

## Ex-Ante Evaluation (for Japanese ODA Loan)

South Asia Division 1, South Asia Department, JICA

### 1. Basic Information

Country: India

Project Name: Project for Sustainable Catchment Forest Management in Tripura

Loan Agreement : October 29, 2018

### 2. Background and Necessity of the Project

#### (1) Current State and Issues of the Forest Sector/Tripura State in India

Due to the forest conservation activities of the Government of India, the forest area in India has been improved year by year since 1997, and increased to 21.5% (Indian State of Forest Report 2017) in 2017. Although forest area has been increasing in recent years, forest degradation has occurred due to development projects and an increase in forest utilization pressure, and the overall proportion of open forest (density of crown cover is between 10% and 40%) in the total forest area in India reached 42.7% (in 2017) (Indian State of Forest Report 2017). As the deterioration of the forest progresses, living necessities such as fuelwood or forest resources as a source of income become insufficient, which directly threatens residents' lives. In addition, forest deterioration causes a reduction of water source recharge function, influences the intake of living water and the yield of agricultural crops, and may cause disasters such as floods. Since this situation has become remarkable due to a recent increase in forest utilization pressure, rehabilitation of the degradation of forests, which have close relations with residents' lives, and conservation of the forests are urgent tasks.

About 73% of the area of Tripura State located in the mountainous region in northeastern India (Indian State of Forest Report 2017) is covered by forests, making it a state rich in forest resources. The population is 3.67 million (in 2011), which represents a 15% increase from 2001 to 2011. More than 70% of the population of the state (Census of India, 2011) lives in the vicinity of forest areas, including non-urban areas, and about 42% (in 2011) of the labor force is engaged in the agricultural sector including forestry, making forestry and agriculture major industries for the state. Traditionally, shifting cultivation is carried out especially in forest land, which is one of the limited agricultural options for residents under the condition where irrigation facilities are not developed. Furthermore, firewood is used for cooking in more than 90% of households in rural areas (Energy Source of Indian Households for Cooking and Lighting, 2011-12), making the forests indispensable resources in daily life. On the other hand, a delay in the economic development is one of the challenges because the state has limited people's movement and transportation of goods due to still developing infrastructure in addition to poor accessibility from other states. Especially around the forest land where the employment opportunities are limited in relation to the population increase, poverty is further exacerbated. For this reason, the necessity of ensuring and sustainably managing forest resources as a means of living and livelihood has been increasing, but the recovery of forests has not been catching up with the excessive use of the forest resources, consequently aggravating the living environment of residents.

Under such circumstances, an ODA loan "Tripura Forest Environmental

Improvement and Poverty Alleviation Project” (hereinafter referred to as “past project”), which was implemented from 2007 to 2017, had the main objective of poverty alleviation among villagers that was an urgent task at that time. Thus, support was provided to restore the forest land around the villages where the population concentrates while focusing on improving their livelihoods. As a result, together with the effect of other projects carried out by the state government, the dense forest area in the state increased by 26,100 ha from 2011 to 2015, and the proportion of households living in poverty in relation to the population of the state decreased from 34.4% in 2006 to 14.1% (Reserve Bank of India, 2012). In addition, over 1,500 self-help groups were organized, jobs for 20 million person/day were created, and 52,353 ha of afforestation was conducted in the target area of the past project.

