

Ecuador

**Ex-Post Evaluation of Japanese Technical Cooperation Project
“Project for Conservation of the Galapagos Marine Reserve”**

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0. Summary

The Project was implemented for the purpose of strengthening of the management of the Galapagos Marine Reserve (GMR). The project objective is an important policy objective of the Government of Ecuador, highly needed and compatible with Japan’s ODA policy. Many of the planned outcomes of the Project, however, do not have a direct link with the Project objective. Since the relationship between the Project objective and some of the planned outputs is questionable, the relevance of the Project is evaluated as fair. On the other hand, most of the outcomes were generally achieved as planned and the activities have mostly continued. As a result, the Project has successfully realised improved awareness among local residents on environmental issues through environmental education, strengthened conservation activities based on the newly-established research and water quality monitoring functions and the promotion of sustainable fisheries through participatory monitoring. Since certain positive effects of new environmental conservation activities by key actors have been confirmed, the effectiveness and impact of the Project are evaluated as high in relation to the prospective achievement of the overall goal. At the initial stage of the Project, many activities stagnated due to the disorganized situation of the counterpart (C/P) organization (implementing agency), worsened relationship with local fishermen and problems surrounding the leasehold of the land earmarked for the construction of the Communication Center for Environmental Education (CCEE). With increased inputs, including the dispatch of more Japanese experts and the recruitment of more local staff, the Project was completed in five years as planned. Based on these facts, the efficiency of the Project is evaluated as fair. Although many activities initiated under the Project are continuing, there is some concern in regard to the function of the Participation Management Board (Junta de Manejo Participativa: JMP) and the financial situation of the implementing agency. Based on above findings, the sustainability of the Project is judged to be fair. In light of above, this Project is evaluated to be partially satisfactory.

1. Project Description



Location of the Project Site



Communication Center for Environmental Education (CCEE)

1.1 Background

The Galapagos Islands (population of approximately 25,000 as of 2012) of Ecuador are an archipelago of volcanic islands located around the equator in the Pacific Ocean, approximately 1,000 km west of continental Ecuador. Due to the isolation from the continent, a unique local ecosystem was developed. Since the preservation of the local nature and its value for tourism is an important policy agenda, the Government of Ecuador introduced the Special Law¹ in 1997. This was followed by the formulation of a strategic plan for the Galapagos² in 2002 aiming at satisfying both the preservation of the biodiversity on the islands, which is truly precious from a global point of view, and the development of local tourism.



Galapagos Islands

As a remote archipelago, the Galapagos Islands traditionally have a unique administrative body called the Participatory Management Boards (JMP)³ which is

¹ Special Regime Law for the Preservation and Sustainable Development of the Province of Galapagos.

² 2010 Strategic Plan for the Conservation and Sustainable Development of the Galapagos. With a target completion year of 2010, this plan consisted of four main pillars: control of the population increase, integrated management of the land area, effective utilization of natural resources while solving the conflict between fishermen and the tourism sector and establishment of an ocean security system.

³ The JMP is a local mechanism designed to ensure the smooth management of the GMR by dealing with any problems of the GMR while avoiding one-sided decision-making by the central government in view of the remote location of the Galapagos. Its members represent the Galapagos Artisanal Fisheries Sector, Galapagos Chamber of Tourism, Charles Darwin Research Station of the Charles Darwin Foundation (CDF), Naturalist Guides Association and Directorate of the Galapagos National Park (DPNG), representing the five most

designed to avoid the enforcement of one-sided decisions by the central government and to facilitate decision-making through a consensus among local stakeholders. In 2002 the DPNG (Dirección del Parque Nacional Galápagos) was concerned about the depletion of such fisheries resources as sea cucumber and lobster and decided to ban their fishing. Local fishermen reacted badly to this decision and the resulting confrontation between the DPNG and fishermen impeded efforts to conserve the ecosystem in the GMR. Ecosystem conservation efforts in the coastal Galapagos stayed behind the corresponding efforts inland, presumably because of insufficient basic data on fisheries resources, impacts of waste water discharged by residents to the ocean, weak environmental awareness among fishermen and local residents and poor communication between fishermen and the DPNG.

In January, 2010, a tanker ran aground in a bay on San Cristobal Island and began leaking oil. The JICA dispatched a study team in February, followed by the dispatch of three experts on ecosystem conservation while searching for the possibility of providing long-term cooperation for the protection of natural resources.

Responding to the action by JICA, the Government of Ecuador requested the Government of Japan's implementation of a project designed to strengthen the management of the Galapagos Marine Reserve (GMR). After analyzing the problems by two short field surveys conducted in 2001 and 2002, the JICA implemented a technical cooperation project entitled "the Project for Conservation of the Galapagos Marine Reserve" (hereinafter the Project) for a period of five years from January, 2004 with the DPNG acting as the implementing agency. The Project consisted of wide-ranging activities, including the communication of information to fishing communities, environmental education, oceanic surveys, water quality monitoring and the sustainable management of resources. While accumulating vital information on marine conservation, the Project attempted to strengthen the management system of the GMR through the establishment of alternative means of livelihood for fishermen, improved awareness of marine conservation by local residents and the

important sectors in the Galapagos (i.e. fishing sector, tourism sector, natural conservation sector, science and education sector and naturalist guides). The JMP was established in 1998 based on the Special Law. The JMP makes its decisions by consensus but these decisions have no legally binding power. When no consensus is reached by members of the JMP, the agenda in question is sent to its superior body, the AIM (Inter-Institutional Management Authority), of which the main members are representatives of the Ministry of Environment, Ministry of Tourism and Ministry of Defense along with some member bodies of the JMP. Decisions by the AIM are based on a majority vote and have legally binding power, forcing all member bodies to abide by such decisions. The revision of the Special Law in 2012 has led to a proposal to revise the members of the JMP to consist of representatives of the islanders of each island, private nature conservation bodies, private tourism sector, health sector and fishermen (further detail in 3.4 – Sustainability).

sustainable management of local resources among fishermen. From the time of the mid-term review of the Project in 2006, the objective of the Project was changed from “promotion of participatory conservation activities for the ecosystem of the GMR” to “strengthening of the participatory management system of the GMR”.

1.2 Project Outline

Overall Goal		GMR conservation and sustainable management is promoted through the participation of key actors ⁴ (changed from the “strengthening of the system for the conservation of the ecosystem of the GMR” at the time of the mid-term evaluation)
Project Objective		Participatory Management System of the GMR is strengthened (changed from the “promotion of participatory conservation activities for the ecosystem of the GMR” at the time of the mid-term evaluation)
Outputs	Output 1	Information flow on marine reserve management is strengthened among fishing communities
	Output 2	Environmental understanding is promoted to the local residents
	Output 3	Information of marine life and ocean environment is increased
	Output 4	Water quality monitoring system is established in Santa Cruz
	Output 5	Sustainable resource management for artisanal fisheries is supported
Inputs		<p>Japanese Side:</p> <ol style="list-style-type: none"> 1. Experts: 22 personnel in total <ul style="list-style-type: none"> ● Long-Term (7)、● Short-Term (15) 2. Trainees received (in Japan): 10 personnel 3. Trainees for Third-Country Training Programs: none 4. Equipment supplied: 20 million yen 5. Local cost: 143 million yen 6. Others (incl. dispatch of related missions) <p>Ecuadorian Side:</p> <ol style="list-style-type: none"> 1. Counterpart(s): 18 personnel in total Project Director, Project Manager and other counterpart personnel (DPNG staff, etc.) (all part-time posts with other

⁴ The key actors are organizations, individuals and groups closely linked to the Project. Some examples are schools, fishing cooperatives, municipal office and tourism-related bodies (as defined in the mid-term evaluation).

