# Ex-Ante Evaluation (for Japanese ODA Loan) South Asia Division I, South Asia Department

Japan International Cooperation Agency

1. Name of the Project

(1) Country : India

(2) Project: Project for Capacity Enhancement for Effective Forest Management

(3) Project Site/Target Area: States and regions in India agreed upon with the executing agency

(4) Loan Agreement: March 27, 2025

2. Background and Necessity of the Project

(1) Current State and Issues of the Forestry and Biodiversity Sector and the Priority of the Project in India

In India, the forest cover fell to about 19% in 1987 due to the progressive decline and degradation of forests in the past (Forest Survey of India, 1987). In its National Forest Policy formulated in 1988, the Government of India set a target of restoring forest cover to 33% and has since been working to conserve forests, establish national parks and wildlife sanctuaries, and develop legal systems to prohibit hunting and trade in wildlife and the collection of certain plants. As a result, the forest cover rate recovered to about 22% by 2021, and the country as a whole has begun to see a gradual increase, but against a backdrop of factors such as the rapid increase in population, the rapid progress of urbanization, and the existence of many impoverished residents who still depend on forest resources to make a living, forests are still under pressure to deteriorate and decrease.

Biodiversity is also under threat. India has rich and diverse ecosystems, with 7-8% of the world's ecosystems found in the country, which accounts for 2.4% of the Earth's land area (National Biodiversity Authority, 2018). However, of the world's 36 biodiversity hotspots (areas with high biodiversity but threatened by human destruction), India has four. For example, the number of plants designated as "Threatened Species" by the International Union for Conservation of Nature has increased from 479 in 2021 to 647 in 2024 (IUCN Red list, 2024). The causes are reported to include habitat degradation, introduction of non-native species, and climate change. These issues are not independent, and it is necessary to take comprehensive action, taking into account their interactions.

Under these circumstances, the importance of initiatives that utilize the diverse

functions provided by forest ecosystems (hereinafter referred to as "ecosystem" services") is increasing. In general, ecosystem services contribute to the preservation of habitats for diverse organisms, but there are three other main functions that are also expected. First, they contribute to mitigating climate change. India's carbon dioxide emissions are the third highest in the world after China and the United States, and its "Nationally Determined Contribution (NDC)" (announced by the Government of India in 2022) under the Paris Agreement stipulates that it will reduce its carbon dioxide emissions by 45% by 2030 and increase its carbon dioxide absorption by 2.5 to 3 billion tons through afforestation. Second, they contribute to climate change adaptation. India is a disaster-prone country, and natural disasters such as cyclones, floods, droughts and landslides are becoming more severe. In recent years, a total of 38.9 million people in the states of West Bengal and Odisha were affected by Cyclone Amphan in 2020 (UNDRR, 2020). Using ecosystem services can increase resilience to disasters, such as preventing soil erosion, mitigating floods, and protecting against tsunamis. Third, they contribute to solvingwater problems. In India, more than 600 million people were exposed to water scarcity and water pollution in 2018, and it is projected that about 40% of the population (more than 500 million people) will have "no access to drinking water" by 2030 (NITI Aayog, 2018). The problem is becoming more acute as climate change and other factors alter rainfall patterns. Forest soils, which have the ability to recharge water sources, are also becoming more important because they have a water purification function as rainwater passes through forest soils.

In order to use the diverse functions of forest ecosystems more effectively, Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, (hereinafter referred to as "MOEFCC") is working on implementing the National Forest Policy. The policy (formulated in 1988) focuses on increasing forest cover and forest conservation, maximizing ecosystem services, climate change measures (mitigation and adaptation), water cycle and watershed management, and collaboration with scientific research and its various practitioners. To implement the policy in practice, the "Project for Capacity Enhancement for Effective Forest Management" (hereinafter referred to as "the Project") aims to strengthen the policy implementation capacity of forest administrators by conducting research, developing projects and improving training systems related to climate change mitigation through forest and biodiversity conservation. Therefore, the Project is considered to be important in the forestry and biodiversity sector in India.

(2) Japan's and JICA's Cooperation Policy in the Forestry and Biodiversity Sector

At the COP26 held in November 2021, Japan announced its participation in the Glasgow Leaders' Declaration on Forests and Land Use, and stated that it would strengthen its efforts to halt deforestation and land degradation by 2030, and promote forest conservation and restortion. In addition, at the COP15 held in December 2022, Japan and other countries adopted the Kunming-Montreal Biodiversity Framework, a new global biodiversity goal (Post-2020 Biodiversity Framework).

Japan's Country Development Cooperation Policy for India (November 2023) positions "Clean Socio-Economic Development" as one of its priority areas, and it states that it will support projects related to the conservation and use of forest resources. JICA Country Analysis Paper on India (March 2018) also states it will promote cooperation to address environmental and climate change issues such as forests conservation and disaster risk reduction. JICA's Global Agenda for "Natural Environment Conservation" also calls for building a society that can continue to enjoy the blessings of the nature by pursuing the harmony between human and nature, preventing ecosystem loss or degradation. The Project implements climate change measures through forestry and biodiversity conservation and is consistent with these policies and analyses. As of December 2024, there were 32 approved ODA loans for the forestry and biodiversity sector, totaling 340 billion yen.

