

*Japan International Cooperation Agency*



*Assessment of the Project:*  
*Monitoring and Improvement of the Water Quality*  
*in the Basin of the*  
*Ypacarai Lake and Paraguay River*

*Executive Summary*

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## Final Project Assessment

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<b>1. Project Summary</b>	
Country: Paraguay	Project Name: Monitoring and Improvement of Water Quality in the Ypacarai Lake and Paraguay River Basin
Area: Environmental preservation and sustainable development of natural resources	
Division in Charge: Local Consultant	Amount of Cooperation (At the Assessment Instance) :
Period of Cooperation	December 10, 2003 through December 9, 2006
	Receiving Institution: Secretary of the Environment [Secretaría del Ambiente – SEAM] and General Direction of Environmental Health [Dirección General de Salud Ambiental – DIGESA / MSPByS]
	Japan Cooperation Agency: JICA
	Other related Cooperating Institutions: none
<p><b>1 – 1 Project Context and Summary:</b></p> <p>Since the execution of the “Study on the Basin of the Ypacarai Lake and Pollution Control Plan” in the year 1983, JICA has been executing several technical assistances related to the control of water quality and its improvement.</p> <p>The Monitoring and Improvement of water quality of the Ypacarai Lake and Paraguay River is a Technical Cooperation Project, with SEAM and DIGESA, from the Ministry of Public Health and Social Welfare as counterpart Institutions, with a period of three years from December, 2003, and is composed mainly by sending third country Nikkei experts from Brazil. The main issues were the “Strengthening the administration of quality norms and environmental conservation” and the “Environmental Monitoring of the Paraguay River basin and the Ypacarai Lake”.</p> <p>As a result of three years of cooperation, legislation related to the protection of water quality in accordance with a categorization of the rivers and streams in Paraguay has been established. On the other side, water in the Paraguay river basin has been monitored, being the most important water source, used by over one million citizens as drinkable water. With regards to the monitoring of water quality, with 26 points of study, seven water quality analyses were performed, as well as the study on the variation in quality of water in the different seasons of the year.</p> <p>During the three years of project execution, 12 counterparts were trained at the investigation institutes in Brazil, and have learned modern technologies related to environmental management and water quality control. Also, and besides the principal Consultant, three water quality Experts and one water management and regulation expert have performed missions to support SEAM, DIGESA and the National Environmental System.</p> <p><b>1 – 2 Contents of Project</b></p> <p><b>(1) Higher Goal</b></p> <p style="padding-left: 40px;">Strengthening of pollution control and environmental policy of hydric resources.</p>	

## (2) Project Objectives

- Establishing superficial water quality regulation and strengthening water resources preservation policy.
- Environmental Monitoring of the Ypacarai Lake and Paraguay river basin.
- Research on the influence of waters of the Ypacarai Lake in public health.
- Strengthening of the environmental preservation policy.

## (3) Results

- Environmental preservation need counter measures that must be planned using participation of the river basin populations.
- Awaken greater interest from the citizens on environmental preservation.
- Determine present situation of water quality in the River basin (building a baseline in water quality).
- Based on results obtained, will prepare Guides for Multi Purpose use of water resources.
- Determine the future pollution status of the Pantanal basin, establishing comparative data for the management and control of water quality in the Paraguay river.
- Increasing and implementation of monitoring measures and recuperation of the Ypacarai Lake, and research related to the use of water for public supply.

## 2. Assessment ( Four Assessment categories: High, Almost achieved, Medium and Low)

### 2 – 1 Pertinence: High

(1) The project fulfill with the Government Program objectives and the activities performed under its framework contribute to improve the Water Resources Policy and the National Environmental Policy, as well as Paraguay's environmental diplomacy. **High-** The project and its results defined in the Local Framework cover the following sectors: *policies, institutional capacities, environmental preservation.*

(2) Does JICA-PY's Office anticipated and responded to significant changes that took place in the environmental sector that might specifically affect the environmental sector?. **Medium:** not fully achieved because the external factors (conditions), in particular the continuous changes of Ministers, prevented that the Project permeate at the higher authorities level. The Project awareness was not sufficiently high so that the SEAM authorities credit it with the importance it represented.

