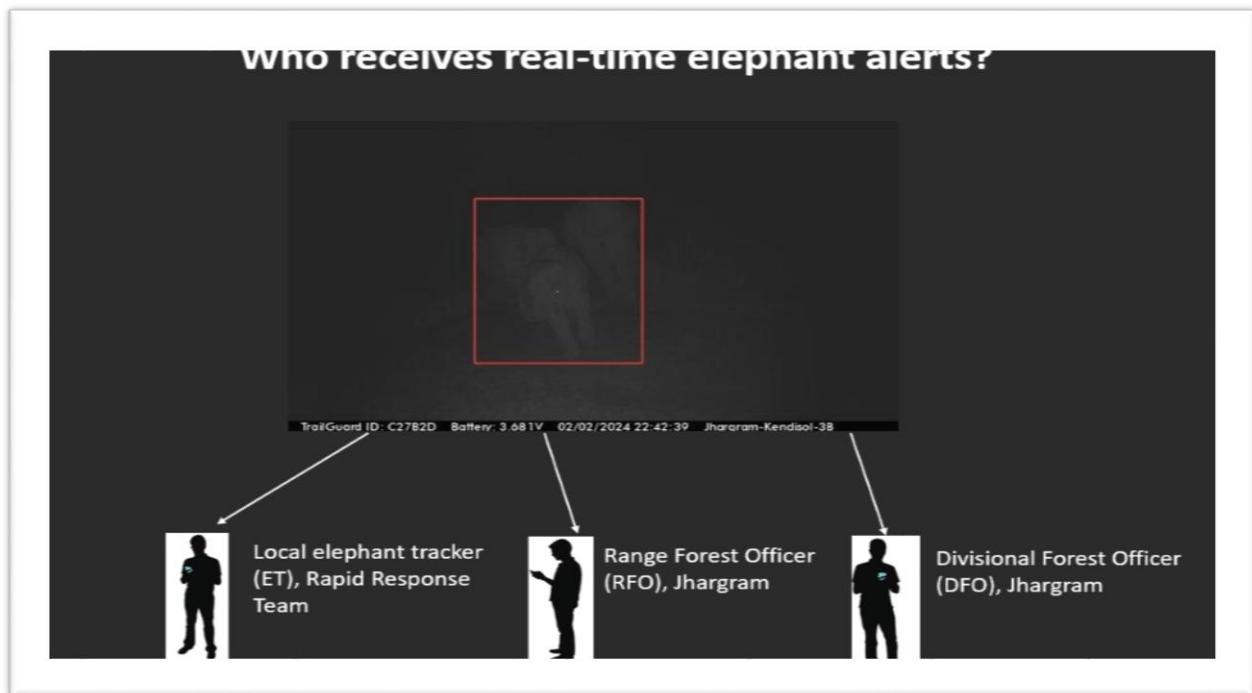


Figure 35: Schematic real-time transmission of elephant alerts to Jhargram DMU aiding in managing HEC events

7.4 Results:

7.4.1 Real-time detection and transmission of elephant alerts:

- 175 detections transmitted in real-time.
- Rapid Response Teams (RRTs) planned their responses as per Standard Operating Procedures (SOP)
- Detection of lone bulls, small groups and herds

7.4.2 Using the real-time elephant alerts for effective mitigation measures:

- RRTs alerted JFMC members in adjoining sites of elephant detection.
- The response from the RRTs include:
 - Blocking of trails and forest roads from human use for the duration until elephants cross over to the forest;

- Using loud noises to scare them away.
- RRTs alerted JFMC members in adjoining sites of elephant detection.
- The response from the RRTs include:
- blocking of trails and forest roads from human use for the duration until elephants cross over to the forest;
- Using loud noises to scare them away.