## (3) Other Donors' Activities

Most recently, the World Bank implemented the India Ecosystems Service Improvement Project (2017-2022) in Madhya Pradesh and Chhattisgarh, with the MOEFCC as the implementing agency, to improve forest quality, improve land management, and promote non-timber forest products. This was a grant from the Global Environment Facility, and the amount was US\$14.64 million. Also, the United States Agency for International Development (USAID), together with the MOEFCC and NGOs, provided technical assistance for improving forest management and improving the livelihoods of forest-dependent households in the states of Bihar, Kerala and Telangana.

3. Project Description

(1) Project Description

### 1 Project Objective

The objective of the Project is to enhance the capacity of forest personnel for implementation of forest policies through research and development, implementation of pilot projects, improvement of training systems and institutional strengthening in the area of forest and biodiversity conservation and climate change measures, thereby contributing to sustainable development in India.

#### 2 Project components

The project components are as follows. Under Components 1 to 3, research institutions under the MOEFCC and state forest departments, etc., submit proposals for sub-projects they will implement to the MOEFCC, which will then select them.

The selection criteria for subprojects shall be: 1) Alignment with and contribution to the policies of the MOEFCC, such as forest and biodiversity conservation and climate change measures, 2) Possibility of expansion to other states and demonstration effects, 3) Partnership with research institutions, private sector companies and civil society, and 4) Not classified as environmental categories A and B in the "Japan International Cooperation Agency Environmental and Social Considerations Guidelines" (promulgated in January 2022), etc.

1) Component 1: Research

Research activities related to forest and biodiversity conservation and climate change measures by research institutions under the MOEFCC. It is expected to include research on topics such as afforestation and forest management methods to improve GHG absorption and carbon sequestration capacity, disaster prevention measures that utilize ecosystem services, and the identification and assessment of invasive species (approximately 8 projects).

2) Component 2: Project development (pilot projects)

Pilot projects by the state government's forest department to address forest and biodiversity conservation and climate change measures. It is expected to include around four projects that contribute to climate change measures (mitigation and adaptation), water issues (water shortages, pollution) improvement, etc., such as river basin management through the use of forest ecosystem services.

3) Component 3: Development of training system

Strengthening the training system for forest and biodiversity conservation and climate change measures provided by national and state forestry training institutions and state forest departments. Specifically, this will involve developing training materials, strengthening the capacity of forestry administrators (domestic and third-country training), and improving training facilities. Promoting the dissemination and return of knowledge to each state, including the results of Component 1 and 2 and the research and projects of the executing agency.

4) Component 4: Strengthening of organizational structure

Strengthening the project implementation capacity of the MOEFCC, research institutions, state forest departments, etc. related to Components 1 to 3. Specifically, this includes hiring staff, equipping facilities, and providing training to improve the capacity of project planning, selection, financial management, monitoring, and evaluation for each sub-project.

5) Consulting services (project management, etc.)

③ Project Beneficiaries (Target Group): MOEFCC, research institutions, forest administrators from the state governments' forest department, etc.

(2) Estimated Project Cost: 10,098 million yen (Japanese ODA loan: 8,280 million yen)

(3) Schedule: March/2025- December/2031 (83 months) Completion of all activities (December 2031) is considered as the completion of the Project

- (4) Project Implementation Structure
  - 1 ) Borrower: President of India
  - 2) Guarantor: N/A
  - 3) Executing Agency: Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India
  - 4) Operation and Maintenance System:

MOEFCC will establish a Central Project Management Unit to oversee and manage the overall project. In addition, a Project Management Unit will be established for each of the selected research institutions, state forest departments, national forest officer training institutions, and state forest officer training institutions to manage the sub-projects.

- (5) Collaboration and Sharing of Roles with Other Donors
  - 1) Japan's Activity:

In the ongoing ODA loans "The Project for Climate Change Response and Ecosystem Servies Enhancement in Rajasthan" (L/A signed in February 2024), "Tamil Nadu Biodiversity Conservation and Greening Project for Climate Change Response" (L/A signed in 2022), and "The Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal" (L/A signed in 2023), measures to address climate change, such as afforestation, the creation of windbreak forests, and the management of coral reefs and seaweed beds, are being implemented. The results of research and training under the Project are scheduled to be used in the implementation of these projects. In addition, the executing agencies for ODA loans in the forestry sector hold a "JICA Annual Forestry Workshop" every year on a rotating basis, and share lessons learned, results, Japanese experience, etc. The Project also seeks to utilize and expand these results.

- 2) Other Donors' Activity: None in particular
- (6) Environmental and Social Considerations
  - 1 Category: C

2 Reason for Categorization: The Project is likely to have minimal or no adverse impact on the environment under the JICA Guidelines for Environmental and Social Considerations (promulgated in January 2022)

- (7) Cross-Sectoral Issues
  - 1 Climate change

The Project will contribute to climate change measures (adaptation and mitigation) as sub-projects contributing to climate change measures (adaptation and mitigation) will be selected during project implementation.

