

International Bank for Reconstruction and Development

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INSP/R96-2

FROM: Vice President and Secretary

December 26, 1996

INSPECTION PANEL

Request for Inspection

Argentina/Paraguay: Yacyretá Hydroelectric Project

Panel Report and Recommendation

Attached is a memorandum from the Acting Executive Secretary of the Inspection Panel dated December 24, 1996, transmitting a memorandum to the Executive Directors from the Chairman of the Inspection Panel entitled "Request for Inspection - Argentina/Paraguay: Yacyretá Hydroelectric Project - Panel Report and Recommendation". Attachment 1 and Attachment 2, Volume 1 and Volume 2, of the Request for Inspection are available for review in the Boards' Resource Center, Room E-11050.

This Report and Recommendation will be scheduled for consideration at a meeting of the Executive Directors on a date to be determined.

Distribution:

Executive Directors and Alternates
President's Executive Committee
Senior Management, Bank, IFC and MIGA
Inspection Panel

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THE INSPECTION PANEL

OFFICE MEMORANDUM

DATE: December 24, 1996

TO: Mr. Shengman Zhang, Vice President and Secretary, SECV

FROM: Antonia M. Macedo, Acting Executive Secretary, IPN 

EXTENSION: 82597

SUBJECT: **Request for Inspection**
Argentina/Paraguay: Yacyretá Hydroelectric Project

Please find attached for distribution to the Executive Directors and Alternates of IBRD a memorandum from the Chairman of the Inspection Panel entitled "Request for Inspection - Argentina/Paraguay: Yacyretá Hydroelectric Project - Panel Report and Recommendation to the Executive Directors of the International Bank for Reconstruction and Development," dated December 24, 1996.

Attachments

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION**

THE INSPECTION PANEL

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Chairman

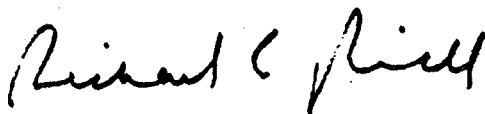
IPN REQUEST RQ96/Z

December 24, 1996

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND ALTERNATES

SUBJECT: Request for Inspection
Argentina/Paraguay: Yacyretá Hydroelectric Project
Panel Report and Recommendation to the Executive Directors of the
International Bank for Reconstruction and Development

In accordance with paragraph 19 of IBRD Resolution 93-10 establishing the Inspection Panel please find attached the report and recommendation of the Inspection Panel concerning the above-referenced Request for Inspection.



Attachments

REPORT AND RECOMMENDATION OF THE INSPECTION PANEL

Request for Inspection ARGENTINA/PARAGUAY YACYRETÁ HYDROELECTRIC PROJECT

Below is (A) Background information, (B) Discussion, and (C) Recommendation of the Inspection Panel ("Panel") on whether or not there should be an investigation ("Recommendation") into allegations made in the above-referenced Request for Inspection ("Request"). Annex 1 contains the Request. Management Response to the Request is provided in Annex 2.

A. Background

1. On September 30, 1996 the Panel received a Request which alleged violations by Management of policies and procedures of the International Bank for Reconstruction and Development ("Bank") in relation to the Yacyretá Hydroelectric Project. ("Yacyretá" or "Project"). The Bank has been involved in the design and implementation of Yacyretá since the mid 1970s. A number of agreements and amendments between the Bank and the Republics of Argentina and Paraguay, a bi-national entity established by both governments, and other entities, relate fully or in part to Yacyretá: Loans 1761-AR for \$210¹ million (Yacyretá Hydroelectric Project approved in FY80), 2998-AR for \$252 million (Electric Power Sector Project approved in FY89), 3281-AR for \$100 million (Water Supply and Sewerage Project approved in FY91), 3521-AR for \$20 million (Flood Rehabilitation Project approved in FY93). Financing of \$300 million under Loan 3520-AR (Second Yacyretá Hydroelectric Project) was approved in September 1992 and subsequently in August 1994 an additional amount of \$146.6 million was reallocated from the uncommitted balance of Loan

2854-AR (SEGBA V Power Distribution Project²) to finance Yacyretá components including the resettlement and environmental protection plan for the Project. This reallocation brought the total amount of Bank financing for Yacyretá to \$895.1 million. In addition, in February 1995 the Board approved a loan for \$46.5 million to the Republic of Paraguay (Ln. 3842-PA) of which \$1.2 million is to finance civil works related to the resettlement activities under the Yacyretá Project.

The Request for Inspection

2. The Request was filed by an organization called SOBREVIVENCIA - located in Asunción, Paraguay - representing persons who live in Encarnación, Paraguay. (the "Requesters"). The Request claims that the environment as well as the standards of living, health and economic well-being of people in the Yacyretá area have been, and may potentially be, directly and adversely affected as a result of the filling of the

¹ Hereinafter "\$" means US\$ equivalent.

² Loan Agreement between IBRD and SEGBA and Guarantee Agreement between the Republic of Argentina and IBRD, June 30, 1988 (Loan No. 2854-AR) later amended by Argentina-IBRD-SEGBA Loan Assumption Agreement, August 19, 1994 to incorporate provisions relating to Loan 3520-AR project activities including in part the environmental mitigation and resettlement plans.

Yacyretá reservoir to 76 meters above sea level ("masl") and the failure of the Bank to ensure—through supervision and enforcement of legal covenants—the adequate execution of the environmental mitigation and resettlement activities included in the Project.

3. The Requesters allege that filling the reservoir inter alia has:

- caused the water to become stagnant and polluted which has contaminated the groundwater supplies used for drinking water;
- affected sanitation systems through discharge of untreated sewage into now stagnant waters that creates health hazards;
- destroyed crops;
- inundated and destroyed island communities and ecosystems;
- flooded farmlands and wildlands;
- displaced local people and wildlife; and
- disrupted fish migration through damming the river, with dramatic impact on subsistence diets and biodiversity.

4. Alleged adverse socioeconomic impacts include:

- loss of jobs, livelihood, and forced resettlement to low quality homes;
- those involved in fishing, ceramics, bakery and laundry services have lost their jobs or their earning capacity has been greatly diminished through loss of fish, top quality clay and loss of customers due to concerns over the poor water quality; and
- distances of resettlement areas from former job sites or sources of income has resulted in additional economic losses due to remoteness and the relatively high cost of transportation.

5. The Requesters claim that the direct and material adverse effects described above result from the Bank's omissions and failures in the preparation and implementation of the Project which violate its policies and procedures including inter alia, the following:

- Environmental Aspects of Bank Work (OMS 2.36)
- Environmental Policy for Dam and Reservoir Projects (OD 4.00 Annex B)
- Environmental Assessment (OD 4.01)
- Indigenous Peoples (OD 4.20)
- Involuntary Resettlement (OD 4.30)
- Project Monitoring and Evaluation (OD 10.70)
- Wildlands Policy (OPN 11.02)
- Cultural Property (OPN 11.03)
- Project Supervision (OD 13.05)
- Suspension of Disbursements (OD 13.40)

6. The Requesters also claim that procedural aspects incorporated in many of such policies, such as basic rights of participation and access to information, have been denied or ignored in the preparation and execution of Yacyretá.

7. In addition the Requesters claim that:

- the Environmental Trust Fund referred to in para. 2.16 of the Staff Appraisal Report ("SAR") for Loan 3520-AR³ has neither been established nor properly funded;
- the Bank has been lax in supervising the Project; and
- the Bank has failed to enforce its rights under the several agreements that it has entered into with the Governments of Argentina ("GOA"), Paraguay ("GOP")

³ Report No. 10696-AR, dated August 31, 1992.

and the Yacyretá Binational Authority (Entidad Binacional Yacyretá "EBY").

8. On October 1, 1996 the Panel notified the Executive Directors and Bank President of receipt of the Request (meaning "Registration" under the Panel's *Operating Procedures*).⁴ On November 1, 1996 the Panel received the Management response ("Response") to the Request.

Management Response

9. The substance of the Response is summarized in paragraph 1.8 which reads as follows:

"We do not agree that the problems which have occurred and their possible consequences for the local population are the result of any alleged Management violation of the Bank's policies and procedures. The salient features of the Management Response are:

- Yacyretá made economic sense when conceived and, even though the economic realities have since changed, it still makes more sense to complete Yacyretá than to stop it.
- all resettlement and environmental mitigation activities required prior to reaching the current reservoir of 76 masl have been met (except some pending matters which are being addressed through appropriate financing and supervision).
- the impacts of increasing the operating level of the reservoir above 76 masl have not yet occurred and are covered by sufficient legal covenants in full compliance with Bank policies.

⁴ See The Inspection Panel, *Operating Procedures* (August 1994) at para. 17.

- although counterpart funding shortfalls have delayed Project implementation, they have not caused harmful impacts, precisely because the reservoir has not been raised beyond its initial operating level.
- the delay in increasing the operating level of the reservoir is, in part, attributable to the Bank's supervision efforts to ensure compliance with resettlement and environmental management activities, supporting the essential principle of Bank operations that the exercise of available legal remedies is not a requirement but a discretionary tool, to be applied only after other reasonable means of persuasion have failed."

Panel: Initial Study

10. After receipt of the Response the Panel decided that an initial field study was needed both to verify the eligibility of the Request and assess the adequacy of the Response.

11. The Panel considered information obtained during Mr. Alvaro Umaña Quesada's ("Inspector") review conducted in the Project area from December 2-6, 1996.⁵ The Inspector consulted with the Governments of Argentina and of Paraguay, EBY, people in the Project area and their representatives from SOBREVIVENCIA. The Panel consulted with the Bank Executive Director representing Argentina and Paraguay.

⁵ The Panel wishes to thank the office of the Bank Executive Director for Argentina and Paraguay for his comments and guidance and the members of SOBREVIVENCIA and the Bank department responsible for Argentina and Paraguay (LA1) for arranging Mr. Umaña's interviews in both countries and particularly the management and staff of EBY for providing logistical support in the project area.

12. As provided in the recent review of the Resolution, the Panel indicated to the Board that it would evaluate the Inspector's findings and would then submit its recommendation as to the need, if any, for an investigation.⁶ Subsequently, the Panel again interviewed Regional Management, staff and others.

B. Discussion

13. The discussion below is based on the Panel's preliminary review of the Request and Response and takes into account the information provided through subsequent interviews in the field and in Washington, D.C.

14. Pursuant to para. 19 of the Resolution it is the responsibility of the Panel to "determine whether the request meets the eligibility criteria set out in paragraphs 12 to 14" after it has received the Response and the Executive Directors have expressed the hope that the Panel process will not focus on "narrow technical grounds" with regard to eligibility. To avoid future possible misunderstandings some comments on the views expressed on eligibility in the Management Response are contained in Attachment 1 to this Report.

15. The Panel is satisfied that the Request meets the eligibility criteria set out in paragraph 12 of the Resolution and that those signing the Request (i) represent communities that feel negatively affected by the design and implementation of the Yacyretá Project; and (ii) properly authorized SOBREVIVENCIA as their legitimate representative. The Inspector verified the identity of the "anonymous" Requesters and obtained first hand

knowledge of some of the alleged material harm on the spot during his field visit.

Preliminary Evidence of Material Harm

16. The Response maintains that the Requesters have not suffered the material harm they allege but the Panel notes that the following statements, for example, appear to indicate otherwise:

"there is *little* evidence of harm having been done to the affected parties" (para. 2 of Cover Memorandum from Mr. Wolfensohn to Mr. Bissell); and that

"Socio-economic outcomes of the relocation of the population affected by operation of the reservoir at level 76 masl are *mostly* satisfactory."
(2.8) [Emphases Added]

17. During his field visit the Inspector interviewed groups of people in the Project area. These discussions and his initial observations *prima facie* confirm some of the allegations of harm made in the Request. For example:

- Quality clay resources seem to be now under water which has an impact on the brick and tile industry. In addition, the 1,200 ceramic workers—unlike other affected people—have not been regarded as eligible for compensation.
- Discharges of raw sewage and slaughterhouse waste into streams that used to flow freely have exposed nearby populations to health risks associated with deteriorating sanitary conditions caused by the rise in reservoir level to 76 masl.

⁶ INSP/SecM96-15, December 10, 1996

- Rise in groundwater levels has contaminated drinking water wells and caused latrines to backup rendering them useless and potentially a health risk.
- People interviewed in one housing resettlement area claim that they have not been fully compensated and that commercial structures to replace their shops or businesses have not been built.
- In the Barrio San Pedro resettlement the Inspector observed leaky roofs and inferior construction materials.

18. A review of these and many other allegations of harm—including damage to wildlife and fisheries—in the Request would require investigation.

Alleged Acts or Omissions

19. **The Request** claims in substance that the act of filling the reservoir to 76 masl but at the same time failing to implement adequately the required resettlement, environmental and social mitigation measures has harmed them and their environment. In addition they express their deep concern about future damage that may occur if the water level is raised to the 78 masl and 83 masl as envisaged in the Project.

20. **Management Response** admits to delays in resettlement and environmental actions required prior to filling the reservoir to the 76 masl level and provides various explanations for the Project's difficulties and delays.

21. **The Panel** notes that:

- the SAR for Yacyretá II explains that Loan 3520-AR is supporting the resettlement program required for raising

the level to 76 masl because "It was expected that the resettlement program would have been completed under the Electric Power Sector Project (Loan 2998-AR)." (Annex 2.7, Attachment 1, para. 2)

- The SAR emphasizes the proper sequencing of project components:

"It is particularly important that the resettlement and environment mitigation measures needed to protect the affected population be executed *prior* to the reservoir rise, and in compliance with defined standards. It would be appropriate to determine whether these have been accomplished in the first semester of 1994 when the Bank would conduct with EBY a mid-term review of the Project. Consequently, the Bank plans to monitor carefully EBY's performance in this area *before* the level is raised to 76m, and again to 78m. (2.11) [Emphases added]

22. The Panel observes that the Resettlement and Environmental Management Plans ("REMP") included a specific sequence of actions for a variety of critical areas such as relocation, compensation, wildlife, compensatory reserves, environmental health and fisheries. At the time the reservoir was filled to 76 masl in 1994 a number of key environmental and resettlement actions had not been completed and many of them now at the end of 1996 still await completion.

23. Quoting the SAR the Response notes that among the three major risks associated with Yacyretá were "failure to implement the resettlement and environmental mitigation activities satisfactorily" (1.3).

Despite the occurrence of such failures Management does not seem to have regarded it as a "major risk" since it agreed to let the reservoir be filled to 76 masl. Much later an internal memorandum from staff working on environmental aspects warned Regional Management of the deteriorating situation:

"The situation is serious, in that the Bank "no objection" to filling the reservoir to elevation 76 meters was conditioned upon the agreement that all pending environmental and resettlement actions, which were not complete at the time of the reservoir filling, would be completed in the course of 1995. The necessary resources to complete the resettlement and environmental pending actions for elevation 76 m have not been provided, despite repeated Bank reiteration of the same request and repeated borrower representations of an intention to do so."

This memorandum was prepared in June 1996—nearly two years after filling the reservoir to 76 masl. Without a more detailed study—that is only possible in the context of an investigation—it is difficult to understand how the imbalance developed between progress in civil works and the REMP was allowed to grow without an effective response from Management. This is one of the very actions and omission which the Requesters claim has adversely affected them.

Alleged Policy Violations

24. **The Request** claims that the Bank's act of authorizing the filling of the reservoir to 76 masl and omission in not insisting on completion of the resettlement, environmental and social mitigation

measures are violations of various Bank policies and procedures: as a result of this failure groups of local people have suffered material harm.

25. **Management Response** appears to suggest that even if there has been harm, it is not the result of any policy violations. It refers to "problems which have occurred and their possible consequences for the local population" but does not agree that they are "the result of any alleged Management violation of the Bank's policies and procedures." (1.8)

26. **The Panel** observes that both the Resettlement and Environmental policies require an **appropriate sequence of actions** to prevent harm to both potentially affected populations and the environment. The sequence of actions in this Project—designed for masl levels 76, 78 and 83—was allowed to slip badly when counterpart funding became unavailable and when an eventual privatization became an option to fund Yacyretá.

27. **The Panel** notes all the other policy violations alleged by the Requesters. However, given this large and complex Request, the Panel has focused only on what appear to be two serious and initially verifiable policy allegations. Even though Management has addressed the complaints, the Panel is not convinced that there has been substantial compliance with the relevant policies and procedures.

Supervision

28. **The Request** also alleges that Management has failed to supervise adequately the Project and to enforce several covenants related to environmental mitigation and resettlement activities.

29. **The Response** argues that the exercise of available legal remedies is not a requirement, but a discretionary tool, to be applied only after other reasonable means of persuasion have failed. (paras. 1.8, 3.61-67).

30. **The Panel**, knowing that Management has flexibility in deciding whether to exercise available legal remedies, must note that the Resolution itself defines as an instance of failure in the compliance of Bank policies and procedures situations where the Bank has "failed in its follow-up on the borrower's obligations under loan agreements with respect to such policies or procedures" (para. 12). In other words, according to Bank policy, compliance is not achieved by merely including covenants in Loan Agreements but rather by ensuring that their provisions are implemented in a timely fashion by the borrower and executing entities.

31. The attention of the Panel was drawn to the discretionary use of legal remedies by an excellent OED analysis. The recent OED Performance Audit Report for two of the loans providing financing for Yacyretá.⁷ states that:

"the Bank accepted repeated violations of major covenants" (para 31); and adds that:

"[c]ovenanted actions are a precarious way to ensure the viability of a financing plan in light of the Bank's willingness to 'accommodate' non-compliance and the added difficulty of stopping a large unitary project once it has

reached a certain stage of implementation." (para. 39)

32. The Response denies that the provision of funds for the implementation of pending actions has constituted a problem. The evidence reviewed so far by the Panel suggests otherwise. Damage related to non-compliance with covenants appears to have occurred. A more detailed analysis—which is only possible under an investigation—would be required to ascertain whether there has been a violation of Bank policy through failure to enforce legal covenants, as stated by the Requesters, or compliance thereof has been achieved through "other reasonable means of persuasion" as claimed by Management.

Remedial Actions

33. **The Management Response** includes "Pending Actions" as Attachment A and describes it as follows:

"With respect to compliance with pending actions related to elevating the reservoir to the current operating level of 76 masl, a time-bound Action Plan, supported by a Special Account, has been put in place to complete all pending actions no later than December 1997."

The Response states that "These activities will be completed by the end of 1997, thus concluding the resettlement and environmental mitigation measures required for raising the operating level of the reservoir to 76 masl." (2.9).

34. **The Request** as noted above at para. 7 complains that the Environmental Trust Fund to finance the REMP has neither been established nor properly funded.

⁷ OED Performance Audit Report No. 15801 on Loans 1761-AR and 2998-AR, SecM96-916, August 19, 1996.

35. **The Response** states that the claim is incorrect: that the Trust Fund (to finance all REMP activities) was established by EBY in November 1994 and that while "amounts deposited in this Fund were not precisely those agreed with the Bank, the Borrower has funded the required REMP activities up to elevation 76 masl through the Fund and otherwise." (3.16)

36. Further clarifications by the staff explain that the Trust Fund referred to in the SAR was never established but rather an account for receiving funds for the execution of the REMP was opened and an initial deposit of about \$3 million made on January 13, 1995: this is in reality the "Trust Fund" referred to in the Response. This account was used during 1995 but as the GOA contributions to EBY were reduced and later on ceased, the account "lost its purpose".

37. Two other accounts have since been established for similar purposes:

- a so called "special account" opened in August 1996 with an initial deposit of \$4 million (for which the Panel has been unable to obtain operating documentation); and
- an "Escrow Account" just opened on December 10, 1996 with an initial deposit of \$5.4 million and with further deposits expected to reach a total of \$8.2 million to finance certain specified REMP activities that were supposed to be carried out before the reservoir reached the 76 masl level. (The Panel has received documents relating to this account).

38. **The Panel** notes the importance attached to funding the Environmental Trust

Fund for this component in the SAR for Loan 3520-AR:

"Given the underlying importance of satisfactorily completing the Resettlement and Environmental Management Programs *required for different reservoir operation levels*, during negotiations EBY agreed to establish by *November 1994*, and, thereafter maintain an Environmental Trust Fund on terms and conditions satisfactory to the Bank by depositing therein the amounts necessary to finance in a timely manner all activities under these programs and for the Arroyos protection works, *such amounts* to be derived from the sales of electricity or any other resource and *be at least US \$18.3 million in 1995, US \$60.9 million in 1996, US \$101.6 million in 1997, and US \$2.7 million in 1998...* withdrawals from such account would be made exclusively to finance these activities." (2.16)
[Emphases added]

39. As evidenced by the above SAR data, neither the \$8 million already deposited, nor the \$16 million in funding anticipated by the Management Response appear to be adequate to implement pending activities of the REMP that may be necessary to meet the policy requirements and the Requesters' concerns. The December 20, 1996 Back to Office Report confirms the seriousness of the financial gap facing the Project at any operating level.

C. Recommendation

40. The Yacyretá Hydroelectric Project has represented a massive effort spanning over twenty years, exceeding \$8 billion in

cost and including a large number of highly complex issues and uncertainties. It is now uncertain whether or when the Project will reach its original design level and generating capacity and what would be the sources of the funding to complete the Project including the REMP. The Panel has been informed that, to date, while the main civil work infrastructure components are almost complete, only about a fifth of the housing in the resettlement component has been completed and other activities and social mitigation measures lag far behind. This is an unusual imbalance.

41. Based on the preliminary review the Panel is satisfied that there have been material adverse effects which may have resulted from policy violations of a serious nature.

42. The recommendation below for an investigation represents the Panel's preliminary conclusion that the Request is eligible for investigation. It will be necessary to conduct an investigation in order to determine whether the harm claimed or likely to occur and the allegations of serious violations of policy are well founded.

43. *Based on the foregoing the Panel recommends that the Executive Directors authorize an investigation into the violations of Bank policies and procedures alleged in the Request.*

ATTACHMENTS (1)
ANNEXES (2)

ATTACHMENT I

Attachment 1

Although it is the Panel's role to ascertain the eligibility of a Request, in its Response Management raises a number of eligibility issues that relate to several of the requirements set forth in paragraphs 12-14 of the Resolution.