7.4.3 Potential for re-identification of elephants in Jhargram:

- In past two years RRTs encountered problems by lone bull elephants.
- Taking this into account strategic placement of TrailGuard AI systems about 44% , elephant alerts were of lone bulls
- During PoC , 7-12 unique lone bull individuals detected across different locations
- Preparing a dossier of these “problem” elephants.
- Monitoring the movement patterns of lone bulls.

7.5 Further way ahead:

- Maintain the 30 AI Trailguard units in Jhargram for further 1 year.
- Rs.50,00,000/- for EWS under JICA project, may be used for further expansion. (Rs.50,00,000 / Rs. 62,273.00 = 80 AI Trailguards)
- Elephant routes are there in Jhargram and we worked on 3 routes, we may try to place AI Trailguards in balance 6 routes at Jhargram.
- We may try it in one protected area in North Bengal also.



Figure 36: Image taken at Jhargram-Barashuli on 01.01.2024 by AI trailguard during PoC at Jhargram DMU



Figure 37: Selection of installation area in Jhargram during September, 2023 during PoC at Jhargram DMU

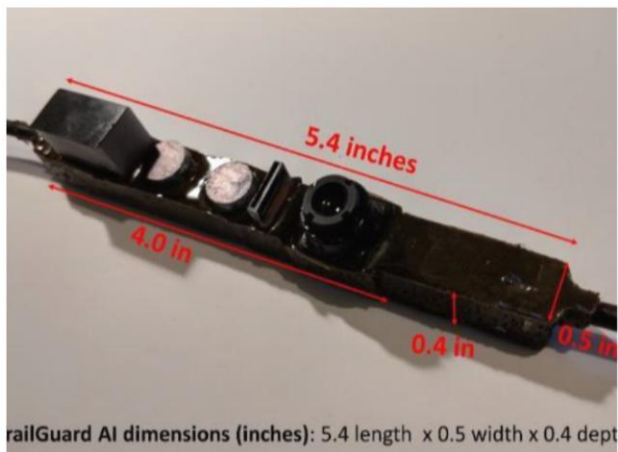


Figure 38: AI trailguard in close-up which were used during PoC at Jhargram DMU



Figure 39: Installing AI Trailguard on tree at Jhargram Division in November, 2023 during PoC at Jhargram DMU

7.6 Further progress regarding AI Trail Guards at Jhargram during Financial Year 2024-25

Five new AI Trail Guards were donated by RESOLVE in lieu of the earlier supplied 30 AI Trail Guards for PoC. These new advanced AI Trail Guards were installed in Jhargram DMU in the elephant infested region as per guidance of Head, DMU Jhargram and his team.

7.7 Detailed status of KB-17 Land for construction of PMU Building:

In WBFBC Project (West Bengal Forest and Biodiversity Conservation Project)- first JICA funded forestry project for the State, building support was extended at the state level, by providing funds to add two floors to the existing headquarter building (i.e. Aranya Bhawan). It was envisaged that PMU could be located in the additional structure, but due to the government decision to relocate the Minister in-charge, along with the forest secretariat from the existing old government building to the forest headquarter, the space available could be utilised only for establishing GIS facility for the project purpose. Now, the PMU building will come-up in separate land, and will exclusively be utilised by the PMU for implementation of the Project activities. The step wise timeline of activities till now for this are as follows:

- Joint inspection by SDM, 24 Parganas North was done for encroachment eviction on 09.09.2024.
- Encroachment has been evicted in January, 2025.
- Inter-departmental transfer of the said land at KB-17 Salt Lake over an area of 8.4783 Kattahs from Urban Development and Municipal Affairs to Forest Department is took place on 24.02.2025.

- e-Tender for Request for Proposal for Engagement of Architectural Firm Consultant for the WB-FBCCCR Project has been cancelled due to non-receipt of minimum bids. In this regard, Publication of Abridged Tender Notice against e-Tender 2nd call for Request for Proposal for Engagement of Architectural Firm Consultant for the WB-FBCCCR Project has been issued vide this office letter no. 464 /WBFBCCCR/3-1(1A)/24 dated 28.03.2025.

