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調査日程

			担当				ブ事務所	
			小川川長 (総括)	酒匂 (森林保全)	笠原 (評価計画)	古谷 (評価分析)	井上	小林所長/ 柴田次長
1	4/23	日				移動[成田発(JL048) 19:20→		
2	4/24	月				移動[サンパウロ17:50 (JJ3818)→viaブラジリア ベレン着23:00(JJ3448)]		
3	4/25	火				・現地調査		
4	4/26	水						
5	4/27	木						
6	4/28	金						
7	4/29	土						
8	4/30	日						
9	5/1	月						
10	5/2	火	移動[成田発(JL006)12:00 → ニューヨーク着11:30] [ニュー YORK発(AA951) 21:20→]					
11	5/3	水	移動[viaサンパウロ17:45→ マカパ着00:15(JJ3448)]	移動[ベレン発(JJ3896) 13:00→マカパ着13:45]	移動[ブラジリア →マカパ]			
12	5/4	木	9:00 C/P機関表敬 14:00 プロジェクト内打合せ	ア マ パ 関 連		所長 移動[ブラジリア →マカパ]		
13	5/5	金	9:00 PDM修正協議					
14	5/6	土						
15	5/7	日	移動[成田発(JL006)12:00→ ニュー YORK着11:30] [ニュー YORK発(AA)21:20→]	・プロジェクト内打ち合わせ				
16	5/8	月	移動[→via リオデジャネイロ ブラジリア着13:43(JJ3822)] 15:00 調査方針協議(ブラジル事務所) 17:00 日本大使館表敬 移動[ブラジリア発(JJ3448)20:30→ ベレン着23:00]	・PDM修正協議 移動[マカパ発14:15(JJ3897)→ベレン着15:00]	移動[マカパ →ブラジリア]	移動[マカパ →ベレン]		
17	5/9	火	9:00 日本側団内打合せ 11:00 SECTAM表敬、EMBRAPA、MPEG追加聞き取り調査 14:00 SECTAM追加聞き取り調査			別プロジェクト へ		
18	5/10	水	9:00 群馬の森調査 14:00 北伯群馬県人会表敬					
19	5/11	木	9:30 ベレン総領事館表敬 11:00 環境教育現場(Escola Bosque)追加聞き取り調査 15:00 MPEG表敬					
20	5/12	金	AM MM作成、翻訳作業 14:00 合同評価委員会					
21	5/13	土	・MM作成、翻訳作業					
22	5/14	日	・群馬の森視察 ・MM作成、翻訳作業					
23	5/15	月	9:00 第2回合同評価委員会 ・MM修正、翻訳作業			次長 移動[ブラジリア →ベレン着]		
24	5/16	火	9:00 JCC(MM署名) 移動[ベレーン→トメアス]	文書整理	移動[ベレーン→ブラジリア]			
25	5/17	水	8:00 ジュース工場視察 9:30 トメアス文化協会表敬 11:00 高松農場視察	移動[ベレン発(JJ3449) 07:20→viaブラジリア サンパウロ発(DL104)22:55]				
26	5/18	木	移動[ベレン発(JJ3449)06:50→ブラジリア着09:15] 11:00 ブラジル事務所報告 15:00 大使館報告 移動[ブラジリア発(JJ3745)18:27→viaサンパウロ(JL047)23:50→]	移動(via アトランタ)				
27	5/19	金	移動	移動[→成田着13:25 (DL055)]				
28	5/20	土	移動[→成田着13:00]					

主要面談者リスト

- ABC

Wofsi Yuri Guimaraes de Souza Vidya Alves Moreira	Program Manager
--	-----------------

- SECTAM

Raul Pinto de Souza Porto Luiz Pinto de Oliveira Lúcia Porpino Telles Maria Ludetana Araújo	Executive Secretary Vice Executive Secretary Director of Environment Dept.(Project Director) Chief of Environment Education Div. (Project Manager)
Paulo Sergio Altieri Ivelise de Nazaré Fiock dos Santos	Environmental Conservation Coordinator Chief of Conservation Div.

- EMBRAPA

Jorge Alberto Gazei Yared Noemi Vianna Martins Leão	General Chief Chief of Laboratory (Project Coordinator for EMBRAPA)
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Rafael Moysés Alves	Researcher
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- MPEG

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--	--

- Education Dept. of Santa Barbara

Denilson Bentes Kalita Regina Costa Fatima de Lima da Silvo	Director of Education Dept. Chief of Education for school
---	--

- Escola Bosque

Nelma Santos Carlos Figueira Mary Fernandes da Liva	Assisitant of President Teacher of eco-tourism Teacher of botany
---	--

- POEMA

Ailton Pires de Lima	President
----------------------	-----------

- Gunma Kenjinkai

Hiroshi Okajima Shigeharu Shimizu Isamu Utagawa	President Vice President Executive Director
---	---

- 日本大使館

中軽米 重男	在ベレン日本国総領事館総領事
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酒井 了

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・JICA ブラジル事務所

小林 正博
柴田 信二
大塚 和哉
井上 ジュリオ

所長
次長

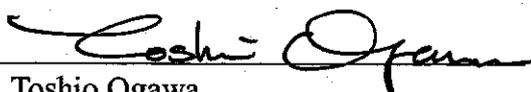
**MINUTES OF MEETING
BETWEEN THE JAPANESE TERMINAL EVALUATION STUDY TEAM
AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT
OF THE FEDERATIVE REPUBLIC OF BRAZIL
FOR
THE PROJECT FOR FOREST CONSERVATION AND ENVIRONMENTAL
EDUCATION IN THE EASTERN AMAZON**

The Japanese Terminal Evaluation Team (hereinafter referred to as “the Japanese Team”), organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) and headed by Mr. Toshio OGAWA, visited The Federative Republic of Brazil (hereinafter referred to as “Brazil”) from April 23th to May 20th, 2006 in order to evaluate the implementation and achievements of the Project for Forest Conservation and Environmental Education in the Eastern Amazon (hereinafter referred to as “the Project”). The terminal evaluation was conducted jointly with the Brazilian Evaluation Team.

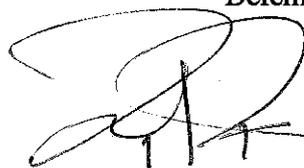
During its stay in Brazil, a series of meetings with Science, Technology and Environment of the Para State (hereinafter referred to as “SECTAM”), Brazilian Agricultural Research Corporation (hereinafter referred to as “EMBRAPA”), Emilio Goeldi Museum of the Para State (hereinafter referred to as “MPEG”), and Brazilian authorities concerned were held and a field survey was conducted. As the result of the meetings and survey, the joint terminal evaluation team (hereinafter referred to as “the Team”) agreed in the Joint Evaluation Meeting to report to the respective Governments the matters referred to in the documents attached hereto. On the recommendation of the terminal evaluation report, the Japanese Team and the authorities of Brazil concerned agreed with the items of the attached document.

Done in duplicate in English and Portuguese, respectively, each text being equally authentic. In case of any divergence of interpretation, the English text shall prevail.

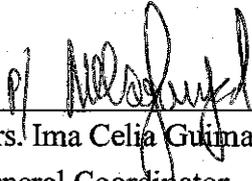
Belem, May 16th, 2006



Mr. Toshio Ogawa
Leader
Terminal Evaluation Study Team
Japan International Cooperation Agency
Japan



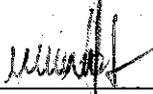
Mr. Raul Pinto de Souza Porto
Executive Secretary
Science, Technology and
Environment of the Para State
The Federative Republic of Brazil



Mrs. Ima Celia Guimaraes Vieira
General Coordinator
Emilio Goeldi Museum of the Para State
The Federative Republic of Brazil



Mr. Jorge Alberto Gazel Yared
General Chief
Brazilian Agricultural Research
Corporation
The Federative Republic of Brazil



Mr. Wofsi Yuri Guimaraes de Souza
Program Manager
Brazilian Cooperation Agency
The Federative Republic of Brazil

Attached document

1. Measures to be implemented before the termination by the Project

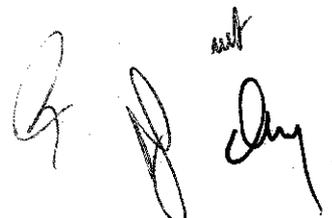
The Project implements the following necessary actions before the termination of the cooperation period in order for SECTAM, EMBRAPA, MPEG, and GEP to carry out the activities with full ownership after the cooperation.

- 1) SECTAM, EMBRAPA, and MPEG take necessary steps to disseminate the results of the Project to its covering area.
- 2) The Project (SECTAM, EMBRAPA, MPEG, Japanese experts, and related organizations) discuss the more appropriate indicator to measure the achievement level of the current overall goal, so that the progress towards the overall goal can be measured objectively at the time of ex-post evaluation which is conducted by JICA approximately three years after the project termination. Some indicators that show the relationship between the habitants and human activities for conservation could measure the progress towards the overall goal in more concrete manner instead of by the deforestation rate, that is difficult to be influenced in three years. Therefore, the decision of the indicators thorough discussion at JCC before the termination of the Project is required. Some examples of the indicators are pointed out: "environmental educational techniques are disseminated and practiced outside Para", "the agroforestry and afforestation techniques introduced by Counterpart organizations are practiced outside Para".
- 3) The Project provides necessary information to establish the NGO for the management of GEP.
- 4) Besides, all the related counterpart organizations cooperate so that RPPN of GEP is completed before the project termination.
- 5) Japanese experts, especially short-term experts, submit the report in Portuguese so that the results of their works can be shared in the partner country.

2. Measures to be taken for the post Project

In order to develop and to disseminate the results of the Project in the eastern Amazon areas, the following action needs to be taken;

- 1) The counterpart organizations make further efforts to obtain resources and funds from several public sources and private companies in order to continue the activities born in the Project.



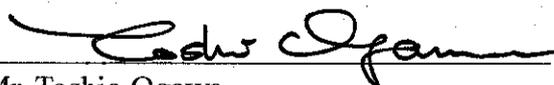
MINUTA DA REUNIÃO
ENTRE A EQUIPE JAPONESA DE ESTUDOS PARA AVALIAÇÃO FINAL
E
AS AUTORIDADES PARTICIPANTES DO GOVERNO
DA REPÚBLICA FEDERATIVA DO BRASIL
PARA
O PROJETO DE CONSERVAÇÃO FLORESTAL E EDUCAÇÃO AMBIENTAL.
NA AMAZÔNIA ORIENTAL

A Equipe Japonesa de Estudos para Avaliação Final (referida a seguir como “a Equipe Japonesa”), organizada pela Agência de Cooperação Internacional do Japão (referida a seguir como “JICA”) e liderada pelo Sr. Toshio OGAWA, visitou a República Federativa do Brasil (referida a seguir como “Brazil”) no período de 23 de abril a 20 de maio de 2006 para avaliar a implementação e as realizações do Projeto de Conservação Florestal e Educação Ambiental na Amazônia Oriental (referida a seguir como “o Projeto”). A avaliação final foi levada a efeito juntamente com a Equipe Brasileira de Avaliação.

Durante sua estada no Brasil, realizou-se uma série de reuniões com a Secretaria Estadual de Ciência, Tecnologia e Meio Ambiente do Pará (SECTAM), o Museu Paraense Emílio Goeldi (MPEG), a Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA) e autoridades brasileiras participantes, e conduziu-se uma pesquisa *in loco*. Como resultado, a equipe conjunta de avaliação final (referida a seguir como “a Equipe”) concordou, por ocasião da Reunião Conjunta de Avaliação, em relatar aos respectivos Governos os assuntos referidos nos documentos anexos a este. Por recomendação da avaliação final, a Equipe Japonesa e as autoridades brasileiras participantes estão de acordo com os itens do documento anexo.

Realizado em duplicata em inglês e português, respectivamente, cada texto é igualmente autêntico. Em caso de qualquer divergência de interpretação, deve prevalecer o texto em inglês.

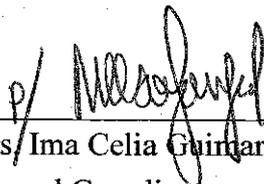
Belém, 16 de maio de 2006



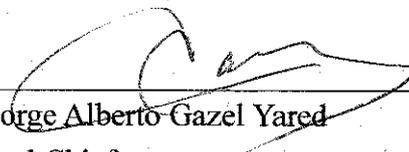
Mr. Toshio Ogawa
Leader
Terminal Evaluation Study Team
Japan International Cooperation Agency
Japan



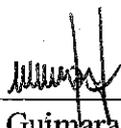
Mr. Raul Pinto de Souza Porto
Executive Secretary
Science, Technology and
Environment of the Para State
The Federative Republic of Brazil



Mrs. Ima Celia Guimaraes Vieira
General Coordinator
Emilio Goeldi Museum of the Para State
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Mr. Jorge Alberto Gazel Yared
General Chief
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Mr. Wofsi Yuri Guimaraes de Souza
Program Manager
Brazilian Cooperation Agency
The Federative Republic of Brazil

Documento anexo

Medidas a serem implementadas antes do término do Projeto

O Projeto considera as seguintes medidas necessárias antes do término do período de cooperação, para que a SECTAM, a EMBRAPA, o MPEG e o PEG possam continuar suas atividades por sua própria conta após a cooperação:

- 1) Que a SECTAM, a EMBRAPA e o MPEG tomem as medidas necessárias para difundir os resultados do Projeto na região de atuação.
- 2) Que o Projeto (SECTAM, EMBRAPA, MPEG, peritos japoneses e outras instituições envolvidas) discutam o indicador mais apropriado para se medir o nível de realização do atual objetivo geral, de maneira que o progresso em direção a esse objetivo geral possa ser objetivamente medido por ocasião da avaliação *ex post* que será efetuada pela JICA aproximadamente três anos após o término do projeto. Alguns indicadores que mostrem a relação entre os habitantes e as atividades antrópicas de conservação poderiam medir o progresso em direção ao objetivo geral de maneira mais concreta do que pela taxa de desmatamento, a qual dificilmente seria afetada em três anos. Por tanto, com relação aos indicadores, deverão ser discutidos entre as partes, para definir indicadores mais apropriados até o final do projeto e definido no JCC. Alguns exemplos serão descritos: As técnicas de educação ambiental serão difundidos nos outros estados além do estado do Para e serão aplicados. As técnicas agoflorestais e preservação florestais serão apresentados e ser serão aplicados.
- 3) Que o Projeto forneça as informações necessária e possível ao movimento de fundação da ONG e para o gerenciamento do PEG.
- 4) Que todas as instituições parceiras cooperem para que o PEG se torne uma RPPN antes do término do Projeto. O registro do Parque como RPPN facilitaria o acesso de cada instituição parceira a vários fundos e recursos financeiros. Portanto, a sustentabilidade das atividades das instituições parceiras seriam melhor garantidas sob os aspectos financeiro e jurídico.
- 5) Que os peritos japoneses, em particular os de curto prazo, submetam seu relatório em português para que os resultado de seus trabalhos possam ser difundido no país parceiro.

Medidas a serem implementadas após o término do Projeto

Com o objetivo de expandir e difundir os resultados do Projeto em toda a região da Amazônia Oriental, a seguinte medida precisa ser implementada:

- 1) Que as instituições parceiras se empenhem para obter recursos e fundos publicos ou companhias privadas de maneira a continuar as atividades iniciadas no Projeto.

JOINT TERMINAL EVALUATION REPORT
ON
THE PROJECT FOR FOREST CONSERVATION AND
ENVIRONMENTAL EDUCATION
IN THE EASTERN AMAZON
IN THE FEDERATIVE REPUBLIC OF BRAZIL

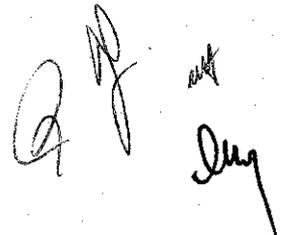
Belem, May 16, 2006

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ANNEX

- ANNEX-1** **Schedule of the Joint Evaluation**
- ANNEX-2** **List of the Personnel Consulted**
- ANNEX-3** **Project Design Matrix**
- ANNEX-4** **Evaluation Grid**
- ANNEX-5** **Indicators for Achievement of the Project (Evaluation Grid with Findings)**
- ANNEX-6** **Plan of Operation**
- ANNEX-7** **Record of Implementation of Input**
- a. List of Experts Dispatched from Japan**
 - b. List of Counterpart Personnel**
 - c. List of Counterpart Personnel Trained in Japan**
 - d. List of the Machinery and Equipment Provided by Japanese Side**



ABBREVIATIONS

ABC	Brazilian Cooperation Agency
ASFLOLA	Instituto Amigos da Floresta Amazonica
EMATER	Institute of Technical Assistance and Rural Extension of Para State
EMBRAPA	Brazilian Agricultural Research Corporation
FEMA	State Environment Fund
FNMA	National Environment Fund
FUNTEC	State Science and Technology Fund
GEP	Gunma Ecological Park
IBAMA	Brazilian Institute for the Environment and Renewable Natural Resources
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
Kenjin-kai	Association of Japanese Brazilian with origin of Gunma Prefecture in the Northern Brazil
M/M	Minutes of Meeting
MMA	Ministry of Environment
Moriwotsukuru-kai	Japanese NGO
MPEG	Emilio Goeldi Museum of the Para State
ODA	Official Development Assistance
PCM	Project Cycle Management
PDM	Project Design Matrix
PO	Plan of Operation
POEMA	Nucleus of Action for Sustainable Development
PRO-PAZ	Development of Peace Culture Program in Para State
R/D	Record of Discussions
RPPN	Private Natural Heritage Reserve
SECTAM	Secretariat of Science, Technology and Environment of the Para State
TOR	Terms of Reference

1. Introduction

1-1 Objectives of the evaluation

The evaluation activities were performed with the following objectives:

- 1) To conduct a comprehensive assessment of the achievements and implementation process of the Project.
- 2) To identify obstacles and/or facilitating factors that have affected the implementation process,
- 3) To analyze the achievement of the Project in terms of the five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability).
- 4) To make recommendations on the Project regarding the measures to be taken for improvement of the project as well as to draw the lessons learned from the Project.

1-2 Members of the joint evaluation team

1) The Japanese team

(a) Mr. Toshio OGAWA (Leader)

Team Director, Forestry and Nature Conservation Team 2,
Group 1, Global Environment Department, JICA

(b) Mr. Tatsuo SAKO

Director, New Policy Division, Planning and development,
Gunma Prefectural Government

(c) Mr. Soichiro KASAHARA

Project Officer, Forestry and Nature Conservation Team2,
Group1, Global Environment Department, JICA

(d) Ms. Noriko FURUTANI

Researcher
Global Link Management, Inc.

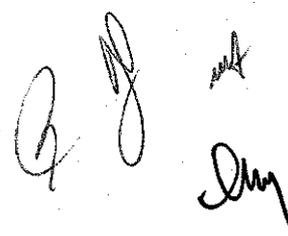
2) The Brazilian team

(a) Mr. Irineu Tamaio,

Project Manager,
Environmental Education Department, Ministry of Environment, Brasilia-DF

(b) Mr. Eduardo Jorge Maklouf Carvaiho

Assistant Director,
Division of Research and Development, EMBRAPA Amazonia Oriental



1-3 Schedule of the study

The detailed schedule of the terminal evaluation study is attached as Annex 1.

