

Terminal Evaluation

Latin America and the Caribbean

1. Outline of the Project

Country:

Bolivia

Project title:

Afforestation and Erosion Control Project in the Valley of Tarija Regiona

Issue/Sector:

Dissemination of Technique

Cooperation scheme:

Project-Type Technical Cooperation

Division in charge:

Forestry and Environment Division, Forestry and Natural Environment Department

Total cost:**Period of Cooperation**

(R/D)1 October 1998 - 30 September 2003

Partner Country's Implementing Organization:

PERTT (Programa Ejectivo De Rehabilitacion De Tierras En El Departamento de Tarija)

Supporting Organization in Japan:

Forestry Agency, Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Other Concerned Organization:**Related Cooperation:****1-1 Background of the Project**

Bolivia had a serious problem of soil erosion caused by the excessive deforestation for the mine timbers of the once-flourishing mines during the period of the Spanish conquest, combined with the unstable soil covered with thick sedimentary layers, as well as the haphazard cultivation of 38% of national land by farmers, overgrazing by goats and woolies, and cutting of trees for fuel wood, and other factors. In particular, in the Tarija Central Valley, 200 to 600 hectares of the land had become degraded every year due to soil erosion, which lowered the living standards of farmers living there. The forest around the upstream of Tarija city has also deteriorated due to soil erosion, and severely lowered its water resource cultivation function, which caused the flood disaster of Tarija city in December 1992. The disaster resulted in the lack of domestic noncommercial water during the dry seasons and has caused a severe impact on the life of the residents.

The Bolivian government announced the preservation and maintenance of natural resources as one of its major political issues. In particular, the Ministry of Sustainable Development Plan has been focusing on promoting the management of forest and environmental policies aggressively and established the " Programa Ejectivo De Rehabilitacion De Tierras En El Departamento de Tarija"(PERTT) in order to promote a project for preventing land erosion.

In order to promote these projects effectively, the Bolivian government requested the Japanese government in July 1995 for cooperation on the development of afforestation and soil conservation techniques. The aim was to prevent soil erosion and to recover the deteriorated and devastated forest and land areas.

1-2 Project Overview**(1) Overall Goal**

- 1) To reduce the scope of land erosion in basins along El Monte River and San Pedro River.
- 2) Methods are improved and developed through the project and are implemented in the surrounding areas of model areas within the Tarija Region.

(2) Project Purpose

Sustainable method for the prevention of land erosion is improved and developed through participation of the local people in model areas along El Monte River and San Pedro River.

(3) Outputs

- 1) The project is implemented and managed appropriately.
- 2) The techniques of soil preservation in order to prevent land erosion are improved and developed through the implementation of the model project.
- 3) The afforestation techniques, in order to prevent land erosion, are improved and developed through the implementation of the model project.
- 4) Participatory methods for the project for the prevention of land erosion are improved.
- 5) Action plan to develop the project for preventing land erosion is prepared.

(4) Inputs

Japanese side:

Long-term Experts	9	Equipment	167,458 thousand yen
Short-term Experts	11	Local Cost	58,751 thousand yen
Trainees received	15		

Bolivian side:

Counterparts	13	Local Cost	5.13 million Bs
Land and Facilities			

2. Evaluation Team

Members of Evaluation Team

Team Leader: Yutaka HONGO, Senior Advisor, JICA
Preventing Erosion/ Citizen Afforestation: Richiro DOUZONO, Section Chief, International Forestry Cooperation Office, Planning Division, Private Forest Department, Ministry of Agriculture, Forestry, and Fisheries
Social Forestry/ Citizen Afforestation: Yoshiaki NISHIKAWA, Assistant Professor, Kurume University
Planning and management: Tsuyoshi TATENO, Staff, Forestry and Environment Division, Forestry and Natural Environment Department
Evaluation Analysis: Yasuyo HIROUCHI, International Development Associates Ltd.

Period of Evaluation

23 March 2003 - 12 April 2003

Type of Evaluation:

Terminal Evaluation

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

Preventing soil erosion was one of the major issues in the Tarija Province, and technical needs from PERTT and environmental needs from local residents to the project were large. Therefore, it can be evaluated that relevance of the project was high.

(2) Effectiveness

All the outputs will be accomplished by the end of the project. These outputs will contribute to the development and the improvement of continuous methods to prevent erosion.

Hence, the project has been effective.

(3) Efficiency

Medium level of efficiency was achieved by the project. Considering the inputs from the Japanese side, the first expert of social forestry dispatched to the country held an additional post of being in charge of adjustment efforts for the project. The dispatch of the second (full-time) expert was delayed by one year. As for the Bolivian side, PERTT was often delayed in disbursing the necessary funds for the project due to its budgetary problems. Some counterparts were temporarily dismissed. All the counterparts held additional posts other than those in the project, therefore, they could not concentrate on the project activities. These factors had a negative influence on the efficiency of the project.

(4) Impact

The effect of the project is high. The improved and developed techniques, as a result of the implementation of the project, contributed to upgrading the technical capability of PERTT. Local people's consciousness of the importance of preventing erosion was enhanced through the Land Conservation Committee (CC) which was unionized by the project, technical training and activities to promote awareness, and other means. The project was the first support from outside the country, which helped alleviate the feeling of isolation of the local people and promoted their empowerment.