	<p>regular work of DPNG other than the Project Manager)</p> <p>2. Procurement of equipment, including vehicle</p> <p>3. Use of the land owned by the CCEE to accommodate the Project Office and provision of utilities</p> <p>4. Local cost: counterpart salaries and training cost</p>
Total cost	682 million yen
Period of Cooperation	January, 2004 – January, 2009
Implementing Agency	Dirección del Parque Nacional Galápagos (DPNG), Ministry of the Environment
Cooperation Agency in Japan	None
Related Projects	<ul style="list-style-type: none"> - Environmental Management Program of Galapagos Islands, IDB, 2001-2005 - Control of Invasive Species in the Galapagos Archipelago, GEF, 2001-2006 - ARAUCALIA Project Integral Galapagos, 1999-2004 - Monitoring of Galapagos Islands, Fundacion Natura/World Bank, -2004.

1.3 Outline of Terminal Evaluation⁵

1.3.1 Achievement of Overall Goal

There has been increasing interest in GMR conservation among not only the five member sectors of the JMP but also other sectors (municipal office, teachers, students and women's groups). As these sectors are expected to grow to become key actors for GMR conservation, at terminal evaluation it was judged that the continuation of the activities initiated under the Project by the implementing agency in the post-project period is likely to achieve the overall goal. Moreover, the relationship between key actors in environmental conservation, such as fishing cooperatives and the DPNG, has been improving, suggesting the likelihood of increased activities based on the proposals of key actors.

1.3.2 Achievement of Project Objective

Although the number of meetings and number of consensus decisions made by the JMP, one indicator of Project objective, decreased in 2007, definite qualitative improvements, including improvement of the consultation process of the JMP were

⁵ Terminal evaluation is carried out six months before the termination of project.

found. It was evaluated by Terminal evaluation that the Project objective was being achieved.

1.3.3 Recommendations

The following recommendations were made at the time of the terminal evaluation.

- 1) Strengthening information dissemination system of DPNG, including the publication of monthly bulletins and television and radio programs on the GMR.
- 2) Strengthening collaborative relationship of DPNG with secondary schools on a coordinated teaching schedule and collaboration with teachers. Promotion of discussions with the Ministry of Education or its office in the Galapagos in order to integrate project-related activities into the curriculum which is to be developed through the comprehensive reform of education in the future.
- 3) Increase the number of technicians/engineers to properly implement ocean monitoring. Collaboration between different sections within the DPNG, such as the Marine Resources Administration, is desirable along with collaboration with the CDF and other related organizations.
- 4) With regard to alternative income sources, development of a scheme to support activities for small and micro-enterprises by means of providing vital information on training credit access and financing, production, commercialization of their products and tax.
- 5) Preparation and implementation of an operation plan for the CCEE with secured staff and the renewal of exhibitions by the DPNG for environmental education in communities.
- 6) Securing financial sources of JMP by DPNG and the continuation of the vital functions of the JMP and AIM.

2. Outline of the Evaluation Study

2.1 External Evaluator

Wataru Yamamoto (Global Group 21 Japan, Inc.)

2.2 Duration of Evaluation Study

The ex-post evaluation was conducted over the following period.⁶

⁶ Interviews comprising a beneficiary survey were conducted with 48 fishermen based at Puerto Ayora, 30 participants of the environmental education program, 32 ordinary residents and five members of women's groups. In addition, an ex-post evaluation workshop was held to which people from the DPNG, project participants, representatives

Duration of the Study: October, 2011 – July, 2012

Duration of the Field Study: January 15th-28th, 2012 and March 25th -31st, 2012.

2.3 Constraints to the Evaluation Study

As the objective of the Project is considered to be unsuitable to indicate the overall effect of the Project, it is decided that information on the achievement status of the relevant indicators for the project objective are described in this report for reference purposes only. This decision is further supported by the fact that there is a logical gap between the planned outputs and the project objective. Due to the fact, the achievement of each indicator for the project objective was not used in relation to the evaluation of effectiveness and impact of the Project. Instead, the outcome(s), impact(s) and state of activity continuation were analysed for each planned output so that they could be evaluated in an integral manner.

3. Results of the Evaluation (Overall Rating: C⁷)

3.1 Relevance (Rating: ②⁸)

3.1.1 Relevance with the Development Plan of Ecuador

As already described in the section on the background of the Project, the preservation of the nature and tourism value of the Galapagos was an important policy agenda at the time of the commencement of the Project in 2004. In 1998 a management plan for the GMR was prepared for the nature conservation and sustainable utilization of local resources. Following the adoption of the new constitution in 2008, the Government of Ecuador restated the importance of the preservation of the natural resources and their tourism value of the Galapagos National Park and GMR and began to restrict resettlement from continental Ecuador to the Galapagos. In addition, the Galapagos became a special district managed by a governmental council representing, the Ministry of Environment, Ministry of Planning and Ministry of Tourism, among others, in order to strengthen the conservation system for the area.

Accordingly, the Project was generally relevant to the policy of the Government of Ecuador to promote protection of the nature of the Galapagos at the time of both the ex-ante evaluation and ex-post evaluation.

of local communities, those working in the education sector and participants of the education program were invited so that the opinions of as many stakeholders as possible could be heard.

⁷ A: Highly satisfactory; B: Satisfactory; C: Partially satisfactory; D: Unsatisfactory

⁸ ③ High; ② Fair; ① Low

3.1.2 Relevance with the Development Needs of Ecuador

At the time of the planning of the Project, the DPNG introduced restrictions on local fishing activities in the light of the depleting marine resources. As the opposition of fishermen against the restrictions intensified, it was needed to improve the communication with fishermen and the development of alternative income sources if the sustainable management of marine resources was to have any chance of success. Meanwhile, the limited opportunities to provide education on the marine environment for islanders meant that the incentives for them to become serious about environmental conservation required an increased environmental education from the long-term viewpoint. In this sense, the contents of the Japanese assistance for the Project were relevant to the needs of the Galapagos at the time of planning.

The number of tourists visiting the Galapagos has been increasing by approximately 10,000 a year in recent years and the necessity to protect marine environment was even higher at the time of the completion of the Project than at the project planning stage and there is still a consistent need for the sustainable management of the GMR which was aimed at by the Project.

3.1.3 Relevance with Japan's ODA Policy

The Policy Consultation Mission sent to Ecuador in February, 1999 confirmed that the priority areas of Japan's ODA policy for Ecuador were "poverty reduction", "environmental conservation" and "disaster prevention" and the Project falls in the key area of "conservation of the natural environment and ecosystem" of "environmental conservation". The Databook of Japan's Ministry of Foreign Affairs for Ecuador lists environmental conservation as a priority and Japan's Medium-Term Policy for ODA also emphasizes the importance of natural environment sector for cooperation. The Project is, therefore, evaluated as highly relevant to Japan's ODA policy.