7.8 Visit of Counsellor, Embassy of Japan on 18.12.2024:

As per direction to PMU from JICA, Japanese Embassy Counsellor Mr. Jiro Kodera was welcomed at Netaji Subhash Chandra Bose Airport, Dum Dum, Kolkata at around 10 AM on his arrival from New Delhi by the Officials of WB-FBCCCR Project. After a short briefing and introduction, he was accompanied to Hijli Forest House, Kharagpur Forest Division. There a brief halt was given for freshening up and also to discuss the plan and purpose of the visit. Then the Project Officials along with the Local Forest Field Officials accompanied him to the following field sites as per the approved tour program:

- 1) **Tall Seedlings Nursery:** Visit to Hijli Central Nursery which has been developed and upgraded under the WB-FBCCCR for taking up the afforestation works within the Forest Division in the next planting season. More than 40 different forestry species have been raised in the nursery with some notable presence like Sal, Arjun, Red Sanders, Kusum, Neem, Mahua, Haritaki, Bahera etc. The nursery has presently a stock of more than 70000 seedlings. Around 20 Nos. local JFMC members are working daily in the nursery on daily wages.
- 2) **Older Plantation Created under JICA funded WBFBCP:** Visit to 2018-19 Sal & Associates Plantation at Mouza-Rangamatia, Beat & Range Hijli under Kharagpur Forest Division. The plantation was raised over 13.5 Ha area in the Phase — Project (WBFBCP) under the JICA ODA Loan in A2 Model.
- 3) **Livelihood Interventions:** Visit to the site of Community Infrastructure Development Activities (CIDA) and Income Generation Activities (IGA) at Kesuria Mouza & JFMC, Beat & Range Hijli under Kharagpur DMU. Under the CIDA Component of the Project (WBFBCP), a Community Hall was constructed in the said JFMC in 2017-18. Micro financing was done to the SHGs under the JFMC in the said project as a part of IGA wherein they established small business like sewing, rearing of Goats & Poultry, Small Shops etc. which has uplifted them economically and reduced their dependence on Forests.

After the completion of the above mentioned field visit, returned back to Hijli Forest Rest House for refreshment. Then proceeded to Lalit Great Eastern Hotel, Kolkata. At around 7 PM Mr. Kodera was see offed at Great Eastern Hotel.



Figure 40: Visit of Mr. Jiro Kodera, Counsellor, Embassy of Japan at Hijli Central Nursery



Figure 41: Welcoming Mr. Jiro Kodera, Counsellor, Embassy of Japan at Hijli Forest Rest House on 18.12.2024

7.9 Ex-Post Evaluation on "West Bengal Forest and Biodiversity Conservation Project" (L/A No. ID-P223) under WB-FBCCCR Project

a. Background of Ex-Post Evaluation:

Japan International Cooperation Agency (JICA) evaluates projects throughout its project cycle mainly to fulfil two purposes:

- a) to improve projects further through the learning loop in the project cycle [learning from lessons drawn from ex-post evaluation]; and
- b) to ensure accountability to stakeholders including Japanese nationals and people of partner countries.

In view of this, the Evaluation Department of JICA, in principle, carries out external ex-post evaluation on all JICA's projects which cost JPY 1 billion or above and other projects deemed to provide valuable insight within two to three years after project completion. Ex-post evaluation focuses on whether project activities have been carried out appropriately to realize their development outcomes, on to what extent the project contributed to development results and on how well their effectiveness will be sustained. A basic approach is to assess projects against stated objectives, benchmarks and expected outcomes. With such objectives and to ensure impartiality and transparency, the Evaluation Department of JICA appoints and dispatches third party evaluators, which is called external ex-post evaluation.

