

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: India

Project: Himachal Pradesh Crop Diversification Promotion Project

Loan Agreement: February 17, 2011

Loan Amount: 5,001 million Yen

Borrower: The President of India

2. Background and Necessity

(1) Current State and Issues of the Agricultural and Irrigation Sectors in India

In India, 60% of the working population is engaged in the agricultural sector, and 55% of the national land is used for agriculture. As the agricultural production accounts for 20% of the gross domestic product, agriculture is an important industry in securing employment and improving livelihood. Poverty in the rural areas is serious, however, and it is imperative to enhance agricultural production and develop water resources in order to respond to the increasing population and realize food self-sufficiency. Although the mountainous areas have a considerable potential for value-added crops through their diversification taking advantage of the unique climate compared to the flat areas, many farmers remain engaged in self-subsistence crop cultivation due to the constraints in land and water as well as the poor access to a market. That is, the improvement of livelihood in rural areas through crop diversification has not been sufficiently promoted.

(2) Development Policies for the Agricultural and Irrigation Sectors in India, and the Priority of the Project

The Eleventh Five Year Plan (April 2007- March 2012) aims at an average real GDP growth rate of 9%, while sectoral target in Agriculture is set at 4%. Irrigation is one of the focused areas of the project as it can contribute to increased agricultural production and thereby enhance the farm income.

(3) Japan and JICA's Policy and Operations in the Agricultural and Irrigation Sectors

The "Poverty Reduction and Environmental Improvement" is one of the prioritized areas in the Country Assistance Program for India by the Government of Japan. Accordingly, JICA will support improvement of rural livelihood as one of the priority issues for development assistance, which this project is consistent with. In terms of the Japanese ODA loans given to India, 15 projects amounting to 120 billion yen have so far been extended in the agricultural and irrigation sectors (excluding tree planting). The technical cooperation project "Himachal Pradesh Crop Diversification Promotion Project" will also be implemented.

(4) Other Donors' Activity

The World Bank supports projects for irrigation / integrated water resources management in the states of Haryana, Tamil Nadu, Orissa, Andhra Pradesh, Maharashtra, etc. The ADB has been providing assistance in repairing and modernizing several irrigation facilities in Orissa since 2008.

(5) Necessity of the Project

The State of Himachal Pradesh (hereinafter referred to as "HP") is a hilly state located at the foot of the Himalayas with a population of 6,080,000 and an area of 5.567 million hectares. Approximately 70% of the working population in the state is engaged in agriculture. However, 80% of the farmers are small landholders with 1.2 ha or less, who remain engaged in self-subsistence crop cultivation. Only 107,000ha (approximately 18%) out of the total cultivated land of 583,000ha in the state has been irrigated due to the steep topography.

Under such circumstances, JICA's "Study on Diversified Agriculture for Enhanced Farm Income in the State of Himachal Pradesh" (2007) was undertaken, during which the "HP Crop Diversification Program" was suggested, aiming at securing food self-sufficiency of small

farmers and improving livelihood through crop diversification from food grain, especially into vegetables. This project specifically supports consolidated implementation system for development of minor irrigation systems, maintenance of access farm roads and services for farmers. The preparations are under way for a technical cooperation project that aims at strengthening the Department of Agriculture and developing Crop Diversification Model under this Program. Therefore, the necessity and relevance for JICA to support this project is very high.

3. Project Description

(1) Project Objective(s)

The objective of the project is to promote sustainable crop diversification in Himachal Pradesh by development and rehabilitation of minor irrigation facilities and access farm roads, as well as by improvement of extension services including promotion of vegetable cultivation, thereby contributing to improvement of livelihood of farmers in Himachal Pradesh.

(2) Project Site/Target Area

Of the twelve districts in the State of HP, the target of the project is the selected five districts that are considered to have high potential for crop diversification in light of the conditions of climate, topography and farming systems.