However, in the Tripura State, due to shifting cultivation which is still carried out in 8% of the land (Department of Agriculture, Government of Tripura), the forest area is still decreasing, and 16,400 ha of the forest were lost from 2015 to 2017 (Indian State of Forest Report 2017). In fact, because it is impossible to enforce the prohibition and restriction of the shifting cultivation to residents who are permitted to use the forest land according to “The Scheduled Tribes and Other Traditional Forest Dwellers Act, 2006” in addition to shifting cultivation being a part of the residents’ customs, there is concern that the forest area and the quality will be further reduced. The rate of decrease in the forest cover in Tripura during the above period is the third highest figure in India. In particular, forests in the catchment areas provide ecosystem functions such as water source recharge and prevention of sediment discharge, but some areas exhibit discharge of 80 tons of earth and sand annually due to deforestation and forest degradation (Department of Agriculture, Government of Tripura), leading to declining land productivity and instability of residents’ lives and livelihoods. In order to deal with such situations, it is necessary to reduce the forest utilization pressure by promoting diversification of a means of livelihood of forest-dependent residents, together with forest management as well as appropriate water and soil conservation activities to conserve catchment area in forests. Those interventions require a comprehensive approach that was not addressed in the past project, especially in the upstream of the catchment area in forests where shifting cultivation is being carried out. In the “Common Guidelines for Watershed Development 2008”, the Government of India also points out the importance of forests in the upstream of the catchment area as a source of water and seeks mutually complementary implementation of the approach to promote sustainable management of forests, conservation of water and soil, and improvement in livelihoods of residents living in the forest land. Because their residential area spreads into the downstream of the catchment areas, such an approach to conservation of catchment forests is expected to ensure the sustainability of activities in the downstream areas where the past project was mainly conducted.

(2) Japan and JICA’s Forest Sector/Tripura State Cooperation Policy and the Positioning of this Project

Japan’s Country Assistance Policy for India (March 2016) states that support for sustainable and inclusive growth is positioned as a priority area, and it will work on a program to increase the income of the poor and promote support for the forest sector to address the environmental/climate change issues. Also, JICA Country Analysis Paper for India (March 2018) mentions the necessity of

countermeasures that can lead to facilitation of proper utilization of natural resources and proper conservation and utilization of forest resources with the aim for inclusive growth in rural areas, and this project is consistent with these policies and analyses. Among all ODA loans to India, there were 26 loan approval cases totaling 257.7 billion yen to the forest sector as of October 2018. Also, there is a track record of support to the Tripura State through the past project (2007 – 2017).

(3) Other Donors' Activities

In India, the World Bank and the European Commission, etc. support the "Forest Management Project" and the Global Environment Facility supports the preparation of a biodiversity conservation plan and its action plan. In Tripura State, KfW, German government-owned development bank, conducted sustainable forest resource management activities under the "Indo-German Development Cooperation Project" (2009 – 2017).

### 3. Project Description

(1) Project Objective

This project aims to improve quality of forest in the targeted catchment by sustainable forest management, soil and moisture conservation and livelihood development, thereby contributing to development of forest ecosystem services and livelihood improvement of forest dependent communities in the State of Tripura.

(2) Project Site/Target Area: Tripura State

(3) Project Components

- 1) Sustainable forest management (preparation of Beat Forest Basic Plan, afforestation in catchment areas, raising seedlings, etc.)
- 2) Soil and moisture conservation (construction of check dams, etc.)
- 3) Livelihood development activities (marketing support for Non Timber Forest Products, etc.)
- 4) Institutional strengthening (such as capacity development training for executing agency's staff, joint forest management associations, and self-help groups)
- 5) Consulting services (implementation management, etc.)

(4) Estimated Project Cost

16,238 million yen (of which, the ODA Loan amount is 12,287 million yen)

(5) Implementation Schedule

Expected to be implemented from October 2018 – October 2028 (121 months in total). The project will be completed upon completion of all activities (in October 2028).

(6) Project Implementation Structure

- 1) Borrower: President of India
- 2) Guarantor: None
- 3) Executing agency: Forest Department, Government of Tripura
- 4) Operation and Maintenance agency: Regarding the activities directly managed by the Forest Department, the Department will continue to carry out the operation and maintenance of the activities by taking budgetary measures after the project completion. Regarding the activities carried out by the residents, the residents will conduct the operation and maintenance of the

activities after the project completion. In order to enable continuous activities by the residents, the Project Management Unit provides residents with capacity development training for maintenance.

(7) Collaboration and Division of Roles with Other Projects and Donors

- 1) Japan's assistance activities: None
- 2) Assistance activities by other donor agencies, etc.: The Forest Department cooperates with other state government-related organizations and carries out planning and implementation of activity plans according to the needs of residents.

(8) Environmental and Social Consideration/Poverty Reduction/Social Development

1) Environmental and Social Consideration

(i) Category: FI

(ii) Reason for Categorization: According to the JICA Guidelines for Environmental and Social Considerations (proclaimed in April 2010), sub-projects cannot be specified prior to the loan approval by JICA, and such subprojects may have environmental impacts.