2. Outline of the Project

2-1 Background of the Project

The conservation of the tropical forest in Amazon is the most important topic among the priority issues of JICA's country program of technical cooperation for Brazil as it is one of the global challenges. The deforestation problem has been deepening due to lumbering, cultivation by colonization, and ranch development in Para State, a part of the Amazon where is located in the Northern Brazil. Therefore, it is urgently required that the researchers/engineers and citizens realize the importance of forest conservation and that the extension of the techniques to sustain forests are spread.

The Gunma Ecological Park, located in Santa Barbara, Para State, is the 540ha wide primeval forest that purchased in 1996 by the fund collected through the fund-raising campaign of Gunma-Kenjinkai together with Moriwotukuru-kai both in Japan and Brazil to appeal forest conservation to the public opinion in the world.

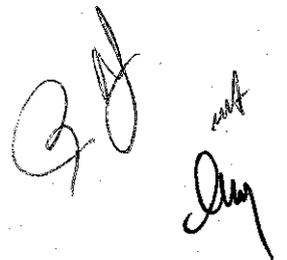
JICA dispatched the project formulation mission in January 2002 with participation from Gunma Prefecture. As a result, GEP was identified that it would produce significant demonstration effect thanks to its good access from Belen, a large city as a state capital, and it could be best place for environmental education and for both Brazilian and Japanese researchers/engineers conduct extension activities. Further discussion was conducted and came to the conclusion of the basic direction of the technical cooperation as promotion of environmental education, promotion of extension techniques of agroforestry and afforestation, and information dissemination through PR.

The Project started under the full assistance from Gunma Prefecture, with the counterpart organizations of SECTAM, MPEG, EMBRAPA, from January 2004 for three years.

2-2 Summary of the Project

The objectives and outputs of the Project stated in the R/D remain the same as follows:

Overall Goal: Effective forest and natural environmental conservation is promoted in the eastern Amazon areas.



Project Purpose: Activities of forest and natural environmental conservation are promoted in Para State.

Output:

- 1) Activities of environmental education are promoted.
- 2) Extension works of afforestation and agroforestry techniques in Para State are promoted.
- 3) Distribution of information and public relations regarding Amazon forests in Para State are strengthened.

3. Methodology of evaluation

In the first step of evaluation, the Team assessed the degree and prospects of achievement of the project purpose and output based on the PDM attached as Annex 3. In the second step, the Team analyzed and evaluated the Project from the viewpoints of "Relevance", "Effectiveness", "Efficiency", "Impacts" and "Sustainability".

Finally, the team made the conclusion and recommendation of the Project, and also identified the lessons learned from the Project.

3-1 Evaluation questions and indicators

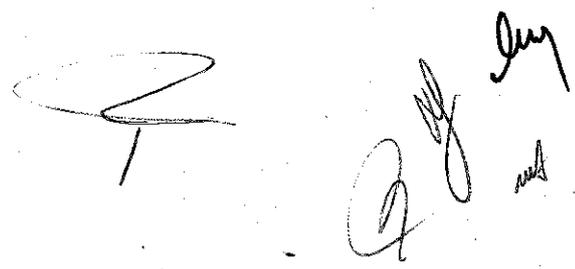
The evaluation grid is attached as Annex 4.

3-2 Data collection method and analysis

3-2-1 Data collection method

Following data and data collection methods were used for this evaluation study.

- 1) Project planning documents such as R/D, PDM, PO, and M/M
- 2) The report of the Japanese Project Consultation Team
- 3) Records of the project evaluation
- 4) Interviews with and questionnaires to Japanese experts, counterpart personnel, school teachers, pupils, related organizations, local residents, and agricultural producers
- 5) Record of input from both sides
- 6) Observation of the Gunma Ecological Park and neighboring areas in the project site
- 7) Other reports by the Project



3-2-2 Criteria of evaluation for analysis

The evaluation is proceeded along with the following five criteria, which are the major points of consideration when assessing development projects.

- 1) Relevance: Relevance is to question whether the project purpose and overall goal are still in keeping with the priority needs and concerns at the time of evaluation.
- 2) Effectiveness: Effectiveness concerns the extent to which the project purpose has been achieved, or is expected to be achieved, in relation to the output produced by the project.
- 3) Efficiency: Efficiency is a productivity of the implementation process: how efficiently the various inputs are converted into output.
- 4) Impact: Impact is intended and unintended, direct and indirect, positive and negative changes as a result of the project.
- 5) Sustainability: Sustainability of the development project is to question whether the project benefits are likely to continue after the external aid has come to an end.

4. Project performance and implementation process

4-1 Input

The Team confirmed that the Project has mostly fulfilled the following input along with the plan stated in the R/D and PDM.

[Japanese side]

1) Dispatch of experts to Brazil

3 long-term experts and 9 short-term experts were dispatched to the Project for technology transfer.

2) Provision of machinery/equipment

Machinery and equipment in total valued at 20,016,000 Japanese yen (484,445 R\$) were provided for the project activities till the end of March, 2006.



3) Training of counterpart personnel in Japan

4 counterpart personnel were dispatched to Japan for training. And one more counterpart personnel is scheduled to be dispatched to Japan.

4) Supplemental cost of local expenditure

A total amounts of 69,184,000 Japanese yen (1,511,222 R\$) was provided to supplement a portion of local expenditure till the end of March, 2006.

[Brazilian side]

1) Appointment of counterpart personnel and other staff

All staff of relevant fields of the Project has been assigned.

2) Allocation of operational cost

The total budget was allocated to the project operational cost was 44,800 R\$ as of March, 2006.

3) Provision of facilities

The necessary spaces for office plot of the Project have also been provided.

The detail of the input is found in ANNEX 7.

4-2 Activities

The Team confirmed that the Project has fulfilled the activities along with the plan stated in the PDM and PO. (The detail of the progress of the activities is found in ANNEX 6.)

4-3 Output

The Team confirmed that the Project has fulfilled the following output along with the plan stated in the R/D and PDM. The reasons of the statement are shown under each output. The detailed information on output is found in the Indicators for Achievement of the Project (ANNEX 5).

Output 1: Activities of environmental education are promoted.

Indicator
Implement 30 environmental education activities and invite 900 people there as a whole.

Output 1 has been almost achieved and will be achieved completely by the end of the Project period. As of March 1st, 2006, 22 seminars were held. The number of the seminar, as environmental education activities, is less than the target figure of 30. However, the number of participants in those seminars amounted to 913 that is more than target figure 900, thanks to the implementation of many nature game seminars. Based on the schedule of the related activities, planned with the short-term Japanese expert for year 2006, the target figure of 30 of environmental education activities is estimated to reach by the end of the Project.

Output 2: Extension works of afforestation and agroforestry techniques in Para State are promoted.

Indicator
Organize 18 seminars and invite 480 people as a whole.

The achievement level of Output 2 is high. The number of seminars held until March 1st, 2006, amounts already to 22 that is more than 18 as target figure. The number of participants of those seminars also exceeds the target figure, 481 to 480 respectively. The indicator, set in PDM to measure the Output 2, has been completely achieved.

It is planned to introduce the Japanese extension system, in which extension and research closely collaborate, to EMBRAPA in year 2006.

Output 3: Distribution of information and public relations regarding Amazon forests in Para State are strengthened.

Indicator
Count 2400 accesses to the web page of the Project and 3600 Brazilian visitors to the Gunma Ecological Park.

Output 3 has been almost achieved and will be achieved for sure by the end of the Project. As of March 1st, 2006, the number of visitors to GEP amounts to 6,600 since the beginning of the Project. That is much more than 3,600 as target figure although it includes the non-Brazilian nationality. On the other hand, access to the web page of the Project is 800 as of the end of March, that is, not yet reached 2,400 as target figure. However, it will be reached soon as time goes, because the main

reason for the gap between the current number and the target figure lies in the delay of the uploading of the web page.

4-4 Project purpose

Project Purpose: Activities of forest and natural environmental conservation are promoted in Para State.

Indicator
Accumulated technology and information in the Secretariat of Science, Technology and Environment of the Para State Government (SECTAM), Emilio Goeldi Museum of the Para State(MPEG), Eastern Amazon Agricultural Research Center of the Brazilian Agricultural Research Corporation (EMBRAPA) on the conservation of forest and natural environment in the Para State

At the time of terminal evaluation, the project purpose is achieved.

The reasons for the foregoing statement are as follows;

As of April, 2006, such knowledge/information and techniques as Nature Game, Forestry Management Technique, Simple soil and plant analysis, Extension system of agricultural techniques, Planning methodology on material exhibition, Workshop on museology for local communities, Current situation of environmental education in the world, Green tourism (Direct sale of fruits, etc.) , and Utilization of tree seeds, etc. could be pointed out as so-called transferred technology. These technologies could be judged as "accumulated" based on the fact that these are utilized and practiced by the counterpart organizations. Therefore, at the time of the evaluation, the project purpose has been achieved.

Some examples of "Utilization of obtained knowledge and technologies" are shown below;

- The nature game came to be one of the important tools of SECTAM and already was introduced in various programs outside of the Project. The reason why these incidents are the results of the Project is that the interpreters/instructors of these programs are the ex-participants of the nature game seminars that provided by the Project.
- The result of the research, that is one of the outputs of the Project, was published by EMBRAPA itself by its own initiative in order to utilize the data and analysis even outside of the Project.
- An article about the experiences of Nature Game in Para State was published by the Ministry of Environment and Ministry of Education in 2006.
- MPEG's workshop on museology working with teachers and community leaders, on issues

such as cultural identity, and the community history, that resulted on a methodology of social environmental diagnosis.

In addition to the indicators that are the means to measure the achievement level of the project purpose by checking the counterpart organization related variables such as accumulated knowledge and techniques, the following data, other target group related indicators such as agricultural producers, citizens, teachers and pupils, support the statement of that the project purpose has been achieved. For example, interview with small-scale farmers revealed that they are highly motivated to practice the knowledge and techniques of agroforestry for sustainable development, obtained in the seminars by the Project, and that they are prepared to start those after rainy season. (Example: crop cultivation with organic fertilizer, utilization of seeds, combining cultivation of fruit trees and non-fruit trees, etc.) Also an interview found that the school, that originally puts emphasis on environmental education, has been practicing the nature game obtained through the Project and been disseminating that within and outside of the school. Those facts are also the evidences to show that the project purpose has been achieved.

4-5 Overall Goal

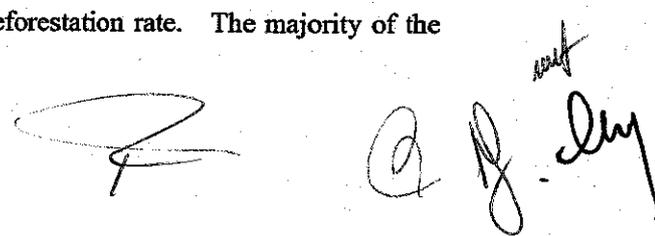
Overall Goal: Effective forest and natural environmental conservation is promoted in the eastern Amazon areas.

Indicator
The increase rate in the deforested area of the Eastern Amazon stops.

It is difficult for the overall goal to be achieved within three to seven years as long as the current indicator is used to measure its achievement level. The current "overall goal" could be positioned as "super goal" that appears even several years after the achievement of overall goal. However, various impacts/changes, that have been appearing as the Project goes on, the direction is on track towards the realization of the overall goal. In short, it is estimated, at the time of terminal evaluation, that overall goal will be achieved over longer term.

The reason for the foregoing statement is as follows;

It is too short for five years or so to show the stop of the deforestation rate in order to judge whether or not that "effective forest and natural environmental conservation is promoted in the eastern Amazon areas". Although there are several factors to determine the deforestation rate, what the Project contributes is to influence on one of those. Therefore, it is not feasible to show the actual figure of stop in deforestation rate. The majority of the



related persons, however, think that the continuing activities for forest conservation, as triggered by the Project implementation on GEP, will spread to Para state, where more than 80% of the population of the eastern Amazon areas live, and even to the neighboring states, and that eventually "effective forest and natural environmental conservation is promoted in the eastern Amazon areas".

Some facts such as that more than 2,000 visited GEP for the past two years, and that the PR through mass media and the website opening predicts further increase of visitors in number. The influence from the above-mentioned also contributes to the realization of the overall goal. The number of visitors and future visitors, among whole population in the area, could be described as considerable since the population of Santa Barbara and Para State is 12,000 and six million, respectively. Although the eastern Amazon areas includes several states such as Para, Amapa, a part of Maranhao and Tocantins, the State of Para, where more than 80 % of the whole population of the eastern Amazon lives, is the main state in terms of population.

4-6 Implementation Process

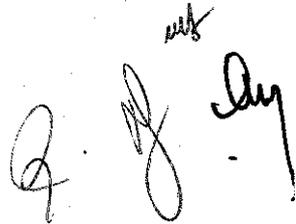
Implementation process was evaluated along with the evaluation grid.(The detailed information on implementation is found in ANNEX 5)

The following are the major points to mention;

- Sufficient explanation on the Project budget to Brazilian counterpart personnel was not carried out even though the Brazilian budget system is quite different from Japanese one. This affected the smooth communication through the Project implementation.
- The information sharing between Japanese experts and Brazilian counterpart personnel was not sufficient enough including the above-mentioned case. However, the coordinator meeting, that was set since January in 2006, has been working well. As a result, the communication among 3 counterpart organizations and Japanese experts are improved at the working level.

5. Results of evaluation by five criteria

Through the evaluation study, the Team assessed the project's relevance, effectiveness, efficiency, impact, and sustainability. (The detailed information on evaluation by five criteria is found in: ANNEX 5).



5-1 Relevance

The Project is highly relevant as follows:

1) Consistency with Brazilian policy:

The overall goal and project purpose are consistent with the Brazilian policy. The contents of the cooperation in the Project conforms to the directions in such measures as promoting biodiversity conservation and the sustainable production system set forth in the "National Comprehensive Policy for the Legal Amazon" (1995), which is the basis for the Amazon policy of the Brazilian Government, and the Lula administration's "The Position of the Amazon in the Development of Brazil" (2002). The environmental education activities help promote environmental education set forth in the "State Environmental Education Program: Guideline and Policy"(2000) of the Para State Government.

2) Needs of target group:

The project purpose is consistent with the needs of the target group. Although the counterpart personnel are highly qualified in terms of knowledge and technology, they are not strong enough in terms of application and extension that are crucial for actual advancement of afforestation. Therefore, there were needs of the Project implementation among the counterpart personnel. The past reports pointed out the existence of needs of the Project that promotes the forest conservation also among agricultural producers, teachers and pupils. These needs were confirmed by the result of the interview with agricultural producers, and practitioners of environmental education at the time of terminal evaluation.

3) Consistency with Japanese ODA policy:

The Project is positioned as part of the ecosystem conservation program for "environmental conservation" of the important development challenges in Brazil's Country-specific Project Plan of JICA. Thus, the objective of the Project is consistent with the Japanese ODA policy.

4) Project Design:

From the viewpoint of appropriateness of the project design, there is gap between project purpose and overall goal if the current indicator remains. The area that the overall goal covers and is expected to influence after the termination of the Project is considerably wider in comparison with the targeted area, the Project implementation period covers. Therefore, it is difficult to achieve the stop of the deforestation rate, which is the current indicator for the overall goal, in the eastern Amazon areas within 3 to 7 years. However, the current direction is on track towards the achievement of

overall goal that will be achieved over long term. Thus, the current overall goal could be described as the super goal.

5-2 Effectiveness

The effectiveness of the Project is high as shown below in detail:

1) Degree of achievement of the project purpose

At the time of terminal evaluation, the project purpose has been achieved. (See 4-4.)

2) Contribution of output to project purpose achievement

All the outputs have been significantly contributing to achievement of the project purpose.

3) Promoting factors and inhibiting factors

It seems that the participatory planning appeared attractive for the agricultural producers, because their needs and requests are reflected, and that they can expect possible improvement in agricultural production through agroforestry techniques as well as afforestation. The existence of needs in target group, shown in their motivation, also promoted the achievement of the project purpose. Besides, learning methodology through experiencing such as nature game has not yet been spread in the area. Thus, there are strong needs for it. Above all, there exists "the place" to conduct the activities. That is to say, the Gunma ecological Park, which is highly qualified forest, exists and is located at very good access from Belem, the capital of Para State. This is the most significant promoting factor of the project purpose. That is why various activities for environmental education and extension works on agroforestry to agricultural producers could be happened.

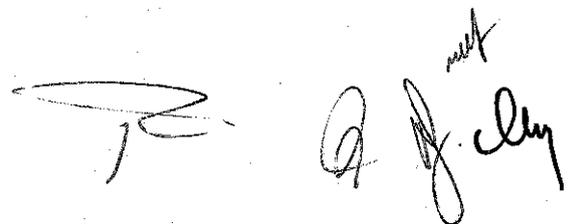
There is no inhibiting factor towards the achievement of the project purpose.

5-3 Efficiency

The efficiency of the Project is high. Detailed assessment of efficiency is as follows:

1) Appropriateness of input

Input by both Japanese and Brazilian sides were mostly necessary and sufficient to produce the intended output for the following reasons.



[Japanese Side]

- Short-term experts, dispatched in various field, played the role of each expected area in the Project. The timing, quality and quantity of the dispatch of Japanese experts were mostly appropriate. (The detailed of the Japanese experts is listed in ANNEX 7.) However, some counterpart personnel felt insufficient discussion between Brazilian counterparts and Japanese side in order to agree on the expertise of short-term experts to be dispatched. Especially, the TOR of the short-term experts in the field of environmental education was not thoroughly discussed to the point of the mutual understanding.
- The time of counterpart training courses was adequate. (The detailed counterpart training in Japan is listed in ANNEX 7.)
- The Japanese side provided necessary equipment for technology transfer. (The detailed items of input are listed in ANNEX 7.)

[Brazilian Side]

- Assignment of counterpart was basically in accordance with the planned schedule. The number of counterparts allocated was sufficient.
- The equipment provided by the Japanese side is utilized and well maintained.

2) Degree of achievement of output

The Project has obtained the intended output to a satisfactory degree. (See ANNEX 5).

5-4 Impact

Impact of the Project is strong positively as follows:

Unintended positive impacts are as follows;

- 1) The publicity of GEP increased considerably, and the number of inquiry increased as the result of that the famous actress visited GEP and introduced it through the TV program nationwide and that local TV program on GEP was broadcast.
- 2) As publicity of GEP goes up, Japanese wood related companies, Japanese agricultural producers in Tome-Asu and Castanhal started collaboration for afforestation, etc.
- 3) In addition to the Project visits, the frequency of utilization of GEP, as venue for seminar, field practice by the agricultural technical schools and for research by some universities, is increasing as the publicity of the Project goes up.
- 4) Although the Emilio Goeldi Museum did not target Santa Barbara for research in the past, it increased its anthropological interests (ceramics, pottery, fishing village, folkcraft, etc) in

that area.