(3) Project Component(s)

- 1) Infrastructure development (construction of irrigation facilities: approximately 210 locations, irrigation area: approximately 3,700ha, improvement of access farm roads: approximately 100km in total)
- 2) Support for farmers (promotion of vegetable cultivation, improvement of post-harvesting technology, strengthening of the organization of farmers group, etc.)
- 3) Institutional Development (strengthening of the functions of the Department of Agriculture, strengthening of the services for promotion of agriculture, baseline survey and impact assessment)
- 4) Consulting services

(4) Estimated Project Cost (Loan Amount)

6,035 million yen (ODA Loan Amount: 5,001 million yen)

(5) Schedule

February 2011 - March 2018 (86 months). Project completion is defined as completion of the Farmers Support Component (March 2018).

(6) Project Implementation Structure

- 1) Borrower: The President of India
- 2) Executing Agency: The Department of Agriculture, the State of Himachal Pradesh
- 3) Operation and Maintenance System: Water Users' Association to be organized per sub-project

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

1) Environmental and Social Consideration

(i) Category: FI

(ii) Reason for Categorization

In accordance with the "Japan Bank for International Corporation Guidelines for Confirmation of Environmental and Social Considerations" (established in April 2002), the sub-projects cannot be specified prior to JICA's approval of the project; and those sub-projects are expected to have potential impact on the environment.

(iii) Other/ monitoring:

The project will develop minor irrigation systems, improve access farm roads and provide support services for farmers. Although the scale of impact is limited considering the scale and envisioned contents of sub-projects, there might be some impact such as water pollution from inappropriate application of agricultural chemical

and fertilizer and noise during construction while it might not be great. Therefore, as part of training for farmers conducted at all of the sites, guidance will be provided on appropriate application and disposal of harmful matters as well as on incorporation of organic fertilizer with less impact on environment and human body. The executing agency will monitor construction noise and the quality of wastewater as well. Sub-projects in Category A are not to be included.

- 2) Promotion of Poverty Reduction: While 87.1% of the farmers in the target area are marginal and small-size, the specific poverty rate and impact by the project shall be confirmed by baseline survey and impact assessment to be conducted after the project is started.
- 3) Promotion of Social Development: The project intends to establish and strengthen Self Help Groups and provide training on processing and sales of agricultural products as well as household budget management as part of the farmers support component. Therefore, it should be noted that considerations will be made to reflect women's needs at the stage of planning and to improve the environment so that women can be participate in the activities.

(8) Collaboration with Other Donors:

The World Bank and the ADB will consider possibilities of collaboration while exchanging information on similar projects which will be underway. As the project will be implemented simultaneously with JICA's "Technical Cooperation Project for Crop Diversification in Himachal Pradesh", it is necessary to carefully review the timing of the collaboration.

(9) Other Important Issues: None

4. Targeted Outcomes

(1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (Actual Value in 2010)	Target (2021) 【Expected value 3 years after project completion】
Beneficiary area (ha)	2,183	3,712
Vegetable cultivation area (ha) rainy season	170	1,410
Vegetable cultivation area (ha) dry season	110	1,820
Beneficiary farmers (households)	-	4,320

(2) Internal Rate of Return

Based on the conditions indicated below, the Economic Internal Rate of Return (EIRR) for the project is 15.96%.

【EIRR】

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

Benefit: Sales of agricultural products, etc.

Project Life: 30 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 ex-post evaluations of similar projects in the past, we learned that it would be necessary to recognize that the maintenance and management of completed irrigation facilities, etc. would greatly affect the results and effects of the project and to select, establish, implement

and monitor the sub-projects with careful attention to the establishment of the maintenance/management system. This project aims at securing sustainability of the project by promoting participation of beneficiaries at the stage of planning and by including components to enhance the capacities of the water users' associations and the executing agency who supports them.

7. Plans for Future Evaluation

(1) Indicators for future evaluation

- 1) Total beneficiary area (ha)
- 2) Vegetable cultivation area (ha) rainy season
- 3) Vegetable cultivation area (ha) dry season
- 4) Beneficiary farmers (households)
- 5) Economic Internal Rate of Return (EIRR) (%)

(2) Timing

Three years after project completion