

## Summary

Evaluation conducted by:OPMAC Corporation

<b>1. Outline of the Project</b>	
<b>Country:</b> The Federative Republic of Brazil	<b>Project title:</b> Cerrado Ecosystem Conservation Project
<b>Issue/Sector:</b> Environment	<b>Cooperation Scheme:</b> Project Type Technical Cooperation
<b>Division in charge:</b> Forestry and Natural Environment Division, Forestry and Natural Environment Department, (Forestry and Nature Conservation Division II, Forestry and Nature Conservation Group, Global Environment Department)	<b>Total Cost:</b> 256 million Yen
<b>Period of Cooperation</b>	February 1, 2003 to January 31, 2006
	<b>Partner Country's Implementing Organization:</b> The Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) (Chico Mendes Institute for Biodiversity Conservation: ICMBio)
	<b>Supporting Organization in Japan:</b> No in particular
<b>Related Cooperation</b>	None in particular
<p><b>1-1. Background of the Project</b></p> <p>The Cerrado, being located mainly in the Midwestern part of Brazil, covers a vast area of approximately 200 million hectares which accounts for about 23% of the country's entire land surface and stretches over 14 states. It is the second largest Brazilian biome, with enriched biodiversity, in particular. It is also important as an area for water sources of major rivers in Brazil, and part of it has been acknowledged as "Biosphere Reserves" by UNESCO. However, fragmentation and degradation of the ecosystem of the Cerrado have increasingly become serious, due to uncontrolled forest fires, expansion of farm land and pasture, illegal logging and so on. The World Wide Fund for Nature (WWF) reported that 80% of the natural vegetation in the Cerrado had been already lost.</p> <p>In the context of those issues, IBAMA launched "the Cerrado Ecological Corridor Program" under the Multiannual Plan (PPA) of the Federal Government and the Brasilia National Park Program. "The Cerrado Ecological Corridor Program" aimed to improve continuity of conservation areas or forest areas through integrated management of the fragmented conservation areas.</p> <p>The Federal Government of Brazil requested to the Government of Japan a technical cooperation for the purpose of conservation of the ecological system and biodiversity as well as of sustainable use of natural resources in the Cerrado. Then, the preparatory study team was dispatched from July to August 2002. Consequently, the Project area was selected in the area centering around the Cerrado among the four ecological corridors relating to the Cerrado and it was decided to implement the Project targeting the "Paraná/Pireneus Ecological Corridor Area," which is one of the most prioritized areas for conservation.</p> <p><b>1-2. Project Overview</b></p> <p>In the Paraná/Pireneus ecological corridor area, the following two pilot areas were set for the project activities: Chapada dos Veadeiros National Park (PNCV) and Nascentes do Rio Vermelho</p>	

Environmental Protection Area (APA-NRA), and those surrounding areas, both in the state of Goiás. With beneficiaries being set up as Governments (the Federal Government, states and municipalities), NGOs and other relevant organizations in the Paranã/Pireneus ecological corridor area while IBAMA was a counterpart agency, the technical cooperation project was implemented in order to improve “integrated ecosystem management”.

**(1) Overall Goal:**

Integrated ecosystem management is promoted in the Paranã/Pireneus Ecological Corridor Area, contributing to the sustainable use of the natural resources.

**(2) Project Purpose:**

Integrated ecosystem management in the Paranã/Pireneus Ecological Corridor Area is improved through activities in the Pilot Areas.

**(3) Outputs:**

- 1) Coordination among the relevant organizations and the local communities is improved in the Corridor as a whole, as well as in the Pilot Areas.
- 2) Orientation contributing to sustainable natural resource management is made clear to the relevant organizations in the Corridor as a whole.
- 3) Capacity of relevant organizations for implementing environmental education/social awareness programs is developed.

