

## Ex-ante Evaluation Paper (for Japanese ODA Loan)

South Asia Division 1, South Asia Department, JICA

### 1. Name of the Project

Country: India

Project: Project for Himachal Pradesh Forest Ecosystems Management and Livelihoods Improvement

Loan Agreement: March 29, 2018

### 2. Background and Necessity of the Project

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

At the beginning of the 20th century, forests covered roughly 40% of the land in India. However, due to massive land changes such as the large-scale conversion of forests to farmland as well as unregulated deforestation, forest cover decreased to below 20% at one point.

In 2015, forest coverage improved to 21.3% (Source: Indian State of Forest Report 2015) as a result of recent forest conservation efforts such as massive afforestation. Nevertheless, in India as a whole the percentage of open forests (defined as forest with canopy density of 10–40%) remains high at 42.8% (at 2015; Indian State of Forest Report 2015) principally due to the progressive implementation of large-scale development projects in addition to increased strain on forests from over-harvesting of firewood/animal feed by inhabitants living nearby forests. This situation not only directly threatens residents' livelihoods, but also impairs the watershed-recharging and soil erosion prevention functions of the forest ecosystem (called "ecosystem services"), decreases agricultural crop yields due to the shortage of agricultural water, invites landslide disasters, and threatens the living standards of residents.

Thus, conserving forest ecosystems through further expansion of forested area and improving degraded forest conditions is an urgent issue.

India contains four biodiversity hotspots, and the Government of India has been focusing efforts on strengthening biodiversity conservation systems by establishing national parks and other protected areas; enacting laws related to biodiversity conservation; and prohibiting the hunt or trade of animals and harvesting of certain plants. Nevertheless, the measures taken by the Government still have some space for further development as the scientific databases necessary for biodiversity conservation are underdeveloped and adequate management plans for biodiversity conservation have yet to be fully prepared.

In 2014, the Indian government formulated the 'Green India Mission' to respond to the situation. To achieve sustainable forest management, ecological conservation, and to help

communities living near forests cope with climate change, Green India Mission's goals were to expand forest area by 5 million ha over 10 years from 2014, improve the quality of 5 million ha of existing forest, and improve ecosystem services in 10 million ha through biodiversity and watershed conservation activities.

The State of Himachal Pradesh (hereinafter, "Himachal Pradesh"), located in the western part of the Himalayan mountainous region with a population of 6.865 million, contains a diverse ecosystem due to its wide-ranging terrain from lowland hills to alpine areas. The state has four large rivers that serve as water sources, supporting the society and economy of north and west India by supplying water to downstream regions such as Delhi and Punjab. Therefore, preservation and betterment of the watershed recharging capacity of forest ecosystems of this area is extremely important.

The state has committed efforts towards forest conservation for many years, improving the forest coverage rate from 27.1% in 2005, to 28.2% in 2015 (Indian State of Forest Report 2015). Despite these efforts, in recent years, it has been confirmed increased strain on forest resources from population growth, deforestation from development projects and forest fires, which have resulted in 34.6% of forest remaining as open forest.

In addition to frequent occurrence of slope failures, there have also been reports of grassland degradation from over-grazing in some areas. Strengthening ecosystem services—specifically the watershed-recharging and soil-protecting abilities provided by forests and grassland in the state—is a serious issue.

Himachal Pradesh is part of a Himalayan biodiversity hotspot (Note 1), an important area in terms of biodiversity, which has been confirmed to contain multiple endangered species that have been red-listed by the International Union for Conservation of Nature. Even so, there has not been enough cooperation from residents from a conservation or protection standpoint. Namely, many endangered and rare species do not have a clearly-defined territory or habitat since the scientific database on biodiversity is inadequate at a state level, and not enough is being done to enlighten or promote awareness in local forest officers or communities living in and around protected areas. Even outside protected areas, because of changes in the habitat from forest depletion, there have been increasingly more encounters between humans and wildlife, and incidents of injury or harm to humans and livestock increase by the year. Strengthening biodiversity conservation in conjunction with forest conservation is an urgent issue that must be addressed quickly to deal with this situation.