3.1.4 Appropriateness of the Project Design

In connection with the Project, the first short-term study (July, 2001), analyzed the existing problems and identified various challenges for environmental conservation efforts in the Galapagos. The second short-term study (March, 2002) proposed a program consisting of several technical cooperation project incorporating wide-ranging activities⁹. It was finally decided that some of the proposed wide-

⁹ Program Outputs proposed at the second short-term study :

1: Pilot project to implement a participatory environmental monitoring and feedback program for the RMG to improve the management plan for responsible use of marine tourism sites and ports

ranging activities would be put together to create a project. Because of this historical background, the activities included in the project were diverse with weak linkage between their outputs.

The objective of the Project was set as “strengthening of the participatory management system” (“promotion of conservation of the ecosystem of the GMR through resident participation” prior to the change of the objective). For the actual achievement of this objective, it is necessary to expand the scope of members of the JMP (currently the members of JMP are only representatives from fishery/tourism/science sectors and naturalist and no representative of education sector/civil society is a member). It is also necessary for the opinions of each member of the JMP to properly reflect the opinions of the organization he/she represents. For instance in the component of environmental education, the proper function of such a mechanism demands that the persons who participated in environmental education under the Project need to become a member of the JMP by forming community groups and gradually obtaining political power and support to the extent that members of the JMP may be replaced or expanded. In short, the initiatives by local residents are essential to achieve the objective of the Project.

In reality, many of the outputs of the Project simply consisted of the activities of technology transfer to the DPNG as the C/P organization and were not directly linked to the achievement of the objective of the Project.

Therefore, even though many activities in fields related to environmental conservation were implemented under the Project, the linkage between individual outputs was weak to the extent that these outputs had no direct links with the objective of the Project, suggesting the existence of a gap in logic (so-called theory failure) in the original project design.

Based on the above analysis, although the Project was highly relevant to the development plan and development needs of Ecuador as well as Japan’s ODA policy, the appropriateness of the project design was partly questionable. Consequently, the overall relevance of the Project is evaluated as fair.

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- 2: Implementation of cross-sectoral community communication and feedback system to enhance management and decision making in natural resources and conservation
 - 3: A precautionary resource management and conservation model that takes into account changes in coastal productivity associated with fluctuations in oceanographic factors
 - 4: An income diversification strategy and professionalization program for the fishing family workforce to reduce dependency and fishing pressure on heavily exploited resources
 - 5: An enhanced capacity to monitor and manage impacts of tourism activities at selected marine sites

3.2 Effectiveness and Impact¹⁰ (Rating: ③)

3.2.1 Effectiveness

The implementation of the Project did not achieve the objective of the Project, i.e. strengthening of the participatory management system of the GMR. Due to the weak linkage between the said objective and the outputs, suggesting theory failure regarding the objective, the state of achievement of the project objective is only evaluated as reference data.

As described below, the planned outputs of the Project were generally achieved and the relevant activities have been continuing with some exceptions. The expected outcomes and impacts were observed in many output areas. Of the six planned output areas, four have witnessed the emergence of new environmental conservation activities by key actors, including the introduction of a new section in the DPNG and environmental conservation activities by the municipal office, illustrating the certain positive effects of the Project towards the achievement of the overall goal. Based on these analysis results, the effectiveness and impact of the Project are evaluated as high.

3.2.1.1 Project Outputs

1) Output 1: Information flow on marine reserve management is strengthened among fishing communities

Indicator 1.1 Increase of the knowledge of GMR management of fishing communities by 50%

Indicator 1.2 Increase of the level of internal and external communication involving four fishing cooperatives in the Galapagos and their members by 40%

With the implementation of the Project, information on local fisheries and fishing cooperatives, natural resources of the GMR and progress and results of discussions at the JMP was disseminated to local fishermen in the form of newsletters, radio and television broadcasting and short messages for mobile phones. At the time of the terminal evaluation, the percentage of fishermen feeling that they “always” receive information on GMR management increased by 16.7 points in three years from 31.3% in 2005 to 48% in 2008 (i.e. an increase rate of 53%). Even though

¹⁰ In this report, judgement of the effectiveness is made with additional consideration of the impact.

the level of indicator achievement at the time of project completion was unknown, according to the beneficiary survey conducted as part of the ex-post evaluation, fishermen received information on the GMR from radio programs (42%) and television programs (54%) sponsored by the DPNG and 38% of fishermen said that such information was useful. As information on GMR management was disseminated to local fishing communities by means of a range of DPNG activities (radio and television broadcasting, distribution of newsletters and short messages for mobile phones), the level of knowledge of the GMR and its management is evaluated as having increased.

Based on the above, the Project is evaluated as having achieved Output 1 by the time of the project termination.

2) Output 2: Environmental understanding of local residents is promoted

Indicator 2.1 Number of events on GMR conservation held at the CCEE

Indicator 2.2 Number of participants in conservation activities organized by the CCEE

Indicator 2.3 Level of participation in conservation activities and increase of knowledge of the GMR among the participants of the environmental education program

The Training Center building and Exhibition Center building, both constructed under the Project, were opened in July, 2006 and March, 2008 respectively. In 2007, 55 events were held at the Training Center, ranging from presentations to training sessions, cultural exchanges and meetings of the INGALA (Instituto Nacional de Galapagos). In 2008, an average of 3 – 4 events was held every month. This trend continued until the end of the project period. At the time of the ex-post evaluation, the number of events at the CCEE stood at around 3 – 4 times per month.

According to the DPNG, the Training Center was used by some 1,500 people in the first seven months of 2008 (on average 215 people/month) while the Exhibition Center received 4,578 visitors (average of 654 visitors/month) in the same period. Two sets of manuals, one DVD film and two video films have been prepared for environmental education and are constantly shown in the Exhibition Center.

During the project period, four courses with 334 lecture hours were held for secondary school students on the subject of marine conservation with a total of 168

participants (Table 1). The beneficiary survey conducted with those students completing one of the courses revealed that 39% (out of 30 samples) were subsequently involved in activities relating to environmental conservation. This figure is 2.4 times higher than the corresponding figure for local residents in general. Meanwhile, 61% of the students said that their interest in the GMR had increased with 90% having visited the CCEE. Eighty-three percent of those who had visited the CCEE said that the CCEE would be useful for the purpose of environmental conservation.

Based on the above, the CCEE established under the Project is effectively functioning for the dissemination of information on environmental conservation and is evaluated as having improved knowledge and awareness of the GMR on the part of local residents through environmental educational activities featuring secondary school students.

Table 1 Environmental Education Program for Secondary School Students

Course Title	No. of Sessions (times)	Total Lecture Hours (hrs)	No. of Participants (persons)
Training of CCEE Volunteers	3	184	103
Marine Ecosystem of the Galapagos	2	60	30
Learning About the GMR	1	80	25
Diving Techniques at the GMR	1	10	10
Total	7	334	168

Source: JICA



Newly constructed Project Office (currently used as the PNG Office)



Inside the Exhibition Center of the CCEE

3) Output 3: Information of marine life and ocean environment is increased

Indicator 3.1 Increase and diffusion of biological and ecological data on the GMR

Indicator 3.2 Improvement of the research capability of the DPNG

Under the Project, the monitoring of marine life and marine environment newly started along with research on spiny lobster larvae. In this project a total of nine reports, five types of manuals and two DVD films were produced. Since 2005, continual monitoring of the coastal marine environment (measuring the temperature and salt content, etc. at different depths) has been conducted along the coast of Puerto Ayora. There had been a gradual accumulation of data on the local marine environment and a weekly report on such data is published for public access. Research on spiny lobster larvae was conducted from 2005 to 2007. As part of this research, monitoring indices were developed and are still being effectively utilized. The study results for marine life and the marine environment have been actively used for the dissemination of information to fishermen, development of teaching materials on the marine environment and decision-making on the allowed size of the catch of spiny lobster at the JMP.

