

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: India

Project: Nagaland Forest Management Project

Loan Agreement: March 31, 2017

Loan Amount: 6,224 million yen

Borrower: The President of India

2. Background and Necessity of the Project

(1) Current State and Issues of Forestry Sector Development in India

Since the start of tree planting and other forest conservation activities, the amount of forest land in India has been increasing since the 1990s, and the forest coverage rate was 21.3% in 2015. Despite these efforts, forest degradation has not improved due to illegal or over-logging and other factors, and the ratio of open forest in the forest areas (forest with 10 to 39% tree canopy cover) rose to 42.8% (2015). Many people in the poverty class live around forest areas and depend on the forests for livelihood materials such as animal feed and fuel wood as well as sources of revenue. Degradation of the forests threaten the livelihood of these people and may cause decline in the water source protection, soil conservation, and other functions of forest ecosystems, resulting in floods and other natural disasters or decreased crop harvest due to irrigation water shortages. The situation has become especially pronounced with the recent increase in population, and forest conservation by alleviating the degradation of forests that are closely linked to residents' lives is an urgent task.

Nagaland, a state in Northeast India, has forests covering more than 78.2% (2015) of the land area. It is one of the top places for biodiversity in India and Myanmar that are hot spots for biodiversity. In the state's population of 1.98 million (2011), 86% belong to a Scheduled Tribe, and each tribe has a different language and governing system, leading traditional lifestyles. Their lifestyles and customs are closely connected to shifting cultivation that is traditionally carried out in the state. Meanwhile, Nagaland is located in a valley, and its weak infrastructure is partly cause by its poor access from other states. While the ratio of the population that was below the poverty line for all of India dropped by 15% from 2004 to 2011, the ratio for Nagaland increased by 10%. More than 70% of the population of Nagaland lives in rural villages, leading lives dependent on agriculture and forest resources. The topography of Nagaland features large height differences and steep gradients, and the flatlands that are suitable for agricultural production are separated into small sections, so shifting cultivation is widely practiced and generates over 60% of food provisions. Although the shifting cultivation left forestland fallow for 10 to 12 years, allowing the land to retain its fertility and its water, the fallow period has dropped to about 5 to 6 years

recently, causing a problematic drop in productivity of crops. The rice output is 2.4 t/ha for terrace farming, but only 1.7 t/ha for shifting cultivation. This has resulted in a vicious cycle in which the scale of the shifting cultivation must then be increased as new farmland is sought. In addition, forest resources such as fuel wood and minor forest products are being over-exploited to secure food and means of subsistence. The forest land area dropped from 13,044 km in 2013 to 12,966 km in 2015, and the Nagaland has the fourth greatest decrease in forest land area of all the states. The reduction in forest land area further diminishes the living standards of farmers in poverty who rely on forest resources for their livelihood.

(2) Development Policies for Forestry Sector Development in India and the Priority of the Program

Forest conservation policies are considered a part of climate control measures in the Green India Mission established by the Indian government in 2014. The purpose is to achieve sustainable forest management and preservation of ecosystems and to have communities around the forests carry out actions against climate change, and the objectives are increasing forest land by 5 million ha in 10 years, improving ecosystem services in 10 million ha through improvement in forest quality, conservation of biodiversity, and protection of water sources, and improving the livelihood of 3 million residents around the forests. Other goals are recognition of the importance of the communities in forest protection activities, capacity building of the Joint Forest Management Committee, and building of an appropriate forest management system through cooperation between residential groups and the government. Moreover, Nagaland is one of the states in northeastern India that is behind in development. The Indian government prioritizes fund allocation to Nagaland and its North Eastern Region Vision 2020 campaign places importance on maintaining and expanding the forests, with the government initiating activities in joint forest management. In a joint India-Japan statement at a top-level meeting in September 2014, it was confirmed that the governments would actively support economic development and raising prosperity in the northeastern states. The Nagaland Forest Management Project (below, “the Project”) aims to restore the Nagaland forests that shrunk due to shifting cultivation and promote development of the northeastern states through community participation-based forest preservation activities, and this Project is in line with the policies of the Indian government.

