

# Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Brazil office: March, 2013

Country Name	The project for Forest Conservation and Environmental Education in the Eastern Amazon
Brazil	

## I. Project Outline

Project Cost	291 million yen	
Project Period	January, 2004 - January, 2007	
Implementing Agency	<ul style="list-style-type: none"> <li>- Secretariat of Science, Technology and Environment of the State of Pará (SECTAM: Secretaria de Estado Pará Ciência Tecnologia Meio Ambiente)</li> <li>- Emilio Goeldi Museum (MPEG: Museu Paraense Emílio Goeldi)</li> <li>- Brazilian Agricultural Research Corporation Eastern Amazon (EMBRAPA Amazônia Oriental : Empresa Brasileira de Pesquisa Agropecuária)</li> </ul>	
Cooperation Agency in Japan	- Gunma Prefecture	
Related Projects (if any)	<u>Cooperation by Japan</u> - Establishment of an Organization for Protection of Rain Forests in the Amazon Region (Grassroots Technical Cooperation Project (Proposal Type), 2007-2010)	
Background	<p>Although Brazil has one third of tropical rainforests in the world, more serious deforestation in the country made the federal government to elaborate the “Integrated National Policy for the Legal Amazon” in 1995. According to the policy, the Legal Amazon areas have been designated as administrative areas to protect natural environment. The Legal Amazon covers the areas of approximately 5.2 million km<sup>2</sup> from northern to central regions of Brazil encompassing 9 states. The State of Pará, which has the second largest forest areas of approximately 1.25 million km<sup>2</sup>, is one of the important states composed of Legal Amazon Areas. However, the rapid and serious deforestation has provoked the necessity of technical extension of forest conservation and public awareness on forest conservation, in particular, targeting general citizens. Therefore, Gunma Prefecture of Japan, proposed technical cooperation collaborating with JICA in order to appeal the importance of tropical forest conservation through activities at “Amazon-Gunma Forest”, including technical extensions to preserve and make use of forests, by both Japanese and Brazilian researchers and technicians as well as public relations to the people in Gunma. At the same time, SECTAM requested JICA to provide technical cooperation in order to promote environmental education, afforestation technology and agroforestry at “Amazon Gunma Forest”, a rare tropical forest with large size located near metropolitan area of Belem.</p>	
Inputs	<b>Japanese Side</b> 1. Experts 3 experts of 3 areas for long term, 9 experts of 3 areas for short term 2. Trainees Received: 4 trainees 3. Equipment: 38.7 million yen 4. Local Cost: 69 million yen	<b>Brazilian Side</b> 1. Counterpart: 20 persons 2. Land and facilities: Project office 3. Local Cost: 0.04 million reais
Project Objectives	<b>Overall goal</b> Sustainability of forest and natural environmental conservation is ensured in the State of Pará.	
	<b>Project Purpose</b> Activities of forest and natural environmental conservation are promoted in the State of Pará.	
	<b>Outputs</b> <ul style="list-style-type: none"> <li>• Activities of environmental education are promoted in the State of Pará.</li> <li>• Extension works of afforestation and agroforestry techniques in the State of Pará are promoted.</li> <li>• Distribution of information and public relations regarding Amazon forests in the State of Pará are strengthened.</li> </ul>	

## II. Result of the Evaluation

Summary of the Evaluation
<p>In the State of Pará, the extension of forest conservation technologies and the increase in public awareness about the importance of forest conservation have been keen issues because of serious forest degradation caused by cultivation for plantation, ranches, and illegal harvesting timbers and so on. “Amazon Gunma Forest”, which is located in Municipality of Santa Barbara and is about 50km north of Belém, the capital of Pará, is Amazon tropical rain primary forest covering 540ha aiming at appealing necessity of global activities to protect forests. It was acquired by the fund raised by activities in both countries of Japan and Brazil in 1996. In 1997, the visitor center was established in the Forest. Based on the Forest, the research activities by Japanese and Brazilian researchers have been conducted for protection of Amazon tropical rain forests.</p>

The Project has achieved promotion of environmental education and utilization of afforestation and agroforestry technologies for the project purpose of “promotion of activities of forest and natural environment conservation and not achieved extension of the project effects and sustainable forest and natural environment conservation but not to the entire state of Pará having a vast land for the overall goal. As for sustainability, some problems have been observed in terms of technical and financial aspects due to issues to share the knowledge and technologies obtained through the Project among the relevant organizations and to ensure sufficient budget to implement large scale extension activities to cover the whole State of Pará despite of the importance of tropical rain forest conservation in the Legal Amazon regions endorsed by the federal and state policies..

For relevance, the Project has been highly relevant with Brazil’s and Pará state’s development policy, development needs as well as Japan’s ODA policy. For efficiency, the project cost slightly exceeded the plan.