Based on the above, it is clear that the implementation of the Project has led to the accumulation of important data through regular monitoring, resulting in an increase of information on marine life and the marine environment. Moreover, the continuing monitoring of the marine environment along with the transfer of monitoring techniques has improved the research capability of the DPNG. Accordingly, Output 3 is evaluated as having been achieved.



Marine monitoring by volunteers



Spiny lobster larva specimen room

4) Output 4: Water quality monitoring system is established in Santa Cruz

Indicator 4.1 Regular water quality monitoring

Indicator 4.2 Compilation of water quality monitoring results in an annual report

Under the Project, 11 land sites and nine sea sites near Puerto Ayora were selected in 2005 as monitoring sites and water quality monitoring commenced on 19 items. The frequency of this monitoring subsequently increased to every month and water quality data for both terrestrial and sea water monitoring sites was published in an annual report and on a web page to allow access by local residents. The DPNG included water quality monitoring in its annual operation plan, employed dedicated staff members and established a program in charge of water quality monitoring. The DPNG purchased equipment at its own expense to establish a system which would allow measuring of the water quality at San Cristobal Island as well as Isabela Island, creating an organizational set-up to deal with water environment issues across the Galapagos. Participatory monitoring of the water quality was also conducted as part of the Project.

The monitoring of the water quality has been regularly conducted at the initially planned island of Santa Cruz and has spread to San Cristobal Island and Isabela Island. Based on this, Output 4 is evaluated as having exceeded compared with the level of performance expected in the original plan.

5) Output 5: Sustainable resource management for artisanal fisheries is supported

The activities related to Output 5 consisted of two entirely different sets of activities: support for alternative income sources (Output 5-1) and participatory monitoring (Output 5-2). As such, the evaluation of Output 5 was conducted for these two sub-components.

Output 5-1 Support for alternative income sources is achieved

Indicator 5-1 Increase of the number of fishermen securing an alternative income source(s)

The activities related to Output 5-1 of the Project were (i) promotion of local fishing experience tours for tourists by local fishermen and (ii) support for domestic cottage industries (making of souvenirs and jams) run by women's groups. In regard

to fishing experience tours, rules were proposed by the project side along with the production of a promotional DVD. In regard to women's groups, seven training sessions were held. For the promotion of fishing experience tours, some 30 fishermen had become capable of leading tours by the end of the project period. However, the task of developing a market for this scheme in order for it to become a viable alternative source of income remained. According to materials provided by the JICA, there appeared to be an ongoing debate on who would organize these fishing experience tours, be it fishermen or the tourism sector, at the time of the Project's end. In the case of support for women's groups, it was confirmed at the time of the terminal evaluation that the Organization for Active Women of Isabela (OMAI) and the Organization of Pinzon Artisan Women of Isabela (OMPAI) were selling T-shirts and other products (a total of 20 – 30 active women in the two groups). While the overall income of these groups had gradually increased, the OMAI in particular appeared to have developed a fairly reliable source of income.

Based on the above, activities designed to develop alternative income sources under the Project had contributed to an increase of an alternative means of livelihood for fishermen, but the scale of the financial contribution was still small. In short, both the positive effects and the subsequent support by the DPNG are evaluated as having been limited.

Output 5-2 Participatory monitoring is implemented

Indicator 5-2 Number of sustainable marine resource management methods proposed by fishermen to the JMP based on the monitoring results

According to materials provided by the JICA, two social survey reports on fishermen were produced along with two reports and one manual (fishing rules featuring the size, age and other aspects of the fish to be caught) on monitoring of the fish catch. As the participatory monitoring of sea cucumbers by local fishermen failed to secure the cooperation of the originally targeted fishermen on Isabela Island, a cash incentive (in a form of daily allowance) was introduced for fishermen on Santa Cruz Island to experiment this activity. Through their participation in the monitoring, local fishermen obtained a better understanding of the state of sea cucumbers. In 2008, these fishermen made a technical proposal to the JMP and a ceiling for the sea cucumber catch was decided with the agreement of fishermen, resulting in lifting of the ban on sea cucumber fishing. According to the DPNG, this lifting of the ban on sea cucumber fishing which was achieved as a result of

participatory monitoring has helped to determine the allocation of the catch for each fishing cooperative. At present, sea cucumber fishing is the livelihood for some 500 fishermen in the Galapagos.

Based on the above, as far as the participatory monitoring of marine resources introduced under the Project is concerned, Output 5-2 is evaluated as having been achieved by the end of the project period in view of the achievement of lifting of the ban of sea cucumber fishing based on proposals made by local fishermen.



A souvenir shop run by a women's group sells local products



Harvest collection point of a local fishing cooperative

3.2.1.2 Achievement of Project Objective

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|---------------------------|---|
| Indicator 1 | Number of meetings held by the JMP and number of consensus decisions made by the JMP |
| Indicator 2 ¹¹ | Extent of representation of the opinions of the relevant sectors by members of the JMP |
| Indicator 3 | Number of decisions made by the JMP based on data or reports produced under the Project |

As described below, both the number of meetings of the JMP and number of consensus decisions made by the JMP decreased during the project period, suggesting that the mechanism of the JMP was not specifically strengthened. However, as the objective of the Project has only a weak link to the activities and outputs of the Project, the achievement of the above indicators were used only as

¹¹ This indicator was not used in this evaluation due to the difficulty to figure out the reality.

reference information in this evaluation.

According to the DPNG, the JMP had many meetings and produced many consensus decisions between 2004 and 2006 but the number decreased thereafter (Table 2). The reasons for the decreased number of meetings were that the facilitator left the job in 2008 following the completion of an Inter-American Development Bank (IDB) project¹² in 2007 (the project funding JMP) and that the necessity to verify the compatibility of the JMP with the revised Constitution of Ecuador to the result of a referendum held in November, 2008. As part of the Project, direct support was provided for the management of the JMP in terms of the preparation of the minutes of meetings, publication of bulletins explaining the results of meetings and radio and television reporting as part of the activities under Output 1. The JMP made five consensus decisions on the introduction of fishing experience tours and the sustainable management of sea cucumbers based on data or reports produced under the Project.

Table 2 Number of Meetings of and Number of Consensus Decisions Made by the JMP

Year	Number of Meetings	Number of Consensus Decisions
2004	9	26
2005	11	32
2006	9	17
2007	5	9
2008	8	16
2009	3	11
2010	5	11
2011	5	NA

Source: DPNG

¹² Environmental Management Program of Galapagos Islands, IDB 2001 - 2005

Types of Project Activities and Relation with the Effects

Activities designed to protect nature in development project are generally implemented through a political compromise of various sectors supported by multiple interest groups who may be seeking incompatible ideas of development and environmental conservation. The target areas and persons involved are, therefore, quite diverse. The activities implemented under the Project for conservation of the natural environment may be classified into the following four types.