1. First, referring to the status of the financing provided by the Bank for this project (Resolution para. 14(c)), Management states that it is addressing the Request primarily in the context of Loan 2854-AR (which is 75% disbursed), since the other loans cited in the Request have been either already fully disbursed and closed (Ln. 1761-AR and 2998-AR) or have been substantially disbursed (Ln. 3520-AR, 98% disbursed) noting, however, that the legal documents of loan 2854-AR have been amended to contain the environmental and resettlement provisions of loan 3520-AR.

No reference is made to loan 3842-PA which is also financing several activities related to this project (see para. 2 below).

2. Management also states that "[i]n a departure from the terms of the Board Resolution, para. 12, the Request is not being filed 'by an affected party in the territory of the Borrower.' The Borrower with respect to Bank loans for the Yacyretá Project is the Argentine Republic, whereas SOBREVIVENCIA and the individuals it claims to represent are all Paraguayan." Adding that "[n]evertheless, in the unique circumstances of this case, where there is binational execution of the project and where the physical impact of the project occurs mostly in the territory of the national partner that happens not to be the borrower, Management understands the pragmatic interest in applying the Board Resolution flexibly on this point."

Although the Panel concurs with the flexible spirit of Management's statement, it would like to note for the record that:

(i) there is a loan to the Republic of Paraguay financing a number of activities related directly to the claims of the Requesters. The project description in the loan agreement for Loan 3842-PA reads as follows:

"Part C: Civil Works in Encarnación

Construction of infrastructure works, including, inter alia: (a) a water supply and sewage disposal; (b) roads; (c) storm water drainage and solid wastes disposal facilities; and (d) a power

distribution system, for the benefit of about 3,000 people to be resettled under the Second Yacyreta Hydroelectric Project."¹

No significant disbursements have been made to date for this project component.

(ii) although the borrower of record is the Argentine Republic, the direct beneficiary of the Bank's loans and project executing entity is a bi-national entity ("EBY") which is equally and jointly owned by both countries; and

(iii) there are a number of agreements entered into by GOP which contain obligations which the Requesters claim have not been fulfilled either entirely or to a great extent by the GOP or its agencies.

3. Management questions the right of SOBREVIVENCIA to file the Request partly on its own, because there is no allegation that the NGO itself has suffered or will suffer a material adverse effect as a result of the alleged policy violations and, therefore, it would not be an affected party according to para. 12 of the Resolution.

The Panel agrees that a strict interpretation of the Resolution could exclude SOBREVIVENCIA as a legitimate requester, but such an interpretation would fail to recognize that SOBREVIVENCIA is a local NGO formed by Paraguayan citizens and that there is a clear national and not merely local interest in preserving biodiversity and improving environmental conditions in the project area. Nowadays when most governmental, non-governmental and international organizations are all concerned and active on issues related to global environmental developments, it would certainly be inappropriate to argue that only the inhabitants of a particular area are or may be negatively affected by a national project of the magnitude of Yacyretá.

4. Anonymity. Management states that the fact that the Requesters represented by SOBREVIVENCIA have requested to remain anonymous "imposes serious constraints on Management's ability to respond fully to the Request, particularly with regard to issues, vital in the context of respecting the terms of the Resolution, such as scope of the alleged harms, exhaustion of remedies, seriousness of alleged violations and causation."

The Panel notes that:

(i) since the first Request for Inspection, potentially affected people have voiced their concern about the risk of reprisals, which in some countries, cultures or political systems can be of a significant nature. Protecting a complainant's anonymity is not new in international fora in which private citizens are allowed to complain against public officials.² Furthermore, the Board did accept this practice

¹ Schedule 2 to the Loan Agreement.

² See explanation about procedures for making human rights complaints in the United Nations, the ILO, etc. in "Guide to International Human Rights Practice" (Hurst Hannum, ed., 2nd edition, 1992)

in the case of the Request for Inspection related to the Arun III Hydroelectric Project;

(ii) Most of the individuals represented by SOBREVIVENCIA have been interviewed by the Inspector in charge of the initial review of the Request and they can be regarded as representatives of whole categories or groups of people allegedly affected by the project. Neither the Request includes, nor the Panel can deal with, individual grievances in this case.

(iii) As an established rule of internal procedure, and more so in these cases, the Panel takes the utmost care in verifying whether the individuals signing a Request understand its terms, live in the area that may be affected by the project, could possibly be affected by the project³ and, if applicable, agree to be represented by a third party.

Therefore, the Panel does not agree with Management's claim that the anonymity of the Requesters may affect its ability to respond to their claims and allegations in the Request.

Regarding the eligibility of the Requesters, according to para. 19 of the Resolution, it is the responsibility of the Panel to "determine whether the Request meets the eligibility criteria set out in paragraphs 12 to 14" thereof, and the final authority on this matter belongs to the Board.

³ See INSP/SecM95-6: *Tanzania Power V, Project (Credit 2479-TA) Panel Recommendation* where the Panel did not recommend an investigation of alleged violations of OMS 2.36 because, after the Inspector's field visit, the Panel found that the Requesters did not provide evidence that they were likely to be directly and adversely affected by the project.

ANNEX I



ANNEX I

Asunción. 12 de Septiembre de 1996

Señor
Richard Bissell
Presidente
Panel de Inspección
1818 H Street, NW
Washington, DC 20433

Estimado Señor Bissell:

Nos dirigimos a Usted para remitirle este pedido de inspección de violaciones de políticas del Banco Mundial en el diseño y la implementación del Proyecto Hidroeléctrico Yacyretá. Presentamos este pedido en nombre de SOBREVIVENCIA, Amigos de la Tierra Paraguay y como representantes de personas directa, material y negativamente afectadas por el proyecto.

Adjuntas a esta carta, enviamos copias de las Autorizaciones de Representación respectivas. Debemos aclarar que, debido a la posibilidad de represalias contra los reclamantes, debemos pedir que sus nombres y afiliaciones permanezcan estrictamente confidenciales.

Durante los últimos 20 años, el Banco Mundial y el Banco Interamericano de Desarrollo han invertido más de mil millones de dólares en el diseño y en la construcción del Proyecto Hidroeléctrico Yacyretá. Este proyecto ha estado plagado por corrupción rampante y por falencias en la mitigación de masivos impactos sociales y ambientales. Los bancos han concentrado su aporte financiero en las obras de ingeniería y han ignorado los aspectos sociales y ambientales del emprendimiento. Este proyecto inunda más de 100.000 hectáreas de tierras de alto valor en biodiversidad y desplaza a más de 50.000 personas.

A pesar de los evidentes daños sociales y ambientales asociados al proyecto Yacyretá, los bancos han fallado sistemáticamente en asegurar que cumpla con sus procedimientos y políticas. Alegamos que, entre otras, han sido violadas políticas del Banco sobre Reasentamientos Involuntarios, Pueblos Indígenas, Medio Ambiente, Valores Culturales, Evaluación y Monitoreo de Proyectos y Supervisión. Cada una de estas violaciones está documentada en el reclamo que se adjunta.

SOBREVIVENCIA, Amigos de la Tierra Paraguay, ha estado haciendo un seguimiento activo del Proyecto Hidroeléctrico Yacyretá y ha estado trabajando con las comunidades locales desde 1991. SOBREVIVENCIA es una organización sin fines de lucro dedicada a la acción e investigación sobre la protección, conservación y restauración de la calidad ambiental. En nuestros trabajos damos alta prioridad a comunidades indígenas, campesinas y marginalizadas urbanas que viven en la pobreza. Hemos advertido repetidas veces a la EBY y a los Bancos sobre los riesgos y problemas asociados con la financiación del Proyecto Yacyretá, pero nuestras advertencias y preocupaciones han sido sistemáticamente ignoradas. Las voces de las poblaciones afectadas y de la sociedad civil han sido silenciadas y la participación pública en la toma de decisiones sobre este proyecto ha sido prácticamente nula. Los bancos y la entidad que éstos han apoyado y financiado, la Entidad Binacional Yacyretá (EBY),

no han respondido a las preocupaciones y demandas de la gente cuyas vidas están siendo afectadas por este proyecto.

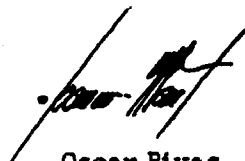
Por todo esto, ahora sólo nos queda el recurso que traer este reclamo a la atención del Panel de Inspección.

Adjuntamos copias de correspondencia pasada con los Bancos y con la EBY.

La situación en Yacyretá es extremadamente urgente, especialmente a la luz del hecho que los Bancos, la EBY y los gobiernos de Argentina y el Paraguay están activamente discutiendo la privatización del proyecto. Esta privatización sólo puede exacerbar una situación ya de por sí mala y no remediaría las pasadas violaciones de las políticas del Banco. La EBY y los bancos han fallado en demostrar capacidad o voluntad para mitigar los impactos sociales y ambientales del proyecto en su etapa actual, con el embalse a cota 76 metros sobre el nivel del mar. Si el Proyecto Hidroeléctrico Yacyretá es privatizado, el sector privado procurará elevar el nivel del embalse a la cota 83 metros tan pronto como sea posible, con el fin de maximizar sus ganancias sin preocuparse por la destrucción que resultará de esa elevación. Los proponentes de la privatización están buscando privatizar los ingresos generados por el proyecto y al mismo tiempo socializar los costos.

Ni la privatización ni la elevación del nivel del embalse deben realizarse hasta que las medidas de mitigación sociales y ambientales sean plenamente desarrolladas e implementadas.

Agradeciendo su atención a esta solicitud y esperando trabajar con Usted en la investigación de este reclamo, le saludamos atentamente.



Oscar Rivas
Coordinador



Asunción. September 12. 1996

Mr. Richard Bissell, Chairman
The Inspection Panel
1818 H Street, NW
Washington, DC 20433

Dear Mr. Bissell:

SOBREVIVENCIA, Friends of the Earth Paraguay, respectfully submits this Request for Inspection of violations of World Bank policies in the design and implementation of the Yacyreta Hydroelectric Project (YHP). We are filing this claim on behalf of SOBREVIVENCIA and as representatives of persons directly, materially and adversely affected by the project. Original copies of Authorizations of Representation are attached to this letter, but due to the likelihood of retaliation against those individuals, we must ask that their names and affiliations remain strictly confidential.

Over the past 20 years, the World Bank and the Inter-American Development Bank have poured well over a billion dollars into the design and construction of the YHP. The project has been plagued by rampant corruption and a failure to adequately mitigate the massive environmental and social impacts. The Banks have concentrated their financing on the physical works and have ignored the environmental and social aspects of the project. The project is flooding over 100,000 hectares of wildlands and is scheduled to displace 50,000 people. Despite the very clear environmental and social dangers associated with this project, the Banks have systematically failed to ensure that the YHP complies with their policies and procedures. We allege that, among others, Bank policies on Involuntary Resettlement, Wildlands, Environmental Assessment, Indigenous Peoples, Environmental Policy for Dam and Reservoir Projects, Cultural Property, Project Monitoring and Evaluation, and Supervision have been violated. Each of these violations is documented in more detail in the attached claim.

SOBREVIVENCIA has been actively monitoring the YHP and working with local communities since 1991. SOBREVIVENCIA is a non-profit organization dedicated to action and research for the protection, conservation and restoration of the environment. Our works prioritize indigenous, peasant and marginalized urban communities living in poverty. We have repeatedly warned EBY and the Banks of the risks and problems associated with the financing of the YHP, but our warnings and concerns have been consistently ignored. The voices of the affected people and of civil society have been silenced and public participation has been a sham. The Banks and the entity they have supported and financed, the Entidad Binacional Yacyreta (EBY), have been unresponsive to the concerns and demands of the people whose lives are being affected by this project.

Accordingly, we have no choice but to bring this claim to the attention of the Inspection Panel.

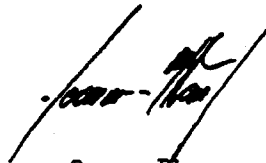
We have attached to the claim copies of correspondence with the Banks and EBY.

The situation at Yacyreta is extremely urgent, especially in light of the fact that the Banks, EBY and the governments of Argentina and Paraguay are actively discussing privatization of the project. Privatization would only exacerbate an already bad situation and would not remedy the past violations of Bank policies. EBY and the Banks have failed to demonstrate the capacity or willingness to mitigate the environmental and social impacts of the project at 76 meters above sea level (the current level). If YHP is privatized, the private sector will seek to raise the reservoir to 83 meters as quickly as possible, in order to maximize profits without regard for the destruction that will result from that elevation. The proponents of privatization are seeking to privatize the income generated by the project while socializing the costs.

Neither privatization nor further elevation of the reservoir should take place until environmental and social mitigation measures are fully developed and enforceable.

Thank you for your attention to this project. We look forward to working with you in the investigation of this claim.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Oscar Rivas', is written over a horizontal line.

Oscar Rivas
Coordinator

REQUEST FOR INSPECTION

1. SOBREVIVENCIA, Amigos de la Tierra Paraguay, files this dual claim to the World Bank Inspection Panel and the Inter-American Development Bank's Investigation Mechanism, on its own behalf and on behalf of other persons whose names and addresses are attached, all of whom are directly and adversely affected by the Yacyretá Hydroelectric Project. SOBREVIVENCIA, a non-profit organization dedicated to protecting the environment and the quality of life of indigenous, peasant and marginalized urban communities living in poverty, has been actively working in the areas affected by the project since 1991. The individual claimants live in Encarnacion, Paraguay, and are suffering from the Project's rising water level. Due to the potential for retaliation, the names of those persons who have authorized SOBREVIVENCIA to represent their interests have been made available only to the World Bank Inspection Panel and are otherwise to remain confidential.

2. Claimants have suffered, as a direct result of the partial filling of the Yacyretá reservoir and the violations of Bank policies set forth below, serious impacts on their standards of living, their economic well-being, and their health. For example, the Banks have violated policies on resettlement, environmental assessment, indigenous peoples, and wildlands. They have also failed to adequately supervise or monitor the Borrower or the beneficiary, with the result that the programs designed to mitigate the social and environmental impacts of the project have been neglected to the harm of the claimants and others directly affected by the project.

3. Socio-economic impacts include loss of jobs and livelihood and forced resettlement to smaller homes of poorer quality. Workers in occupations including ceramic making and fishing have lost their resource base. Others, including washerwomen, bakers and pastry makers in the zone adjacent to the reservoir have lost customers concerned over the effects of lower water quality on the goods they produce and the services they provide. The distances of resettlement areas from their former homes have resulted in additional economic dislocation from the claimants' prior jobs and sources of income. They have also lost their social network, and are suffering separation from their families and friends. Their diminished economic capacity and the relatively high cost of transportation has forced many of them to withdraw their children from school so that they can work to help support their families, with a resulting loss of educational opportunities and hope for future generations. Families that were given small plots of land in compensation for lost farmland have often found that they are in areas of very poor soil, which in practical terms means they can be farmed only as long as EBY provides fertilizers and other chemical inputs.

4. The claimants have also suffered increased health problems caused by poor water quality. The rising reservoir has introduced stagnant, polluted water and has

contaminated the groundwater supplies used for drinking water. The rising water table has also incapacitated sanitation systems and destroyed crops. In addition, untreated sewage is discharged into the lake and instead of being carried downstream it stagnates in the proximity of homes now near the water level. The municipal slaughterhouse, now on the shore of the reservoir, discharges wastes directly into an arroyo used by local residents for bathing and cooking water. Localized stagnant pools in the reservoir have also caused concern regarding the presence of vectors for diseases such as malaria, schistosomiasis and skin diseases. Among the health impacts which have been registered, and which probably result from the filling of the reservoir, are increased respiratory infections, diarrhea, skin rashes, skin and intestinal parasites, nutritional disorders, and stress-related conditions.

5. The partial filling of the reservoir has also inundated and destroyed island communities and ecosystems, flooded farmlands and wildlands, and displaced local people and local wildlife. The damming of the river has disrupted fish migration, with dramatic impacts on subsistence diets, earning capacity of fisherfolk, and biodiversity.

6. The World Bank and the Inter-American Development Bank have a mandate to provide financing to stimulate development and alleviate poverty. People affected by Bank projects are supposed to participate in and benefit from the projects. In the case of the Yacyretá Hydroelectric Project, the quality of life for local people and their environment have only been diminished by the project. The intended beneficiaries are consumers of electricity in Buenos Aires, but even if the dam were fully operational and the water level rose to a devastating 83 meters above sea level, the cost of electricity generated by the project would be more than three times the competitive market price in the region, according to the World Bank's own review of the project. The negative impacts of the project on the local people and their environment have been exacerbated by a failure of the Banks to adequately supervise and monitor the project, and their failure to follow their own policies and procedures.

7. Given that completion of the project would cause even greater problems than at present; given that the Banks and the entity they have financed (the Entidad Binacional Yacyretá, or EBY) have demonstrated very little interest in or capacity to mitigate the social and environmental consequences of the project; and given that the economic justifications for the project are inherently flawed, we call for construction to be stopped with the reservoir at elevation 76 meters asl and for a prohibition on raising the level of the reservoir unless and until (a) proper social and environmental mitigation has been done to the satisfaction of the affected people and (b) there has been further examination of the economic feasibility of continuing the project.

I. Introduction to Project.

8. The Yacyretá Hydroelectric Project is a joint project between Argentina and Paraguay that involves the construction of a major dam, 67 km in length, on the Rio Parana. The Parana forms part of the border between Argentina and Paraguay. One of the largest hydroelectric projects in the world, the dam will produce 2,700 megawatts of electricity for Argentina. The project has been plagued by delays, corruption,

procurement disputes, political changes, failures to conform to Bank policies, and the reluctance of the Argentine government to provide its share of counterpart financing.

9. The World Bank and the Inter-American Development Bank (IDB) have a long history of involvement in the Yacyretá Hydroelectric Project. The first loan for the project was approved in 1979. The beneficiary of the loans has been a binational commission, the Entidad Binacional Yacyretá (EBY), which was established pursuant to a treaty signed by the two countries in 1973. The International Treaty of Yacyretá calls for equally shared co-ownership of the project between Argentina and Paraguay. (SAR, IBRD Loan 3520-AR, para. 2.1). EBY's mandate is to design, build and implement the project; it is administered by a Board of Directors and an Executive Committee, whose members are appointed by both Argentina and Paraguay. The hydroelectric complex installations and ancillary works are jointly owned by both countries in equal parts, and the power produced is also owned by both countries in equal parts. (SAR, IBRD Loan 3520-AR, Annex 2.1, paras. 5, 7).

10. Although the electricity from the joint project is going exclusively for use in Argentina, most of the adverse impacts of the project are in Paraguay. The vast majority of the physical works of the dam are located on Paraguayan territory, and the loss of wildlands and homes will also be concentrated in Paraguay. If the reservoir is raised from the current level of approximately 76 meters asl to its targeted elevation of 83 meters asl, it would cover 1,650 square kilometers, inundating approximately 80,000 hectares in Paraguay and 29,000 hectares in Argentina above and beyond the original river bed.

11. At the moment, the civil works are nearly complete, eleven out of the proposed 20 turbines are operating and the water level behind the dam is approximately 76 meters above sea level (asl). The project calls for raising the water in two additional stages, to 78 meters asl and then to 83 meters asl. According to the terms of the loan agreements, raising the water level above 78 meters will require the approval of the World Bank. The Bank documents also state that the Bank cannot approve raising the reservoir level above 78 meters unless there is a satisfactory completion of the Resettlement and Environmental Management programs (REMP), together with an adequate financing plan to carry out the activities under the programs. Adequate financing, in turn, requires deposits into the currently non-existent Environmental Trust Fund (discussed below). The actual rise should not occur before a "fully satisfactory completion of the revised REMF." (SAR, IBRD Loan 3520-AR, para. 2.46).

12. Each stage of filling the reservoir has significant social and environmental impacts. For example, at 83 meters asl the Project will displace approximately 50,000 people and inundate over 100,000 hectares of previously undisturbed wildlands. "Of the total flooded area, about 78,200 ha will be in Paraguay and 29,400 ha will be in Argentina. The great majority of the area to be inundated is sparsely-populated wildlands." (SAR, IBRD Loan 3520-AR, para. 2.45). Island ecosystems, marshes and grasslands, which harbored unique biodiversity, have already been lost, and the indigenous peoples and traditional communities that lived on those islands have been involuntarily resettled. The Project has also adversely affected small riverside

communities and the cities of Encarnacion, Paraguay and Posadas, Argentina, causing enormous social disruption. People are being forced to abandon their homelands, their sources of sustenance from the river and their means of earning a livelihood. These impacts have been significant at the current water level, but will increase by an order of magnitude when and if the water level is raised to 83 meters asl.

13. We find it particularly disturbing that a reservoir level of 83 meters asl, which has the most devastating social and environmental impacts, is described as the optimal level for the dam. A lower water level would significantly reduce the environmental and social consequences, and save considerable money in a project already experiencing massive cost overruns. Certain Bank policies, such as the resettlement policy and the environmental policy for dams and reservoirs, recognize that design considerations such as lower reservoir levels can vastly reduce the social and environmental impacts of a project; such policies have not been applied in this case. The environmental policy on dams and reservoirs states that wherever possible, adverse environmental impacts should be avoided, minimized or compensated for in project design, including modification of dam height. (OD 4.00, Annex B, para. 4). Similarly, the resettlement policy states that all viable options for project design need to be explored to minimize involuntary resettlement, and it specifically notes that "reductions in dam height may significantly reduce resettlement needs." (OD 4.30, para. 3(a)).

14. There has been inadequate consideration of design alternatives that would involve markedly less social and environmental impacts. The SAR for Loan 3520-AR specifically notes that "Permanent operation of the Yacyretá reservoir at a lower level (such as EL 76 or 78) would significantly reduce environmental mitigation costs." The SAR summarizes the savings as follows: (1) the number of involuntarily resettled people is at least 34,500 people fewer at 76 than 83; (2) less risk of stagnant water at 76 than at 83; (3) 50% less wildlands flooded at 76 than 83, with proportionately lower wildlife losses; (4) protect the Parana-type rainforest (with its various endangered species) upriver of Posadas and Encarnacion at 76; at 83, over 3,600 hectares would be flooded; (5) at 76, the Ana Cua branch of the Parana river would receive a substantial amount of water all year long, since the Ana Cua spillway would operate on a more or less continuous basis. (SAR, IBRD Loan 3520-AR). Thus, operating the reservoir at a lower level would specifically avoid the worse damages associated with the project, damages which the Borrower and EBY have failed to demonstrate that they have the willingness or capacity to mitigate.