- 5) After the activities carried out by the stakeholders, GEP came to be open to the neighboring habitants. As a result, they understand the importance of it.
- 6) Two species, which are in danger of extinction, were found in GEP by the research activities of the Project. And the research on those species started.
- 7) EMBRAPA invited EMATER to work together for the effective extension on GEP.
- 8) Kenjin-kai began taking action for the establishment of NGO that promotes the environmental activities in GEP, registration of GEP as RPPN, and wider networking with other organizations than Japanese related ones.
- 9) Impact to the population of Gunma Prefecture in Japan is considerable. The Kids Ambassadors for Green as well as JICA experts contributed to spread information on GEP through the report session. Furthermore, the publicity goes up, through the Mail Magazine and mass media such as major newspaper, all over Japan. As a result, the Kenjin-kai, the owner of GEP, was awarded "Love and Earth Award", that is given to the technique contributing to the realization of sustainable society, at the world's fair in 2005.

No negative impacts are observed.

5-5 Sustainability

The sustainability of the Project is high as follows, with condition of the continuation of current efforts to obtain financial resources,:

1) Organizational sustainability

The counterpart organizations continually exist for sure in order to implement the Brazilian policy to conserve the forest along today's world political wind for forest conservation. In such organizations, there are already some concrete plans, shown below, that utilize GEP, after the termination of the Project. This fact shows the fruit of the Project has already been institutionalized in the counterpart organizations.

- PRO-PAZ, which is an educational program provided by the Para State government, already includes the nature game as a part of its program.
- The result of the research, that is one of the outputs of the Project, was published with EMBRAPA's own budget.
- MPEG uses the field of GEP for the research of fern and fungus. Those activities are outside of the Project.

Above all, the fact that GEP has been utilized for the activities of forest conservation outside of the Project shows the evidence of future sustainability of GEP itself.

There is a movement to establish new NGO in order to manage GEP with the purpose of the environmental conservation and poverty alleviation, involving wider participants rather than Gunma related people. At the same time, the part of GEP, which is 200ha of the high quality forest, is expected to be registered as RPPN by the federal government. If realized, the collaboration with the current counterpart organizations would continue to be promoted.

2) Financial sustainability

Financial sustainability could be secured as long as current efforts are going to be made continuously because the budget are allocated for the future activities utilizing GEP to keep enjoying the fruit of the Project.

- PRO-PAZ is the on-going program of the Para State government, thus, budget has already been allocated.
- EMBRAPA already obtained its budget from FUNTEC to publish the result of the research. In addition to that, the activities on GEP among all are put importance on in the course of the prioritization and application to the research fund of the various financial resources from the state and federal government. This initiative to seek the fund by EMBRAPA is highly appreciated as institutional capacity.

While Kenjin-kai is not the counterpart organization of the Project, it is quite important of the continuation of GEP itself as the field of the activities for the counterpart organizations. Therefore, it is required that Kenjin-kai secures the financial resources to manage GEP stably. It is judged, however, that the financial basis of Kenjin-kai is not firm enough in order to keep and maintain GEP appropriately. To overcome these difficulties, Kenjin-kai and related people have been currently taking actions to establish a new NGO in order to keep GEP open and to promote environmental activities together with outside partnership. This measure, establishment of NGO, seems to be considerably effective for the advancement of the income generating activities in line with environmental conservation such as collecting admission/accommodation fee, providing pay eco-tour, and selling the agricultural products, etc. besides the efforts to cut cost down. Furthermore, Kenjin-kai prepares application for RPPN registration of GEP so that the counterpart organizations can access to various financial assistance with ease. Such efforts appear to lead up to the stable finance.

3) Technical sustainability

It can be said that technical sustainability is high although there are differences of achievement level among techniques.

It was confirmed that not only the counterpart personnel but also other Brazilian participants in the seminars provided by the Project came to be competent in practicing and providing the participatory environmental education activities such as nature game by themselves to wider population. As the state of Para has already integrated nature game as a methodology into its program other than JICA supported project, further development of Brazilian human resources for such an environmental education activities are advancing.

As for agroforestry, Brazilian counterpart personnel came, through the implementation of the Project, to be more aware of the importance of its extension/application of their research result. Such a change in consciousness could also be described as an aspect of technology transfer. Because they tend to put emphasis on the theory although they are originally highly qualified and already accumulated the fruit of the past technical cooperation of JICA.

On the other hand, what reached to the agricultural producers remains mainly up to knowledge level. It requires some time in order for them to practice what they learned. However, the knowledge seems to have plant firmly in agricultural producers and they are likely to be practiced in near future.

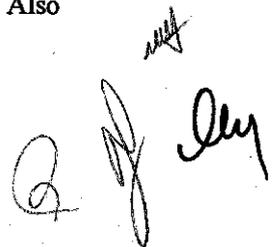
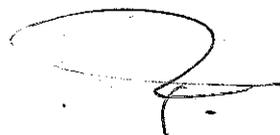
6. Conclusion of evaluation

The Team came to the following conclusion through the field survey of the Project, discussion among the members of the Team and exchange views and opinions with concerned organizations.

6-1 Achievement of the Project

The project purpose is achieved at the time of terminal evaluation, judging from the following facts.

- 1) There are some technologies and information transferred through the Project implementation both in the field of environmental education and agroforestry. These technologies could be judged to be "accumulated" based on the fact that these are utilized and practiced by the counterpart organizations. Therefore, at the time of the evaluation, the project purpose has been achieved.
- 2) The agricultural producers who live around GEP are highly motivated to practice the knowledge and techniques of agroforestry for sustainable development, obtained in the seminars by the Project, and that they are prepared to start those after rainy season. Also



some teachers and community leaders who participated in the seminars, have been practicing several environmental educational techniques such as nature game, and have been disseminating such techniques within and outside of the school as well as working with cultural identity issues with the communities.

6-2 Evaluation by five criteria

At the time of terminal evaluation, the relevance of the Project is high, and the effectiveness is also judged to be high due to the high achievement level of the Project purpose. The efficiency is generally high although it could be improved to some extent in terms of the implementation process. Impact is globally large including influence in Japan.

As for the sustainability, it could be said high due to the high technical level of the three counterpart organizations and high possibility in drawing the related funds from the state and federal government. Some funds were already obtained. On the other hand, the sustainability of GEP, which is the actual place for the counterpart organizations' activities to be conducted, is not secured, judged from the limited resources in terms of finance and human resources. Therefore, it can be said that possibility of the securing sustainability is high if GEP is registered as RPPN upon the establishment of NGO for cost effective management, and the more participation, backed with budget, are advanced.

6-3 Promoting factors and prohibiting factors

The virtues of the Gunma Ecological Park as promoting factors can be summarized as follows.

Above all, there exists "the place" to conduct the activities. That is to say, the GEP, which is highly qualified forest, exists and is located at very good access from Belem, the capital of Para State. This is the most significant promoting factor of the project purpose. That is why various activities for environmental education and extension works on agroforestry to agricultural producers could be happened.

Together with this condition, the existence of needs of target group also promoted the achievement of the project purpose. For example, it was attractive for the agricultural producers to get involved in planning, because their needs and requests are reflected, and to expect possible improvement in agricultural production through agroforestry techniques as well as afforestation. Besides, learning methodology through experiencing such as nature game, has not yet been spread in the area. Thus, there are strong needs for it.

7. Recommendation

The Team recommends Governments of Brazil and Japan following points based on the conclusions of evaluation.

7-1 Measures to be implemented before the termination by the Project

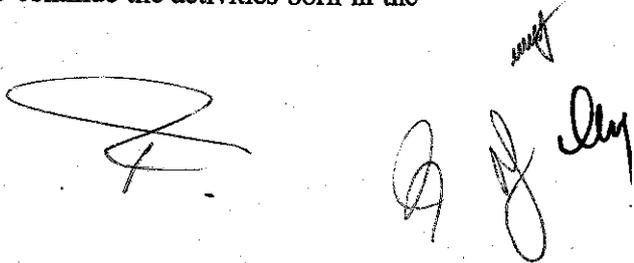
The Project implements the following necessary actions before the termination of the cooperation period in order for SECTAM, EMBRAPA, MPEG, and GEP to carry out the activities with full ownership after the cooperation.

- 1) SECTAM, EMBRAPA, and MPEG take necessary steps to disseminate the results of the Project to its covering area.
- 2) The Project (SECTAM, EMBRAPA, MPEG, Japanese experts, and related organizations) discuss the more appropriate indicator to measure the achievement level of the current overall goal, so that the progress towards the overall goal can be measured objectively at the time of ex-post evaluation which is conducted by JICA approximately three years after the project termination. Some indicators that show the relationship between the habitants and human activities for conservation could measure the progress towards the overall goal in more concrete manner instead of by the deforestation rate, that is difficult to be influenced in three years. Therefore, the decision of the indicators thorough discussion at JCC before the termination of the Project is required. Some examples of the indicators are pointed out: "environmental educational techniques are disseminated and practiced outside Para", "the agroforestry and afforestation techniques introduced by Counterpart organizations are practiced outside Para".
- 3) The Project provides necessary information to establish the NGO for the management of GEP.
- 4) Besides, all the related counterpart organizations cooperate so that RPPN of GEP is completed before the project termination.
- 5) Japanese experts, especially short-term experts, submit the report in Portuguese so that the results of their works can be shared in the partner country.

7-2 Measures to be taken for the post Project

In order to develop and to disseminate the results of the Project in the eastern Amazon areas, the following action needs to be taken;

- 1) The counterpart organizations make further efforts to obtain resources and funds from several public sources and private companies in order to continue the activities born in the Project.



8. Lessons learned

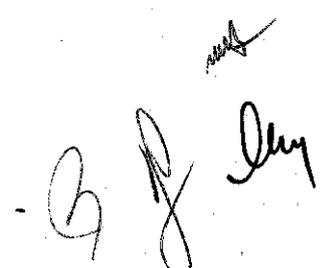
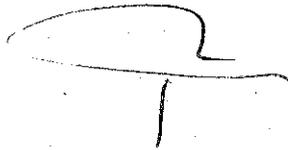
- 1) The fruits of the Japanese experts should be widely shared by the partner countries. Thus, it is required for the report to be written at least in English if it impossible in the major language.
- 2) It is quite important to have smooth communication among counterpart organizations and Japanese experts at all stages of project.
- 3) All the counterpart organizations should be involved, to the full extent, in the project design stage. Besides, thorough discussion, including the opinion exchange on the indicators to measure the achievement, should be conducted in the course of the PDM creation.
- 4) Project Design: It should avoid the huge gap between the project purpose and the overall goal. Thorough discussion among related organizations/personnel contributes to set more practical and verifiable indicators so that the logic of the project design is secured.



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ANNEX

- ANNEX-1 Schedule of the Joint Evaluation
- ANNEX-2 List of the Personnel Consulted
- ANNEX-3 Project Design Matrix
- ANNEX-4 Evaluation Grid
- ANNEX-5 Indicators for Achievement of the Project (Evaluation Grid with Findings)
- ANNEX-6 Plan of Operation
- ANNEX-7 Record of Implementation of Input
- a. List of Experts Dispatched from Japan
 - b. List of Counterpart Personnel
 - c. List of Counterpart Personnel Trained in Japan
 - d. List of the Machinery and Equipment Provided by Japanese Side



Schedule on Joint Evaluation Study

Date			Time	Schedule	
				Principal member	Ms. Furutani
4/23	Sun	1			19:20: Lv. Tokyo (JL048)→
4/24	Mon	2			23:00: Ar. Belem
4/25	Tue	3			AM: Meeting with Japanese experts, Interview with a Japanese expert PM: Courtesy call to Gunma-Kenjinkai, Interview with a Japanese expert
4/26	Wed	4			AM: Interview with SECTAM PM: Field Survey on Gunma Ecological Park
4/27	Thu	5			AM: Interview with MPEG PM: Interview with EMBRAPA
4/28	Fri	6			AM: Interview with Escola Bosque PM: Interview with farmers in Santa Barbara
4/29	Sat	7			• Input data
4/30	Sun	8			• Analysis data, • Preparation of draft evaluation report
5/1	Mon	9			• Preparation of draft evaluation report
5/2	Tue	10			AM: Interview with Education Dept. of Santa Barbara PM: Interview with POEMA
5/3	Wed	11			
5/4	Thu	12			
5/5	Fri	13			
5/6	Sat	14			
5/7	Sun	15	12:00	Lv. Tokyo (JL006)→	
5/8	Mon	16	13:43	→Ar. Brasilia	
			15:00	• Meeting with JICA Brazil Office	
			17:00	• Courtesy Call on ABC	
			20:30	Lv. Brasilia (JJ3448)→	
			23:00	Ar. Belem	
5/9	Tue	17	09:00	• Meeting in the Study Team	
			11:00	• Courtesy call to SECTAM, Meeting with EMBRAPA, MPEG	
			14:00	• Meeting with SECTAM	
5/10	Wed	18	09:00	• Field Survey on Gunma Ecological Park	
			14:00	• Courtesy call to Gunma-Kenjinkai	
5/11	Thu	19	09:30	• Courtesy Call to Consular office of Japan	
			11:00	• Meeting with Escola Bosque	
			15:00	• Courtesy Call to MPEG	
5/12	Fri	20		• Meeting in the Study Team	
			14:00	• Joint Evaluation Committee	
5/13	Sat	21		• Preparation of Joint Evaluation Report, Translation to Portuguese	
5/14	Sun	22		• Preparation of Joint Evaluation Report • Field Survey on Gunma Ecological Park	
5/15	Mon	23	9:00	• Joint Evaluation Committee • Modification of Joint Evaluation Report	
5/16	Tue	24	9:00	• Joint Coordinating Committee (Signed M/M and Joint Evaluation Report)	

List of the Personnel Consulted

- **SECTAM**
 - Raul Pinto de Souza Porto Executive Secretary
 - Luiz Pinto de Oliveira Vice Executive Secretary
 - Lúcia Porpino Telles Director of Environment Dept.(Project Director)
 - Maria Ludetana Araújo Chief of Environment Education Div.
(Project Manager)
 - Paulo Sergio Altieri Environmental Conservation Coordinator
 - Ivelise de Nazaré Fiock dos Santos Chief of Conservation Div.
- **EMBRAPA**
 - Neomi Vianna Martins Leão Chief of Laboratory
(Project Coordinator for EMBRAPA)
 - José Edmar Urano de Carvalho Researcher
 - Rafael Moysés Alves Researcher
 - Sonia Helena Monteiro dos Santos Researcher
 - Oriel Filgueira de Lemos Assistant Chief of Research and Development
- **MPEG**
 - Nelson Sanjad Communication and Extention Coordnator
 - Lúcia das Graças Santana da Silva Researcher (Project Coordinator for MPEG)
 - Horácio Higuchi Researcher
 - Maria das Graças Santana da Silva Researcher
- **Education Dept. of Santa Barbara**
 - Denilson Bentes Director of Education Dept.
 - Kalita Regina Costa Chief of Education for school
 - Fatima de Lima da Silvo
- **Escola Bosque**
 - Nelma Santos Assisitant of President
 - Carlos Figueira Teacher of eco-tourism
 - Mary Fernandes da Liva Teacher of botany
- **POEMA**
 - Ailton Pires de Lima President
- **Farmers**
- **Gunma Kenjinkai**
 - Hiroshi Okajima President
 - Shigeharu Shimizu Vice President
 - Isamu Utagawa Executive Director
- **Consular office of Japan**
 - Shigeo Nakakarumai Consul General
- **JICA Brazil Office**
 - Shinji Shibata Vice Coordinator
 - Kazuki Otsuka

ANNEX-3 : Project Design Matrix (PDM2)

Project title: The project for Forest Conservation and Environmental Education in the Eastern Amazon
Period: January 15, 2004 through January 14, 2007

Target groups: State citizens, researchers, teachers, pupils, agricultural producers of the target region

Date: May 16, 2005

Project summary	Indicators	Means of obtaining the indicators	Constraints and external factors
<p>[Overall goal] Effective forest and natural environmental conservation is Promoted in eastern Amazon areas.</p>	<ul style="list-style-type: none"> The increase rate in the deforested area of the Eastern Amazon stops. (Many of the cooperation projects in the conservation of the natural environment need decades to produce any effect. Their assessment indicators and methods should therefore be considered with a long-term outlook.) 	<p>Report on the deforestation status of satellite images taken by the Instituto Nacional de Pesquisas Espaciais (National Institute for Space Research, INPE)</p>	
<p>[Project goal] Activities of forest and natural environmental conservation are promoted in Para State.</p>	<ul style="list-style-type: none"> Accumulated technology and information in the Secretariat of Science, Technology and Environment of the Para State Government (SECTAM), Emilio Goeldi Museum of the Para State (MPEG), Eastern Amazon Agricultural Research Center of the Brazilian Agricultural Research Corporation (EMBRAPA) on the conservation of forest and natural environment in the Para State 	<p>Annual reports of each organization</p>	<ol style="list-style-type: none"> The policy of the environment conscious of Para State Government will not change. Governmental establishments, universities, NGOs, and private companies will participate more in the Gumma Ecological Park.
<p>[Output]</p> <ol style="list-style-type: none"> Activities of environmental education are promoted in Para State. Extension works of afforestation and agroforestry techniques in Para State are promoted. Distribution of information and public relations regarding Amazon forests in Para State are strengthened. 	<ol style="list-style-type: none"> Implement 30 environmental education activities and invite 900 people there as a whole. Organize 18 seminars and invite 480 people as a whole. Count 2400 accesses to the web page of the Project and 3600 Brazilian visitors to the Gumma Ecological Park. 	<ol style="list-style-type: none"> Project report Project report Homepage 	<ol style="list-style-type: none"> No quick decline will occur in the financial situation of the related organization.
<p>[Activity]</p> <ol style="list-style-type: none"> 1-1. Conduct a biodiversity survey necessary for environmental education. 1-2. Implement environmental education activities for local citizens, teachers, students, and pupils of elementary and junior high schools. 1-3. Improve exhibition and educational facilities and equipment of "the Gumma Ecological Park" for implementation of environmental education and ecotourism activities. 2-1. Develop technologies for afforestation and agroforestry 2-2. Extension technologies for afforestation and agroforestry among farmers.. 3-1. Establish a homepage to disseminate information on activities in the Gumma Ecological Park. 3-2. Organize seminars and workshops on environment issues targeting schools, communities, and citizens. 	<p>[Inputs]</p> <ul style="list-style-type: none"> Long-term experts (2 persons x 3 years) Chief advisor / environmental education (24M/M) Coordinator / agroforestry (36M/M) Short-term experts as appropriate environmental educational Forest conservation and afforestation Afforestation technology Crops Cultivation Ecotourism and other necessary sectors Buildings and equipment Materials, equipment, vehicles, office equipment Acceptance of Counterpart Personnel Environmental education, studies of forest ecology, Agro-forestry, etc. 	<p>Brazil</p> <ul style="list-style-type: none"> Staff Project directors (36M/M) Project managers (36M/M) Environmental instructors: 3 persons Forest ecology researchers: 4persons Agroforestry experts: 4persons Facility: Project office (SECTAM) Local cost: Administration expenses 	<ol style="list-style-type: none"> The Gumma Ecological Park will not suffer catastrophic damage due to unexpected weather. <p>[Preconditions]</p> <ol style="list-style-type: none"> There should be no opposition on the part of the local community. Governmental establishments, universities, NGOs, and private companies should cooperate in the activities of the Gumma Ecological Park.