Type 1: Development of environmental information through efforts to create an information gathering mechanism and to improve communication (Outputs 1, 3 and 4)

Type 2: Environmental education and improvement of awareness for the teaching of new knowledge and fostering of a volunteer spirit (Output 2)

Type 3: Improvement of the existing methods of resources utilization (Output 5-2)

Type 4: Reduction of resources utilization through the use of alternative resources (Output 5-1)

The implementation of these activities is designed to produce the planned outputs. Depending on the actual conditions of each output, the nature of environmental conservation activities (outcomes) is determined.

- In the case of Type 1 activities, the planned output is achieved if the targeted information is gathered, developed or properly disseminated. The effective use of such information may lead to environmental conservation activities (outcomes).
- In the case of Type 2 activities, the planned output is achieved if environmental education is made available for the target persons. Increased environmental knowledge or improved environmental awareness among participants means that the activities are effective. However, improved awareness itself is insufficient to achieve the launch of environmental conservation activities as voluntary commitment based on incentives felt by individual participants is necessary. It is not possible to determine in advance if each participant has such an incentive or not.
- In the case of Type 3 activities, the planned output are achieved when a sustainable method for resources utilization is presented, followed by the relevant training. The effective implementation of such a method produces an outcome(s).
- In the case of Type 4 activities, the planned output is achieved when an alternative source for income increase is realized. In order for this alternative source to have a bearing on environmental conservation, the functioning of the relevant activity to increase income as a viable alternative to the existing unsustainable production activity must be proven. In other words, there is a condition that the level of the environmental load was lowered by the reduced unsustainable utilization of resources. If this condition is not met, the alternative income sources and related activities do not lead to environmental conservation.

3.2.2 Impacts

3.2.2.1 State of Continuity of Outputs

- 1) Output 1: The flow of information on marine reserve management is strengthened among fishing communities

Although a newsletter has been continuously published since the completion of the Project, publicity solely for the GMR using radio, television and mobile phones has been suspended due to the lack of funds and low level of urgency. The latter is now incorporated into the publicity for the entire national park. According to the results of the beneficiary survey, the relationship between the DPNG and fishing cooperatives is perceived to be very good (2.8%) or good (40%). These figures exceed the combined ratio of 31.3% for a perceived bad relationship (22.8% for bad and 8.5% for very bad). Nearly one quarter of the respondents (22.8%) of the survey consider that the communication between the DPNG and fishing cooperatives is insufficient. Even though the DPNG faces budgetary constraints, it is desirable for it to recommence at least the radio broadcasting program in order to maintain the level of knowledge about the GMR and the reputation of the DPNG among fishermen because of the small cost of such broadcasting.

- 2) Output 2: The environmental understanding of local residents is promoted

In 2011, the Exhibition Center of the CCEE received 9,010 visitors (5,875 Ecuadorians, 2,335 foreign nationals, 630 Galapagos residents, and unknown 170) while the Research Center was used by 1,661 people. The activities of the CCEE now comprise part of the annual operation plan of the DPNG. One person has been assigned on a part-time basis to the planning of the activities of the CCEE, illustrating the high level of continuity of activities.

The environmental education program for secondary school students has been suspended because of the difficulty for teachers to find time for the program following the revision of the secondary education curriculum by the government. Even though a new curriculum for environmental education is currently being developed, the state of continuity of the activities is not fully satisfactory in terms of environmental education.

- 3) Output 3: The environmental understanding of local residents is promoted

As part of the reorganization in 2008, the DPGN established the Oceanic Research Division. This division is staffed by two full-time members and five

volunteers and is run on the basis of the annual operation plan of the DPNG. The data published by this division is used to understand the seasonal changes of fishing activities and other purposes. As of 2012, monitoring has an additional four items (sharks, sea turtles, whales and the local ecology). Based on the above, the continuity of the activities is evaluated as being high.

4) Output 4: A water quality monitoring system is established in Santa Cruz

Monitoring has been regularly conducted as planned at Santa Cruz Island and has been expanded to include San Cristobal Island and Isabela Island. The data produced by this continuous monitoring is used at the time of this evaluation for various reports and by the municipal office. However, the participatory water quality monitoring has been terminated since the completion of the Project because of the high cost (US\$ 12 per measurement kit) when the available kits were exhausted in 2008.

5) Output 5: Sustainable resource management for artisanal fisheries is supported

At the time of the ex-post evaluation, 25 fishing households run fishing experience tours. However, for this activity to become a viable alternative income source, it is essential for it to be certified as a tourism activity¹³ along with development of the market. Although fishermen have proposed a revision of the rules governing fishing experience tours to the JMP, no decisions have yet been made. What is required is the clear establishment of the status of fishing experience tours as a business by local fishermen.

In the case of support for domestic cottage industries run by women's groups, one group, the OMPAI, has ceased their activities due to financial difficulties and a change of the leader. While the other group, the OMAI, run by 12 women (six engaged in the production of such souvenirs as T-shirts and stuffed toys and six in the production of jam) has earnings from the sale of souvenirs, the limited market means that their income is far smaller (3 – 5%) than the earnings of their husbands from fisheries. Moreover, the DPNG does not currently provide support for women's groups.

In regard to participatory monitoring, the beneficiary survey at the time of the ex-post evaluation found that 34% of fishermen were involved in this activity. The fact that the ban on sea cucumber fishing has been listed on a sustainable basis with the cooperation of fishermen indicates the high level of continuity of

¹³ Unless certification by the Tourist Board in the form of an OK Certificate is obtained, fishing experience tours cannot be incorporated in tours for tourists.

this activity.

Table 3 Summary Table of the Outcomes/Impacts and State of Continuation of Activities by Output¹⁴

	Level of Achievement ¹⁵	Situation of Achievement
Output 1 Information flow on marine reserve management is strengthened among fishing communities		
Output	High	Information on the GMR is disseminated by means of radio and television broadcasting, newsletters and messages to mobile phones.
Outcome /Impact	Medium	Knowledge of GMR management in fishing communities has improved. Communication using mobile phones to fishermen has started by fishing cooperatives.
State of Continuance of Activities	Medium	Radio and television broadcasting on the GMR is now included in programmes featuring the entire national park (the programs solely about the GMR has ceased except for newsletters).
Output 2 Environmental understanding is promoted to the local residents		
Output	High	<ul style="list-style-type: none"> • The CCEE was constructed and opened in March, 2008. • The facilities of the CCEE are frequently used for environmental conservation activities and events. • Educational programs for secondary school students have been held (seven courses, 334 hours and 168 students so far).
Outcome /Impact	High	<ul style="list-style-type: none"> • Understanding of the environment has been promoted among secondary school students and ordinary residents. • As of 2012, some 10,000 people a year visit the CCEE. • The facilities of the CCEE are used for environmental education activities and events with a finalized schedule up to August, 2012.
State of Continuance of Activities	Medium	<ul style="list-style-type: none"> • The CCEE is an integral part of the annual operation plan of the DPNG. • Environmental education for secondary school students has been suspended as a new curriculum is currently being developed.
Output 3 Information of marine life and ocean environment is increased		
Output	High	Studies on the coastal sea environment and spiny lobster larvae had been conducted and useful data has been accumulated.
Outcome/ Impact	High	<ul style="list-style-type: none"> • As the DPNG has established the Oceanic Research Division, its research function has improved. • The JMP continually uses the data on spiny lobster larvae for any decision on the allowable catch. • Research work on the coastal sea water quality is continuing.
State of Continuance of Activities	High	<ul style="list-style-type: none"> • The monitoring items have been expanded to include sea turtles, sharks and marine ecology. • The Oceanic Research Division is run by two full-time staff members

¹⁴ Output: the effect of project demonstrated at the termination of project, outcome/impact and State of continuance: the effect/activities at the ex-post evaluation.