**(4) Inputs**

**Japanese side:**

<b>Long-term Expert:</b>	2 persons	<b>Equipment:</b>	25 million Yen
<b>Short-term Expert:</b>	8 persons	<b>Local cost:</b>	57 million Yen
<b>Trainees of C/Ps in Japan:</b>	6 persons	<b>Others (dispatch of study team):</b>	4million Yen
			<b><u>Total: 256 million Yen</u></b>

**Brazilian side:**

<b>Counterpart:</b>	11 persons	<b>Equipment:</b>	NA
<b>Land and Facilities:</b>	NA	<b>Local cost:</b>	NA

**2. Evaluation Team**

<b>Members of Evaluation Team</b>	Team leader/evaluation design/site survey: Ms. Mitsue MISHIMA, OPMAC Corp. Consultant Evaluation expert: Ms. Hisami Nakamura, OPMAC Corp. Consultant Evaluation expert of agriculture/rural development aspects: Dr. Kiyoko HITSUDA, Japan Development Service Co., Ltd., Consultant	
<b>Period of Evaluation</b>	November 24, 2008 to April 24, 2009 (Field Trip: January 25, 2009 to February 2, 2009)	<b>Type of Evaluation:</b> Ex-post Evaluation

### **3. Project Performance**

#### **3-1. Performance of Project Purpose**

Although “integrated ecosystem management has been improved, the achievement of the Project Purpose is found to be insufficient.

The Project Purpose is not well-defined and the indicators shown in the PDM neither define specifically what “integrated ecosystem conversation approach/measures” and “capacity of officers for integrated ecosystem management” mean, nor do they clearly state on the situation that those are introduced or improved. Furthermore, there is some confusion in the logic of PDM as seen from Output 1 and Output 3 that simply explain the Project purpose in concrete terms, in other words, merely restates the purpose.

At the time of the terminal evaluation, it was evaluated that the Project Purpose had been achieved, based on the activities carried out under the Project. However, it could be simply confirmed that “approaches using participatory management methods are known or experienced”. Only the fact “participation in the activities” cannot conclude that “the methods have been introduced” or “the capacities have been improved.” It can be, however, considered that the project activities brought about improvement of ecosystem management in certain ways since the concept of “integrated ecosystem management” has been introduced by the Project for the first time in the Project area.

On the other hand, regarding the outputs, the Project achieved the indicators for the pilot areas, however, it could not achieve to the improvement of integrated ecosystem management for the entire Paranã/Pireneus Corridor area., which is the Project Purpose.

In addition, although verification was attempted on indicators relating to the Project Purpose at the time of the ex-post evaluation, it was difficult to establish criteria to objectively verify “the status in which methods have been introduced.” Moreover, it was also difficult to confirm the conditions in which the methods have been introduced at the fifteen municipalities located in the pilot areas. Consequently, it was impossible to verify the achievements of the Project Purpose. In terms of the indicator of “improvement of capacities of officers in relevant organizations (the Federal Government),” improvement of knowledge that can be utilized in their works has been observed, based on the results of self-evaluation on the capacity improvement by some of the counterpart officers during the Project implementation, who could be contacted.

#### **3-2 Achievement related to Overall Goal**

After the completion of the Project, the budget for the activities concerning “integrated ecosystem management” was not allocated and activities that could contribute to the achievement of the overall goal were not continued. Accordingly, it is evaluated that the overall goal has not been realized. Moreover, problems are identified in that the overall goal was not clearly determined, including the indicators that are not well-defined or inappropriate.

#### **3-3 Follow-up of the Recommendations by Terminal Evaluation Study**

In the terminal evaluation, recommendations were made on enhancement of coordination among related organizations, legal and institutional framework, securing of financial resources, human resources and implementation of new projects, and so forth in order to continue, disseminate and develop activities concerning “integrated ecosystem management.”

However, except for recommendations about expansion of income sources for some communities in the pilot areas and implementation of new projects, recommendations were not put into practice as it became difficult to carry out many of the activities relating to the Project due to organizational reform of IBAMA as well as reduction of the budget allocated to the environmental sector.