ANNEX-4: Evaluation Grid: The Project for Forest Conservation and Environmental Education in the Eastern Amazon (Terminal evaluation)

[Note] Interview for Counter Personnel (C/P) and Japanese Expert (J/E) is basically based on the questionnaire

Evaluation Item	Evaluation Questions	Information/Indicators	Data sources/Data collection methodology
	<p>Achievement of Overall Goal (expected)</p> <p>(Achievement of Overall Goal is estimated, at the time of terminal evaluation, based on the progress of project as planned towards the realization of overall goal over 3 to 7 years after the project completion.)</p> <p>Estimation on the achievement of Overall Goal "Effective forest and natural environmental conservation is promoted in the eastern Amazon areas."</p>	<p>The increase rate in the deforested area of the Eastern Amazon. (whether such a rate shows that long-term outlook on deforestation is decreasing)</p> <p>The definition of "the eastern Amazon areas" as well as common understanding the term among project related people, its area, population, and deforestation rate?</p>	<p>Interview and questionnaire for C/P and J/E, if not scientific data (projection) available.</p>
	<p>Achievement of Project Purpose</p> <p>To what extent has Project Purpose, "Activities of forest and natural environmental conservation are promoted in Para State" been achieved?</p>	<p>Accumulated technology and information in the Secretariat of Science, Technology and Environment of the Para State Government (SECTAM), Emílio Goeldi Museum of Para State (MPEG), Eastern Amazon Agricultural Research Center of the Brazilian Agricultural Research Corporation (EMBRAPA) on the conservation of forest and natural environment in Para State.</p> <p>1. Number of the technology and the content 2. Number of the knowledge and the content 3. The extent of utilization of those knowledge and technology</p> <p>Other supporting data as an evidence of achievement of project purpose, if any. (See promoting factor under the effectiveness)</p>	<p>Project Records, Interview and questionnaire for C/P and J/E</p>
<p>Project Achievement</p>	<p>Achievement of Outputs</p> <p>Output 1 To what extent has Output 1, "Activities of environmental education are promoted in Para State" been achieved?</p> <p>Output 2 To what extent has Output 2, "2. Extension works of afforestation and agroforestry techniques in Para State are promoted," been achieved?</p> <p>Output 3 To what extent has Output 3, "Distribution of information and public relations regarding Amazon forests in Para State are strengthened," been achieved?</p>	<p>The number of environmental education activities (more than 30?), and the number of participants for those (more than 900 in total?)</p> <p>The number of seminars and participants (more than 18 seminars and more than 480 participants in total?)</p> <p>The number of access to the web page of the Project and Brazilian visitors to the Gunma Ecological Park. (more than 2400 and more than 3600 respectively?)</p>	<p>Project Records, Interview and questionnaire for C/P and J/E</p> <p>Project Records, Interview and questionnaire for C/P and J/E</p> <p>Project Records, Administration documents of Gunma Ecological Park, Interview and questionnaire for C/P and J/E</p>
	<p>Actual Inputs</p> <p>Brazilian Side</p> <p>Japanese Side</p>	<p>* Personnel necessary for the Project * Necessary cost and facilities for the Project * Japanese Experts (Long-term, Short-term) * Training in Japan (= Counterpart personnel training in Japan) * Equipment</p>	<p>Project Records Project Records Project Records Project Records Project Records</p>
	<p>Progress of the activities</p> <p>Problems on implementation and solution process</p>	<p>Progress of the Project, reasons for the gap between current situation and the original plan, monitoring situation</p> <p>Problems on project implementation/management and solution process</p>	<p>Project Records, Interview for C/P and J/E</p> <p>Project Records, Interview and questionnaire for C/P and J/E</p>
<p>Implementation Process</p>	<p>Coordination among the related organizations in the operational mechanism</p> <p>Performances of C/P, J/E</p> <p>Ownership of Brazilian implementing agency (SECTAM, MPEG, EMBRAPA)</p>	<p>Administration structure</p> <p>Coordination with other concerned organizations</p> <p>Adequacy in quantity, allocation timing, qualification (experience)</p> <p>Communication</p> <p>Initiative of C/P</p> <p>Ownership of SECTAM, MPEG, EMBRAPA for the Project</p>	<p>Project Records</p> <p>Interview and questionnaire for C/P and J/E</p> <p>Project Records, Interview and questionnaire for C/P and J/E</p> <p>Interview and questionnaire for C/P and J/E</p> <p>Interview and questionnaire for C/P and J/E</p> <p>Interview and questionnaire for C/P and J/E</p>

Evaluation Item	Evaluation Questions	Information/Indicators	Data sources/Data collection methodology
1. Relevance	1.1 Necessity of this Project for the sector of environmental conservation in Brazil	Consistency with the strategy of promotion of environmental education, afforestation and agroforestry through CEP in the sector of forest conservation	Project records, Interview and questionnaire for C/P and J/E
To question whether the project purpose and overall goal are still in keeping with the priority needs and concerns at the time of evaluation	1.2 Consistency with the Japanese aid policy	Japanese aid policy for Brazil	Project records, Interview and questionnaire for C/P and J/E, interview to school teachers and pupils, some agricultural producers
2. Effectiveness	1.3 Needs of target groups	Information to show the adequacy of the target groups, Consistency with the target group's (State citizens, researchers, teachers, pupils, agricultural producers of the target region) needs	Project records, Interview and questionnaire for C/P and J/E
The extent to which the project purpose has been achieved, or is expected to be achieved, in relation to the output produced by the project	2.1 Achievement level of Project Purpose	Consistency with the contents of the trainings provided by the Project and needs of target groups	Project records, Interview and questionnaire for C/P and J/E
3. Efficiency	2.2 Inhibiting factors, promoting factors. Relations between outcomes and external conditions.		Project records, Interview and questionnaire for C/P and J/E
Productivity of the implementation process: how efficiently the various input are converted into output and outcome	3.1 Adequacy of Input	Adequacy of allocation of C/P, facilities, operational costs.	Project records, Interview and questionnaire for C/P and J/E
4. Impact	3.2 Achievement of Output	Management of C/P	Project records, Interview and questionnaire for C/P and J/E
Intended and unintended, direct and indirect, positive and negative changes as a result of the project	3.3 Supporting mechanism of the Project	Adequacy of inputs such as Japanese experts, receiving C/P in Japan for training, provision of equipment	Project records, Interview and questionnaire for C/P and J/E
5. Sustainability	4.1 Achievement of Overall Goal (expected)	See project achievement	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	4.2 Positive impacts other than the overall goal	Current situation on JCC	Project records, Interview and questionnaire for C/P and J/E
Intended and unintended, direct and indirect, positive and negative changes as a result of the project	4.3 Negative impact	Situation of supporting system in Japan (JICA Brazilian Offices, JICA HQs in Tokyo, Supporting committees, Gunma Prefecture)	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.1 Organizational sustainability	See project achievement	Project records, Interview and questionnaire for C/P and J/E
5.2 Financial sustainability	4.4 Positive impacts other than the overall goal	Cases of positive spread effect including incidents in Gunma Prefecture in Japan such as response from population on the Project.	Project records, Interview and questionnaire for C/P and J/E
5.3 Technical sustainability	4.5 Negative impact	Existence of negative spread effects	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.1 Organizational sustainability	Operational structure to continue the activities, the position of the Gunma Ecological Park in SECTAM, MPRG, FIMBRAPA (Any future plan by these organizations?)	Project records, Interview and questionnaire for C/P and J/E, and interview to related organization such as
To question whether the project benefits are likely to continue after the external aid has come to an end	5.2 Financial sustainability	Budget allocation, possibility of continuous financial support	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.3 Technical sustainability	Information to show the extent of technology transfer to the Brazilian counterpart personnel	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.4 Promoting factors, inhibiting factors to sustainability	Remaining level of Brazilian researchers/practitioners trained	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.4 Promoting factors, inhibiting factors to sustainability	Information to show the plan of the further training or institutionalization of the skill obtained through the Project	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.4 Promoting factors, inhibiting factors to sustainability	Ability to maintain the equipment	Project records, Interview and questionnaire for C/P and J/E
To question whether the project benefits are likely to continue after the external aid has come to an end	5.4 Promoting factors, inhibiting factors to sustainability	Ex. Necessary conditions for the developed/improved courses by the Project to be continuously implemented.	Project records, Interview and questionnaire for C/P and J/E

**ANNEX-5 Indicators for Achievement of the Project (Evaluation Grid with findings)
The Project for Forest Conservation and Environmental Education in the Eastern Amazon (Terminal evaluation)**

Evaluation Item	Evaluation Questions	Information/Indicators	Results
Achievement of Overall Goal (expected)	The increase rate in the deforested area of the Eastern Amazon. (Whether such a rate shows that long-term outlook on deforestation is decreasing)	The increase rate in the deforested area of the Eastern Amazon. (Whether such a rate shows that long-term outlook on deforestation is decreasing)	It is impossible to show specific figure of deforestation rate that has been decreasing due to the Project result. However, many counterpart personnel and Japanese experts think that the forest conservation activities, which are expected to continue after the termination of the Project period, will contribute to the overall goal.
Achievement of Overall Goal is estimated, at the time of terminal evaluation, based on the progress of project as planned towards the realization of overall goal over 3 to 7 years after the project completion.)	Estimation on the achievement of Overall Goal "Effective forest and natural environmental conservation is promoted in the eastern Amazon areas."	The definition of "the eastern Amazon areas" as well as common understanding the term among project related people. Its area, population, and deforestation rate?	During the past two years, more than 2000 visitors came to the CEP. Since the web page was open now, the number of visitor is expected to increase at higher pace. Thus, this would contribute to the achievement of the overall goal. The ratio of the visitors to the local population is considerable because population of Santa Barbara and Para State is approximately 12,000, and 6 million, respectively.
Achievement of Project Purpose	To what extent has Project Purpose, "Activities of forest and natural environmental conservation are promoted in Para State" been achieved?	Accumulated technology and information in the Secretariat of Science, Technology and Environment of the Para State Government (SECTAM), Emilio Goeldi Museum of Para State (MPEG), Eastern Amazon Agricultural Research Center of the Brazilian Agricultural Research Corporation (EMBRAPA) on the conservation of forest and natural environment in Para State.	There is the academic definition of the Eastern Amazon areas in "Legal Amazon". The area is not exactly same as the administration boundary. The time difference line divides the west and the east. Lower Amazon coincides with the east and Upper Amazon coincides with the west. The western Amazon area has scattered habitats. The size of area of the west is bigger than the east. The eastern Amazon areas includes, in terms of administrative division, Para State, Amapa State, a part of Maranhao and Tokanchins State. Since it is not administrative division, it is not easy to count exact number of population. It is, however, possible to guess approximate population by summing up 6 million of Para State and 400,000 of Amapa State.
Project Achievement	Achievement of Outputs	<p>Output 1 To what extent has Output 1, "Activities of environmental education are promoted in Para State" been achieved?</p> <p>Output 2 To what extent has Output 2, "Extension works of afforestation and agroforestry techniques in Para State are promoted," been achieved?</p> <p>Output 3 To what extent has Output 3, "Distribution of information and public relations regarding Amazon forests in Para State are strengthened," been achieved?</p>	<p>It is complicated to count by clearly distinguishing knowledge and technology, because technology always includes knowledge and information. However, the followings are the knowledge/information and technologies so-called transferred. These are judged to be "accumulated" based on the fact that these are utilized and practiced by the counterpart organizations. Therefore, at the time of the evaluation, the project purpose has been achieved because there exist some accumulated knowledge/information, technologies in the counterpart organizations.</p> <p>Knowledge and Information</p> <ol style="list-style-type: none"> 1. Current situation of environmental education in the world, 2. Green tourism (Direct sale of fruits, etc.), 3. Utilization of tree seeds <p>Techniques</p> <ol style="list-style-type: none"> 1. Nature Game, 2. Forestry Management Technique, 3. Simple soil and plant analysis, 4. Extension system of agricultural techniques, 5. Planning methodology on material exhibition, 6. Workshop on museology for local communities <p>Some examples of "Utilization of obtained knowledge and technologies" are that the nature game became one of the important tools of SECTAM and already was introduced in various programs outside of the Project. The reason why these incidents are the results of the Project is that the interpreters/instructors of these programs are the ex-participants of the nature game seminar, that provided by the Project.</p> <p>Not only researchers of the counterpart organizations but also agricultural producers, citizens, teachers and pupils are included as the target group of the Project. For example, interview with neighboring farmers revealed that they are highly motivated to practice the knowledge and techniques of agroforestry for sustainable development, obtained in the seminar by the Project, and that they are prepared to start those after rainy season. (Example: crop cultivation with organic fertilizer, utilization of seeds, combining cultivation of fruit trees and non-fruit trees, etc.) Also an interview found the school, that originally puts emphasis on environmental education, has been practicing the nature game obtained through the Project and disseminating that within and outside of the school. Those facts are also the evidences to show that Project Purpose has been achieved.</p>
Project Achievement	Achievement of Outputs	<p>Output 1 To what extent has Output 1, "Activities of environmental education are promoted in Para State" been achieved?</p> <p>Output 2 To what extent has Output 2, "Extension works of afforestation and agroforestry techniques in Para State are promoted," been achieved?</p> <p>Output 3 To what extent has Output 3, "Distribution of information and public relations regarding Amazon forests in Para State are strengthened," been achieved?</p>	<p>As of March 1, 2006, 22 seminars were held as the environmental education activities and not yet reached the target figure, 30. However, in terms of the number of participants for those is 913 that is more than the target figure, 900. Based on the plan of short-term Japanese expert dispatched for year 2006, the target figure of seminars will be reached before the termination of the Project.</p> <p>As of March 1, 2006, 22 seminars were already held and the number of participants is 481. Thus, both are more than the target figures. In terms of indicator, output 2 was completely achieved.</p> <p>For year 2006, Japanese extension system is going to be introduced to EMBRAPA.</p> <p>As of March 1, the number of visitors to the Gunma Ecological Park reaches 6,600, during the project period, that is far more than the target figure 3,600, although it includes the non-Brazilian (Visitors record is not by nationality.) On the other hand, the number of access to the web page of the Project is about approximately 800 as of the end of March, 2006. The target figure 2,400 has not yet been achieved, but the reason behind that is that the time of web page opening was delayed until recent. Therefore, the number of the access to the web page is also expected to reach the target figure sooner or later as time goes.</p>
Actual Inputs	Brazilian Side	<p>* Personnel necessary for the Project</p> <p>* Necessary cost and facilities for the Project</p>	<p>Totally 21 counterpart personnel were appointed. (SECTAM 6, MPEG 7, EMBRAPA 8)</p> <p>The total budget was allocated to the Project operational cost was 44,800 R\$ as of March, 2006. The necessary spaces for office plot of the Project have been provided.</p>

Japanese Side	* Japanese Experts (Long-term, Short-term) * Training in Japan (= Counterpart personnel training in Japan) * Equipment	Long-term expert 3, Short term expert 9 4 counterpart personnel participated in the training in Japan. See the annex for the list of equipment. Total cost of the equipment until fiscal year 2005 is 484,445RS (=20,015 thousand Japanese yen).
Progress of the activities	Progress of the Project, reasons for the gap between current situation and the original plan, monitoring situation	Coordinator meeting as liaison mechanism has been held once a month since the beginning of 2006. Through this meeting, the progress of activities are confirmed. The committee of the extension plot of GEP has also been held once a month and the related activities on the extension plot are monitored within this meeting. Although the monitoring has been conducted based on PO, some counterpart personnel are not clearly aware of the relation between PDM and PO. Communication between Brazilian counterpart personnel and Japanese experts, especially on the budget system, was not open enough, thus some activities were stranded. However, aforementioned coordinator meeting started improving the communication mechanism. The frustration accumulated in the past among Brazilian counterpart personnel could only be further improved by the better communication.
Problems on implementation and solution process	Problems on project implementation/management and solution process	It took quite time-consuming to coordinate the related organizations and personnel because they are many. The unplanned activities were conducted without modification of PO in order to meet the unexpected demand and expectation towards the Project as many as possible.
Coordination among the related organizations in the operational mechanism	Administration structure	The counterpart organizations are 3 which are SECTAM, MPEG, EMBRAPA.
Performance of C/P, J/E	Coordination with other concerned organizations	The coordinators from SECTAM, MPEG, EMBRAPA as the counterpart organizations hold the meeting and discuss with 2 Japanese long-term experts the activity progress and whatever necessary. The committee of the extension plot of GEP has also been held once a month and discussion has been conducted among EBRAPA, the Association of Guma Kaqin-hai of the Northern Brazil as the owner of the plot, and Japanese experts, about the related activities on the extension plot.
	Adequacy in quantity, allocation timing, qualification (experience)	General appropriate. However, expertise and dispatch period of some short-term Japanese experts are pointed out not to be fully appropriate by the counterpart personnel. This shows the discussion between Japanese experts and counterpart personnel were not sufficient enough.
	Communication	Some communication obstacles between Japanese experts and counterpart organizations/personnel are observed. The main reason lies in management rather than language difficulties. However, the coordinator meeting, which was started as liaison mechanism since January 2006, has been making situation much improved.
Ownership of Brazilian implementing agency (SECTAM, MPEG, EMBRAPA)	Initiative of C/P	The counterpart personnel had forwardness towards the Project although they tend to put emphasis on theory.
	Ownership of SECTAM, MPEG, EMBRAPA for the Project	At the project design stage, not all the counterpart organizations thoroughly discussed equally. This affected the ownership of the counterpart personnel. However, they created ownership as they progress the activities they are in charge after the Project started. Ownership of MPEG seems to be light due to its initiative to plan for the post-project period.

Evaluation Item	Evaluation Questions	Information/Indicators	Results
1. Relevance	1.1 Necessity of this Project for the sector of environmental conservation in Brazil	Consistency with the strategy of promotion of environmental education, afforestation and agroforestry through GEP in the sector of forest conservation	Consistent. The contents of the cooperation in the Project conforms to the directions in such measures as promoting biodiversity conservation and the sustainable production system set forth in the "National Comprehensive Policy for the Legal Amazon" (1995), which is the basis for the Amazon policy of the Brazilian Government, and the Lula administration's "The Position of the Amazon in the Development of Brazil" (2002). The environmental education activities help promote environmental education set forth in the "State Environmental Education Program: Guideline and Policy" (2000) of the Para State Government.
To question whether the project purpose and overall goal are still in keeping with the priority needs and concerns at the time of evaluation	1.2 Consistency with the Japanese aid policy	Japanese aid policy for Brazil	The Project is positioned as part of the ecosystem conservation program for "environmental conservation" of the important development challenges in Brazil's Country-specific Project Plan of JICA.
	1.3 Needs of target groups	Information to show the adequacy of the target groups. Consistency with the target groups (State citizens, researchers, teachers, pupils, agricultural producers of the target region) needs	Consistent. Although the counterpart personnel are highly qualified in terms of knowledge and technology, they are not strong enough in terms of application and extension, that are crucial for actual advancement of afforestation. Therefore, there were needs of the Project. The past reports pointed out the existence of needs of the Project, that promotes the forest conservation, for agricultural producers, teachers and pupils. This needs were supported by the result of the interview with agricultural producers, and practitioners of environmental education at the time of terminal evaluation.
2. Effectiveness	2.1 Achievement level of Project Purpose	Consistency with the contents of the trainings provided by the Project and needs of target groups	The content of the training is consistent with the needs of the target group because of the fact that the nature game was welcomed and accepted to practice by themselves, that agroforestry techniques are spread (mainly knowledge spread effect).