¹⁵ Level of achievement: High >80%, Medium 50-80%, Low <50%.

		and volunteers and its activities are included in the annual operation plan of the DPNG.
Output 4 Water quality monitoring system is established in Santa Cruz		
Output	High	<ul style="list-style-type: none"> • Water monitoring has been conducted for 19 parameters at 11 terrestrial sites and nine sites in the sea near Puerto Ayora. • Participatory water quality monitoring has been conducted for the purpose of increasing the awareness of the marine environment on the part of local residents.
Outcome/ Impact	High	<ul style="list-style-type: none"> • The monitoring results can be accessed by anyone on the Internet. • The municipal office has changed the water source and tightened the control of contamination sources in response to a reported deterioration of the water quality.
State of Continuance of Activities	High	<ul style="list-style-type: none"> • The DPNG has purchased equipment at its own expense for installation by the Water Quality Monitoring Program. The scope of monitoring has been expanded to San Cristobal Island and Isabela Island. Monitoring now corresponds to the need to identify contamination sources.
Output 5 Sustainable resource management for artisanal fisheries is supported		
Output 5— 1 Development of alternative means of livelihood		
Output	High	Support has been provided for the activities of women's groups to make souvenirs and jam and also for local fishing experience tours organized by fishermen for tourists.
Outcome/ Impact	Medium	<ul style="list-style-type: none"> • The commercial operations of women's groups have encountered marketing problems and their impact is limited. • Fishing experience tours face a problem of coordination with the tourism sector.
State of Continuance of Activities	Medium	The DPNG does not support the commercial activities of women's groups or the local fishing experience tours organized by fishermen.
Output 5— 2 Monitoring of marine resources with the participation of fishermen		
Output	High	The monitoring of sea cucumbers has been conducted with the participation of fishermen.
Outcome/ Impact	High	The JMP's decision on the allowable catch each year is made based on data obtained by participatory monitoring and with the consent of fishermen.
State of Continuance of Activities	High	Participatory monitoring is continuing as part of the annual operation plan of the DPNG.

3.2.2.2 Achievement of the Overall Goal

The overall goal of the Project was the successful promotion of the conservation and sustainable management of the GMR through the participation of key actors (Indicator: number of conservation activities based on proposals by key actors).

The key actors in the Galapagos are thought to include members of the JMP (representatives of the DPNG, Chamber of Tourism, Galapagos Artisanal Fisheries Sector and Naturalist Guides Association), schools, fishing cooperatives and the municipal office. It has been confirmed that the nine conservation activities listed below were implemented in related to the planned outputs of the Project. Based on the above, although the number of key actors has not increased, the overall goal is evaluated as having been achieved due to the major contribution of the project outputs to the activities to protect nature of the key actors.

(1) Fisheries Sector (Related to Outputs 1 and 5)

- Following the dissemination of information on the GMR on Isabela Island and San Cristobal Island under the Project through the mobile phone network, the use of mobile phones for information exchange in and between fishing cooperatives has started.
- The annual amount of the allowable catch is now determined based on data provided by participatory monitoring.

(2) Municipal Office (Related to Output 4)

In the face of a problem of water quality deterioration in the Galapagos as revealed by the water quality monitoring under the Project, the municipal office took the following actions in 2011.

- The source for municipal water supply was moved 3 km from a fracture in the rock near the bay of Puerto Ayora to a site on a hill.
- The boat maintenance site was moved to a site on a hill to improve the water quality in the Bay of Puerto Ayora.
- The refueling point for boats was moved from inside the Bay of Puerto Ayora to outside the Bay.
- Recycling of the spent engine oil of boats is planned.

(3) DPNG (related to Outputs 2, 3 and 4)

- The CCEE facilities are used for environmental education activities (some 9,000 visitors/year to the Exhibition Center, approximately three environment-related events/month, environmental education for new residents by the government, environment-related seminars and others).
- The Ocean Research Division has been established to start the monitoring of not only sea cucumbers and spiny lobster larvae but also sharks, sea turtles and marine ecology. Useful data has been accumulated and is used for activities to

protect nature.

- A water quality monitoring program has been established to conduct water quality inspection as required. One such inspection aimed at investigating the cause of the mass death of fish near San Cristobal Island has been conducted.

3.2.2.3 Summary of Effectiveness and Impact

As mentioned above, the outputs of the project were achieved as planned with some exception, and these activities are continued. As results, expected outcomes and impacts were observed in the many activities. Regarding overall goal, new environmental activities by key actors (e.g. establishment of new divisions, environmental protection activities by municipalities) were confirmed in four out of six outputs and impacts were emerged at a certain level. Based on the above, effectiveness and impact of the project were judged as high.

3.3 Efficiency (Rating: ②)

3.3.1 Inputs

3.3.1.1 Elements of Inputs

Based on materials provided by the JICA and the results of interviews with those involved in the Project, the following problems can be pointed out in relation to the inputs.

- In the first half of the project period, the project implementation system of the DPNG was unstable, restricting the inputs by C/P personnel and the scope of activities. In 2004, 5–6 strikes were carried out by local fishermen regarding restrictions imposed on sea cucumber fishing and the DPNG could not properly function because of the situation. Moreover, the implementation of the Project was significantly affected by the frequent replacement of the Director General of the DPNG, strike action by DPNG staff members over a reduction of their salaries and change of the head of the Marine Resources Administration. Even though the staff strength of the patrol section was increased, no such increase was made for the Marine Resources Administration which was the counterpart section for the Project. In 2004 when the confusion at the DPNG was at its highest level, Japanese experts were dispatched at a rate of some 50 person-months. This was almost equivalent to one-quarter of the total person-months figure and approximately one-third of the budget for the dispatch of experts was spent in this period. This means that many experts were dispatched in a period in which they could not work efficiently.

- Under the circumstances described above, the scope of the marine survey was considerably reduced because of the practical impossibility to procure expensive survey equipment (digital aerial camera). Instead, the emphasis was placed on activities involving organizations other than the DPNG (for example, the municipal office and schools).