② Poverty measures and consciousness

Climate change and water issues, which will be addressed through research and project development activities under the Project, have a particularly large impact on the poor, and it is expected that the effective implementation of the Project will mitigate the impact on poverty.

③ Participatory development

The trainings to be implemented as sub-projects will provide opportunities for field forest officers to learn about participatory forest management and community development, etc., thereby supporting the sustainable livelihoods of local residents in forest areas.

- (8) Gender Category: GI(S) Gender Informed (Significant)
  - < Details of Activities/ Reason for Categorization>

The survey identified a gender issue in that the proportion of male forest officers is higher (the proportion of female forest officers in the forest sector is only 9% as of 2020). In the Project, it was agreed with the executing agency that when renovating or constructing training facilities, standards for their construction would include separate toilets and rest areas for men and women, as well as nursing rooms and sufficient lighting to ensure safety for female field forest officers, whose numbers have increased in recent years. It was also agreed that the participation of female forest administrators and female forest officers in training would be promoted, and that the results and progress would be monitored by the number of female forest administrators who have participated in training. For these reasons, the Project is classified as a "gender activity integration project".

(9) Other Important Issues

The Project will pursue the possibility of partnership with research institutions including Japanese universities and research institutions, as well as private sector companies including Japanese companies. In Components 2 and 3, initiatives will be implemented to promote more efficient and effective forest management based on the use of data and the establishment of a digital platform.

4. Target Outcomes	
(1) Quantitative effects	

## 1) Outcomes (Operational and Effect Indicators)

	Baseline	Target (2030)
Indicator	(Actual value in	[2years after
	2024)	project completion]
1-1 Number of researches addressing	0	
global issues* within the Project	0	
1-2 Number of partnership research		Targets will be set
projects with research institutions	0	after sub-projects
outside India within the Project		are selected, and
2-1 Number of pilot projects addressing	0	the baseline survey
global issues* within the Project	0	conducted after the
2-2 Number of partnerships with		start of the Project.
research institutions, private	0	
companies, or civil society in pilot		

projects	
3-1 Utilization rate of training facilities	
developed / rehabilitated in the Project	N/A
(%)	
3-2 Number of educational materials	
developed in the Project that address	0
global issues*	
3-3 Number of trainings conducted	0
during the project implementation	
period	
3-4 Number of forest administrators	0
who participated in training during the	
project implementation period (persons)	
(Calculated separately by gender)	

\*This refers to issues related to forest and biodiversity conservation, climate change, etc.

(2) Qualitative Effects: improvement of MOEFCC's capacity to implement forest policy, forest and biodiversity conservation, climate change mitigation and adaptation, water issues mitigation, etc.

(3) Internal Rate of Return

As the Project aims to improve the capacity of forest administrators, the financial and economic internal rate of return will not be calculated.

5 External Easters and Rick Control	
5. External Factors and Risk Control	

- (1) Preconditions: None in particular
- (2) External Factors: None in particular

6. Lessons Learned from Past Projects

In ex-post evaluations of past ODA loans to India, such as the Orissa Forestry Sector Development Project (evaluation year: 2018), it was learned that in countries where multiple projects are being implemented in the same sector, it is effective to carefully analyze the factors that led to the emergence and continuation of the effects, to consider effective approaches based on the lessons learned from the results of this analysis, to accumulate objective data to demonstrate the effectiveness of the proposed approaches, and to design the project contents through sufficient discussions with the executing agencies at the time of project formulation.

In the Project, we will select sub-projects by fully discussing the project components with the executing agency and its affiliated research institutions and state forest departments. While conducting factor analysis and quantitative data analysis to determine the causes of effectiveness and sustainability, we will extract lessons from the sub-projects and use them to formulate and select the subsequent sub-projects' project planning. In addition, as already mentioned in 3.

(5) 1), we also plan to implement measures that make the most of the lessons learned from similar projects. We also aim to contribute to the improvement of the effectiveness and sustainability of similar projects by the state government by proposing effective approaches based on these lessons.

#### 7. Evaluation Results

The Project is consistent with the development issues and policies of the Government of India, as well as the cooperation policies and analysis of Japan and JICA, and it also contributes to the international frameworks on climate change (the Paris Agreement) and the SDGs, specifically Goal 13 (combat climate change) and Goal 15 (protect, restore and promote sustainable use of terrestrial ecosystems, and halt biodiversity loss). Therefore, there is a high demand for supporting the implementation of the Project.

#### 8. Plan for Future Evaluation

(1) Indicators to be Used

As indicated in Section 4.

(2) Future Evaluation Schedule

Ex-post evaluation: 2 years after the Project completion

END

Appendix: Map of the Project for Capacity Enhancement for Effective Forest Management

## Map of the Project for Capacity Enhancement for Effective Forest Management