(3) Also, the Project, from the point of view of the needs (training and "hard technology") of the sector, was perceived as very relevant. Qualification: **Almost Achieved**

(4) Considering the immense needs of the environmental sector in Paraguay, any activity selected by JICA and effectively executed by the counterparts will be in accordance with national priorities, will leave its mark and will teach that intervention is relevant, many times, due to the flexibility of the administrative system and the internal decision making system. **Qualification: almost achieved.**

### 2 – 2 Effectiveness:

(1) The Project has regional and national importance. **Qualification: High.** In particular, the water quality data generated by the Project and its use, has had an important relevance in the last year of project, when SEAM used the datas for the drafting of Resolution 255/06, which establishes the category or type of superficial water for Paraguay. Qualification: High. In the last year of execution, it has gained *momentum.*

### 2 – 3 Efficiency:

(1) All investments were performed as defined in the Logical Framework and disbursement timetable. **Qualification: High.** Some activities not foreseen were included, and this contributed to create trust in the water quality results and in having public participation that was not foreseen at first, including participation of vulnerable groups.

(2) Considering local counterpart investment, there was a great difficulty on the part of DIGESA and SEAM in providing the means (mobility, per diem, etc.) to comply with the monitoring water quality campaigns. **Qualification: almost achieved.** In spite of this, thanks to the good will, in particular of the DIGESA technicians and of the principal counterpart, all activities were performed timely. Other important factors that affected the effectiveness of the Project have been, the *absence of coordination between SEAM and DIGESA* as well as the *non existent coordination* within SEAM directorates, in particular due to the lack of managerial abilities.

(3) *Influence on Public health, of the quality of water of the Ypacarai lake used for public supply.* **Qualification: High.** The Project provided all necessary elements (results of physical-chemical and biological analysis) that justified ESSAP's intervention, in performing a special treatment (activated carbon) for the elimination of potential toxic substances in drinkable water.

(4) Assisting Paraguay in the strengthening of local and regional capacities for integral management of the water basins. **Qualification: medium.** Within this objective, the inclusion of the issue of management by basin was determined, which introduced a new concept for its debate; but the effort to implement the debate was very weak

(5) Technological transfer & Cost-Benefit relation: **Qualification: High.** The project as executed under the form of using Japanese technology in the region, has been extremely efficient, both technically and financially, if compared with projects where counterparts are sent to Japan, and missions are sent from Japan to Paraguay. The reasons for this advantage are economical, and technological. Economical, due to the high transportation and staying costs for missions, while technological, due to two aspects: a. Soft technology, that is, the knowledge that the regional expert has on the scientific and technical characteristics of Paraguay, and the cultural aspects of the Paraguayan technician, and b. the climatic conditions (Brazil has a sub-tropical or tropical climate very similar to that of Paraguay, as well as the same species of phito plankton in its slower water streams, that condition the physical-chemical, biological and bacteriological phenomena that take place in the water bodies.

(6) Has JICA known to position itself as a promoter of policies or better practices? **Qualification: medium.** The answer is negative. The Program must look for a balance in its application at the national level, to avoid bothering local actors (Government officials and others). It must be avoided that the agenda be visualized as "managed by an international institution".

#### 2 – 4 Impact:

(1) Do results obtained contribute to the implementation of a water resources policy and to improve the national environmental policy? **Qualification: almost achieved.** It is evident that the Project Final Report recommendations provide a Route Map to follow that will allow for the consolidation of the project's impacts. One notable contribution of the project that will have a large impact in the awter resources development policy, in Paraguay's environmental diplomacy, in particular in the interventions within the projects of Hidrovía, Jindal – Mutún<sup>1</sup>, and gold mining in the Brazilian Pantanal. The data base and the recommendations provided by the Project, allow that Paraguay have a data base line today, on the water quality of the Paraguay river.