For the above-captioned project, the Evaluation Department of JICA has appointed OPMAC Corporation. Throughout the evaluation process, the team of the above consultant will visit the project sites and concerned organizations, conduct various surveys and then evaluate the project based on the OECD DAC 6 evaluation criteria (relevance, coherence, effectiveness, impact, efficiency, and sustainability). Results of evaluation, including lessons learned and recommendations, will be fed back to JICA as well as the government of the partner countries including executing agencies, to help improve JICA projects as well as to ensure accountability and transparency. They will be also open to the public via JICA's website.

b. Schedule of Study:

The schedule is as follows:

- | | | | |
|----|-------------------------------------|---|--------------------------------|
| a. | Start of Study | : | September 27, 2024 |
| b. | Preparatory Work | : | October to December 2024 |
| c. | Response to Questionnaire | : | December 2024 |
| d. | Field Visit 1 | : | January 10 to January 31, 2025 |
| e. | Analytical Work | : | February to May 2025 |
| f. | Field Visit 2 | : | Mid-May 2025 |
| g. | Drafting of Evaluation Report | : | June 2025 |
| h. | Comments on Draft Evaluation Report | : | Late September 2025 |
| i. | Completion of Final Report | : | January 16, 2026 |

The final report on the evaluation study will be submitted by OPMAC to JICA on January 16, 2026.

In connection with this, Mr. Keishi Miyazaki, Managing Director & CEO, OPMAC Corporation; Mr. Kazuki Kawamura, Consultant, OPMAC Corporation and Dr. Suchandrima Chakaraborty, Associate Consultant, Tetra Tech India visited Kolkata in January, 2025. Followed by field visit in North Bengal and South Bengal in January, 2025. They visited Darjeeling, Jalpaiguri, Cooch Behar, Kharagpur, Bankura, Midnapore and Sundarban during their field visit. They would again visit on Mid-May 2025 during Financial Year 2025-26.

Detailed interview and observation has been made from JFMC, SHG and Village Households:

Organizational and institutional aspects- Feedback from JFMC

- Monthly JFMC meetings, annual General Assembly Meetings and Annual Board Meetings are conducted regularly, with proper documentation like, resolution notes, minutes of the meeting and other relevant documents.
- Proper cycle of election of board members are conducted with the period varying between 3-5 years for different JFMCs through nomination and selection process based on eligibility.
- Most of the JFMC presidents mentioned that they have a fairly good institutional capacity where trainings of the roles of the JFMC members have been carried out during the initial phase of the project either by WBFD officials, or Block Officers or in rare cases some NGO partners.

Technical aspects- Feedback from JFMC and SHG

- In all, JFMC members have different role in different perspectives for which they have received different training and maintain respective books/registers.
- Records are systematically maintained, with plantation records, meeting minutes, and financial reports securely stored at the Beat Officer's office. Regular audits are conducted to ensure accurate and efficient record-keeping.
- The technical capacity of JFMC/EDC is moderate but requires enhancement. Strengths include regular training, proper documentation, and active afforestation initiatives. However, challenges such as infrequent training sessions, decreasing youth engagement, and limited financial resources impede long-term sustainability and technical progress. Although afforestation efforts have been successful, members need more frequent refresher courses and updated skill development to stay aligned with evolving forestry practices.

Financial aspects- Feedback from JFMC and SHG

- The Forest Department remains the primary financial contributor. Additionally, limited to moderate funding comes from roads, electricity and other block

development projects and some funds from small grants for afforestation activities.

- Sometime some JFMC has some projects run by NGO's although they are not regular.
- While the income sharing from sale of forest product is limited in JFMCs in the reserve forest the JFMCs in lower plain generate more income from CFC work and grant a larger chunk of income-share which they use for community development work.
- While the financial capacity of JFMC/EDC in the mountain and forest area of Darjeeling are limited and unsustainable, as after the JICA project the funding has significantly declined the JFMC in the Jalpaiguri division seems to be financially better off due to better income from income sharing work.
- But overall in all areas the funding from of the JFMCs has generally declined from the JICA project time which has created constraints in funding development activities and created financial uncertainty threatening long-term sustainability.