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

**1 Relevance**

This project has been highly relevant with Brazil’s and the State of Pará’s development policies of “the National Comprehensive Policy on the Legal Amazon (1995)” and “The Position of Amazon in Development of Brazil (2002)” targeting “conservation of biodiversity and promotion of sustainable production system” and “the National Program of Environmental Education (ProNEA: Programa Nacional de Educação de Ambiental) “ and “The Environmental Education Plan (of the State of Pará): Guideline and Policy)” addressing “promotion of environmental education”, development needs of “extension of forest conservation technologies” and “improvement of public awareness of forest conservation”, as well as Japan’s ODA policy for Brazil to address “environment”, at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

**2 Effectiveness/Impact**

This project achieved compilation of the knowledge and technologies such as environmental education and environment conservation technologies including agroforestry in the counterpart organizations of SECTAM, MPEG and EMBRAPA Amazônia Oriental for the project purpose at the time of terminal evaluation. The overall goal was partially achieved but not sufficient to extend the environment education and agroforestry technologies introduced by the Project to the entire State of Pará during the 5 year period from the project completion to the ex-post evaluation despite of the continuous efforts such as the ecotourism promotion program by SECTAM and the environmental education activities by MPEG.



Environmental Education Seminar (2009)

On the other hand, some positive impacts of the Project have been observed. EMBRAPA Amazônia Oriental has been disseminating agroforestry cultivation methods to participants from not only Brazil but also outside of the country through the third country training program which started from 2006 and will continue to 2015 under the cooperation with JICA and the collaboration with CAMTA, the Japanese Brazilian Agriculture Association, practicing agroforestry agriculture methods. Although the training programs have not been based on “Amazon Gunma Forest”, the continuous efforts by the counterpart organization after the project has partly contributed to the current achievement of the overall goal. In addition, the glass roots technical cooperation by JICA, which has been implemented after the Project, established an association by young people in the local areas surrounding “Amazon Gunma Forest” and trained ecotourism guides. The Project can be appreciated that the project activities have made SECTAM recognize the importance of tropical forests and encouraged them to enforce their environmental education activities at the state natural conservation areas. However, the positive impacts have been limitedly realized because of the insufficient coverage of activities to protect vast areas of Amazon as well as issues on the continuity of the activities and the knowledge sharing caused by institutional reforms and personal transfers in SECTAM after the project completion. On the other hand, the good location of Amazon Gunma Forest has been enabling to promotion of environmental education and researches on conservation of Amazon tropical rain forests through providing opportunities not only visitors including students and tourists for environmental education but also research institutions, including EMBRAPA Amazônia Oriental, for their research activities. Despite of no data available on the visitors of Amazon Gunma Forest, according to the documents of annual general meeting of the Association of People from Gunma in Northern Brazil (Kita-Brazil Gunma Kenjinkai), the number of major visitors for the Forest has been decreasing from 430 people in 2010 to 299 in 2011. Also, the website developed by the Project has already closed. Expansion of visitors and awareness are needed to strength the positive impacts of the Project.

Therefore, its effectiveness/impact of this project is fair.

**Achievement of the Project Purpose and the Overall Goal**

Outcomes	Indicators (Target)	Actual Achievement
<u>Overall Goal</u> Sustainability of forest and natural environment conservation is ensured in the State of Pará	The technologies and skills transferred by the Project, including environmental education and agroforestry system are extended to the State of Pará.	(At the time of ex-post evaluation in 2012) - Introduction of “Nature Game” developed by the Project into the environmental education activities by MPEG in Pará with 80 participants annually, - The business plan of ecotourism promotion by SECTAM targeting natural area including Amazon Gunma Forest based on “the Green

		<p>Tourism" conducted by the Project,</p> <ul style="list-style-type: none"> <li>- Dissemination of research outputs related to an agroforestry farming method by EMBRAPA Amazôniza Oriental,</li> <li>- Continuous activities utilizing the knowledge and skills obtained through the Project but uncompleted extension to the entire Pará.</li> </ul>
<p><u>Project Purpose</u> Forest and natural environment conservation activities are promoted in the State of Pará</p>	<p>Accumulated technology and information in SECTAM, MPEG, AMBRAPA Eastern Amazon on the conservation of forest and natural environment in the State of Pará</p>	<p>(At the time of project completion in 2007) [Knowledge and technologies introduced by the Project]</p> <ul style="list-style-type: none"> <li>- Environmental Education: Nature Game (experience-based environmental education), Green Tourism, basic planning method for exhibition, museum workshops, and so on,</li> <li>- Afforestation and Agroforestry: forest management technologies, soil and plant rapid analysis, agriculture technology extension system, agroforestry technologies (crop cultivation using green manure, seed utilization, companion planting of fruit trees and timbers, and so on).</li> </ul> <p>[Utilization of the knowledge and technologies]</p> <ul style="list-style-type: none"> <li>- SECTAM: introduction of various programs using Nature Game (the program trainers are the teachers trained by the Project)</li> <li>- EMBRAPA: publishing the research outputs related agroforestry.</li> </ul>

Source: Terminal Evaluation Report and interviews with MPEG, local leaders, manager of Amazon Gunma Forest, documents for annual general meeting of Association of People from Gunma in Northern Brazil.

