

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: India

Project: Sikkim Biodiversity Conservation and Forest Management Project

Loan Agreement: March 31, 2010

Loan Amount: 5,384 million Yen

Borrower: The President of India

2. Background and Necessity

(1) Current State and Issues of the Biodiversity Conservation and Forest Management Sector in India

In terms of biodiversity conservation in India, as of March 2009, 4.79% of the country was designated as protected area, with 99 national parks and 523 wildlife sanctuaries. However, the management plans of these protected areas are not well prepared based upon scientific databases in order to conserve biodiversity. Furthermore, at the start of the 20th Century, approximately 40% of India was covered by forest, but the India's forest and tree cover ratio¹ stood at 23.6% (2005), which is lower than the global average of 30.3% (2005). Man-made activities within forest areas such as the use of land for grazing and the collection of fuel wood have an influence on the degradation of forests in some areas. Consequently, in addition to the need for strengthening capacity among related agencies to ensure a balanced approach for sustainable ecosystem, it is also vital to improve forest and tree cover as well as the forest quality.

(2) Development Policies for Biodiversity Conservation and Forest Management Sector in India, and the Priority of the Project

The Government of India has outlined a target of increasing India's forest and tree cover ratio by 5% in its Eleventh Five Year Plan (April 2007-March 2010). In addition, the Plan places an emphasis on participatory Joint Forest Management (JFM) to ensure sustainable forest management, the promotion of activities by an Eco-Development Committee to ensure wildlife conservation, support for those who rely on the forest for their livelihood to ensure alternative sources of income, and a reduction of man-animal conflict. Furthermore, in order to implement sustainable forest management and biodiversity conservation, the Government of India aims to build an information management system and promote the training for human resources development.

(3) Japan and JICA's Policy and Operations in the Biodiversity Conservation and Forest Management Sector

The "Poverty Reduction and Environmental Improvement" is one of the prioritized areas in the Japan's Country Assistance Program for India by the Government of Japan. Accordingly, JICA has set the "Support for Environment/Climate Change Measures" as a prioritized area. More specifically,

¹ Forest and tree cover ratio is the ratio of forest (land with a crown ratio (coverage ratio of tree leaves on the ground in a specific block) above 10% greater than 1ha that can be surveyed by satellite) and trees (land with a crown ratio above 10% less than 1ha that can't be surveyed by satellite) within the total target area (i.e. the total area of India).

JICA will support measures to prevent soil degradation and improve soil water retention ability as well as bio-diversity through restoration of degraded forest and improvement of forest cover and quality for the sake of sustainable forest management. In terms of Japanese ODA loans given to India, 17 projects totaling 174,612 million Yen have so far been extended in the forestry sector. JICA Technical Cooperation Project, “Capacity Building of State Forest Training Institutions and SFS Colleges”, has been implemented for a projected period of five years from FY2008.

(4) Other Donors’ Activities

In addition to forest management projects being implemented by the World Bank and the EU, the Global Environmental Facility (GEF) has been involved in supporting the preparation of India’s biodiversity strategy and related action plans.

(5) Necessity of the Project

The state of Sikkim is known as a biodiversity hotspot, located in a particularly important area in the Eastern Himalayas. It is considered that approximately one quarter of the total number of species in India live in this area. Since Sikkim is located in the foothills of the Himalayas, it is geographically far from the urban area and its environment is not suited to the development of manufacturing industries. As a result, Sikkim has been involved in trying to develop tourism industry, including aspects of ecotourism that utilize its rich natural environment and unique traditional culture. However, in recent years, the increasing number of tourists visiting Sikkim has negative influence on the natural environment. In addition, in contrast to urban areas of Sikkim, the rural areas are still suffering from poverty, leading to activities that have a negative impact on valuable flora and fauna, and presenting a threat to the biodiversity conservation and forest management in Sikkim. There is a need for the provision of mechanisms to improve the livelihoods of rural people, especially those living in poverty, with the aim of achieving sustainable socio-economic development in balance with the natural environment in this region. Since the state of Sikkim is promoting participatory sustainable biodiversity conservation and forest management, JICA assistance for the Project, with its emphasis on appropriate biodiversity conservation and forest management, and the improvement of livelihoods for rural people through, for example, the development of ecotourism and other forms of tourism industry, is highly necessary and relevant.

3. Project Description

(1) Project Objective(s)

The objective of the project is to strengthen biodiversity conservation activities and forest management capacity, and to improve livelihood for the local people who are dependent on forests by promoting sustainable biodiversity conservation, afforestation and income generation activities including eco-tourism for community development, thereby contributing to environment conservation and harmonized socio-economic development of Sikkim.

(2) Project Site/Target Area

State of Sikkim

(3) Project Component(s)

This is a project to implement the strategies required to strengthen management capacities within

the Khangchendzonga National Park and the seven wildlife sanctuaries in the state of Sikkim. In addition, the project will implement activities to improve the livelihoods of rural people who are dependent on forest resources in each district within Sikkim, and strengthen and upgrade the activities base of the Forestry Department. The eligible portions of the project covered by the Japanese ODA Loan are as follows.