<p>The extent to which the project purpose has been achieved, or is expected to be achieved, in relation to the output produced by the project</p>	<p>2.2 Inhibiting factors, promoting factors, Relations between outcomes and external conditions.</p>	<p>Inhibiting factors and promoting factors</p>	<p>It was attractive for the agricultural producer to get involved in planning, because their needs and requests are reflected, and to have expect possible improvement in agricultural production through agroforestry techniques as well as afforestation.</p> <p>Learning methodology through experiencing such as nature game, has not yet been spread in the area. Thus, there is strong needs for it. This needs came to be promoting factor for the Project. Above all, there exists "the place" to conduct the activities. That is to say, the Gunmas ecological Park, which is highly qualified forest, exists and is located at very good access from Beten. This is the most significant promoting factor of the project purpose.</p>
<p>3. Efficiency</p>	<p>3.1 Adequacy of Input</p>	<p>Adequacy of allocation of C/P, facilities, operational costs. Management of C/P Adequacy of inputs such as Japanese experts, receiving C/P in Japan for training, provision of equipment</p>	<p>Generally appropriate.</p> <p>The coordinator of each counterpart organization functions well to deliver the information.</p> <p>Generally appropriate. However, it is noteworthy that the chief advisor's duty, especially secondly dispatched, became heavy because he doubles as chief advisor of a JICA technical cooperation project and specific sector (environmental education, forestry management) and the secondly dispatched one only for the third year.</p>
<p>Productivity of the implementation process: how efficiently the various input are converted into output and outcome</p>	<p>3.2 Achievement of Output 3.3 Supporting mechanism of the Project</p>	<p>See project achievement Current situation on JCC</p>	<p>Twice were held. December, 2004 and October, 2005. Before the first JCC the counterpart met in January, 2004 to establish the JCC. If this is included, three JCC were held.</p>
<p>4. Impact</p> <p>Intended and unintended, direct and indirect, positive and negative changes as a result of the project</p>	<p>4.1 Achievement of Overall Goal (expected) 4.2 Positive impacts other than the overall goal</p>	<p>Situation of supporting system in Japan (JICA, A Brazilian Office, JICA HQs in Tokyo, Supporting committee, Gunma Prefecture)</p> <p>See project achievement</p> <p>Cases of positive spread effect including incidents in Gunma Prefecture in Japan such as response from population on the Project.</p>	<p>Gunma Prefecture provide sufficient assistance to the Project through the appointment of Japanese experts dispatched, exchange program with population of Gunma Prefecture, and wide public relations, etc.</p> <p>The common understanding of "the eastern Amazon areas" coincides with that defined in Legal Amazon, which includes, in terms of administrative division, Para State, Amapa State, a part of Maranhao and Tocantins State.</p> <p>As for indicator to measure overall goal, it might be better to consider at the time of ex-post evaluation. The possible indicators are, for example, would be "the number of RPPN registered in urban area", "historical, economic, and political (policy related) indicators" if the current indicator is not applied to more limited area such as Santa Barbara.</p> <p>Impact on policy: SECTAM would like to feedback the result of the Project and to integrate it into the State policy as the model of the environmental education. The goal for the Para State is to register the (part of) GEP as the RPPN. The government of Para State is willing to integrate something good into its policy.</p> <ol style="list-style-type: none"> 1. The amount of activities increased than actual PO because the Project tried to correspond to many inquires and expectation from outside. 2. As publicity of the GEP goes up, Japanese wood related companies, Japanese agricultural producers in Toneyasu and Castaluna started collaboration for afforestation, etc. 3. Kinjin-kai began to take action for the establishment of NGO that promotes the environmental activities in GEP, registration of the GEP as RPPN, wider networking with other than Japanese related organizations. 4. The networking between EMBRAPA and EMATER for the utilization of GEP is now trying to be established. 5. The frequency of utilization of GEP as venue for seminar, field practice by the agricultural technical schools and research by some universities in addition to the Project visits is increasing as the publicity of the Project goes up. 6. The data, that was obtained as the result of the research of the Project activities, came to be utilized for further research and other activities. 7. The eco-tourism related project, which utilizes the local resources in Santa Barbara, is now under way. 8. The attitude of counterpart personnel, traditionally puts emphasis on theory, has been changed in a sense that they became more aware of the importance of "extension". The following facts are the supporting data to the foregoing statement: The director of EMBRAPA was significantly impressed by the Japanese extension system, in that system extension has same importance as research at the Introduction seminar; EMBRAPA is planning to hold the seminar together with EMATER and UFPA in near future. <p>The famous actress (Mezina Care) visited the GEP and introduced it through the TV program nationwide. In addition to that, local TV program broadcast. Such a 7 in total broadcast increased publicity of the Gunma Ecological Park considerably, and the number of inquiry increased.</p> <p>Due to the strengthening the Project's PR activities, larger population became beneficiaries. For example, as a result of that the Project participated in various exhibition such as International Amazon Tourism Exhibition, Japan Week, Trade Promotion Conference of Para State, etc., many inquires and expectation of collaboration reached the Project.</p> <p>Although the Emilio Goeldi Museum did not target Santa Barbara for research, it increased its archaeological interests (ceramics, pottery, fishing village, folkcraft, etc) in that area.</p> <p>Two species, which are in danger of extinction, were found in GEP by the research activities of the Project. Therefore, the research on those species started.</p> <p>Impact to the population in Gunma Prefecture, Japan. The report session by the Kids Ambassador for Green as well as JICA experts were conducted and spread information on GEP in Brazil. Furthermore, the celebrity goes, through the Mail Magazine and mass media such as major newspaper, nationwide in Japan. As a result, the Kenjin-kai, the owner of GEP was awarded "Love and the world's fair in 2005. "Love and Earth Award" is given to the technique that contributes to the realization of sustainable society.</p>

<p>4.3 Negative impact</p> <p>5.1 Organizational sustainability</p> <p>5.2 Financial sustainability</p> <p>5.3 Technical sustainability</p> <p>5.4 Promoting factors, inhibiting factors to sustainability</p>	<p>Existence of negative spread effects</p> <p>Operational structure to continue the activities, the position of the Gunma Ecological Park in SECTAM, MPEG, EMBRAPA (Any future plan by those organizations?)</p> <p>Budget allocation, possibility of continuous financial support</p> <p>Information to show the extent of technology transfer to the Brazilian counterpart personnel</p> <p>Remaining level of Brazilian researchers/practitioners trained</p> <p>Information to show the plan of the further training or institutionalization of the skill obtained through the Project</p> <p>Ability to maintain the equipment</p> <p>Ex. Necessary conditions for the developed/improved courses by the Project to be continuously implemented.</p>	<p>No negative impacts are observed.</p> <p>The counterpart organizations continually exist for sure in order to implement the Brazilian policy to conserve the forest along today's world political wind for forest conservation. In such organizations, there are already some concrete plans, shown below, that utilize the Gunma Ecological Park, after the termination of the Project. This fact shows the fruit of the Project has already been institutionalized in the counterpart organizations.</p> <ol style="list-style-type: none"> 1. PRO-PAZ, which is rehabilitation program for juvenile delinquents provided by the Para State government, already includes the nature game as a part of its program. 2. The results of the research, that is one of the outputs of the Project, was published by EMBRAPA's own budget. 3. MPEG prepares the eco-tourism related project that includes the environmental education aspects utilizing the touristic resources of Santa Barbara and the Gunma Ecological Park. 4. MPEG uses the field of the Gunma Ecological Park for the research of fern and fungi. <p>Those activities are outside of the Project.</p> <p>Above all, the fact that the Gunma Ecological Park has been utilized for the activities of forest conservation outside of the Project shows the sustainability of not only the counterpart organizations but also the GEP itself.</p> <p>The department of education of Sanata Barbara expresses its positive stance to utilize GEP for education by local government. Actual plan of educational activities of environmental education are already prepared for this academic year.</p> <p>There is a movement to establish new NGO apart from the Association of Gunma Kenjin-kai in order to manage GEP for the environmental conservation and poverty alleviation, involving more wider participants rather than Gunma related people. At the same time, the part of GEP, which is 200ha of the high quality forest, is expected to be registered as RPPN by the federative government. If this is realized, the collaboration with the current counterpart organizations would be stronger.</p> <p>Financial sustainability is high as long as current efforts are going to be made continuously because the budget are allocated for the future activities utilizing GEP to keep enjoying the fruit of the Project.</p> <ol style="list-style-type: none"> 1. PRO-PAZ is the on-going program of the Para State government, thus budget has already been allocated. 2. EMBRAPA already obtained its budget from FUNTEC to publish the result of the research. This initiative to seek the fund by EMBRAPA is highly appreciated as institutional capacity. 3. MPEG is now applying to JICA through ABC so that the eco-tourism related project get budgeted. This MPEG's initiative can be appreciated as institutional capacity. 4. Technology transfer between some Japanese companies are under way. For example, wood processing company Moudi Norte requires the networking with the Project on afforestation as a sustainable resource management. 5. Some networking with Japanese companies have already been in effect. For example, the field verification of sustainable agroforestry techniques are under way in collaboration with the pepper producer/exporter. This verification activities are sponsored completely by the Japanese company based on the data obtained by the Project. 6. One of NGOs, POEMA pledges 50% of the publication cost of the report to show the result of the Project activities. <p>From this fiscal year, the GEP has began the actions to ensure the independent financial resources by collecting admission fee, accommodation, by selling the agricultural products, as well as trying to establish the independent NGO for environment. One of the examples of selling the agricultural products is sell banana produced in the extension field of GEP to the public in front of the entrance faced to the street on weekend. If the part of the forest of GEP is registered as RPPN upon the establishment of NGO, it would be possible for that NGO to receive the assistance/aid from federation government and private sector.</p> <p>Extension technique has been transferred. Although the Brazilian counterpart personnel, who are originally highly qualified and already accumulated the fruit of the past technical cooperation of JICA, tend to put emphasis on the theory, they become to be more aware of the importance of the extension/aspect of application of the research. Such a change in consciousness is also an aspect of technology transfer.</p> <p>Currently 7 research by academics are on-going in GEP.</p> <p>On the other hand, as for the field of forest management, technology transfer reaches until the level of researcher/engineer of nursery. As for afforestation and management field, it cannot be describe as sustainable technique. Therefore, afforestation reaches only large-scale agriculture farmers and corporate. It requires time for afforestation techniques to be reached to small-scale farmers and citizens.</p> <p>The director of SECTAM was replaced in March, 2006. The newly appointed director said that the fruit of the Project would be feedback to the State policy. The SECTAM coordinator for the Project is concurrent with a teaching post at University. It is reported the Project, the forest conservation related section will be allocated enough human resources as the related authority is transferred from IBAMA.</p> <p>It is reported by the Project that MPEG, EMBRAPA has no problem with allocation of human resources.</p> <p>Japanese experts judges that the counterpart personnel are competent enough to practice the technologies transferred and even to disseminate them further. Also more interpreters/instructors for the hands-on educational methodology are trained through the practice of nature game. Actually, the State of Para integrates the nature game as an methodology into the program conducted by the State government. In this way, further human resources development have been advancing by Brazilian side.</p> <p>The equipment/materials are maintained well and are in good conditions. It does not seem that they are frequently used by the counterpart personnel yet. Therefore, they are expected to be utilized to the full extent in the seminars planned in future.</p> <p>In the field of environmental education, it is a facilitating factor for the nature game to spread nationwide that teachers and staff from Escola Bosque, who participated in the Project seminar and experienced nature game, are practicing such participatory methodology and taking initiative to disseminate nature game widely beyond their school. They want to discuss further collaboration with the Brazilian representative of nature game when short-term Japanese expert comes this year. They wish to establish the NGO that disseminates nature game in Brazil.</p>
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ANNEX-6 : Plan of Operation (Achievement of Activities)
(A: Completed, B: Will be completed by the end of Project, C: Not yet started)

Activities	2004				2005				2006				Parties responsible	Implementers	Inputs	Share of expenses	Evaluation		
	I	II	III	IV	I	II	III	IV	I	II	III	IV							
I. Activities of environmental education in the Para State are promoted.																			
1-1. Conduct biodiversity surveys necessary for environmental education.																			
1-1-1														MPEG	Environmental education experts, environmental education C/P	Survey expenses (but the personnel expenses for MPEG surveyors will be borne by the MPEG.)	JICA/MPEG	A	
1-1-2																			A
1-1-3														Same as above	Same as above	Same as above	Same as above	B	
1-2. Implement environmental education activities for local citizens, teachers, students, and pupils of elementary and junior high schools.																			
1-2-1														SECTAM/MPEG	Same as above	Information collection, survey expenses	JICA/SECTAM/MPEG	B	
1-2-2														Same as above	Same as above	Information collection, survey expenses	Same as above	B	
1-2-3														Same as above	Same as above	Information collection, survey expenses, expenses for creating teaching materials	Same as above	B	
1-2-4														Same as above	Same as above	Expenses for organizing workshops and seminars, expenses for educational tours	Same as above	B	
1-3. Improve exhibition and educational facilities and equipment of "the Gunma Ecological Park" for implementation of environmental education and ecotourism activities.																			
1-3-1														SECTAM/MPEG	Environmental education experts, environmental education C/P	Expenses for facility enhancement	JICA/SECTAM/MPEG	B	
1-3-2																			A
1-3-3														Same as above	Same as above	Same as above	Same as above	B	

Activities	2004				2005				2006				Parties responsible	Implementers	Inputs	Share of expenses	Evaluation
	I	II	III	IV	I	II	III	IV	I	II	III	IV					
	2. Extension works of afforestation and agroforestry techniques in the Para State are promoted.																
2-1. Develop technologies for afforestation and agroforestry.																	
2-1-1 Establish the zone for collecting seeds of the primeval forest in the Gunma Ecological Park, collect and select seeds.													EMBRAPA	Raising of seedlings, afforestation experts, EMBRAPA, C/P	Expenses for facility enhancement, expenses for technical development	JICA/EMBRAP A	A
2-1-2 Install fields of seedlings of useful timber tree species.													Same as above	Same as above	Same as above	Same as above	A
2-1-3 Install fields for displaying tropical fruit trees of Amazonian origin.													Same as above	Agroforestry experts, EMBRAPA, C/P	Expenses for facility enhancement, information collection, survey expenses	Same as above	A
2-1-4 Install demonstrative fields based on the agroforestry system.													Same as above	Agroforestry experts, EMBRAPA, C/P	Expenses for organizing demonstrative fields	Same as above	A
2-2. Implement extension works of afforestation and agroforestry for farmers.																	
2-2-1 Provide seminars on production of seeds and seedlings and technologies for seed management.													EMBRAPA	Raising of seedlings, afforestation experts, EMBRAPA, C/P	Same as above	JICA/EMBRAP A	A
2-2-2 Provide seminars on technologies for afforestation of tropical forests and forest management.													Same as above	Same as above	Same as above	Same as above	A
2-2-3 Provide technical seminars on the agroforestry system.													Same as above	Agroforestry experts, EMBRAPA, C/P	Same as above	Same as above	A
3. Distribution of information and public relations regarding Amazon forests in the Para State are strengthened.																	
3-1 Establish a homepage to disseminate information on activities in the Gunma Ecological Park.													Chief advisors/SECTA M	Japanese experts, C/P	Information collection, survey expenses, expenses for creating homepages	JICA/SECTAM A	A
3-2 Organize seminars and workshops on environmental issues targeting schools, communities and citizens.													SECTAM	Japanese experts, C/P	Expenses for organizing workshops and seminars	Same as above	A

Record of Implementation of Input

-a. List of Experts Dispatched from Japan

1. Long term experts 3 experts

Speciality	No.	Name	Despach period
Chief Advisor / Environmental Education	1	Masashi Tsuchiya	2004.01.17 - 2006.01.16
Chief Advisor / Afforestation	2	Fumihiko Takahashi	2006.01.05 - 2007.01.14
Coordinator / Agroforestry	3	Kentaro Ikeda	2004.01.17 - 2007.01.14

2. Short term experts 9 experts

Japanese Fiscal year	Speciality	No.	Name	Dispatch period
2003	Environmental Education	1	Tadashi Inamoto	2004.03.26 - 2004.04.02
2004	Afforestation	2	Fumihiko Takahashi	2004.05.29 - 2004.08.28
	Environmental Education (Nature Game)	3	Naoko Miyoshi	2004.11.08 - 2004.11.26
	Environmental Education (Training for Interpreter)	4	Daisuke Yanase	2005.01.19 - 2005.03.19
2005	Environmental Education	5	Naoko Miyoshi	2005.04.05 - 2005.07.02
	Afforestation	6	Fumihiko Takahashi	2005.07.13 - 2005.10.01
	Agroforestry (Soil)	7	Motoko Honma	2005.09.05 - 2005.11.06
	Environmental Education	8	Shinichi Furihata	2005.11.03 - 2005.11.26
	Agroforestry (Fruit Tree)	9	Kazuhiko Goto	2005.12.05 - 2006.02.26

-b. List of Counterpart Personnel

Name	Institution	Post	Specialty	Period
Paulo Mayo Koury de Figueredo	SECTAM	Director of Environment Dept. (Project Director)	Conservation Unit	2004.01-2005.04
Lúcia Porpino Telles	SECTAM	Director of Environment Dept. (Project Director)	Chemical engineering	2005.06-
Paulo Sergio Altieri	SECTAM	Coordinator of Environmental Protection	Macro Area Zoning	2004.01-2004.09
Maria Ludetana Araújo	SECTAM	Chief of Environment Div. (Project Manager)	Environmental Education	2004.09-
Ivelise de Nazaré Fiock dos Santos	SECTAM	Chief of Conservation Div.	Biology	2004.01-
Andrea Bezerra de Castro	SECTAM	Technical Staff	Animal science	2004.01-
Noemi Vianna Rodrigues	SECTAM	Technical Staff	Environmental Education	2004.01-2006.05

Name	Institution	Post	Specialty	Period
Lindalva Paiua O. Godinho	SECTAM	Technical Staff	Tourism Development	2004.01-2005.05
Maria do Socorro Vicente Brasil	SECTAM	Technical Staff	Environmental Education	2004.01-2005.06
Jorge Alberto Gazel Yared	EMBRAPA	General Chief	Forestry engineering	2004.01 -
Noemi Vianna Martins Leão	EMBRAPA	Chief of Laboratory (Project Coordinator for EMBRAPA)	Forestry engineering	2004.01 -
José Edmar Urano de Carvalho	EMBRAPA	Researcher	Agriculture	2004.01 -
Rafael Moysés Alves	EMBRAPA	Researcher	Agriculture	2004.01 -
Sonia Helena Monteiro dos Santos	EMBRAPA	Researcher	Forestry engineering	2004.01 -
Carlos Hans Müller	EMBRAPA	Researcher	Agriculture	2004.01 -
Ruth Linda Benchimol	EMBRAPA	Researcher	Agriculture	2004.01 -
Oriel Filgueira de Lemos	EMBRAPA	Assistant Chief of Research and Development	Plant breeding	2004.01 -
Horácio Higuchi	MPEG	Researcher	Zoology	2004.01 -
Lúcia das Graças Santana da Silva	MPEG	Researcher (Project Coordinator for MPEG)	History of Amazon region	2004.01 -
Maria das Graças Santana da Silva	MPEG	Researcher	Anthropology	2004.01 -
Maria Filomena Secco	MPEG	Researcher	Science Education	2004.01 -
Hilma Cristina Guesdes	MPEG	Researcher	Environmental Education	2004.01 -
Gilma Isabel D'Aquino	MPEG	Researcher	Archaeology	2004.01 -
Ricardo Secco	MPEG	Researcher	Botany	2004.01 -