15. The governments and the multilateral Banks are actively promoting privatization of the project. Proponents of privatization argue that it is the only way to finance the environmental and social mitigation required by the project. This argument ignores the responsibility of the Banks and the Argentine government for failing to live up to Bank policies and the terms of the numerous loan agreements. Social and environmental mitigation should have been built into the financing of the project. Argentina is using economic and political leverage to pressure Paraguay to agree to privatization. This, in turn, is leading to political unrest as evidenced by the recent contractors' strike. We request that the Inspection Panel and the Investigation Mechanism consider this claim in the context of the privatization debate. How would privatization affect the environmental

and social components of the project now and in the future? How would the rights and interests of those who have already been harmed by the project be protected under a privatization scheme? How would privatization affect decision-making relating to water management for multiple use, e.g. electricity, fisheries, health? How will the private sector be held accountable for recurrent costs of environmental mitigation, including reservoir maintenance to guard against schistosomiasis, malaria, and other water-borne diseases? What responsibilities must the Banks assume before privatization could be approved?

II. History of Project Financing.

16. Over the past seventeen years, the World Bank and the Inter-American Development Bank have together provided over \$1,740,000,000 in support of the Project. Several loans have been granted specifically for the project - such as IBRD loan 1761-AR for \$250 million in 1979, IBRD loan 2998-AR for \$250 million in 1988, IBRD loan 3520 -AR for \$300 million in 1992; IDB loan 346/OC-RG for \$210 million in 1978, IDB loan 555/OC-RG for \$250 million in 1988, IDB loan 583/OC-RG for \$250 million, and IDB loan RG/0004 for \$130 million in 1993. These loans account for only a part of the financing, however, as the Banks have also re-directed funding from other loans to benefit the project, including, at a minimum, funds from IBRD loan 2854-AR (the SEGBA V loan, redirecting approximately \$138 million) and IBRD loan 3281-AR (originally for sanitation for the Province of Misiones) and IBRD loan 3521-AR (Flood Rehabilitation Project). In addition, there have been many other loans by both the World Bank and the IDB to finance improvements in the Argentine energy sector and transmission of electricity, which have also directly affected the Yacyretá project. The IDB has also financed PR-0030, a \$50 million loan to Paraguay for the Yacyretá Transmission System. Together, this financing package constitutes continuous and ongoing support by both Banks for the project.

17. Despite these enormous expenditures, the Banks have not adequately financed the environmental and social mitigation that is necessary to address the negative impacts of the project. Instead, they have required the Government of Argentina to provide counterpart financing to cover land acquisition, administration, and the resettlement and environmental protection program. Requiring Argentina, which the Banks have recognized is in a financial crisis, to provide financing for the mitigation of impacts felt largely in Paraguay is totally unrealistic and ignores consideration of political will. In fact, Argentina decided to reduce its contribution to the project's 1995 budget and has reportedly refused to finance any of its contribution to the 1996 budget. In addition to failing to provide funding that would allow EBY to operate the environmental and resettlement programs, Argentina is also apparently failing to meet its commitments under the loan agreement to resettle all members of its population affected by the project, regardless of when they moved into the project area.

18. The Banks have also failed to ensure that EBY was capable of implementing the required environmental and resettlement mitigation measures. They have consistently provided continued funding knowing that EBY was institutionally weak. "Under Loans 1761-AR and 2998-AR, EBY considered the resettlement and environmental protection

works as secondary to the construction of the civil works. Within EBY's management, there was no professional with requisite skills, experience or interest to oversee the resettlement and environmental protection." (Project Completion Report, IBRD Loans 1761-AR and 2998-AR). In addition, the staffing of the resettlement and environment department in EBY has been poor. In fact EBY reduced the number of people in the Environment and Resettlement Unit from 195 in 1990, to 117 in 1991, to 42 in 1992. (SAR, IBRD Loan 3520-AR, Para. 2.23).

III. Summary of Policies Violated.

19. We understand that the World Bank has the following relevant policies and/or procedures: Environmental Policy for Dam and Reservoir Projects (OD 4.00 - Annex B); Environmental Assessment (OD 4.01); Involuntary Resettlement (OD 4.30); Indigenous Peoples (OD 4.20); Wildlands (OPN 11.02); Supervision (OD 13.05); Project Monitoring and Evaluation (OD 10.70); Suspension of Disbursements (OD 13.40); Cultural Property (OPN 11.03); and Environmental Aspects of Bank Work (OMS 2.36). In addition, the Inter-American Development Bank has policies on Procedures for Classifying and Evaluating Environmental Impacts of Bank Operations and Strategies and Procedures on Socio-Cultural Issues as Related to the Environment. During the course of the design and construction of the Yacyretá Hydroelectric Project, each of these policies has been violated.

20. Although we have been unable to locate a particular World Bank or IDB policy regarding transboundary project impacts, we believe that if such a policy exists it must have been violated. This project involves the construction of an enormous dam for the benefit of Argentina, with most of the negative effects being felt in Paraguay. The majority of the environmental and resettlement impacts are in Paraguay. Argentina's refusal to provide counterpart financing is directly impacting Paraguayans, as is the Banks' failure to incorporate environmental and social mitigation into the design and financing of the Project. We believe that the decision to structure the financing in such a way that transboundary mitigation depended on national counterpart funding, rather than including such mitigation in the core Bank loan financing, was irresponsible and ignored political and economic realities. The claimants are among the many thousands of people who are suffering the consequences of this decision by the Banks.

21. The range of violations have been systematic and pervasive. The violations are both procedural and substantive in nature. Basic rights of participation and access to information, which are incorporated in many of the above policies, have been denied in this project. The Banks have provided financial support to a supra-national entity, the Entidad Binacional Yacyretá (EBY), which is systematically unresponsive to the concerns of citizens or either of the two governments. The Banks have also been unresponsive and unaccountable. Citizens affected by and concerned about the impacts of the Project have not been allowed meaningful participation in any phase of the Project. Attempts to raise problems and concerns with EBY and the Banks have been unsuccessful. The specific concerns of the claimants are discussed below.

IV. Social Concerns.

A. Resettlement.

22. The Banks have failed to take financial responsibility for the resettlement of persons displaced by the project. Although they have known from the beginning that the project would displace tens of thousands of people and impact many more, the Banks failed to incorporate resettlement planning in the design and financing of the project. This violates OD 4.30, which states that "Planning and financing resettlement components or free-standing projects are an integral part of preparation for projects that cause involuntary resettlement" and that resettlement "should be dealt with from the earliest stages of project preparation." (OD 4.30, paras. 1, 3). The Resettlement policy also states that the World Bank needs to ensure that involuntary resettlement is avoided or minimized, that laws and regulations concerning displaced people provide compensation sufficient to replace all lost assets, and that displaced persons are assisted to improve, or at least restore, their former living standards, income earning capacity, and production levels. (OD 4.30, para. 24).

23. Similarly, the IDB's Strategies and Procedures on Socio-Cultural Issues as Related to the Environment states that "the relocation component will be made an integral part of overall project design, execution schedule and project budget, avoiding, where possible, the approval of the resettlement component as a 'parallel' project to be financed by local funds and over which the IDB will have no or little control." (Part C2(b)(3)). It also emphasizes the importance of community consultation and participation in all stages of project design and execution. (Part C2(b)(6)).

24. Rather than financing a resettlement component or integrating the resettlement program into the design and preparation of the project, the Banks have instead treated resettlement as separate from the civil works aspect of the Project and they have placed primary responsibility for financing resettlement on the government of Argentina. In addition, the Banks failed to ensure that Argentina or EBY had the institutional capacity to implement a resettlement program. The Banks also ignored the lack of political will: the majority of displaced people live in Paraguay, yet Argentina is being asked to provide hundreds of millions of dollars in compensation. Not surprisingly, Argentina has refused to provide its agreed counterpart funding for environmental and social mitigation.

25. The Banks have consistently failed to correct the compliance problems. Specifically, Loan 3520-AR was approved after the issuance of clear policy guidance on resettlement, and after ample opportunity to learn from past financing mistakes, but again the World Bank failed to properly incorporate the resettlement component into the project. The SAR for Loan 3520-AR estimated that the total Resettlement and Environmental Management Program would cost \$720 million dollars. However, the Bank only provided \$9 million to cover the costs of studies and technical assistance. (SAR, IBRD Loan 3520-AR, p. 33 and Annex 2.2, para. 2). This hands-off approach allowed the project to be built without taking financial responsibility for mitigating the impact on people and their environment.

26. As part of the 1992 World Bank loan, the Banks also required that EBY establish an Environmental Trust Fund with the proceeds from the sale of electricity, to fund environmental mitigation and resettlement. This Trust Fund has not been created. The Staff Appraisal Report for IBRD Loan 3520-AR stated that:

Given the underlying importance of satisfactorily completing the Resettlement and Environmental Management programs required for different reservoir operation levels, during negotiations EBY agreed to establish by November 1, 1994, and, thereafter, maintain an Environmental Trust Fund on terms and conditions satisfactory to the Bank by depositing therein the amounts necessary to finance in a timely manner all activities under these programs and for the Arroyos protection works, such amounts to be derived from the sales of electricity or any other source and be at least US\$18.3 million in 1995, US\$60.9 million in 1996, US\$101.6 million in 1997, and US\$20.7 million in 1998; withdrawals from these accounts would be made exclusively to finance these activities. (Para. 2.16).

27. The failure of the Bank to take responsibility for or supervise the development of a Resettlement plan has resulted in concrete hardship and violations of the rights and interests of affected persons. Affected people did not have meaningful participation and consultation in the design or implementation of the EBY resettlement plan, violating OD 4.30 paras. 3(c) and 8 and Part C2(b)(5) of the IDB's Strategies and Procedures on Socio-Cultural Issues as Related to the Environment. Most of the claimants were denied any reasonable choice from among several reasonable resettlement alternatives, again violating OD 4.30. For example, several of the claimants were told by EBY that they could accept the resettlement home being offered or cash compensation, but the cash compensation would not be paid for a year or two and the assessment upon which the level of compensation was based undervalued their homes.

28. The Banks have failed in their duty to ensure that persons resettled by the project, including the claimants, improve or at least maintain their standards of living. In fact, resettled persons have suffered financial losses and the destruction of their way of life. They have not participated in the development benefits of the project. There has been a noticeable lack of the "intense Bank monitoring" required throughout project execution, as required by the IDB's Strategies and Procedures on Socio-Cultural Issues as Related to the Environment (Part C2(c)(6)).

29. The claimants have not been compensated adequately for the impacts on their livelihoods. The claimants must now depend on odd jobs, while before they were owners and managers of their own businesses, independent and sufficient to assure that they ate well, and that their children could study. Their entire communities and social fabric have been disrupted. Before, they lived in a neighborhood with a small-scale system of production and a social fabric that they themselves determined, for example chipa (bread) baking, pastry making, carpenters who worked with the ceramicists, riverine carpenters who worked with fisherfolk, and plumbers. Now, they live far from their former clients

or places of employment, and at the same time their cost of living has gone up: they have to pay for transportation to their jobs, their children do not have a regular school bus and therefore must pay bus fare to go to school, they must pay for their water supply, electricity bills are expensive, and they have lost their basic source of food (fish). People whose livelihood have been threatened or destroyed, such as ceramists, launderers, bread bakers, and fishermen have not received adequate retraining that would allow them to shift to a new method of earning a living. The social consequences have been grave, as neighborhoods have been lost and traditional ways of life destroyed. This violates the IDB's Strategies and Procedures on Socio-Cultural Issues as Related to the Environment, which states that relocation efforts must be designed to assure the long-term economic viability of the new communities . . . and the overall increase in income levels and socioeconomic well-being of the resettled population." (Part C2(b)(7)).

30. In addition to displacement, people affected by the project have suffered from the rising water table, which has destroyed crops, flooded sanitation systems and contaminated drinking water wells. The impacts of the rising water table forced the inhabitants of Isla del Medio to abandon their lands. Residents of the barrios Santa Rosa, M'boi Cae and Barril Paso in Encarnacion have also suffered damage from the rising water table, without compensation or assistance from EBY. Photographs showing the water table seeping through land, contaminating wells and impacting latrines are all attached to the claim.

31. The claimants have been manipulated and pressured by EBY, and do not believe that EBY has developed a fair or equitable system of compensation. The determination of benefits has been inconsistent, and the claimants have not had a clear understanding or explanation of the entitlements available. They have not received adequate compensation to cover the losses suffered as a result of the project, and in many cases have not been compensated for their losses in advance of the move. The lack of a framework that meets Bank standards has also deprived them of the ability to negotiate fairly with EBY, which has stated to affected persons that it is bound only by the terms of Paraguayan law in determining compensation.

32. In addition, EBY has failed to compensate some of the claimants for the loss of structures of economic importance. One of the claimants owned a carpentry shop and was able to support his family. When EBY resettled him, it failed to do anything about his workplace. Now he has difficulty working, and cannot pay the electricity bills. His granddaughter cannot go to school because he does not have money to pay the 200 guaranics per day (\$1) for bus fare. He has tried to speak with social workers from EBY, without any resolution. Now, he says "I am so desperate that I will now have to sell my tools, which are my only means of work."

33. Another claimant owned a butcher shop in his old neighborhood, and was able to make a living selling meat to his customers. When he was relocated, his family of 8 was moved from a house with 5 rooms, a kitchen and a storeroom to a house with only two bedrooms, forcing the family to crowd together. EBY told him that they would compensate him for the cost of building a new kiosk, and he borrowed 9 million guaranics for his small business (\$4,500). However, EBY has failed to reimburse him for

the debt incurred to move his business. In addition, he has fewer customers in the new neighborhood and can only sell a fraction of what he used to. Two of his four children had to leave school because they could not afford to pay for transportation. He has complained in the past, but now feels that it does no good, that he has no rights and nowhere to go.

B. Health Impacts.

34. The health problems caused by the reservoir are quite serious. The reservoir is an ideal habitat for vectors that transmit malaria, leishmaniasis, schistosomiasis and other diseases. Records of the Ministry of Health and Welfare of Paraguay (1990, 1992, 1994, Seventh Sanitary Region) show that illnesses related to the reservoir are among the most common cause of hospital visits. Examples include diarrhea, anemia, parasitic diseases, skin diseases (piodermatitis and ectoparasitosis), and stress-related disorders such as cefalea (recurrent headache), epigastralgia (heartburn) and dispepsia (digestive imbalance). Since the filling of the reservoir, people living in the area have complained increasingly of fever; this symptom must be investigated because it may indicate the presence of diseases associated with stagnant water. Water quality problems are another cause of diseases and will be the source of the most important health problems in the future if appropriate measures are not taken. Some of the claimants have suffered from reservoir-related diseases and all of the claimants face an increased risk of these diseases in the future. There are inadequate health centers to attend to the needs of the affected people. Sanitation has been adversely impacted by the rising water table, which has fouled latrines and contaminated well water. Finally, the fouling of the reservoir and disruption of fish migration has also impacted the food security of the affected populations, with related impacts on health and nutrition. These health impacts were not considered sufficiently in the Environmental Assessment process, and local populations were not consulted adequately. In addition, the Banks have failed to supervise or monitor the Borrower's and beneficiary's performance on the mitigation of health impacts.

C. Indigenous Peoples.

35. The islands on the Parana river, now flooded or transformed by the Yacyretá project, were part of the traditional territory of the Mbya Guaraní Indigenous People. Many of them left Isla Yacyretá in 1987 because of the construction of the dam; most of them were later relocated to a tract of land of 370 hectares, in a place called Pindo. This tract of land is bisected by National Highway 1 and by the main power transmission line running from Trinidad to Ayolas. Even though, as stated by William Partridge of the World Bank, they were given title to a piece of land "for the first time", these people really lost their traditional territory which covered tens of thousands of hectares of diverse ecosystems, rich in fauna and flora, and their livelihoods were completely changed in the process of moving from the Island.

36. The Mbya families from the island were moved to the reserve at Pindo and placed with other groups of Mbya whose original habitats and cultural development was different. The land they were allocated is inadequate to support those families currently living there, due to its small size and limited natural resources. Some of them have been

returning to the portion of Isla Yacyretá not flooded by the reservoir, which, according to the National Constitution of Paraguay, they can legally claim as their own. Independent anthropological and ecological studies need to be carried out to evaluate and monitor the situation at Pindo in the context of the environmental limitations, the rights of the Mbya as indigenous peoples and the survival of their cultural heritage. It is also critical to address the question that the remaining portion of Isla Yacyretá, which has been designated by EBY as a compensatory reserve, is part of the constitutionally recognized traditional territory of the Mbya people. In addition, there was no real participation by the Mbya people in the decision about their destination, nor were they given alternatives they could choose from. SOBREVIVENCIA has repeatedly raised their concerns about the treatment of the indigenous communities in correspondence and meetings with the World Bank and the IDB. For example, these concerns are summarized in a letter to Mr. Serageldin of September 26, 1995, a copy of which is attached to the claim.

V. Environmental Concerns.

A. Environmental Assessment and Environmental Mitigation.

37. The Environmental Assessment of the Project was flawed in many ways, including the failure to ensure the meaningful participation of affected persons and concerned NGOs. The Environmental Assessment was not funded by IBRD until 1991, although construction had begun in 1984. The SAR for Loan 3520 acknowledges that the 1992 Environmental Assessment did nothing more than compile and synthesize the findings of earlier environment-related studies on the Project. (SAR, IBRD Loan 3520-AR, Annex 2.7, Attachment 2, para. 2). Although the SAR states that the draft EA and EMP were "submitted for review to interested NGOs", in fact the process excluded NGO participation and was structured in such a way that the NGO review could not be meaningful. For example, representatives of EBY sent SOBREVIVENCIA the Environmental Management Plan and the Resettlement and Rehabilitation Plan on May 26, 1992; the documents arrived on May 29th, and the stated deadline for comments was May 31st. Two days is obviously an unrealistic time frame for NGO participation. SOBREVIVENCIA noted its objection to the process in several letters, which are attached to this claim. When meetings were arranged to discuss the plans, EBY failed to provide NGOs with the necessary documentation ahead of time that would have allowed them to have meaningful participation. Thirteen NGOs prepared a Declaration criticizing the Environmental Assessment process, and sent the declaration with a letter outlining their concerns to Lewis Preston, President of the World Bank, on July 20, 1992. They did not receive a response to this letter.

38. In addition to the procedural problems, the EA also failed to adequately consider several important substantive aspects of the project, including the impacts on the Ana Cua branch of the Rio Parana, the need for adequate compensatory reserves (discussed in more detail in the section on Wildlands), the removal of vegetation, the impacts on the water table, the impacts on fish migration both upstream and downstream, the development of environmental management plans for Encarnacion and Carmen del Parana, and the lack of baseline environmental data.

39. Despite these flaws, the Environmental Assessment concluded that significant adverse environmental and social impacts were associated with raising the water level to 83 meters asl and that keeping the reservoir at 76 meters asl would have "significant advantages from an environmental and resettlement standpoint" and would "significantly reduce environmental mitigation costs." (Env. Assessment Summary, SecM92-674, paras. 53-54). These considerations, however, were subsumed beneath the higher economic goal of maximizing output from the dam, even though the project cannot produce electricity at a price which is competitive in the market according to World Bank reviews of the project.

1. Impacts on the Ana Cua Branch.

40. The Ana Cua is a branch of the Rio Parana which separates Yacyretá Island from the Paraguayan mainland; on average it carries about one third of the total river flow at the Project site. As a result of the reservoir operation plan, the Ana Cua Branch would, according to statistical studies carried out on 90 years of riverflow records, dry up during long periods; about 80% of the time on the average. Thus only when the Parana River flow is higher than the total flow capacity of the powerhouse turbines (20% of the time), would any water flow along the 25 kilometer stretch of this 2,000 meter wide branch between the Ana Cua Spillway and the confluence of the Ana Cua with the San Jose Mi branch, just downstream from the city of Ayolas.

41. The consortium of consulting companies which designed the Yacyretá project, CIDY, developed mitigation plans for the environmental impacts from the drying out of this channel for long periods (decomposition of organic material in isolated holes with stagnant water, lowering water tables that would radically affect the proposed compensatory reserve on Isla Yacyretá, inhibition of the water intake of the city of Ayolas, etc). This mitigation plan would include the implementation of small reservoirs in the Ana Cua channel along the affected stretch, with the construction of two rock dams and the discharge of 50 m³/s of water from the Ana Cua Spillway during the dry periods to maintain minimum water quality in the channel reservoirs. In a meeting with Fernando Yaluk, the Environmental Director of EBY, members of SOBREVIVENCIA were told that there is a chance that the proposed mitigation plan may not be implemented due to lack of funds.

42. Members of SOBREVIVENCIA have also heard from IDB officials that the program would likely not be implemented because it is now considered not to be technically sound; however the proposed program is necessary for mitigation of the anticipated adverse impacts. According to a letter sent by EBY's Paraguayan Director Joaquin Rodriguez to the Paraguayan Chamber of Deputies in response to their June 22, 1995 request for information from EBY, the final design for the mitigation scheme on the Ana Cua was to be developed from September 1, 1995 to December 12, 1995, and the construction of the proposed works was supposed to be carried out from January 1, 1996 to October 1, 1996.

2. Removal of vegetation.

43. The Bank's Environmental Policy for Dam and Reservoir Projects notes that vegetation should be removed from the reservoir areas in order to protect water quality,

reduce growing conditions for aquatic weeds, enhance water circulation, reduce obstacles to fishing, and promote oxygen distribution. (OD 4.00, Annex B, para. 5) The Executive Summary to IDB Loan RG/0004 notes specifically that the islands are designated for biomass removal, among other places. Photographs attached to the claim clearly demonstrate the lack of biomass removal on the islands.

44. World Bank officials have told Sobrevivencia that the lack of removal of most of the vegetation mass in the reservoir would not pose any problem to water quality in the reservoir because the average turnover period of the water in the lake is only a few days. Reliance on an average figure is misleading, however, because the turnover period varies widely in different areas of the lake. This turnover period in the areas of the old river channels is only a few hours, while in other areas, for example the bays along the coast and the islands, the water hardly moves at all.