As a response to the situation, building on the recognizing that sustainable forest ecosystem management contributes to the sustainable social and economic development of its citizens, Himachal Pradesh established the 'H.P. Forest Sector Policy & Strategy 2005', which set a target of raising the forest coverage rate from 27.1% at the time of inception, to 35.5%. Under the initiative, the state is promoting sustainable conservation of forest ecosystems, conservation of biodiversity, and also strengthening the livelihood foundation

for residents living near forests through enhancing its participatory forest management system. The above strategy was also emulated in the '12th Five Year Plan (2012–17)', which laid out policies on encouraging afforestation; sustainable management and conservation of forests/natural resources/wildlife outside protected areas; and awareness programs on forests, forestry and biodiversity. Accordingly, the 'Project for Himachal Pradesh Forest Ecosystems Management and Livelihoods Improvement' (hereinafter, "the Project") has been positioned as an initiative for dealing with these issues.

Note 1: Biodiversity hotspots represent key conservation areas around the world. Although more than 1,500 unique vascular plants have been identified, areas where over 70% of the original vegetation has been altered or lost are designated in each eco-region by Conservation International, an international NGO.

#### (2) Japan and JICA's Biodiversity Sector Policy and the Positioning of this Project

The Country Assistance Policy for India (March 2016) set "cooperation toward inclusive and sustainable growth" as a priority issue, stating the intention to provide cooperation in dealing with environmental and climate change issues of forests, and to support fields that contribute to raising income levels among the impoverished segment of the population.

The JICA Country Analysis Paper for India (March 2012) concluded the importance of providing support for: sustainable forest management including afforestation and water/soil conservation; biodiversity conservation; and livelihood improvement for local residents who depend on forest resources.

Therefore, this project is consistent with the policy and plan. Among ODA loans to India, there have been 25 loans totaling 246.5 billion yen to the forest sector as of January 2018. There is also a past record of support to Himachal Pradesh with the ODA loan project, 'Swan River Integrated Watershed Management Project (2006–2016)'.

#### (3) Other Donors' Activity

World Bank, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ, German Corporation for International Cooperation), and German government-owned development bank Kreditanstalt für Wiederaufbau (KfW) have been involved in projects concerning watershed conservation, forest ecosystem management, and biodiversity conservation. The Global Environment Facility (GEF) has also been providing support for formulation of an action plan.

### **3. Project Description**

#### (1) Project Objective

This project aims to manage and enhance ecosystems in the project area, by sustainable forest ecosystem management, biodiversity conservation, livelihood improvement support and strengthening institutional capacity, thereby contributing to environmental conservation and sustainable socio-economic development in the project area in the State of Himachal

Pradesh.

(2) Project Site/Target Area:

The State of Himachal Pradesh

(3) Project Components

- 1) Sustainable forest ecosystem management (afforestation, grassland management, soil conservation activities, etc.)
- 2) Biodiversity conservation (provision of training, equipment, and materials to reduce human-wildlife conflict)
- 3) Livelihood improvement support (provision of training, equipment, and materials for livelihood improvement)
- 4) Institutional capacity strengthening (training to the Forest Department and community organizations)
- 5) Consulting services (managing project implementation, etc.)

(4) Estimated Project Cost

13.921 billion yen (of which, the ODA Loan amount is 11.136 billion yen)

(5) Schedule

Scheduled for March 2018–March 2028 (121 months in total). The project completion is defined as the completion of all activities.

(6) Project Implementation Structure

- 1) Borrower: President of India
- 2) Guarantor: None
- 3) Executing Agency: Forest Department, Government of Himachal Pradesh
- 4) Operation and Maintenance Agency: O&M of afforestation is the responsibility of community organizations covered by the Project. After project completion, they are expected to continue activities independently. A portion of revenues gained through activities conducted by the community organizations will provide funding for operation and maintenance expenses.

(7) Collaboration with Other Schemes and Donors

- 1) Related aid activities by Japan: None in particular.
- 2) Aid activities of other aid organizations: In the livelihood improvement support, the Forest Department collaborates with relevant state organizations, NGOs, etc., and carries out the planning and implementation of action plans designed to conform to residents' needs.

