

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Dominican Republic Office/ December 2013

Country Name	The Sustainable Watershed Management Project in the Upper Area of the Sabana Yegua Dam in the Dominican Republic
Dominican Republic	

I. Project Outline

Background	<p>In the 1940's, about 70% of the national land of the Dominican Republic was covered by forests. The forest coverage had dropped to as low as 14% during the 1980s due to commercial felling, development of ranches, slash and burn agriculture, damage caused by a succession of hurricanes and farmland and forest fires. It was urgent to conduct the participatory watershed management aiming at stopping watershed devastation because of poverty, facilitating forest restoration and soil conservation that are compatible with local as well as national needs. In order to overcome the problem, it was essential to strengthen capacities of Secretariat of State of Environment and Natural Resources (SEMARENA currently MARENA), which was in charge of establishing watershed management system, and Sur Futuro Foundation (FSF), which was entrusted to conduct sustainable watershed management in the upper area of the Sabana Yegua Dam by SEMARENA.</p>										
Objectives of the Project	<ol style="list-style-type: none"> Overall Goal: The forest resources in the Project Area will be handled suitably by the villagers using techniques they assimilate through the technical support provided by the staff of FSF and SEMARENA. Project Purpose: The staff of FSF and SEMARENA will improve their technical capacity in Watershed Management and administrative capacity in project management. Logical flow of how the project responses to development issues: This project aims to improve FSF's and SEMARENA's technical capacity in watershed management through technical transfer of agroforestry and handy irrigation agriculture as incentives for villagers¹, introduction of monitoring activities and establishment of voluntary forest fire control units, and thereby forest is conserved by villagers in target villages. 										
Activities of the project	<ol style="list-style-type: none"> Project site: 14 villages in the Upper Area of the Sabana Yegua Dam Main activities: <ul style="list-style-type: none"> - Formulate annual plans and technical manuals for the fields of agroforestry, handy irrigation agriculture reforestation - Establish demonstration farms for agroforestry - Organize farmers associations for handy agriculture techniques - Organize voluntary forest fire control units and conduct training for the units - OJT to C/Ps by Japanese experts and trainings to villagers by C/Ps Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Dominican Republic Side</td> </tr> <tr> <td>1) Experts: 9 persons</td> <td>1) Staff allocated: 11 persons</td> </tr> <tr> <td>2) Trainees received: 3 persons</td> <td>2) Land and facilities: project office</td> </tr> <tr> <td>3) Equipment: 8 million yen</td> <td>3) Local cost (items not specified): 3 million RD\$</td> </tr> </table> 			Japanese Side	Dominican Republic Side	1) Experts: 9 persons	1) Staff allocated: 11 persons	2) Trainees received: 3 persons	2) Land and facilities: project office	3) Equipment: 8 million yen	3) Local cost (items not specified): 3 million RD\$
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Project Period	Original period: April 2006 - March 2009 Extended period: April 2009 – March, 2010	Project Cost	Total: 306 million yen								
Implementing Agency	<ul style="list-style-type: none"> -Secretariat of State of Environment and Natural Resources (SEMARENA, currently MARENA) -Sur Futuro Foundation (FSF) 										
Cooperation Agency in Japan	Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries										
Related Projects	<p>Japan's cooperation:</p> <ul style="list-style-type: none"> -The watershed management project in the upper area of the Sabana yegua Dam (Master Plan, 2000-2002) -Dispatch of individual expert of Forest Operation Technic (2001-2003) -Dispatch of JOCV to FSF (2002-2004) -Construction of Mini-hydropower at El Recodo (Embassy of Japan, 2006-2008) <p>Other donors' cooperation:</p> <ul style="list-style-type: none"> -Support to the National Reforestation Program (establishment of forestry nursery for the target area of this project) (Taiwan) -Introduction of handy irrigation agriculture (Dominican Rep., ADESJO: NGO) -Demonstrating the Sustainable Watershed Management in Sabana Yegua Dam (Global Environmental Fund (GEF) and United Nation Development Program (UNDP)) -Construction of Palomino Dam (Dominican Government and ODEBRECH Brasil) 										

¹ Villagers are required to plant trees in return for receiving support of agroforestry and handy irrigation.