-c. List of Couterpart Personnel Trained in Japan

Japanese Fiscal year	Training theme	Name	Post	Dispatch Period
2004	Environmental Education	Maria Ludetana Araújo	Project Manager	2005.03.08 – 2005.04.02
		Lúcia das Graça Santana da Silva	Resercher, MPEG	
2005	Forest Conservation	Noemi Vianna Martins Leão	Resercher, EMBRAPA	2005.08.23 – 2005.10.15
	Environmental Education	Maria das Graça Santana da Silva	Resercher, MPEG	2005.11.06 – 2005.12.02

-d. List of the Machinery and Equipment Provided by Japanese Side

Japanese Fiscal Year	Machinery	Equipment	Qua.	Total Price (R\$)	Place	Management and Utilization*
2003	4WD	TOYOTA Hylux	2	157,000	Project Office	A,C
	Mini Tractor	AGRALE 4100.4	1	34,700	Gunma Ecological Park	A
	Cutting Glass Machine for Tractor	LAVRALE RDA-130	1	4,500	Gunma Ecological Park	A
	Trailer for Tractor	CEMAG	1	3,500	Gunma Ecological Park	A
	Personal Computer(Desk Top)	PENTIUM4 HD 40GB	1	2,092	SECTAM	A
	Lap top Computer	TOSHIBA	1	6,361	MPEG	A
	Monitor	15inc	1	1,601	SECTAM	A
	FAX	BROTHER	1	694	Project Office	A
	Copying Machine	TOSHIBA STUDIO250	1	44,933	Project Office	A
2004	Clean bench	FLV-CLIIA-01-1K	1	25,575	Gunma Ecological Park	A
	Purifying Machine for distilled water	ASSDI030LPH	1	7,774	Gunma Ecological Park	A
	Microscope	OLYMPUS CX41-BF-III	1	17,060	Gunma Ecological Park	A
	Stereoscopic Microscope	OLYMPUS SZ6145TR-ILST	1	22,031	Gunma Ecological Park	A
	Digital Camera for Microscope	OLYMPUS DP-12-II	1	22,896	Gunma Ecological Park	A
	Digital Video Camera	SONY DCR-HC 15	3	8,211	SECTAM, EMBRAPA, MPEG	A
	Digital Recorder	PANASONIC RR-US360	3	2,010	SECTAM, EMBRAPA, MPEG	A
	Autoclave	SERCON HAE19	1	14,690	Gunma Ecological Park	A
	Incubator	NT718	1	6,233	Gunma Ecological Park	A
	Drying sterilizer	NT513	1	1,291	Gunma Ecological Park	B
	Incubator	NT705	1	4,659	Gunma Ecological Park	A
	Shaker	NT713	1	12,937	Gunma Ecological Park	B
	RQFLEX Adopter	1169530001	7	508	Gunma Ecological Park	A
	RQFLEX	1169550001	7	6,754	Gunma Ecological Park	A

Japanese Fiscal Year	Machinery	Equipment	Qua.	Total Price (R\$)	Place	Management and Utilization
2004	RQFLEX Calibration	1169540001	7	489	Gunma Ecological Park	A
	RQFLEX Software	116980001	7	2,788	Gunma Ecological Park	A
	Freezer	RC330D	1	9,990	Gunma Ecological Park	A
	Deep Freezer	IULT2005D	1	25,611	Gunma Ecological Park	B
	Personal Computer(Desk Top)	PENTIUM4 2.8GHZ 478P HT800 MHZ	6	17,244	SECTAM, EMBRAPA, MPEG	A
	CD-R/DVD-R	SAMSUNG 12	3	1,660	SECTAM, EMBRAPA, MPEG	A
	Monitor	SAMSUNG MOD. 753DFX	6	4,260	SECTAM, EMBRAPA, MPEG	A
	No Break	SMS 1.3KVA	3	1,605	SECTAM, EMBRAPA, MPEG	A
	Stabilizer	SMS PROGRESSIVE 2 100VA MONO 4T	3	480	SECTAM, EMBRAPA, MPEG	A
	FAX	PANASONIC KXFHD 331	2	1,400	MPEG, EMBRAPA	A
	Printer	HP DESKJET5650	4	2,912	SECTAM, EMBRAPA, MPEG	A
	Lack for PC	WORKFLE	6	960	SECTAM, EMBRAPA, MPEG	A
2005	4WD		1	-	Project Office	A
	Portable Cutting Glass Machine	Srtihl FS 280	1	2,017	Gunma Ecological Park	A
	Mini Pump	Stihl P840	1	1,183	Gunma Ecological Park	A
	Portable Pruning Machine	Stihl MT75	1	3,050	Gunma Ecological Park	A
	Binoculars	NIKULA RUBICON 10*50*50	2	790	EMBRAPA	A

* A: Well managed and fully utilized; B: Well managed but not fully utilized; C: not maintained;

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専門家派遣リスト

(2006年6月現在)

年度				2003				2004				2005				2006								
専門家名	指導科目	本邦所属先	派遣期間	1	4	7	10	1	4	7	10	1	4	7	10	1	4	7	10	1				
長期	土屋 真志	チーフアドバイザー/環境教育	群馬県庁	2004.01.17 - 2006.01.16	●																			
	高橋 史彦	チーフアドバイザー/森林保全	群馬県庁	2006.01.17 - 2007.01.16																				
	池田 健太郎	業務調整/アグロフォレスト	群馬県庁	2004.01.17 - 2007.01.16	●																			
短期	稲本 正	環境教育	オーク・ヴィレッジ	2004.3.26 - 2004.4.2		●	●																	
	高橋 史彦	森林保全	群馬県庁	2004.5.29 - 2004.8.28			●	●																
	三好 直子	環境教育	日本ネイチャーゲーム協会	2004.11.8 - 2004.11.26				●	●															
	築瀬 大輔	環境教育	群馬県庁	2005.1.19 - 2005.3.19					●	●														
	三好 直子	環境教育	日本ネイチャーゲーム協会	2005.4.5 - 2005.7.2						●	●													
	高橋 史彦	森林保全	群馬県庁	2005.7.13 - 2005.10.1							●	●												
	本間 素子	アグロフォレストリー	群馬県庁	2005.9.5 - 2005.11.6																				
	降旗 信一	環境教育	日本ネイチャーゲーム協会	2005.11.3 - 2005.11.26																				
	後藤 和彦	アグロフォレストリー	群馬県庁	2005.12.5 - 2006.2.26																				

CPリスト(終了時評価時点)

CP名	所属先	役職	POの担当活動 及び対応する専門家	学位・ 専門分野	専任/兼任	備考
Lúcia Porpino Telles	SECTAM	環境部長	PO全般	化学	兼任	
Maria Ludetana Araújo	SECTAM	環境課長	1.環境教育	歴史学及び教育学	兼任	
Ivelise de Nazaré Fiock dos Santos	SECTAM	自然保護区 課長	1.環境教育	生物科学	兼任	
Andrea Bezerra de Castro	SECTAM	技術員	1.環境教育	修士・動物科学	兼任	
Noemi Vianna Rodrigues	SECTAM	技術員	1.環境教育	環境教育	兼任	
Horácio Higuchi	MPEG	研究員	1.環境教育	博士・動物学	兼任	
Lúcia das Graças Santana da Silva	MPEG	研究員	1.環境教育	修士・アマゾン神話研究	兼任	
Maria das Graças Santana da Silva	MPEG	研究員	1.環境教育	考古学	兼任	
Maria Filomena Secco	MPEG	研究員	1.環境教育	科学教育	兼任	
Hilma Cristina Guesdes	MPEG	技術員	1.環境教育	環境教育	兼任	
Gilma Isabel D´Aquino	MPEG	技術員	1.環境教育	修士・考古学	兼任	
Ricardo Secco	MPEG	技術員	1.環境教育	博士・植物学	兼任	
Jorge Alberto Gazel Yared	EMBRAPA	所長	2.森林保全・SAFs	博士・森林科学	兼任	
Noemi Vianna Martins Leão	EMBRAPA	研究室長	2.森林保全	修士・森林科学	兼任	
José Edmar Urano de Carvalho	EMBRAPA	研究員	2. SAFs	修士・農学(果樹)	兼任	
Rafael Moysés Alves	EMBRAPA	研究員	2. SAFs	修士・農学(育種)	兼任	
Sonia Helena Monteiro dos Santos	EMBRAPA	研究員	2.森林保全	修士・農学(植物生理)	兼任	
Carlos Hans Müller	EMBRAPA	研究員	2. SAFs	修士・農学(植物生産)	兼任	
Ruth Linda Benchimol	EMBRAPA	研究員	2.森林保全・SAFs	博士・農学(植物病理)	兼任	
Oriel Filgueira de Lemos	EMBRAPA	研究部長	2.森林保全・SAFs	博士・農学(育種)	兼任	

供与機材リスト

供与年度	調達先*1	機材名	型番・仕様	総額(千円)	数量	管理・利用状況*2	利用(保管)場所	備考(特記事項)
2003	現地	調査用車両	TOYOTA Hylux	6,269	2	A	プロジェクト事務所	R\$ 157,000.00
2003	現地	ミニトラクター	AGRALE 4100.4	1,386	1	A	群馬の森	R\$ 34,700.00
2003	現地	トラクター附属草刈り機	LAVRALE RDA-130	180	1	A	群馬の森	R\$ 4,500.00
2003	現地	トラクター附属トレーラー	CEMAG	140	1	A	群馬の森	R\$ 3,500.00
2003	現地	デスクトップパソコン	PENTIUM4 HD 40GB	84	1	A	SECTAM	R\$ 2,091.90
2003	現地	ノートパソコン	TOSHIBA	254	1	A	MPEG	R\$ 6,361.00
2003	現地	モニター	15inc	64	1	A	SECTAM	R\$ 1,600.75
2003	現地	FAX	BROTHER	28	1	A	プロジェクト事務所	R\$ 693.60
2003	現地	コピー機	TOSHIBA STUDIO250	1,794	1	A	プロジェクト事務所	R\$ 44,932.51
2004	現地	クリーンベンチ	FLV-CLIIA-01-1K	1,086	1	A	群馬の森	R\$ 25,574.74
2004	現地	蒸留水製造装置	ASSDI030LPH	330	1	A	群馬の森	R\$ 7,774.00
2004	現地	生物顕微鏡	OLYMPUS CX41-BF-III	725	1	A	群馬の森	R\$ 17,060.45
2004	現地	実体顕微鏡	OLYMPUS SZ6145TR-ILST	936	1	A	群馬の森	R\$ 22,030.53
2004	現地	カメラ付生物顕微鏡	OLYMPUS DP-12-II	972	1	A	群馬の森	R\$ 22,895.89
2004	現地	デジタルビデオカメラ	SONY DCR-HC 15	349	3	A	SECTAM,EMBRAPA, MPEG	R\$ 8,211.00
2004	現地	デジタルレコーダー	PANASONIC RR-US360	85	3	A	SECTAM,EMBRAPA, MPEG	R\$ 2,010.00
2004	現地	オートクレーブ	SERCON HAE19	624	1	A	群馬の森	R\$ 14,690.00
2004	現地	人工気象器	NT718	265	1	A	群馬の森	R\$ 6,232.80
2004	現地	乾熱滅菌器	NT513	55	1	B	群馬の森	R\$ 1,290.50
2004	現地	インキュベーター	NT705	198	1	A	群馬の森	R\$ 4,658.70
2004	現地	振とう培養器	NT713	549	1	B	群馬の森	R\$ 12,936.80
2004	現地	RQFLEXアダプター	1169530001	22	7	A	群馬の森	R\$ 507.60
2004	現地	RQFLEX本体	1169550001	287	7	A	群馬の森	R\$ 6,753.70
2004	現地	RQFLEXキャリブレーション	1169540001	21	7	A	群馬の森	R\$ 488.70
2004	現地	RQFLEXソフトウェア	116980001	118	7	A	群馬の森	R\$ 2,787.80
2004	現地	保冷库	RC330D	424	1	A	群馬の森	R\$ 9,990.00
2004	現地	ディープフリーザー	IULT2005D	1,088	1	B	群馬の森	R\$ 25,610.60
2004	現地	コンピュータ	PENTIUM4 2.8GHZ 478P HT800 MHZ	732	6	A	SECTAM,EMBRAPA, MPEG	R\$ 17,244.00
2004	現地	CD-R及びDVD-R	SAMSUNG 12	71	3	A	SECTAM,EMBRAPA, MPEG	R\$ 1,660.00
2004	現地	モニタ	SAMSUNG MOD. 753DFX	181	6	A	SECTAM,EMBRAPA, MPEG	R\$ 4,260.00
2004	現地	無停電電源装置	SMS 1.3KVA	68	3	A	SECTAM,EMBRAPA, MPEG	R\$ 1,605.00
2004	現地	電圧安定装置	SMS PROGRESSIVE 2 100VA MONO 4T	20	3	A	SECTAM,EMBRAPA, MPEG	R\$ 480.00
2004	現地	FAX	PANASONIC KXFHD 331	59	2	A	MPEG, EMBRAPA	R\$ 1,400.00
2004	現地	プリンタ	HP DESKJET5650	124	3	A	SECTAM,EMBRAPA, MPEG	R\$ 2,912.00
2004	現地	パソコン用デスク	WORKFLE	41	6	A	SECTAM,EMBRAPA, MPEG	R\$ 960.00
2005	現地	携帯用除草機	Srtihl FS 280	111	1	A	群馬の森	R\$ 2,017.00
2005	現地	小型ポンプ	Stihl P840	65	1	A	群馬の森	R\$ 1,183.00
2005	現地	電動剪定機	Stihl MT75	168	1	A	群馬の森	R\$ 3,050.00
2005	現地	双眼鏡	NIKULA RUBICON 10*50*50	44	2	A	EMBRAPA	R\$ 790.00

*1 本邦、現地、携行から選択。

*2 A:適切に管理され利用度が高い。B:管理はされているが利用度は低い。C:管理されていない。

調査結果記入済み評価グリッド：ブラジル国東部アマゾン森林保全・環境教育プロジェクト終了時評価調査

評価項目	調査項目	必要な情報・データ	調査結果
	<p>上位目標の達成度(見込み)</p> <p>(終了時評価時点では、「上位目標」がプロジェクト終了3～7年後に達成されるべく、プロジェクトが計画・実施されているかを確認する。)</p> <p>「東部アマゾンにおける森林・自然環境保全が促進されたかどうか。」</p>	<p>東部アマゾン地域の森林破壊率(この率が停止することと上位目標の指標では表されているが、少なくとも現象傾向にあることを示すデータ)森林破壊率減少に寄与するであろう向からの事実(上位目標達成見込みの根拠、サポーターインタビュー)</p> <p>東部アマゾンの定義および本プロジェクト関係者間における共通理解の確認。</p>	<p>具体的な森林破壊率を示すことはできないものの、プロジェクト終了後も継続していくであろう森林保全活動が、上位目標の達成に貢献すること関係者の多数は考えている。</p> <p>約2年間に、すでに2000名を越す人々がアマゾン群島の森を実際に訪問している事実及び、インターネットによる情報発信も盛んについでことから、さらに多くの人々が当該森林を訪問することが予想され、それらの影響が上位目標達成に効果及ぼしていくと考えられる。当該地域サンタバーバラ郡の人口は約12,000人、パラ州人口は600万人であることから、人口全体の中で占める訪問者数は少なくともいくつと判断できる。</p> <p>法定アマゾンの中で学術的定義がある。行政区分とされにくい二重なるわけではなく、時差線を境にして東西が分かれる。また、上流下流地域としてみるとLower Amazon地域が東、Upper Amazon地域が西となる。西は人口密度は低いものの、面積は東より大きい。東は、行政区分では、パラ州、アマゾン州、マラニョン州の一部となっている。東西区分が自然区分であるため(行政区分でないため)、正確な人口を示すことは難しいが、パラ州約600万人、アマゾン州約40万人。</p>
	<p>プロジェクト目標達成度</p> <p>「パラ州において、森林・自然環境保全に関する活動が促進されるようになったかどうか。」</p>	<p>SECTAM、MPEG、EMBRAPA内に蓄積された、パラ州の森林自然環境保全に関する情報や技術</p> <p>1. 技術数及びその内容 2. 情報(知識)量及びその内容 3. 上記活用状況</p>	<p>知識と技術を厳密に分けることは容易ではないが、大枠以下のように示す。また、技術には当然ながら知識・情報が含まれるものもある。これらの技術・知識・情報は、実際にカウンタートパー機構により活用、実践されるようになってきているという事実から、「蓄積された」と判断することができる。従って、プロジェクト目標達成は、指標とした「蓄積技術」が存在することを根拠として、終了時評価調査時点において達成されていると判断することができる。</p> <p>知識・情報</p> <p>1. 世界の環境教育の現状について、2. グリーンツーリズム(果樹の直接販売など)、3. 種子の活用</p> <p>技術</p> <p>1. ネイチャーゲーム、2. 森林管理技術、3. 土壌・植物体の簡易成分分析、4. 農業技術の普及システム 5. 資料展示に関する基本計画立案手法、6. 博物館学ワークショップ(地元コミュニティに対して)</p> <p>活用されている例として、ネイチャーゲームがSECTAMの重要なツールとなったこと、当該プロジェクトから離れたところでも、すでに各種プログラムに導入されていること、である。また、これがプロジェクト実施による結果であるということは、これらのプログラムの指導員が当該プロジェクトの活動である「ネイチャーゲーム指導者養成セミナー」で育成された教員であることから裏付けられる。</p>
<p>プロジェクト実績</p>	<p>アウトプットの達成度</p> <p>「パラ州における自然環境教育活動が促進されたかどうか。」</p>	<p>指標で設定された上記数値以外にも、プロジェクト目標が達成されたことを示す(根拠となる)サポーターインタビューデータを(あれば)示す。プロジェクト目標達成の促進要因の項目参照。</p>	<p>ターゲットグループには、カウンタートパー機構の研究員、技術者のみならず、農業生産者や市民・学生なども含まれている。例えば、小規模農業生産者からの聞き取りでは、プロジェクトの研修により新しく獲得した知識・森林保全型のアグロフォレストリー技術を用いた実践を行なう意欲は高く、雨期終了後に実施するべく準備が進められている(例: 糞肥を用いた作物栽培、種子利用や果樹と樹木の混植など)ことや、もともと存在した環境教育を重視したカリキュラムを実施する学校が、その学校組織全体を通して、ネイチャーゲームの推進、普及体制の整備に取り組んでいるという事実の存在も、プロジェクト目標が達成されたことの証拠として示すことができる。</p>
	<p>アウトプット2</p> <p>「パラ州における植林及びアグロフォレストリーの技術普及が促進されたかどうか。」</p>	<p>環境教育活動数と当該活動への参加者数。(環境教育活動が300回以上実施され、その参加者(招待者)が900名を超えているかどうかを確認する)</p>	<p>2006年3月1日時点でのデータでは、環境教育活動としての研修会開催数は22回であり、目標数値である30回にまだ達していないが、それら活動への参加者数では、多くの人がネイチャーゲームに参加したこともあり、913名に上っている。従って、目標数値である900名を既に超えている。開催数に関しては、2006年度の短期派遣専門家の予定などから計算するに、終了時までには達成が可能な数値となっている。</p>
	<p>アウトプット2</p> <p>「パラ州における植林及びアグロフォレストリーの技術普及が促進されたかどうか。」</p>	<p>開催されたセミナー数と当該セミナーへの参加者数。(セミナーが18回以上開催され、その参加者が総計で480名を超えているかどうかを確認する)</p>	<p>2006年3月1日時点でのデータでは、開催されたセミナー数は22回であり、目標数値である18回をすでに達成している。また、その参加者数に關しても総計で481名を救え、目標値である480名を既に超えており、アウトプット2の達成を測るために設定された指標は、完全に達成された。</p> <p>今年度(2006年度)に、日本型の技術普及システムをEMBRAPAに移転する予定。</p>