In addition, with respect to some recommendations for organizations other than IBAMA, it is not clear which organizations were supposed to conduct such recommendations. Hence, there is a possibility that those organizations which are supposed to take responsibility for recommendations could not regard themselves as the agencies to implement them.

## **4. Results of Evaluation**

### **4-1. Summary of Evaluation Results**

#### **(1) Relevance**

As for the appropriateness of the methodologies, although it is considered that there could have been some room for examining other alternative approaches, the Project was relevant from the viewpoint of needs of the beneficiaries and the consistency with the Brazilian policies as well as Japanese aid policies.

Also in the Paranã/Pireneus Ecological Corridor Area, fragmentation and degradation of the ecosystem of the Cerrado were serious issues, and “improvement of integrated ecosystem management” met needs of relevant organizations, including the Federal Government, states and municipalities, NGOs. Furthermore, since the Project activities were initiated after needs of the participating organizations was assessed through the participatory workshop, the Project responded to their needs.

In Japan’s aid policy towards Brazil, natural environment conservation is one of the priority areas while on the Brazilian side, emphasis is placed on biodiversity and conservation of the ecosystem in the National Biodiversity Policy and the Multiannual Plan (PPA) of the Federal Government. In particular, establishment and management of the ecological corridors were regarded as one of the strategies to maintain the continuity of the ecosystem.

With regard to the appropriateness of Project approach, because the definition of the target group for the Project Purpose was vague, the Project challenged to distribute benefits to a broader range of beneficiaries. However, targeting at wider and diversified stakeholders within a limited project scope led to a decrease in the project effects. It is inevitable to strategically selected target groups that the Project directly deals with and to carefully consider means to disseminate the project effects.

#### **(2) Effectiveness**

In the terminal evaluation, the Project Purpose was very satisfactorily achieved and the Project was considered very effective, nevertheless, in the ex-post evaluation, effectiveness was deemed to be insufficient.

The logic of the project design was not appropriate as the outputs are just a restatement of the Project Purpose. The weak causal relationship between some outputs and the Project Purpose and the inappropriate important assumptions impeded the effectiveness of the Project.

As for the contributions of respective outputs to the achievement of the Project Purpose, activities under the participation of various stakeholders, including a total of more than 3,000 local residents, at mini-projects and seminars/workshops, which were conducted through the coordination committee at the Integrated Centre for Environmental Activities (CIAA) concerning the output 1, contributed to enhance understanding on “the integrated ecosystem management” in a certain way. However, it is considered that Outputs 1 and 2 have not been produced sufficiently since coordination capacity was limited at the whole Corridor level and orientation on sustainable use of natural resources for entire Corridor area was not clearly developed by the Project. As for Output 3, improving capacity of relevant organizations, which overlaps with the Project Purpose, cannot be verified without indicators clearly defining what kind of capacity need to be improved at what level. In addition, although environmental education and social awareness programs as part of the activities for Output 3 contributed to environmental conservation in the Corridor Area to some extent, the direct causal relation with achievements of the Project purpose is not identified very well.

The possibility is limited in terms of realizing the important assumption that “counterpart personnel will continue working for Project activities” in Brazil where changes in personnel are frequently observed. As a result, it became one of the obstacles against achievement of the Project purpose and outputs. Supposedly, measures should have been taken against those risks by the Project.

#### **(3) Efficiency**

Efficiency of the Project is insufficient based on utilization of inputs for the project activities and appropriateness of the inputs, including quantity, quality and timing of inputs that were

confirmed for analysis. For the Project Purpose and part of the outputs, indicators were not properly set up to sufficiently verify the extent of the achievements. In addition, as the actual data on inputs by the Brazilian side were not available, it was impossible to analyze the efficiency on conversion from the inputs into the outputs and on the cost-effectiveness.