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Dominican Republic's development policy (environmental conservation including watershed management as set in "the General Law of Environment and Natural Resources (Law 64-00)" (2000), and the National Plan of Reforestation "Quisqueya Verde" (Green Quisqueya) (1997-present) and development needs "conservation of soil and water resources through the sustainable management in watersheds including the upper area of the Sabana Yegua Dam", and as well as Japan's ODA policy "JICA Country Assistance Programme" (2002) which specifies "support to environmental conservation including forestry recovery and water quality improvement" at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has largely achieved the project purpose "enhancement of technical and administrative capacity of FSF and SEMARENA in sustainable watershed management" in terms of i) provision of better technical support for handy irrigation agriculture, ii) agroforestry, iii) reforestation, as well as iv) implementation of monitoring activities, v) forest fire prevention and control, vi) erosion control, and so forth. At the time of project completion, handy irrigation system was introduced in 44ha in 4 villages, agroforestry was introduced in 32ha (64% of the target) and a voluntary forest fire control unit was formed in the 4 villages where handy irrigation agriculture was introduced. The project assessed the technical and administration capacity level of SEMARENA and FSF by Capacity Development Sheet and it was improved by 27% compared to before the project implementation. According to the interviews with FSF, MARENA and villagers at the time of ex-post evaluation, the technical and administrative capacities, which were strengthened by the project, in watershed management are considered to have been maintained. As a result, newly planted area, which totaled 99ha during the project period, further increased to 636ha (about 33% increase since 2006) in May 2013. In addition, aforesation activities have been extended to other villages than the target ones through the extension of handy irrigation system. FSF has played a major role in promoting relevant extension activities and technical assistance. Furthermore, the minutes/report of periodical meetings among FSF, SEMARENA and community associations prove that the level of satisfaction of villagers on services of FSF and MARENA is high.

As for overall goal "the forest resources in the project area will be handled suitably by the villagers", it has been achieved since the percentage of the forest area in the project area was increased by approximately 33% between year 2010 and May 2013 through promotion of reforestation.

Therefore, effectiveness/impact of this project is high.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Enhancement of technical and administrative capacity of FSF and SEMARENA in sustainable watershed management.	The technical capacities in watershed management and the project administration capacities of the technicians working in the FSF and the SEMARENA will be improved by 20%.	(Project Completion)Data on Capacity Development (CD) sheet, which was designed to clarify situations of CD that related to the project management capacity and watershed management skills, shows that the general capacity level was improved by 27% (from 67% in 2006 to 94% in 2009) (Ex-post Evaluation)According to the interviews of FSF, SEMARENA and villagers, the technical and administrative capacities in watershed management of the technicians of the FSF and the MARENA are considered to have been even more enhanced, which might also be justified by the enhancement of forest area.
	The satisfaction of local residents with the services offered by the technicians of the FSF and the SEMARENA will increase.	(Project completion)According to monitoring survey, villagers benefitted by the project in target area are almost 100% satisfied with the activities of FSF and the forest office. (Ex-post Evaluation)No official survey has been conducted by MARENA or the FSF however, at periodical meetings with the different community associations, villagers expressed that the level of their satisfaction with services of MARENA or the FSF is quite high, which is proved by the minutes/report of meetings.
(Overall goal) Better handling of forest resources and erosion control by villagers.	By 2014, the percentage of the forest area in the project area will increase by 3%. Note: the percentage is against the original forest area (1912 ha) at the time of the project commencement.	(Ex-post Evaluation)The forest area in the project target area was 1912ha at the commencement of the project. The forest area that was added after the project commencement increased from 99 ha in 2010 to 636ha in May 2013 through promotion of reforestation, which is approximately 33% increase against the original forest area.