<p>アウトプロセ 「パラ州のアマゾンの森林に関する情報発信・広報活動が強化された」というか。</p>	<p>アウトプロセ3 ホームページへのアクセス数と群馬の森への訪問者数。(ホームページへのアクセスが2400を超え、群馬の森への訪問ブラジル人の数が3600人を超えているかどうかを確かめる。)訪問者の国籍別統計をとっていない場合は、厳密にカウントする必要はない。</p>	<p>2006年3月1日時点でのデータでは、群馬の森への訪問者数は、6600名に上り、これにはブラジル人以外も含まれるものの、それを差し引いても僅かに目標値3600を超えている。一方、ホームページへのアクセスは、約800回(3月末日時点)であり、目標値である2400回にまだ及んでいないが、その主たる原因が設置の遅れであることを考慮すると、時間の経過とともに、目標値は早晚達成されると見込まれる。</p>
<p>投入の実績</p> <p>ブラジル側</p> <p>日本側</p>	<p>* プロジェクトに必要な人員</p> <p>* プロジェクト実施に必要な経費と施設</p> <p>* 専門家派遣(長期、短期)</p> <p>* 研修員受入(=日本でのカウンターパート研修)</p> <p>* 供与資機材</p>	<p>合計21名(SECTAM6名、MPEG7名、EMBRAPA8名)が配置された。但し、SECTAMの一人である局長が、2006年3月時点で辞任し、その後、後任は任命されている。</p> <p>2006年3月時点において、プロジェクト実施にかかる運営費の支出は、合計44,800レアル。</p> <p>長期専門家3名、短期専門家9名</p> <p>4名が日本での研修に参加。(内訳:環境教育3名、森林保全1名)</p> <p>機材のリスト(別添のとおり)に対応する機材調達額は、2005年度分までで、484445R\$(約20,015千円)。</p>
<p>活動の進捗状況</p>	<p>プロジェクト進捗状況、計画と乖離した(もし、あれば)理由、モニタリング状況</p>	<p>連携メカニズムとしてのコーディネーター会議(月1回)において、進捗確認が行われた。また、実証現場作業委員会(月1回)においても、同現場に関連する活動に関するモニタリングは行なわれた。POIに基づいてモニタリングが行なわれたが、関係者の中には、PDMとPOOの関係に明確な認識を持たない者もいた。これらのメカニズムを通してモニタリングが行なわれた。予算の獲得および執行に関する意思疎通が旨く行かず、一部の活動が停滞するなどの問題が起こった。コミュニケーションのさらなる改善に今後の方向性がかかっている。</p>
<p>実施上の課題とこれまでの取り組み</p>	<p>プロジェクトの運営実施上の課題、これまでの取り組み</p>	<p>関係者が非常に多く、調整に時間がかかった。予想外の外部からの要望や期待など(当該プロジェクトに対する)が多く寄せられたことに対応するべく、活動を当初の予定より増やした。PO上での変更はなし。</p>
<p>実施体制と関係部署との連携状況</p>	<p>実施体制図</p> <p>連携状況</p>	<p>カウンターパート機関は3機関で、SECTAM、MPEG、EMBRAPA。</p> <p>カウンターパート機関であるSECTAM、MPEG、EMBRAPAのコーディネーターが集合し、日本人長期専門家2名と共に月に一回のペースで「コーディネーターミーティング」を開催し、活発な意見交換を実施した。また、【実証現場作業委員会】でも、EMBRAPA及び森の所有者である県人会の参加を得て意見交換を実施している。</p>
<p>C/P、J/Eの業務遂行状況</p>	<p>数・配置時期・能力(経験)の適切性</p> <p>コミュニケーション能力</p>	<p>概ね適切であったが、一部の短期派遣専門家については、その専門性が必ずしもカウンターパート機関の要望に十分に合致していると言えぬものではなかった。しかしながら、この点に関しても派遣決定の事前にも派遣決定の事前にも十分な議論が関係者間に尽くされていなかったことも要因の一つである。</p> <p>日本側と関係機関のコミュニケーションに一部問題が存在した。言語能力の問題以上にマネジメントの問題と考えられる。しかしながら、コーディネーターミーティングの開始などにより改善が図られた。</p>
<p>相手国実施機関の主体性</p>	<p>C/Pの積極性</p>	<p>知識を重視する傾向が存在したが、プロジェクトそのものへの積極性は存在した。</p> <p>プロジェクト計画立案段階での議論が必ずしも3機関同様に十分に尽くされていなかったことが、その後の主体性に若干の影響を及ぼした。しかしながら、プロジェクトが開始され活動が進捗する中で、担当の活動を通じた主体性が顕れってきた。プロジェクト終了後の自立発展性確保に関連する計画や行動からすると、MPEGのオーナーシップは高いと考えられる。</p>

実施プロセス

評価項目	調査項目	必要な情報・データ	整合している。本プロジェクトの協力内容は、ブラジル政府のアマゾン政策の基本である「法定アマゾン国家総合政策」(1995年)、並びにルーラ政権の「ブラジルの開発におけるアマゾンの位置」(2002年)で示された生物多様性保全や持続的生産システムの推進などの方向性に合致している。また、環境教育活動は、ハラ州政府の「州環境教育計画 指針と政策」(2000年)に示された環境教育の推進に貢献するものである。
1. 妥当性	1.1 ブラジルの環境・森林保全分野における本プロジェクトの必要性	環境・森林保全分野における環境教育戦略との適合性	本プロジェクトは、JICAのブラジル国別事業実施計画の「環境保全」生態系保全プログラムに位置づけられている。
	1.2 日本の開発援助政策との適合性	日本の国別援助計画	
	1.3 ターゲットグループのニーズ	ターゲットグループ設定の適切性を示す情報	整合、カウンターパート機関の研究者、技術者については、資質は本来高く、知識水準や技術水準は高いものの、理論に傾く傾向があり、実際の森林保全に影響を及ぼすために必要な普及や実践という観点からは弱い部分があることから、ニーズが存在している。農家や教員、生徒などについては、森林保全に向けた活動の活発化のためにプロジェクト実施のニーズは存在していることが、すでに、これまでの報告で十分なされているが、終了時評価調査での聞き取りにおいても、これらを裏付ける農民たちの声、また環境教育を実践する教育者からの意見を確認することができた。
2. 有効性(目標達成度)	2.1 プロジェクト目標の達成度合い	プロジェクト実績「」に既述	ネイチャーゲームなどが歓迎され、実践され始めていること、アグロフォレストリー技術が普及され始めている事実(現段階では知識の普及に留まる)を根拠に、提供された研修・訓練の内容とターゲットグループのニーズは整合している。
	2.2 阻害・促進要因、成果・外部条件との因果関係	阻害・促進要因の確認	プロジェクト目標
	2.3 プロジェクトの目標は達成されたか、あるいは間もなく達成される見込みか。	周辺地域の農民にとって、住民の要望を反映させることのできる計画立案やアグロフォレストリー技術が森林保全と同時に農業生産増大とつながる点が魅力と写った。	各機関ともに、コーディネーターがそれぞれのカウンターパートの連絡を良く行っている。
3. 効率性	3.1 「投入」の適正度	C/Pの配置、供与施設、プロジェクト運営費の適正度	概ね適正と言えらる。
	3.2 「アウトプット」の達成度	C/Pの業務管理体制	各機関ともに、コーディネーターがそれぞれのカウンターパートの連絡を良く行っている。
	3.3 プロジェクトの支援体制	専門家派遣、研修員受入、供与機材の適正度	概ね適正であるが、チーフアドバイザーが環境教育や森林保全といった分野との兼任で、最初の2年間で最後の1年間で人員が入り替わるといった計画であるため、JICA技術協力プロジェクトのチーフアドバイザーとして求められる任務の遂行に負担をかけることになった。
4. インパクト	4.1 上位目標の達成の見込み	「プロジェクト実績」に既述	これまでに合計2回実施されている(2004年12月、2005年10月)。最初の設立の際に行なわれた委員会(2004年1月)を含めると3回。
	4.2 中間目標の達成の見込み	合同調整委員会の実施状況	群馬県は、派遣専門家の提供、県民との交流事業、広報活動など幅広く支援を実施している。
	4.3 下位目標の達成の見込み	日本側の支援体制の状況(JICA事務所・本部、群馬県、国内委員会など)	関係者の認識する定義は、法定アマゾン地域の中でも、ハラ州、マラニョン州、アマゾン州、及びトカンチンス州の北部を指す。ただし、指標に関しては、事後評価の際に、再度検討する余地もある。例えば、サンタバーバラ郡の森林減少率などと範囲・指標を限定することができないのであれば、例えば、「都市圏の中で保護地域がどの位設定されたか」「歴史的、経済的(経済開発が進めば森林が減少する)、政治的(開発関連政策)な指標」を盛り込むことが考えられる。
4.4 最終目標の達成の見込み	「プロジェクト実績」に既述	【政策的な側面からのインパクト】SECTAMとしては、当該プロジェクトの成果を環境教育の「モデル」として州の政策にフィードバックし、保全区設置を目標としている。良いモデルは積極的に政策に盛り込む方針である。	

<p>4.2 上位目標以外のプラスの影響</p>	<p>プラスの波及効果の事例</p> <ol style="list-style-type: none"> プロジェクト実施により起こってきた想定外のこととして、当該プロジェクトに対して外部からの要望や期待などが多く寄せられたこと、従って、これに対応するべく、当初予定された活動より実際の活動が増えた。 アマゾン群馬の森の認知度が高まることにも、トマスやカスターニヤなどの日系農家、木材関連企業などから植林その他に関する連携する動きが現れてきている。 北群馬県農人会から、アマゾン群馬の森管理団体設立、RPPN(私有地保護区制度)の指定、日系団体以外との連携を模索する動きが現れてきている。 アマゾン群馬の森を活用したEMBRAPA(研究機関)と州農業普及公社との連携を探る動きが現れてきている。 アマゾン群馬の森の認知度が高まり、プロジェクトで行なわれている取組の見学、研修会場としての利用、大学や高校などの実習会場として、研究機関が研究フィールドとして利用され始めている。 プロジェクト活動として実施された各種調査の結果データが利用され始めている。 地元サンタバーバラ郡の資源を活かした、エコツーリズムのためのプロジェクトが企画されている。 カウンタートパートの考え方や姿勢に関する影響として、従来重視されてこなかった「普及」の重要性に気づかせることになり、理論中心ではなく、現場への適応、普及にむけた努力が開始しつつある。その根拠として、日本の普及システム(普及と研究が同じ地位にあり重要視され双方のやりとりが活かされているシステム)が紹介された際に、EMBRAPA所長が大きく感心したことで、EMATER(パラ州農業普及公社)やUFRA(農業大学)と共同でEMBRAPAがセミナーを実施する予定(当初5月24日を設定していたが終了時期調査のため、延期)である。 <p>アマゾン群馬の森にブラジルで著名な女優(メジナカゼー)が訪問し、そのテレビ番組(全国版)で紹介されたこと、地元テレビでも紹介されたこと、などテレビというマスメディアを通じて計7回の放映が行なわれたことから、問合せが増加することにも、知名度が一挙に上がった。</p> <p>プロジェクト活動の広報活動強化によりプロジェクトの受益範囲が大きくなったと考えられる。例えば、プロジェクトでは様々な展示会(国際アマゾン観光展、日本週間、パラ州貿易促進会議)にブースを出展しPRを実施した結果、各方面からの連携の要請などが寄せられている。</p> <p>サンタバーバラ郡はもともエミリオゲル博物館が研究対象とする地域ではなかったが、サンタバーバラでの調査でも考古学的な関心(窯業、陶器、漁村、民芸品など)が高まっている。</p> <p>アマゾンにおいて絶滅の危機に瀕している樹木2種がプロジェクトの調査によってアマゾン群馬の森で発見された。そこでそれに関する研究が開始されている。</p> <p>日本の群馬県へのインバウンドも大きい。「子ども緑の大使」派遣やJICA専門家として派遣された県職員などによる県民への報告会を通じ、県民のアマゾン群馬の森についての認識が高まった。さらには、群馬県内に留まらず、メールマガジンや新聞報道を通じ、日本全国への影響も与えており、その象徴として、2008年に行なわれた世界万国博覧会「愛・地球博」において、「愛・地球賞」(世界中で持続可能な社会の実現に貢献している地球環境技術を表彰するもの)を受賞したことが挙げられる。</p>
<p>4.3 マイナスのインパクト</p>	<p>マイナスの波及効果の有無確認 特に観察されない。</p>

5.1 組織的自立発展性	プロジェクトの継続実施体制、アマゾン群馬の森の今後の位置付け(sectam, MPEG, EMBRAPA それぞれのアマゾン群馬の森の今後の活用計画)	森林保全の世界的潮流、それに整合する形でブラジル政府による森林保全政策としての継続性は確保されている。それらの組織の中において、上述の政策を実現するために当該プロジェクト終了後におけるアマゾン群馬の森を活用した具体的な計画(以下参照)がカウンタパート機関にすでに存在していることは、すでに当該プロジェクトの成果が組織に内部化され発展を遂げつつあることを示すことにはならない。 1. バラ州実施によるPRO-PAZ(バラ州平和と文化の開発プログラム)の中で、ネイチャーゲームが取り込まれている。 2. EMBRAPAによる調査結果(プロジェクトによる実施活動)の出版 3. MPEGによるエコツアーリズム関連プロジェクトの仕組み(アマゾン群馬の森及びサンタバーバラ郡の観光資源を活用した環境教育の要素が取り込まれている) 4. MPEG独自の活動(当該プロジェクトとは別途)、すなわち、シダ類や糸状菌研究フィールドとして、アマゾン群馬の森を利用して始めている。
5. 自立発展性	アマゾン群馬の森が、森林保全に貢献する活動のために、プロジェクトの外において、既に活用されている事実もカウンタパート機関の自立発展性とともに、「アマゾン群馬の森」の自立発展性を示すものと言える。 1. カスタニャール農学校やJK(地元)の農業専門学校などによる実習での活用が開始されている。このように、学校との連携も動き始めている。 2. その他の各種NGOが主催するレセプションや会議、野外活動などが開催されるようになっている。 3. 地元日系企業から植林技術に関する情報交換が望まれている。 4. NGOである自然環境及び貧困救済プログラム(POEMA)が、当該プロジェクト外の活動として独自の各種セミナーや講習会でアマゾン群馬の森の活用を予定している。 5. POEMAは、さらに、サンタバーバラ郡での新規小規模農家支援プロジェクトの提案をアマゾン群馬の森と共同で実施する連携も具体化しつつある。	アマゾン群馬の森を活用する「組織」としてのサンタバーバラ郡の連携が今後の課題の一つであるが、サンタバーバラ郡教育局のアマゾン群馬の森に関する積極的な姿勢が確認された。今年度の活動の中に環境教育が組み込まれていた。 アマゾン群馬の森そのものに関しては、運営組織を現在の県人会から切り離し、群馬県出身の移住者という枠にとらわれない新しい別組織として、環境と小農対策による森林保全を目指した、NGOを設立し管理運営を任せられる方向性で動き出している。同時に、ア
5.2 財政的自立発展性	予算の確保、財政支援の継続性を確認できる情報(独自の予算に加えて、外部資金源としての企業や外部予算を確保しているNGOとの連携などを含む)	プロジェクトの効果を持続するために、アマゾン群馬の森を活用した具体的な計画に対して、以下に示すとおり、予算の確保も進められていることから、今後と現在と同様の努力を継続していく限り、財政的自立発展性確保の道は存在している。 1. PRO-PAZプロジェクトは、バラ州政府により既に実施中のプログラムであり、予算の配置はすでに行なわれている。 2. 調査結果の出版に関しては、EMBRAPAが独自にバラ州科学技術基金(FUNITEC)から既に獲得している。獲得された予算の存在も重要であるが、予算獲得にイニシアティブを取った組織(EMBRAPA)の能力が特に評価される。 3. エコツアーリズム開発に関するプロジェクトに関しては、MPEGが現在、ABCを通じてJICAに申請しているものであるが、この予算獲得行動は、評価される。 4. 複数の日系企業との技術連携が協議中。例えば、木材加工関連の日系企業(MOULD NORTE)からは持続的な資源管理の方法としての植林に関してプロジェクトとの連携が要請されている。 5. 複数の日系企業との技術連携がすでに活動を開始している。例えば、カスタニャールのコンショウ生産・輸業者と連携して持続的なアグロフォレストリー技術の現地実証試験を開始しているが、プロジェクトで開発、収集された情報を元に金額相手側の企業の出資で行なわれている。 6. NGOであるPOEMA(自然環境及び貧困救済プログラム)が報告書出版に関して費用分担意志を表明。
5.3 技術的自立発展性	ブラジル劇人材(環境教育指導者・アグロフォレストリー関連技術者など)への技術移転度を示す情報	普及技術が大いに移転された。ブラジル人カウンタパート側の高い資質やJICAのこれまでの支援の成果などから、彼・彼女らはもとも高い技術や知識を備えていたが、理論にかたまぎがちであった傾向が、プロジェクト実施により、現場への適用することの重要性を認識するに至った。このような意識変革そのものも、技術移転の一面であり、普及技術の移転が十分に行なわれたといえる。 大学研究者などによる研究が現在、当該森において7つ進行している。 一方、森林・林業分野に関しては、種苗に関する研究者や技術者についてまで、造林・経営の分野に関しては、自立発展的な技術と言えるまでには至っていない。従って、植林への広がりが、大規模農家や企業など限定的であり、一般農業生産者や市民にまでは至るまでには時間がまだ必要。