(2) *Determine the influence of Public Health on the quality of water from the Ypacarai Lake used for public supply.* **Qualification: High.** The Project had a very significant impact within this component, allowing for pollution prevention and a more rigorous care of water quality controls in the areas affected by the presence of toxic algae.

#### 2 – 5 Sustainability:

(1) Are these activities sustainable? ¿Are JICA projects in the environmental area going to survive the end of their financing. Will political support be maintained? **Qualification: Low.** Within the priorities program prepared by the Technical Secretary of Planning, the environmental component is placed at number 8 out

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<sup>1</sup> Largest gold mining Project in South America.

of 15 topics proposed by the new Government, which let us assume that the same will not be a priority. In the case of DIGESA, in spite of the fact that the beneficiaries feel capable to “continue on their own”; there is great financial weakness in terms of budget. In the case of SEAM, this institution does not see itself as the project’s “owner”.

(2) Has the Project been able to obtain budget increase for the benefited institutions? **Qualification: Low.** The 2007 budget for the counterpart institutions. Considering the budget assigned for the years 2007 (the Project ended in November, 2006), there are no changes evidenced in relation to the previous year, neither in DIGESA nor in SEAM. That is to say, no financial resources have been secured to provide continuity to the project

### **3.Important points to mention**

Some factors that are obstacles for the reaching of the superior goal, for example, the absence of social capital<sup>2</sup>, the scarce financial resources destined as counterparty, scarcity which denotes lack of interest from public administration’s higher management, added to this factors is the absence of knowledge at the citizens’s level.

#### **Recomendaciones**

(1) In projects where the execution through two or more agencies is required, it is important to anticipate the establishment of formal mechanisms of coordination between agencies, in order to ensure an effective and efficient completion of the cooperation.

(2) It has been demonstrated, with the few diffusion and public participation events, the avidity and necessity to strengthen the community based organization and the local environmental authorities, in order to assure the implementation of national policies in to regional/local policies. This planning of public hearings, training, workshops, must be in accordance with the socioeconomic situation in the project’s area of influence. Environmental education and public participation are the sectors that have less possibilities to accede to funds.

(3) JICA must provide more soft assistance aiming to orient the GoPY on the possibilities of opening other windows of financing and to incorporate other sectors like: tourism, catchment conservation, remediation of water basin and sensible ecosystems. A key issue to reach the outcomes and sustainability will be to build alliances, but creating leadership in governmental agencies.

(4) An other key issue is that the Government must assure funds for inputs (vehicles, fuel, per diem) as well as salary adjustment of civil servants before starting any new Project. It is also, a key issue, to build an structured management system from the new Project, identifying responsibilities and tasks allowing the principal consultant or expert to be just an articulator or “hinge” between agencies and not to be the visible leader of the Project.

(5) It is important that the civil servants from several participating agencies, remains within a formal institutional framework, like an interagency comitee in order to provide continuity to the activities of the Annual Operative Plan.

(6) Other key recommendation is to strengthen links and relations between public and citizen sector (public citizen partnership), as well as to facilitate public participation in the preparation of environmental policies at the nacional and local level and strengthening of local governments. JICA must do their best to build empowerment of projects, at the implementing agencies level.

(7) For future projects, JICA must include as a condition: a. to implement a selection process for local counterparts; the Express commitment of the GoPY to provide financial support to the Project;

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<sup>2</sup> Human resources with high values in knowledge, ethics and moral

commitment that the salary level of the human resources of the Project are enough in order to avoid a “Diaspora” to the private sector; to assure the permanence of the trainee civil servant in his/her position during the project.

(8) JICA must continue providing expertise with regional experts, specially in environmental and rural development projects. The cultural and technological reasons are explained in (2-3.5).