45. Also, bank officials noted that the removal of vegetation mass was carried out according to what was established in the Environmental Mitigation Plans. Unless there has been some change since the mitigation plan was approved, those plans state that all of the tall standing forests in the lake had to be removed; and so far only one tenth of these forests have been removed, while there are extensive areas where the trees were left dying, their trunks in the water. The mitigation plan also stated that all of the vegetation in stagnant areas had to be removed, as well as all of the vegetation around the urban areas. In many areas observed by SOBREVIVENCIA on the Paraguay side, including the Paraguayan coast from the end of the right lateral dam to San Cosme; the Yacyretá Island from the area of Ka'aguy Hh, in the middle of the island, to its eastern end; the entire area of Talavera Island; and all of the numerous islands in the "Canal de los Jesuitas" (the river channel that separates Yacyretá and Talavera Islands), there has been no removal of vegetation. Nonetheless, Bank technicians are apparently satisfied with the work, when EBY clearly did not carry out the vegetation removal plans specified in the Environmental Management Plan of 1992. This demonstrates the Banks' failure to supervise the project, which is also discussed in Part VI.

3. Impacts on Water Table.

46. Variations in water table levels on the Paraguayan side of the reservoir have not been assessed adequately. There should be a study of the impact on the water table north of the right lateral dam due to the damming effect on ground water produced by the cement-bentonite wall under the dam. Studies on the impact of this channel on the ground water table need to be carried out. In addition, impacts on the water table along the coasts of the reservoir must be carried out, especially in the urban areas.

4. Impacts on Fish Migration.

47. The lack of facilities for the migration of fish downstream necessitates that the fish must either pass through the turbines or over the spillways (if they are operating), which has resulted in the death of a great number of fish. Press clippings attached to the claim indicate that there have been large fish kills as a result of the dam. In addition, the facilities for fish

migration upstream are extremely inefficient, when they function. The Environmental Impact Assessment failed to adequately consider the impact of the dam on migratory fish species and failed to develop mitigation techniques which were appropriate to the Rio Parana.

48. There are several migratory fish species in the Rio Parana that are being harmed by the Project. Some of these species migrate both upstream and downstream, two or three times during their lifetimes. The Project has incorporated very expensive technology which is inappropriate for the river. The fish elevators, which cost \$30 million, only transport fish upstream. Even if the fish elevators operated properly, Bank officials have acknowledged that at best only 7% of the fish seeking to migrate upstream past the dam would be transported by the fish elevators. Fish which must then migrate back downstream are forced to navigate the turbines or the spillway, resulting in high fish mortality. The World Bank's Project Completion Report for Loans 1751-AR and 2998-AR notes that "Since Bank preparation/appraisal missions did not include resettlement and environmental specialists, the flaws were not detected in many cases. For example, a fish passage facility was based upon the consultants' knowledge and experience with fish migrations on the Columbia River in North America, where, upon reaching upstream areas, the fish immediately die after spawning. In the case of the Parana River, however, fish tend to return to the sea and, therefore, it would be desirable that facilities permit passage downstream as well. This aspect was not considered." (PCR, Loans 1761-AR and 2998-AR, para 4.25).

49. The claimants also question the accuracy of the data kept by EBY. Although EBY claims that the fish elevators run every hour, they have not been in use during any of the five visits that members of SOBREVIVENCIA have made to the dam. In fact, during a visit by members of the Paraguayan National Commission for the Defense of Natural Resources on July 5, 1995 the operator of the elevator said that the last transfer of fish had occurred just half an hour before their arrival, but the elevator was completely dry. When the members of the delegation checked the logbook used to record fish transfer data, they found that the operator had already recorded data for the following day.

50. On a subsequent visit to the dam site, members of SOBREVIVENCIA discussed the reservoir and the fish with one of the people who had been displaced from Isla Yacyretá. He and his family were farmers on Isla Yacyretá and owned 150 head of cattle. However, when the land was flooded, the money his father received in compensation was only enough to buy a small house in San Cosme. They were unable to buy enough land to support the cattle or maintain their lifestyle as farmers. He has therefore turned to fishing to provide food for his family, although there is no market where he can sell any additional fish that he catches. He told members of SOBREVIVENCIA that many fish species that used to live in the river had disappeared. When asked about the fish elevators, he stated that they only run when people from the World Bank visit the dam.

5. Need for Environmental Management Plans in Urban Areas.

51. Adequate environmental management plans must be developed for the cities of Encarnacion and Carmen del Parana, including management plans for the Quiteria, Mboi Ka'e and Tacuary rivers, in order to assure water quality and avoid public health risks in these urban areas, surrounded by mostly stagnant reservoir water.

6. Failure to Conduct Biotic Surveys: Flawed Animal Rescue Program.

52. The Banks failed to assess adequately the biodiversity at the Project site before filling the reservoir, despite repeated requests from NGOs. The survey of flora and fauna made by the Centro Paraguayo de Datos was apparently limited to a survey of several species of vertebrates, particularly large mammals and birds in danger of extinction. The Banks are therefore operating on extremely limited knowledge of the natural biodiversity that has been destroyed, which will hinder efforts to protect similar ecosystems. OD 4.0, Annex B1, para. 3 notes that "Biotic surveys are normally essential Loss of wildlife may be mitigated by including elsewhere in the country a wildlands management area equivalent to the inundated tract." The language requiring equivalent wildlands elsewhere in the country affected is especially relevant in this case, as the Banks and EBY are seeking to concentrate their efforts at creating compensatory reserves in Argentina, while Paraguay has lost the majority of the wildlands to the project.

53. The ineffectual approach to categorizing the fauna and flora to be impacted is also reflected in the Banks' attempt to rescue threatened animals. The focus was almost exclusively on charismatic megafauna, and amounted to little more than an attempt to manipulate public opinion. The few animals that were "rescued" from the flooded islands were not placed in suitable replacement reserves, and their survival was unlikely. The Chief of the Environmental Unit at the World Bank clarified the objectives of the animal rescue program in a quote on the Canadian Broadcasting Company's documentary on Yacyretá: "The animal rescue program has in large part achieved its objectives. The rescue of individual animals makes good television, makes good propaganda for the project to show that they've made an effort to rescue monkeys, rescue deer and whatnot. But in terms of the impact upon biodiversity, the impact upon ecological values that we all share, its impact is minimal." A visit to the flooded islands as recently as July 1996 found stranded monkeys clinging to trees above the water.

54. Finally, we believe that this casual approach to surveying and protecting natural resources to be impacted may also extend to the impacts on cultural property. The project is located in an area that has a rich cultural history, and World Bank policy requires that the Bank "assist in the protection and enhancement of cultural properties." OPN 11.03. We request that the Inspection Panel evaluate the extent to which this policy has been complied with.

B. Wildlands.

55. The project destroyed wildlands without establishing adequate compensatory reserves, thus violating the Bank's policy on Wildlands (OPN 11.02). The policy

specifically recognizes that hydroelectric projects have significant adverse impacts on wildlands. It states that such projects should contain wildland components and that those components need to be incorporated early in the project cycle, adequately financed by the Bank, and supervised to ensure that the components are protected in fact rather than simply on paper. The policy also requires the protection of an ecologically similar area and that compensatory wildlands management areas should be no smaller than the wildland area converted by the project. All of these policy prescriptions have been violated in this case. Bank documents recognize that of the 107,600 hectares of land to be inundated in addition to the existing riverbed, 105,300 would be classified as natural ecosystems little touched by human activity which retain the great majority of their native plant and animal species. (IDB loan RG-0004, Executive Summary, para. 4.5). Nonetheless, the creation of compensatory reserves has been illusory. The EBY and the Banks claim that six compensatory reserves have been created. However, in most cases they have failed to actually acquire title to the lands, and the areas are not being protected.

56. While approximately 80,000 hectares of land are to be inundated in Paraguay, only 9,000 hectares of compensatory reserves have been designated by EBY in Paraguay, on the extreme western edge of Isla Yacyretá. Although that area is an extremely important ecosystem, it can hardly be considered protected, given that it is currently being degraded by cattle grazing, burning of grasslands, and slash and burn agriculture in forested areas. In addition, within the boundaries of this "reserve" are a military base, an international highway, a large unregulated garbage dump for the city of Ayolas, and an area that has been destroyed by borrow pits for the construction of the dam. This last area is the only part of the reserve that is currently owned by EBY. The rest is privately owned. The rare arary forest remaining on Isla Yacyretá, which is one of the most important ecosystems needing protection, will also be threatened by the drying out during long periods of the Ana Cua Branch, once the turbines are functioning, if the planned program for mitigating this problem is not implemented. Arary trees are an endangered species.

57. The wildlands policy specifically notes that there must be effective management on the ground, not simply on paper. "Paper parks", which exist only on a legal document or a map and not on the ground, are vulnerable to colonists and resource extraction. Wildland management objectives have to be translated into specific measures with a budget for their implementation. These measures include hiring and training of personnel, provision of necessary infrastructure and equipment, development of a scientifically sound management plan for each particular wildland, and a policy environment - legal, economic and institutional - which supports the wildland preservation objective. (OPN 11.02, para. 17).

58. World Bank officials agreed with these concerns regarding the extremely urgent need for effective protective measures, mentioning that EBY was planning on supplying guards. But this cannot be considered adequate because the land has not been purchased by EBY. SOBREVIVENCIA has urgently suggested, several times, that first, the land should be purchased immediately. Second, all of the small farmers should be adequately compensated and moved. Third, all of the cattle should be removed, and fourth there should be put in place a program for ecological restoration of the complete 9,000 hectares, including the complete removal of the garbage dump. Finally, it is also critical to address

the question that this land is part of the constitutionally recognized traditional territory of the Mbya people.

59. The proposed Yabebyry Reserve and the "Refugio Faunístico" Atinguy lie within a proposed irrigation and drainage scheme developed by the Japanese International Cooperation Agency (JICA). EBY was originally committed to buy a total of more than 41,000 hectares in the headwater area of the Yabebyry river, to establish a compensatory reserve. Later, EBY transferred this responsibility to the government of Paraguay, which has designated an area of 30,000 hectares in this zone as part of the proposed National System of Protected Areas (SINASIP). This land is still under private property and exploited as cattle ranches. Besides, this tract that does not include some of the most important ecosystems that could assure the survival of some of the wildlife to be released there.

60. A scientific team from SOBREVIVENCIA has identified as well an area of about 10,000 hectares of gallery forests along the Atinguy river on the Paraguayan mainland downstream from the Ana Cua Branch, which should be included among the compensatory reserve areas for Yacyretá, because it contains important and fairly well preserved examples of ecosystems lost by reservoir flooding.

61. The Cerro Yvyku'i Sand Dunes used to be the highest point on Isla Yacyretá, and they have partially survived the filling of the reservoir at 76 m. The protection of these dunes, representing a unique ecosystem very rich in biodiversity must be assured. Most of these dunes are still above water level with the present reservoir level, but if the reservoir is elevated above 78 meters, they will disappear. Protection measures against the action of waves must be undertaken immediately.

62. Argentine side: The proposed reserve areas of Apipe Grande and Apipe Chico would be in most part flooded by the reservoir of the Itati-Itacora binational Hydroelectric project, downstream from Yacyretá, near the confluence of the Parana and the Paraguay rivers, while the proposed reserve areas of Teyd Cuare and Campo San Juan would be partially flooded by the Corpus-Itacua reservoir.

C. Compliance with International Treaties.

63. Finally, the World Bank and the IDB should both be responsible for not undermining the objectives of global environmental agreements. In fact, OMS 2.36 states that the World Bank "will not finance projects that contravene any international environmental agreement to which the member country concerned is a party." (para. 9(d)). Paraguay is a "member party concerned" and is a party to the Convention on Biological Diversity and other international environmental agreements such as the Climate Change Convention. The violations of the wildland policy described above, the failure to survey or preserve biotic information, and the failure to mitigate the impacts on fish migration all constitute a systematic disregard for the impact of the project on biodiversity, and certainly undermine the goals of the Biodiversity Convention to conserve and sustainably use biological diversity.

VI. Failures in Supervision and Monitoring.

64. OD 13.05 states quite clearly that project supervision is one of the Bank's most important activities and that its purposes include (a) ensuring that the borrower implements the project with due diligence to achieve the agreed development objectives and in conformity with the loan agreements; (b) to promptly identify problems as they arise and help the borrower to resolve them, and to modify as necessary the project concept and design; and (c) to cancel a project if its continuation is no longer justified. The OD also notes that there should be coordination with the borrower's monitoring and evaluation of the project (detailed in OD 10.70). The Yacyretá Hydroelectric Project is a clear example where Bank supervision and monitoring was essential, particularly in light of the institutional weakness of the implementing agency. By failing to take an active role to actually correct the problems with implementation of the social and environmental components of the project, the Banks have allowed the project to stray drastically off-course, with the consequences borne by the local affected communities. For example, OD 13.05 notes that multipurpose hydroelectric projects, which proceed in stages and begin to produce benefits before the investment stage is complete, require informational feedback relating to benefit distribution which could "lead to changes in the project during implementation." Rather than change the project to reduce the environmental and social impacts in light of repeated violations of loan agreements and project documents, the Banks changed the project to allow the borrower to delay implementation of these neglected components.

65. Finally, the Banks did not adequately exercise their remedies when the borrower failed to comply with project conditions. (OD 13.05, para. 41). In particular, the Banks should have suspended disbursement on the project when the environmental and social components were consistently violated. (OD 13.40). Alternatively, they should have ensured that the Borrower and EBY were adequately implementing the environmental and social mitigation required for the project, through direct financing, supervision, and either the exercise of remedies or the threatened exercise of remedies. The failure to provide co-financing and the complete failure to adequately implement the environment and resettlement programs should have triggered more oversight and monitoring, and the continued failure over many years should have also led the Banks to consider pulling out of the Project.

VII. Attempts to Resolve Violations with Bank Staff.

66. We believe the actions and omissions described above are the responsibility of the World Bank, Inter-American Development Bank and EBY. We have met with and corresponded with each of these entities in our attempts to resolve the problems. Copies of correspondence and summaries of meetings are attached to this claim. Despite repeated attempts by concerned citizens, members of congress and NGOs to raise questions and concerns about the status of the project, the Banks and EBY either failed to respond or indicated that the project was proceeding in a satisfactory manner. Copies of responses we have received from the Banks are also attached to this claim.

VIII. Conclusion.

67. For the reasons detailed above, we respectfully request that the World Bank Inspection Panel and the IDB Investigation Mechanism conduct thorough investigations into the violations of IBRD and IDB policies that occurred and continue to occur in the design and implementation of the Yacyretá Hydroelectric Project. We also ask the Panel to advise the Bank on any remedies which should be implemented to compensate the people affected by the Project fully for the harms they have suffered as a result of inadequate environmental and social mitigation. At a minimum, this should include provisions for the creation of compensatory reserves, adequate compensation for people who have been and will be resettled, fair financial compensation and retraining for those who have suffered impacts to their livelihood, consideration of the current water level in the reservoir and possible unanticipated impacts that may require mitigation, purchase and protection of compensatory wildlands, and a prohibition on raising the reservoir until the responsible parties can demonstrate the capacity, willingness and financial commitment to actually meet environmental and social mitigation needs. The structuring of remedies should be done in full consultation with affected people, and should not be considered adequate until the affected people have been fully compensated for the losses they have suffered and will suffer in the future as a result of this project. Privatization should also not proceed without adequate legal safeguards regarding reservoir level, monitoring of the impact of the reservoir level on the health and well-being of affected populations and the environment, an environmental impact assessment of the impact of privatization, and the meeting of the minimum standards which have already been violated. There should be an evaluation of the economic rationale behind privatization, and the implications for dam-affected people and the environment. Other alternatives should also be fully evaluated, including dismantling the dam or operating the Yacyretá reservoir at a lower level than the projected 83 meters asl.

68. We therefore believe that the above actions/omissions which are contrary to the above policies or procedures have materially and adversely affected our rights/interests and request the Panel to recommend to the Board's Executive Directors that an investigation of these matters be carried out in order to resolve the problem.

Attachments: Yes.

We authorize you to make this Request public.

OFFICE MEMORANDUM

RECEIVED

DATE: October 30, 1996

95 NOV -1 PM 4:46

TO: Mr. Richard E. Bissell, Chairman, The Inspection Panel

THE INSPECTION PANEL

FROM: James D. Wolfensohn

EXTENSION: 81384

SUBJECT: **ARGENTINA - Second Yacyretá Hydroelectric Project**
(Lns. 2854-AR and 3520-AR)
Management Response to the Request for Inspection

1. On October 1, 1996, the Inspection Panel registered a Request for Inspection concerning the above-referenced project, the implementation of which is currently supported by two Bank loans. The attached Response has been prepared in close coordination with the Inter-American Development Bank, and addresses all of the issues raised in the Request. In our response, we provide supporting evidence and details to demonstrate that the Bank has not been remiss in complying with our policies for such operations. In particular, the response highlights the thoroughness of the Environmental Assessment in identifying environmental risk and mitigation measures.

2. The crux of the matter is that not everything has gone, nor will go, perfectly well and there are still large uncertainties in completing the operation. This has to do with the planned privatization and the need to complete a very substantial resettlement component prior to filling the reservoir to the next levels -- 78 meters above sea level (masl) and 83 masl. For the works done to date and the filling to the 76 masl level, while there have been delays, there is little evidence of harm having been done to the affected parties. The next major hurdle is a decision to be taken on privatization: that will determine what happens next. In our response, we stress that the Bank has adequate safeguards to ensure that all resettlement and environmental mitigation measures are implemented before raising the reservoir above the elevation 76 masl, regardless of who operates the Yacyretá complex.

cc: Messrs./Mmes.: Kaji, Koch-Weser (o/r) (EXC); Shihata, Rigo (LEGVP); Alexander (OPRDR); Burki, Ody (LACVP); Ecevit (LATSO); Nankani (LA1DR); Augusto, Hagerstrom (LA1C2); Faiz, de Franco (o/r), Klockner, Jadrijevic (LA1IU); Oliver (LA1ER); Collell, Molnar (LEGLA)

ARGENTINA

**SECOND YACYRETA HYDROELECTRIC PROJECT
(Lns. 2854-AR and 3520-AR)**

**MANAGEMENT RESPONSE
TO THE
REQUEST FOR INSPECTION
SUBMITTED TO THE
INSPECTION PANEL
ON SEPTEMBER 30, 1996**

October 29, 1996

ACRONYMS AND ABBREVIATIONS

| | |
|-------|---|
| EA | Environmental Assessment |
| EBY | Yacyretá Binational Authority <i>Entidad Binacional Yacyretá</i> |
| GOA | Government of Argentina |
| GOP | Government of Paraguay |
| GWh | gigawatt hour |
| IDB | Inter-American Development Bank |
| IRR | Internal Rate of Return |
| kWh | kilowatt hour |
| masl | meters above sea level |
| MW | megawatt |
| NGO | Non-Governmental Organization |
| OD | Operational Directive |
| OED | Operations Evaluation Department |
| OMS | Operational Manual Statement |
| OPC | Operations Policy Committee |
| OPN | Operational Policy Note |
| REMP | Resettlement and Environmental Management Programs |
| SEGBA | <i>Servicios Eléctricos del Gran Buenos Aires, SA</i> |

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ARGENTINA

SECOND YACYRETA HYDROELECTRIC PROJECT

REQUEST FOR INSPECTION: MANAGEMENT RESPONSE

1. INTRODUCTION

1.1 On October 1, 1996, the Inspection Panel registered a Request for Inspection concerning the Yacyretá Hydroelectric Project, the implementation of which is currently supported by two Bank loans. The Request was submitted by Sobrevivencia/Friends of the Earth, a non-governmental organization (NGO) based in Paraguay. An identical Request has been presented to the Investigation Mechanism of the Inter-American Development Bank (IDB). This Management Response has been prepared in close coordination with the IDB, and has been formulated to address all of the issues raised and allegations made in the Request.

Eligibility Issues

1.2 There are certain eligibility questions relating to the Request that are important to emphasize in the light of the requirements of the Board Resolution establishing the Panel:

- (a) Bank management is addressing the Request primarily in the context of Loan 2854-AR (which is 75% disbursed); other loans cited in the Request have either been fully disbursed and closed long before the Request was filed (Lns. 1761-AR and 2998-AR), or have been substantially disbursed (Ln. 3520-AR, currently 98% disbursed), thus falling outside the scope of the Panel's jurisdiction (see Board Resolution, para. 14 (c)). Note, however, that the legal documents for Loan 2854-AR were amended in 1994 to incorporate provisions relating to Loan 3520-AR project activities; those provisions pertain in part to the environmental mitigation and resettlement plans addressed at length in the Management Response.
- (b) In a departure from the terms of Board Resolution, para. 12, the Request is not being filed "by an affected party in the territory of the Borrower." The Borrower with respect to Bank loans for the Yacyretá Project is the Argentine Republic, whereas Sobrevivencia and the individuals it claims to represent are all Paraguayan. Nevertheless, in the unique circumstances of this case, where there is binational execution of the project and where the physical impact of the project occurs mostly in the territory of the national partner that happens not to be the borrower, Management understands the pragmatic interest in applying the Board Resolution flexibly on this point.

- (c) It is inappropriate for Sobrevivencia to have filed the Request partly on its own behalf, for there is no allegation that the NGO has suffered or will suffer a material adverse effect as a result of alleged Bank policy violations. Consequently, the NGO is not an affected party according to Board Resolution, para. 12. Nevertheless, Management recognizes that, as a local Paraguayan NGO, Sobrevivencia can file the Request in representation of true affected parties (e.g., Paraguayan individuals for whom specific harm allegations are made).
- (d) The identity of those individuals that Sobrevivencia claims to represent is being held confidential by the Panel at the request of the NGO. Although the Board Resolution itself does not address the issue of claimant anonymity, Management understands that there have been Panel precedents in this regard. Nevertheless, it is important to note that such anonymity imposes serious constraints on Management's ability to respond fully to the Request, particularly with regard to issues, vital in the context of respecting the terms of the Board Resolution, such as scope of the alleged harms, exhaustion of remedies, seriousness of alleged violations and causation. Management is responding as best it can to the Request despite the claimants' anonymity, but we urge the Panel to take these constraints into account when assessing whether the Request meets the eligibility criteria required by the Board Resolution.

The Management Response

1.3 The Request raises a number of important issues concerning the design and implementation of the project which have also been of concern to Management. The Second Yacyretá Hydroelectric Project is designed to complete the remaining work, including resettlement and environmental mitigation, to enable the Yacyretá project to reach its full productive capacity. It was recognized at appraisal, both by the Bank and the IDB, as being a project with significant attendant risks; in the Staff Appraisal Report¹, the three major risks associated with the project were considered to be: (a) possible unavailability of funds; (b) failure to implement the resettlement and environmental mitigation activities satisfactorily; and (c) failure to implement the transmission line on time.