- 1) Biodiversity conservation and forest management
 - 2) Community development and livelihood improvement activities
 - 3) Supporting activities
 - 4) Consulting services (support for procurement and fund management, etc.)
- (4) Estimated Project Cost (Loan Amount)
6,347 million Yen (Loan Amount: 5,384 million Yen)
- (5) Schedule
March 2010-March 2020 (total 121 months). Project completion is defined as completion of Forest and Biodiversity Conservation and Joint Forest Management (March 2020).
- (6) Project Implementation Structure
- 1) Borrower: The President of India
 - 2) Executing Agency: Department of Forest, Environment and Wildlife Management, Government of Sikkim
 - 3) Operation and Maintenance System: Same as 2) above
- (7) Environmental and Social Considerations/Poverty Reduction/Social Development
- 1) Environmental and Social Considerations
 - (i) Category: B
 - (ii) Reason for Categorization
This project is not considered to have significant undesirable impact on the environment, given the characteristics of the sector, the characteristics of the project and the characteristics of the project area, under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Consideration” (established in April 2002). For this reason, this project is classified as Category B.
 - (iii) Environmental Permit
The Environmental Impact Assessment (EIA) report is not required for this project under the country’s legal system.
 - (iv) Anti-Pollution Measures
No particular adverse impact on the environment is anticipated, since the executing agency will issue appropriate guidance when agricultural chemicals and fertilizers are used.
 - (v) Natural Environment
Within the national park and wildlife sanctuaries, biodiversity conservation and forest management activities will be undertaken by the Department of Forest, Environment and Wildlife Management, Government of Sikkim. With regard to the afforestation activities, adverse impact on the natural environment is expected to be minimal because, in this project, native species will be mainly planted with due consideration to the ecosystem by the guidance of the Department of Forest,

Environment and Wildlife Management, Government of Sikkim.

(vi) Social Environment

Since the project will be implemented mainly in national forests, it will involve neither land acquisition nor involuntary resettlement.

(vii) Other/Monitoring

The executing agency will monitor for noise, water quality, dust, etc.

2) Promotion of Poverty Reduction

While the proportion of Sikkim people living in poverty (19.2%) is lower than the national average (27.8%), there are disparities between regions (Scheduled Tribes live in the northern area, for example) and therefore there is a need to consider poverty reduction when selecting target villages for the implementation of community development and livelihood improvement.

3) Promotion of Social Development (e.g. Gender Perspective, Measures for Infectious Diseases Including HIV/AIDS, Participatory Development, Consideration for the Person with Disability, etc.)

Under the project, participatory forest management through Joint Forest Management Committees (JFMC) will be implemented. In addition to paying consideration to the gender balance of participants of these committees, Self Help Groups (SHGs) will be formed comprising mainly women and members of Scheduled Tribes, which will engage in activities to improve livelihoods such as the processing and sale of non-timber forest products. Environmental education will also be carried out at the biodiversity visitor center, etc.

(8) Collaboration with Other Donors

This project will collaborate with local NGOs in implementing regional development and livelihood improvement activities, etc.

(9) Other Important Issues

This project will contribute to the biodiversity conservation and sustainable forest management, as well as countermeasures to climate change.

4. Targeted Outcomes

(1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (Actual Value in 2009)	Target (2022) [Expected value 2 years after project completion]
Total Protected Area (km ²)	2,183	2,400
Total Number of Protected Areas	8	10
Afforestation and Regeneration Area (ha)	-	4,300
Number of Target JFMC, EDC & PSS*	-	180
Number of Self Help Groups (SHGs) Formed	-	540
Number of Trainees of Forest Department Staff	-	769

* JFMC: Joint Forest Management Committees, EDC: Eco-Development Committees, PSS: Pokhri Sanrakshan Samitis

(2) Internal Rate of Return

Based on the conditions indicated below, the Economic Internal Rate of Return (EIRR) is 15.80%.

[EIRR]

Cost: Project costs (excluding tax), operation and maintenance/management expenses, renewal expenses

Benefit: Income from forest produce, income from tourism, livelihood improvements through joint forest management, etc.

Project life: 50 years

5. External Factors and Risk Control

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

6. Lessons Learned from Past Projects

From the ex-post evaluations of similar projects in the past, the lesson learned is that in order to smoothly implement JFM, it is important (i) to prepare, in comprehensive and easy-to-understand language, guidelines that indicate, among others, the scale of JFM, the basis of the wood-lot selection, the basis for operating JFMCs, and a system for getting people to take responsibility, then (ii) to implement the project in accordance with those guidelines. This project aims to implement JFM smoothly through employing experts thoroughly versed in India's JFM and management of protected areas, and having them prepare a manual for making micro plans and for managing the JFMCs.

7. Plan for Future Evaluation

(1) Indicators for future evaluation

- 1) Total Protected Area (km²)
- 2) Total Number of Protected Areas
- 3) Afforestation and Regeneration Area (ha)
- 4) Number of Target JFMC, EDC & PSS
- 5) Number of Self Help Groups (SHGs) Formed
- 6) Number of Trainees of Forest Department Staff
- 7) Economic Internal Rate of Return (EIRR) (%)

(2) Timing

2 years after project completion

(End)