Environmental conservation- Feedback from JFMC, SHG and Village Household

- The afforestation activities, particularly the strategic planting of indigenous tree species, have significantly contributed to improving soil stability and reducing erosion. These native trees, with their extensive root systems, not only bind the soil more effectively but also enhance its nutrient profile, fostering a healthier ecosystem. This has been particularly impactful in areas prone to landslides and soil degradation, ensuring long-term environmental resilience.
- Furthermore, conservation efforts have complemented afforestation initiatives by introducing protective measures such as the construction of robust barriers to shield vulnerable areas from external pressures. These barriers, made from eco-friendly and durable materials, help prevent further soil loss and safeguard newly planted vegetation. Additionally, the installation of improved drainage systems has played a crucial role in mitigating the adverse effects of heavy rains and floods.
- Some villages by channelling excess water efficiently, these systems reduce the risk of waterlogging, minimize surface run-off, and protect both agricultural land and forested areas from erosion and damage. Collectively, these efforts represent a comprehensive approach to fostering ecological balance and ensuring the sustainability of natural resources.
- Species diversity in the region has shown remarkable improvement, with significant increases observed in populations of wild boars, deer, leopards, and a variety of bird species. This resurgence can be attributed to targeted conservation efforts, including habitat restoration, afforestation, and the

establishment of protected zones that have reduced human-wildlife conflicts and poaching.

- The increase in wild boars and deer, as herbivores, plays a vital role in maintaining the ecological balance, contributing to seed dispersal and fostering the regeneration of native flora. Leopards, as apex predators, help regulate prey populations, ensuring a balanced ecosystem. The thriving bird populations enhance pollination and seed distribution, supporting a richer and more diverse habitat.
- These changes not only indicate ecological recovery but also suggest a healthier and more resilient ecosystem capable of supporting both wildlife and local communities. The positive trends underline the importance of sustained conservation programs and collaborative efforts to preserve biodiversity in the region.
- Reports from local farmers and village authorities highlight an increase in incidents of human-animal conflict involving leopards, elephants, and wild boars. This increase has had a direct negative impact on the local community, including reduced loss of agricultural crops, income, and property such as houses. It has also increased the strain on animal husbandry activities, with more cases of loss of livestock, such as chickens and goats.
- These conflicts often led to severe repercussions, including economic setbacks for families and emotional distress. In some cases, these interactions tragically resulted in the loss of human lives. The reported increase in such incidents underscores the effectiveness of targeted conservation measures, improved wildlife management practices, and community-based initiatives aimed at reducing human-wildlife interactions. There is a need for more discussion for sustainable solutions for maintaining local biodiversity and also foster coexistence, enhancing the safety, livelihoods, and overall well-being of the affected communities.

Improvement of people' standard of living- Feedback from JFMC, SHG and Village Household

- Since the project's implementation, there has been a notable improvement in livelihoods, with diversification playing a key role in enhancing community resilience. Compared to a decade ago, household surveys reveal a significant shift in income sources. Families have increasingly adopted secondary income-generating activities, leading to a reduced dependency on forests for their primary needs.
- Agriculture has emerged as a more sustainable and productive livelihood option, benefiting from better practices and resource availability. Additionally, the growth of tourism has created new opportunities for income, such as running homestays, guiding tours, or selling local handicrafts. Small businesses, including

retail shops, food services, and artisan trades, have also flourished, providing stable alternative income streams for many households.

- This shift not only reflects the success of capacity-building efforts and resource optimization but also underscores the community's ability to adapt and thrive through diversified economic activities. The reduced reliance on forest resources has contributed to environmental conservation while simultaneously improving the socio-economic well-being of the community.