1.4 Given its very considerable support over a long period, the Bank concluded that the project would benefit from its continued involvement. In particular, the Bank's presence was considered crucial in overcoming the project's "stop-go" pattern of implementation and in catalyzing improved project management and organization, Government commitment in terms of funding, and promotion of private sector involvement. Measures to address the risks were incorporated into the project's design,

¹ Report No. 10696-AR, dated August 31, 1992.

and this has been translated into practical concern by means of a large supervision effort, with coefficients for staff support five times the Bank average.

1.5 In practice, a number of the potential problems foreseen have occurred; there have been further delays, particularly with resettlement and environmental mitigation, and the Borrower is not in compliance with its obligations in some areas. Most of these relate to raising the reservoir level above its present 76 meters above sea level (masl), an event that has been postponed for the time being in view of budget constraints and the intention to complete the project with private sector participation, through a concession for the operation, maintenance and marketing of energy produced by Yacyretá to the private sector via a competitive process.

1.6 The strategy of the two governments to complete the project through the proposed privatization scheme is fundamentally sound, provided the Yacyretá Binational Entity (EBY) takes the required measures to implement the environmental and resettlement activities associated with raising the reservoir level above 76 masl. Adequate legal safeguards are provided in both the Bank and IDB loans to ensure full compliance with these requirements. With respect to compliance with pending actions related to elevating the reservoir to the current operating level of 76 masl, a time-bound Action Plan, supported by a Special Account, has been put in place to complete all pending actions no later than December 1997. The pending actions are defined in Attachment A. This Action Plan is the subject of intensive Bank supervision. In the event that the proposed privatization program is not implemented by February 1997, EBY in consultation with the two Governments will propose to the Bank and IDB a plan for future operation and financing of Yacyretá. This plan could include the option of operating the reservoir at its existing level of 76 masl and deferring those additional investments needed to raise the reservoir to its full design level.

1.7 The Request to the Panel claims that certain members of the local population have suffered material harm as a result of the Bank not following its own procedures and policies in the design and implementation of the project. These claims are set out in detail in Section 3, and refer to alleged failures in dam design, failure of the Bank to finance environmental and resettlement activities, inadequate participation of the local population, failures concerning resettlement and compensation, health problems, indigenous people, flaws in the Environmental Assessment, failures in project supervision, the economic cost of energy generated at Yacyretá, and the anticipated impact of privatization of the project's operation, among others.

1.8 We do not agree that the problems which have occurred and their possible consequences for the local population are the result of any alleged Management violation of the Bank's policies and procedures. The salient features of the Management Response are:

- the project made economic sense when conceived and, even though the economic realities have since changed, it still makes more sense to complete the project than to stop it.

- all resettlement and environmental mitigation activities required prior to reaching the current reservoir level of 76 masl have been met (except some pending matters which are being addressed through appropriate financing and supervision).
- the impacts of increasing the operating level of the reservoir above 76 masl have not yet occurred and are covered by sufficient legal covenants in full compliance with Bank policies.
- although counterpart funding shortfalls have delayed project implementation, they have not caused harmful impacts, precisely because the reservoir has not been raised beyond its initial operating level.
- the delay in increasing the operating level of the reservoir is, in part, attributable to the Bank's supervision efforts to ensure compliance with resettlement and environmental management activities, supporting the essential principle of Bank operations that the exercise of available legal remedies is not a requirement but a discretionary tool, to be applied only after other reasonable means of persuasion have failed.

2. DESCRIPTION AND PRESENT STATUS OF THE PROJECT

2.1 The Yacyretá Hydroelectric Project is a joint venture being developed on the Paraná river under an international treaty¹ ratified by the governments of Argentina and Paraguay in 1973. The main objective of the project is to provide base-load hydroelectric energy for Argentina's grid. It is a complex undertaking consisting of a large earth dam approximately 65 km long; power generation with a designed final capacity of 3,100 MW; a navigation lock, fish passage and other support facilities; and a large program of infrastructure relocation, population resettlement and environmental impact alleviation. The project is located about 80 km down-stream of the cities of Encarnación in Paraguay and Posadas in Argentina.

2.2 The origins of the project can be traced to a joint protocol signed by the two countries in 1926 in connection with the use of the Apipé Falls. A Technical Commission was established in 1958 to carry out studies, and the detailed design of the project was completed in 1978. On the basis of this design, the Bank approved its first loan to the Government of Argentina (GOA) in support of the project (Ln. 1761-AR for \$210 million, approved in October 1979). Additional financial support was provided under the Electric Power Sector Project (Ln. 2998-AR for \$252 million, of which \$250 million was destined to Yacyretá, approved in October 1988). Both of these loans were evaluated in the Performance Audit Report produced by the Operations Evaluation Department (OED) and sent to the Board in June, 1996.²

2.3 The latest Bank loan (Ln. 3520-AR for \$300 million, approved in September 1992) supports the Second Yacyretá Hydroelectric Project which is designed: (a) to complete the civil works and commission the first six generating units (of an eventual 20); (b) to support environmental protection and social aspects; and (c) to encourage the participation of private capital in the project. The Bank also agreed, in 1994, that uncommitted funds (of US\$137 million) in the loan to support the SEGBA V Power Distribution Project (Ln. 2854-AR for \$276 million, approved in June 1987) could be used for Yacyretá. The Bank's total commitment to Yacyretá is \$897 million. Since its first loan in 1977, the IDB has committed US\$840 million to the project.

2.4 The project has suffered numerous and significant problems in implementation. The most recent estimates indicate that it will be completed in 2000, with an eleven-year delay and, at an estimated final cost of \$8.22 billion, a 59 percent cost overrun in current

¹ The Treaty of Yacyretá, signed on December 3, 1973, has been expanded through numerous amendment letters.

² Report No. 15801, dated June 28, 1996.

price terms.³ A major procurement dispute concerning civil works delayed the project's start-up. Further delays were caused by Argentina's economic and political difficulties throughout the 1980s and the consequent problems of project finance.

2.5 A number of changes were introduced in the scope of the project: in 1986, facilities to permit increasing the number of generating units beyond twenty were eliminated from the design in order to reduce project cost, and in the early 1990s it was decided to start operating the reservoir at a reduced water level of 76 meters above sea level (masl), instead of the maximum design level of 83 masl, in order to re-phase major investments for resettlement, infrastructure, environmental mitigation and land acquisition.

2.6 When the latest Bank loan (Ln. 3520-AR) was approved, Management agreed to provide the Board with periodic progress reports on project implementation. The most recent report, of April 17, 1996, was supplemented on June 27, 1996 with the findings of the May 1996 Bank supervision mission. The current status of project implementation is summarized in the following paragraphs.

2.7 The main civil works, and the supply and installation of electro-mechanical equipment, are progressing satisfactorily and according to schedule. Main civil works are expected to be completed by the end of 1996. With the most recently installed generating unit having been commissioned in October 1996, there are now eleven units under commercial operation. While installation of all twenty units should be completed by mid-1998, operation of the reservoir at level 83 masl is not expected until January 2000. To complete the project, the following activities remain: (a) complementary works (resettlement, coastal treatment, and infrastructure relocation works); (b) civil works for the protection of the Aguapey and Tacuari streams; and (c) civil works for water flow control of the Aña Cuá spillway and coastal treatment of the Apipé island.

2.8 The implementation of the Resettlement and the Environmental Management Programs (REMP) has been delayed because of administrative bottlenecks and budgetary constraints. The implementation of the REMP related to reservoir levels above 76 masl has been delayed by more than two years and is currently nearly halted, mainly because of the Governments' decision to hold implementation until the privatization scheme for Yacyretá is approved by the Argentine and Paraguayan Congresses. The general economic down-turn and the contraction of public sector expenditure in Argentina in the wake of the "tequila effect" has made matters worse. Socio-economic outcomes of the relocation of the population affected by operation of the reservoir at level 76 masl are mostly satisfactory.

2.9 As agreed with the Bank in May 1996, EBY has secured the funds and started implementation of pending actions related to raising the reservoir to level 76 masl, such as: (a) contract signature and starting of the construction of the 28 houses; (b) compensation to all small brick makers (*oleros*); and (c) signing of contracts for the construction of the

³ This estimate includes interest during construction. The cost overrun on capital investment due to physical contingencies, in constant 1977 price terms, is approximately 20%.

communal infrastructure in the Caraguatá and Yacarey areas and of the drainage system in the Atinguy area. These activities will be completed by the end of 1997, thus concluding the resettlement and environmental mitigation measures required for raising the operating level of the reservoir to level 76 masl. An increase in the operating level of the reservoir above the current level 76 masl depends upon the satisfactory completion of pre-defined portions of the REMP, as defined in the Loan Agreement and Schedule 2 of the Project Agreement. The GOA, the Government of Paraguay (GOP) and the *Entidad Binacional Yacyretá* (EBY) have agreed that there will be no further increase in the reservoir elevation until the satisfactory completion of the required environmental and resettlement actions.

2.10 As the operating level of the reservoir has been restricted to 76 masl until additional funding for the project is secured (through privatization or direct public expenditure), no resettlement actions for increasing the operating level of the reservoir above 76 masl have been initiated, except for housing design and social support programs. The housing program, which involves the construction of about 2000 houses to be financed by IDB, is the critical element for reaching level 78 masl. Effectiveness of the IDB loan remains contingent on the appointment of consultants for engineering updating and supervision of complementary works.

2.11 Beyond the requirements of the REMP, the GOP has taken the responsibility for relocation of "additional families" (i.e., those families that moved into the area to be flooded by the reservoir after EBY's 1990-91 census and which, therefore, are not included under EBY's REMP). Land in the Itapazo area has been acquired for this purpose. The bidding process for the construction of facilities for water and electricity supply is under way under Ln. 3842-PA which includes a component of US\$1.2 million to support resettlement activities. The contractor will be selected by December 1996, and the works should start and be completed by January 1997 and July 1997, respectively. In Encarnación, some of these displaced additional families are living in precarious conditions. On the Argentine side, the Federal Government has agreed to take responsibility for relocation of additional families (61 small brick-makers) affected by the present operating level of the reservoir. The GOA and EBY will provide the counterpart funds to access financing available from Bank Loan 3821-AR to finance the construction of the 61 houses, which will start before December 1996. For the relocation of these families, EBY has made available the land and has provided water, electricity and access roads.

2.12 The reduced GOA contribution to the project's 1995 budget following the "tequila effect" caused EBY's financial situation to deteriorate. As a result of the GOA decision not to finance its contribution to the 1996 project budget, and a decision based on its agreement with the GOP to complete remaining project works through a privatization scheme, EBY's electricity sales remain its sole source of funds. This is not sufficient to meet the financial requirements for the continuation of the resettlement, environmental, and infrastructure works, and to pay outstanding debts to contractors, until privatization is completed. Following strong representation by the Bank to the GOA to meet its Loan obligations, EBY secured in August 1996 a US\$50 million credit from a local bank to

finance partially its 1996 cash deficit and implement the plan agreed with the Bank to complete pending actions required for raising the operating level of the reservoir to 76 masl (estimated cost: US\$16 million). The plan is being implemented satisfactorily and according to schedule. As agreed with the May 1996 Bank mission, to speed up payments for those activities related to level 76 masl that needed immediate attention, a special account with an initial deposit of US\$6.0 million, managed by EBY's Executive Director and Financial Manager, has been established in a commercial bank (the Banco Francés, in Buenos Aires). To ensure the availability of funds beyond the initial deposit to finance the remaining activities under the agreed plan, some of which will be completed towards the end of 1997, EBY agreed to establish an escrow account.

2.13 The Governments' strategy to complete the project through the privatization scheme is satisfactory. In November 1995, the GOA and the GOP signed a Protocol providing for the contracting of a private operator under a 30-year concession for the operation and maintenance of the Yacyretá plant and the marketing of energy. The Argentine Senate has approved the Protocol, but its approval by the Chamber of Deputies in Argentina and the Congress in Paraguay may face difficulties which, in turn, could impose rescheduling of the privatization plans. Privatization bidding documents are being prepared by the two Governments, in compliance with the REMP covenants in Loan 3520-AR. The Bank will review the documents following approval of the Protocol by the two Congresses, to ensure: (a) adequate funding for completion of the main civil works; (b) adequate funding of the itemized investment and recurrent costs of all necessary environmental mitigation and resettlement activities; (c) the adoption of adequate environmental rules for dam and spillway operation; and (d) the establishment of a realistic timetable for future raising of the reservoir to its final design level. It has been agreed with EBY and the GOA that the privatization will be subject to compliance with all the relevant Loan covenants under the Bank's and the IDB's loans, especially those concerning resettlement and environmental activities. Under the privatization scheme, funding for implementation of these activities will be assured through an escrow account managed by EBY and funded by the private concessionaire responsible for the marketing of energy and revenue collection.

3. SUMMARY OF SPECIFIC ISSUES, AND RESPONSES

3.1 The Request for Inspection (the Request) concisely presents its case that

"the claimants have suffered, as a direct result of the violations of Bank policies ... serious impacts on their standards of living, their economic well-being, and their health."

In addition, the Request claims that

"the Bank has failed to adequately supervise the Borrower or the beneficiary, with the result that the programs designed to mitigate the social and environmental impacts of the project have been neglected to the harm of the claimants and others directly affected by the project."¹

3.2 The Request makes a large number of claims including alleged actions or omissions on the part of the Bank with respect to the design and implementation of the project. The claims are frequently not linked directly to specific Bank operational procedures and policies. Instead, a blanket reference is made to seven ODs, two OPNs, and one OMS, with the assertion that "during the course of the design and construction of the... Project, each of these policies has been violated"². A number of the claims do not comply with the criteria of eligibility specified in the Board Resolution establishing the Panel. However, all of the points raised in the Request are dealt with in this Response in order to provide the fullest possible information. The claims made are summarized individually in matrix form in Attachment B and, where appropriate, are cross-referenced to the alleged violations of Bank policies and procedures. In order to avoid repetition, related and over-lapping claims have been grouped together, in the following sets of Claims and Responses.

3.3 *Claim: Bank policies which recognize that design considerations, such as lower reservoir levels, can reduce the social and environmental impacts of a project have not been applied, and inadequate consideration was given to design alternatives (Request, paras. 13 and 14).*

3.4 **Response:** We do not agree with this claim. The Bank carefully analyzed available design alternatives at the time of project preparation and processing of the first loan. As the project site was defined, trade-off analysis concentrated on different

¹ The Request for Inspection, para. 2.

² The Request for Inspection, para. 19.

reservoir operating levels. The Environmental Assessment (EA) concluded that most significant ecological and cultural site impacts would be felt even at the lowest operating level of the dam. Summaries of: (a) the comparison of potential impacts at different operating levels of the reservoir; and (b) the principal environmental mitigation measures, are presented in matrix form in Attachment C. The design of the resettlement and environment mitigation program was done carefully and in accordance with all Bank procedures and policies.

3.5 The cost-benefit analysis originally carried out for the project concluded that the higher resettlement and infrastructure relocation costs associated with higher operating levels of the reservoir would be significantly outweighed by the incremental revenue resulting from increased energy generation, giving a higher rate of return for the overall project. This conclusion remains valid. As described above, under the scenario of permanent operation at level 76 masl, only about two-thirds of the designed power output would be generated. The cost to generate this amount of energy foregone at another site and with other sources of energy would be much higher than undertaking the additional capital expenditure to enable Yacyretá to operate at its designed capacity, including the incremental costs of resettlement, environmental mitigation, and infrastructure relocation.

3.6 *Claim: The Banks did not adequately finance the environmental and social mitigation required by the project, requiring the GOA to provide counterpart funding for land acquisition, administration and the resettlement and environmental protection program. In addition, the Banks failed to incorporate resettlement planning in the design and financing of the project, in violation of OD4.30 (Request, para. 22).*

3.7 **Response:** The first assertion is based on a misunderstanding of Bank policy, and the second is incorrect. Bank policies require that, where resettlement and environmental mitigation operations are required, firm financial arrangements which ensure adequate resources to implement them should be agreed with the Borrower, but they do not require that the Bank loan itself should finance all or any part of the environmental mitigation and resettlement operations. Moreover, OD12.00 establishes that the Bank normally does not disburse against purchase of land and the Operations Policy Committee (OPC) confirmed in April 1996 that the Bank does not finance land. In this project, the Bank has firm legal agreements with the Borrower that provide complete and comprehensive financing for all environmental mitigation and resettlement operations. The fact that the Borrower prefers to use its own resources to finance the bulk of resettlement, and that it requested Bank finance only for strengthening capacity to implement the agreed Resettlement Plan, does not violate Bank policy.

3.8 A complete detailed Resettlement Plan, including design and finance commitments, was prepared by the Borrower agency and submitted to the Bank for review prior to appraisal of the Second Yacyretá Hydroelectric Project. The Plan was appraised in the field by a Bank resettlement expert. Consultations were held with affected people, local governments, NGOs and technical staff of EBY. Families affected by the filling of the reservoir were identified through a house-to-house census conducted in 1990-1991 by the resettlement planning team. All these families are included in the Resettlement Plan. For

those families who moved into the reservoir zone between 1991 and the present, the respective governments have agreed to provide replacement house plots, electricity, potable water, sewerage and drainage, access roads and technical assistance in self-relocation. The Resettlement Plan³ was formally agreed in negotiations with the Borrower, and subsequently incorporated in its entirety into the legal agreements signed by the Governments of Argentina and Paraguay and the World Bank. The resettlement process now underway is guided by this legally-binding REMP.

3.9 Claim: *Basic rights of participation and access to information have been denied; the EBY and the Banks have been unresponsive; and efforts to raise problems and concerns with them have been unsuccessful, in violation of OD4.30 (Request, paras. 21 and 27).*

3.10 Response: We do not agree with the statements made. The Resettlement Plan was designed in part through consultation with representatives of the affected people (i.e., Neighborhood Committees organized in the late 1980s), elected representatives in local government, social workers, anthropologists and other resettlement staff of the Borrower agency. Since 1990, the Borrower agency has maintained offices in the affected neighborhoods, staffed by full-time social workers who interact on a daily basis with the affected families and accompany each family in its relocation. Every Bank mission between 1991 and 1996 has met with affected families and their representatives. The alternatives provided by the Resettlement Plan were identified in this process of consultation. The Plan stipulates a choice between cash compensation and one or more resettlement alternatives for peri-urban brick makers, agricultural families and urban slum dwellers affected by the reservoir filling. These include formerly landless farmers -- the majority -- who are eligible for title to land and houses at no cost. Attachment D shows the types and numbers of families affected in filling the reservoir to level 76 masl, the resettlement alternatives offered, the alternatives selected and the location of the families today.

3.11 The Bank has provided to concerned NGOs and institutions all relevant information regarding the EA report of the project. The Bank required EBY to carry out extensive consultations with NGOs and other interested parties. A three-day workshop with the assistance of more than 60 local, regional and national NGOs (of both countries) was held in Ayolas in March, 1992 specifically to review the draft EA document and the proposed environmental management plan for the project. Similar meetings were held in Encarnación and Posadas during the same year. A Bank-financed Environmental Management Training Seminar was held in Ayolas in July, 1993. Over 60 participants from government and NGOs of Paraguay attended. The Yacyretá EA, containing the agreed Environmental Management Plan, was the focus of the seminar and was thoroughly discussed and analyzed. Official and informal meetings have been held with federal environmental agencies, municipalities, provincial natural resource agencies and local

³ *Resettlement and Rehabilitation Plan: Yacyretá Hydroelectric Project, July 31, 1992.*

NGOs throughout the process of project preparation and implementation, in both Argentina and Paraguay.

3.12 In line with Bank policy on Dams and Reservoirs, a panel composed of internationally-recognized experts on environmental and social impacts was created by EBY in 1992. The Panel meets twice per year in response to an agenda prepared by the Borrower. The Panel: (a) responds to emergent issues or problems on which the Borrower requires technical advice and expert opinion; and (b) makes independent observations on the implementation status of agreed programs and provides feedback to the Borrower. In the latter capacity, the Panel conducts field inspections, interviews affected people and their representatives, consults regional and national experts, carries out analytical work and makes recommendations. The Panel provides written reports to EBY, with copies to the Bank. Bank supervision mission have regularly attended briefings over the past four years, together with EBY professionals, provided by the members of the Panel. The Panel convened at the project site between October 21-25, 1996, and the report, with conclusions and recommendations, will be prepared by the end of October.

3.13 *Claim: The Banks failed to ensure that Argentina or EBY had the institutional capacity to implement a resettlement program (Request, para. 24).*

3.14 **Response:** We do not agree with the basic premise. While it may be true that such institutional capacity could be improved, nothing in the Bank's procedures oblige it to *ensure* a given outcome. The Resettlement Plan was prepared in 1991-1992 by experienced professional staff assembled by the Borrower agency, supplemented by internationally-recognized consultants. Beginning in 1992, implementation capacity was strengthened as part of the agreed Resettlement Plan, which includes the permanent recruitment of a properly qualified and experienced resettlement coordinator, social workers, agricultural extension specialists, health specialists, educators, engineers and others. The Bank loan financed this augmentation of institutional capacity, which continues to the present.

3.15 *Claim: The Environmental Trust Fund, designed to receive part of the proceeds from energy sales and to finance environmental mitigation and resettlement, has not been created (Request, para. 26).*

3.16 **Response:** The claim is incorrect. The Trust Fund (to finance all the activities of the REMP) was established by EBY in November 1994 in the Banco de la Provincia de Buenos Aires. Although the amounts deposited in this Fund were not precisely those agreed with the Bank, the Borrower has funded the required environmental and resettlement programs up to elevation 76 masl through the Fund and otherwise. After reaching elevation 76 masl, the sponsoring governments decided to complete the project above elevation 76 masl through a privatization scheme of the operation and maintenance of the Yacyretá plant and the marketing of energy. In early 1995, the GOA reduced by 50% its budget contribution to the project for 1995 and totally eliminated its contribution for 1996. However, to complete actions required for raising the reservoir level to

76 masl, the GOA authorized EBY to borrow funds against future electricity sales (see para. 3.66).

