Summary of Terminal Evaluation

I. Outline of the Project			
Country: Mexico			**Project title:** Coastal Wetland Conservation in Yucatan Peninsula in the United Mexican States
Issue/Sector: Natural Environment Conservation			**Cooperation scheme:** Technical Cooperation Project
Division in charge: Forestry and Nature Conservation Team II, Group I, Global Environment Department			**Total cost (estimated at completion of the Project):** **about 350 million** yen
Period of Cooperation	**(R/D):** from 1 March 2003 to 28 February 2008 **(F/U):**	**Partner Country's Implementing Organization:** CONANP - the RBRC Office (CONANP: National Commission for the Nature Protected Areas, RBRC: Ría Celestún Biosphere Reserve)	
		Supporting Organization in Japan: Ministry of the Environment, Ministry of Agriculture, Forestry and Fisheries, Kushiro International Wetland Center	

1 Background of the Project

The soil of the land of Yucatan Peninsula is limestone origin and almost completely flat, and has valuable ecosystems. In order to conserve them, the Ministry of Environment and Natural Resources (SEMARNAT) has been designated a series of natural protection areas for appropriate management. However, there are many problems which bear threat the environment such as artificial division of wetland ecosystem due to socio-economic development and increasing pressure for natural resource utilization caused by local people as well ass tourists. It is, therefore, required urgently to strengthen the environmental conservation system including development of human resources. In this context, the government of Mexico requested to the government of Japan a technical cooperation project that aims the conservation and restoration of coastal wetland and its sustainable use. Then, this 5-year project started from the March 2003.

2 Project Overview

(1) Overall Goal

Conservation of wetland ecosystem of RBRC is improved.

(2) Project Purpose

Environmental management activities are carried out properly in RBRC by leadership of the RBRC office.

(3) Outputs

1) Mangrove ecosystem restoration in RBRC is promoted.
2) Sustainable use of natural resources is practiced by community-based organizations (CBOs).
3) Solid waste management is improved.
4) Mechanism of information sharing about wetland conservation in the RBRC among related organizations and residents is established.
5) Knowledge and capacity of residents about importance of RBRC are improved through environmental education.

(4) Inputs

Japanese side:

Long-term Expert: total 4 persons, Short-term Expert: total 19 persons, Trainees received in Japan: 17 persons (including 2 persons planed), Provision of equipment 1,280 thousand pesos, Local cost expenditure: 4,222,276 pesos

Mexican side:

Counterpart (at the time of the terminal evaluation): total 7 persons, Local Cost: 19.9mullion pesos (this is amount allocated to the RBRC office), Provision of land and facilities: office space

II. Evaluation Team		
Members of Evaluation Team	1) Team Leader: Mr. Takayuki ANDO, Team Director, Forestry and Nature Conservation Team II, Group I, Global Environment Department, JICA 2) Evaluation Planning: Ms. Kanako ADACHI, Forestry and Nature Conservation Team II, Group I, Global Environment Department, JICA 3) Evaluation Analysis: Mr. Isao DOJUN, Chuo Kaihatsu Corporation	
Period of Evaluation	From November 1, 2007 to November 24, 2007	**Type of Evaluation:** Terminal

III. Results of Evaluation

1 Achievement

Indicators of each output are fulfilled in general and project purpose can be achieved mostly.

Output 1: The experimental reforestation for mangrove restoration has been carrying out in 8.3ha. Manual for Mangrove Restoration have been produced.

Output 2: 2 ecotourism groups have participated in the training course of ecotourism and 1 group will participate in the course in December 2007. In addition, advices for producing value added product have been provided to the cooperative of salt production and the cooperative of honey production.

Output 3: A master plan on the solid waster management in the municipality of Celestun was produced and separated collection of wastes is started in a pilot area of Celestun.

Output 4: Study reports, publications, and data related with RBRC were collected and a list of such publications was made. In addition, A newsletter "Revista RIA CELESTUN" was published.