JICAの協力終了
時後、その効果は
持続するか。

<p>養成されたブラジル人環境教育推進者・指導者の定着度</p>	<p>SECTAMの局長が2006年の3月で退職している。その後、このポストへの後任はあり、プロジェクトの成果をモデルケースとし政策にフィードバックしてきたと考えている。プロジェクトのコーディネーターを現在担っているカウンタートパート(退職問題勃発?)は、大卒教員職との兼任である。今後の見通しであるが、IBAMAからの権限委譲に伴い、森林管理や保護区などの部門には、人員が手厚く配置可能性がある、とのプロジェクト側からの報告あり。</p> <p>MPEG、EMBRAPAに関しては、スタッフの配置に関する懸念は特にないことが、プロジェクト側から報告されている。</p>
<p>5.4 自立発展性の阻害・促進要因</p>	<p>日本人専門家の判断するところによると、ブラジル人カウンタートパートたちは、プロジェクトの機関に移転された技術に関して、実践および更なる拡大(より多くの人材への技術移転拡大)に関して、可能な水準にまで能力を高めていることが報告されている。また、ネイチャーゲームの実施促進により、同時に、体験型環境教育の指導員を育成することにもなっている。実際に、すでにプロジェクトを離れたところで、パラ州が行政の手法として取り込む(パラ州の実施するプログラムに組み入れる)ことが行なわれ、ブラジル側でのさらなる人材育成が前進している。</p> <p>現地にて機材状況を確認したところ、維持管理に特に問題は発見されない。但し、カウンタートパートによる使用が現段階では十分に活発でない様子であり、今後計画されている研修などで使用頻度が高まることが期待される。</p> <p>環境教育において研修に参加したEscola Bosque という学校、またその関係者が極めて熱心にネイチャーゲームの普及促進に関心を示し、行動を起こしつつあることは、今後の環境教育のブラジル全土への自立発展的な前進・波及に関しての促進要因と言える。ブラジルにおけるネイチャーゲームのコーディネーターであるリタさんとの連携については、今年度の短期派遣専門家(環境教育)が派遣される際に、連携をはかり、ネイチャーゲームを推進するNGOを設立する方向で話し合いたい、としている。</p>

The Project for
 Forest Conservation and Environmental Education in the Eastern Amazon
Questionnaire for counterpart personnel of SECTAM, MPEG, EMBRAPA
For Terminal Evaluation

This is a questionnaire for terminal evaluation of the project for forest conservation and environmental education in the Eastern Amazon (herein after referred to as "the Project"). The questionnaire is designed in accordance with JICA's evaluation methodology that is regularly applied to evaluate JICA funded project. The data (answer) of the questionnaire will be directly collected and analyzed by an external consultant hired by JICA, and the results will be summarized during the evaluation with the participation of Brazilian counterparts, Japanese experts, the joint evaluation team, and other individuals concerned. Although the analyzed data of the questionnaires will be presented in public, the answer of each individual will be dealt as confidential. Please fill out the blank spaces of the questionnaire, and send it back to the external consultant, Noriko Furutani through e-mail (furutani.noriko@glm.co.jp) at your earliest convenience. Or return it to Mr. Ikeda (Coordinator of the Project) hopefully by April 24, 2006 (Monday). If the answer were in English, it would be grateful, but in Portuguese is also acceptable.

We would appreciate it very much if you could send us back your answer for the questionnaire as soon as you can.

Please answer all the questions, which you think applicable to you. The questionnaire consists of 7 items, including Implementation Process, Achievement, Relevance, Effectiveness, Efficiency, Impact, and Sustainability. Please judge to what degree/extent the Project achieved on related issues, by checking the relevant box with ×. In some cases, you are required put number. Please follow the instruction.

(A= Very much so, B= Somewhat so, C= Difficult to judge, D= Not so much, E= Not at all)

Reason/Evidence: Please provide reason(s)/evidence behind your judgment.

- 0 - 0 Your Name
- 0 - 1 Organization and your position
- 0 - 2 Your Charge/Responsibility in the Project

Implementation process (Some are related to Achievement)

1 - 1 How many trainings did you receive as counterpart personnel? Please include the training in Japan.

Normal training for C/Ps (Excluding OJT)	OJT
Times	Times

1 - 2 Name of the training(seminar, workshops, etc.) to show its content.

1 - 3 Have you provide trainings to other people by utilizing the knowledge and skill obtained by yourself through the above mentioned trainings?

YES	NO

• If yes, specify (Name of the training/topic to show its content) :

1 - 4 Are you involved in any mechanism to link the counterpart personnel including Japanese experts for the Project implementation? (ex; Regular meeting)

YES	NO

1 - 5 If yes, how frequently it has been held ?

A. Once a week B. Once a month C. Others : Specify→

1 - 6 Do you think that mechanism effective enough towards the project purpose?

YES	NO

• Reasons:

1 - 7 Do you think that the planning process of the Project was appropriate?

A	B	C	D	E

• Reason :

1 - 8 Do you think the implementation process of the Project has been appropriate?

A	B	C	D	E

• Reason :

Achievement (Some are related to effectiveness, sustainability)

2 – 1 Please provide your own judgement. How many technologies(knowledge and skills) did the organization, you are working for, institutionally accumulate/obtain?

2 – 2 Please specify what you counted in the answer for question 2-1.

2 – 3 Are they currently utilized by your organization including yourself?

YES	NO

If yes, provide how they are utilized;

2 – 4 Is it possible, you think, for your organization to continue to implement/utilize those, especially technologies, even after the termination of the cooperation from Japan?

YES	NO

If not, reason for that :

2 – 5 If not yet utilized, are there any plan to use it in near future?

YES	NO

If any, specify;

Relevance

3 – 1 Is the project purpose [Activities of forest and natural environmental conservation are promoted in Para State] consistent with the needs of your organization?

YES	NO

• Reason :

Effectiveness

4 – 1 Has the project purpose [Activities of forest and natural environmental conservation are

promoted in Para State] been, you think, achieved ?

A	B	C	D	E

• Reason :

4 – 2 Mark ×(only one) under the output which, you think, has most contributed (has been contributing, in case of not yet the project purpose been achieved) to the project purpose. If more than one outputs are significant, then provide the number to show the priority.

<u>Output 1</u> Promotion of environmental education	<u>Output 2</u> Promotion of extention for agrogorestry	<u>Output 3</u> Dissamination of informantion

• Reason :

Efficiency

5 – 1 Do you think that allocation of Japanese experts, counterpart personnel appropriate in terms of number, expertise, timing of dispatch/appointment, part-time/full-time, etc.?

A	B	C	D	E

• Reason :

Impact (Some are related to sustainability)

6 – 1 In case you think the project purpose has already been achieved, do you think the overall goal [Effective forest and natural environmental conservation is promoted in the eastern Amazon areas] , possibly achieved within five to seven years after the termination of the Project?

YES	NO

• Reason :

6 – 2 According to the logic shown on the PDM(=Project Design Matrix), the following two external conditions should be met in order to achieve the overall goal.

【The policy of the environmental conservation of Para State Government sill not change.】

【Governmental establishments, universities, NGOs, and private companies will participate more in the Gunma Ecological Park】 .

Do you think that the latter condition will be met ?

YES	NO

• Reason :

6 – 3 Do you think that the promotion of the nature game to Brazil nationwide has been advanced?

A	B	C	D	E

• Reason :

Sustainability

7 – 1 Does your organization have concrete plan to utilize of the Gunma Ecological Park in near future?

YES	NO

• Evidence :

7 – 2 Is that plan supported by the budget in your organization?

YES	NO

• Evidence :

7 – 3 If your organization itself does not allocate the budget on it, does your organization establish linkage with other NGO or corporate as financial source?

YES	NO

• Evidence :

7 – 4 Please provide the name of NGOs or other organizations with which your organization tries to cooperate for the utilization of the Gunma Ecological Park. Specify the experties of those NGOs and way of cooperation as well.

質問票集計結果（カウンターパート 3 機関及び日本人長期専門家）〈5 月 3 日〉

基本情報

C/P の人数合計は 3 機関で 21 名、派遣中長期専門家数 2 名

回答者数：23 名中 12 名

機関別人数：

パラ州科学技術環境局(SECTAM)	6	* 提出数 5 名。
エミリオゲルジ博物館 (MPEG)	7	* 提出数 4 名。
ブラジル農牧研究公社東部アマゾン農業研究センター(EMBRAPA)	8	* 提出数 1 名。
日本人専門家（派遣中の長期専門家）	2	* 提出数 2 名。
合計	23	* 提出者合計 12 名

回答者の技術移転参加状況

- 1-1：OJT も含め、カウンターパートが参加した研修は、以下 1-2 の回答と連動するが、回数としてネイチャーゲーム関連のものが突出している。
- 1-2：自分が受けた研修内容として、ネイチャーゲーム及びその関連のものが中心的に挙げられた。
- 1-3：カウンターパートは、ネイチャーゲームを含む環境教育分野に関して、他の人への普及に自信を示しているし、実際に実施している。
- 1-3'（日本人専門家のみ回答）：日本人専門家からの、移転を受けたカウンターパートの技術に対する信用度は高い。一方、カウンターパートからの回答において指摘された、研修から得られたアグロフォレストリー新技術は、ネイチャーゲームを含む環境教育分野の技術と比較して少ない。しかしながら、その点は、知識・技術水準がもともと高いカウンターパートの、「普及」の概念にプロジェクト実施の結果変化が起こり、有する技術を現場に適用化させる重要性を再認識したという意識変化も大きな技術移転の一つと分類できる。

実施プロセスに関する質問

- 1-4：連携メカニズムは存在している。但し、機能し始めたのは今年度当初からである。
- 1-5：月に一回の頻度で、【コーディネーターミーティング】、【群馬の森実証圃場作業委員会】が開催されている。
- 1-6：上記連携メカニズムは活発で、プロジェクト目標達成に向けて役立つと参加者の全員が感じている。
- 1-7：プロジェクトの計画・立案の過程とその内容に関して、適切ではなかったと感じている者が一部にいる。
具体的には、次のようなことが指摘された。
* 予算計画が JICA 主導型で、ブラジルとのすり合わせがなかった。支出報告がないことを含め透明性がなかった。
* 議論が不十分なまま内容が決まっていた。また、だれに掛け合って相談したらいいのかも不明だった。
* アドホックに対処したところがあり、困難だった。
- 1-8：プロジェクトの実施プロセスに関して、適切ではなかったと感じている者が一部にいる。
具体的には次のようなことが指摘された。
* 透明性がなかった。
* 唐突に対処するなど、アドホックなやり方があり困難を生じた。
* 最初の段階で、カウンターパートに日本の技術協力システムについて、きちんとした理解が得られていない部分があったこと（カウンターパートが当初報酬を得て業務を請け負うコンサルタントとなっていた）から、誤解を生むこととなった。

実績

2-1：関係者は、カウンターパート機関に、本プロジェクト実施により蓄積された技術（知識・情報を含む）の存在を認識している。

2-2：上記にて指摘された技術や知識の名称（内容を表すもの） 但し、例示。

ネイチャーゲーム	自然環境を活用した手法（教室で行なったことはあっても自然の中で実施したことはなかった）
森林管理技術	
環境教育概論	移民の歴史
世界の環境教育の状況について	サンタバーバラのコミュニティの現状（社会文化状況）
土壌（簡易）成分分析方法	植林と植樹
植物体（簡易）成分分析方法	日本ブラジルにおける環境保護区の設定
農業技術普及方法（システム）	環境法
高密度多樹種植栽による造林技術	ネイチャーゲームで使用される体験型環境教育手法
グリーンツーリズム（果樹の直接販売など）	種子の採取、保存
資料展示に関する基本計画立案手法	植林と環境教育
博物館の展示方法	クップアスの接木・台木の評価
	果樹 5 品種の導入、バナナ 4 品種、樹木 1 種

2-3：それは、現在、当該機関で活用されているか

回答者のほぼ全員が、活用されていると回答している。

* 具体的には：

* ネイチャーゲームは SECTAM において自然環境教育を行なう上で重要な一つのツールとなっている。プロジェクト外においてすでにプログラムに導入されている。この指導員となるのが、本プロジェクトで養成された教員である。

* 森林関連分野において、より自然に近い方法での造林方法（高密度多樹種植栽による造林技術）の紹介が行なわれたが、現在ではカウンターパート側から、宮脇方式と呼んで質問してくるなど、一つの方法として定着したと言える。

* 展示資料に関する基本計画立案手法では、日本人専門家がカウンターパートとともに作成した基本案が骨格となって、現在の資料展示室改修計画となった。森と地元サンタバーバラ郡をテーマとした資料展示としていかされた。

2-4：日本からの援助終了後も、当該機関が独自に実践可能な状況か

* 多数派（回答者の 7 割以上）は、援助終了後も継続可能と考えている。

* いいえと回答したのは、ブラジル側カウンターパートであるが、その背景には継続の財政的な裏づけへの不安が見られた。

2-5：今後の具体的な実践予定に関しては以下の点が指摘された：

* 教職員を対象にしたワークショップでさらなる技術移転の波及が予定されている。

* 日本の農業普及方法に関しては、EMBRAPA 所長からの反応も大きかったこともあり、今後具体的な動きが出てくると思われる。この背景には、EMBRAPA の「活動 4 ヶ年計画」の中に技術者普及の促進という課題も含まれているからである。今年度はセミナーや研修会を体系的に実施することで日本型技術普及システムを EMBRAPA に移転予定。

妥当性

3-1：プロジェクト目標は、カウンターパート機関のニーズと合致しているかとの問いに対し、回答者のほぼ全員が、肯定的な回答であった。

有効性

4-1：プロジェクト目標は達成されたとほとんどの関係者が考えている一方で、アマゾン群馬の森が正式な RPPN に登録されていないことやプロジェクトで実施されている活動は点でしか見ていないことを理由に、達成されていないと考えるものも一部にいる。

4-2：すべてのアウトプットはプロジェクト目標の達成に貢献したが、自分の関わった活動に結びつくアウトプットに高い評価を与える傾向がある。

効率性

5-1：C/P の配置、専門家の派遣は、概ね適切であったが、短期派遣日本人専門家の専門性に関してブラジル側と日本側の合意に至る十分な議論がなされなかったとの意見があった。

インパクト

6-1：C/P の配置、専門家の派遣は、概ね適切であったが、短期派遣日本人専門家の専門性に関してブラジル側と日本側の合意に至る十分な議論がなされなかったとの意見があった。

6-2：上位目標が達成されるための外部条件の一つ【政府、大学、NGO、民間企業がさらにアマゾン群馬の森に参画する】は、満たされつつあると思うかどうかとの質問に対して、いいと回答したのも 3 割強存在するものの、その理由は、まだ正式なコミットが得られていないからというものである。実質的には、プロジェクト期間中にも政府、大学、NGO、民間企業などからの群馬の森への連携の要請が多く寄せられるなど、当該外部条件は満たされつつあると言える。たとえば、群馬の森の天然林では、MPEG がプロジェクトとは別にシダ類や糸状菌の研究フィールドとして利用しはじめている。また、カスタンヤール農学校や JK（地元の農業専門学校）などによる実習での活用もはじまっており、学校機関との連携も充実しつつある。その他各種 NGO が主催するレセプションや会議、野外活動なども開催されるようになってきている。地元日系企業から植林技術に関する情報交換も要請されている。このようにプロジェクト活動やその広報を通じて群馬の森の利用・参画がパラ州に広がりつつある。

6-3：ネイチャーゲームのブラジル全土への波及を目指した取組に関して、否定的な見解をもつ回答者はいなかった。また、具体的な全国展開へのきざしとして以下の点も指摘されている。

- * ブラジルで実施したネイチャーゲームの普及セミナーの後、再生可能天然資源管理院（IBAMA）より当プロジェクトで作成したネイチャーゲームテキストを配布して欲しいとの要請があり、5 部送付した。
- * 降旗短期専門家のセミナーにおける講演内容が環境省のテクニカルレポートに掲載され、ブラジル中央政府機関がネイチャーゲームに興味を示している姿勢が見られた。

プロジェクトの自立発展性に関する質問

7-1：回答者の 7 割以上が、プロジェクト終了後、アマゾン群馬の森を活用した具体的計画は、カウンターパート機関にあるとしている。具体的には、以下のようなものが例として指摘されている。

- * すでに 3 つの CP で煮詰まっていて、総合的プロジェクトを作ってアマゾンの森を活用して実施するアイデアがある。
- * アマゾン群馬の森が RPPN に登録されれば、エコツーリズムに活用できるし、パラ州の一保護区のモデルとなる。
- * 動物・植物の分野の学術研究分野の場ともなるし、環境教育の実践の場ともなる。
- * サンタバーバラ郡のコミュニティと共に教育と博物学の活動を続けていく。

* パラ州政府の実施する PRO-PAZ で、ネイチャーゲームをプログラムの一つとして実施することが予定されている。

* MPEG では群馬の森及びサンタバーバラ郡の観光資源を利用し、それに環境教育の要素を取り込んだエコツーリズム開発に関するプロジェクトを ABC を通じて JICA に要請中である。

7-2 : 上記計画に対する、予算確保はできているものと、これからの可能性を秘めたものが存在している。

7-3 : 外部資金源として企業や NGO との連携が模索されつつある。具体的には、以下が指摘された。

* 現在幾つかの日系企業との技術連携を協議中もしくはすでに活動を開始している。カスタンヤールのコショウ生産・輸出業者と連携して、持続的なアグロフォレストリー技術の現地実証試験を開始した。これは、プロジェクトで開発、収集された情報を元に全額相手側企業の出資で行われている。また、木材加工関連の日系企業からは持続的な資源管理の方法としての植林に関してプロジェクトとの連携を要請されている。

* サンタバーバラ郡での農業状況調査を委託した NGO 自然環境及び貧困救済プログラム (POEMA) は、JICA との双方負担で報告書を出版する意志を示している。また、現在実施している各種セミナーや講習会の会場としてアマゾン群馬の森を利用予定。さらに、サンタバーバラ郡での新規小規模農家支援プロジェクトの提案をアマゾン群馬の森と共同で行なうという連携案も検討中。

7-4 : 連携の可能性が具体的になりつつある NGO 名(但し、今後の可能性がありうる程度の組織名も指摘されている)

* POEMA(NGO 自然環境及び貧困対策救済プログラム)

* ASFLORA (Instituto Amigos da Floresta Amazonica アマゾン森林友の協会) というパラ州の木材輸出業共同組合を母体としている NGO は、独自に植樹祭を行っており、今後共同で植樹祭などの事業を展開したいとの話があった。

* トメアス総合農業共同組合 (日系農協)

* FUNTEC 科学技術基金 (SECTAM)

* IPAN (環境保護財団 NGO)

* FEMA 環境基金 (パラ州)

* 環境教育フォーラム

* 命の財団 (NGO)

* Argonautas (環境 NGO)

* CNPQ 国家科学技術審議会

* Albras (アルミ製造会社)

* FNMA 国家環境基金 (連邦政府環境省)

* Alunorte (アルミ精製会社)

* アマゾニア銀行

* Rede celpa (民間電力会社)

* ブラジル石油公社

* VALE DO RIO DOCE (民間企業) 鉄鉱石を掘っている会社 (民営化された公社)

* Boticario 財団 (香水を製造する会社の財団)