3.17 Claim: *The Banks failed to ensure that people resettled under the project were able to improve, or at least to maintain, their standards of living, in violation of OD4.30 (Request, paras. 28 and 29).*

3.18 Response: We do not agree with this assertion. An independent evaluation⁴ of the conditions of the resettled population (i.e., all people displaced by reservoir filling to level 76 masl) was conducted by resettlement experts contracted by the Borrower and financed by the Bank loan, in accordance with the Resettlement Plan. This evaluation found that the great majority of affected people who selected a resettlement option -- rather than cash compensation alone -- have successfully re-established their production systems, show no evidence of impoverishment, and (in many cases) have improved their income. The evaluation further concluded that all resettled families have better living standards than before their resettlement, including much-improved environmental health conditions, secure property tenure, access to basic public services (i.e., potable water, education, electricity and health care) and improved housing.

3.19 Claim: *The Borrower failed to establish a fair or equitable system of compensation. Many affected families have not received adequate compensation, and many have not been compensated in advance for their losses. The lack of a framework for equitable compensation has deprived them of the ability to negotiate fairly with EBY (Request, para. 31).*

3.20 Response: We do not agree with these assertions. The level of compensation paid to indemnify for property lost according to the Yacyretá Treaty is determined by a binational commission composed of an equal number of retired members of the judiciary from each country. The EBY has no power to adjudicate or negotiate the amounts of compensation paid. The Commission calculates compensation amounts based on the market replacement value. Records show that less than 5% of compensation awards have been disputed. No property has been affected without fair compensation being first paid to affected owners. In some cases, owners of property have disputed the compensation amounts, in which cases the amount offered -- but rejected by the awardee -- was deposited in an escrow account in the name of the affected party and held until such time as appeals were heard by the responsible judicial authorities in the respective countries.

3.21 Claim: *Serious health problems have been caused by the reservoir. These were not anticipated in the EA, and the Banks have failed to supervise or monitor the Borrower's and the beneficiary's performance to mitigate them (Request, para. 34).*

3.22 Response: We do not agree with these assertions. The EA report presents an in-depth analysis of anticipated health impacts. One of the EA authors is a well-known

⁴ Scombatti, M. and R. Carvalho. 1995. *Evaluación del Plan de Reasentamiento y Rehabilitación* (five volumes). Buenos Aires, Asunción and Washington, D.C.

expert on epidemiological conditions along the Paraná river and in Argentina as a whole. The health conditions existing in the area of influence of the project prior to the project were quite deficient. Major endemic diseases included hepatitis, various gastro-intestinal infections and parasites. Contaminated water resulting from deficient waste disposal and sanitation systems constituted a significant public health threat, especially in the urban areas.

3.23 Reversing and improving negative health conditions in the region is a major objective of the agreed REMP. The program consists of two interrelated activities: environmental health monitoring and treatment of illnesses and/or disease vectors. Health issues have been monitored from two basic viewpoints: epidemiological surveillance and the availability of basic health services in resettlement areas. Epidemiological surveillance on the Paraguayan side has been carried out in close coordination between EBY and health agencies of the Departments of Itapúa and Misiones. The project has financed an Agreement between Paraguayan and Argentine health agencies to monitor and treat clinical diseases in the area of influence of the project. In addition, the project financed an area-wide monitoring and control of vector-borne diseases, carried out by a prestigious academic center in Argentina. Local health agencies have been trained in monitoring, data interpretation and control techniques.

3.24 The Entomology Department of the La Plata Museum of Argentina has monitored vector organisms (especially mosquitoes) in the area of the reservoir since 1993, starting before the reservoir was filled to level 76 masl. Their findings, based on composition and relative abundance of species, do not indicate any changes in these parameters which can be interpreted as an additional incidence of vector diseases in the area due to filling the reservoir to level 76 masl. Malaria vectors of the genus *Anopheles* (e.g. *A. darlingi* y *A. albiparvus*) are endemic in the area of the reservoir. The data gathered so far indicated that seasonal population behavior of these species does not present significant variations when compared to their behavior before dam construction. Yellow fever and dengue vectors are also endemic for this area, as they are for the whole Paraná basin.

3.25 *Claim: The Mbya Guaraní have lost their traditional territory, and their livelihoods have completely changed. The land allocated to them is inadequate. They were not allowed to participate in decision-making nor given alternatives (Request, para. 36).*

3.26 *Response:* The first assertion is a statement of fact. The second and third assertions are incorrect. Some 10-20 Mbya families moved off the island of Yacyretá in 1974 and became scattered in several locations on the mainland, for reasons that are unknown and prior to Bank involvement. These are the only Mbya people known to have been resident on the island(s) of the Paraná river. In 1987, the Bank received a request from the Episcopal Conference of Paraguay, on behalf of the Mbya families, to consider them as having been displaced by the Yacyretá Project because they had fled the island to avoid problems with authorities when they learned of the construction of the dam. Following meetings between the Bank, the Borrower agency and the Episcopal

Conference, the Borrower agency volunteered to purchase a 370 ha tract of forest land and to offer the Mbya the opportunity to reunite on this land.

3.27 In 1988, the 21 Mbya families that accepted this offer were then assisted to relocate by the Borrower agency, which provided, in addition to title to the land, transportation to the site, building materials for houses, a school, a drinking water well, seeds, tools, medical care and agricultural extension services. Under the Second Yacyretá project, electricity, a tube well, milk cows, fruit trees, continued medical care and agricultural extension have been provided. The Mbya have reported to successive Bank missions their gratitude for the fact that for the "first time in memory" they have legal title to land and are protected from Paraguayan invasions of their territory. Paraguayan anthropologists have accompanied and assisted the Mbya in reuniting on their new lands. At 17.62 ha per family, the carrying capacity of their land appears more than adequate for the present and the next generation.

3.28 *Claim: The EA was flawed in many ways. It failed to consider several important aspects of the project (e.g., the impact on the Aña Cuá Branch of the Paraná river, compensatory reserves, vegetation removal, water table, fish migration, environmental management plans for Encarnación and Carmen del Paraná, lack of baseline environmental data) (Request, paras. 36-38, and 47-51).*

3.29 **Response:** We do not agree with this claim. The Borrower prepared a full EA report under Terms of Reference agreed with the Bank. This EA was undertaken by a group of international consultants (from Argentina, Paraguay and Colombia) which delivered a high class product. The analysis was comprehensive and included: (a) a synthetic analysis of environmental baseline conditions using the wide (but uncoordinated) array of ecological and environmental studies carried out by EBY and other institutions in the area; (b) an assessment of the magnitude, importance and probability of occurrence of all potentially-significant negative and positive impacts; (c) an analysis of alternatives, based on available options; and (d) an integrated Environmental Management Plan, tailored to the most likely reservoir filling schedule, with detailed description of activities, timing, institutional responsibilities and budget. The EA was sent to the Bank prior to the appraisal mission, and an English language executive summary was distributed to the Board. The EA report has been deemed a thorough and complete best-case study by Bank and non-Bank specialists alike, and met all the requirement of the Bank's policies and procedures.

3.30 Public consultations took place during preparation of the EA. The consultants carried out informal consultations with environmental scientists, non-governmental organizations, environmental officials of local and national governments and informed citizens throughout the period of preparation of the EA. When the report was available in draft and before finalization, a formal 3-day consultation was organized by EBY with more than 60 NGOs and representatives of affected populations in Ayolas. The Resettlement Plan was also presented in draft form at this time to all of the participants. Based upon the suggestions and comments received, the EA was revised and finalized.

3.31 *Aña Cuá Branch.* The impacts on this river branch were regarded as the major downstream impact of the reservoir. The management of water quality and quantity along this branch is to be an important component of reservoir operating rules. The construction of three mini-dams downstream from the Aña Cuá spillway will guarantee the permanence of appropriate water levels in the branch. Nevertheless, water quality degradation and other undesirable conditions (e.g., aquatic weeds) need to be monitored in order to send necessary "wash-load" flows downstream to improve environmental conditions in the mini-reservoirs. A minimum "ecological" flow will have to be maintained at any operational level of the reservoir, whether it is operated by EBY or a private sector concessionaire. These issues are being analyzed as part of studies to design the management of water levels and discharges which would be required before operation either beyond level 78 masl or under conditions which would necessitate closing off all spills on the Aña Cuá Branch.

3.32 *Compensatory Reserves.* The EA report identified that "one of the most significant impacts of the project, both in importance and magnitude, will be the permanent loss of wildlands, especially the island ecosystems of Yacyretá and Talavera". It also stated that "the functional capabilities of these ecosystem will cease even at operational level 76 masl". The EA report also identified that the most important measure available for mitigating the loss of natural ecosystems is the establishment of a network of compensatory reserves. Seven reserves totaling more than 100,000 ha were proposed in the EA report as partial compensation for the wildlands lost to the project. These potential areas were identified as ecologically similar to the ecosystems affected by the project. Compensatory protected areas have been established under the Yacyretá project.

3.33 *Migration of Fish.* The potential impact of reservoir development on the fish populations of the Paraná river have been studied for several decades. The EA report fully considered all previous studies and conclusions, and recommended management plans to take into consideration: (a) the inevitable barrier of an existing dam (90% completed when the EA was carried out); and (b) the existence of fish elevators as part of the main civil works of the dam.

3.34 The project's effects on the Paraná river's native fish are varied and complex, but appropriate mitigation measures are being implemented. On the positive side, the overall fish biomass (including that of harvested species) is expected to increase under the project, because: (a) the total fish habitat (freshwater surface area) will expand; and (b) preliminary evidence indicates that the reservoir is a productive fishery habitat (with mostly excellent water quality and other favorable conditions). Furthermore, the Yacyretá dam and reservoir are not expected to cause any of the Paraná river's native fish species to disappear completely from the river (although this can only be confirmed over time with continued scientific monitoring). This favorable prediction is based on the extensive undammed section of the Paraná river below the dam, which native (including migratory) species will continue to utilize and the fact that sections of the Yacyretá reservoir will continue to have "riverine" aquatic characteristics suitable for some species not tolerant of "lake" conditions.

3.35 On the negative side, the dam has resulted in three major adverse impacts. First, the dam is a physical barrier to fish migrations, both up- and down-river. Neither the two existing fish elevators nor any other known technology (e.g., ladders or "trap and truck" facilities), could restore fish migrations to anything resembling natural, pre-dam conditions. While the fish elevators cannot re-establish natural migration patterns, they are nonetheless useful for ensuring that the Yacyretá reservoir has a genetically-diverse breeding stock, by "seeding" the reservoir with many native species from below the dam. Second, two large fish kills occurred below the dam during reservoir filling to level 76 masl, due to gas (primarily nitrogen) super-saturation of the relatively shallow waters below the dam. The gas super-saturation results from the atypical design of the dam's main spillway, which causes excessive aeration of the water. This effect was not anticipated by the EA, because it is a rare phenomenon (not previously known from hydroelectric dams in Latin America). Under the circumstances, EBY is doing everything feasible to minimize gas super-saturation, including: (a) adjusting operation of the main spillway; (b) carefully monitoring dissolved gas levels; and (c) incorporating design changes into the Aña Cuá spillway. As a result of EBY's efforts, visible fish kills are no longer occurring although the gas super-saturation problem will not completely disappear at Yacyretá. Third, large-scale, illegal commercial fishing is common in Paraguayan waters immediately below the dam, where migratory species are highly concentrated and unusually easy to catch. Although EBY has no legal mandate to regulate fishing below the dam and despite the fact that the Paraguayan authorities have been slow to respond, this problem is likely to be solved by the declaration and enforcement of a 1 km security zone below the dam, which would prevent access to most fishing boats (as well as protect the dam from the remote risks of sabotage or terrorism).

3.36 *Water and Sanitation.* Water quality in or near urban areas, and its related potential health risks, was identified as being of the highest importance. Existing deficits in sanitation services (existing sewage collection covers less than 15% of household units) and low circulating waters in lateral urban bays would create unhealthy conditions and cause proliferation of vector diseases. This condition would be exacerbated by endemic mosquito populations and institutional weaknesses of health sector agencies. Maximum risks would be present at the highest reservoir elevations. However, situations similar to pre-impoundment conditions were expected for filling of the reservoir to level 76 masl, and have been confirmed by the vector monitoring programs.

3.37 The EA report established that improvements of basic sanitation services in water, sewerage and sewage treatment, and in solid waste collection and disposal, were a necessary condition for filling the reservoir beyond level 78 masl. EBY has financed new water intakes and treatment plants for Encarnación and Posadas, and is currently building main sewerage collectors, pumping stations and wastewater treatment plants for both cities. The Bank and the IDB have sewerage network and house connection projects for Posadas and Encarnación. The reconstruction of urban infrastructure of affected urban centers will be included in a major study for the feasibility and design of coastal treatment works, which will be financed by the Bank Loan.

3.38 EBY completed a study with the assistance of consultants with respect to Carmen del Paraná. Implementation will be the responsibility of the Paraguayan agency CORPOSANA in coordination with EBY's Technical Department.

3.39 *Claim: A Declaration from NGOs criticizing the EA, sent to the World Bank's President, was unanswered (Request, para. 37).*

3.40 *Response:* Despite an exhaustive search of files and records, no evidence could be found of the receipt of this letter by the Bank, although it seems clear from the evidence presented in the Request that the letter was sent to the Bank. We are continuing with the search of the records.

3.41 *Claim: The Requesters have been informed that the proposed Aña Cuá mitigation plan may not be implemented for lack of funds and/or questions about its technical quality (Request, paras. 41 and 42).*

3.42 *Response:* We believe that the information on which the claim is based is incorrect. A major effect of the project on fish and other aquatic life would be on the Aña Cuá Branch of the Paraná river. This Branch would be subject to annually-recurring desiccation. The mitigation plan for this Branch involves: (a) the construction of three mini-dams downstream from the Aña Cuá spillway, which would retain water during the low flow periods; (b) an environmental monitoring program which would assess water quality and other conditions including aquatic weeds, vectors and fish mortality; (c) operating rules that would allow for minimum "ecological" discharges to the mini-reservoirs and occasional large flushing releases, in order to maintain desirable environmental conditions; (d) relocation of water and sanitation infrastructure; (e) community programs for fisheries and other water uses in the reservoirs; and (f) control of illegal fishing and surveillance. The Borrower has agreed to fulfill the above Environmental Mitigation Plan (part of the REMP) and to ensure that the Aña Cuá Branch will not be left dry at any time before the infrastructure and the plans are in place. We understand that IDB has never questioned the concept of the proposed mini-dams, but wanted to examine other possible options.

3.43 *Claim: Vegetation has not been cleared from the areas to be flooded, as specified in the Environmental Management Plan, in violation of OD4.00, Annex B (Request, paras. 43 and 45).*

3.44 *Response:* This assertion is incorrect. The effect of flooded vegetation on reservoir water quality was analyzed using both qualitative and quantitative methods. These analyses concluded that the relative importance of the flooded biomass on the overall water quality of the reservoir was very low. Most of the flooded biomass is in the form of wetlands and natural grasslands, while standing trees cover less than 8% of the total reservoir area at level 76 masl. At the initial operating level (76 masl), the reservoir surface area covers some 110,000 ha, of which some 52,600 ha correspond to land flooded and 57,400 ha to existing river bed. Of the land flooded, 8,300 ha correspond to standing-tree vegetation, mainly riverine and island border forests (see following table). In

addition to very low values of flooded biomass per unit area (i.e., less than 6 ton/ha compared to 300 - 600 ton/ha for other tropical forests which have been flooded by other reservoirs), the high turnover period (calculated at 3 to 5 days at level 76 masl and 25 days at level 83 masl), the low reservoir height, and river-induced mixing conditions all establish favorable conditions for maintaining adequate water quality in the reservoir.

Flooded Areas at Level 76 masl

| Affected Area | ha | % |
|----------------------------------|---------|-------|
| Standing Vegetation (islands) | 5,521 | 5.0 |
| Standing Vegetation (inland) | 2,872 | 2.6 |
| Grasslands and wetlands(islands) | 27,408 | 24.9 |
| Grasslands (inland) | 16,799 | 15.3 |
| Water surface | 57,400 | 52.2 |
| Total | 110,000 | 100.0 |

3.45 Even with the low relative importance of flooded biomass on the overall water quality of the reservoir, the EA report identified the need for the removal of vegetation in specific areas where risks of thermal stratification and eutrophication were the greatest. Specific areas for vegetation removal were identified, in order: (a) to improve water quality conditions in low circulating areas, especially in lateral bays near urban and/or resettlement areas; (b) to diminish the potential of aquatic weed entrenchment of standing trees in areas near population centers; (c) to improve access to the reservoir by rural and urban users; and (d) to improve navigation channels. For reservoir filling to level 76 masl, about 2800 ha were targeted for the removal of standing vegetation using slash and burn techniques. Of these, about 2700 ha (33% of the total flooded standing vegetation) were actually removed before flooding to that level. Critical areas to be removed for reservoir filling to level 78 masl have already been identified. These future areas will target lateral bays near urban areas.

3.46 Favorable water quality predictions have been confirmed by extensive monitoring programs including upstream and downstream conditions, which started before the final flooding to level 76 masl and are being carried out by binational teams of universities and research centers. There have been no significant changes in key physical and chemical parameters in the main water body of the reservoir at locations such as Encarnación-Posadas and at the dam site. Initial conditions for oxygen depletion behaved as expected, with a slight dip immediately after flooding but with fast recovery of saturation levels. Although deteriorating water quality conditions in small patches or lateral bays of the reservoir cannot be completely avoided, the removal of vegetation in critical areas has definitely improved water conditions and has not allowed the establishment of aquatic weed populations near populated areas. No bloom of aquatic weeds has been reported in the reservoir area.

3.47 The removal of vegetation prior to flooding is one of the recommended activities included in OD 4.00 Annex B. This policy does not require that all vegetation be removed as a condition for Bank financing but rather that the feasibility of such removal should be determined. The relative importance of flooded biomass in the overall water quality should be weighed against other sources of organic and nutrient loads in the future reservoir. Yacyretá is a typical case where flooded biomass and other reservoir conditions (e.g., height, renovation time, mixing conditions) preclude total vegetation removal as a means to improve water quality. Specific removal in targeted areas is, therefore, a more effective approach allowing for a more efficient use of resources assigned to environmental mitigation.

3.48 In those parts of the Yacyretá Reservoir where biomass removal was not needed to achieve water quality, navigation, mosquito control, or other important objectives, standing dead trees are acceptable (and even desirable) from an ecological standpoint. The underwater portions of flooded trees and shrubs provide shelter and nutrients for many fish and other aquatic life. The emergent portions of flooded trees at Yacyretá are used as roosting or nesting sites by cormorants, herons, kingfishers, swallows, and many other birds.

3.49 *Claim: Variations in the levels of the water table on the Paraguayan side of the reservoir have not been assessed adequately (Request, para. 46).*

3.50 **Response:** This assertion is correct. Water table conditions both for quantity and quality have not been adequately assessed, either on the Paraguayan or on the Argentine side. The EA report addressed this issue; it concluded that there was not sufficient information to assess the potential impacts on groundwater quantity and quality, and recommended that specific hydrogeological studies be carried out in critical areas such as Encarnación and Posadas. The impacts would grow in importance with higher reservoir operating levels. These hydrogeological studies were included as part of the Bank-financed project, but they have not been carried out yet because of procurement delays. The EBY plans to hire consultants in early 1997 with the objective of completing the studies during 1997. This is an important information gap that needs to be addressed before raising the reservoir beyond level 76 masl.

3.51 *Claim: The Banks failed to assess adequately the biodiversity at the Project site before the reservoir was filled. The project destroyed wildlands without establishing adequate compensatory reserves, in violation of OPN11.02, and the creation of reserves has been illusory. Although it is claimed that six reserves have been created, in most cases title has not been acquired and the areas are not being protected (Request, paras. 52 and 55).*

3.52 **Response:** These assertions are incorrect. The biological surveys carried out for the Yacyretá project are described in the EA report and summarized in the EA Executive Summary and the Staff Appraisal Report. They included a thorough review of higher plants, large mammals, birds and reptiles in the project area, and a less detailed review of Paraná river fish species. A comprehensive survey of other life forms (including

invertebrates) in the reservoir area was not done, as it would have taken several years to complete and the information obtained would almost certainly not have been used to change project design or operation. By the time that Ln. 3520-AR was under preparation, the Yacyretá dam was already physically in place and could not be relocated, based on biological or any other environmental data. However, the biological surveys that were carried out proved very useful in identifying compensatory protected areas which have the same ecosystem types and the same or similar species as the areas flooded by the reservoir.

3.53 The Environmental Mitigation Program required under Ln. 3520-AR provides for a system of compensatory protected areas which is fully consistent with the letter and spirit of the Wildlands Policy (superseded by the Natural Habitats Policy, OP 4.04). To date, five new protected areas totaling about 128,000 ha have been legally established under the Yacyretá Project. They comprise:

- (a) five Special Conservation Units (Galarza, Ibera, Itati, Yaguarete Cora, and Camby Reta) totaling 83,000 ha within the Ibera Provincial Reserve (Corrientes, Argentina);
- (b) Santa Maria Provincial Reserve (2,450 ha in Corrientes, Argentina);
- (c) Apipé Grande Provincial Reserve (27,000 ha in Corrientes, Argentina);
- (d) Campo San Juan (5,700 ha in Misiones, Argentina, which is still under private ownership but is legally protected under a "no innovation" decree); and
- (e) the Isla Yacyretá Wildlife Reserve (9,940 ha in Paraguay).

As a group, these reserves encompass all of the ecosystem types (including different kinds of wetlands, native grasslands, and forests) which have been or will be inundated by the reservoir. In compliance with the Natural Habitats (Wildlands) Policy, the combined size of the Yacyretá Protected Areas System (SAPY) is larger than the land area to be inundated when the reservoir is raised to level 83 masl (about 105,000 ha of natural habitats).

3.54 On-the-ground management has been initiated (with financial support from EBY) at the Santa Maria and Isla Yacyretá reserves, which now have physical demarcation and full-time guards. Investments to manage the other above-named protected areas have been delayed because EBY has not yet provided the agreed counterpart funds. However, these other reserves (Ibera, Apipé Grande and Campo San Juan) do not currently face human encroachment or other imminent threats. Nonetheless, satisfactory implementation of on-the-ground protection measures for the Ibera-Galarza, Apipé Grande, and Isla Yacyretá reserves is a pending action required for operating at level 76 masl, which is being implemented as agreed with the Bank. The recurrent costs of managing all of the SAPY reserves (as well as other recurrent environmental mitigation costs) are to be

funded through a special allocation from power sale revenues; this requirement will be made explicit in the privatization bidding documents.