Output 5: Environmental awareness of local residents has been raised through various environmental education events and seminars.

2 Summary of Evaluation Results

(1) Relevance: High

CONANP, the implementation organization of the Project, was established as an organization managing the nature protected areas in Mexico in 2000. The protected area has been increased, and the needs on the techniques of conservation for protected areas and knowledge on management of protected areas are increasing more. The National Development Plan of the current Federal Government shows that the protection and the sustainable use of natural resources and environmental education are the important issues. Therefore, the aims of the Project are relevant to the policies of the government of Mexico. One of the priority issues of Japanese economic cooperation with Mexico is the strengthening of capacity on management of ecosystem. Therefore, the Project is in conformity with Official Development Assistance policy of Japan. Main components of the Project are such as restoration of mangrove, ecotourism, solid waste management, environmental education, and others. Restoration of mangrove forest and improvement of solid waste management were important environmental issues in the area of RBRC, and awareness raising of local residents on environmental conservation was indispensable. Therefore, it may be said that the selection of strategically important components for the conservation of wetland ecosystem of RBRC was appropriate. In the three technical areas of the Project such as mangrove restoration, promotion of ecotourism and solid waste management, Japan has appropriate technologies with experienced persons, which makes justifiable the technical cooperation for those areas.

(2) Effectiveness: Satisfactory level in general

The RBRC office has obtained basic capacity for carrying out environmental management activities with proper leadership through projects' activities, and the degree of achievement of the Project Purpose is at a satisfactory level.

(3) Efficiency: Moderate

Around 2 years from the start of the Project, the progress of the project activities was not smooth because of the policy change of the RBRC office caused by personnel change of the director. This happened several months after the commencement of the Project, and it took time to come to an agreement with the Project contents. After obtaining a consensus, the progress of the project activities became smooth. The degrees of the achievement of the Outputs, which are indicated in the revised PDM Project Design Matrix), are in a satisfactory level in general.

(4) Impact

1) Prospect of achieving the Overall Goal "Conservation of wetland ecosystem of RBRC is improve"

It is expected that restoration of mangrove will be continued and appropriate management of solid waste will be strengthened by strengthening further the capacity of the RBRC office in term of institution, coordination and technical skills. Therefore, there is good prospect in achieving the Overall Goal of the Project.

2) Other Impact

The following impacts were observed.

a) Local residents, who participated in the activities for mangrove experiment reforestation, have begun to recognize the importance of mangrove restoration. As effects of implementation of the seminars on garbage and the pilot project of the separated garbage collection, illegal garbage disposal and burning of garbage at home have been reduced. Decrease of number of fly is also reported.

b) Explanation about the experiment reforestation field in Celestun and site visit were carried out at the following courses of Advanced Investigation and Study Center (CINVESTAV) and Ducks Unlimited in Mexico (DUMAC).

c) As obtaining visible good outcomes of mangrove restoration, topographic survey and mangrove reforestation are going to be started at just southern part (around 12 ha) of the experiment reforestation site of the Project in Celestun using the fund of the Mexican government (CONAFOR: National Commission of Forestry).

d) CONAFOR usually provided their fund mainly for nursery production and tree planting. By understanding necessity of topographic survey and construction of canals and wells for mangrove restoration, CONAFOR started to provide fund for such purposes. Therefore, there is good possibility that other organizations also provide necessary support.

e) 11 municipal offices in the northern coastal area of the Yucatan peninsula have interest to the solid waste management system incorporating in the municipality of Celestun. There is possibility that this system will be referred by such municipal offices in future.

(5) Sustainability

It is considered that the sustainability of the Project will be ensured at a satisfactory level politically and financially. However, there is room for ensuring the institutional and technical sustainability.

1) Political aspect

The sustainable environment, protection and sustainable use of natural resources and environmental education are the important issues in the National Development Plan of the current Federal Government. Also the State Government of Yucatan considers that the basic priority is to establish the conditions for achieving sustainable development in assuring environmental conservation and sustainable use of natural resources. Therefore, political importance of the wetland ecology conservation will be continued.