(5) Sustainability

The activities of PERTT gained legal and political support. PERTT sufficiently upgraded its technical capability. The positive impacts of the project will be sustained by PERTT if the provincial government continuously allocates necessary budget to PERTT. CC showed signs of its sustainability for now, but the incentive for participating in the project came from outside the committee. Therefore, improvement of the incentive is necessary in order to promote its sustainability.

3-2 Factors that Promoted the Realization of Effects

(1) Factors Attributed to the Japanese Side

1) Input of experts with technical capability and language ability

The erosion at the project sites was severe, but the project determined the best ways to cope with the erosion. In the latter half of the project, experts had no difficulty in terms of their language ability to communicate with counterparts and they organized technical manuals in Spanish as well, which greatly helped promote the understanding of counterparts.

2) Input of Equipment (Heavy Machinery)

PERTT, the counterpart organization, had only old types of heavy machinery. However, the input of appropriate equipment by the project helped to upgrade the capability of the counterparts and the efficiency of their work.

(2) Factors Attributed to the Bolivian Side

1) Technical Absorbency of PERTT

PERTT originally consisted of a group of engineers. However, the lack of techniques in Bolivia impeded them from taking proper countermeasures to erosion. Offering the techniques and method of construction helped them to improve their technical capability dramatically.

3-3 Factors that Impeded the Realization of Effects

(1) Factors Caused by the Japanese Side

1) Insufficiency and delay of long-term expert input in the field of social forestry

Some problems were observed in adjusting the theory on sufficient participatory method in the early period of the project. A Japanese coordinator had to also take on the task of a long-term expert of social forestry at the same time, and the dispatch of a long-term expert to Bolivia in the field of social forestry was delayed.

(2) Factors Caused by the Bolivian Side

1) Social instability in Bolivia

Bolivia is politically and socially unstable, and riots occurred across the nation during the project period. Fortunately, as the Tarija region is far from the Capital, La Paz, the impacts of the riots to the project were small.

2) Natural disaster and construction of a earth-fill dam

Because of the deluge that occurred in Tarija city in the earlier phases of the project, it was found that the originally planned traditional earth-fill dam had a problem in its intensity. Therefore, the project changed its policy, and decided to construct a non-breakable earth-fill dam. This type of earth-fill dam can function well enough to protect from sediment discharge, but it costs substantially more for its construction. The issue of clarifying the cost remains in case PERTT constructs the type of earth-fill dam by itself in the future.

3) Allocation of counterparts

A sufficient number of counterparts was assigned, but they had other posts at PERTT and that the time they spent being involved in the project was insufficient.

4) Selection of sites and participating incentive

As a private land was selected as the project site, planted trees and constructed facilities belonged to the owner of the land. Incentives were required of those who participated in the project living in the vicinity of the project site. To solve this problem, Reservorio (a storage reservoir) was constructed, anchored by PERTT in order to obtain the consent of the participated residents.

3-4 Conclusion

The project was mostly smoothly implemented in accordance with the contents of Record of Discussion, PDM and Plan of Operation. During the project period, some problems were observed, such as the level of incentive of the citizens participated in the project and the delayed dispatch of the Japanese expert. However, the original purpose of the project was accomplished.

3-5 Recommendations

(1) Short-Term Recommendation (Till the Termination of the Project)

1) It is necessary to continue the technical improvement and development as well as to take time to summarize the project by the end of the project period.

2) As the model facilities, research and trial plots, etc. are on a private land, their sustainability is questionable. Therefore, it is necessary that PERTT make an agreement with CC about those facilities in order to assure their sustainability. It is also necessary that the experts in the field of social forestry and PERTT staff consider the incentives for participating in the project for the sustainability of CC.

(2) Long-Term Recommendation (After the Termination of the Project)

1) Because the data on research and trial plot obtained in the project is indispensable for future technical development, it is favorable to continuously accumulate and analyze the data. For that purpose, it is necessary that the participants be continuously involved in the efforts as experts of the erosion prevention project in PERTT.

2) As for the earth-fill dam developed in the project, considering the economic situation of Bolivia, it is favorable to implement a new development plan based on the dam with reduced cost.

3) It is recommended to maintain the political independence of PERTT as well as to properly utilize the procured equipment.

4) It is necessary that the provincial government continuously secure the budget for the activities of PERTT.

5) It is necessary to reinforce the linkage among governmental organizations and universities in order to develop a system so that many people can utilize the reports and manuals developed in the project.

3-6 Lessons Learned

Ideal and reality on participation

In the late 1990s when the project was developed, both the Japanese side and the Bolivian side were at the stage of trial and error regarding "community participation." The Bolivian side introduced the idea of "public participation" in the preparation and implementation stages of the "Poverty Reduction Strategy," which was enacted in 1999, while the Japanese side introduced the "Community participation" in the form of riding the tide of aid at that time. Therefore, the ideal form for "community participation" was not fully discussed before the introduction of the project.

However, the discussion on "participation" has been developed since then, and it has become clear that there were various forms of introduction. Therefore, it is necessary that JICA summarizes and categorizes its approach toward "participatory development."

3-7 Follow-Up Situation

N/A.