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

1) Environmental and Social Considerations

①Category: FI

②Categorization Rationale: Based on 'JICA Guidelines for Environmental and Social Considerations' (promulgated in April 2010), sub-projects cannot be specified before JICA's loan approval and it is also assumed that such sub-projects will have an impact on the environmental.

③Other/Monitoring: While enlisting the assistance of consultants hired through the ODA loan, the executing agency will categorize each sub-project according to the domestic laws of India and 'JICA Guidelines for Environmental and Social Considerations', and adopt the necessary measures of the applicable category. Category A projects are not to be included in sub-projects.

2) Cross-cutting Items: This project promotes sustainable forest management including afforestation, and contributes to CO2 absorption and carbon capture as a means to mitigate climate change.

3) Gender Classification: GI (S) Gender Integrated Project

<Activities/Classification Rationale> Once the project starts, gender awareness training will be provided to the Forest Department and community organizations. Activities will also be implemented from a gender-centric viewpoint by collecting information on gender and analyzing issues.

(9) Other Important Issues: None in particular.

#### 4. Target Outcomes

(1) Quantitative Effects

Outcomes (Operational and Effect Indicators)

Indicator	Baseline (Actual value in 2018)	Target (2030) (Note 3) [2 Years after Completion]
Coverage of area under plantation (ha)	0	10,984
Survival rate of tree planted	0	80%
Tall Plants (Note 1)		70%
Normal Plants		
The cases of Human-Wildlife Conflict	(Note 2)	Reduction in the project area
Number of community organizations attending biodiversity related training	0	60 organizations
The number of livelihood improvement activities planned	0	460
Percentage of enhancement of	(Note 2)	(Note 3)

household annual income in the project area		
Number of community institutions participating in the capacity development training	0	1,380 organizations
The number of officers/staff participating in the capacity development training	0	359 people

(Note 1): Seedlings grown larger than normal. The time required to grow seedlings depends on the tree species.

(Note 2): Baseline value depends on results of a baseline survey conducted after project start.

(Note 3): Target value is reviewed based on a Detailed Activity Plan and Baseline Survey.

## (2) Qualitative Effects

Qualitative effects include conservation of forest ecosystems (including biodiversity conservation); livelihood improvement; promotion of women's social participation and economic activity; and mitigation of climate change through forest carbon fixation.

## (3) Internal Rate of Return

Based on the following assumptions, the Economic Internal Rate of Return (EIRR) of this project is 9.6%. Since the Executing Agency will not collect revenues in this project, the Financial Internal Rate of Return (FIRR) is not calculated.

[EIRR]

Cost: Project cost (excluding taxes etc.), operation and maintenance cost

Benefits: Income from special forest products; income from other livelihood activities; greenhouse gas capture.

Project life: 40 years

## 5. External Factors and Risk Control

(1) Preconditions: None in particular

(2) External Factors: None in particular

## 6. Lessons Learned from Past Projects and Applications to this Project

The following lessons were learned from ex-post evaluation results etc. of the 'Gujarat Afforestation and Development Project' implemented through ODA loan to India: Given that community organizations' participation in sustainable forest management after the project

has great impact, it is essential to encourage the residents of affected villages to participate in preparing a Detailed Activity Plan and selecting activities based on it to ensure that project content is rooted in the needs of residents. To accomplish this, it is also vital to build up the facilitation skills of local forestry officers.

The activities of this project include community organization based forest ecosystem management, biodiversity conservation, and support for livelihood improvement. In addition to encouraging the active participation of local residents from the planning stage, the project will also strive for smooth implementation by providing skill development training to local forestry officers in the areas of natural environment and ecosystem management based on community participation.

## **7. Evaluation Results**

This project is consistent with the Government of India's policies on development, Himachal Pradesh's strategy, as well as Japan and JICA's assistance policy and analysis. Supporting the implementation of this project is considered highly necessary based on the judgment that it will contribute to SDG Goal 15: "to sustainably manage forests and preserve biodiversity."

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

(1) Indicators to be Used

As described in sections 4 (1) - (3)

(2) Timing of the Next Evaluation

Ex-post evaluation: Two years after the project completion