Source: Project Completion Report, Interviews to counterparts

3 Efficiency

While the inputs were appropriate for producing the outputs of the project, both the project period and the project cost significantly exceeded the plan (ratio against the plan: 130%, 155%) since training for handy irrigation agriculture was delayed especially due to climate issue mostly hurricanes in the second year, which was specified as an important assumption in the PDM . Therefore, efficiency of this project is low.

4 Sustainability

FSF is a NGO established in 2001 to improve environmental deterioration and has conducted watershed management,

including reforestation and soil conservation as well as community development. The FSF has been entrusted to conduct sustainable watershed management in the upper area of the Sabana Yegua Dam by MARENA, which is continuously in charge of establishing watershed management system and currently has 27 personnel dealing with watershed management (including staff for programs of microcredit, social organization activities and environmental awareness education for the communities). In addition, MARENA and FSF agreed to jointly implement the Updated Master Plan during the period 2013-2023. FSF also has experiences of working in the field, together with internal and external organizations (e.g. MARENA/Global Environment Facility: GEF, UNDP), based on the techniques transferred by JICA. Although the number of personnel was reduced after the project to the same level as that before the project and five (5) counterparts among 11 are not working anymore, FSF has enough personnel who conduct regular watershed management activities. Regarding the policy aspect, reforestation for watershed management is considered as one of the most important environmental issues and besides the policies and strategies mentioned in "Relevance", "the Reforestation Plan in the upper area of San Juan Watershed" was officially launched in June 2013. As for technical aspect, the FSF maintains a high level of technical competence to carry out the watershed management activities, which is attributed to this project and other international cooperation projects that they have been involved in. It has been conducting several training courses for its technicians such as "soil conservation practice" using the manuals prepared by the project as well as for farmers in the field of operation and maintenance of irrigation systems, agroforestry system management and so forth, through agroforestry demonstration farms by OJT after the project. In addition, all of equipment provided by the project, such as motorbikes and cultivation equipment, are properly working/maintained and in very good shape. Regarding the financial aspect, the FSF has firmly established the financial support to maintain the promotion and watershed management activities with a reliable prospect of its continuation. However, the revolving fund for handy irrigation and agroforestry has not yet been fully functioned because currently farmers try to recover from tropical storm damage in 2011. The negotiation to restart the fund is under process, and the farmers are willing to pay the debt if the production conditions are recovered. Therefore, at the time of ex-post evaluation, no problem has been observed in policy background, institutional and technical aspects of the implementing agencies. Therefore, sustainability of this project is high.

5 Summary of the Evaluation

The project has largely achieved the provision of better technical support for handy irrigation agriculture, agroforestry, reforestation, monitoring, forest fire prevention and control, erosion control, etc. for the project purpose of "enhancement of technical and administrative capacity of FSF and SEMARENA in sustainable watershed management". With such activities, the forest cover has increased through reforestation activities by villagers not only in the target villages but also in other villages, and the overall goal "better handling of forest resources and erosion control by villagers has been achieved.

As for sustainability, there was no problem observed in the policy, institutional, technical and financial aspects.

For efficiency, the inputs were appropriate for producing the outputs of the project, though both the project period and the project cost were significantly exceeded the plan.

In the light of above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- Although there is no problem on technical aspect of Sustainability, it is recommended to develop adequate knowledge transfer system to maintain the institutional knowledge base and capabilities in preparation for staff attrition.
- It is important to maintain the partnership between the Official sector (MARENA) and a local NGO (FSF) with a strong presence and structure in the territory, which is a key factor to ensure the consolidation and sustainability of effects of watershed management activities.

Lessons learned for JICA

- Consensus building with communities and participation are crucial elements for democratic governance and sustainable management of watersheds. These approaches can be promoted in combination with giving incentives to villagers, such as handy irrigation and agroforestry, as well as with cultivating their ownership.



Agroforestry parcels well maintained



Production of trees is maintain for reforestation