Element of Input	Planned	Actual (At the Time of Completion)
(1) Dispatch of Experts	<p>4 long-term experts (at the time of the initial discussions on the Project in 2003)</p> <ul style="list-style-type: none"> • Chief advisor (GMR management) • Project coordinator • Marine ecosystem monitoring • Environmental education and community activities <p>2 or 3 short-term experts</p>	<p>7 long-term experts</p> <ul style="list-style-type: none"> • Chief advisor (GMR management) • Project coordinator • Marine ecosystem monitoring • Environmental education and community activities • Environmental ecosystem monitoring <p>15 short-term experts</p> <ul style="list-style-type: none"> • Supervision of facility construction (2) • Completion inspection of new facilities • Environmental education • Support for capacity building of fishermen • Marine ecosystem monitoring • Marine resources monitoring • Project management (2) • Other fields <p>Total dispatch month 213.6 (2003(13.5) 2004(49.5) 2005(39.5) 2006(46) 2007(36.6), 2008(28.5) Cost of dispatch 390,392 thousand yen</p>
(2) Trainees Received		10 trainees in such fields as conservation of the ecosystem, monitoring of water contamination and ocean pollution, environmental education and others
(3) Third-Country Training Program	None	None
(4) Equipment Cost	217 million yen to cover the costs of survey, training, AV, communication and other equipment required for the Project (of which 200 million yen is for a digital aerial camera)	27 million yen to cover the costs of marine surveying, water quality analysis, communication and other equipment required for the Project plus a vehicle for the survey team
(5) Construction Cost	Construction of the CCEE building:5 0 million yen	Construction of the CCEE building

Total Cost of Japanese Assistance	500 million yen	682 million yen
Inputs by the Government of Ecuador	<ul style="list-style-type: none"> • Project director • Project manager • Counterpart personnel (DPNG staff members) • Secretary, clerk and driver < Equipment and vehicle > <ul style="list-style-type: none"> • Land, buildings and other facilities, including an office for the Japanese experts • Local cost (as required by project-related activities) 	Counterpart personnel (18 in total) <ul style="list-style-type: none"> • Project director • Project manager • Counterpart personnel (DPNG staff members) • Others (All but the project manager worked on a part-time basis.) < Equipment and vehicle > <ul style="list-style-type: none"> • Land for the CCEE (The annual budget of the CCEE at the time of the mid-term evaluation was approximately 9 million yen.)

As most of the counterpart personnel assigned to the Project worked on a part-time basis, it was extremely difficult for them to get fully involved in the Project because of their other assignments. This situation forced the recruitment of local staff to work exclusively for the Project. Although the direct employment of highly professional staff contributed to the smooth implementation of the Project, the overall project cost increased accordingly.

Because of the lengthy period of negotiations for the use of land earmarked for the construction of the CCEE under the Project, the actual opening of the CCEE was delayed by more than one year.¹⁶

3.3.1.2 Project Cost

The total cost of the Japanese assistance for the Project was 682 million yen which exceeded the originally planned amount (ratio to planned amount: 136%). The reason for this is that the increased funding necessitated by the increase of the number of dispatched experts and recruitment of local staff exceeded the decreased amount of the equipment cost due to the withdrawal of marine survey equipment.

¹⁶ In response to a request made by the DPNG, the construction site for the CCEE was changed to a more convenient place for its use by local communities. However, the land in question was jointly owned by the DPNG and the INGALA (Galapagos National Institute) and was on lease to a private organization at the time. As both government bodies insisted on their right of use, it was impossible to proceed with the plan. An agreement was finally reached between the two organizations for the use of the land by the DPNG when the mid-term evaluation team visited the Galapagos in July, 2006. Because of this, the use of the CCEE during the project period was limited but its construction in a convenient place has led to the effective use of its facilities at the time of the ex-post evaluation.

3.3.1.3 Period of Cooperation

Japan's cooperation period for the Project was five years as planned. The delay caused by confusion in the early stages of the Project was compensated by the faster implementation of the Project due to modification of the activities, increase of the number of experts and recruitment of local staff. Consequently, the Project-related activities were completed within the planned cooperation period.

Based on the above, even though the cooperation period to produce the planned outputs was within the originally planned period, the total amount of the project cost exceeded the planned amount due to the fact that the timing of the inputs was inappropriate. Therefore, the efficiency of the Project is evaluated to be fair.

3.4 Sustainability (Rating: ②)

3.4.1 Related Policy towards the Project

The Government of Ecuador is increasingly emphasizing the protection of nature at the GMR of the Galapagos National Park. One example of such emphasis is the establishment of the Galapagos as a Special District instead of a province. At the same time, a Government Council has been established to strengthen the governance in order to preserve the value of the Galapagos as a natural asset and to ensure development based on the principle of environmental conservation. One of the measures introduced is the restriction of new settlers. In 2011, a proposal was made to revise the Special Law to change the composition of the JMP to include representatives of citizens, the health sector and other stakeholders. As the efforts of the Government of Ecuador to protect the GMR are expected to continue, the sustainability of the Project within the policy and institutional framework is expected to be generally secure.

3.4.2 Institutional and Operational Aspects of the Implementing Agency

In August, 2008, 150 people contracted to the DPNG became full-time employees, stabilizing the state of personnel deployment of the DPNG. Following its restructuring in 2012, the staff strength of the DPNG is currently approximately 150. While the Director General of the DPNG used to be an appointee of the Ministry of Environment, the position became subject to open recruitment in 2007 in response to a proposal made by the UNDP, eliminating the possibility of frequent changes as witnessed in the early stages of the Project. The organizational structure of the DPNG has become much more stable compared to the time of the Project's commencement. The DPNG is currently undertaking major organizational reform to

improve its efficiency. As part of this, 51 positions have been dismissed in January 2012 and two counterparts have left the DPNG. The remaining five counterparts continue to hold the same positions as before.

The JMP, the body specifically targeted by the objective of the Project, is supposed to be run by a facilitator who is employed using the budget of the DPNG. According to a DPNG source, however, while the budget of the JMP was assisted by the IDB until 2005¹⁷, the subsequent withdrawal of funding by the IDB has led to fewer activities on the part of the JMP. In recent years, the JMP appears to have become a body simply to discuss matters relating to fisheries. In 2012, the DPNG allocated US\$ 20,000 for the JMP to employ a facilitator to activate the JMP although the employment contract of this facilitator will expire in October, 2012. It is necessary to pay close attention to the role to be played by the facilitator, to the possible revision of members and to other aspects of the JMP. As mentioned in 3.4.1, the members of the JMP are expected to be modified after the enforcement of the revised Special Law.

In short, while the organizational set-up of the DPNG has been improving, there is concern in regard to the institutional aspect of the DPNG because of the need to continually monitor the composition of the JMP and the employment of the facilitator.

3.4.3 Technical Aspects of the Implementing Agency

Based on the technical standards required to achieve the intended outputs and the state of continuity of activities in the post-project period, the Project is judged to have conducted the transfer of technology in an appropriate manner in general. However, no counterparts were deployed for the establishment of alternative income sources (part of Output 5) and this activity was mostly led by locally recruited staff for the Project. As such, no sufficient transfer of technology to the counterparts took place. At the time of the ex-post evaluation, the DPNG was not providing support for this activity. The reason for this is presumably the passive attitude of the DPNG towards continually supporting the small groups rather than a reflection of its technical capability.

3.4.4 Financial Aspects of the Implementing Agency

Fifty-three percent of the funding for the DPNG comes from the distribution of the entry tax to the Galapagos paid by visitors. Because of the increasing number of tourists, the financial base of the DPNG appears to be stable. Because of the

¹⁷ Environmental Management Program of Galapagos Islands, IDB 2001 - 2005

tendency of the DPNG to employ excess personnel, its budget does not necessarily have any surplus.¹⁸ While an adequate budget can be allocated to priority activities, the budget size for non-priority activities may not be sufficient. For example, while the scope of such activities as water quality monitoring and marine research has been expanding with the recruitment of specialists, radio and television broadcasting focusing solely on the GMR and other activities has been terminated due to budgetary constraints. In short, the financial aspect of the DPNG as an organization does not pose any problems. There is slight concern in regard to the sustainability of the project effects, however, because continued budget allocation to support many activities launched under the Project depends on the perceived priority or non-priority status of each activity by the DPNG.