The terminal evaluation, despite the delay in assigning the counterpart officers and allocating budgets by the Brazilian side, discussed that efficiency was adequate with the efforts made by Japanese experts and counterpart officers. In the ex-post evaluation as well, it was noteworthy that the Project produced a certain level of results despite such constraints, while understandings were enhanced among as many stakeholders as possible on the concept of the integrated ecosystem management.

However, despite the fact that it was predictable to have a negative influence on the Project implementation by a large number of personnel change in the federal governmental organization including IBAMA due to the change of the government, the long-term experts were dispatched as scheduled and this consequently reduced the efficiency of the inputs of long-term experts. The experts were not able to start with actual activities at the outset and spent most of time for re-consultation and coordination, including review of the project design, with newly-assigned personnel in charge on the Brazilian side. In addition, there was a certain period of time without counterpart personnel due to the strikes of IBAMA personnel or to delay in assigning personnel to be involved in the Project, and so on. Because of these reasons, only 40% of the activities originally planned for the first year of the Project were carried out.

As for the appropriateness of the inputs, experts and local costs as inputs from the Japanese side were set at a minimum level in consideration of capacities of the personnel and inputs on the Brazilian side. In particular, among the inputs, priorities were placed on long and short-term experts in charge of participatory natural resource management, which contributed to promotion of activities involving a wide range of stakeholders in the pilot areas. On the other hand, there was some room to be improved in the fact that the short-term experts in charge of the environmental education were assigned to activities that had limited direct contributions to the Project purpose. As for inputs from the Brazilian side, the budget allocation fell far behind the schedule partly due to constraints in the federal government budgets while the assignment of the counterpart personnel was delayed due to the new government.

#### **(4) Impact**

There are some impacts by the Project in limited areas in spite of difficulty in verifying spillover effects by the wide range of project activities because of the limited scope and the constraints of the evaluation study.

- Achievement of the overall goal: although the overall goal has not been achieved, the Project activities were widely carried out so that related organizations outside the pilot areas undertook activities, by which the people enhanced knowledge and changed their awareness concerning “integrated ecosystem management.”
- Impact on organizations and institutions: in pilot area 2 (Nascentes do Rio Vermelho Environmental Protection Area), the establishment of Integrated Center for Environmental Education and Activities (CIEAA) was established. In addition, there are more organizational activities were developed relating to conservation of ecological corridor such as a handicraft association utilizing plants in the Cerrado, cooperative activities by people who make a living of extracting natural resources, a tourist guide association by NGO, and so on.
- Impact on conservation activities of the ecological corridors: in the “review of the regulations and monitoring program in the legal reservation area and permanent protection area” (Pro-legal) at IBAMA Goiás branch, data such as land use maps based on satellite images are utilized.

#### **(5) Sustainability**

In the terminal evaluation, it was considered that the project outcomes would be sustainable if IBAMA was able to manage the Project activities ensuring financial and technical resources after

completion of the Project. However, at the time of the ex-post evaluation, the overall prospect appears to be uncertain.

After completion of the Project, an independent administrative institution called ICMBio was established in 2007 for conservation of the federal protection areas in Brazil. Then, in 2008, organizational reform was undertaken at IBAMA and the Department of Ecosystem, in charge of the integrated ecosystem management, was integrated into ICMBio. With this change, it is considered that activities concerning the conservation of the federal protection areas will be taken over by ICMBio but reviewing works of the organizational set-up is still under way at the time of the ex-post evaluation. Therefore, more concrete organizational strategies and plans are not yet revealed.

In terms of the policy and institutional aspects, there has been no change as of the time of the ex-post evaluation. There is a policy to implement the conservation of the Cerrado as well as the national program for the sustainable use and the implementation of the ecological corridor projects. However, although the concept and approaches of “the integrated ecosystem management” in the federal protection areas have been understood widely among those involved in the project activities, they are not yet defined nor introduced clearly in official institutions and policies.