2) Organizational aspect

It is well recognized that the project activities should be continued as regular activities of the RBRC office. The counterparts have improved knowledge and experiences related the project activities, and also they have good capacity to manage the task forces and to coordinate the organizations concerned. However, their capacity should be improved in order to keep sustainability. It is necessary to take appropriate measures for assuring continuity of the counterparts, who received technical transfer under the Project and are employed as contract based staff, in order to establishing their knowledge and experiences. Therefore, there is room for improvement in assuring the organization sustainability.

3) Financial aspect

The project activities were carried out by using program funds of Sustainable Regional Development Programme (PRODERS) and Temporal Employment Programme (PET), and also having funds of CONAFOR. The State Government of Yucatan provided budget for the construction of the garbage treatment center in Celestun. It is expected that the activities will be carried out by using such budgets. Therefore, it is expected to be assured financial sustainability.

4) Technical aspect

After the mid-term of the Project, the project activities of each field have been carried out by deciding the roles of each counterpart. Therefore, the counterpart training in Japan and the technical transfer by the Japanese short-term experts have been done effectively. The counterparts are positively trying to acquire related knowledge and techniques. Their capacity has been clearly strengthened. However, there is still room for improvement in order to establish the outcomes of the Project and keep sustainability. It is important to define objective clearly for obtaining good results with an efficient and effective way under the conditions that limited budget and limited personnel are available. For that, it is necessary to have a mid and long-term vision on conservation of the whole RBRC area with a plan of the activities of the RBRC office. For sustainability, alignment of such mid and long-term vision with a concrete action plan by the RBRC office is highly recommended.

3. Factors that promoted realization of effects

Governmental organizations, residents groups and NGOs are participating to the Project as member of the task forces. There is very good cooperation and collaboration between those organizations and the Project, and contributing smooth implementation of the project activities. Task forces of the Project are effective as a place for grasping the project activities and discussion. It is important to cooperate among organizations concerned, because those organizations tended to implement activity separately formerly and also to obtain appropriate academic support and financial support from the organization concerned.

At first, top-down decisions were seen in the RBRC office. Japanese experts promote to clarify each counterpart's role and to transfer authority. As a result, counterparts' ownership and capacity were improved.

Japanese short-term experts tried to apply Japanese techniques to the Project site with local stakeholders. Japanese long-term experts kept in step with the short-term experts' advices. Such technical transfer was very effective.

4. Factors that impeded realization of effects

Around 2 years from the start of the Project, the progress of the project activities was not smooth. Main cause was the policy change of the RBRC office caused by personnel change of the director. This happened several months after the commencement of the Project, and it took time to come to an agreement with the Project contents. On the other hand, it can be pointed out that there was no sufficient explanation about consistency of the contents of the Project, which indicated in the original PDM that covers many activities comprehensively, with the roles and the duties of the RBRC office. When a technical cooperation project is carried out for organizations where decision-making is performed by top-down method, risk management for reducing negative effects caused by policy and attitude change due to personnel change of managerial revel is necessary.

5. Conclusion

Indicators of each output are fulfilled in general and project purpose can be achieved mostly. Counterparts' capacity and sense of responsibility have been strengthened considerably and the RBRC office got trust from local residents and related organizations. Environmental awareness of local residents has been raised through the project. Project's outcomes can be spread to other areas because organizations concerned and neighborhood municipalities show their interests especially in the field of mangrove restoration and solid waste management. In the field of ecotourism, capacity of ecotourism groups has been strengthened through several trainings provided by the Project.

It is the close collaboration between Japanese experts and Mexican counterparts and their enthusiastic activities that brought such considerable results. In addition, effective coordination among organizations concerned through task forces had a good impact.