(3) Japan and JICA’s Policy and Operations in India’s Forestry Sector

In Japan’s Country Assistance Policy for India (March 2016), ‘supporting sustainable and inclusive growth’ is set as one priority area. The policy states that Japan will carry out programs to increase income to people living in poverty and provide assistance to the forestry sector to cope with environmental and climate change problems. JICA’s Country Analysis Paper for India (March 2012) identified priority areas as afforestation activities, actions for sustainable forest management

such as water and soil preservation activities, and assistance in biodiversity conservation to achieve preservation and sustainable use of natural resources as well as assistance with activities to improve the livelihood of local residents who depend on forest resources. This Project is in line with these policies and analysis results. JICA previously received authorization to provide ODA loans to India of the amount of 225.8 billion yen for 23 projects in February 2017.

(4) Other Donors' Activities

The World Bank, Asian Development Bank, and other donors have been supporting environmental preservation fields, but there is no overlap between their projects and this Project.

(5) Necessity of the Project

This Project is congruent with the development policies of the Indian government, the needs of Nagaland, and the assistance policies and analyses of JICA. Moreover, it may contribute to sustainable development goal (SDG) 1 that is to eradicate poverty and goal 15 that is to sustainably manage forests and halt biodiversity loss. Therefore, it is necessary to assist in the implementation of this project.

3. Project Description

(1) Project Objective

The project will restore forests in the lands under shifting cultivation in Nagaland in northeast India, and provide means to improve livelihood in order to improve the forest ecosystem and secure livelihood means other than shifting cultivation to contribute to sustainable forest environment conservation and improved livelihood for local residents.

(2) Project Site/Target Area: Nagaland

(3) Project Components

1) Community participation-based forest preservation activities (e.g. restoring shifting cultivation sites and forests through afforestation, forest ecosystem conservation activities) (direct management)

2) Activities to improvement livelihood and develop the communities (e.g. income-generating activities targeting Self Help Groups (SHGs)) (direct management)

3) Capacity building activities for Executing Agencies (e.g. skill-building workshops) (international competitive bidding)

4) Consulting services (implementation supervision) (short-list method)

(4) Project Cost

Loan: 8,534 million yen (Loan amount: 6,224 million yen)

(5) Project Implementation Schedule/Cooperation Period

March 2017 to March 2027 (121 months in total). The project completion is defined as the completion of all activities.

(6) Project Implementation Structure

- 1) Borrower: The President of India
- 2) Executing Agency: Department of Environment, Forest and Climate Change, Government of Nagaland
- 3) Operation and Maintenance System: Work to develop afforested areas is carried out by the Joint Forest Management Committees that are the target of this Project. The Joint Forest Management Committees jointly accumulate part of the profits by selling forestry products and use expenses necessary for development work. Technical and financial management capacity building of Joint Forest Management Committees is carried out as part of the Project activities. Department of Environment, Forest and Climate Change, Government of Nagaland will continue operating monitoring and assessment systems even after the Project ends. As Department of Environment, Forest and Climate Change carries out monitoring and assessment for Nagaland's own projects, there are no particular concerns about technical implementation capacity.

(7) Environmental and Social Considerations/Poverty Reduction/Social Development

1) Environmental and Social Considerations

- ① Category: FI
 - ② Reason for Categorization: This Project is classified as Category FI because no sub-projects can be identified before the approval of JICA's loans according to the JICA Guidelines for Environmental and Social Considerations (put into effect in April 2010) and such sub-projects are estimated to have an environmental impact.
 - ③ Other/Monitoring: In this Project, the Executing Agency receives assistance from consultants hired with loan funds to categorize the sub-projects based on India's laws and systems as well as the JICA Guidelines for Environmental and Social Considerations and takes the necessary measures for the respective category. No Category A sub-projects are included.
- 2) Promotion of Poverty Reduction: Although the poverty rate for all of India dropped by 15% from 2004 to 2011, the rate for Nagaland increased by 10%. As many of the people who would derive benefit from the Project are living in forest areas in poverty, this Project helps control poverty.
 - 3) Promotion of Social Development (e.g. Gender Perspective, Measures to Prevent Infectious Diseases Including AIDS, Participatory Development, Consideration for Persons with Disabilities, etc.) In this Project, community participation-based afforestation activities and livelihood improvement and community development activities that incorporate gender considerations and consideration for people with disabilities are carried out through Joint Forest Management Committees and SHGs.