### 3 Efficiency

While the inputs were appropriate for producing the outputs of the Project and the project period was as planned (ratio against the plan: 100%), the project cost was higher than the plan (ratio against the plan: 133%). Therefore, efficiency of this project is fair.

### 4 Sustainability

The importance of the Project has been endorsed by the policies of the federal government of Brazil due to the importance of conservation of the Legal Amazon areas. Also, the State of Pará has been prioritizing the promotion of environmental education. In 2005, the Inter-institutional Commission of Environmental Education of the State of Pará (CIEA: Comissão Interinstitucional de Educação Ambiental) was established in accordance with ProNEA. In terms of institutional aspect, there has been no significant change in organizational arrangement for promotion of environment protection despite of the organizational reform of SECTAM after the project completion. SECTAM was separated into the Secretariat of Environment (SEMA: Secretaria de Meio Ambiente) and the other one for science and technology. The activities related to the Project are now managed by SEMA. There has no change in EMBRAPA Amazônia Oriental, MPEG and the Association of Gunma People in Northern Brazil. Despite of some personnel transfer within the organizations, most of key counterpart personnel remain in their organizations and have been using the knowledge and technologies obtained through the Project. However, the insufficient sharing of knowledge and technologies at the time of personnel transfers have been interfering compilation of knowledge and technologies at organizational level. Namely, there have been issues on the sharing and dissemination of the knowledge and technologies obtained through the Project from the organizational and the technical aspect of sustainability. The budget for environmental education programs of the State of Pará has been allocated from a part of the environmental compensations, which are collected by the state government from the entity engaged in the activities adversely affecting environment. The budget for research activities of EMBRAPA Amazônia Oriental has been allocated from their general budget. Also, MPEG allocates the budget for their activities for environmental education from their general budget, too. The operation costs of Amazon Gunma Forest have been covered by the revenues, including the entrance fees, sales of agricultural products cultivated in the agroforestry farm and seeds collected from the trees in the Forest, subsidies and donations. The total revenue of the Forest in 2011 amounted 0.1236 million reais while the expenditure was 0.104 million reais. Although the budgets of the counterpart organizations have been sufficient to continue their activities at small scale, they have not been sufficient to extend their activities to cover the entire state of Pará with vast area in order to achieve the overall goal.

Therefore, due to some problems in, structural, technical and financial aspects of the counterpart agencies, sustainability of the project effect is fair.

## III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- It is necessary to reconsider the extension of activities and to establish the extension system in order to spill over the project effects in the State of Pará which area is large, more than three times larger than Japan. Also, budgeting and fund raising for activities are very essential. In addition to the general budget of each counterpart organization, they need to make efforts to get special budgets, such as the environment compensations utilized by SECTAM. Also, it is recommended that the counterpart organizations should devote sharing the knowledge and skills gained through the Project among their organizations at first and then to make efforts to disseminate and share those knowledge and technologies to wide range of organizations, including government organizations, universities and research institutions, civil organizations, and business entities and so on since it is difficult for the counterpart organizations to disseminate the project effects by themselves in the entire area of Pará.

Lessons learned for JICA:

- The grassroots technical cooperation at Amazon Gunma Forest as well as the third country training program under the cooperation with EMBRAPA Amazônia Oriental positively affected dissemination and sustainability of the project effects. The approach to implement multiple projects connecting with specific issues at different timings can be effective to ensure sustain and extend the project effects.
- Deforestation of tropical forests is a key issue for not only Pará but also other states in Brazil and other countries having tropical forest in their areas. However, it is impossible to accomplish conservation of tropical forests by efforts of limited organizations because of the complicated causes for the deforestations by various factors and actors. The cooperation among many stakeholders is essential to address the issue. Also, each organization needs to proactively share their knowledge and technologies with others. Therefore, it is necessary to establish and enhance inter-organizational network associated with broad range of organizations including counterpart organization, other government organizations, universities, research institutions, civil organizations and business entities, for sharing their knowledge, technologies and knowhow and to challenge establishment of system to scale up the activities and their effects after project completion during the project period.