3.55 About 92% of the SAPY land area is in Argentina, while about 75% of the natural land area lost to the reservoir is in Paraguay. This apparent imbalance exists because it has been easier to establish new protected areas on the Argentine side of the river, which has significant tracts of public land (at Ibera and Apipé Grande) and a more favorable land expropriation law (for Campo San Juan). On the Paraguayan side, all the sites examined to date for possible new reserves are privately owned. Except for Isla Yacyretá, EBY's management has consistently declined to purchase land in Paraguay, due in part to concerns about inflated land prices. However, EBY has committed itself to finance essentially all of the costs of protected area establishment and management, other than land acquisition. The Natural Habitats (Wildlands) Policy does not specify what proportions of the compensatory protected areas must come from each country in binational projects.

3.56 Although the western end of Isla Yacyretá has been degraded by dam construction-related activities prior to being established by EBY in March 1994 as a Wildlife Reserve, it is nonetheless an ecologically valuable area, with the only Arary (*Calophyllum brasiliense*) forests and sand dune formations in any of the SAPY protected areas. The problems cited in the Request are being addressed: protected area guards have been hired, the reserve has been demarcated with signs, the Ayolas garbage dump has been closed, and rehabilitation of borrow pits (as wetland ponds or other attractive wildlife habitat) is underway. A major pending action at the Isla Yacyretá Wildlife Reserve is the acquisition by EBY of remaining private lands; this is to be done initially in the portion of the reserve east of the highway, which is relatively wild and where no resettlement is needed. Although the Arary is not a globally-endangered tree species, Arary forests in Paraguay are a rare and threatened ecosystem. The Bank is committed to ensuring that adequate water remains in the Aña Cuá Branch (from sufficient water releases, with or without the three planned mini-dams), so that the Arary forests at Isla Yacyretá will not be damaged by water shortages.

3.57 *Claim: There might have been an impact of the project on cultural property, in violation of OPN11.03, and the Request asks that the Panel evaluate the extent to which policy has been complied with (Request, para. 54).*

3.58 **Response:** Bank-financed systematic field surveys and investigations were carried out for the Paraguay and Argentina sides of the river and for the islands. Archaeological salvage operations were carried out in all islands prior to flooding to level 76 masl. Materials and artifacts have been analyzed and catalogued. Additional surveys (and, if needed, salvage) as well as studies of historic sites in urban areas to be flooded will be carried out prior to filling the reservoir to higher elevations, as defined in the REMP.

3.59 Claim: *The systematic disregard for the impact on biodiversity undermines the goals of the Convention of Biological Diversity, in violation of OMS2.36 (Request, para. 63).*

3.60 Response: This assertion is incorrect. The Yacyretá project was designed and largely implemented long before the Convention on Biological Diversity was signed in 1992. Implementation since 1992 has done much to support, not undermine, the goals of this Convention, both in Paraguay and Argentina. Project activities which support the Convention include: (a) establishment and management of new protected areas; (b) research and monitoring of many terrestrial and aquatic animal species in the project area; (c) promotion of sustainable fish management, by prohibiting fishing immediately below the dam and by refusing to introduce non-native fish into the reservoir; (d) captive maintenance and re-introduction to suitable riverine habitat of threatened *Aylacostoma* snails; (e) managing of water releases over the dam and spillway to help sustain native fish and other aquatic life by minimizing gas super-saturation and avoiding desiccation of the Aña Cuá Branch; and (f) allocation of power sale revenues for protected area management, fish monitoring, and the other recurrent costs of environmental protection.

3.61 Claim: *The Banks have allowed the project to stray off-course, and have allowed the Borrower to delay implementation of the neglected social and environmental components. In addition, the Banks did not exercise their remedies when the Borrower failed to comply with Loan conditions, in violation of OD13.05 and OD13.40 (Request, paras. 64 and 65).*

3.62 Response: We agree that there have been delays, but the assertion concerning remedies is based on a misunderstanding of Bank procedures. Commensurate with the nature and complexity of the project, the Bank has supervised the project at least three times a year; as shown in Attachment F, in the past four years, 24 supervision missions have visited Argentina/Paraguay. On average, the Bank has assigned 80 staffweeks per year to supervision of the project, five times the Bank-wide average. Supervision missions have met with interested parties, including the Universities of Buenos Aires, Misiones and Encarnación, Fundación Moisés Bertoni, Fundación Vida Silvestre, as well as the representatives of affected population. Supervision missions have been and are always ready to meet with interested parties during the course of their work and they have done so regularly since 1990. Our records show only one unfulfilled request from Sobrevivencia received while a Bank mission was in the field (November 27, 1995). On this occasion, the mission contacted Sobrevivencia, and its staff apologized for the fact that they were unavailable. It was agreed to meet in the future in Washington and in the field with supervision missions. The Bank met most recently with Sobrevivencia in April and October 1996.

3.63 In supervision, Bank missions have drawn a clear distinction between the actions related to elevation 76 masl (i.e., current operating level of the reservoir) and those actions required as a pre-condition for raising the reservoir level above elevation 76 masl. The Bank, in close coordination with IDB, ensured that all essential environmental and resettlement actions were complied with before agreeing to raising the reservoir to

elevation 76 masl and commissioning the first generating unit. At this point, the Bank forcefully insisted that the Borrower change the schedule for raising the reservoir in order to allow time to comply, *inter alia*, with the removal of affected population, payment of indemnifications, and removal of biomass. The raising of the reservoir operating level was completed strictly in accordance with the plans agreed with the Bank; EBY and the Borrower were in compliance with the dated covenants in the loan. Some complementary actions were needed, following a review made after elevation of the reservoir to level 76 masl. Some of these actions were not implemented as planned because of the financial difficulties faced by EBY in 1995 and 1996, but are being addressed as described in paras. 2.11 and 3.66.

3.64 With respect to the implementation of actions related to reservoir elevations 78 masl and 83 masl, the Borrower was in non-compliance with dated loan covenants which reflect the initial plan to achieve elevation 78 masl by the end of 1995 and elevation 83 masl by the end of 1998. The Bank's major concern was to avoid the increase of the reservoir level above elevation 76 masl, without strict compliance with the action plan agreed with the Bank.

3.65 Because of the macroeconomic crisis faced by Argentina, the GOA decided to reduce by half in 1995 and to eliminate in 1996 its budget contribution to the project (other than debt servicing), which delayed project implementation and almost stopped execution of the REMP required for elevations 78 masl and 83 masl, as well as implementation of pending resettlement and environmental actions related to elevation 76 masl. At the same time, the GOA and the GOP agreed on a privatization strategy for project completion above elevation 76 masl, that would allow the financing of the REMP required for elevations 78 masl and 83 masl.

3.66 On April 13, 1996, the Bank urged the GOA to agree on a Plan of Action to complete outstanding resettlement and environmental actions related to elevation 76 masl and to inform the Bank on its plans for raising the reservoir above elevation 76 masl. The Bank also informed the GOA that unless a satisfactory agreement was reached with the Bank on these issues, the Bank would have to consider the application of remedies in the Loan Agreement. On April 24, 1996, the GOA confirmed to the Bank its agreement to provide the financial resources to complete pending actions required for raising the reservoir to elevation 76 masl, and its decision to complete the project above elevation 76 masl, in compliance with the REMP, through the privatization of the operation, maintenance and sales of energy of Yacyretá, estimated by the two Governments to be finalized by February 1997. On July 31, 1996, EBY confirmed to the Bank that it had secured funds to finance pending activities related to elevation 76 masl, and that a special account has been established for this purpose. As of October 15, 1996, implementation of these activities was proceeding satisfactorily and in accordance with the plan agreed with the Bank mission on August 16, 1996.

3.67 In view of the Government's positive response in providing funds and quickly starting implementation of the pending actions related to elevation 76 masl, the Bank did not require the exercise of the legal remedies of the Loan Agreement. The exercise of

remedies is a discretionary matter, according to Bank policy, to be used only when other reasonable means of persuasion have failed.

3.68 Claim: *Even if the dam were fully operational at level 83 masl, the cost of electricity generated by the project would be more than three times the competitive market price in the region (Request, paras. 6 and 39).*

3.69 Response: The claim is correct. However, it is important to understand both the history of the project and the decision-making processes which have been followed in approving successive loans in support of it.

3.70 The decision to build Yacyretá was taken at the end of a decade which saw two massive crises in energy supplies and prices. There were powerful reasons to view such a project, with heavy capital costs but low operating costs, in a very favorable light. It is extremely important to understand that, under the assumptions prevailing at the time of the appraisal of the Bank's first loan in support of Yacyretá, *the project was the least-cost option for meeting Argentina's electric power needs from 1985 onwards.*

3.71 The decade of the 1980s was disastrous for Yacyretá. First, there was a three-year procurement dispute between the Bank and EBY. Macroeconomic instability, compounded by the South Atlantic War and its aftermath, resulted in chronic financing problems. EBY itself suffered from severe management problems. Nonetheless, in spite of all the difficulties and delays, the dam was built. The Second Yacyretá Hydroelectric Project was designed to complete outstanding work. When it was appraised in 1992 and Loan 3520-AR was made, *it was part of the least-cost power generation expansion for the period 1992-2000*, where investments already made were considered as "sunk costs" for the purposes of economic evaluation, in accordance with standard economic cost-benefit analysis methodology.

3.72 In appraising the project for the first loan, the Bank estimated its internal rate of return (IRR) at 14%; however, the IRR is currently estimated at 5.5%. Using a discount rate of 10%, the cost of power generated at level 83 masl would be US\$9.5 per kWh. Two separate sets of forces have reduced the expected rate of return and increased the unit cost of power. On one side, delays⁵ and interruptions in project implementation have increased costs and delayed the expected power production from the dam. In addition, the actual capital cost of the project rose by about 20% in constant 1977 price terms, which is not unreasonable for such a complex project with a long gestation period. On the other side, the cost of alternative means of power production (gas-fired combined cycle thermal plants) has decreased in real terms, instead of remaining constant or even increasing as it was projected in the late 1970s.

3.73 The project was designed to be operated at a reservoir level of 83 masl. Operating it permanently at a level of 76 masl would reduce the energy output by one-third from its

⁵ The first investments were made in 1977 and completion is now expected to be in 2000, a total of 24 years.

designed capacity, with obvious consequences for both unit costs and revenues. Looked at from the point of view of the incremental costs and revenues which would result from raising the level of the reservoir from its present level of 76 masl to 83 masl, a 50% increase in productive capacity⁶ can be obtained and the incremental costs of production of energy would be equal to about US\$1.6 per kWh, which is about two-fifths of the cost of the lowest cost alternative.⁷ The incremental investment (of US\$760 million, mostly for resettlement and environmental mitigation, as the dam and power generation facilities are substantially in place) would have an IRR of 25% and a payback period of less than three years. The present selling price of energy generated at Yacyretá at level 76 masl is US\$3.3 per kWh, as defined in the 1992 amendment to the Treaty. This is close to the present spot market price in Argentina and is twice the incremental cost of power produced by increasing the operating level of the reservoir from 76 masl to 83 masl.

3.74 Claim: *Privatization should not proceed without adequate legal safeguards regarding the reservoir level, monitoring of the impact of the reservoir level on the health and well-being of affected populations and the environment, and environmental impact assessment of the impact of privatization, and the meeting of the minimum standards which have already been violated. There should be an evaluation of the economic rationale behind privatization, and the implications for dam-affected people and the environment. Other alternatives should also be fully evaluated, including dismantling the dam or operating the Yacyretá reservoir at a lower level than the projected 83 masl (Request, para. 67).*

3.75 Response: The GOA's strategy is to promote private sector participation in its power sector, and that strategy has the support of the GOP. The Bank's position has always been that the privatization arrangements should be decided by the interested countries, following the consultant/decision process described in the legal documents, and that the Bank would have no objection, in principle, to the privatization of Yacyretá provided: (a) that it would not conflict with the basic objectives of the project; and (b) that implementation of the Resettlement and Environmental Management Plan would be carried out strictly as agreed with the Bank.

3.76 In compliance with a Loan covenant, EBY hired consultants to study the feasibility of private capital participation in the operation and maintenance of the Yacyretá plant and in the marketing of its energy. Following completion of the study, the sponsoring Governments and EBY agreed with the Bank to proceed in 1995 with the privatization of EBY. On November 22, 1995, the Governments of Argentina and Paraguay signed a Protocol, providing a basic scheme for the contracting of private operators under a 30-year concession arrangement.

⁶ in excess of 6000 GWh per year. This is equivalent to a large power plant of 1300 MW operating at a 50% capacity factor.

⁷ The long-run marginal cost of energy from a combined-cycle thermal plant using gas would be about US\$4 per kWh in Argentina.

3.77 The Protocol does not conflict in principle with the basic objectives of the project established in the legal agreements. Because of political difficulties, the plans to complete the procurement process for the concession were postponed from June 1996 to February 1997. The Argentine Senate has already approved the bill, but the Chamber of Deputies in Argentina and the Congress in Paraguay are still divided with respect to the privatization. For this reason, completing privatization of Yacyretá by February 1997 seems unrealistic. If the Congresses approve the Protocol, the Bank will review the bidding documents to ensure: (a) adequate funding for completion of the main civil works; (b) adequate funding of the itemized investment and recurrent costs of all necessary environmental mitigation and resettlement activities; (c) adequate environmental rules for dam and spillway operation; and (d) that further raising of the reservoir's operating level is subject to the compliance with agreements entered between EBY and the Bank, relative to the execution of the REMP.

3.78 There is a clear understanding among all parties involved (the Governments of Argentina and Paraguay, EBY, and the World Bank and Inter-American Development Bank) that the two governments are legally obliged to implement the REMP before further elevation of the reservoir is undertaken, whether operated by EBY or a private sector concessionaire before or after privatization of Yacyretá. Even after privatization, EBY's legal obligation to the Bank to comply with resettlement and environment covenants would persist (the only difference being that such obligation would be met by requiring the private sector to participate in the necessary actions). The bidding documents for the privatization will be approved *ex-ante* by the Bank and concessionaire compliance with the Bank policy-derived resettlement and environmental obligations would be an explicit obligation in the concession contracts between the concessionaire and the GOA, GOP and the EBY. In reviewing the bidding documents, the Bank intends to focus on mechanisms for ensuring concessionaire compliance with such obligations.

3.79 The completion of the REMP to allow operation of the dam at the designed 83 masl reservoir level would be an investment with large economic returns. The privatization strategy proposed by the two Governments includes the establishment of an escrow account for resettlement and environmental mitigation activities, funded from electricity sales by the concessionaire. There is no reason to expect that this concessionaire will attempt to undermine the resettlement and environmental protection agreements entered between EBY and the Bank, which will remain valid until they are fully satisfied. The Protocol gives EBY the control on the execution of the REMP.

3.80 The dismantling of a dam such as Yacyretá would be an extremely costly and complex operation, which would represent a high risk to the environment. The termination of electric energy production would represent an economic loss between US\$500 million and US\$800 million per year, for reservoir levels of 76 masl and 83 masl respectively.

Yacyretá Hydroelectric Project

Pending Actions Related to Operating the Reservoir at Level 76 masl

| Description | Cost Estimate (US\$'000) | Completion Date |
|--|-----------------------------|--------------------|
| IN ARGENTINA: | | |
| Sanitation: | | |
| (a) Sewage and Water Pumping System - Resettlement Unit 3.2 | 129 | 12/97 |
| (b) Water Supply by Trucks-Resettlement Unit 3.2 | 99 | 12/97 |
| (c) Construction of Water Tank in Villa Lanus | 663 | 7/97 |
| Reserves and Biodiversity: | | |
| (a) Apipé Island | 213 | 4/97 |
| (b) Galarza | 99 | 4/97 |
| (c) Rincón Santa Maria | 55 | 11/97 |
| Urban Housing: | | |
| (a) Supply of Equipment - Communal Unit (3.2) | 1092 | 6/97 |
| (b) Additional - Project I | 159 | 6/97 |
| (c) Additional - Project II | 326 | 6/97 |
| Rural Housing: | | |
| (a) Santa Tecla (Corrientes Province)-5 houses | 48 | Completed |
| (b) Santa Tecla: Water Supply | 57 | 11/96 |
| Equipment Supply: | | |
| (a) Naval Unit (ARG) | 40 | Completed |
| (b) Naval Unit (ARG) - Nemesio Parma | 40 | 6/97 |
| Social Development: | | |
| Santa Tecla: Rehabilitation and Productive Program | 16 | 2/97 |
| Brick Making Areas: | | |
| (a) Nemesio Parma: Rehabilitation Program | 74 | 12/96 |
| (b) Nemesio Parma: Productive Units - Drilling Water Wells | 70 | 10/96 |
| (c) Santa Rita: Compensation, small brick-makers (Stage II-Phase II) | 379 | Completed |
| (d) Santa Rita: Economic Support (Stage II) | 7 | 10/96 |
| (e) El Porvenir: Electricity Supply, Road Access and Sewerage ¹ | 0 | 12/96 |
| Additional Families | | |
| Construction of 61 houses for small brick-makers | 204 | 12/96 |
| Issuance of Titles | | |
| Issuance of property titles | 646 | 4/97 |

¹ Carried out by the Provincial Government of Misiones.

| | | |
|---|---------------|-----------|
| IN PARAGUAY: | | |
| Indemnifications/Expropriations: | | |
| (a) Reserves on Yacyretá Island | 218 | 1/97 |
| (b) Zone E - Encarnación | 4412 | 1/97 |
| (c) Rural Zones A and D | 997 | 1/97 |
| Reserves and Biodiversity: | | |
| Yacyretá Island | 100 | 9/97 |
| Urban Housing: | | |
| Construction of commercial units, part of the San Pedro housing development. | 103 | 12/96 |
| Rural Housing: | | |
| (a) Construction of infrastructure, drainage, access roads in Atinguy and Caraguatá/Yacarey | 100 | 11/96 |
| (b) Construction of communal facilities in Caraguatá/Yacarey and S. Miguel Potrero | 293 | 1/97 |
| (c) Construction of 28 houses in San Juan del Paraná | 247 | 1/97 |
| Equipment Supply: | | |
| Naval Unit - San Cosme | 36 | 10/96 |
| Industries: | | |
| (a) Drainage System - Stage I: San Pedro | 45 | 10/96 |
| (b) Infrastructure - Stage I: San Pedro | 180 | 12/96 |
| (c) Clay collection for relocated brick makers - Stages I and II: San Pedro | 304 | 1/97 |
| Projects: | | |
| CONAVI - Agreement for preparation of project for 1,750 houses in Arroyo Porá | 20 | Completed |
| Social Development: | | |
| (a) Food supply to brick-makers and relocation assistance | 1034 | 12/96 |
| (b) Compensation to small brick-makers | 188 | Completed |
| (c) Indemnification - Tile-makers | 3201 | 11/96 |
| (d) Food supply, agricultural assistance, relocation assistance | 638 | 12/97 |
| Additional Families: | | |
| 143 Affected Families: 60 families already relocated in the Ita Paso area. ² | -- | 12/97 |
| Issuance of Titles: | | |
| Issuance of property titles | 450 | 12/96 |
| BOTH BANKS OF PARANA RIVER: | | |
| Water Weed Control | | |
| Weed control for 1995 and 1996 | | |
| TOTAL | 16,154 | |

² To be carried out by the Government of Paraguay.