Women's Social Participation and Economic Activities- Feedback from JFMC, SHG and Village Household

- Women have experienced significant empowerment due to increased income from Self-Help Groups (SHGs), improved access to loans, and enhanced decision-making roles within both households and village-level governance. These developments have enabled women to take on more active and influential roles in shaping their families' and communities' futures.
- The higher income from SHGs has provided women with greater financial independence, allowing them to contribute meaningfully to household expenses and savings. Access to loans through these groups has further empowered them to start small businesses, invest in education, or expand agricultural activities, thereby diversifying income sources.
- Increased participation in decision-making within households has elevated women's voices in financial planning, children's education, and other critical matters. At the village level, their involvement in community discussions and governance has fostered more inclusive decision-making processes.
- This empowerment is further reinforced by the migration of male members of households, which often places women in key roles to manage finances and resources, thereby strengthening their leadership and economic capacity. With continued access to education, skill development, and financial resources, women are poised to play a pivotal role in ensuring long-term financial sustainability and driving social progress in their communities.

Suggestions for Future Initiatives- Feedback from JFMC, SHG and Village Households:

1. Wildlife Conflict Mitigation:

- Install electric fencing and construct elephant trenches to prevent animals like elephants and wild boars from entering agricultural areas. This ensures the safety of crops and property while maintaining animal welfare.
- Promote awareness programs about non-lethal conflict mitigation techniques and involve the local community in maintenance.

2. Financial Support for JFMC and Villagers:

- Increase funding for Joint Forest Management Committees (JFMC) to enhance their operational capacity.
- Establish loan facilities through JFMC and the West Bengal Forest Department (WBFD) to provide villagers with accessible credit for livelihood activities.
- Expand funding for Self-Help Groups (SHGs) and offer longer repayment periods to ensure productive use of the loans and sustainable returns.

3. Capacity Building and Training:

- Conduct frequent training programs for JFMC and SHG members focusing on financial management, resource accounting, and long-term sustainability strategies.
- Introduce training in alternative income-generation activities such as mushroom cultivation, beautician courses, eco-tourism services, and handicraft production. This will diversify income sources and empower women.

4. Support for Eco-Tourism Development:

- Provide support for the construction of eco-lodges and community-run guesthouses.
- Facilitate training programs on eco-tourism management, hospitality, and marketing.
- Launch targeted advertising campaigns to promote the region as a sustainable tourism destination.
- Encourage local ownership and participation to ensure that tourism benefits flow directly to the community.

5. Market Access for Agricultural and Commercial Crops:

- Develop infrastructure for the collection, storage, and transportation of perishable goods like mushrooms and vegetables to ensure timely delivery to markets.
- Create linkages with larger markets or cooperatives to provide fair pricing for the villagers' produce.

6. Infrastructure Development for Safety and Accessibility:

- Build additional culverts, concrete village roads, and bridges to improve accessibility, especially for elders and children, reducing the risk of accidents.
- Upgrade the village infrastructure to ensure year-round safety and connectivity. By implementing these measures, the community's livelihoods, financial stability, and overall resilience can be significantly enhanced, fostering a more sustainable and inclusive development pathway.



Figure 42: Meeting with CCF, Hill Circle, Darjeeling on 15.01.2025



Figure 43: Meeting with officials and staff at Senchal under Darjeeling Wildlife DMU on 15.01.2025



Figure 44: Meeting with officials and staff at Kurseong DMU on 17.01.2025



Figure 45: Meeting with CCF, Wildlife North on 17.01.2025

Chapter VIII: Accounts & Audit

8.1 Background:

Accounting and auditing are related and go hand-in-hand with one another. Accounting provides information on the financial health, profitability and performance of an organization, while auditing aims to determine whether or not the financial data provided by accounting is correct. Accounting and audit have a pivotal role to play in the financial activities and record keeping process of any Society. However, their roles and focus are different. While accounting translates to a much wider field, encompassing everything, including the flow of funds from the government to the society, auditing is more of a specialized service.

Auditing is a part of the accounting world. It is an examination of accounting and financial records that is undertaken independently. This is done to determine if the company or the business undertaking/society has conformed its operations to the existing laws and generally accepted accounting principles.