Based on the above, the sustainability of the effects of the Project is evaluated as fair because of some problems relating to the institutional and financial aspects of the DPNG.

4. Conclusions, Lessons Learned and Recommendations

4.1 Conclusions

Strengthening of the management of the Galapagos Marine Reserve (GMR), which was the objective of the Project, is an important policy objective of the Government of Ecuador, is highly necessary and compatible with Japan's ODA policy. Many of the planned outcomes of the Project, however, do not have a direct link with the Project objective. Given the fact that the relationship between the Project objective and some of the planned outputs is questionable, the relevance of the Project is evaluated as fair. On the other hand, most of the outcomes were generally achieved as planned and the activities have mostly continued. As a result, the Project has successfully realised improved awareness among local residents on environmental issues through environmental education, strengthened conservation activities based on the newly-established research and water quality monitoring functions and the promotion of sustainable fisheries through participatory monitoring. Since certain positive effects of new environmental conservation activities by key actors have been confirmed, the effectiveness and impact of the Project are evaluated as high in relation to the prospective achievement of the overall goal. At the initial stage of the Project, many activities stagnated due to the disorganized situation of

¹⁸ In Ecuador for every new national administration tend to add extra personnel. The DPNG has been securing its budget to maintain its activities by shedding staff members every few years. The latest round of such downsizing took place in January, 2012 when 50 employees out of some 200 were made redundant.

the counterpart (C/P) organization (implementing agency), worsened relationship with local fishermen and problems surrounding the leasehold of the land earmarked for the construction of the Communication Center for Environmental Education (CCEE). With increased inputs, including the dispatch of more Japanese experts and the recruitment of more local staff, the Project was completed in five years as planned. Based on these facts, the efficiency of the Project is evaluated as fair. Although many activities initiated under the Project are continuing, there is some concern in regard to the function of the Participation Management Board (Junta de Manejo Participativa: JMP) and the financial situation of the implementing agency. In this sense, the sustainability of the Project is judged to be fair. In light of the above, this Project is evaluated to be partially satisfactory.

4.2 Recommendations

4.2.1 Recommendations for the Implementing agency

(1) Restart of Radio Publicity of Activities to Protect the GMR

While information on the sustainable management and development of the GMR was disseminated to fishermen via television and radio programs solely dedicated to the GMR under the Project, such publicity was not maintained after the project termination. Although the relationship between the DPNG and fishermen temporarily improved with the implementation of the Project, the latest beneficiary survey has found a worsening trend of this relationship. It is highly desirable for the DPNG to restart the dissemination of information on the GMR. Because of the cost implications of such activity, it is recommended that radio publicity is restarted as the most effective means of communication to fishermen.

(2) Restart of Environmental Education for Secondary School Students on Marine Protection in the Galapagos.

Although the cooperation is provided for the curriculum whose revision was planned as part of the educational reform the environmental education for secondary school students launched under the Project has not been continued. As the new constitution of Ecuador restricts the new settlement of Ecuadorians in the Galapagos, understanding of the need for long-term marine protection in the Galapagos among existing residents is extremely important. It is desirable for the DPNG to restart a volunteer training program and a program on the marine ecosystem in the Galapagos for secondary school students, both of which were implemented under the Project, to facilitate understanding of the need for long-term environmental protection among existing residents. According to the findings of the beneficiary survey conducted as

part of the present evaluation, the ratio of participants of educational programs under the Project subsequently participating in environmental activities is 2.4 times higher than the corresponding figure for local residents in general. The continuation of environmental education is believed to increase the number of residents agreeing with the activities of the DPNG, contributing to the smooth implementation of such activities.

(3) Promotion of Fishing Experience Tours Organized by Local Fishermen

The involvement of the DPNG in fishing experience tours which were supported under the Project is limited. Because of the restriction on new settlement in the Galapagos imposed by the new constitution, fishermen in the Galapagos are deemed to have a vested right for any fishing-related activity. It is desirable for suitable arrangements to be made to certify fishing experience tours as a business activity organized by local fishermen and approved by the local tourism sector. The DPNG should clarify its stance and cooperate for the promotion of fishing experience tours.

(4) Revitalisation of the JMP and Continual Allocation of the Necessary Budget

The DPNG should play a central role in securing funding sources to pay for the operation and administrative expenses of the JMP, including the employment cost of a facilitator. It is desirable to revitalize the JMP through the newly proposed remodeling of the JMP so that the opinions of local residents on GMR management are passed to the JMP via their representatives for the more proactive protection of the marine environment in the Galapagos.

4.2.2 Recommendations for the JICA

There is no specific recommendation to the JICA in connection with the ex-post evaluation of the Project on Conservation of the Galapagos Marine Reserve.

4.3 Lessons Learned

(1) When we plan technical assistance projects, we need to design feasible projects with logical framework and outputs after understanding the institutional arrangement of the C/P and the level of cooperation of people concerned. This project showed some problem of sustainability because the project scope was beyond their work scope. Also the project had extensive activities and the project objective was never set up with outputs based on the clear logical framework, even though PDM was revised twice after project started.

In order to avoid this situation, before the project starts, it is essential to elaborate target topics, clear logics to connect the project objective with outputs, and the refinement of people concerned while obtaining sufficient commitment of C/P on the activities beyond their regular work.

However, when a project becomes extensive scope due to the character of the target sector and/or the structure of concrete tasks or problems, it may not be easy to set a single goal or project objective to be achieved at the end of the project through the achievement of outputs. In such a case, it is essential to examine the possibility of narrowing down the project scope while taking the reduction of the project impacts into consideration. However, when the subject fields are diverse like the project aiming at nature conservation¹⁹, narrowing of the project scope may make impact smaller with larger external conditions, potentially increasing the risk not to achieve positive impacts. When narrowing of the project scope is judged to be not advantageous, the description of the project objective should prioritize covering the scope of activities with clear aim of the project even if the description become abstract.²⁰

(2) This project initiated activities which C/P had not had such work before (e.g. oceanography research, water quality monitoring, and supporting alternative income generation of fishermen). In this case, the budget and personnel arrangement of C/P may not be sufficient. The project implementation with expert dispatch and employment of local staff with technical expertise may initiate new activities or establishment of new division in the C/P²¹. It is important for project staff and C/P to develop mutual understanding in the process of technical transfer in order to be able to claim sufficient budget/personnel in C/P to continue the activities.

¹⁹ As mentioned in Box 1, activities designed to protect nature in development project are generally implemented through a political compromise of various sectors supported by multiple interest groups who are seeking of the two incompatible ideas: development and environmental conservation. The target areas and persons involved are, therefore, quite diverse. However, when the nature of the planned activities is justifiable from the viewpoint of both the aid organization and its counterpart organization, there is a possibility of producing wide-ranging significant impacts in the long-term because of the discovery of new activities rooted in the activities of the counterpart organization despite the weak relationship between the outputs.

²⁰ In the case of the present Project for example, its objective is described as “the management of the GMR is strengthened” instead of “the participatory management system of the GMR is strengthened”.

²¹ In this project, as mentioned above, oceanography research and water monitoring were continued by counterpart organization voluntarily but support for alternative income generation of fishermen were not continued since the technical transfer was not sufficiently done.

(3) In this project the construction of Communication Center for Environmental Education (CCEE) was delayed due to the problem related to land use right. When constructing a new facility, the ownership and user rights of the land allocated to the construction should be ensured before planning the work.