Although there were great effects mentioned above, sustainability of some outputs were not secured yet, because project activities actually began after middle of the project and some activities have not finished yet. For example, mangrove restoration is in the experimental stage and there are some examinations which results have not been gotten. The RBRC office is expected to monitor the mangrove continuously and feedback its results to the manuals. Then those manuals can be applied to other areas.

In the field of solid waste management, separated collection in a pilot area has started and OPD will be established near future. However, separated collection in Celestun as a whole has not done yet and the management of OPD must be a challenging issue because it is the first case in the Yucatan State. In terms of information sharing, to launch a homepage of the RBRC office can be useful for effective information accumulation and sharing. Environmental education has been implemented in some events and in case of separated collection of garbage. However, it was not implemented in school education or toward tourists. It is expected to promote environmental education by using the Cultural Conservation Center which is under construction. The RBRC office needs mid-term and long-term conservation vision. Based on the vision, the RBRC office should place necessary staff and strengthen its institution in order to promote conservation activities strategically.

6. Recommendations

In order to fix and extend the results of the Project, it is desirable to extend the Project around 2 years and to strengthen the capacity of the RBRC office.

6-1 Measures to be taken until the original project period (February 2008)

(1) The Project should continue experimental reforestation of mangrove.
(2) The Project should support the establishment and management of the Decentralized Public Organization.
(3) The Project should prepare a utilization plan of the Cultural Conservation Center which includes environmental education.

6-2 Measures to be taken when the project is extended

(1) CONANP is recommended to employ counterpart staff permanently in order to fix and expand the project results.

(2) The RBRC office will revise the management program of RBRC next year. In the course of its revison, the RBRC office should align a mid-term and long-term conservation vision of RBRC including multiyear operation plan in accordance with the management program and the institutional strategy of CONANP. Japanese experts should give necessary advice.

(3) The RBRC office, together with related organizations, should monitor and evaluate experimental reforestation of mangrove and feedback its result to the manuals so that the manuals can be applied in other areas. Japanese experts should analyze the situation and give them necessary advices. (In order to monitor mangrove reforestation efficiently, the target area of the monitoring should be concentrated on the existing experimental reforestation areas in Celestun.)

(4) In the field of solid waste management, the RBRC office, together with related organizations such as the municipality of Celestun, should support OPD to manage itself smoothly. Especially, support to separated collection in whole area of Celestun and financial management method will be needed. Japanese experts should analyze the situation and give them necessary advices.

(5) The RBRC office, together with related organizations, should prepare and implement environmental education plan for school education and produce necessary materials for this. Japanese experts should analyze the situation and give them necessary advices.

(6) The RBRC office should use the Cultural Conservation Center as a base of various conservation activities including environmental education for local residents and tourists. Japanese experts should analyze the situation and give them necessary advices.

(7) The Project should launch the RBRC office's homepage and give information about nature environment and conservation activities of RBRC through the homepage.

(8) The RBRC office should share lessons learned and results of the Project with CONANP and the regional office of Yucatan Peninsula. CONANP should use them in other areas in Mexico and in South-South cooperation such as a Third Country Training Programme.

7. Lessons Learned

(1) At the beginning of the Project, it took time to build consensus between Japanese side and Mexican side. After continuous consultation between Japanese long-term experts and Mexican counterparts, the consensus was built, and the project activities have been implemented successfully. It shows that the base of activities is mutual trust.

(2) In this project, technical transfer by Japanese short-term expert was very effective. But it must have been impossible if there was no mutual trust between Japanese long-term experts and Mexican counterparts. In addition, continuous follow-up by Japanese long-term experts realized of Japanese short-term experts' technical advices.

(3) In order to develop capacity and raise sense of responsibility of staff, clear roll allocation and devolution are effective.

(4) Cooperation of various actors including local residents is indispensable for wetland conservation. It is necessary and effective to organize necessary task forces for conservation under the cooperation of related actors. A conservation office should take an initiative in task forces and coordinate stakeholders in order to promote conservation activities.