Accounting of an organisation/society is done by its own employees. The financial statements used in accounting are a brief summary of financial transactions over an accounting period. Accounting is categorized into various branches such as Cost Accounting, Financial Accounting, Management Accounting etc. The accounting report helps the management to inform society's decisions.

8.2 Computerized Accounting System:

Computerized accounting system based on standard accounting software (Tally) is being utilized for maintaining financial records till FMU level for real-time reporting. The accounting software has been customized and adopted for financial management, tracking disbursement as per annual plans and efficiently compiling Statement of Expenditures (SOEs) for submission to JICA, State Government and Central Aids, Accounts and Audit Division (CAAA) under the Ministry of Finance, Department of Economic Affairs, Government of India. All operational levels are being strengthened both in terms of equipment/connectivity and human-resource for implementing the plans. Systematic training was planned for all key staff, at all levels to handle and utilize this software for maintaining financial records and generating reports including landscape segregated financial progress reports.

8.2.1 Tally Implementation Development and hosting in Microsoft Cloud:

Implementation and development was done as follows:

- 1) Tally Prime Server
- 2) Microsoft Azure Cloud implementation
- 3) Tally virtual users
- 4) TS-pulse enterprise edition
- 5) Microsoft Office 2022 Standard Edition
- 6) PMU, DMU and FMU wise database creation

- 7) DMU wise Group Creation
- 8) Head wise Budget Setup
- 9) Budget Data Entry
- 10) Cumulative Report
- 11) User wise Data Security Management

8.2.2 Development of component wise detailed Chart of Accounts (COA):

Selection of Cost/Chartered Accountant Firm for development of component wise detailed Chart of Accounts (COA) for PMU, DMU and FMU, Mapping of COA with the Tally Software in base data files along with preparation and submission of Accounting Manual and procedure (PMU, DMU and FMUs) of WB-FBCCCR Project is being done.

Manual and procedure (PMU, DMU and FMUs) of WB-FBCCCR Project is being done.

8.3 Audit:

8.3.1 Statutory Audit:

To institute financial discipline and controls as well as to comply with JICA requirements, audits is being undertaken on a regular basis. Statutory financial audits is annually conducted at PMU and DMUs by engaging a qualified chartered accountant firm by PMU.

8.3.2 Internal Audit:

Beside the annual Statutory Audits, PMU is instituting a system of undertaking concurrent audits annually to keep close track of funds and its utilization, and capacitate various project offices to maintain systematic and proper records as per the JICA norms. It would be carried through a qualified and credible CA firms experienced in auditing externally-aided projects.

The e-Tender for Selection of bona fide Chartered / Cost Accountant Firms for Internal Audit for Financial Year 2024-25 of PMU and DMUs of Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal (WB-FBCCCR) are floated in <https://wbtenders.gov.in/> on 03.04.2025 vide NIT NO. : WBFBCCCR/NIT-04/2024-25 vide Memo No. 478/WBFBCCCR/1-7(3)/25 dated 28.03.2025.

8.3.3 CAG Audit:

The audit of office of the West Bengal Forest and Biodiversity Conservation Society (Japan International Cooperation Agency) from 4th March, 2025 to 7th March, 2025 was carried out by field audit party of office of the Principal Accountant General (Audit- II), West Bengal for undertaking the review of Cash/Fund Management. The response to comments furnished by them is under process.

8.4 Financial Results:

8.4.1 Utilisation of Grants:

The Society has received ₹ Nil Crores as Grant during the year 2024-25. The expenditure was incurred from the balance fund of ₹ 40 Crores released during Financial Year 2023-24.

Funds to the tune of ₹ 29.15 Crores were released to DMUs during the FY 2024-25.

The expenditure incurred during Financial Year 2024-25 for implementation of works in the PMU, DMUs and FMUs was as per approved APO for the Financial Year 2024-25 and is to the tune of ₹ 19.48 Crores.