(iii) Others/Monitoring: In this project, the executing agency shall categorize sub-projects based on the national legal system in India and JICA guidelines and take measures required for relevant categories while receiving assistance from Consultant hired by ODA loan. Note that the sub-project categorized as category A is not included in this project.

- 2) Cross-cutting Issues: In this project, joint forest management committees are formed by local residents and carry out sustainable forest management, soil and moisture conservation activities, and livelihoods development activities in a participatory manner in which residents participate in the planning process. In addition, it is expected to reduce 280,651 tons of CO<sub>2</sub> emissions per year, contributing to climate change (mitigation) measures.

- 3) Gender Category: GI(S)--Gender Informed (Significant) (Gender Activity Integration Project)

<Description of activities and reason for classification>:

After the project commences, gender awareness training will be implemented for officials in the Forestry Department, community committees, etc. Activities based on gender perspective are also conducted through collecting information on gender and analyzing the issues. Moreover, livelihood improvement activities are to be carried out by self-help groups organized mainly by women, so the intentions of women are reflected in the project activities easily.

(9) Other Important Issues: None in particular

#### 4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (Actual value in 2017)	Target (2030) (Note 2) [Expected value 2 years after project completion]
Plantation area (ha)	0	42,000
Survival rate of trees planted by the Project (%)	(Note 1)	80
Ratio of households having accessibility to water in the target villages (%)	(Note 1)	100
The ratio of soil moisture in forest of project target area (%)	(Note 1)	10
Transition of annual household income in the project target area (%)	(Note 1)	50

(Note 1) The original data of the above indicators is collected by baseline survey.

(Note 2) The target shall be reviewed based on detailed activity plans and baseline survey.

(2) Qualitative Effects: Conservation of forest ecosystems, social participation of women, etc.

(3) Internal Rate of Return

Based on the conditions indicated below, the economic internal rate of return (EIRR) of the Project will be 14.5%. Since this project has no income for the executing agency throughout the project implementation period, the financial internal rate of return (FIRR) is not calculated.

[EIRR]

Cost: Project cost, operation and maintenance expenses (excluding tax)

Benefits: Income from Non Timber Forest Products, income from livelihood development activities, greenhouse gas fixation

Project Life: 50 years

#### 5. Preconditions / External Factors

(1) Preconditions: None in particular

(2) External Factors: Aggravation of political and economic situations in the areas surrounding the subject of the project and large-scale natural disasters do not occur.

#### 6. Lessons Learned from Past Projects

From the results of ex-post evaluation, etc. of "Gujarat Forestry Development Project" for India, important lessons are acquired that it is necessary to encourage local residents to participate in the preparation of a document of detailed activity plans in the target villages as well as the selection of activities based on the planning document so that the project contents are based on the needs of residents, because participation in sustainable forest management by residents' associations after the completion of the project greatly influences the achievement of the project effect; therefore, it is essential to develop the capacity of on-site forest officers' regarding

method of dialogue with local residents and the adjustment methods regarding residents' consultations.

In this project, sustainable forest management, soil and moisture conservation activities, and livelihoods development activities are implemented through residents' committees, but it shall be noted that capacity development training, etc. regarding the participatory forest management by residents is implemented for on-site forest officers, in addition to encouraging active involvement of local residents from the planning stage, so that smooth project implementation can be facilitated. In the capacity development training, manuals and guidelines prepared in the past project are reviewed and the lessons learned in the project will be utilized to implement effective training.

## **7. Evaluation Results**

This project is considered to be consistent with the development policy of the Government of India and the policy of Tripura State, and the cooperation policy/analysis of Japan and JICA, and is also considered to contribute to Goal 15 of the SDGs, which stipulates the sustainable management of the forests and the prevention of biodiversity loss; therefore, it is highly necessary to support the implementation of the project.

## **8. Plan for Future Evaluation**

- (1) Indicators to be Used  
Same as 4. (1) - (3)
- (2) Timing of the Next Evaluation  
Ex-post evaluation: 2 years after project completion

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