In the aspect of the budget, it was not secured to continue the Project activities at the Department of Ecosystem of IBAMA after the completion of the Project. Owing to the decrease in budget, the activities concerning “integrated ecosystem management” could not be continued. In 2009, however, it is planned to resume the currently suspended activities of CIAA in the national park by allocating the financial resource of the Global Environment Facility.

Although the counterpart personnel of the Project deepen their understanding on the concept of the “integrated ecosystem management” introduced by the Project and practice it in their works, the concept has not been applied throughout the entire organization, rather in a limited scope. The outputs produced by the Project such as the land evaluation maps are not being fully utilized.

#### **4-2. Factors that have promoted the Project**

##### **(1) Impact**

The idea about the ecological corridors and the integrated ecosystem management have been spread among various stakeholders by promoting broader participation through organizing seminars and workshops for various groups as part of the project activities. In particular, the participatory natural resource management promoted understanding of the participatory natural resource management as a part of “the integrated ecosystem management through the activities such as seminars organized with participation of stakeholders, establishment of a coordination committee at the Integrated Centre for Environmental Activities (CIAA) in the pilot areas and conservation activities in collaboration with the stakeholders.

In addition, as for activities in APA-NRA, the fact that the ex-counterpart personnel of the Project who is highly-motivated to continue their activities contributed to institutionalization and development of their activities in the surrounding areas of APA-NRA.

##### **(2) Sustainability**

Nothing in particular.

#### **4-3. Factors that have inhibited the Project**

##### **(1) Impact**

In order to achieve the overall goal “Integrated ecosystem management is promoted in the Paranã/Pireneus Ecological Corridor Area, contributing to the sustainable use of the natural resources,” various activities concerning “the integrated ecosystem management” should have been deployed in the areas beyond the pilot areas. Since the Project Purpose and the overall goal were vaguely set up in PDM of the Project, the strategies were not presented, based on the experiences in the pilot project areas, from the viewpoint of how results of the Project would be reflected in policies or systems with the long-term perspectives. This was a factor that has inhibited the impact from being realized.

Furthermore, due to the change in the Brazilian government, there was a delay in the counterpart personnel assignment and budget allocation by the Brazilian side. This caused considerable reduction of the actual implementation period of the Project, and insufficient achievements of the outputs because activities were not carried out as originally planned. As a result, there was no chance to learn how results in the pilot areas could be fed back to the entire corridor areas. Therefore, the Project could not indicate a road map how to achieve the overall goal.

## **(2) Sustainability**

Since the budget was reduced after completion of the Project, it was difficult to continue activities relating to the Project. In addition, the reform of the C/P organization cast uncertainty over the sustainability. Moreover, the reduced actual Project implementation period resulted in a situation where the improvement process was not taken in such a way that the results of the project activities are analyzed and fed back, and activities are continued in a sustainable manner after completion of the Project. This is also one of the factors that have inhibited sustainability.

Furthermore, even within an organization under the federal government, it is not easy to coordinate internally IBAMA headquarter in Brasilia, Goiás branch office, and offices in the pilot areas as they are located physically far away. In addition, it takes time to establish coordination scheme with other organizations at state and municipal level. There is a limitation to developing a sustainable institutional arrangement within the Project implementation period.

## **(3) Factors that have inhibited effectiveness and efficiency**

The ambiguous Project Purpose and the inappropriate logic between the Project Purpose and the Outputs brought about various interpretation of “the integrated ecosystem management” among the stakeholders. Based on those varieties of interpretation, a wide range of activities was carried out under the Project. However, some activities did not contribute directly to the outputs and the attainment of Project Purpose. This dilution of the activities have weakened a series of the causal relations from inputs to outputs and then, the Project purpose, leading to decrease in effectiveness and efficiency.

## **4-4. Conclusion**

The activities were delayed in implementation because it took time to review the project design due to the changes and absence of the personnel affected by the politics: however, activities were intensively carried out from the second year of the Project in order to achieve the Outputs. Hence, it is considered that the Project has promoted understanding on the concept of “the integrated ecosystem management” among the stakeholders in the pilot areas. However, in addition to ambiguous the Project purpose, the project activities were implemented in broader areas with various types of target groups, which resulted in dispersion of activities. It can be pointed out that there is a room to improve effectiveness and efficiency.