- (8) Collaboration with Other Donors: In livelihood improvement and community development activities, the Forestry Department collaborates with relevant state government organizations and local NGOs to carry out all steps from formulating to carrying out action plans that are in line with residents' needs.

4. Targeted Outcomes

(1) Quantitative Effects

1) Operation and Effect Indicators

Indicator		Baseline (recorded in 2017)	Target (2029) [2 years after project completion]
Afforestation area (ha)	Agroforestry model in shifting cultivation sites (Model 1)	*1	10,094 ^{*2}
	Afforestation model in shifting cultivation sites that are lying fallow (Model 2)	*1	4,601 ^{*2}
	Switching model from shifting cultivation to forests (Model 3)	*1	4,601 ^{*2}
	Transition model from shifting cultivation to community protected zones (Model 4)	*1	3,640 ^{*2}
	Model for developing and expanding existing community protected zones (Model 5)	*1	53,050 ^{*2}
Survival rate of planted trees (%)	Model 1	*1	*2
	Model 2	*1	*2
	Model 3	*1	*2
	Models 4 and 5	*1	*2
Forest coverage rate (%)	Model 1	*1	*2
	Model 2	*1	*2
	Model 3	*1	*2
	Model 4	*1	*2
	Model 5	*1	*2
Number of SHGs that have completed two cycles of borrowing and returning funds		*1	227

*1 Set based on the results of baseline surveys conducted at the start of the Project.

*2 Based on the micro plan created after the Project began, target values were revised and set with the assistance of consultants.

2) Impact: None in particular.

(2) Qualitative Effects

E.g. forest preservation, biodiversity conservation, improvement in living

standards of residents, promotion of social participation and economic activities by women, and climate control

(3) Internal Rate of Return

Based on the following preconditions, the economic internal rate of return (EIRR) of the Project is 11.2%. As making profit was not the purpose of this Project, the financial rate of return (FIRR) was not calculated.

[EIRR]

Cost: Project cost (excluding tax), O&M cost

Benefit: Income from minor forest products

Project Life: 40 years

5. External Factors and Risk Control

Political and economic deterioration as well as natural disasters in India and the area surrounding the project sites.

6. Evaluation Results and Lessons Learned from Past Projects

(1) Results of Evaluation of Similar Past Projects

From the ex-post evaluation of the Gujarat Forestry Development Project, participation in sustainable forest management by resident organizations after the project ended greatly affected the outcomes of the project. It is therefore necessary to select community activities in target villages that are based on residents' needs and encourage participation by local residents in formulating detailed activity plans. Doing so absolutely requires capacity building of facilitation skills in site forest managers.

(2) Lessons for the Project

In this Project, forest preservation activities and livelihood improvement activities will be carried out through resident organizations. However, special efforts must be given to ensure the Project is carried out smoothly, such as encouraging active participation by local residents from the planning stage onwards and carrying out workshops to increase community participation-based forest management related skills in site forest managers of the Executing Agency.

7. Plans for Future Evaluation

(1) Indicators to be Used

- 1) Afforestation area of models 1 to 5 (ha)
- 2) Survival rate of planted trees of models 1 to 5 (%)
- 3) Forest coverage rate of models 1 to 5 (%)
- 4) Number of SHGs that have completed two cycles of borrowing and returning funds
- 5) Economic internal rate of return (EIRR) (%)
- 6)

(2) Timing

Two years after project completion.

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