MATRIX SUMMARY OF THE REQUEST FOR INSPECTION AND THE MANAGEMENT RESPONSE

| REQUEST FOR INSPECTION | | REFERENCE TO MANAGEMENT RESPONSE (para. #) |
|--|---|--|
| Claim | Alleged Violation of Bank Procedures | |
| 1. Even if the dam were to be operated at 83 masl, the cost of electricity generated by the project would be more than three times the competitive market price in the region. (Request, paras. 6 and 39) | | 3.68-3.73 |
| 2. Bank policies which recognize that design considerations, such as lower reservoir levels, can vastly reduce the social and environmental impacts of a project have not been applied in this case. (para. 13) | | 3.3-3.5 |
| 3. There has been inadequate consideration of design alternatives that would involve markedly less social and environmental impacts. (para. 14) | | 3.3-3.5 |
| 4. Basic rights of participation and access to information have been denied. EBY is systematically unresponsive to the concerns of citizens and both governments. The Bank has also been unresponsive and unaccountable. (para. 21) | | 3.9-3.12 |
| 5. The Bank has failed to take financial responsibility for the resettlement of people displaced by the project. (para. 22) | | 3.6-3.8 |
| 6. The Bank failed to incorporate resettlement planning in the design and financing of the project. (para. 22) | OD 4.30, paras. 1, 3 and 24 | 3.6-3.8 |
| 7. The Bank failed to ensure that Argentina or EBY had the institutional capacity to implement a resettlement program. (para. 24) | | 3.13-3.14 |
| 8. The Environmental Trust Fund has not been created, as required under the Loan Agreement. (para. 26) | | 3.15-3.16 |
| 9. Affected people did not have meaningful participation and consultation in the design or implementation of the resettlement plan. (para. 27) | OD 4.30, paras. 3(c) and 8 | 3.9-3.12 |
| 10. The Bank has failed to ensure that people resettled by the project have maintained or improved their standard of living. (para. 28) | OD 4.30, para. 24 | 3.17-3.18 |
| 11. The claimants have not been compensated adequately for the impact on their livelihood. (para. 29) | | 3.17-3.18 |
| 12. The Borrower failed to establish a fair and equitable system of compensation. Many affected families have not received adequate compensation, and many have not been compensated in advance for their losses. The lack of a framework for equitable compensation has deprived them of the ability to negotiate fairly with EBY (para. 31). | | 3.19-3.20 |
| 13. The health impacts of the reservoir were not considered sufficiently in the Environmental Assessment process, and local populations were not consulted adequately. (para. 34) | | 3.21-3.24 |
| 14. The Bank failed to supervise or monitor the Borrower's and the beneficiary's performance concerning the mitigation of health impacts. (para. 34) | | 3.21-3.24 |
| 15. Members of the Mbya Guarani ethnic group lost their traditional territory and their livelihoods changed, when islands in the Paraná river were flooded or transformed. They were not allowed to participate in decisions affecting them, nor were they given any alternatives to choose from. The lands allocated to them are inadequate to support them. (paras. 35 and 36) | | 3.25-3.27 |
| 16. The Environmental Assessment (EA) of the project was flawed; people affected and NGOs did not fully participate. (para. 37) | | 3.28-3.38 |
| 17. A "Declaration" by 13 NGOs criticizing the EA was sent to the President of the World Bank on 7/20/1992, but no reply was received. (para. 37) | | 3.39-3.40 |
| 18. The EA failed to include important aspects of the project (e.g., impact on Aña Cuá branch of the Paraná, compensatory reserves, removal of vegetation). (para. 38) | | 3.28-3.38 |

MATRIX SUMMARY OF THE REQUEST FOR INSPECTION AND THE MANAGEMENT RESPONSE

| REQUEST FOR INSPECTION | | REFERENCE TO MANAGEMENT RESPONSE (para. #) |
|--|---|--|
| Claim | Alleged Violation of Bank Procedures | |
| 19. The environmental mitigation plan for the Aña Cuá branch of the Paraná is unlikely to be implemented for lack of funds and/or because it is technically unsound. (paras. 41 and 42) | | 3.41-3.42 |
| 20. Vegetation has not been removed from the areas to be inundated by the dam, as defined in the Environmental Mitigation Plans; this represents a failure by the Bank to supervise the project adequately. (paras. 43 and 45) | OD 4.00, Annex B, para. 5 | 3.43-3.48 |
| 21. Variations in the level of the water table on the Paraguayan side of the reservoir have not been adequately assessed. (para. 46) | | 3.49-3.50 |
| 22. The EA failed to consider adequately the effect of the dam on migratory fish, and therefore was unable to develop mitigation techniques appropriate to the Paraná. (para. 47) | | 3.28-3.38 |
| 23. Adequate Environmental Management Plans have not been developed for the cities of Encarnación and Carmen del Paraná, to assure water quality and avoid public health risks. (para. 51) | | 3.28-3.38 |
| 24. The Bank failed to assess adequately the biodiversity of the project area before allowing the reservoir to fill. (para. 52) | | 3.51-3.56 |
| 25. The Bank may have failed to assist in the protection and enhancement of cultural properties. (para. 54) | OPN 11.03 | 3.57-3.58 |
| 26. The project destroyed wildlands without establishing adequate compensatory reserves. (para. 55) | OPN 11.02 | 3.51-3.56 |
| 27. The creation of compensatory reserves has been illusory. EBY and the Bank claim that six reserves have been created, but in most cases title to the land has not been acquired, and the areas are not being protected. (para. 55) | | 3.51-3.56 |
| 28. The violations of wildlands policy, the failure to survey or preserve biotic information, and the failure to mitigate the adverse effects on fish migration undermine the goals of the Convention on Biological Diversity, to which Paraguay is a party. (para. 63) | OMS 2.36 | 3.59-3.60 |
| 29. The Bank has failed to take an active role to correct problems with implementation of the social and environmental aspects of the project. Rather than change the project to reduce the environmental and social impacts in the light of repeated violations of loan agreements and project documents, the Bank changed the project to allow the borrower to delay implementation of these neglected components. (para. 64) | | 3.61-3.67 |
| 30. The Bank did not adequately exercise its remedies when the Borrower failed to comply with project conditions. The Bank should have suspended disbursements when the environmental and social components were consistently violated. Alternatively, it should have ensured that the Borrower and EBY were adequately implementing the environmental and social mitigation required through direct financing, supervision, and the actual or threatened exercise of remedies. The failure to provide cofinancing and adequately to implement the environment and resettlement programs should have triggered more oversight and monitoring, and the continued failure over many years should also have led the Bank to consider pulling out of the Project. (para. 65) | OD 13.05, para. 4-1 OD 13.40 | 3.61-3.67 |

**MATRIX SUMMARY OF THE REQUEST FOR INSPECTION
AND THE MANAGEMENT RESPONSE**

| REQUEST FOR INSPECTION | | REFERENCE TO MANAGEMENT RESPONSE (para. #) |
|--|---|---|
| Claim | Alleged Violation of Bank Procedures | |
| 31. Privatization should not proceed without adequate legal safeguards regarding reservoir level, monitoring of the impact of the reservoir level on the health and well-being of affected people and the environment, an environmental impact assessment of privatization, and the meeting of the minimum standards which have already been violated. There should be an evaluation of the economic rationale behind privatization, and the implications for dam-affected people and the environment. Other alternatives should be fully evaluated, including dismantling the dam or operating the reservoir at a lower level than the projected 83masl. (para. 67) | | 3.74-3.80 |

Table C.1 Comparison of Potential Impacts at Different Reservoir Operating Levels without Mitigation Measures

| | Level 76 masl | Level 78 masl | Level 83 masl |
|--|--|--|---|
| Water Quality | Similar to existing high flood conditions | Increasingly moderate problems specially in lateral bays | Significant water quality problems in urban bays |
| Ecological Impacts (natural habitats) | Island ecosystems significantly damaged (52,00 ha of natural habitats flooded) | Island ecosystems lost (64,000 ha of natural habitats flooded) | Island ecosystems lost (105,000 ha of natural habitats flooded) |
| Archeological Sites | All island sites will be flooded | All island sites will be flooded | All island sites will be flooded |
| Fish Migration | Blocking of most migrations | Blocking of virtually all migrations | Blocking of virtually all migrations |
| Health | Similar to existing conditions | Similar to existing conditions; moderate risks | Potentially significant problems in lateral urban bays |
| Aquatic weeds | Similar to existing conditions | Similar to existing conditions | Potentially significant problems in lateral urban bays |
| Resettlement | Moderate effect | Moderate impacts | Maximum effect |
| Infrastructure | Minimum effect | Moderate impact | Maximum effect |

**Table C.2 Summary Of Principal Environmental Mitigation Measures
(for all levels)**

| ENVIRONMENTAL IMPACT | MITIGATIVE MEASURES |
|--|---|
| Water Quality | Selective vegetation clearing in critical areas, especially lateral bays Environmental clean-up of urban bays prior to flooding (closure of septic tanks, removal of waste dumps, removal of vegetation) Sewage collection and treatment systems for urban areas Water quality monitoring (reservoir, upstream and downstream) Water quality simulation through mathematical models Water level and release schedules for water quality control Water quality regulation/effluent control programs in upstream watershed Water level/water quality control Aña Cuá Branch through mini-dams and water discharges |
| Ecological Impacts (Natural Habitats) | Animal rescue prior to vegetation removal and flooding Establishment of compensatory reserves in areas of similar ecological significance On-the-ground management of newly-created protected areas Live preservation of endemic snail species |
| Archeological Sites | Archeological surveys and salvage prior to flooding Artifact classification and preservation, and information dissemination Historical sites studies in urban areas |
| Fish Migration | Operation of fish elevators Fish monitoring in lake and upstream and downstream ecosystems Fish prohibition 1 km below dam |
| Health | Selective vegetation clearing to minimize establishment of aquatic weed population Vector monitoring and control in area of influence (Plus: all water and sanitation infrastructure, health assistance to resettled population, health programs with local health agencies) |
| Aquatic weeds | Aquatic weed monitoring and control (plus all water quality and vector measures, treatment of lateral bays in urban areas) |
| Resettlement and Infrastructure | Resettlement of affected population, social and health assistance, compensation programs, technical assistance Relocation/compensation of businesses and industries/ceramic workers Relocation of infrastructure Reconstruction of urban network Coastal treatment works in urban areas |

Affected Family Choice Among Resettlement Alternatives

| Types and Numbers of Affected Families ¹ | Resettlement Alternatives Offered | Current Situation |
|--|--|---|
| I. Periurban Brick Makers² - Total: 761 families | | |
| (102 families) | (a) 0.5 ha plot for production unit, five years of clay trucked into plot, houseplot and house with water, electricity, drainage and sewerage, community buildings, schools, clinic, food for six months, social and technical assistance, grant of US\$2,500 in compensation of lost time and to reinstall production. | All in community of San Pedro, production systems re-established, productivity and income higher than before move. |
| (96 families) | (b) 1.5 ha plot for production unit with own clay deposits, houseplot and house with water, electricity, drainage and sewerage, food for six months, community buildings, school, clinic, social and technical assistance, grant of US\$2,500 in compensation of lost time and to reinstall production at no cost to the family. | 70 production units reinstalled at sites called Nemesio Parma and Campo Bauer, 55 of which are producing bricks; others took possession but found employment in city, while some are raising vegetables and domestic livestock on plots rather than producing bricks; income levels of those re-established here same as before the move. |
| (62 families) | (c) Assistance in forming Brick Makers Cooperative, communal clay deposit of about 10 ha, individual plots for reinstalling production unit, fleet of two trucks and one tractor to haul clay (original housing not affected, just production units) | All located in Coronel Bogado, full production restored and income levels about the same as before. |
| (491 families) | (d) Cash payment to compensate for losses (US\$6000 to 16,000), houseplot and house in urban area with water, electricity, drainage and sewerage, schools, community buildings, clinics at no cost to the family. | Not recommended by Resettlement Plan, but local political aspirants convinced these families not to accept resettlement options but demand cash; evaluation reveals about 40% invested in productive assets, some 20% in interest-bearing accounts, about 40% lost to money lenders and thieves. |
| (10 families) | (e) 7 ha of farm land, houseplot and house with water, electricity, sewerage systems, access to school, clinic and community buildings, food for six months, US\$800 to dig a well and latrine, US\$600 to fence property, fruit tree seedlings, tools, seeds, technical and social assistance at no cost to the family. | Four families farming their land in Santa Tecla, two families living there but working elsewhere, others working elsewhere and rent all or a portion of land allocated; incomes about same as before move. |

¹ Figures that appear in parentheses indicate the number of families selecting alternative.

² These families are all poor artisans (oleros), who lived in precarious conditions in low-lying, flood-prone margins of the river, and considered at high risk of impoverishment without government resettlement assistance. Industrial ceramics producers (tejerías) are not considered at risk of impoverishment because of their wealth and political power in the region, so the industrialists are provided only cash compensation equivalent to their physical losses, cost of self-relocating their production units, and cost of self-stockpiling ten years of raw materials.

| Types and Numbers of Affected Families | Resettlement Alternatives Offered | Current Situation |
|---|---|--|
| II. Agricultural Families - Total : 356 families | | |
| (218 families) | (a) 7 ha farm (1,016 ha have been allocated, some 227% more than the farmland flooded), food during transition, provisional wood house to be replaced with permanent one, three years agricultural extension, demonstration plots, inputs of tools, seeds and fertilizer, school, community buildings, clinic, social assistance, cash compensation for crop losses and structures flood (majority were landless before; now 100% have titles to land and house), at no cost to the family. | 78 families selected (Antinguy) 59 families selected (San Miguel Potrero) 28 families selected (Caraguata) 23 families selected (Yacarey) 30 families moved to higher ground on own farms and compensated in cash for losses and cost of reconstruction; incomes reported as equal to or higher than before the move; (crop/livestock yields for first year available for soya, corn, manioc, mate, citrus, melons, alfalfa, sugar cane, peanuts, sweet potato, chickens, ducks, turkeys, pigs, cattle and horses; see Scombatti and Carvalho 1995) |
| (117) families | (b) Cash compensation for crop losses and structures flooded, replacement house in an urban area, with potable water, electricity, sewerage and drainage, telephone, access to existing local public services (e.g., schools) expanded as required, titles to land and house, at no cost to the family. | Farmers who have left agriculture in the past and have urban jobs selected new urban housing in small towns along river, including San Juan del Parana, Damian, San Cosme and Carmen del Parana; incomes unaffected by move as employment is unchanged. |
| (21 families) | (c) Special case of indigenous Mbya, communal grant of 370 ha of forest land, health clinic, school, community building, electricity, wells, seed (corn, cotton, sweet potato, squash, mate, etc.), tools, technical and social assistance, land title at no cost to the family. | Displaced in 1974, provided land for resettlement at Bank request in 1988, further development assistance provided under Loan 3520-AR; incomes at subsistence level as before land grant. |
| III. Urban Families - Total: 2,638 families | | |
| (2,349 families) | (a) Urban house lot and house, potable water, electricity, drainage and sewerage, school, clinic, community building, telephone, church, kindergarten, police station, bus terminal, social services, training, ownership titles to new house and land, at no cost to the family. | 1,113 are living in (Posadas) Conjunto Habitacional A-1; 762 are living in (Posadas) Conjunto Habitacional A-2.3; 273 are living in (Encarnación) Buena Vista; 201 are living in (Encarnación) San Pedro; Income same as before since occupations not affected. |
| (289 families) | (b) Cash only compensation for property loss | Families with legal title to houseplot and house flooded by reservoir who choose not to relocate to project resettlement areas, self-relocated throughout the region |
| TOTAL :3,755 Families | | |

ARGENTINA

**YACYRETA HYDROELECTRIC PROJECT - (Loans 3520-AR AND 2854-AR)
Supervision Plan for FY97**

Supervision Plans

The Bank plans for FY97 and FY98 are to supervise the Yacyretá project at least three times a year. For FY97, plans have been scheduled and budget allocated for three missions: August 1996 (mission completed on August 16, 1996); November 11-22, 1996; and April 7-18, 1997. Bank supervision missions will focus on the two major outstanding project components: (a) the implementation of pending actions in the REMP related to level 76 masl; and (b) the implementation of the resettlement and environmental management program above level 76 masl, as agreed with the Bank.

As agreed with Sobrevivencia in our meeting held in the Bank on April 4, 1996, the Bank will invite them to participate in the field supervision mission.

As of October 15, 1996, the undisbursed loan amounts are US\$4.0 million (Loan 3520-AR) and US\$68.5 million (Loan 2854-AR).

Application of Funds

Undisbursed funds under Loan 3520-AR will be used to finance consulting services related to environmental and resettlement matters, and transmission lines. Undisbursed amounts under loan 2854-AR will be used to finance: (a) part of the sewage system for the city of Posadas; (b) coastal treatment for levels 78 masl and 83 masl; (c) consultant services for: (i) the Aña Cuá branch, (ii) engineering and supervision of complementary works, and (iii) hydrometereology and sedimentation; and (d) a small component for computer software and hardware. The anticipated disbursement profiles are as follows:

**Anticipated Disbursement Profile
(US\$ thousand)**

| Year | Loan 3520-AR | Loan 2854-AR |
|--------------|---------------------|---------------------|
| 1996 | 1,640 | 5,000 |
| 1997 | 960 | 18,000 |
| 1998 | 1,400 | 20,000 |
| 1999 | -- | 15,000 |
| 2000 | -- | 10,500 |
| TOTAL | 4,000 | 68,500 |

Yacyreta II - Supervision Missions

| DATE | World Bank Staff | Report Date |
|-----------------------------|---|--|
| As of September 1992 | | |
| 8/21-9/5 | De Franco, Power Engineer | SPN Report - 10/8/92 |
| 12/9-12/16 | Klockner, Financial Auditor | SPN Report - 12/21/92 |
| 10/12-10/26 | Dr Franco Partridge, Chief, Env. Unit Nissenbaum, Economist Chang, Sanitary Engineer | Letter to EBY - 11/25/92 BTO - 11/25/92 |
| 1993 | | |
| 1/13-2/1 | De Franco Partridge Ledec, Environmental Spec. Mejia, Resettlement Spec. IDB | Aide Memoire |
| 5/17-5/28 | Partridge Ledec Mejia Quintero, Water Poll. Spec. | Letter to EBY - 6/15/93 Aide Memoire |
| 6/29-7/2 7/12-7/23 | De Franco Klockner Partridge Quintero Ledec | SPN Report - 10/18/93 |
| 7/17-7/23 | Sanchez, Division Chief | BTO - 8/9/93 |
| No date | Partridge Quintero Ledec IDB | Aide Memoire Aug/Sep. 93 |
| 10/10-10/16 | De Franco Klockner | Letter to EBY - 9/28/93 |
| 1994 | | |
| 1/24-2/14/94 | De Franco Quintero Partridge Ledec | Aide Memoire |
| 3/12-3/16 | Partridge IDB | BTO Report - 3/21/94 |
| 5/4-5/6 | Headquarter Visit by EBY | |
| 5/17-6/11 | De Franco Partridge Mejia Quintero | SPN Report - 6/29 Aide Memoire |

Attachment F

| | | |
|----------------------|--|------------------------|
| | Ledec | |
| 7/22-8/9 | De Franco Partridge Mejia | SPN Report - 8/24/94 |
| 9/5-9/15 | De Franco Klockner | SPN Report - 9/28/94 |
| 11/17-11/18 | Headquarter Visit by EBY | Letter - 12/2/94 |
| 12/7-12/16 | De Franco Mejia Quintero | Aide Memoire (Dec. 94) |
| 1995 | | |
| 3/27-3/31 | De Franco Jadrijevic, Power Engineer Klockner | SPN Report - 5/2/95 |
| 7/10-7/20 | Jadrijevic Klockner Partridge Mejia Quintero Ledec | SPN Report - 8/3/95 |
| 10/11-10/13 | De Franco | BTO - 11/9/95 |
| 11/27-12/7 | Nankani, Director Jadrijevic Klockner Partridge Mejia Quintero Ledec | SPN Report - 12/22/95 |
| 1996 | | |
| 3/4-3/6 3/11-3/13 | Klockner | BTO - 4/5/96 |
| 5/95 | Faiz, Chief, LAIU De Franco Jadrijevic Klockner | SPN Report - 6/14/96 |
| 8/13-8/16 | Jadrijevic | SPN Report - 9/4/96 |

Supervision Efforts- Staffweeks and Budget

| | FY93 | FY94 | FY95 | FY96 | FY97 | FY93-96 (Ave.) |
|-----------------------------|-------|-------|-------|-------|------|----------------|
| Yacyretá Project | | | | | | |
| Staffweeks | 72.9 | 81.1 | 85.1 | 81.5 | 9.1 | 80 |
| Budget | 207.3 | 227.5 | 235.5 | 288.5 | 40 | 240 |
| Latin America Region | | | | | | |
| Staffweeks | 15.3 | 16.8 | 16.1 | 15.1 | - | 16 |

Two Ongoing Action Plans

- **Action Plan A** - (\$16 million): Agreed May 1996 to complete by December 1997 remaining 5% of actions pending from filling the reservoir in September 1994 to elevation 76m. In October 1996 implementation delayed due to lack of funds. Escrow account established in December 1996. Progress has been satisfactory since then. As of January 20, 1997, 60% had been executed and it remains on schedule.
- **Action Plan B** - (\$140 million): Agreed January 1996 to complete by December 1999 works and activities to mitigate negative effects of prolonged operation at elevation 76m. Details and funding to be concluded by mid-April.

Chronology of Events

- Initiation of operation at level 76m (REMP 95 % completed \$226 million spent) - September 1, 1994

Slow Implementation

- EBY opens account for REMP and other expenditures - January 1995
- GOA cuts budgetary contribution due to Tequila Effect - May 1995
- GOA and GOP agree on protocol to privatize Yacyreta - June 1995
- GOA 1996 budget excludes contributions to Yacyreta - December 1995

Reinvigorated Implementation

- GOA agrees to EBY borrowing to finance Plan A (\$16 million) - May 1996
- EBY opens account for Plan A (initial deposit \$4 million) - August 1996
- Replenishment of account interrupted with 30% of Plan A completed (\$5 million spent) - October 1996
- EBY opens Plan A escrow account with automatic funding from electricity sales (initial deposits of \$5.1 million) -December 1996
- EBY completes 60% of Plan A (\$9.1 million spent, \$4 million remaining in account and \$3 million more to be deposited automatically) - January 1997
- GOA/EBY/GOP agree to Plan B estimated to cost \$140 million - January 1997

PLAN A: PENDING ACTION AT ELEVATION 76M
CONTENT OF THE PLAN

(Figures in US\$ million, as of January 24, 1997)

| | |
|--|-------------|
| Indemnification and new property Titles (Includes: Unoccupied property, Clay deposits, new titles, etc.) | 10.9 |
| Resettlement (Includes: Community building, Special housing, etc.) | 2.2 |
| Infrastructure (Includes: Water tank, protected areas, etc.) | 1.7 |
| Social Assistance (Includes: Agricultural extension, food subsidies, training, provision of water tanker, etc.) | 1.2 |
| TOTAL | 16.0 |

Components of Action Plan B: Agreed on January 1997

(US\$ millions)

| Works/Actions | Total | Completion Date |
|--|--------------|------------------|
| Housing and Related Works | 15.4 | November 1998 |
| Infrastructure and Related Works (Sanitation and Coastal Treatment, etc.) | 24.2 | December 1999 |
| Consultants: Engineering/Project Management | 8.3 | August 1999 |
| Indemnification, Reallocation of Families, Property Titles | 31.0 | May 1999 |
| DOC-Management and Recurrent Costs | 12.8 | December 1999 |
| Civil Works (Aña Cúa) and Equipment | 24.5 | December 1999 |
| Sub-Total | 116.2 | |
| Additional Families * | 20.0 | To be determined |
| GRAND TOTAL | 136.2 | |

DOC = Department of Complementary Works

* Estimated figure to be confirmed and financing agreed by April 15, 1997

Action Plan B: As agreed on January 1997

Timetable of Key Decisions

| Key Decisions | Completion Date |
|---|------------------------|
| Loan Agreement with a Local Bank to finance Action Plan | April 14, '97 |
| Establishment of project management arrangements | March 31, '97 |
| Evidence of establishment of escrow account for Plan B | April 21, '97 |
| Appointment of consultant for monitoring Action Plan | March 15, '97 |
| Agreement on a resettlement program for additional families * | April 15, '97 |

* Estimated at US\$20 million

Account for REMP

Loan 3520-AR

LEGAL COVENANTS

- Project Agreement Section 2.12 (c) requires an account by November 1994 to finance REMP exclusively
- Project Agreement Section 2.12 (d) requires that EBY deposit into account:
 - \$18 M in 1995
 - \$60.9 M in 1996 (assumes level 78m)
 - \$101.6 M in 1997 (assumes level 83m)
 - \$20.7 M in 1998 (assumes level 83m)

COMPLIANCE

- First account opened January 1995, but not exclusively for REMP
 - \$12.4 M applied to REMP in 1995
- Subsequent account opened in August 1996, but not exclusively for REMP
- REMP escrow account opened in December 1996
 - \$9.1 M applied to REMP in 1996



100 year flood (82.5m); 82m in 1992.

Figure 4—Urban Sanitation and Flood Conditions in the Havana Flood Plain