Moreover, while a systematic measure was not taken with a view to developing “the integrated ecosystem management” over the entire Corridor, activities introduced by the Project were suspended due to the organizational reform of the C/P organization and reduction of the budget after completion of the Project. As a result, impact is limited and sustainability is uncertain.

Hereafter, in order to continue to implement “the integrated ecosystem management” under the common framework for related organizations, it is recommended to disseminate and feed back experiences gained under the Project in the pilot areas and improve management methods for similar types of projects on corridor conservation.

## **4-5. Recommendations**

(Recommendations to JICA)

- Feedback of the outcomes of the Project: at the time of implementing new project in ecological corridor conservation in future, it is recommended to provide opportunities to feed back the outputs produced by the Project to the C/P organization and other stakeholders on the Brazilian side in order to share information on experiences from the Project through seminars and so on.

(Recommendations to ICMBio)

- Utilization of results from the Project: as the outputs (maps, technical reports, etc.) were not sufficiently utilized, it is recommended to make sustainable use of and disseminate them within the organization of ICMBio. Furthermore, it is essential to share the results and information concerning the Project with related organizations in the Paranã/Pireneus Ecological Corridor Area and continue to improve the integrated ecosystem management on the corridor level in future.

#### **4-6. Lessons Learned**

(Lessons learned in JICA)

- Position of the project and clarification of the project purpose: the Project was implemented under the conditions where neither legal framework nor implementing guidelines existed about “the ecological corridor.” Furthermore, “the integrated ecosystem management” of the Project Purpose was not clearly defined; therefore the Project purpose became unclear. As the scope of activities of environment-related projects tends to be broadened, it is necessary to define the position of the project from a long-term perspective and clarify what is to be achieved by the project within the scope of the estimated project period, budgets and so on. Moreover, in order to manage the project efficiently and to yield outcomes, it is indispensable to set up a project purpose on which anybody can share the same understanding, in any circumstances.
- Importance of verifying the appropriateness of PDM: as many stakeholders are involved in environment projects and activities tend to be spread out, it is dispensable to design the project how the project achieves the project purpose with steps of activities, monitoring, review of results, and feedback to adjustment or improvement of activities. Under the limited framework of the project, in order to implement a project efficiently and to attain outputs and project purpose properly, it is essential to have PDM with clear logic, checked and advised by an expert on project design. In case that any problems are identified, it is inevitable to revise the PDM timely in order to take necessary countermeasures.
- Appropriate project management: since environment projects require coordination among a wide range of stakeholders, monitoring and progress management based on well-defined indicators is important to establish common understanding on the Project. Regarding this Project, a consultant who was locally employed conducted a study for the terminal evaluation. However, evidences for the evaluation analyses were not clear in some part. In case of environment projects, it is effective to improve the operation by experts on project monitoring and operational improvement, if necessary. Besides that, owing to the change of administration in Brazil just before starting the Project, it was required to review contents of the Project totally which caused the delay of the project implementation. Since this situation can be predicted beforehand, it was desirable, examining the situation of the Brazilian side, to discuss and assess again on the Project when the C/P organization became stable to some extent under the new regime and then to commence the Project.

(Lessons learned in ICMBio)

- A systematic approach to “integrated ecosystem management” practices with utilization of the outputs of the Project: understanding on the concept and vision of “integrated ecosystem management” was promoted among stakeholders of the Project to a certain extent: however, due to the lack of institutional or policy supports, sustainability was not ensured. It is important to clarify where it takes its position and what concrete measures are to be taken in the Cerrado Ecological Corridor and to take a systematic approach so as to reflect in concrete institutional and policy framework such as supports to prepare a land use plan for sustainable use of natural resources at state and municipality levels.